

# **SCHEDULE OF RATES**

## **FOR TERM CONTRACTS FOR BUILDING WORKS**

2013 EDITION

Volume 2

(Building Services Works)



ARCHITECTURAL SERVICES DEPARTMENT  
HONG KONG

**ARCHITECTURAL SERVICES DEPARTMENT**

**HONG KONG**

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## **DISCLAIMER**

This Schedule of Rates is solely compiled as a basis for tendering of Term Contracts for which the Architectural Services Department is responsible. The Schedule rates may not necessarily reflect the market values of materials / products / works as included in this Schedule.

There are no representations, either expressed or implied, as to the suitability of this Schedule for purposes other than that stated above, and the Architectural Services Department does not accept any liability and responsibility for any special, indirect or consequential loss or damages whatsoever arising out of or in connection with the use of this Schedule or reliance placed on it.

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**Section 00**

**GENERAL REGULATIONS**

**SECTION 00****GENERAL REGULATIONS****Associated documents****GR.01**

This Schedule of Rates (hereinafter referred to as "this Schedule" or "the Schedule") shall be read and used in conjunction with : -

- (a) The General Conditions of Contract and Special Conditions of Contract adopted for the Term Contract.
- (b) The Conditions of Tender, Form of Tender and Articles of Agreement of the Term Contract.
- (c) Drawings, Specification and Employer's Requirements of the Term Contract.
- (d) The term "Specification" shall mean the General Specification, Codes of Practice and other documents referred herein below, Particular Specifications and all other specification requirements issued therein and referred to in the Term Contract.
- (e) The General Specifications and other documents for building works as listed below including all current amendments issued thereto and referred to in the Term Contract : -
  - (i) General Specification for Building issued by Architectural Services Department.
  - (ii) Appropriate Sections of General Specification for Civil Engineering Works issued by Civil Engineering and Development Department.
  - (iii) Design Manual : Barrier Free Access issued by Buildings Department.
  - (iv) Code of Practice for Fire Resisting Construction issued by Building Authority, Hong Kong.
  - (v) The Fresh Water Plumbing Maintenance Guide, Handbook on Plumbing Installation and Hong Kong Waterworks Standard Requirements For Plumbing Installation in Buildings issued by Water Supplies Department.
- (f) The General Specifications, Codes of Practice and other documents for building services installations as listed below, which are issued by Architectural Services Department or Electrical and Mechanical Services Department including all current amendments issued thereto and referred to in the Term Contract : -
  - (i) General Specification for Electrical Installation in Government Buildings of the Hong Kong Special Administrative Region issued by Architectural Services Department.
  - (ii) General Specification for Air Conditioning, Refrigeration, Ventilation and Central Monitoring and Control System Installation in Government Buildings of the Hong Kong Special Administrative Region issued by Architectural Services Department.



**Associated documents (Cont'd)****GR.01 (Cont'd)**

- (f) (iii) General Specification for Mechanical Installation in Government Buildings of the Hong Kong Special Administrative Region issued by Architectural Services Department.
- (iv) General Specification for Fire Service Installation in Government Buildings of the Hong Kong Special Administrative Region issued by Architectural Services Department.
- (v) General Specification for Lift, Escalator and Passenger Conveyor Installation in Government Buildings of the Hong Kong Special Administrative Region issued by Architectural Services Department.
- (vi) General Specification for Liquefied Petroleum Gas Installation in Government Buildings of the Hong Kong Special Administrative Region issued by Architectural Services Department.
- (vii) General Specification for Catering Equipment Installation in Government Buildings of the Hong Kong Special Administrative Region issued by Architectural Services Department.
- (viii) General Specification for Swimming Pool Water Treatment Installation in Government Buildings of the Hong Kong Special Administrative Region issued by Architectural Services Department.
- (ix) General Requirement for Electronic Contract (ESG01) issued by Electrical and Mechanical Services Department
- (x) General Specification for Broadcast Reception Installation in Government Buildings of the Hong Kong Special Administrative Region issued by Architectural Services Department.
- (xi) General Specification for Public Address Systems (ESG11) issued by Electrical and Mechanical Services Department.
- (xii) General Technical Specification for Monochrome and Colour Closed Circuit Television Systems (ESG14) issued by Electrical and Mechanical Services Department.
- (xiii) General Technical Specification for Uninterruptible Power Supply (UPS) (ESG15) issued by Electrical and Mechanical Services Department.
- (xiv) General Specification for Plumbing and Drainage Installation in Government Buildings of the Hong Kong Special Administrative Region issued by Architectural Services Department.
- (xv) Code of Practice for the Electricity (Wiring) Regulations issued by Electrical and Mechanical Services Department.
- (xvi) Code of Practice for Energy Efficiency of Building Services Installation issued by Electrical and Mechanical Services Department.

**Associated  
documents  
(Cont'd)****GR.01  
(Cont'd)**

- (f) (xvii) Code of Practice for Minimum Fire Services Installations and Equipment and Inspection, Testing and Maintenance of Installations and Equipment issued by Fire Services Department.
- (xviii) Code of Practice for Lift Works and Escalator Works issued by Electrical and Mechanical Services Department.
- (xix) Testing and Commissioning Procedure for Electrical Installation in Government Buildings of the Hong Kong Special Administrative Region issued by Architectural Services Department.
- (xx) Testing and Commissioning Procedure for Air-conditioning, Refrigeration, Ventilation and Central Monitoring and Control System Installation in Government Buildings of the Hong Kong Special Administrative Region issued by Architectural Services Department.
- (xxi) Testing and Commissioning Procedure for Fire Services Installation in Government Buildings of the Hong Kong Special Administrative Region issued by Architectural Services Department.
- (xxii) Testing and Commissioning Procedure for Lift, Escalator and Passenger Conveyor Installation in Government Buildings of the Hong Kong Special Administrative Region issued by Architectural Services Department.
- (xxiii) Testing and Commissioning Procedure for Liquefied Petroleum Gas Installation in Government Buildings of the Hong Kong Special Administrative Region issued by Architectural Services Department.
- (xxiv) Testing and Commissioning Procedure for Catering Equipment Installation in Government Buildings of the Hong Kong Special Administrative Region issued by Architectural Services Department.
- (xxv) Testing and Commissioning Procedure for Swimming Pool Water Treatment Installation in Government Buildings of the Hong Kong Special Administrative Region issued by Architectural Services Department.
- (xxvi) Testing and Commissioning Procedure for Broadcast Reception Installation in Government Buildings of the Hong Kong Special Administrative Region issued by Architectural Services Department.
- (xxvii) Testing and Commissioning Procedure for Burglar Alarm and Security Installation in Government Buildings of the Hong Kong Special Administrative Region issued by Architectural Services Department.
- (xxviii) Testing and Commissioning Procedure for Emergency Generator Installation in Government Buildings of the Hong Kong Special Administrative Region issued by Architectural Services Department.

**Associated documents (Cont'd)****GR.01 (Cont'd)**

- (f) (xxix) Testing and Commissioning Procedure for Steam Boiler and Calorifier Installation in Government Buildings of the Hong Kong Special Administrative Region issued by Architectural Services Department.
- (xxx) Testing and Commissioning Procedure for Plumbing and Drainage Installation in Government Buildings of the Hong Kong Special Administrative Region issued by Architectural Services Department.
- (g) Particular Specification(s) and all other specification requirements issued and referred to in the Term Contract.
- (h) Any Amendments to the Schedule of Rates issued and referred to in the Term Contract.

All items of works contained in this Schedule and in the Amendments to the Schedule of Rates issued and referred to in the Term Contract, shall be executed in accordance with the conditions and stipulations as provided in the above mentioned documents, and in compliance with all requirements on workmanship, materials, plant, measurements and any other requirements as stipulated in the above documents.

Due allowance is deemed to have been made in the Contract Percentages for complying with the requirements in the Specification and/or Employer's Requirements as adopted in the Term Contract.

**Definitions generally****GR.02**

Where any of the definitions given in these General Regulations are at variance with those given in the Special Conditions preceding the Sections throughout this Schedule, the definitions given in the Sections in this Schedule shall take priority.

- “approved” shall mean approved in writing by the Maintenance Surveyor but this approval shall not relieve the Contractor from responsibilities imposed by the Term Contract.
- “described” shall mean described in the Specification and all current amendments (if any) issued thereto.
- “ditto” shall mean the whole of the work described in detail in the preceding item, except as qualified in the description in which it occurs.
- “origin” shall mean the place or country where the material (which shall be natural material only) is originally produced.
- “proprietary” shall mean a proprietary material or product, protected by a patent or registered trade mark ® or a trade mark symbol ™ or similar recognizable trade mark or copyright, that is manufactured and marketed by the owner who has exclusive rights of use, or other material or product that the Contractor could provide authentication documents on its make and origin as required by the Maintenance Surveyor and to his satisfaction.

**Definitions  
generally  
(Cont'd)****GR.02  
(Cont'd)**

|                 |   |
|-----------------|---|
| “Schedule”      | shall mean this Schedule of Rates.  |
| “specified”     | shall mean specified in the Specification and all current amendments (if any) issued thereto.   |
| “submission”    | shall mean the submission of all documents like design, calculation, working drawings, shop drawings, records, etc. as required in the Special Conditions to each Section of the Schedule including obtaining the approval of the Maintenance Surveyor on the submission. |
| "Term Contract" | shall mean the Contract referring this Schedule as forming part of the Contract.  |

**Abbreviations**

|                   |   |
|-------------------|---|
| “exc.”            | shall mean exceeding.   |
| “n.e.”            | shall mean not exceeding.   |
| “c/w”             | shall mean complete with.   |
| “xx - yy”         | shall mean a range of dimensions exceeding the first dimension as stated but not exceeding the second, for example: "1.50 - 3.00" shall mean exceeding 1.50 and not exceeding 3.00. |
| “bore”            | shall mean nominal internal diameter.   |
| “dia”             | shall mean nominal diameter.  |
| “mm”              | shall mean millimetre.  |
| “m”               | shall mean linear metre.  |
| “m <sup>2</sup> ” | shall mean square metre.  |
| “m <sup>3</sup> ” | shall mean cubic metre.   |
| “kg”              | shall mean kilogram.  |
| "B.S."            | shall mean British Standard.  |
| "DBH"             | shall mean diameter at breast height of trees.  |
| "EN"              | shall mean European Standard.   |
| “G.S.”            | shall mean the General Specification and other documents referred to in General Regulations Clause GR.01(e) and (f) where appropriate.  |
| "MDF"             | shall mean medium density fibreboard.   |
| “RSE”             | shall mean Registered Structural Engineer.  |
| “TCP”             | shall mean Technically Competent Person.  |

**Methods of measurement****GR.03**

All works including "Supply only of materials" measured and paid for under this Schedule shall be measured in accordance with the conditions and rules detailed herein irrespective of any local or trade customs.

All works shall be measured net as completed or fixed in its place. Due consideration has been made in the Schedule rates for works executed in small quantities, narrow widths, short lengths, isolated patches, repairs, any height or locations above or below ground, difficult positions or confined spaces or any other exceptional circumstances; and no additional payment for such circumstances shall be made except where specifically provided for in this Schedule.

All works of "Supply only of materials" shall be the net quantities specified in a Works Order. No allowance or payment will be made to the Contractor for small quantities, short lengths, breakage or damage, delivery to store or any designated location as directed by the Maintenance Surveyor or any other circumstance except where specifically provided for in this Schedule.

Any disadvantage which may be entailed by items being performed under exceptional circumstances must be regarded as being offset by other items which may be proven exceptionally advantageous.

**Overtime****GR.04**

All works shall be deemed to be executed during any working hour in a 24 hour-day (from 00:00 hour to 24:00 hour) including Sundays and General Holidays. No additional payment will be made for any overtime including : -

- (a) Overtime which is ordered by the Maintenance Surveyor in accordance with the Conditions of Contract to expedite slow progress of the work caused by default, negligence or omission by the Contractor.
- (b) Watchmen or security guard at any time.

**Deductions for voids****GR.05**

Where a minimum area is defined for the deduction of voids, such minimum shall refer only to openings or voids detached from the boundaries of the space measured. Reductions of area caused by projections or recesses from the boundary of the area measured shall always be deducted irrespective of size.

**Curved or circular works****GR.06**

Except where specified items are included in this Schedule for curved or circular work, all work shall be measured and priced as if straight and flat. Where specific items for curved work or circular work are included, the maximum radius stated in such description shall be the limit for which curved or circular work will be paid for and any work curved to a radius greater than this limit shall be measured and priced as if straight and flat.

**Works executed  
by Specialist  
Sub-contractors,  
sub-contractors,  
etc.**

**GR.07**

Where appropriate throughout this Schedule and where specified in the Term Contract, the following categories of works shall be executed by : -

- (a) Specialist Sub-contractors included in the list of Approved Suppliers of Materials and Specialist Contractors for Public Works maintained by Development Bureau namely : -
- (i) Air-conditioning Installation
  - (ii) Audio Electronics Installation
  - (iii) Broadcast Reception Installation
  - (iv) Burglar Alarm and Security Installation
  - (v) Catering Equipment Installation
  - (vi) Design, Manufacture and Installation of Glass (or Fibre) Reinforced Plastic Units
  - (vii) Diesel Generator Installation
  - (viii) Electrical Installation
  - (ix) Electrical and Mechanical Installation for Sewage Treatment and Screening Plant
  - (x) Electronic Timing and Display Installation
  - (xi) Fabrication of Steel Pipe Specials
  - (xii) Fabrication of Unfired Pressure Vessels
  - (xiii) Fire Service Installation
  - (xiv) Fountain Installation
  - (xv) Landscaping
  - (xvi) Landslip Preventive/Remedial Works to Slopes/Retaining Walls
  - (xvii) Lift, Escalator and Passenger Conveyor Installation
  - (xviii) Liquefied Petroleum Gas Installation
  - (xix) Low Voltage Cubicle Switchboard Installation
  - (xx) Mechanical Handling and Lifting Installation

**Works executed  
by Specialist  
Sub-contractors,  
sub-contractors,  
etc.  
(Cont'd)**

**GR.07  
(Cont'd)**

- (a)
  - (xxi) Mechanical Plant and Equipment Installation
  - (xxii) Plumbing Installation
  - (xxiii) Radio Electronics Installation
  - (xxiv) Repair and Restoration of Historic Buildings
  - (xxv) Repair of Motors, Transformers and Switchgear
  - (xxvi) Road Marking
  - (xxvii) Soil and Rock Testing
  - (xxviii) Space Frame Systems
  - (xxix) Steam and Compressed Air Installation
  - (xxx) Structural Steelwork
  - (xxxi) Supply and Installation of Pumpsets and Associated Pipework
  - (xxxii) Supply and Installation of Water Treatment Plant
  - (xxxiii) Supply of Bituminous Pavement Materials and Construction of Special Bituminous Surfacing
  - (xxxiv) Swimming Pool Water Treatment Installation
  - (xxxv) Turn-key Interior Design and Fitting-out Works
  - (xxxvi) Uninterruptible Power Supply Installation
  - (xxxvii) Video Electronics Installation
- (b) Maintenance Surveyor's approved sub-contractors or applicators namely : -
  - (i) Medical Gas
  - (ii) Town Gas
  - (iii) Curtain Walling

The above categories of specialist works are not exhaustive. Other categories of works, if specified in the Term Contract, shall also be executed by Specialist Sub-contractors or other approved sub-contractors or applicators.

Due allowance is deemed to have been made in the Contract Percentages for complying with these requirements.

**Latest standards and specification****GR.08**

Where materials, workmanship and works are specified in this Schedule to be in conformity with certain British Standards or other International Standards, or to be in accordance with certain G.S. Items, Code of Practice and the like, they shall deem to be referred to the latest relevant and equivalent standards and specification current and published before the date of first tender invitation for the Term Contract unless otherwise specified. If conflict occurs between various standards, then the more onerous is to apply.

Due allowance is deemed to have been made in the Contract Percentages for complying with these requirements.

**Imperial equivalents where required or necessary****GR.09**

Whenever practicable, the Contractor shall supply materials in metric sizes and execute the works strictly in accordance with the metric dimensions specified. Imperial equivalents may be accepted only when circumstances prohibit compliance with this sub-clause (for example, statutory obligations) or where the Maintenance Surveyor considers it impracticable, undesirable or impossible to use metric sizes or dimensions or when suitable materials are not available in metric sizes.

The provision of this sub-clause shall not apply to materials which are specified in this Schedule by their actual manufactured sizes or their metric equivalents (for example, roof tiles, plywood, building boards, p.v.c. pipes, mosaic tiles) or classified in accordance with the relevant British Standards (for example, copper pipes) or other International Standards.

**Schedule rates****GR.10**

The rates throughout this Schedule shall include for : -

- (a) All materials supplied, and all works and services executed complying strictly with the Specification as detailed in General Regulations Clause GR.01 and the provision or execution of all samples of materials or finished works in patterns where required.
- (b) Provision of all materials and cutting and wastage on the same, except where otherwise stated, including collection, loading, conveyance, delivery, unloading, stacking, storage of the same, multi-handling between positions as directed on Site and provision of storage accommodation, handling, hoisting, lowering, distributing, etc. to specified location.
- (c) Provision of all labour including contributions to Mandatory Provident Fund, paid leave, travelling expenses, lodging allowance or living accommodation and any other allowances as required.
- (d) Provision of all tools, plant, temporary water, power and lighting, watching and work sheds.
- (e) All expenses for delivery, distribution or transportation of articles, materials, labour, personnel, tools, plant, work sheds etc. by all means including land, sea or air except otherwise specifically provided for in the Special Conditions of each Section in this Schedule or when specifically required and ordered by the Maintenance Surveyor.



**Schedule rates  
(Cont'd)**

**GR.10  
(Cont'd)**

- (f) Executing work in any position, location and height unless otherwise stated.
- (g) Providing record of photograph, location plan and schedule of existing trees, if any, within and in close vicinity (within 2.00 m) of the site boundary and works areas including protective and preservative works/measures such as tree surgery works, temporary fencing, etc. and the like, allowance for method of operation and vehicular access for tree preservation throughout the period of Works and removing all temporary protective and preservative works/measures on completion and making good all works disturbed.
- (h) Setting up monitor points for controlling noise, vibration, settlement and lateral movement imposed on adjoining properties including provision of equipment, technical and supervisory personnel carrying out daily monitoring and submission of records as directed by the Maintenance Surveyor.
- (i) Provision and maintaining temporary access and road as G.S. Item 1.25 and making good to match existing.
- (j) Provision and maintaining temporary drainage system as G.S. Item 1.26 and making good to match existing.
- (k) Provision of drawings, operation manuals and tests on samples or finished works.
- (l) Allowance for the works to be executed by Specialist Sub-contractors, Maintenance Surveyor's approved sub-contractors and applicators where required in the Specification, or as stated in the Special Conditions of each Section of the Schedule.
- (m) Testing and certification including the employment of independent certification bodies wherever required or necessary.
- (n) Provision, erection, maintenance, alterations, dismantling and clearing away of the following temporary works and protective measures that are required for the execution and completion of the Works unless specifically provided otherwise in the Schedule : -
  - (i) All bamboo, metal or any proprietary scaffolding, staging, ladders, trestles, cradles, gondolas, platforms and similar items complete with all netting, coverings, screens, dust sheets, barricades, catch-fans, protective canopies, etc.;
  - (ii) All types of hoardings and walkways complete with gateways, adequate lighting, associated power supply and electrical work as required by the Maintenance Surveyor including the types of hoardings and walkways referred to in Section 10 - Steel and Metal Work of this Schedule and other proprietary hoardings and walkways systems, and the submission of detailed drawings together with supporting calculations certified by TCP or RSE for approval and provide operation manuals of other proprietary hoardings and walkways systems not referred to in Section 10 - Steel and Metal Work; and

**Schedule rates  
(Cont'd)****GR.10  
(Cont'd)**

- (n) (iii) Similar temporary measures including but not limited to protective shield coverings, fences, barriers and the like and/or other protective measures specifically covered by the Special Conditions of each Section in this Schedule, and the erection, alteration and dismantling of such temporary measures on a daily basis where required by the Maintenance Surveyor for all necessary protection to new works and the public from harm, dust or nuisance.

The drawings referred to in Section 10 - Steel and Metal Work of this Schedule and in sub-clause (ii) above are not exhaustive and would be subject to change. The Contractor is deemed to allow for complying with the latest requirements.

- (o) Clearing away debris, surplus materials or other materials arising from the works and leaving the works and areas affected by the works clean and tidy on completion to the satisfaction of the Maintenance Surveyor.
- (p) Provision of mechanical dump truck covers in accordance with Particular Specification for Mechanical Dump Truck Covers.
- (q) All superintendence, establishment charges, overhead, expenses and profit.
- (r) Any cost and/or expenses incurred for carrying out the works at all times including working outside normal working hours as provided in General Regulations Clause GR.04.
- (s) Any costs and/or expenses in supplying materials or products to match existing works, finishes or systems when instructed by the Maintenance Surveyor, except when such materials or products are not specifically mentioned in this Schedule.
- (t) Any other expenses incurred in conforming with the Term Contract.
- (u) Reinstatement and making good surfaces disturbed.
- (v) Imperial equivalents wherever required or necessary.

Where the Contractor considers any of the rate contained in the Schedule is insufficient or inadequate, the Contractor is deemed to have made all necessary allowances in the Contract Percentages adjustment and/or in any other priced items in the Term Contract for executing the works as contained in the Schedule and in compliance with all requirements as stipulated in the Term Contract.

**Rates for items not specifically mentioned in this Schedule**

**GR.11**

Rates for items not specifically mentioned in this Schedule shall be valued as follows :-

- (a) Proportional rate      When an article, a material, workmanship or service is of similar form, character or quality to that detailed in the Schedule or executed under similar conditions and circumstances as described therein, then at a rate equal to a Schedule rate but with a fair adjustment for the difference in form, character and quality or in conditions and circumstances, and such rate to be agreed upon between the Maintenance Surveyor and the Contractor.
- Such proportional rate shall be subject to relevant Contract Percentage adjustment.
- (b) Star rate                When an article, a material, workmanship or service is not of similar form, character or quality to that detailed in the Schedule or not executed under similar conditions and circumstances as described therein, or when work or material of any kind which is not detailed in the Schedule, then at a reasonable rate to be agreed upon between the Maintenance Surveyor and the Contractor.
- Such star rate shall not be subject to relevant Contract Percentage adjustment.
- (c) Re-applicable rate      A rate fixed in accordance with the Term Contract requirements and to be re-applicable in any other Works Orders as approved by the Maintenance Surveyor for the whole duration of the Term Contract and not subject to adjustment of fluctuation and Contract Percentage adjustment.

**Adjustments made to basic rates and application of Contract Percentages**

**GR.12**

The Schedule rates in this Schedule are derived from the basic rates of provisions of labour, materials, plant and all other provisions as stated in this Schedule including adjustments made to the basic rates giving due consideration of factors including market trends, trade practices and the management efficiency and bidding strategies as reflected in the past term contracts procurement.

The Schedule rates also take into account conditions under which term contracts works are executed, which may include but not be limited to works executed in small quantities or large quantities, narrow widths, short lengths, isolated patches, repairs, any height or locations above or below ground, difficult positions or confined spaces or any other exceptional circumstances of the works.

In all cases, the Schedule rates shall be applied in the valuation of works before applying any relevant Contract Percentages contained in the Form of Tender of the Term Contract.

The Contract Percentages including any percentage addition as contained in the Form of Tender shall include the Contractor's profits and overheads, attendance, all costs and expenses incurred in connection with the Works and are necessary in fulfilling the requirements of the Term Contract where they are not separately itemized or stated in this Schedule, including the works or services assessed under proportional rate items, star rate items and re-applicable rate items.

|   |              |  |
|---|--------------|--|
| <b>Materials supplied by Government or other designated suppliers</b> | <b>GR.13</b> | When materials are supplied to the Contractor by Government or other designated suppliers, no allowance will be made to the Contractor other than the payment for "Fix only" ("Lay only" or "Set only", etc.) as detailed under the appropriate items of this Schedule.  |
| <b>"Supply only"</b>  | <b>GR.14</b> | <p>The term "Supply only" used throughout this Schedule shall mean the provision complete by the Contractor of an article, a fitting or a material. The rates for such items shall include for, where applicable, obtaining and taking delivery of the article, fitting or material, transporting by land, sea, or air to sites or Government stores or other designated locations as directed by the Maintenance Surveyor, and all necessary off-loading and moving into sites, Government stores or other designated locations.</p> <p>The rates listed in the "SUPPLY ONLY OF MATERIALS" in each Section of this Schedule shall include all the foregoing charges and allowance for replacement of materials damaged during delivery to sites, off-loading and moving into sites, Government stores or other designated locations as directed by the Maintenance Surveyor.</p>  |
| <b>"Take down ("Take up" or "Take out", etc.) and clear away"</b>     | <b>GR.15</b> | <p>The term "Take down ("Take up" or "Take out", etc.) and clear away" used throughout this Schedule shall mean execution complete by the Contractor of the work of taking down, taking up or taking out of an existing article, fitting or material either in whole or in part and removing from Site and disposing of the same. The rates for such items shall include for all or any of the following :-</p> <ul style="list-style-type: none"> <li>(a) Works executed by skilled labourers of the required trades, unless specifically provided otherwise in the Schedule.</li> <li>(b) Payment of all fees and charges.</li> <li>(c) Taking down, taking up or taking out of the article, fitting or material either in whole or in part together with any associated plugs, holdfasts, lugs, brackets and other fixings and all necessary cutting out and disposal.</li> <li>(d) Making good any works disturbed and any damage to surrounding surfaces and filling up all mortices, holes, etc. or alternatively leaving the same open and clean to receive readily new articles, fittings or materials.</li> <li>(e) Reinstatement and making good surfaces disturbed by specialists.</li> <li>(f) Preparing edges, ends or surfaces of remaining material to receive junction with new.</li> <li>(g) Taking up or removing covers, access doors, etc. and the like for the execution of the works and re-fixing the same on completion.</li> </ul> <p>The articles, fittings, or materials taken down shall become property of the Contractor. Unless otherwise specified, due allowance for credit has been considered in the Schedule rates where applicable.</p> |

**“Take down (“Take up” or “Take out”, etc.) and set aside for re-use”**

**GR.16**

The term “Take down (“Take up” or “Take out”, etc.) and set aside for re-use” used throughout this Schedule shall mean execution complete by the Contractor of the work of taking down, taking up or taking out of an existing article, fitting or material either in whole or in part and setting the same aside on site or transporting to Government stores or other Government sites for subsequent re-use. The rates for such items shall include for all or any of the following : -

- (a) Works executed by skilled labourers of the required trades, unless specifically provided otherwise in the Schedule.
- (b) Payment of all fees and charges.
- (c) Carefully taking down, taking up or taking out of the article, fitting or material together with associated plugs, holdfasts, lugs, brackets and other fixings and all necessary cutting out and disposal.
- (d) Thoroughly cleaning, oiling and adjusting the article, fitting or material ready for re-use, dismantling, re-assembling again as necessary, moving and stacking or putting into stores on sites or alternatively loading, transporting, unloading and moving to Government stores or other Government sites.
- (e) Making good any works disturbed and any damage to surrounding surfaces and filling up all mortices, holes, etc. or alternatively leaving the same open and clean to receive readily re-used or new articles, fittings or materials.
- (f) Reinstatement and making good surfaces disturbed by specialists.
- (g) Preparing edges, ends or surfaces of remaining material to receive junction with re-used or new.
- (h) Repairing or replacing at Contractor's own cost any damage caused to the articles, fittings or materials during taking down, taking up, taking out, etc. and transit.
- (i) Taking up or removing covers, access doors, etc. and the like for the execution of the works and re-fixing the same on completion.

**“Fix only” (“Lay only” or “Set only”, etc.)**

**GR.17**

The term “Fix only” (“Lay only” or “Set only”, etc.) used throughout this Schedule shall mean execution complete by the Contractor of the work of fixing, laying, setting, jointing, re-fixing, re-laying, re-setting and re-jointing an article, a fitting or a material made available free of charge to the Contractor by Government or it has been previously taken down. The prior taking down of the existing articles, fittings or materials shall be measured separately and paid for at the appropriate rates under applicable Sections of this Schedule. The rates for such items shall include for any or all of the following : -

- (a) Works executed by skilled labourers of the required trades, unless specifically provided otherwise in the Schedule.
- (b) Payment of all fees and charges.

**“Fix only”  
 (“Lay only”  
 or “Set only”,  
 etc.)  
 (Cont'd)**

**GR.17  
 (Cont'd)**

- (c) Taking delivery of the articles, fittings or materials at Government stores or other designated suppliers, loading, transporting to sites, unloading, checking and examining the same and storing on sites and returning any crates and other packings to Government stores, if required.
- (d) Taking the articles, fittings or materials from stores on sites, sorting, cutting and fitting, fabricating, assembling, moving, hoisting, distributing at locations, fixing, laying, setting, jointing, re-fixing, re-laying, re-setting and re-jointing in new or existing work, opening or position.
- (e) Providing all fixing and jointing materials such as nails, bolts, nuts, washers, screws, gaskets, mastic, adhesive, mortar and the like or other fixing and jointing materials made available from taking down.
- (f) Executing all plugging and screwing, jointing, cutting all mortices and grouting the same, and executing all cutting, fitting, easing or adapting necessary to the articles, fittings or materials to the positions in which the same are to be fixed, and oiling and leaving in good working order.
- (g) Making good any damage caused to the articles, fittings or materials and surrounding surfaces and making good new or existing finishes up to the same.
- (h) Reinstatement and making good surfaces disturbed by specialists.

When the articles, fittings or materials despite having been taken down from another positions and set aside for re-use or having been delivered by Government or other designated suppliers or their agents are made available on site, no deduction will be made from the rates of “Fix only” (“Lay only” or “Set only”, etc.) for transporting the said articles, fittings or materials to Site.

**Built up fittings or  
 composite units**

**GR.18**

The rates for “Take down and clear away”, “Take down and set aside for re-use” and “Fix only” are not intended to cover built up fittings or composite units, i.e. fittings or units that are fabricated and can be moved in their entirety or broken down into fabricated components. These items are to be measured as the appropriate items in the respective Sections unless otherwise provided in this Schedule.

**Nominated  
 Sub-contractors'  
 accounts**

**GR.19**

When works are carried out by Nominated Sub-contractors and facilities for the execution of such works are afforded to the Nominated Sub-contractors by the Contractor and accounts for such works are paid by the Contractor in accordance with the Conditions of Contract, the percentage addition allowed to the Contractor on the net cost of such works shall be as that contained in the Form of Tender for “Profit and Attendance on Nominated Sub-contractors' Works”.

|  |              |   |
|--|--------------|---|
| <b>“Making good”</b>                           | <b>GR.20</b> | <p>The term “Making good” shall be understood as including all labour and materials necessary to bring the disturbed area to the same face, colour, texture, etc., in the same materials as the surrounding work and shall include for painting, colouring and/or varnishing any new work to match the surrounding existing work to the entire satisfaction of the Maintenance Surveyor.</p>  |
| <b>Daywork</b>                                 | <b>GR.21</b> | <p>When daywork is ordered by the Maintenance Surveyor, measurement of daywork shall be made according to the Special Conditions set out in Section 17 - Labour and Section 18 - Temporary Plant and Facilities of this Schedule.</p>   |
| <b>“Utility Connection And Pavement Works”</b> | <b>GR.22</b> | <p>The term “Utility Connection And Pavement Works” shall mean the works of drainage connection, water supply connection, construction of run-in and reinstatement of footways which shall be executed complete by contractors selected and employed by the Contractor from the “List of Approved Contractor for Public Works in Group A, B or C for Road &amp; Drainage Works” for the drainage connection and construction of run-in and reinstatement of footways and from the “List of Approved Contractors for Public Works in Group A, B or C for Waterworks” for the water supply connection work.</p> <p>When Utility Connection and Pavement Works are required to be executed under the Term Contract and are ordered specifically by the Maintenance Surveyor for such purpose, the Contractor will be reimbursed a lump sum fee payment as included in Item 03063 in Section 03 – Excavation of this Schedule for compliance with the requirements stated herein and as provided in the Term Contract for the Utility Connection and Pavement Works. This lump sum fee payment is an allowance made for all costs and expenses other than the valued works executed in connection with the Utility Connection and Pavement Works under the relevant Sections in this Schedule, and shall include for the following :-</p> <ul style="list-style-type: none"><li>(a) Complying with the requirements and procedures in connection with the Utility Connection And Pavement Works specified in the Particular Specification referred to in the Term Contract and submitting assessments and reports as required.</li><li>(b) Liaising with the relevant authorities and utility companies, preparing and submitting relevant drawings, programmes and documents and completing all the forms in connection with the Utility Connection And Pavement Works.</li><li>(c) Submitting all the detailed particulars in connection with the granting of an Excavation Permit [Note : Excavation Permit means any excavation permit issued by the Government in respect of the Utility Connection And Pavement Works under Section 8 of the Land (Miscellaneous Provision) Ordinance] as required by the Maintenance Surveyor.</li></ul> |

**“Utility Connection  
And Pavement  
Works”  
(Cont'd)**

**GR.22  
(Cont'd)**

- (d) Obtaining approvals and permits from relevant utility companies or Government departments.
- (e) Complying with the conditions of any Excavation Permit applicable to the Utility Connection And Pavement Works.
- (f) Providing and maintaining temporary road or access where required for pedestrian and vehicular traffic diversions and subsequent clearing away after completion of Works.
- (g) Providing and maintaining traffic control as G.S. Item 1.18.
- (h) Locating and protecting existing services as G.S. Item 1.22.
- (i) Carrying out all necessary site inspections (including handing over inspections) jointly with the relevant authorities and utility companies.
- (j) Provision of identification tapes along the water connection mains.
- (k) Cleaning and sterilization of fresh water mains for making connections.
- (l) Provision of as built drawings and test reports as specified.
- (m) Protection of curbs, masking and unmasking of drainage channels, manhole covers, gully gratings, expansion joints, road studs and road marking.
- (n) Provision, maintenance and removal of all measures to maintain traffic flow including labour and temporary traffic diversion lighting and signs and paying all charges incurred.
- (o) Provision, maintenance and removal of temporary road, walkway, covers to trenches and the like.
- (p) Making good all surfaces, features, etc. and the like disturbed by all temporary road, access, traffic control, pedestrian footway, etc. and the like to match existing and including all requirements as stipulated in the Term Contract for carrying out the Utility Connection and Pavement Works.

This lump sum fee payment shall only be paid once for each project or each location specified in the Works Order. Works executed in connection with the Utility Connection and Pavement Works will be measured separately as in accordance with the General Regulations and the Special Conditions of the relevant Sections in this Schedule.

**Submission of  
measurement  
and accounts**

**GR.23**

All quantities shall be measured and rounded to the nearest two decimals of a unit.



**Materials/  
Products****GR.24**

All materials/products shall generally be based on the corresponding properties and/or performance standards as stipulated in the Specification (as defined in General Regulations Clause GR.01(d) herein) and/or as set out in this Schedule.

Where materials, products or works in this Schedule are stipulated as "proprietary", "approved", of "specific quality" or by their origins of which properties and/or performance standards are specified without their brand names, authentication document on such materials, products or works including certificates of origins, technical literatures and catalogues, compliance test reports, manufacturers' guarantees or warranties, samples and mock-ups of these materials, products or works and other document as required by the Maintenance Surveyor should be submitted or provided for the Maintenance Surveyor's written approval before purchase, delivery and execution. If any of these materials, products or works delivered or executed without the Maintenance Surveyor's prior written approval, or are not carried out to the Maintenance Surveyor's satisfaction, they should be removed or reinstated by the Contractor at his own expenses.

For all materials, products and works within the definition of "proprietary" in General Regulations Clause GR.02, the Contractor, if required by the Maintenance Surveyor, shall provide a certificate of patent or registered trade mark or copy right; or provide authentication documents on the make or origin of the materials or products; and provide local project reference to demonstrate that the materials, products and works have proven track record of similar application, all to the satisfaction of the Maintenance Surveyor. The Contractor shall further be required to have specific proprietary materials / products/works executed by approved sub-contractors/applicators and submit technical literatures, method statements, etc. where required by the Maintenance Surveyor or as stated in the Term Contract.

Due allowance is deemed to have been made in the Contract Percentages for complying with all of the above requirements.

**Materials/Products  
specified as  
"specific quality"****GR.25**

Certain materials/products in this Schedule are stipulated as of "specific quality". These shall generally be materials/products of significance, such as those that are safety critical, prestigious in nature, or such are required to create a specific visual impact to the completed works, or are critical to the completed works from their functionality, operation and maintenance perspectives that the quality of such materials/products exceeds the requirement generally stated in the General Specification and in the Term Contract.

The Contractor shall provide authentication of documentary evidence and proof including those specified in this Clause and General Regulations Clause GR.24 herein to identify and justify the properties and/or performance standards of "specific quality" of the subject materials/products are generally of higher quality than that specified in the General Specification and the requirements as stated in the Specification of the Term Contract, for the Maintenance Surveyor's approval. Such proof may include carrying out appropriate quality tests to verify the quality of the subject materials / products is of quality higher than that specified in the General Specification, or obtaining certification from an independent testing authority/expert (to be approved by the Maintenance Surveyor) confirming of such specific quality.

Due allowance is deemed to have been made in the Contract Percentages for complying with all of the above requirements.

**Payment for materials/products****GR.26**

Throughout this Schedule, the payment of materials / products shall generally be assessed according to the corresponding properties or performance standards as set out in this Schedule (with reference to the Specification) regardless of whether the materials / products are specified with brand names or referred as "proprietary", "approved", of "specific quality" or by their origins, or not.

The onus of proof is vested with the Contractor to identify the origins, properties and/or performance standards of materials/products used in the works corresponding to those set out in this Schedule (with reference to the Specification), and to provide the necessary documentary evidence and authentications including but not limited to certificates of origins, certificates of patent, registered trade marks or copy rights, local job references of similar applications, technical literatures and catalogues, compliance test reports, manufacturers' guarantees or warranties, sub-contractors' / applicators' warranties and the like of the materials / products specified or approved for use by the Maintenance Surveyor for payment of the corresponding materials / products as set out in this Schedule.

In the absence of any documentary evidence and authentications that are required to demonstrate the conformity or compliance of the materials/products/works with the respective "proprietary", "approved", of "specific quality", origins or brand names, the assessment of such materials / products / works may be based on the basic costs of the materials / products/works, such basic costs and types of materials / products / works shall be ascertained by the Maintenance Surveyor; or the Maintenance Surveyor shall withhold or deduct the value of such materials / products / works that are not being carried out to his satisfaction from the final value of the Works.

**Adjustment to unit rates exceeding \$99,999.99****GR.27**

Whenever the unit rate for an item exceeds \$99,999.99, it has been divided by a factor ("adjustment factor") to reduce the figure to fall within \$99,999.99 ("adjusted rate") for inclusion in this Schedule. Such unit rate before adjustment is described in the item description as the actual rate. When the adjusted rate is to be used for all purposes under the Term Contract, such adjusted rate shall be multiplied by the adjustment factor to revert it back to the actual rate before making any adjustment of the relevant Contract Percentages.

**Application of Schedule rates****GR.28**

This Schedule comprises Volume 1 for Builder's Works and Volume 2 for Building Services Works (B.S. Works). The compilation of unit rates in these two Volumes of Schedule of Rates are made with due consideration on the specific natures, purposes and requirements which would vary for the execution of the builder's works and the building services works.

Where similar Schedule rates are found in different Sections, whether within the same volume or different volume of the Schedule, such valuation shall in so far as reasonable be based on Schedule rates of the same Section under which the works are executed.

**Section 01**

**CONTRACT FACILITIES AND SPECIAL ATTENDANCES**

## SECTION 01

### CONTRACT FACILITIES AND SPECIAL ATTENDANCES

#### SPECIAL CONDITIONS

#### Contract Requirements

##### SC01.01

This Section shall be read and used in conjunction with the Specification and the Employer's Requirements adopted in the Contract.

Contract Facilities stated in this Section shall refer to land transport facilities, contract equipment and contract staff services provided by the Contractor for the exclusive use by the Maintenance Surveyor, his representatives, the Employer or his staff all in accordance with the requirements of the Contract for the Contract Period or such other period as instructed by the Maintenance Surveyor.

Special Attendances stated in this Section shall mean the Contractor's provision of means of access for the works in Works Orders of incidental minor maintenance and repair nature at a height of over 10 metre where no other proper means of access is available. Payments of Special Attendances shall satisfy the conditions as stated in Item SC01.11 below.

The Contractor shall arrange for the provisions of Contract Facilities and Special Attendances to be readily available for use at the time or any time, for the duration and in the manner as specified in the Contract, or otherwise as may be instructed by the Maintenance Surveyor.

#### Particular Preamble

##### SC01.02

The rates appearing in this Section are allowances for providing the Contract Facilities as required in the Contract and Special Attendances. The Contractor is deemed to have allowed in his Contract Percentage(s) for this and other Sections in the Schedule of Rates of any insufficiency of rates and all other expenses incurred under the Contract for : -

- (a) Meeting all contractual and statutory obligations in connection with the provision of Contract Facilities and Special Attendances, and any other related obligations, liabilities, risks and profit borne by the Contractor;
- (b) Any of the Contract Facilities requirement which is impracticable or not available (e.g. when the model satisfying the contract requirement is no longer available or out of stock), the Contractor shall provide similar facilities and services satisfying the requirement of the Contract and accepted by the Maintenance Surveyor;
- (c) Any item or part thereof of any Contract Facilities that is required and specified in the Contract but the methods of measurement provided hereunder do not measure or have excluded such item or part thereof in this Section;
- (d) The payment for Special Attendances shall in no way vitiate the provisions as stipulated in General Regulations for all Works and Services carried out under the Contract;

**SPECIAL CONDITIONS****Particular  
Preamble  
(Cont'd)****SC01.02  
(Cont'd)**

- (e) Any further period of Contract Facilities provided beyond the period of measurement as provided in the Special Conditions contained in this Section and without any confirmation from the Maintenance Surveyor; and
- (f) All other allowance as stipulated in the Contract in connection with the provision of the Contract Facilities and Special Attendances.

**SC01.03**

The rates in this Section shall generally include for : -

- (a) Maintenance, repairs, service charges, tax, license and any other government fees and charges in connection with the use of the Contract Facilities and provisions of Special Attendances;
- (b) Provisions of all insurances on the Contract Facilities against accident, damage, loss by theft or fire, etc.;
- (c) Replacement of contract staff;
- (d) Replacement of damaged or lost facilities; and
- (e) Removal of the Contract Facilities within the time as stipulated in the Contract, or at any time as may be informed by the Maintenance Surveyor.

**Measurement of  
Contract Facilities  
generally****SC01.04**

The items for Contract Facilities shall generally be measured and paid for in accordance with the Special Conditions provided below where such facilities are specifically stated in the Contract. Any item(s) of Contract Facilities that are stated in the Contract but not included in this Section, the Contractor is deemed to have allowed such item(s) in his Contract Percentage(s) for this and other Sections in the Schedule of Rates under the Contract.

The Contractor is not entitled to any payment when he fails to remove the Contract Facilities in accordance with Special Conditions Clause SC01.03(e) of this Section.

**LAND TRANSPORT****Measurement of  
land transport  
facilities****SC01.05**

The land transport facilities shall include the provision of petrol private car, electric vehicle or multi-purpose vehicle (MPV) and the driver services as specified in the Contract.

The rates for land transport facilities shall be measured each and on a monthly basis for the period from the date when such land transport facilities are provided for use under the Contract until the expiry of the Contract Period as specified in the Contract, and any further period of provision of the land transport facilities that the Maintenance Surveyor expressly confirms in writing.

**SPECIAL CONDITIONS****LAND TRANSPORT****Measurement of  
land transport  
facilities  
(Cont'd)****SC01.05  
(Cont'd)**

In case where the period of the provision of land transport facilities provided for use is not in a whole month, or where no alternative replacement facilities are provided, the rates for land transport facilities shall be adjusted based on the number of working days basis (over the number of calendar days of the given month). The period of the provision of land transport facilities measured in calendar days shall exclude Saturdays, Sundays and/or public holidays immediately preceding or following the said period of provision.

No measurement and payment shall be made for any period of time during which there is no land transport and other alternative replacement facilities is provided for use under the Contract.

**Rates for  
land transport  
facilities****SC01.06**

The rates for land transport facilities shall further include for : -

- (a) Provision of Environment-friendly Petrol Private Cars, Electric Vehicles or Hybrid Vehicles of not more than one year old, in good working order that is eligible for reduction of the First Registration Tax. A valid Environment-friendly Vehicle Certificate shall be provided for Environment-friendly Petrol Private Cars.
- (b) Provision of a competent and licensed driver for each vehicle who must have not less than 3 years' driving experience, no dangerous driving records and who shall be approved by the Maintenance Surveyor. The driver shall be equipped with a mobile telephone for contact purpose when on duty.
- (c) Provision of the vehicles at all times and for the uses and trips as specified in the Contract, during normal working hours and such other times when the Contractor is carrying out work including the time when requested by the Maintenance Surveyor or his Representatives for emergency situations, or for the discharge of their duties outside normal working hours and outside such other times when the Contractor is carrying out work.
- (d) Arranging the vehicles to be standby during the period when the vehicles are not in use including having the vehicles parked at a location designated by the Maintenance Surveyor.
- (e) All tunnels, bridges and cross harbour tunnel toll fees, and parking fees including the parking fees incurred when the vehicles are standby.
- (f) Maintaining a record of the use of the vehicles including details, times and purpose of journeys together with appropriate pedometer readings and distances travelled.
- (g) Maintaining effective comprehensive insurances covering passenger liability of the vehicles to be driven by any driver. In the case of a private car under the ownership of the Contractor, inclusion of an endorsement in the insurance policy expanding the definition to cover the Maintenance Surveyor and his Representatives and all personnel of the Employer.

**SPECIAL CONDITIONS****LAND TRANSPORT**

**Rates for  
land transport  
facilities  
(Cont'd)**

**SC01.06  
(Cont'd)**

- (h) Fuels, oils, lubricant and the like for the proper running and functioning of the vehicles.
- (i) Provision for similar alternative transport when the vehicles provided are unavailable.
- (j) Providing or painting the contract number, contract title, the Contractor's name or other suitable identification as approved by the Maintenance Surveyor to the vehicles.

**CONTRACT EQUIPMENT**

**Measurement of  
contract equipment  
generally**

**SC01.07**

The rates for provision of contract equipment shall be measured each and on a monthly basis from the date when such equipment is provided for use until the expiry of the Contract Period as specified in the Contract, and any further period of provision of the contract equipment that the Maintenance Surveyor expressly confirms in writing.

In case where the period of the provision of contract equipment provided for use is not in a whole month, or where no alternative replacement equipment is provided, the rates for contract equipment shall be adjusted based on the number of working days basis (over the total number of calendar days of the given month). The period of the provision of contract equipment measured in calendar days shall exclude Saturdays, Sundays and/or public holidays immediately preceding or following the said period of provision.

No measurement and payment shall be made for any period of time during which there is no contract equipment and other alternative replacement equipment is provided for use under the Contract.

**Rates for  
contract equipment  
generally**

**SC01.08**

The rates for contract equipment shall further include for : -

- (a) Provision of all equipment with functions, configurations and specifications as stated in the Contract and in good working order.
- (b) Provision of all necessary consumables like paper, toner, etc..
- (c) License fees, connection charges, rental charges, service charges, insurance and the like.
- (d) Maintaining monthly report on usage.
- (e) Regular maintenance, repair and temporary replacement of the devices of similar function and configuration during period of repair.

**SPECIAL CONDITIONS****CONTRACT STAFF SERVICES****Measurement of contract staff services****SC01.09**

The contract staff services shall include the provision of the following staff services when specified in the Contract : -

- (a) Clerical support staff
- (b) Technical officer
- (c) Works supervisor (builder's work) and works supervisor (building services)
- (d) Quality control assistant (builder's work) and quality control assistant (building services)
- (e) Repair Call Centre staff

The rates for provisions of contract staff services shall be measured each and on a monthly basis from the date when the contract staff report duty at the Employer's office until the expiry of the Contract Period as specified in the Contract, and any further period of provision of the contract staff services that the Maintenance Surveyor expressly confirms in writing.

Payment shall only be made when the Contractor has demonstrated to the Maintenance Surveyor's satisfaction that salary payments have been received by the contract staff.

In case where the contract staff services are not provided in a whole month, or where no replacement is provided during the period when the contract staff is on leave, the rates for the contract staff services shall be adjusted based on the number of working days basis (over the total number of calendar days of the given month). The working period measured in calendar days shall exclude Saturdays, Sundays and/or public holidays immediately preceding or following the working period.

No measurement and payment shall be made for the period of time during which there are no contract staff services provided for use under the Contract.

No measurement and payment shall be made for the period of time during which the contract staff fails to discharge any of his or her duties to the satisfaction of the Maintenance Surveyor.

**Rates for contract staff services****SC01.10**

The rates for "contract staff services" shall further include for : -

- (a) Provision of full time contract staff with qualification and experience that meet the requirements as specified in the Contract.
- (b) Performance of all duties.
- (c) Maintenance of an attendance diary.



**SPECIAL CONDITIONS****CONTRACT STAFF SERVICES**

**Rates for  
contract staff  
services  
(Cont'd)**

**SC01.10  
(Cont'd)**

- (d) All expenses and reimbursement in connection with employment of the contract staff including but not limited to basic salary, contribution to the Mandatory Provident Fund, gratuity and all necessary levies, e.g. Construction Industry Council, insurances, etc..
- (e) Transportation arrangement required for executing their respective duties.
- (f) Provision of facilities for executing their respective duties like computer equipment including both hardware and software, digital cameras, stationery and consumables, etc..
- (g) Working outside normal working hours.
- (h) Working on General Holidays, emergency and urgent works and working at specific locations.
- (i) Replacement by temporary staff when the contract staff is on leave.
- (j) Any other related costs and expenses that the Contractor may incur from the recruitment, management and deployment of the contract staff services.

**PAYMENT FOR SPECIAL ATTENDANCES**

**Measurement of  
Payment  
for Special  
Attendances**

**SC01.11**

The item for "Payment for Special Attendances" shall only be measured and paid for when the Maintenance Surveyor is satisfied that the following conditions have been fulfilled : -

- (a) Where the work instructed under the Works Order is incidental minor maintenance and repair work in nature and the claimed value of the works under the Works Order alone, does not exceed \$ 1,000;
- (b) Works is carried out to walls or ceiling soffits, where the work is at a clear height over 10 m high (measured from the level on which the staging or the mean of access is erected, or where the level is sloping, measured from the level immediately at the provision of the staging or the mean of access) with no other means of access available;
- (c) Submission of reports and photographic records to justify such reimbursement; and
- (d) The provision of the staging or means of access is made by the Contractor himself.

Where works under more than one Works Orders of incidental minor maintenance and repair nature are carried out at the same location at or around the same period of time by the Contractor or his Specialist Sub-contractors, the Contractor shall arrange for the full utilization of the means of access to be provided for these Works Orders. Subject to fulfillment of the conditions stated in sub-clauses (a) to (d) herein, payment for Special Attendances will only be made once irrespective of the number of Works Orders issued under such circumstance.

**SPECIAL CONDITIONS****PAYMENT FOR SPECIAL ATTENDANCES****Measurement of  
Payment  
for Special  
Attendances  
(Cont'd)****SC01.11  
(Cont'd)**

No measurement and payment shall be made for "Payment for Special Attendances" under either one of the following conditions : -

- (i) The claimed value of the works carried out under the above circumstances exceeds \$ 1,000 per Works Order.
- (ii) Where means of access is available or provided at the location by the owners, the Employer or other parties.
- (iii) The Contractor fails to submit the report and photographic records to justify the reimbursement of the Special Attendances claimed, or the Maintenance Surveyor considers that the report submitted fails to provide adequate information to demonstrate satisfaction of the conditions as stated in sub-clauses (a) to (d) herein.
- (iv) Where works are carried out under separate Works Order with staging or means of access provided at the same location at or around the same period of time, and the estimated value of the works exceeds \$1,000 for that Works Order.

**Rates for  
Payment  
for Special  
Attendances****SC01.12**

The rates for "Payment for Special Attendances" shall further include for : -

- (a) Providing any means of access including but not be limited to scaffolding, screens, working platforms, staging, gondolas and the like; and erection, subsequent dismantling and removal of the same upon completion of the works;
- (b) Compliance with all safety requirements and certification from independent checking engineer, where required, and payment of all fees; and
- (c) Submission of all necessary records and reports in the format as approved by the Maintenance Surveyor.

| Item  |   | A<br>\$   | Item  |
|---|---|-----------|-------|
| <b>CONTRACT FACILITIES</b>  |   |           |       |
| Note : - The following Items 01001 to 01016 inclusive will only be paid for if the requirements as set out in the Contract and the conditions as set out in the Special Conditions are complied with. |   |           |       |
| <b>LAND TRANSPORT</b>   |   |           |       |
| <i>Per number-month</i>   |   |           |       |
| 01001   | Private car - fully air conditioned saloon car with seating capacity of not less than five seats (including driver) ..... | 22,100.00 | 01001 |
| 01002   | MPV - fully air conditioned saloon car with seating capacity of not less than seven seats (including driver) .....        | 23,600.00 | 01002 |
| <b>CONTRACT EQUIPMENT</b>   |   |           |       |
| <i>Per number-month</i>   |   |           |       |
| 01003   | Provision of facsimile machine (for A4 size).....   | 110.00    | 01003 |
| 01004   | Provision of 3G mobile phone.....   | 230.00    | 01004 |
| 01005   | Provision of computer facilities .....  | 250.00    | 01005 |
| 01006   | Provision of monochrome laser-jet printer (for A4 size).....  | 160.00    | 01006 |
| 01007   | Provision of colour inkjet printer (for A3 size).....   | 220.00    | 01007 |
| 01008   | Provision of scanner .....  | 110.00    | 01008 |
| 01009   | Provision of digital camera .....   | 70.00     | 01009 |
| <b>CONTRACT STAFF SERVICES</b>  |   |           |       |
| <i>Per number-month</i>   |   |           |       |
| 01010   | Clerical support staff .....  | 11,600.00 | 01010 |
| 01011   | Technical officer .....   | 16,000.00 | 01011 |
| 01012   | Works supervisor (builder's work) .....   | 20,500.00 | 01012 |
| 01013   | Works supervisor (building services).....   | 20,500.00 | 01013 |
| 01014   | Quality control assistant (builder's work) .....  | 19,200.00 | 01014 |
| 01015   | Quality control assistant (building services).....  | 19,200.00 | 01015 |
| 01016   | Repair Call Centre staff .....  | 11,600.00 | 01016 |

| Item  |   | Item  |
|-------|---|---|
|       | <p><b>PAYMENT FOR SPECIAL ATTENDANCES</b></p> <p>Note : - Item 01017 will only be paid for if the requirements as set out in the Contract and the conditions as set out in the Special Conditions are complied with.</p> <p><i>Per item</i></p> |   |
| 01017 | Payment for Special Attendances.....  | <div style="border: 1px solid black; padding: 2px; display: inline-block;">             A<br/>\$           </div><br>3,000.00 |

**Section 27**

**ELECTRICAL INSTALLATION -  
LIGHTING SYSTEM AND FIXTURES**

## SECTION 27

### ELECTRICAL INSTALLATION

#### SPECIAL CONDITIONS

(Note: The following special conditions shall apply equally where appropriate to rates under Sections 27 to 30)

|   |                |   |
|---|----------------|---|
| <b>Measurement of conduits and flexible conduits</b>  | <b>SC27.01</b> | Conduits and flexible conduits shall be measured the net length as fixed in linear metres over all conduit fittings, boxes and short running lengths.   |
| <b>Measurement of trunkings, trays and ladders</b>  | <b>SC27.02</b> | Trunkings, trays and ladders shall be measured the net length as fixed in linear metres over all fittings, short running lengths and branches.  |
| <b>Measurement of cables</b>  | <b>SC27.03</b> | Cables shall be measured the net length as fixed in linear metres between equipment, control gear, fittings, accessories and the like.  |
| <b>Measurement of excavations, cable ducts, chases, holes and other subsidiary work</b>                 | <b>SC27.04</b> | All trench excavation shall be measured separately and paid for at the appropriate rates under Section 03 - Excavation of this Schedule. All cable ducts shall be measured separately and paid for at the appropriate rates under Section 12 - Roadwork and Cable Duct of this Schedule. All chases in, and holes through existing walls, ceilings and similar for cables, conduits etc. shall be measured and paid for at the appropriate rates under Section 04 - Concrete Work, Section 05 - Brickwork and Blockwork or other applicable Work Sections of this Schedule. Special concrete marker blocks specifically ordered in writing by the Maintenance Surveyor shall be measured separately and paid for at the appropriate rates under the applicable Works Sections of this Schedule. |
| <b>Measurement of power supply for bedhead trunking system and staff/ emergency/ nurse call system</b>  | <b>SC27.05</b> | All works of electrical power supply up to power supply points (e.g. switchgear or isolator or spur unit and the like) for the bedhead trunking system and staff/ emergency/ nurse call systems shall be measured separately and paid for at the appropriate rates under these Sections 27 to 30 or other applicable Work Sections of this Schedule.  |
| <b>Measurement of control panel for bedhead trunking system and staff/ emergency/ nurse call system</b> | <b>SC27.06</b> | The interconnecting cables and the cable containment for the control panel connecting to external equipment or existing panel shall be measured separately.   |

**SPECIAL CONDITIONS****Measurement of simplified items****SC27.07**

- (1) Simplified items included in Section 27 shall apply to : -
  - (a) Lighting points commencing from the loadside of the over-current protection device (e.g. MCB) or existing lighting switch/ lighting fitting.
  - (b) Lighting switch points commencing from the loadside of the over-current protection device (e.g. MCB) or existing lighting fitting and lighting switch.
- (2) Simplified items included in Section 28 shall apply to : -
  - (a) Power points commencing from the loadside of over-current protection device (e.g. RCBO) or adjacent power outlet.
  - (b) Telephone points commencing from the telephone distribution room on the same floor.
  - (c) LAN nodes commencing from the server, hub, cabinet, switches, equipment rack or router on the same floor.
  - (d) Service outlet points (e.g. broadcast and satellite reception, audio-visual, public address) commencing from the cabinet, equipment rack or distribution splitter on the same floor.
- (3) Any point containing a socket outlet (single or twin), a power connection unit, a power switch controlling socket outlet/ power connection unit and the like shall be measured as a power point. Any power point for power switch controlling socket outlet/ power connection unit shall be measured in accordance with the rating of its controlled socket outlet and rating of protection fuse of power connection unit no matter its rating is larger than the socket outlet/ power connection unit except the connection unit with cables of conductor size  $2.5 \text{ mm}^2$  with ring final circuit arrangement shall be measured as 13A socket outlet.
- (4) Cabling and wiring facilities for fan regulators shall not be measured as a power point.
- (5) Simplified items shall not be applied to floor outlet box/ trunking service box cabling system.
- (6) Simplified items shall be adopted unless otherwise specifically ordered in writing by the Maintenance Surveyor.
- (7) Additional payment for Items 27791 to 27798 and Items 28565 to 28593 inclusive for provision of circuit protective conductors to grid switch shall be measured as number of circuits.

### SPECIAL CONDITIONS

|   |                |  |
|---|----------------|--|
| <b>Measurement of periodic inspection, testing and certification of electrical installation</b> | <b>SC27.08</b> | <p>Testing and inspection of electrical installation for the whole premises to comply with the statutory requirements shall be paid for at the appropriate single rate in accordance with the installed rating of outgoing switch of the switchboard or cut-out switch comprising rising mains and feeder circuits in single-phase or three-phase. The testing of the sub-main circuit, final circuit, external mounted IDMT relay and testing of the main L.V. switchboard shall be measured separately and paid for at the appropriate rates under Section 30.</p>   |
| <b>Measurement of temporary supply</b>  | <b>SC27.08</b> | <p>Where a temporary supply is ordered by the Maintenance Surveyor, the provision of all articles, labour and accessory materials (nails, screws, rawplugs and similar) necessary for fixing shall be of temporary nature. For "use and waste" of all materials, such as cables, fittings, switchgear and accessories, etc., for a period of not exceeding four weeks from the date of certified completion, 50 per cent of the value of the appropriate "supply and fix" items after the adjustment of contract percentages will be paid. For a period exceeding four weeks and not exceeding eight weeks, 55 per cent will be paid and for each subsequent month a further addition of 5 per cent will be made.</p> <p>For a period of more than six months, the full rates, as for permanent works will be paid, and the materials will become the property of the Employer.</p> <p>No extra payment will be made for the removal of materials in connection with the temporary supply, but the cost of which shall have been included in the payment as aforementioned in the first paragraph hereof. The date of certified completion of a temporary supply shall be the date when the installation is first brought into service. The date when it ceases to be used shall be the date from which the Maintenance Surveyor instructs the dismantlement of the installation, or the date when the installation is no longer in use, whichever is earlier.</p> |
| <b>Rates generally</b>  | <b>SC27.09</b> | <p>The rates for all items shall generally include for : -</p> <ul style="list-style-type: none"> <li>(a) Colour band and colour identification work.</li> <li>(b) Lettering and engraving for identification, signs, labels in both English and Chinese.</li> <li>(c) Identification plates, signs, notice plates, discs and labels in both English and Chinese.</li> <li>(d) Priming or painting off site and proprietary finishes or surface treatment applied as part of the production process whether applied before or after fabrication and assembly.</li> <li>(e) All protective coating or finishing painting work, apart from additional painting work specifically ordered by the Maintenance Surveyor in writing which shall be measured separately and paid for at the appropriate rates under Section 15 - Painting of this Schedule.</li> <li>(f) Any kind of fixing method including drilling of the background and provision of fixings, hangers, brackets, supports, saddles, nails, screws, nuts, bolts, shims, washers, plugs, shotfired pins, spring compensated and seismic restraints and isolated components and the like.</li> </ul>   |



**SPECIAL CONDITIONS****Rates generally  
(Cont'd)****SC27.09  
(Cont'd)**

- (g) Provision of fire stopping as required.
- (h) Submission of catalogues, technical literature, data, calculations, test certificates and approval documentation covering the equipment and materials being supplied.
- (i) Preparing and submitting detail working drawings as required and all shop drawings for the fabrication and installation.
- (j) Attendance, as required, of the manufacturers' representative to assist in the installation and subsequent testing and commissioning.
- (k) Testing and commissioning including submission of Testing and Commissioning Certificates and Records of Tests.
- (l) Provision of all necessary power, fuel, labour and testing instrument of approved type for testing and commissioning.
- (m) Preparing and submitting operation and maintenance manuals and as-fitted drawings for items of works as required.
- (n) Provision of schematic diagrams covered front and back with plastic sheet including fixing to wall.
- (o) Provision of manufacturer's guarantee.
- (p) Submission of sample board for all compact sized materials and accessories, and supply of samples of materials for testing (including testing to destruction).

Where an equipment or item requires identification by lettering , engraving, sign, label, etc., 25 per cent of the value of the appropriate item will be deducted for non-provision of the required lettering, engraving, sign, label, etc.

**Rates for  
"Take down  
and clear  
away" or  
"Take down  
and set aside  
for re-use"****SC27.10**

The rates for "Take down and clear away" or " Take down and set aside for re-use" existing items in connection with electrical installation shall further include for : -

- (a) All in-line fittings including brackets, supports, hangers and the like.
- (b) Cutting into existing conduits, trunkings, trays, ladders, cables and the like in position.
- (c) Plugging off remaining ends with plugs or caps as required.
- (d) Preparing remaining ends of building services works to receive connections with new work if required.
- (e) In the case of equipment, lighting fittings, appliances and the like, taking down all associated connecting cables and the like.
- (f) In the case of bedhead trunking and staff/ emergency/ nurse call system, taking down all associated building services works.

**SPECIAL CONDITIONS**

**Rates for  
"Take down  
and clear  
away" or  
"Take down  
and set aside  
for re-use"  
(Cont'd)**

**SC27.10  
(Cont'd)**

In the case of fluorescent lighting fittings, the rates for "Fix only" or "Take down and clear away" or "Take down and set aside" for fittings/ components of the fittings complete with T5 electronic ballasts shall also apply to the similar items complete with T8/ T12 electronic/ magnetic ballasts and starter units.

**PART I - ELECTRICAL INSTALLATION**

**Rates for  
electrical  
installation  
generally**

**SC27.11**

The rates for electrical installation shall further include for : -

- (a) Making all necessary arrangements with public electricity supply companies and other public utility companies as may be required.
- (b) Connecting supply to and energizing all new or "re-used" fittings including provision of associated materials.
- (c) Disconnecting existing supply when existing fittings are taken down and properly sealing off the supply.
- (d) Submission of Completion Certificate (Form WR1).
- (e) Warning notice for installation having both new and old cable colours.

**Rates for  
conduits  
and flexible  
conduits**

**SC27.12**

The rates for conduits and flexible conduits shall further include for : -

- (a) Draw wires, draw cable and the like.
- (b) Bends, bushes, couplers, adaptors, expansion joints and the like.
- (c) All bending, setting, cutting, screwing, threading, jointing and providing all conduit fixings.
- (d) All conduit boxes, adaptable junction boxes, covers, and fittings
- (e) Provision of all sleeves for casting in or building in where conduits pass through slabs, walls or beams and caulking between conduit and sleeve where required.
- (f) Components and the forming of holes for making connections into trunking.
- (g) Bonding as specified between adjacent component parts.
- (h) Cleaning out and testing of the conduit system for continuity.
- (i) Provision of expansion joints in services runs wherever they coincide with structural expansion joints.

**SPECIAL CONDITIONS****Rates for trunkings****SC27.13**

The rates for trunkings shall further include for : -

- (a) All joints in the running lengths and components for bonding.
- (b) All cutting and jointing to fittings.
- (c) All cutting, drilling, bushing and jointing to equipment or control gear including all necessary connection accessories.
- (d) Pin-racks for supporting cables.
- (e) Internal fire barriers as required.
- (f) Bonding as specified between adjacent component parts.
- (g) Covers, cross units, tee units and elbow units

**Rates for trays and ladders****SC27.14**

The rates for trays and ladders shall further include for : -

- (a) Cutting openings as required.
- (b) All joints in the running lengths.
- (c) All cutting and jointing to fittings.
- (d) Pin-racks for supporting cables.
- (e) Bonding as specified between adjacent component parts.
- (f) Cable ties for securing cables.

**SPECIAL CONDITIONS****Rates for cables****SC27.15**

The rates for cables shall further include for : -

- (a) Laying or fixing in different locations, such as laying in trenches or open ducts, laying on arms or hangers, fixing to cable trays, ladders or other surfaces, drawing into underground pipe ducts, laying or drawing into trunkings, drawing into conduits, suspending from insulators or catenaries, wrapping around equipment, unless specifically provided in this Schedule.
- (b) In case of cables drawn into existing conduits, existing ducts or existing trunkings, removing and putting back existing covers, existing inspection lids and the like.
- (c) Making cable-joints.
- (d) Determining circuits, lacing into circuit groups and provision of draw wires, draw cables and the like.
- (e) Components for supporting cables including combination system cable supports, two piece cleats, trefoil cleats, multiway cleats, hangers, channels and the like.
- (f) Provision of all sleeves for casting in or building in where cables pass through slabs, walls or beams and caulking between cable and sleeve where required.
- (g) Bonding as specified between adjacent component parts.
- (h) Provision of lettered or numbered ferrules for 1 core PVC cable at terminations where required for identification.

**Rates for cable termination glands****SC27.16**

The rates for cable termination glands shall further include for : -

- (a) Assembling and mounting.
- (b) Insulating material, jointing material, locknuts, bushes, couplers and the like.

### SPECIAL CONDITIONS

**Rates for fittings and accessories**

**SC27.17**

The rates for fittings and accessories shall further include for : -

- (a) All boxes, cover plates, connector blocks, cable terminations, bonding and connecting of cable tails.
- (b) All necessary bushes, nipples, locknuts, couplers and the like.
- (c) Assembling and fixing in position.
- (d) Bonding as specified between adjacent component parts.

**Rates for equipment and control gear**

**SC27.18**

The rates for equipment (e.g. motors, fans, starter panels, circuit breakers, batteries, rectifiers and the like) and control gear (e.g. fuse-and-link disconnecting boxes, isolating switches, changeover switches, switch fuses, fused switches, distribution boards, connectors, starters, busbar chambers and the like) shall further include for : -

- (a) Connecting cable ends or cable tails to which they are connected.
- (b) Coupling to and forming holes for conduit entry.
- (c) Links, fuses, gland plates, terminal boxes and the like which form part of the item.
- (d) Bonding as specified between adjacent component parts.

**Rates for lighting fittings**

**SC27.19**

The rates for lighting fittings shall further include for : -

- (a) Reflectors, shades, lamps, control gear, ballasts, transformers, light troughs, diffusers and the like.
- (b) All connection/ terminal boxes, connector blocks, plugs and connecting of cable tails including all necessary grommets, bushes, nipples, locknuts and the like.
- (c) Assembling and fixing in position including all forms of suspensions, supports, safety chains with attachments and the like.
- (d) Adjustment, alignment and the like.
- (e) Bonding as specified between adjacent component parts.

The rates for "Fix only" or "Take down and clear away" or "Take down and set aside" for a normal lighting fitting shall also apply to the similar items equipped with the emergency power pack but the emergency power pack shall not be measured separately.

**SPECIAL CONDITIONS****Rates for ventilation fans, air curtains and appliances****SC27.20**

The rates for ventilation fans, air curtains and appliances shall further include for : -

- (a) All connection/ terminal boxes, connector blocks, plugs and connecting of cable tails including all necessary grommets, bushes, nipples, locknuts and the like.
- (b) Assembling and fixing in position including all supporting devices, hangers and the like.
- (c) Bonding as specified between adjacent component parts.
- (d) Taking down existing power connection units for cable connection and subsequent refixing as required.

**Rates for earthing, lightning protection and bonding items****SC27.21**

The rates for earthing, lightning protection and bonding items shall further include for : -

- (a) Bends, twists and through joints.
- (b) Cables and tape connections and junctions including tinning, sweating and provision of any jointing materials, heat, holes, rivets, bolts, nuts, washers and clamps.
- (c) Saddles, cleats, clips, holdfasts and the like which form part of the tape and rod conductor items.
- (d) Driving electrodes into the ground and connecting electrodes to connectors.

Unless otherwise stated as being included in the items, bonding shall be measured and paid for at the appropriate rates under Sections 27 to 30.

**Rates for simplified items****SC27.22**

- (1) The rates for lighting points and lighting switch points shall include the cabling and wiring facilities starting from the over-current protection device or adjacent points as the case may be, complete with conduits/ trunking, draw wires, flexible conduits, adaptors, boxes and all necessary accessories. However, MCBs/ RCDs/ RCBOs in the MCB board, lighting fittings, lighting switches and the like shall be measured separately and paid for at the appropriate rates under Sections 27 and 28.
- (2) The rates for lighting points shall include only the single end of new lighting fittings installed in the lighting circuit. The number of lighting points shall be measured as number of new lighting fittings installed. Lighting circuits with ELV provision for lighting dimming control, motion sensor control, etc. shall be measured separately.
- (3) The rates for lighting switch points shall include only the single end of new lighting switches installed in the lighting circuit. The number of lighting switch points shall be measured as number of new lighting switch gang installed. Therefore, the number of lighting switch points for lighting switches and grid switch panel shall be measured as number of gangs installed on the lighting switches and grid switch panel.

### SPECIAL CONDITIONS

**Rates for  
simplified  
items  
(Cont'd)**

**SC27.22  
(Cont'd)**

- (4) The rates for power points shall include the cabling and wiring facilities starting from the over-current protection device or adjacent points as the case may be, complete with conduits/ trunking, draw wires, flexible conduits, adaptors, boxes and all necessary accessories. The rates for power points shall further include the cabling and wiring facilities from the MCB unit to the contactor/ time switch but exclude the by-pass switch. RCD, contactor and time switch shall not be measured separately as a power point/ lighting point. However, MCBs/ RCDs/ RCBOs in the MCB board, socket outlets, power connection units and the like shall be measured separately and paid for at the appropriate rates under Sections 27 and 28.
- (5) The rates for telephone points, LAN points and service outlet points shall include for cabling and wiring facilities starting from the telephone distribution room/ server room/ control point on the same floor complete with conduit/ trunking, draw wires, boxes, blanking plates and all necessary accessories. Each point shall have a starting point and an end point. In case if there is a ring of multiple end points, one point shall be taken as a common start point. In case if there are different rings interconnected with each other, the interconnection shall be taken as a new point.

**Rates for  
periodic  
inspection,  
testing and  
certification  
of electrical  
installation**

**SC27.23**

The rates provided for the relevant work under periodic inspection, testing and certification of electrical installation shall generally include for : -

- (a) Testing, inspection and measuring of electrical installation comprising rising mains, feeder circuits, sub-main circuits, final circuits, protective conductors, earthing facilities, power supplies to all communal services of the premises and all necessary testing and inspection to satisfy the requirements as stipulated in Chapter 406, Electricity Ordinance and the latest edition of Code of Practice for Electricity (Wiring) Regulations published by Electrical and Mechanical Services Department.
- (b) Provision of electrical schematic, test report, test readings and test certificate which should be certified by a Registered Electrical Worker of the appropriate grade of the EMSD.
- (c) Submission of Form WR2.
- (d) The testing and inspection, if necessary, to be scheduled in phases and/ or arranged in non-office hours/ night time/ on Sundays and holidays, to suit the allowable working schedule for such work of the premises as advised by the premises management office or the occupants of the premises or per the instruction given by the project officer.

**SPECIAL CONDITIONS****Rates for periodic inspection, testing and certification of electrical installation (Cont'd)****SC27.23 (Cont'd)**

For the purpose of assessment of the payment for periodic inspection, testing and certification of electrical installation under Section 30, the Contractor shall submit to the Maintenance Surveyor a detailed report which shall include, but not limited to, the value of works claimed in the Works Order, photographic records, electrical schematic diagrams, test report and test certificate which should be certified by the Registered Electrical Worker of the appropriate grade of the EMSD and the submission of Form WR2.

For government premises, Form WR2 shall be submitted to the Maintenance Surveyor for record. The Submission of Form WR2 to the EMSD including the endorsement fee shall only be paid for non-government premises with the L.V. switchboard not maintained by the EMSTF, for which WR2 shall be submitted to the EMSD for endorsement.

The Contractor shall submit the format of the report to the Maintenance Surveyor for approval upon commencement of the Contract; once endorsed, the details of the report shall be submitted by the Contractor together with any application for such payment.

In order to justify any payment, the Contractor shall demonstrate that the conditions as laid down in the Special Conditions under Section 27 of this Schedule have been satisfied.

No payment shall be made in respect of any work if the Contractor failed to submit the report, or if the Maintenance Surveyor considers that the work as stated in the report fails to satisfy the Special Conditions under Section 27 of this Schedule.

**Rates for Buildings Energy Efficiency Ordinance Submission****SC27.24**

- (a) In order to fulfill the energy efficiency requirements by the Buildings Energy Efficiency Ordinance, the Contractor is required to appoint a Registered Energy Assessor (REA) at his own cost for the completion and submission of the Form of Compliance - Form EE4 to the EMSD for approval including but not limited to compilation and certification of the required forms and worksheets for the electrical installations, lighting installations and air-conditioning installations, where applicable, including any necessary endorsement fees.
- (b) The rates as separately scheduled for the Buildings Energy Efficiency Ordinance submission shall generally include for the preparation of the installation summaries, worksheets, relevant drawings, drawing lists and other supportive documents by the Contractor. The Contractor shall further coordinate with the REA and provide the required information at no extra cost for his submission of the Form of Compliance to the EMSD as required to fulfill the latest requirements of the Buildings Energy Efficiency Ordinance.



### SPECIAL CONDITIONS

#### PART II - BEDHEAD TRUNKING SYSTEM AND STAFF/ EMERGENCY/ NURSE CALL SYSTEM

**Rates for bedhead trunking system and staff/ emergency/ nurse call system generally**

**SC27.25**

The rates for bedhead trunking system and staff/ emergency/ nurse call system shall further include for : -

- (a) All components and parts building up the system.
- (b) Interconnecting wirings and signal cables including conduits and/ or flexible conduits, trunkings, trays, junction boxes and the like necessary to complete the system.
- (c) All electricity supply and control circuits from the supply points including cables, wirings, conduits and/ or flexible conduits, trunkings, cable trays, fuses, control boxes and necessary accessories required to energize the system.
- (d) Provision of expansion joints in service runs wherever they coincide with structural expansion joints.

**Rates for call units**

**SC27.26**

The rates for call units shall further include for push button package, flashlights, flexible cables, flexible conduits and all associated components.

**Rates for power supply units**

**SC27.27**

The rates for power supply units for call system shall further include for : -

- (a) Uninterruptible power supply system and associated accessories.
- (b) Well-ventilated and earthed metal enclosures.
- (c) Transformers, fused spur units, termination blocks and the like.
- (d) Rectifying, filtering and control circuits and associated accessories.
- (e) Circuit protection devices.
- (f) All cable and wiring facilities including necessary conduits, trunking and the like.

**Rates for control panels**

**SC27.28**

The rates for control panels shall further include for visual indications, audible alarm, indication lamps, switches and the internal wiring of the control panel. The cable and cable containment to external equipment or existing panel shall be measured separately and paid for at the appropriate rates under Sections 27 to 30.

**SPECIAL CONDITIONS**PARTICULAR SPECIFICATION

**Particular  
Specification  
for electrical  
installation**

**SC27.29**

The Particular Specification for electrical installation can be found in the Contract.

**Particular  
Specification  
for bedhead  
trunking  
system and  
staff/ emergency/  
nurse call  
system**

**SC27.30**

The Particular Specification for bedhead trunking system and staff/ emergency/ nurse call system can be found in the Contract.

| Item  |   | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only | Item  |
|-------|---|----------------|--------------------------|------------------------------------|----------|-------|
|       |   | A \$           | B \$                     | C \$                               | D \$     |       |
|       | <b>LAMP HOLDERS</b>   |                |                          |                                    |          |       |
|       | The rates include for the provision of fixing screws and rawplugs of approved sizes and types.  |                |                          |                                    |          |       |
|       | <i>Each</i>   |                |                          |                                    |          |       |
| 27001 | Lampholder, bakelite, batten type, with shade carrier skirt or home office type, shield for all lamp with Edison Screw/Bayonet cap..... | 28.79          | 5.00                     | 6.17                               | 15.98    | 27001 |
| 27002 | Lampholder, bakelite, cordgrip type, with shade carrier etc. for all lamps with Edison Screw/Bayonet cap.....                           | 20.37          | 3.54                     | 4.42                               | 11.54    | 27002 |
| 27003 | Lampholder, porcelain, backplate type, for all lamps with Edison Screw/Bayonet cap.....   | 25.78          | 5.00                     | 6.17                               | 15.98    | 27003 |
| 27004 | Lampholder, porcelain, backplate type, skirted for all lamps with Edison Screw/Bayonet cap.....   | 25.24          | 5.00                     | 6.17                               | 15.98    | 27004 |
| 27005 | Lampholder, bakelite, angle batten type, with home office type, shield for all lamps with Edison Screw/Bayonet cap.....                 | 25.89          | 5.00                     | 6.17                               | 15.98    | 27005 |
| 27006 | Lampholder, brass, threaded for all lamps with Edison Screw/Bayonet cap.....  | 35.89          | 5.00                     | 6.17                               | 15.98    | 27006 |
| 27007 | Lock ring for lampholder.....   | 7.21           | 1.54                     | 1.83                               | 4.70     | 27007 |
| 27008 | Wedge lampholder for B.C. lamps.....  | 7.26           | 1.73                     | 2.12                               | 5.32     | 27008 |
| 27009 | Lampholder for high pressure sodium type lamps (all types).....   | 129.49         | 12.18                    | 15.09                              | 41.52    | 27009 |
| 27010 | Ditto but for low pressure sodium type lamps (all types).....   | 60.88          | 8.57                     | 10.58                              | 29.58    | 27010 |
| 27011 | Ditto but for tungsten halogen type lamps (all types).....  | -              | 8.57                     | 10.58                              | 29.58    | 27011 |
| 27012 | Ditto but for metal halide MBIL type lamps (all types).....   | 136.35         | 12.18                    | 15.09                              | 41.52    | 27012 |
| 27013 | Lampholder for tubular fluorescent lamp (all types).....  | 28.32          | 3.54                     | 4.42                               | 11.54    | 27013 |
| 27014 | Lampholder for compact fluorescent lamp (all types).....  | 32.25          | 3.54                     | 4.42                               | 11.54    | 27014 |
| 27015 | Lampholder for circular fluorescent lamp (all types).....   | 27.43          | 3.54                     | 4.42                               | 11.54    | 27015 |

| Item   |                        | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only | Item  |
|--|------------------------|----------------|--------------------------|------------------------------------|----------|-------|
|  |                        | A              | B                        | C                                  | D        |       |
|  |                        | \$             | \$                       | \$                                 | \$       |       |
| <b>LAMPS</b>                                   |                        |                |                          |                                    |          |       |
| T5 tubular fluorescent tube, 2700K to 6500K :- |                        |                |                          |                                    |          |       |
| <i>Each</i>                                    |                        |                |                          |                                    |          |       |
| 27016  | 549 mm long, 14W.....  | 38.75          | 2.53                     | 3.04                               | 7.67     | 27016 |
| 27017  | 549 mm long, 24W.....  | 45.83          | 2.53                     | 3.04                               | 7.67     | 27017 |
| 27018  | 849 mm long, 21W.....  | 40.79          | 2.53                     | 3.04                               | 7.67     | 27018 |
| 27019  | 849 mm long, 39W.....  | 46.53          | 2.53                     | 3.04                               | 7.67     | 27019 |
| 27020  | 1149 mm long, 28W..... | 41.03          | 2.53                     | 3.04                               | 7.67     | 27020 |
| 27021  | 1449 mm long, 35W..... | 43.24          | 3.02                     | 3.52                               | 8.39     | 27021 |
| 27022  | 1449 mm long, 49W..... | 57.99          | 3.02                     | 3.52                               | 8.39     | 27022 |
| 27023  | 1149 mm long, 54W..... | 47.52          | 3.02                     | 3.52                               | 8.39     | 27023 |
| 27024  | 1449 mm long, 80W..... | 57.99          | 3.02                     | 3.52                               | 8.39     | 27024 |

| Item                                    |  | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only | Item  |
|---|--|----------------|--------------------------|------------------------------------|----------|-------|
|   |  | A<br>\$        | B<br>\$                  | C<br>\$                            | D<br>\$  |       |
| <b>LAMPS (CONT'D)</b>                   |  |                |                          |                                    |          |       |
| LED T8 Lighting Tube, 2700K to 6500K :- |  |                |                          |                                    |          |       |
|   | <i>Each</i>                                  |                |                          |                                    |          |       |
| 27025                                   | 600 mm long .....                            | 396.14         | 10.92                    | 14.67                              | 34.39    | 27025 |
| 27026                                   | 900 mm long.....                             | 457.97         | 10.92                    | 14.67                              | 34.39    | 27026 |
| 27027                                   | 1200 mm long.....                            | 503.96         | 10.92                    | 14.67                              | 34.39    | 27027 |
| Circular fluorescent lamp :-            |  |                |                          |                                    |          |       |
|   | <i>Each</i>                                  |                |                          |                                    |          |       |
| 27028                                   | 22W.....                                     | 26.35          | 3.53                     | 4.42                               | 11.43    | 27028 |
| 27029                                   | 32W.....                                     | 28.83          | 3.53                     | 4.42                               | 11.43    | 27029 |
| 27030                                   | 40W.....                                     | 40.99          | 3.53                     | 4.42                               | 11.43    | 27030 |
| 27031                                   | 60W.....                                     | 45.13          | 3.53                     | 4.42                               | 11.43    | 27031 |
| Compact fluorescent lamp :-             |  |                |                          |                                    |          |       |
|   | <i>Each</i>                                  |                |                          |                                    |          |       |
| 27032                                   | 2 pin single turn PLS, 5/7W.....             | 18.14          | 1.73                     | 2.12                               | 5.28     | 27032 |
| 27033                                   | Ditto but 9/11W.....                         | 20.25          | 1.73                     | 2.12                               | 5.28     | 27033 |
| 27034                                   | 2 pin double turn PLC, 10/13W.....           | 30.64          | 1.73                     | 2.12                               | 5.28     | 27034 |
| 27035                                   | Ditto but 18/26W.....                        | 38.18          | 1.73                     | 2.12                               | 5.28     | 27035 |
| 27036                                   | 4 pin biaxial long turn PLL, 18/24/34W ..... | 54.91          | 1.73                     | 2.12                               | 5.28     | 27036 |
| 27037                                   | Ditto but 36/40/55W.....                     | 54.91          | 1.73                     | 2.12                               | 5.28     | 27037 |
| 27038                                   | 4 pin double turn PLC, 10/13W.....           | 39.72          | 1.73                     | 2.12                               | 5.28     | 27038 |
| 27039                                   | Ditto but 18/26W.....                        | 45.18          | 1.73                     | 2.12                               | 5.28     | 27039 |
| 27040                                   | 2 or 4 pin triple turn PLT, 13/18/26W .....  | 78.62          | 1.73                     | 2.12                               | 5.28     | 27040 |
| 27041                                   | 4 pin triple turn PLT, 32/42W .....          | 90.33          | 1.73                     | 2.12                               | 5.28     | 27041 |
| 27042                                   | 2 pin 2D compact fluorescent lamp.....       | 43.12          | 1.73                     | 2.12                               | 5.28     | 27042 |
| 27043                                   | Ditto but 4 pin 28/38/55 W.....              | 69.14          | 1.73                     | 2.12                               | 5.28     | 27043 |

| Item  |   | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only | Item  |
|-------|---|----------------|--------------------------|------------------------------------|----------|-------|
|       |   | A<br>\$        | B<br>\$                  | C<br>\$                            | D<br>\$  |       |
|       | <b>LAMPS (CONT'D)</b>   |                |                          |                                    |          |       |
|       | Incandescent lamp :-  |                |                          |                                    |          |       |
|       | <i>Each</i>   |                |                          |                                    |          |       |
| 27044 | 15/25/40/60W, B15/B22/E14/E27 cap, 35 mm diameter candle type or 45 mm diameter golf ball type lamps..... | -              | 1.01                     | 2.03                               | 3.86     | 27044 |
| 27045 | 25/40/60/100W, G.L.S. lamp B15/B22/E14/E27 cap, with clear, pearl or colour finish.....                   | -              | 1.01                     | 2.03                               | 3.86     | 27045 |
| 27046 | 150W, G.L.S. lamp G.E.S. cap, clear or pearl finishes.....  | -              | 1.73                     | 2.15                               | 5.35     | 27046 |
| 27047 | 200W, ditto.....  | -              | 1.73                     | 2.15                               | 5.35     | 27047 |
|       | Halogen lamp :-   |                |                          |                                    |          |       |
|       | <i>Each</i>   |                |                          |                                    |          |       |
| 27048 | 20/35W dichroic lamp 12V, 35 mm diameter MR11, closed fronted with mirror reflector.....                  | -              | 1.73                     | 2.15                               | 5.35     | 27048 |
| 27049 | Ditto but open fronted.....   | -              | 1.73                     | 2.15                               | 5.35     | 27049 |
| 27050 | 20/35/50W dichroic lamp 12V, 50 mm diameter MR16, closed fronted with mirror reflector.....               | -              | 1.73                     | 2.15                               | 5.35     | 27050 |
| 27051 | Ditto but open fronted.....   | -              | 1.73                     | 2.15                               | 5.35     | 27051 |
| 27052 | 35/50/75/100W aluminium reflector lamp 12V, 111 mm diameter.....  | -              | 1.73                     | 2.15                               | 5.35     | 27052 |
| 27053 | 20/50W aluminium reflector lamp 12V, 70 mm diameter.....  | -              | 1.73                     | 2.15                               | 5.35     | 27053 |
| 27054 | 35/50W PAR 16 reflector lamp ( spot / flood ), 50 mm diameter.....  | -              | 1.73                     | 2.15                               | 5.35     | 27054 |
| 27055 | 50W PAR 20 reflector lamp ( spot / flood ), 63 mm diameter .....  | -              | 1.73                     | 2.15                               | 5.35     | 27055 |
| 27056 | 75/100W PAR 30 reflector lamp ( spot / flood ), 95 mm diameter .....                                      | -              | 1.73                     | 2.15                               | 5.35     | 27056 |
| 27057 | 60/80/120W PAR 38 reflector lamp ( spot/flood).....   | -              | 1.73                     | 2.15                               | 5.35     | 27057 |
| 27058 | 150W ditto.....   | -              | 1.73                     | 2.15                               | 5.35     | 27058 |
| 27059 | 300W PAR 56 reflector lamp ( spot / flood / wide flood).....  | -              | 1.73                     | 2.15                               | 5.35     | 27059 |
| 27060 | 150W double-end.....  | -              | 1.73                     | 2.15                               | 5.35     | 27060 |
| 27061 | 200W ditto .....  | -              | 1.73                     | 2.15                               | 5.35     | 27061 |
| 27062 | 300W ditto.....   | -              | 1.73                     | 2.15                               | 5.35     | 27062 |
| 27063 | 500W ditto.....   | -              | 1.73                     | 2.15                               | 5.35     | 27063 |
| 27064 | 750W ditto.....   | -              | 1.73                     | 2.15                               | 5.35     | 27064 |
| 27065 | 1000W ditto.....  | -              | 1.73                     | 2.15                               | 5.35     | 27065 |
| 27066 | 1500W ditto.....  | -              | 1.73                     | 2.15                               | 5.35     | 27066 |

| Item                         |   | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only | Item  |
|------------------------------|---|----------------|--------------------------|------------------------------------|----------|-------|
|                              |   | A<br>\$        | B<br>\$                  | C<br>\$                            | D<br>\$  |       |
| <b>LAMPS (CONT'D)</b>        |   |                |                          |                                    |          |       |
| Halogen lamp : - (Cont'd)    |   |                |                          |                                    |          |       |
|                              | <i>Each</i>                               |                |                          |                                    |          |       |
| 27067                        | 100/150W single-end.....                  | -              | 1.73                     | 2.15                               | 5.35     | 27067 |
| 27068                        | 250W ditto.....                           | -              | 1.73                     | 2.15                               | 5.35     | 27068 |
| 27069                        | 300W ditto.....                           | -              | 1.73                     | 2.15                               | 5.35     | 27069 |
| 27070                        | 500W ditto.....                           | -              | 1.73                     | 2.15                               | 5.35     | 27070 |
| Induction lamp : -           |   |                |                          |                                    |          |       |
|                              | <i>Each</i>                               |                |                          |                                    |          |       |
| 27071                        | 55W induction.....                        | -              | 1.73                     | 2.15                               | 5.35     | 27071 |
| 27072                        | 88W ditto.....                            | -              | 1.73                     | 2.15                               | 5.35     | 27072 |
| Low pressure sodium lamp : - |   |                |                          |                                    |          |       |
|                              | <i>Each</i>                               |                |                          |                                    |          |       |
| 27073                        | 26/35W.....                               | 199.29         | 6.78                     | 8.23                               | 20.42    | 27073 |
| 27074                        | 35/55W.....                               | 209.25         | 6.78                     | 8.23                               | 20.42    | 27074 |
| 27075                        | 66/90W.....                               | 285.77         | 6.78                     | 8.23                               | 20.42    | 27075 |
| 27076                        | 90/135W.....                              | 296.49         | 6.78                     | 8.23                               | 20.42    | 27076 |
| Metal halide lamp : -        |   |                |                          |                                    |          |       |
|                              | <i>Each</i>                               |                |                          |                                    |          |       |
| 27077                        | 35W reflector - ceramic.....              | 391.30         | 6.78                     | 8.23                               | 20.42    | 27077 |
| 27078                        | 70/150W double-end compact.....           | 124.51         | 6.78                     | 8.23                               | 20.42    | 27078 |
| 27079                        | 250W double-end compact.....              | 615.88         | 6.78                     | 8.23                               | 20.42    | 27079 |
| 27080                        | 400W double-end compact.....              | 641.21         | 6.78                     | 8.23                               | 20.42    | 27080 |
| 27081                        | 70/150W double-end compact - ceramic..... | 296.43         | 6.78                     | 8.23                               | 20.42    | 27081 |
| 27082                        | 70/150W single-end compact.....           | 159.26         | 6.78                     | 8.23                               | 20.42    | 27082 |
| 27083                        | 200W single-end compact.....              | 311.72         | 6.78                     | 8.23                               | 20.42    | 27083 |
| 27084                        | 35/70W single-end compact - ceramic.....  | 332.53         | 6.78                     | 8.23                               | 20.42    | 27084 |
| 27085                        | 150W single-end compact - ceramic.....    | 343.19         | 6.78                     | 8.23                               | 20.42    | 27085 |

| Item                                     | Item  |
|--|---|
| <b>LAMPS (CONT'D)</b>                    |   |
| Metal halide lamp : - (Cont'd)           |   |
| <i>Each</i>                              |   |
|  | Supply<br>and<br>fix  |
|  | Take<br>down<br>and<br>clear<br>away  |
|  | Take<br>down<br>and set<br>aside for<br>re-use                                |
|  | Fix<br>only   |
|  | A<br>\$   |
|  | B<br>\$   |
|  | C<br>\$   |
|  | D<br>\$   |
| 27086                                    | 70W MBIF, elliptical coated..... 258.76 6.78 8.23 20.42 27086                 |
| 27087                                    | 100/250W MBIF, elliptical coated..... 266.22 6.78 8.23 20.42 27087            |
| 27088                                    | 400W MBIF, elliptical coated..... 294.34 6.78 8.23 20.42 27088                |
| 27089                                    | 250W tubular clear..... 247.32 6.78 8.23 20.42 27089                          |
| 27090                                    | 400W tubular clear..... 261.02 6.78 8.23 20.42 27090                          |
| 27091                                    | 1000W tubular clear..... 750.19 8.26 10.26 28.14 27091                        |
| 27092                                    | 750W MBIL double-end..... 400.39 8.26 10.26 28.14 27092                       |
| 27093                                    | 1500W MBIL double-end..... 853.33 8.26 10.26 28.14 27093                      |
| 27094                                    | 2000W MBIL double-end..... 1,695.53 8.26 10.26 28.14 27094                    |
| 27095                                    | 70/150W compact metal halide..... 345.64 6.78 8.23 20.42 27095                |
| 27096                                    | 1000W compact metal halide..... 1,414.55 8.26 10.26 28.14 27096               |
| High pressure sodium lamp (Standard) : - |   |
| <i>Each</i>                              |   |
| 27097                                    | 50/70W SON-E..... 124.25 6.78 8.23 20.42 27097                                |
| 27098                                    | 70W SON-I / SON-T..... 134.76 6.78 8.23 20.42 27098                           |
| 27099                                    | 100W SON-E / SON-T..... 156.01 6.78 8.23 20.42 27099                          |
| 27100                                    | 110/150W SON-E / SON-T..... 164.93 6.78 8.23 20.42 27100                      |
| 27101                                    | 250W SON / SON-T..... 172.51 6.78 8.23 20.42 27101                            |
| 27102                                    | 400W SON / SON-T..... 175.16 6.78 8.23 20.42 27102                            |
| 27103                                    | 1000W SON-T..... 670.82 6.78 8.23 20.42 27103                                 |
| High pressure sodium lamp (Special) : -  |   |
| <i>Each</i>                              |   |
| 27104                                    | 50/70W high lumen output..... 149.07 6.78 8.23 20.42 27104                    |
| 27105                                    | 100/150W high lumen output..... 175.70 6.78 8.23 20.42 27105                  |
| 27106                                    | 250/400W high lumen output..... 187.18 6.78 8.23 20.42 27106                  |
| 27107                                    | 150W colour temperature not less than 2150K..... 215.22 6.77 8.22 20.40 27107 |
| 27108                                    | 250W colour temperature not less than 2150K..... 260.81 6.77 8.22 20.40 27108 |



| Item  |   | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only | Item  |
|---|---|----------------|--------------------------|------------------------------------|----------|-------|
|   |   | A<br>\$        | B<br>\$                  | C<br>\$                            | D<br>\$  |       |
| <b>LAMPS (CONT'D)</b>                           |   |                |                          |                                    |          |       |
| High pressure sodium lamp (Special) (Cont'd) :- |   |                |                          |                                    |          |       |
| <i>Each</i>                                     |   |                |                          |                                    |          |       |
| 27109   | 400W colour temperature not less than 2150K.....                  | 324.58         | 6.77                     | 8.22                               | 20.40    | 27109 |
| 27110   | 35/50W WHITE SON.....   | 301.07         | 6.77                     | 8.22                               | 20.40    | 27110 |
| 27111   | 100W WHITE SON.....   | 322.39         | 6.77                     | 8.22                               | 20.40    | 27111 |
| 27112   | 150W WHITE SON.....   | 347.55         | 6.77                     | 8.22                               | 20.40    | 27112 |
| 27113   | 250W WHITE SON.....   | 381.02         | 6.77                     | 8.22                               | 20.40    | 27113 |
| 27114   | 70/150W double-end.....   | 309.96         | 6.77                     | 8.22                               | 20.40    | 27114 |
| 27115   | 250W double-end.....  | 387.02         | 6.77                     | 8.22                               | 20.40    | 27115 |
| 27116   | 400W double-end.....  | 429.54         | 6.77                     | 8.22                               | 20.40    | 27116 |
| 27117   | 70W reflector.....  | 265.00         | 6.77                     | 8.22                               | 20.40    | 27117 |
| High pressure mercury discharge lamp :-         |   |                |                          |                                    |          |       |
| <i>Each</i>                                     |   |                |                          |                                    |          |       |
| 27118   | 50/80/125W MBF.....   | -              | 6.77                     | 8.22                               | 20.40    | 27118 |
| 27119   | 250W ditto.....   | -              | 6.77                     | 8.22                               | 20.40    | 27119 |
| 27120   | 400W ditto.....   | -              | 6.77                     | 8.22                               | 20.40    | 27120 |
| 27121   | 450W ditto.....   | -              | 6.77                     | 8.22                               | 20.40    | 27121 |
| 27122   | 700W ditto.....   | -              | 6.77                     | 8.22                               | 20.40    | 27122 |
| Other lamps :-                                  |   |                |                          |                                    |          |       |
| <i>Each</i>                                     |   |                |                          |                                    |          |       |
| 27123   | Energy saving lamp 9/11/13/15/18W, E14/E27 lamp base.....         | 36.25          | 1.01                     | 1.35                               | 3.83     | 27123 |
| 27124   | Energy saving lamp 20/25W, E14/E27 lamp base.....                 | 58.24          | 1.01                     | 1.35                               | 3.83     | 27124 |
| 27125   | Energy saving lamp, globe type 9/11/13/15/18W.....                | 42.81          | 1.01                     | 1.35                               | 3.83     | 27125 |
| 27126   | Energy saving lamp, globe type 20/25W.....                        | 49.51          | 1.01                     | 1.35                               | 3.83     | 27126 |
| 27127   | 24V, 75/55W, sealed beam lamp bulb for underwater floodlight..... | 64.10          | 6.77                     | 8.67                               | 20.40    | 27127 |
| 27128   | Dimmable energy saving lamp 9/11/13/15/18W .....                  | 168.35         | 1.01                     | 1.35                               | 3.83     | 27128 |
| 27129   | LED lamp, 12V 3.5/4W, GU 5.3 .....                                | 448.91         | 9.07                     | 12.13                              | 31.41    | 27129 |
| 27130   | LED lamp, 12V 6.5W, GU 5.3 .....                                  | 631.20         | 9.07                     | 12.13                              | 31.41    | 27130 |

| Item  |   |                |                          |                                    | Item     |       |
|-------|---|----------------|--------------------------|------------------------------------|----------|-------|
|       | <b>FLUORESCENT LIGHTING FITTINGS</b>  |                |                          |                                    |          |       |
|       | Surface mounted modular vandal resistant fluorescent lighting fitting c/w T5 electronic ballast, fluorescent tube, (one electronic ballast for each set of fluorescent tube), aluminium louvres/ reflectors, anti-vibration devices and polycarbonate diffusers : - | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only |       |
|       | <i>Each</i>   | A \$           | B \$                     | C \$                               | D \$     |       |
| 27131 | 200 x 600 mm, 1 x 14W, single tube.....   | 740.33         | 26.44                    | 31.32                              | 84.00    | 27131 |
| 27132 | 300 x 600 mm, 1 x 14W, single tube, matt-satin polycarbonate green cross blades, dimmable electronic ballast.....   | 419.62         | 29.62                    | 35.08                              | 89.53    | 27132 |
| 27133 | 300 x 600 mm, 2 x 14W, twin tube.....   | 806.97         | 29.62                    | 35.08                              | 89.53    | 27133 |
| 27134 | 300 x 600 mm, 2 x 14W, twin tube, IP54 c/w emergency power pack.....  | 1,656.86       | 29.62                    | 35.08                              | 89.53    | 27134 |
| 27135 | 300 x 600 mm, 2 x 14W, twin tube, IP54 c/w 1x10W PLC night light.....   | 1,451.84       | 29.62                    | 35.08                              | 89.53    | 27135 |
| 27136 | 600 x 600 mm, 3 x 14W, triple tube, IP54, impact resistance IK10.....   | 1,786.84       | 29.62                    | 35.08                              | 89.53    | 27136 |
| 27137 | 600 x 600 mm, 3 x 14W, triple tube, IP54, impact resistance IK10, c/w Ni-MH emergency power pack.....   | 2,003.75       | 29.62                    | 35.08                              | 89.53    | 27137 |
| 27138 | 200 x 1200 mm, 1 x 28W, single tube.....  | 770.72         | 26.44                    | 31.32                              | 84.00    | 27138 |
| 27139 | 300 x 1200 mm, 2 x 28W, twin tube.....  | 945.93         | 29.62                    | 35.08                              | 89.53    | 27139 |
| 27140 | 300 x 1200 mm, 2 x 28W, twin tube, IP54, impact resistance IK10, c/w 2-hour Ni-MH emergency power pack.....   | 1,663.17       | 29.62                    | 35.08                              | 89.53    | 27140 |
| 27141 | 300 x 1200 mm, 2 x 28W, twin tube, impact resistance IK10 c/w parabolic side reflector.....   | 1,682.79       | 29.62                    | 35.08                              | 89.53    | 27141 |
| 27142 | 300 x 1200 mm, 2 x 28W, twin tube, IP54, impact resistance IK10 c/w night light.....  | 2,149.55       | 29.62                    | 35.08                              | 89.53    | 27142 |
| 27143 | 250 x 1200 mm, 2 x 28W, twin tube, impact resistance IK10.....  | 1,294.10       | 29.62                    | 35.08                              | 89.53    | 27143 |
| 27144 | 200 x 1500 mm, 1 x 35W, single tube.....  | 1,075.75       | 28.08                    | 33.98                              | 89.11    | 27144 |
| 27145 | 300 x 1500 mm, 2 x 35W, twin tube.....  | 1,148.23       | 32.94                    | 38.59                              | 95.27    | 27145 |
| 27146 | 300 x 1500 mm, 2 x 35W, twin tube, IP54, impact resistance IK10, c/w self-contained emergency Ni-MH power pack.....   | 2,312.91       | 32.94                    | 38.59                              | 95.27    | 27146 |
| 27147 | 300 x 1500 mm, 2 x 35W, twin tube c/w parabolic side reflector.....   | 2,455.86       | 32.94                    | 38.59                              | 95.27    | 27147 |
| 27148 | 600 x 1200 mm, 3 x 28W, triple tube c/w parabolic side reflector.....   | 2,169.13       | 32.94                    | 38.59                              | 95.27    | 27148 |
| 27149 | 600 x 1200 mm, 3 x 28W, triple tube, IP54 c/w emergency power pack, impact resistance IK10.....   | 3,236.25       | 32.94                    | 38.59                              | 95.27    | 27149 |
| 27150 | 600 x 1200 mm, 3 x 28W, triple tube, IP54 c/w night light, impact resistance IK10.....  | 2,910.88       | 32.94                    | 38.59                              | 95.27    | 27150 |

| Item  |   |                |                          |                                    | Item     |       |
|-------|---|----------------|--------------------------|------------------------------------|----------|-------|
|       | <b>FLUORESCENT LIGHTING FITTINGS (CONT'D)</b>   |                |                          |                                    |          |       |
|       | Surface mounted fluorescent light fitting c/w T5 fluorescent tube, T5 electronic control gear/electronic ballast (one electronic ballast for each set of fluorescent tube) :- | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only |       |
|       | <b>Each</b>   | A \$           | B \$                     | C \$                               | D \$     |       |
| 27151 | 600 mm, 1 x 14W, batten type as SFA 50 .....  | 189.83         | 18.38                    | 22.94                              | 61.60    | 27151 |
| 27152 | 600 mm, 2 x 14W, batten type as SFA 69.....   | 276.06         | 20.11                    | 25.51                              | 71.08    | 27152 |
| 27153 | 600 mm, 1 x 14W, batten type with plastic diffuser as SFA 51.....   | 263.50         | 19.34                    | 23.81                              | 65.00    | 27153 |
| 27154 | 600 mm, 2 x 14W, batten type with plastic diffuser as SFA 74.....   | 389.88         | 21.58                    | 26.53                              | 74.60    | 27154 |
| 27155 | 1200 mm, 1 x 28W, batten type as SFA 50.....  | 212.91         | 20.41                    | 24.86                              | 68.95    | 27155 |
| 27156 | 1200 mm, 2 x 28W, batten type as SFA 69.....  | 327.05         | 21.96                    | 26.87                              | 79.83    | 27156 |
| 27157 | 1200 mm, 1 x 28W, batten type with metal trough reflector as SFA 58.....  | 277.87         | 21.38                    | 26.48                              | 73.12    | 27157 |
| 27158 | 1200 mm, 2 x 28W, batten type with metal trough reflector as SFA 72.....  | 422.39         | 23.44                    | 28.94                              | 84.30    | 27158 |
| 27159 | 1200 mm, 1 x 28W, batten type with metal angle reflector as SFA 56.....   | 282.74         | 21.58                    | 26.53                              | 73.12    | 27159 |
| 27160 | 1200 mm, 1 x 28W, batten type with plastic diffuser as SFA 51.....  | 313.30         | 21.58                    | 26.53                              | 73.12    | 27160 |
| 27161 | 1200 mm, 2 x 28W, batten type with plastic diffuser as SFA 74.....  | 483.15         | 23.44                    | 28.94                              | 84.30    | 27161 |
| 27162 | 1500 mm, 1 x 35W, batten type as SFA 50.....  | 249.63         | 21.24                    | 26.24                              | 72.78    | 27162 |
| 27163 | 1500 mm, 2 x 35W, batten type as SFA 69.....  | 388.82         | 24.73                    | 30.21                              | 85.71    | 27163 |
| 27164 | 1500 mm, 1 x 49W, batten type as SFA 50.....  | 253.95         | 21.24                    | 26.24                              | 72.78    | 27164 |
| 27165 | 1500 mm, 2 x 49W, batten type as SFA 69.....  | 396.56         | 24.73                    | 30.21                              | 85.71    | 27165 |
| 27166 | 1500 mm, 1 x 35W, batten type with metal trough reflector as SFA 58.....  | 301.39         | 24.07                    | 29.26                              | 77.31    | 27166 |

| Item  |   | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only | Item  |
|---|---|----------------|--------------------------|------------------------------------|----------|-------|
|   |   | A \$           | B \$                     | C \$                               | D \$     |       |
| <b>FLUORESCENT LIGHTING FITTINGS (CONT'D)</b> |   |                |                          |                                    |          |       |
|   | Surface mounted fluorescent light fitting c/w T5 fluorescent tube, T5 electronic control gear/electronic ballast (one electronic ballast for each set of fluorescent tube) :- (Cont'd)  |                |                          |                                    |          |       |
|   | <i>Each</i>   |                |                          |                                    |          |       |
| 27167   | 1500 mm, 2x35W, batten type with metal trough reflector as SFA 72.....  | 460.77         | 25.60                    | 32.06                              | 90.62    | 27167 |
| 27168   | 1500 mm, 1x49W, batten type with metal trough reflector as SFA 58.....  | 312.81         | 24.07                    | 29.26                              | 77.31    | 27168 |
| 27169   | 1500 mm, 2x49W, batten type with metal trough reflector as SFA 72.....  | 470.11         | 25.60                    | 32.06                              | 90.62    | 27169 |
| 27170   | 1500 mm, 1x35W, batten type with metal angle reflector as SFA 56.....   | 288.00         | 23.98                    | 29.08                              | 76.85    | 27170 |
| 27171   | 1500 mm, 1x49W, batten type with metal angle reflector as SFA 56.....   | 290.86         | 23.98                    | 29.08                              | 76.85    | 27171 |
| 27172   | 1500 mm, 1x35W, batten type with plastic diffuser as SFA 51.....  | 286.94         | 23.98                    | 29.08                              | 76.85    | 27172 |
| 27173   | 1500 mm, 2x35W, batten type with plastic diffuser as SFA 74.....  | 465.57         | 25.51                    | 31.87                              | 90.07    | 27173 |
| 27174   | 1500 mm, 1x49W, batten type with plastic diffuser as SFA 51.....  | 295.55         | 23.98                    | 29.08                              | 76.85    | 27174 |
| 27175   | 1500 mm, 2x49W, batten type with plastic diffuser as SFA 74.....  | 481.34         | 25.51                    | 31.87                              | 90.07    | 27175 |
|   | Surface mounted modular fluorescent light fitting c/w T5 fluorescent tube, electronic control gear/electronic ballast (one electronic ballast for each set of fluorescent tube), aluminium louvre/reflector/plastic diffuser (all types) :- |                |                          |                                    |          |       |
|   | <i>Each</i>   |                |                          |                                    |          |       |
| 27176   | 150x1500 mm, 1x35W as SFA 110.....  | 394.34         | 21.87                    | 26.76                              | 79.51    | 27176 |
| 27177   | 300x600 mm, 1x14W as SFA 110.....   | 414.15         | 21.87                    | 26.76                              | 79.51    | 27177 |
| 27178   | 300x600 mm, 2x14W as SFA 110.....   | 571.35         | 26.40                    | 31.26                              | 83.83    | 27178 |
| 27179   | 300x1200 mm, 1x28W as SFA 110.....  | 542.15         | 26.40                    | 31.26                              | 83.83    | 27179 |
| 27180   | 300x1500 mm, 1x35W as SFA 110.....  | 588.69         | 28.03                    | 33.84                              | 88.75    | 27180 |
| 27181   | 300x1500 mm, 1x49W as SFA 110.....  | 595.12         | 28.03                    | 33.84                              | 88.75    | 27181 |
| 27182   | 300x1200 mm, 2x28W as SFA 110.....  | 595.58         | 29.57                    | 34.93                              | 89.18    | 27182 |
| 27183   | 300x1200 mm, 2x28W c/w nano reflectors.....   | 860.25         | 29.57                    | 34.93                              | 89.18    | 27183 |

| Item  |  |                |                          |                                    | Item     |       |
|-------|--|----------------|--------------------------|------------------------------------|----------|-------|
|       | <b>FLUORESCENT LIGHTING FITTINGS (CONT'D)</b>  |                |                          |                                    |          |       |
|       | Surface mounted modular fluorescent light fitting c/w T5 fluorescent tube, electronic control gear/electronic ballast (one electronic ballast for each set of fluorescent tube), aluminium louvre/reflector/plastic diffuser (all types) :- (Cont'd) |                |                          |                                    |          |       |
|       | <i>Each</i>  |                |                          |                                    |          |       |
|       |  | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only |       |
|       |  | A<br>\$        | B<br>\$                  | C<br>\$                            | D<br>\$  |       |
| 27184 | 300x1500 mm, 2x35W as SFA 110.....   | 699.44         | 32.94                    | 38.51                              | 95.09    | 27184 |
| 27185 | 300x1500 mm, 2x35W c/w emergency power pack.....   | 829.08         | 32.94                    | 38.51                              | 95.09    | 27185 |
| 27186 | 300x1500 mm, 2x49W as SFA 110.....   | 710.09         | 32.94                    | 38.51                              | 95.09    | 27186 |
| 27187 | 400x1500 mm, 3x35W.....  | 545.38         | 32.94                    | 38.51                              | 95.09    | 27187 |
| 27188 | 600x600 mm, 2x14W as SFA 111.....  | 624.68         | 28.08                    | 33.91                              | 88.93    | 27188 |
| 27189 | 600x1200 mm, 2x28W as SFA 110.....   | 687.12         | 35.70                    | 42.07                              | 104.27   | 27189 |

| Item  |   |                |                          |                                    | Item     |       |
|-------|---|----------------|--------------------------|------------------------------------|----------|-------|
|       | <b>FLUORESCENT LIGHTING FITTINGS (CONT'D)</b>   |                |                          |                                    |          |       |
|       | Surface mounted modular fluorescent lighting fitting c/w T5 fluorescent tube, T5 electronic control gear/electronic ballast (one T5 electronic ballast for each set of T5 fluorescent tube) : -   | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only |       |
|       | <i>Each</i>   | A \$           | B \$                     | C \$                               | D \$     |       |
| 27190 | 600x600 mm, 3x14W as SFA 111.....   | 681.58         | 32.94                    | 38.51                              | 95.09    | 27190 |
| 27191 | 600x1200 mm, 3x28W as SFA 110.....  | 808.07         | 38.68                    | 45.69                              | 108.42   | 27191 |
| 27192 | 1200mm, 2x28W track light module luminaire for continuous lighting with housing c/w louver as SFA 201.....  | 1,080.08       | 26.93                    | 31.42                              | 72.09    | 27192 |
| 27193 | 1500mm, 2x35W track light module luminaire for continuous lighting with housing c/w louver.....   | 1,204.22       | 27.88                    | 31.90                              | 73.82    | 27193 |
|       | Surface mounted modular fluorescent lighting fitting c/w ball-proof hinged wire guard, with/without transparent polycarbonate/plastic cover, T5 fluorescent tube, T5 electronic control gear/electronic ballast (one T5 electronic ballast for each set of T5 fluorescent tube) : - |                |                          |                                    |          |       |
|       | <i>Each</i>   |                |                          |                                    |          |       |
| 27194 | 300 x 1200 mm, 2 x 28W as SFA 112.....  | 408.37         | 26.93                    | 31.42                              | 72.09    | 27194 |
| 27195 | 300 x 1500 mm, 1 x 35W as SFA 112.....  | 701.44         | 23.51                    | 28.20                              | 60.66    | 27195 |
| 27196 | 300 x 1500 mm, 2 x 35W as SFA 112.....  | 810.82         | 27.88                    | 31.90                              | 73.82    | 27196 |
| 27197 | 300 x 1500 mm, 2 x 35W c/w 2-hour emergency power pack.....   | 1,273.78       | 27.88                    | 31.90                              | 73.82    | 27197 |
| 27198 | 450 x 1200 mm, 3 x 28W as SFA 112.....  | 658.41         | 38.68                    | 45.69                              | 108.42   | 27198 |
| 27199 | 450 x 1500 mm, 3 x 35W as SFA 112.....  | 1,307.28       | 40.35                    | 46.75                              | 114.72   | 27199 |

| Item  |  |                      |                                      |  | Item        |       |
|-------|--|----------------------|--------------------------------------|--|-------------|-------|
|       | <b>FLUORESCENT LIGHTING FITTINGS (CONT'D)</b>  |                      |                                      |  |             |       |
|       | Surface mounted modular fluorescent lighting fitting c/w ball-proof hinged wire guard, with/without transparent polycarbonate/plastic cover, T5 fluorescent tube, T5 electronic control gear/electronic ballast (one T5 electronic ballast for each set of T5 fluorescent tube) : - (Cont'd) |                      |                                      |  |             |       |
|       | <i>Each</i>  |                      |                                      |  |             |       |
|       |  | Supply<br>and<br>fix | Take<br>down<br>and<br>clear<br>away | Take<br>down<br>and set<br>aside for<br>re-use | Fix<br>only |       |
|       |  | A<br>\$              | B<br>\$                              | C<br>\$  | D<br>\$     |       |
| 27200 | 450x1500 mm, 3x35W with ball-proof hinged wire guard and with/without transparent polycarbonate/plastic cover c/w emergency power pack.....  | 2,039.76             | 40.35                                | 46.75  | 114.72      | 27200 |
| 27201 | 600x1500 mm, 3x35W with ball-proof hinged wire guard and with/without transparent polycarbonate/plastic cover as SFA 112.....  | 1,062.75             | 40.35                                | 46.75  | 114.72      | 27201 |
| 27202 | 600x1200 mm, 3x54W with ball-proof hinged wire guard and with/without transparent polycarbonate/plastic cover as SFA 112.....  | 970.32               | 38.68                                | 45.69  | 108.42      | 27202 |
| 27203 | 600x1500 mm, 4x49W with ball-proof hinged wire guard and with/without transparent polycarbonate/plastic cover as SFA 112.....  | 1,397.35             | 43.50                                | 50.42  | 119.45      | 27203 |
|       | Surface/pendant mounted modular fluorescent light fitting c/w T5 fluorescent tube, electronic control gear/electronic ballast (one electronic ballast for each set of fluorescent tube), aluminium louvre/reflector /plastic diffuser (all types), die cast aluminium body : -               |                      |                                      |  |             |       |
|       | <i>Each</i>  |                      |                                      |  |             |       |
| 27204 | 1x28W as SFA 113.....  | 682.88               | 23.05                                | 27.54  | 60.04       | 27204 |
| 27205 | 2x28W as SFA 113.....  | 885.38               | 26.93                                | 31.42  | 72.09       | 27205 |
| 27206 | 3x28W as SFA 113.....  | 1,228.53             | 31.30                                | 36.59  | 83.39       | 27206 |

| Item  |   | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only | Item  |
|---|---|----------------|--------------------------|------------------------------------|----------|-------|
|   |   | A \$           | B \$                     | C \$                               | D \$     |       |
| <b>FLUORESCENT LIGHTING FITTINGS (CONT'D)</b> |   |                |                          |                                    |          |       |
|   | Surface/pendant mounted modular fluorescent light fitting c/w T5 fluorescent tube, electronic control gear/electronic ballast (one electronic ballast for each set of fluorescent tube), aluminium louvre/reflector /plastic diffuser (all types), die cast aluminium body : - (Cont'd) |                |                          |                                    |          |       |
|   | <b>Each</b>   |                |                          |                                    |          |       |
| 27207   | 1x35W as SFA 113.....   | 737.57         | 23.51                    | 28.20                              | 60.66    | 27207 |
| 27208   | 2x35W as SFA 113.....   | 1,094.89       | 27.88                    | 31.90                              | 73.82    | 27208 |
| 27209   | 3x35W as SFA 113.....   | 1,290.60       | 33.91                    | 40.02                              | 86.94    | 27209 |
|   | Recess mounted modular fluorescent light fitting c/w T5 fluorescent tube, electronic control gear/electronic ballast (one electronic ballast for each set of fluorescent tube), aluminium louvre/reflector/plastic diffuser (all types), with/without air slot : -                      |                |                          |                                    |          |       |
|   | <b>Each</b>   |                |                          |                                    |          |       |
| 27210   | 200x600 mm, 1x14W, vandal resistant.....  | 1,201.48       | 21.74                    | 26.65                              | 79.18    | 27210 |
| 27211   | 300x600 mm, 1x14W as SFA 114.....   | 521.92         | 21.74                    | 26.65                              | 79.18    | 27211 |
| 27212   | 300x600 mm, 1x14W c/w nano reflectors.....  | 538.54         | 21.74                    | 26.65                              | 79.18    | 27212 |
| 27213   | 300x600 mm, 2x14W as SFA 114.....   | 645.45         | 26.23                    | 31.13                              | 83.49    | 27213 |
| 27214   | 300x600 mm, 2x14W, vandal resistant.....  | 1,393.10       | 26.23                    | 31.13                              | 83.49    | 27214 |
| 27215   | 300x1200 mm, 1x28W as SFA 114.....  | 562.74         | 26.23                    | 31.13                              | 83.49    | 27215 |
| 27216   | 300x1200 mm, 2x28W as SFA 114.....  | 670.44         | 29.39                    | 34.86                              | 88.99    | 27216 |
| 27217   | 300x1500 mm, 1x35W as SFA 114.....  | 603.45         | 27.86                    | 33.77                              | 88.58    | 27217 |
| 27218   | 300x1500 mm, 1x49W as SFA 114.....  | 607.82         | 27.86                    | 33.77                              | 88.58    | 27218 |



| Item  |   |                |                          |                                    | Item     |       |
|---|---|----------------|--------------------------|------------------------------------|----------|-------|
| <b>FLUORESCENT LIGHTING FITTINGS (CONT'D)</b>   |   |                |                          |                                    |          |       |
| Recess mounted modular fluorescent light fitting c/w T5 fluorescent tube, electronic control gear/electronic ballast (one electronic ballast for each set of fluorescent tube), aluminium louvre/reflector/plastic diffuser (all types), with/without air slot : - (Cont'd) |   |                |                          |                                    |          |       |
| <i>Each</i>   |   |                |                          |                                    |          |       |
|   |   | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only |       |
|   |   | A \$           | B \$                     | C \$                               | D \$     |       |
| 27219   | 300 x 1200 mm, 2 x 28W c/w dimmable electronic ballast, 3-level dimmer switch and 2-hour emergency power pack.....      | 841.01         | 29.39                    | 34.86                              | 88.99    | 27219 |
| 27220   | 300 x 1500 mm, 2 x 35W as SFA 114.....  | 725.89         | 32.67                    | 38.35                              | 94.71    | 27220 |
| 27221   | 300 x 1500 mm, 2 x 49W as SFA 114.....  | 734.76         | 32.67                    | 38.35                              | 94.71    | 27221 |
| 27222   | 450 x 635 mm, 1 x 14W c/w air slots.....  | 221.67         | 27.86                    | 33.77                              | 88.58    | 27222 |
| 27223   | 485 x 735 mm, 1x14W c/w air slots with perforated white panel.....  | 330.62         | 27.86                    | 33.77                              | 88.58    | 27223 |
| 27224   | 485 x 735 mm, 1x14W c/w air slots with perforated white panel and 2-hour emergency power pack.....                      | 424.73         | 27.86                    | 33.77                              | 88.58    | 27224 |
| 27225   | 485 x 735 mm, 2x14W c/w air slots with perforated white panel and 2-hour emergency power pack.....                      | 500.57         | 32.67                    | 38.35                              | 94.71    | 27225 |
| 27226   | 485 x 1200 mm, 1x28W c/w air slots with perforated white panel.....   | 334.54         | 32.67                    | 38.35                              | 94.71    | 27226 |
| 27227   | 485 x 1200 mm, 1x28W c/w air slots with perforated white panel and 2-hour emergency power pack.....                     | 472.37         | 32.67                    | 38.35                              | 94.71    | 27227 |
| 27228   | 485 x 1200 mm, 2x28W c/w air slots with perforated white panel and 2-hour emergency power pack.....                     | 544.77         | 32.67                    | 38.35                              | 94.71    | 27228 |
| 27229   | 485x1485 mm, 1x35W c/w white powder coated sheet steel with perforated white panel .....                                | 338.45         | 32.67                    | 38.35                              | 94.71    | 27229 |
| 27230   | 485x1485 mm, 1x35W c/w white powder coated sheet steel with perforated white panel and 2-hour emergency power pack..... | 520.00         | 32.67                    | 38.35                              | 94.71    | 27230 |
| 27231   | 485x1485 mm, 2x35W c/w white powder coated sheet steel with perforated white panel .....                                | 407.43         | 32.67                    | 38.35                              | 94.71    | 27231 |
| 27232   | 485x1485 mm, 2x35W c/w white powder coated sheet steel with perforated white panel and 2-hour emergency power pack..... | 588.97         | 32.67                    | 38.35                              | 94.71    | 27232 |
| 27233   | 600x600 mm, 2x14W as SFA 115.....   | 651.70         | 27.86                    | 33.77                              | 88.58    | 27233 |
| 27234   | 600x600 mm, 2x14W c/w nano reflectors.....  | 686.37         | 27.86                    | 33.77                              | 88.58    | 27234 |
| 27235   | 600x600 mm, 3x14W as SFA 115.....   | 705.07         | 32.67                    | 38.35                              | 94.71    | 27235 |
| 27236   | 600x600 mm, 4x14W as SFA 115.....   | 884.32         | 32.67                    | 38.35                              | 94.71    | 27236 |

| Item  |   |                |                          |                                    | Item     |       |
|-------|---|----------------|--------------------------|------------------------------------|----------|-------|
|       | <b>FLUORESCENT LIGHTING FITTINGS (CONT'D)</b>   |                |                          |                                    |          |       |
|       | Recess mounted modular fluorescent light fitting c/w T5 fluorescent tube, electronic control gear/electronic ballast (one electronic ballast for each set of fluorescent tube), aluminium louvre/reflector/plastic diffuser (all types), with/without air slot : - (Cont'd) |                |                          |                                    |          |       |
|       | <i>Each</i>   | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only |       |
|       |   | A \$           | B \$                     | C \$                               | D \$     |       |
| 27237 | 595x1195 mm, 2x28W c/w dimmable electronic ballast.....   | 609.11         | 35.41                    | 41.90                              | 103.84   | 27237 |
| 27238 | 600x1200 mm, 2x28W as SFA 114.....  | 718.29         | 35.41                    | 41.90                              | 103.84   | 27238 |
| 27239 | 600x1200 mm, 2x28W c/w nano reflectors.....   | 988.39         | 35.41                    | 41.90                              | 103.84   | 27239 |
| 27240 | 600x1200 mm, 2x28W c/w mirror aluminium back reflector, dimmable electronic ballast, 3-level dimmer switch and 2-hour emergency power pack.....   | 981.81         | 35.41                    | 41.90                              | 103.84   | 27240 |
| 27241 | 600x1200 mm, 3x28W as SFA 114.....  | 894.84         | 38.36                    | 45.52                              | 107.98   | 27241 |
| 27242 | 600x1200 mm, 4x28W as SFA 114.....  | 1,019.09       | 38.36                    | 45.52                              | 107.98   | 27242 |
|       | Compact fluorescent down light fitting, recess mounted to false ceiling, integral electronic control gear/ballast, white stove enameled steel/die cast aluminium body and anodized aluminium reflector with/without metal trim:-  |                |                          |                                    |          |       |
|       | <i>Each</i>   |                |                          |                                    |          |       |
| 27243 | Down light with 7/9/11W PL lamp as SFA 224.....   | 204.67         | 15.18                    | 18.58                              | 52.72    | 27243 |
| 27244 | Down light with 7/9/11W PL lamp c/w glass diffuser as SFA 224.....  | 273.35         | 15.18                    | 18.58                              | 52.72    | 27244 |
| 27245 | Down light with 13/18/26W PL lamp as SFA 224.....   | 221.05         | 15.18                    | 18.58                              | 52.72    | 27245 |
| 27246 | Down light with 13/18/26W PL lamp c/w glass diffuser as SFA 224.....  | 287.02         | 15.18                    | 18.58                              | 52.72    | 27246 |
| 27247 | Down light with 2x13/2x18/2x26W PL lamp as SFA 224.....   | 292.36         | 15.18                    | 18.58                              | 52.72    | 27247 |
| 27248 | Down light with 2x13/2x18/2x26W PL lamp c/w glass diffuser as SFA 224.....  | 365.48         | 15.18                    | 18.58                              | 52.72    | 27248 |
| 27249 | Down light with 13/18/26W PL lamp, IP 65 c/w safety glass diffuser as SFA 224.....  | 1,854.49       | 15.18                    | 18.58                              | 52.72    | 27249 |
| 27250 | Down light with dimmable electronic ballast, 13/18/26W PL lamp as SFA 224.....  | 1,179.19       | 15.18                    | 18.58                              | 52.72    | 27250 |
| 27251 | Down light with dimmable electronic ballast, 2x13/2x18/2x26W PL lamp as SFA 224.....  | 1,319.35       | 15.18                    | 18.58                              | 52.72    | 27251 |

| Item  |  | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only | Item  |
|-------|--|----------------|--------------------------|------------------------------------|----------|-------|
|       |  | A<br>\$        | B<br>\$                  | C<br>\$                            | D<br>\$  |       |
|       | <b>FLUORESCENT LIGHTING FITTINGS (CONT'D)</b>  |                |                          |                                    |          |       |
|       | Recessed downlight : -   |                |                          |                                    |          |       |
|       | <i>Each</i>  |                |                          |                                    |          |       |
| 27252 | Ceiling recessed downlight as SFA 224, die cast aluminium body and front ring, anodised aluminium reflector, 150mm diameter, IP65 c/w safety glass, control gear and 1 x 18W/26W compact fluorescent lamp c/w emergency power pack with NiMH rechargeable battery for 2 hours discharge..... | 1,127.97       | 17.43                    | 20.93                              | 63.25    | 27252 |
|       | Surface mounted fluorescent light fitting c/w T5 circular fluorescent tube, electronic control gear/electronic ballast and diffuser : -  |                |                          |                                    |          |       |
|       | <i>Each</i>  |                |                          |                                    |          |       |
| 27253 | 1 x 22W.....   | 786.32         | 20.75                    | 26.36                              | 79.21    | 27253 |
| 27254 | 1 x 40W.....   | 1,003.33       | 20.75                    | 26.36                              | 79.21    | 27254 |
|       | Surface mounted compact fluorescent light fitting, integral electronic control gear/ballast : -  |                |                          |                                    |          |       |
|       | <i>Each</i>  |                |                          |                                    |          |       |
| 27255 | Twin compact fluorescent 9W c/w prismatic controller.....  | 439.99         | 19.23                    | 23.72                              | 64.87    | 27255 |
| 27256 | Twin compact fluorescent 11W c/w prismatic controller.....   | 474.36         | 19.23                    | 23.72                              | 64.87    | 27256 |
| 27257 | Circular/diamond shape compact fluorescent lighting fitting opal/clear prismatic polycarbonate diffuser, die cast aluminium/polycarbonate body c/w 16/21W 2D lamp .....  | 394.20         | 19.34                    | 23.81                              | 65.00    | 27257 |
| 27258 | Circular/diamond shape compact fluorescent lighting fitting opal/clear prismatic polycarbonate diffuser, die cast aluminium/polycarbonate body c/w 28/38W 2D lamp .....  | 476.30         | 19.34                    | 23.81                              | 65.00    | 27258 |
| 27259 | Circular/diamond shape compact fluorescent lighting fitting vandal resistant prismatic diffuser, die-cast aluminium base with IP65 protection body c/w 16/21W 2D electronic ballast and lamp tube .....  | 788.94         | 19.34                    | 23.81                              | 65.00    | 27259 |
| 27260 | Circular/diamond shape compact fluorescent lighting fitting vandal resistant prismatic diffuser, die-cast aluminium base with IP65 protection body c/w 28/38W 2D electronic ballast and lamp tube .....  | 861.54         | 19.34                    | 23.81                              | 65.00    | 27260 |
| 27261 | Circular/diamond shape compact fluorescent lighting fitting vandal resistant prismatic diffuser, die-cast aluminium base with IP65 protection body c/w 28/38W 2D electronic ballast, lamp tube and 2 hours emergency power pack (NiMH) and charger.....                                      | 1,477.19       | 19.34                    | 23.81                              | 65.00    | 27261 |

| Item  |   | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only | Item  |
|---|---|----------------|--------------------------|------------------------------------|----------|-------|
|   |   | A \$           | B \$                     | C \$                               | D \$     |       |
| <b>FLUORESCENT LIGHTING FITTINGS (CONT'D)</b> |   |                |                          |                                    |          |       |
|   | Self-contained and maintained type for 2-hour duration emergency fluorescent lighting fitting c/w battery charger, inverter and :-  |                |                          |                                    |          |       |
|   | <i>Each</i>   |                |                          |                                    |          |       |
| 27262   | 600/900 mm single fluorescent tube (electronic ballast).....  | 374.25         | 19.04                    | 23.44                              | 65.34    | 27262 |
| 27263   | Ditto but twin fluorescent tubes (electronic ballasts).....   | 475.10         | 20.94                    | 25.51                              | 71.08    | 27263 |
| 27264   | 1200 - 1500 mm single fluorescent tube (electronic ballast).....  | 550.51         | 21.70                    | 26.04                              | 75.90    | 27264 |
| 27265   | Ditto but twin fluorescent tubes (electronic ballasts).....   | 640.19         | 22.82                    | 27.03                              | 82.02    | 27265 |
| 27266   | Bulk head fitting, 1 x 13/18/26W PL-C compact fluorescent tube.....   | 489.76         | 20.41                    | 24.86                              | 68.95    | 27266 |
| 27267   | Ditto but 2 x 13/18/26W PL-C compact fluorescent tubes.....   | 562.41         | 20.41                    | 24.86                              | 68.95    | 27267 |
| 27268   | Bulk head fitting, 1 x 7/9/11W PL-S compact fluorescent tube.....   | 437.45         | 20.41                    | 24.86                              | 68.95    | 27268 |
| 27269   | Ditto but 2 x 7/9/11W PL-S compact fluorescent tubes.....   | 491.15         | 20.41                    | 24.86                              | 68.95    | 27269 |
|   | Weather proof, IP65 self-contained and maintained type for 2-hour duration emergency fluorescent lighting fitting with polycarbonate / slab cover, battery charger, inverter and :- |                |                          |                                    |          |       |
|   | <i>Each</i>   |                |                          |                                    |          |       |
| 27270   | 600/900 mm single fluorescent tube (electronic ballast).....  | 499.60         | 18.94                    | 23.25                              | 64.82    | 27270 |
| 27271   | Ditto but twin fluorescent lamp tubes (electronic ballasts).....  | 658.67         | 19.99                    | 25.29                              | 70.52    | 27271 |
| 27272   | 1200-1500 mm single fluorescent tube (electronic ballast).....  | 637.70         | 22.18                    | 26.74                              | 81.09    | 27272 |
| 27273   | Ditto but twin fluorescent lamp tubes (electronic ballasts).....  | 806.01         | 22.70                    | 26.83                              | 81.36    | 27273 |
| 27274   | Bulk head fitting, 1 x 13/18/26W PL-C compact fluorescent tube.....   | 643.88         | 20.29                    | 24.66                              | 68.41    | 27274 |
| 27275   | Ditto but 2 x 13/18/26W PL-C compact fluorescent tubes.....   | 757.43         | 20.29                    | 24.66                              | 68.41    | 27275 |
| 27276   | Bulk head fitting, 1 x 7/9/11W PL-S compact fluorescent tube.....   | 608.88         | 20.29                    | 24.66                              | 68.41    | 27276 |
| 27277   | Ditto but 2 x 7/9/11W PL-S compact fluorescent tubes.....   | 664.23         | 20.29                    | 24.66                              | 68.41    | 27277 |

| Item  |  |                |                          |                                    | Item     |       |
|-------|--|----------------|--------------------------|------------------------------------|----------|-------|
|       | <b>FLUORESCENT LIGHTING FITTINGS (CONT'D)</b>  |                |                          |                                    |          |       |
|       | Glass-fiber fluorescent light fitting c/w polycarbonate diffuser, IP 65, corrosion resistant, T5 fluorescent tube and electronic ballast (one electronic ballast for each set of fluorescent tube) : - | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only |       |
|       | <i>Each</i>  | A \$           | B \$                     | C \$                               | D \$     |       |
| 27278 | 600 mm, 1x14W as SFA 116.....  | 286.05         | 19.23                    | 23.63                              | 64.48    | 27278 |
| 27279 | 600 mm, 2x14W as SFA 117.....  | 371.35         | 21.26                    | 26.27                              | 73.99    | 27279 |
| 27280 | 1200 mm, 1x28W as SFA 116.....   | 341.83         | 21.46                    | 26.31                              | 72.53    | 27280 |
| 27281 | 1200 mm, 2x28W as SFA 117.....   | 492.06         | 23.30                    | 27.33                              | 83.61    | 27281 |
| 27282 | 1500 mm, 1x35W as SFA 116.....   | 473.02         | 24.24                    | 29.61                              | 77.66    | 27282 |
| 27283 | 1500 mm, 2x35W as SFA 117.....   | 700.84         | 25.45                    | 31.80                              | 89.88    | 27283 |
| 27284 | 1500 mm, 1x49W as SFA 116.....   | 476.45         | 27.38                    | 33.32                              | 83.15    | 27284 |
| 27285 | 1500 mm, 2x49W as SFA 117.....   | 705.92         | 28.75                    | 35.78                              | 96.23    | 27285 |
|       | Corrosion resistant IP65 fluorescent lighting fitting c/w self-contained battery (NiMH) for 2 hours discharge (emergency of the normal length) : -   |                |                          |                                    |          |       |
|       | <i>Each</i>  |                |                          |                                    |          |       |
| 27286 | 600 mm, 1 x 20W, single tube.....  | -              | 19.27                    | 23.72                              | 64.75    | 27286 |
| 27287 | 600 mm, 2 x 20W, twin tubes.....   | -              | 21.17                    | 26.13                              | 72.49    | 27287 |
| 27288 | 1200 mm, 1 x 40W, single tube.....   | -              | 20.33                    | 24.78                              | 68.69    | 27288 |
| 27289 | 1200 mm, 2 x 40W, twin tubes.....  | -              | 22.03                    | 27.00                              | 79.51    | 27289 |
| 27290 | 1500 mm, 1 x 65W, single tube.....   | -              | 21.17                    | 26.13                              | 72.49    | 27290 |
| 27291 | 1500 mm, 2 x 65W, twin tubes.....  | -              | 24.63                    | 30.10                              | 85.37    | 27291 |

| Item  |   |                |                          |                                    | Item     |       |
|-------|---|----------------|--------------------------|------------------------------------|----------|-------|
|       | <b>FLUORESCENT LIGHTING FITTINGS (CONT'D)</b>   |                |                          |                                    |          |       |
|       | Corrosion resistant IP65 fluorescent lighting fitting c/w T8 electronic ballast and self-contained battery (NiCd) for 2 hours discharge (emergency of the normal length) :- | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only |       |
|       | <i>Each</i>   | A \$           | B \$                     | C \$                               | D \$     |       |
| 27292 | 600 mm, 1 x 18W, single tube.....   | -              | 18.96                    | 23.40                              | 63.77    | 27292 |
| 27293 | 600 mm, 2 x 18W, twin tubes.....  | -              | 21.34                    | 26.42                              | 74.45    | 27293 |
| 27294 | 1200 mm, 1 x 36W, single tube.....  | -              | 20.37                    | 24.82                              | 68.82    | 27294 |
| 27295 | 1200 mm, 2 x 36W, twin tubes.....   | -              | 22.09                    | 27.06                              | 79.67    | 27295 |
| 27296 | 1500 mm, 1 x 58W, single tube.....  | -              | 21.34                    | 26.42                              | 74.45    | 27296 |
| 27297 | 1500 mm, 2 x 58W, twin tubes.....   | -              | 24.69                    | 30.15                              | 85.54    | 27297 |
|       | Corrosion resistant IP65 fluorescent lighting fitting c/w T8 electronic ballast and self-contained battery (NiMH) for 2 hours discharge (emergency of the normal length) :- |                |                          |                                    |          |       |
|       | <i>Each</i>   |                |                          |                                    |          |       |
| 27298 | 600 mm, 1 x 18W, single tube.....   | -              | 18.96                    | 23.40                              | 63.77    | 27298 |
| 27299 | 600 mm, 2 x 18W, twin tubes.....  | -              | 21.34                    | 26.42                              | 74.45    | 27299 |
| 27300 | 1200 mm, 1 x 36W, single tube.....  | -              | 20.37                    | 24.82                              | 68.82    | 27300 |
| 27301 | 1200 mm, 2 x 36W, twin tubes.....   | -              | 22.09                    | 27.06                              | 79.67    | 27301 |
| 27302 | 1500 mm, 1 x 58W, single tube.....  | -              | 21.34                    | 26.42                              | 74.45    | 27302 |
| 27303 | 1500 mm, 2 x 58W, twin tubes.....   | -              | 24.69                    | 30.15                              | 85.54    | 27303 |
|       | Corrosion resistant IP65 fluorescent lighting fitting c/w T5 electronic ballast and self-contained battery (NiCd) for 2 hours discharge (emergency of the normal length) :- |                |                          |                                    |          |       |
|       | <i>Each</i>   |                |                          |                                    |          |       |
| 27304 | 600 mm, 1 x 14W, single tube.....   | 597.90         | 18.96                    | 23.40                              | 63.77    | 27304 |
| 27305 | 600 mm, 2 x 14W, twin tubes.....  | 709.59         | 21.34                    | 26.42                              | 74.45    | 27305 |
| 27306 | 1200 mm, 1 x 28W, single tube.....  | 644.88         | 20.37                    | 24.82                              | 68.82    | 27306 |
| 27307 | 1200 mm, 2 x 28W, twin tubes.....   | 796.38         | 22.09                    | 27.06                              | 79.67    | 27307 |
| 27308 | 1500 mm, 1 x 35W, single tube.....  | 979.51         | 21.20                    | 26.19                              | 72.66    | 27308 |
| 27309 | 1500 mm, 2 x 35W, twin tubes.....   | 1,149.62       | 24.68                    | 30.15                              | 85.54    | 27309 |
| 27310 | 1500 mm, 1 x 49W, single tube.....  | 1,124.74       | 21.34                    | 26.42                              | 74.45    | 27310 |
| 27311 | 1500 mm, 2 x 49W, twin tubes.....   | 1,339.54       | 24.84                    | 30.41                              | 87.65    | 27311 |

| Item  |  | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only | Item  |
|---|--|----------------|--------------------------|------------------------------------|----------|-------|
|   |  | A \$           | B \$                     | C \$                               | D \$     |       |
| <b>FLUORESCENT LIGHTING FITTINGS (CONT'D)</b> |  |                |                          |                                    |          |       |
|   | Corrosion resistant IP65 fluorescent lighting fitting c/w T5 electronic ballast and self-contained battery (NiMH) for 2 hours discharge (emergency of the normal length) :-          |                |                          |                                    |          |       |
|   | <i>Each</i>  |                |                          |                                    |          |       |
| 27312   | 600 mm, 1 x 14W, single tube.....  | 723.28         | 18.96                    | 23.40                              | 63.77    | 27312 |
| 27313   | 600 mm, 2 x 14W, twin tubes.....   | 870.36         | 21.34                    | 26.42                              | 74.45    | 27313 |
| 27314   | 1200 mm, 1 x 28W, single tube.....   | 776.59         | 20.37                    | 24.82                              | 68.82    | 27314 |
| 27315   | 1200 mm, 2 x 28W, twin tubes.....  | 940.17         | 22.09                    | 27.06                              | 79.67    | 27315 |
| 27316   | 1500 mm, 1 x 35W, single tube.....   | 1,267.98       | 21.20                    | 26.19                              | 72.66    | 27316 |
| 27317   | 1500 mm, 2 x 35W, twin tubes.....  | 1,503.25       | 24.68                    | 30.15                              | 85.54    | 27317 |
| 27318   | 1500 mm, 1 x 49W, single tube.....   | 1,272.40       | 21.34                    | 26.42                              | 74.45    | 27318 |
| 27319   | 1500 mm, 2 x 49W, twin tubes.....  | 1,514.88       | 24.84                    | 30.41                              | 87.65    | 27319 |
|   | Corrosion resistant IP65 fluorescent lighting fitting c/w T5 electronic dimmable ballast and self-contained battery (NiMH) for 2 hours discharge (emergency of the normal length) :- |                |                          |                                    |          |       |
|   | <i>Each</i>  |                |                          |                                    |          |       |
| 27320   | 1200 mm, 1 x 28W, single tube.....   | 890.93         | 20.33                    | 24.78                              | 68.69    | 27320 |
| 27321   | 1200 mm, 2 x 28W, twin tubes.....  | 1,167.48       | 22.03                    | 27.00                              | 79.51    | 27321 |
| 27322   | 1500 mm, 1 x 35W, single tube.....   | 1,383.45       | 21.17                    | 26.13                              | 72.49    | 27322 |
| 27323   | 1500 mm, 2 x 35W, twin tubes.....  | 1,732.65       | 24.63                    | 30.10                              | 85.37    | 27323 |
| 27324   | 1200 mm, 1 x 28W, single tube c/w light sensor.....  | 889.37         | 20.33                    | 24.78                              | 68.69    | 27324 |
| 27325   | 1500 mm, 1 x 35W, single tube c/w light sensor.....  | 1,399.91       | 21.17                    | 26.13                              | 72.49    | 27325 |
|   | Corrosion resistant IP65 fluorescent lighting fitting :-   |                |                          |                                    |          |       |
|   | <i>Each</i>  |                |                          |                                    |          |       |
| 27326   | 600 mm, 1 x 20W, single tube.....  | -              | 19.27                    | 23.72                              | 64.75    | 27326 |
| 27327   | 600 mm, 2 x 20W, twin tubes.....   | -              | 21.17                    | 26.13                              | 72.49    | 27327 |
| 27328   | 1200 mm, 1 x 40W, single tube.....   | -              | 20.33                    | 24.78                              | 68.69    | 27328 |
| 27329   | 1200 mm, 2 x 40W, twin tubes.....  | -              | 22.03                    | 27.00                              | 79.51    | 27329 |
| 27330   | 1500 mm, 1 x 65W, single tube.....   | -              | 21.17                    | 26.13                              | 72.49    | 27330 |
| 27331   | 1500 mm, 2 x 65W, twin tubes.....  | -              | 24.63                    | 30.10                              | 85.37    | 27331 |

| Item   |   | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only | Item  |
|--|---|----------------|--------------------------|------------------------------------|----------|-------|
|  |   | A<br>\$        | B<br>\$                  | C<br>\$                            | D<br>\$  |       |
| <b>FLUORESCENT LIGHTING FITTINGS (CONT'D)</b>  |   |                |                          |                                    |          |       |
| Corrosion resistant IP65 fluorescent lighting fitting c/w T8 electronic ballast : -          |   |                |                          |                                    |          |       |
| <i>Each</i>  |   |                |                          |                                    |          |       |
| 27332  | 600 mm, 1 x 18W, single tube.....                   | -              | 18.96                    | 23.40                              | 63.77    | 27332 |
| 27333  | 600 mm, 2 x 18W, twin tubes.....                    | -              | 21.34                    | 26.42                              | 74.45    | 27333 |
| 27334  | 1200 mm, 1 x 36W, single tube.....                  | -              | 20.37                    | 24.82                              | 68.82    | 27334 |
| 27335  | 1200 mm, 2 x 36W, twin tubes.....                   | -              | 22.09                    | 27.06                              | 79.67    | 27335 |
| 27336  | 1500 mm, 1 x 58W, single tube.....                  | -              | 21.34                    | 26.42                              | 74.45    | 27336 |
| 27337  | 1500 mm, 2 x 58W, twin tubes.....                   | -              | 24.68                    | 30.15                              | 85.54    | 27337 |
| Corrosion resistant IP65 fluorescent lighting fitting c/w T5 electronic ballast : -          |   |                |                          |                                    |          |       |
| <i>Each</i>  |   |                |                          |                                    |          |       |
| 27338  | 600 mm, 1 x 14W, single tube.....                   | 510.48         | 18.96                    | 23.40                              | 63.77    | 27338 |
| 27339  | 600 mm, 2 x 14W, twin tubes.....                    | 657.56         | 21.20                    | 26.19                              | 72.66    | 27339 |
| 27340  | 1200 mm, 1 x 28W, single tube.....                  | 555.79         | 20.37                    | 24.82                              | 68.82    | 27340 |
| 27341  | 1200 mm, 2 x 28W, twin tubes.....                   | 719.37         | 22.09                    | 27.06                              | 79.67    | 27341 |
| 27342  | 1500 mm, 1 x 35W, single tube.....                  | 979.73         | 21.20                    | 26.19                              | 72.66    | 27342 |
| 27343  | 1500 mm, 2 x 35W, twin tubes.....                   | 1,203.24       | 24.68                    | 30.15                              | 85.54    | 27343 |
| 27344  | 1500 mm, 1 x 49W, single tube.....                  | 1,035.50       | 21.20                    | 26.19                              | 72.66    | 27344 |
| 27345  | 1500 mm, 2 x 49W, twin tubes.....                   | 1,277.98       | 24.68                    | 30.15                              | 85.54    | 27345 |
| Corrosion resistant IP65 fluorescent lighting fitting c/w T5 electronic dimmable ballast : - |   |                |                          |                                    |          |       |
| <i>Each</i>  |   |                |                          |                                    |          |       |
| 27346  | 1200 mm, 1 x 28W, single tube.....                  | 670.13         | 20.33                    | 24.78                              | 68.69    | 27346 |
| 27347  | 1200 mm, 2 x 28W, twin tubes.....                   | 946.68         | 22.03                    | 27.00                              | 79.51    | 27347 |
| 27348  | 1500 mm, 1 x 35W, single tube.....                  | 1,158.60       | 21.17                    | 26.13                              | 72.49    | 27348 |
| 27349  | 1500 mm, 2 x 35W, twin tubes.....                   | 1,507.80       | 24.63                    | 30.10                              | 85.37    | 27349 |
| 27350  | 1200 mm, 1 x 28W, single tube c/w light sensor..... | 668.57         | 20.33                    | 24.78                              | 68.69    | 27350 |
| 27351  | 1500 mm, 1 x 35W, single tube c/w light sensor..... | 1,175.06       | 21.17                    | 26.13                              | 72.49    | 27351 |



| Item  |  |                |                          |                                    | Item     |       |
|-------|--|----------------|--------------------------|------------------------------------|----------|-------|
|       | <b>FLUORESCENT LIGHTING FITTINGS (CONT'D)</b>  |                |                          |                                    |          |       |
|       | Surface mounted modular fluorescent light fitting c/w T5 fluorescent tube, dimmable electronic control gear/electronic ballast (one electronic ballast for each set of fluorescent tube), aluminium louvre/reflector/ plastic diffuser (all types) : - | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only |       |
|       | <i>Each</i>  | A \$           | B \$                     | C \$                               | D \$     |       |
| 27352 | 300x600 mm, 1x14W as SFA 110.....  | 519.62         | 21.87                    | 26.76                              | 79.51    | 27352 |
| 27353 | 300x600 mm, 2x14W as SFA 110.....  | 782.29         | 26.40                    | 31.26                              | 83.83    | 27353 |
| 27354 | 300x1200 mm, 1x28W as SFA 110.....   | 595.07         | 26.40                    | 31.26                              | 83.83    | 27354 |
| 27355 | 300x1200 mm, 2x28W as SFA 110.....   | 845.14         | 29.57                    | 35.00                              | 89.35    | 27355 |
| 27356 | 300x1500 mm, 1x35W as SFA 110.....   | 695.05         | 28.03                    | 33.91                              | 88.93    | 27356 |
| 27357 | 300x1500 mm, 2x35W as SFA 110.....   | 971.26         | 32.87                    | 38.51                              | 95.09    | 27357 |
| 27358 | 300x1500 mm, 1x49W as SFA 110.....   | 708.83         | 28.03                    | 33.91                              | 88.93    | 27358 |
| 27359 | 300x1500 mm, 2x49W as SFA 110.....   | 998.75         | 32.87                    | 38.51                              | 95.09    | 27359 |
|       | Flameproof IP66 fluorescent fitting c/w T5 electronic ballast for use in Zone 1 hazardous area and for gas groups IIA & IIB conform to FSD requirements : -  |                |                          |                                    |          |       |
|       | <i>Each</i>  |                |                          |                                    |          |       |
| 27360 | 600 mm, 1 x 14W, single tube batten.....   | 4,607.11       | 49.20                    | 61.68                              | 184.39   | 27360 |
| 27361 | 600 mm, 2 x 14W, twin tubes batten.....  | 4,932.76       | 53.81                    | 66.52                              | 195.73   | 27361 |
| 27362 | 1200 mm, 1 x 28W, single tube batten.....  | 4,890.01       | 49.20                    | 61.68                              | 184.39   | 27362 |
| 27363 | 1200 mm, 2 x 28W, twin tubes batten.....   | 5,180.21       | 53.81                    | 66.52                              | 195.73   | 27363 |
| 27364 | 1500 mm, 1 x 35W, single tube batten.....  | 5,697.99       | 49.20                    | 61.68                              | 184.39   | 27364 |
| 27365 | 1500 mm, 2 x 35W, twin tubes batten.....   | 6,037.08       | 53.81                    | 66.52                              | 195.73   | 27365 |
| 27366 | 1500 mm, 1 x 49W, single tube batten.....  | 6,512.93       | 49.20                    | 61.68                              | 184.39   | 27366 |
| 27367 | 1500 mm, 2 x 49W, twin tubes batten.....   | 6,859.33       | 53.81                    | 66.52                              | 195.73   | 27367 |
|       | X-ray view boxes : -   |                |                          |                                    |          |       |
|       | <i>Each</i>  |                |                          |                                    |          |       |
| 27368 | X-ray view box, twin type, 1 mm thick aluminium x-ray viewing boxes; fluorescent tubes with color temperature 6500k to suit viewing box; 3 mm thick transparent perspex; including all necessary electrical connection to adjacent power source .....  | 2,751.27       | 20.25                    | 24.71                              | 68.54    | 27368 |
| 27369 | Ditto but stainless steel x-ray viewing box.....   | 3,156.82       | 20.25                    | 24.71                              | 68.54    | 27369 |

| Item  |   |                |                          |                                    |          |       |
|-------|---|----------------|--------------------------|------------------------------------|----------|-------|
|       | <b>FLUORESCENT LIGHTING FITTINGS (CONT'D)</b>   |                |                          |                                    |          |       |
|       | Emergency power pack (with inverter, battery charger, indication lights, test button and nickel-metal hydride rechargeable battery for 2 hours discharge) for fluorescent light/compact fluorescent light /LED light fitting: - | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only |       |
|       | <i>Each</i>   | A<br>\$        | B<br>\$                  | C<br>\$                            | D<br>\$  |       |
| 27370 | Not exceeding 18W.....  | 304.16         | 6.83                     | 8.26                               | 21.19    | 27370 |
| 27371 | 18W-28W power pack.....   | 402.03         | 6.83                     | 8.26                               | 21.19    | 27371 |
| 27372 | 28W-35W power pack.....   | 462.96         | 6.83                     | 8.26                               | 21.19    | 27372 |
| 27373 | 35W-58W power pack.....   | 663.16         | 6.83                     | 8.26                               | 21.19    | 27373 |
|       | Reflector for surface mounted fluorescent light fittings (batten type): -   |                |                          |                                    |          |       |
|       | <i>Each</i>   |                |                          |                                    |          |       |
| 27374 | Metal angle reflector, 1200 mm for SFA 56 .....   | 71.45          | 7.83                     | 8.85                               | 22.77    | 27374 |
| 27375 | Metal angle reflector, 1500 mm for SFA 56.....  | 78.75          | 7.83                     | 8.85                               | 22.77    | 27375 |
| 27376 | Metal trough reflector, 1200 mm for single tube batten as SFA 58.....   | 80.94          | 7.88                     | 8.91                               | 22.91    | 27376 |
| 27377 | Metal trough reflector, 1200 mm for twin tubes batten as SFA 72.....  | 98.71          | 7.88                     | 8.91                               | 22.91    | 27377 |
| 27378 | Metal trough reflector, 1500 mm for single tube batten as SFA 58.....   | 88.89          | 7.88                     | 8.91                               | 22.91    | 27378 |
| 27379 | Metal trough reflector, 1500 mm for twin tubes batten as SFA 72.....  | 110.50         | 7.88                     | 8.91                               | 22.91    | 27379 |
| 27380 | Metal trough reflector, 600 mm for single tube batten as SFA 58.....  | 75.91          | 7.88                     | 8.91                               | 22.91    | 27380 |

| Item   |  | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only | Item  |
|--|--|----------------|--------------------------|------------------------------------|----------|-------|
|  |  | A<br>\$        | B<br>\$                  | C<br>\$                            | D<br>\$  |       |
| <b>FLUORESCENT LIGHTING FITTINGS (CONT'D)</b>                                    |  |                |                          |                                    |          |       |
| Plastic diffuser for surface mounted fluorescent light fittings (batten type): - |  |                |                          |                                    |          |       |
| <i>Each</i>  |  |                |                          |                                    |          |       |
| 27381  | 600 mm for single tube batten as SFA 51.....                           | 60.25          | 5.10                     | 5.51                               | 13.70    | 27381 |
| 27382  | 1200 mm for single tube batten as SFA 51.....                          | 68.22          | 5.10                     | 5.51                               | 13.70    | 27382 |
| 27383  | 1200 mm for twin tubes batten as SFA 74.....                           | 110.68         | 5.10                     | 5.51                               | 13.70    | 27383 |
| 27384  | 1500 mm for single tube batten as SFA 51.....                          | 76.68          | 5.10                     | 5.51                               | 13.70    | 27384 |
| 27385  | 1500 mm for twin tubes batten as SFA 74.....                           | 124.88         | 5.10                     | 5.51                               | 13.70    | 27385 |
| Plastic panel diffuser   |  |                |                          |                                    |          |       |
| <i>Per square metre</i>  |  |                |                          |                                    |          |       |
| 27386  | for surface/recess mounted modular fluorescent light fitting size..... | 198.74         | 17.84                    | 19.28                              | 47.97    | 27386 |
| Starter for fluorescent lighting fittings : -                                    |  |                |                          |                                    |          |       |
| <i>Each</i>  |  |                |                          |                                    |          |       |
| 27387  | 18/30/36W.....   | -              | 1.83                     | 2.03                               | 5.43     | 27387 |
| 27388  | 58/85W.....  | -              | 1.83                     | 2.03                               | 5.43     | 27388 |
| Condenser for fluorescent lighting fittings : -                                  |  |                |                          |                                    |          |       |
| <i>Each</i>  |  |                |                          |                                    |          |       |
| 27389  | 18/30/36W.....   | -              | 8.34                     | 10.28                              | 30.32    | 27389 |
| 27390  | 58/85W.....  | -              | 8.34                     | 10.28                              | 30.32    | 27390 |

| Item  |                            | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only | Item  |
|---|----------------------------|----------------|--------------------------|------------------------------------|----------|-------|
|   |                            | A<br>\$        | B<br>\$                  | C<br>\$                            | D<br>\$  |       |
| <b>FLUORESCENT LIGHTING FITTINGS (CONT'D)</b>   |                            |                |                          |                                    |          |       |
| Quick start unit for fluorescent lighting fittings : -                                      |                            |                |                          |                                    |          |       |
|   | <i>Each</i>                |                |                          |                                    |          |       |
| 27391   | 30/36W.....                | -              | 8.29                     | 10.22                              | 30.15    | 27391 |
| 27392   | 58/85W.....                | -              | 8.29                     | 10.22                              | 30.15    | 27392 |
| Ballast for fluorescent lighting fittings : -   |                            |                |                          |                                    |          |       |
|   | <i>Each</i>                |                |                          |                                    |          |       |
| 27393   | 18/30/36W single.....      | -              | 6.83                     | 8.26                               | 19.98    | 27393 |
| 27394   | 58/85W single .....        | -              | 6.83                     | 8.26                               | 19.98    | 27394 |
| Socket for starter unit of fluorescent lighting fittings : -                                |                            |                |                          |                                    |          |       |
|   | <i>Each</i>                |                |                          |                                    |          |       |
| 27395   | Starter unit 2/4 pin ..... | -              | 5.07                     | 5.47                               | 13.63    | 27395 |
| Electronic ballast for T5 fluorescent light fitting and compact fluorescent light fitting:- |                            |                |                          |                                    |          |       |
|   | <i>Each</i>                |                |                          |                                    |          |       |
| 27396   | Not exceeding 14W.....     | 147.49         | 6.83                     | 8.26                               | 19.98    | 27396 |
| 27397   | 14W-21W.....               | 149.18         | 6.83                     | 8.26                               | 19.98    | 27397 |
| 27398   | 21W-28W.....               | 150.99         | 6.83                     | 8.26                               | 19.98    | 27398 |
| 27399   | 35W.....                   | 152.83         | 6.83                     | 8.26                               | 19.98    | 27399 |
| 27400   | 49W.....                   | 158.14         | 6.83                     | 8.26                               | 19.98    | 27400 |
| 27401   | 54W.....                   | 159.82         | 6.83                     | 8.26                               | 19.98    | 27401 |
| 27402   | 80W.....                   | 161.64         | 6.83                     | 8.26                               | 19.98    | 27402 |

| Item  |  | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only | Item  |
|---|--|----------------|--------------------------|------------------------------------|----------|-------|
|   |  | A<br>\$        | B<br>\$                  | C<br>\$                            | D<br>\$  |       |
| <b>FLUORESCENT LIGHTING FITTINGS (CONT'D)</b> |  |                |                          |                                    |          |       |
|   | Dimmable electronic ballast for T5 fluorescent light/compact fluorescent light fitting:-   |                |                          |                                    |          |       |
|   | <i>Each</i>  |                |                          |                                    |          |       |
| 27403   | Not exceeding 14W.....   | 212.81         | 6.83                     | 8.26                               | 19.98    | 27403 |
| 27404   | 14W-21W.....   | 216.85         | 6.83                     | 8.26                               | 19.98    | 27404 |
| 27405   | 21W-28W.....   | 220.80         | 6.83                     | 8.26                               | 19.98    | 27405 |
| 27406   | 35W.....   | 224.85         | 6.83                     | 8.26                               | 19.98    | 27406 |
| 27407   | 49W.....   | 236.90         | 6.83                     | 8.26                               | 19.98    | 27407 |
| 27408   | 54W.....   | 240.97         | 6.83                     | 8.26                               | 19.98    | 27408 |
| 27409   | 80W.....   | 245.02         | 6.83                     | 8.26                               | 19.98    | 27409 |
|   | Sundry fittings :-   |                |                          |                                    |          |       |
|   | <i>Each</i>  |                |                          |                                    |          |       |
| 27410   | Brackets, tubular, comprise flange plate and nipple and 20 mm diameter tube bent to required shape, all galvanized, n.e. 450 mm projection.....                      | 35.87          | 6.10                     | 7.63                               | 19.47    | 27410 |
| 27411   | Ditto but 450 mm - 600 mm projection.....  | 37.93          | 6.10                     | 7.63                               | 19.47    | 27411 |
| 27412   | Brackets, corner fitting, comprise 20 mm diameter tube bent to required shape n.e. 450mm projection .....  | 37.85          | 6.86                     | 8.42                               | 21.14    | 27412 |
| 27413   | Pendant, tubular, comprise male pendant plates, conduit, socket, adaptors and male bush as required and 20 mm diameter tube n.e. 300 mm length, all galvanized ..... | 34.19          | 6.10                     | 7.63                               | 19.47    | 27413 |
| 27414   | Extra over modular fluorescent fitting for provision of ball-proof wire mesh, 300 x 600 mm.....  | 109.30         | 6.45                     | 8.10                               | 17.84    | 27414 |
| 27415   | Ditto but 600 x 600 mm.....  | 126.47         | 6.45                     | 8.10                               | 17.84    | 27415 |
| 27416   | Ditto but 300 x 1200 mm.....   | 127.53         | 6.62                     | 8.44                               | 18.38    | 27416 |
| 27417   | Ditto but 600 x 1200 mm.....   | 163.43         | 6.62                     | 8.44                               | 18.38    | 27417 |
| 27418   | Ditto but 300 x 1500 mm.....   | 142.66         | 6.84                     | 8.59                               | 19.56    | 27418 |
| 27419   | Ditto but 600 x 1500 mm.....   | 183.21         | 6.84                     | 8.59                               | 19.56    | 27419 |
| 27420   | T8 to T5 Bi-pin lampholder adaptor.....  | 25.45          | 1.54                     | 1.83                               | 4.70     | 27420 |

| Item  |   | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only | Item  |
|-------|---|----------------|--------------------------|------------------------------------|----------|-------|
|       | <b>FLUORESCENT LIGHTING FITTINGS (CONT'D)</b>   |                |                          |                                    |          |       |
|       | Sundry fittings : - (Cont'd)  |                |                          |                                    |          |       |
|       | <i>Per linear metre</i>   | A<br>\$        | B<br>\$                  | C<br>\$                            | D<br>\$  |       |
| 27421 | Extra over items 27410 - 27413 for each additional length of 20 mm diameter tube all galvanized for tubular pendant mounting .....  | 24.95          | 3.07                     | 3.58                               | 9.31     | 27421 |
| 27422 | Brass chain for lighting fitting, chromium plated, 20 mm oval link with brazed ends .....   | 18.24          | 1.84                     | 2.17                               | 5.39     | 27422 |
| 27423 | Chain, hot dip galvanized steel, bright, for lighting fitting c/w screw eyes, screw hocks and 20 mm oval link with welded ends..... | 19.43          | 1.84                     | 2.17                               | 5.39     | 27423 |

| Item  |   |                |                          |                                    | Item     |       |
|-------|---|----------------|--------------------------|------------------------------------|----------|-------|
|       | <b>LIGHTING FITTINGS</b>  |                |                          |                                    |          |       |
|       | LED down light fitting, recess mounted to false ceiling, integral electronic control gear/driver, white stove enameled steel/die cast aluminium body and anodized aluminium reflector (all types) with/without metal trim:- | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only |       |
|       | <i>Each</i>   | A \$           | B \$                     | C \$                               | D \$     |       |
| 27424 | Down light with 3W LED lamp, non maintained type, c/w 2 hours Ni-MH emergency power pack.....   | 681.09         | 15.32                    | 18.79                              | 53.32    | 27424 |
| 27425 | Down light with 3W LED lamp, IP54.....  | 579.54         | 15.32                    | 18.79                              | 53.32    | 27425 |
| 27426 | Down light with 7W LED lamp as SFA 224.....   | 851.72         | 16.78                    | 20.12                              | 57.09    | 27426 |
| 27427 | Down light with 12W LED lamp as SFA 224.....  | 1,057.65       | 16.78                    | 20.12                              | 57.09    | 27427 |
| 27428 | Down light with 15/16W LED lamp as SFA 224.....   | 1,293.13       | 16.78                    | 20.12                              | 57.09    | 27428 |
| 27429 | Down light with 7W LED lamp c/w glass diffuser as SFA 224.....  | 1,205.37       | 16.78                    | 20.12                              | 57.09    | 27429 |
| 27430 | Down light with 12W LED lamp c/w glass diffuser as SFA 224.....   | 1,413.04       | 16.78                    | 20.12                              | 57.09    | 27430 |
| 27431 | Down light with 15/16W LED lamp c/w glass diffuser as SFA 224.....  | 1,675.61       | 16.78                    | 20.12                              | 57.09    | 27431 |
| 27432 | Down light with 7W LED lamp c/w safety glass diffuser to IP54 as SFA 224.....   | 2,241.40       | 16.78                    | 20.12                              | 57.09    | 27432 |
| 27433 | Down light with 12W LED lamp c/w safety glass diffuser to IP54 as SFA 224.....  | 2,439.47       | 16.78                    | 20.12                              | 57.09    | 27433 |
| 27434 | Down light with 15/16W LED lamp c/w safety glass diffuser to IP54 as SFA 224.....   | 2,682.00       | 16.78                    | 20.12                              | 57.09    | 27434 |
| 27435 | Down light with infra-red lamp, 175 mm diameter.....  | 354.51         | 15.32                    | 18.79                              | 53.32    | 27435 |
| 27436 | Down light with 10W LED lamp c/w glass cover.....   | 678.93         | 15.32                    | 18.79                              | 53.32    | 27436 |
| 27437 | Down light with 12W LED lamp, IP44 c/w glass cover.....   | 679.53         | 15.32                    | 18.79                              | 53.32    | 27437 |
| 27438 | Down light with 10W LED lamp c/w dimmable driver.....   | 678.80         | 15.32                    | 18.79                              | 53.32    | 27438 |
| 27439 | Down light with 12.5W LED lamp c/w dimmable driver.....   | 926.09         | 15.32                    | 18.79                              | 53.32    | 27439 |
| 27440 | Down light with 24W LED lamp c/w dimmable driver.....   | 536.90         | 15.32                    | 18.79                              | 53.32    | 27440 |
| 27441 | Down light with 24W LED lamp c/w dimmable driver and 2-hour emergency power pack.....   | 891.46         | 15.32                    | 18.79                              | 53.32    | 27441 |
| 27442 | Down light with 12W LED lamp, IP65 c/w clear tempered glass lens.....   | 1,638.20       | 15.32                    | 18.79                              | 53.32    | 27442 |
| 27443 | Down light with 12W LED lamp c/w clear tempered glass lens, IP65 and 2 hours Ni-MH emergency power pack.....  | 2,011.17       | 15.32                    | 18.79                              | 53.32    | 27443 |
| 27444 | Down light with 12W LED lamp c/w matt diffuser .....  | 631.64         | 15.32                    | 18.79                              | 53.32    | 27444 |

| Item  |  |                |                          |                                    | Item     |       |
|-------|--|----------------|--------------------------|------------------------------------|----------|-------|
|       | <b>LIGHTING FITTINGS (CONT'D)</b>  |                |                          |                                    |          |       |
|       | LED down light fitting, recess mounted to false ceiling, integral electronic control gear/driver, white stove enameled steel/die cast aluminium body and anodized aluminium reflector (all types) with/without metal trim:- (Cont'd) | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only |       |
|       | <i>Each</i>  | A \$           | B \$                     | C \$                               | D \$     |       |
| 27445 | Down light with 15W LED lamp.....  | 644.55         | 15.32                    | 18.79                              | 53.32    | 27445 |
| 27446 | Down light with 20W LED lamp c/w satin glass diffuser.....   | 927.79         | 15.32                    | 18.79                              | 53.32    | 27446 |
|       | Self-contained and maintained type for 2-hour duration down light fittings c/w battery charger, inverter, transformer and : -  |                |                          |                                    |          |       |
|       | <i>Each</i>  |                |                          |                                    |          |       |
| 27447 | 7W LED lamp.....   | 664.98         | 20.56                    | 25.10                              | 69.61    | 27447 |
| 27448 | 12W LED lamp.....  | 805.00         | 20.56                    | 25.10                              | 69.61    | 27448 |
| 27449 | 15/16W LED lamp.....   | 805.00         | 20.56                    | 25.10                              | 69.61    | 27449 |



| Item                              |   | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only | Item  |
|-----------------------------------|---|----------------|--------------------------|------------------------------------|----------|-------|
| <b>LIGHTING FITTINGS (CONT'D)</b> |   | A              | B                        | C                                  | D        |       |
|                                   |   | \$             | \$                       | \$                                 | \$       |       |
|                                   | Track lighting system : -   |                |                          |                                    |          |       |
|                                   | <i>Each</i>   |                |                          |                                    |          |       |
| 27450                             | Single-circuit extruded monorail aluminium lighting track, surface/suspended mounted, 1000 mm in length, 16A max. rating, mains voltage.....  | 224.95         | 18.51                    | 23.16                              | 62.17    | 27450 |
| 27451                             | Single-circuit extruded monorail aluminium lighting track, surface/suspended mounted, 2000 mm in length, 16A max. rating, mains-voltage .....   | 329.38         | 17.51                    | 26.49                              | 73.46    | 27451 |
| 27452                             | End cap for monorail lighting track .....   | 21.03          | 1.95                     | 2.17                               | 5.68     | 27452 |
| 27453                             | Three phase four circuit six conductor slimline lighting track made from extruded aluminum with powder coated finish c/w components including push-up live end, plug-in coupler, push-up coupler, plug-in coupler, rigid L/T/X coupler, flexible coupler, mounting clip, end cap, suspension, mains supply kit, cable entry moulding, etc., two 16 A fused feeds, 1000mm in length..... | 939.59         | 23.62                    | 29.22                              | 85.11    | 27453 |
| 27454                             | Spot light with 9W LED lamp for light track mounting as SFA 244.....  | 534.23         | 16.78                    | 20.12                              | 57.09    | 27454 |

| Item  |  |                      |                                      |  | Item        |       |
|-------|--|----------------------|--------------------------------------|--|-------------|-------|
|       | <b>LIGHTING FITTINGS (CONT'D)</b>  |                      |                                      |  |             |       |
|       |  | Supply<br>and<br>fix | Take<br>down<br>and<br>clear<br>away | Take<br>down<br>and set<br>aside for<br>re-use | Fix<br>only |       |
|       |  | A<br>\$              | B<br>\$                              | C<br>\$  | D<br>\$     |       |
|       | Bulkhead light fitting c/w electronic control gear/electronic ballast, lamps, side/back entry cutting and rubber grommet or stop :-  |                      |                                      |  |             |       |
|       | <i>Each</i>  |                      |                                      |  |             |       |
| 27455 | 2 x 8W vandal resistant fluorescent bulkhead with injection moulded polycarbonate diffuser, IP65.....  | 536.63               | 20.36                                | 25.43  | 75.72       | 27455 |
| 27456 | Ditto but 3 x 8W fluorescent light, IP65 .....   | 728.24               | 20.36                                | 25.43  | 75.72       | 27456 |
| 27457 | Ditto but for 1 x 11W PL fluorescent light, IP65.....  | 479.25               | 20.36                                | 25.43  | 75.72       | 27457 |
| 27458 | Ditto but for 2 x 11W PL fluorescent light, IP65.....  | 545.63               | 20.36                                | 25.43  | 75.72       | 27458 |
| 27459 | Bulkhead lighting fitting IP65 with die-cast aluminium body, moulded glass lens c/w built-in control gear and 1 x 70W CDMT lamp.....   | 1,206.83             | 20.36                                | 25.43  | 75.72       | 27459 |
| 27460 | Bulkhead fitting of IP65 protection c/w 70W CDMT lamp, polycarbonate cover .....   | 1,447.18             | 20.36                                | 25.43  | 75.72       | 27460 |
| 27461 | Bulkhead luminaire c/w 2 x 8W fluorescent lamps, 2 hour battery & control gear.....  | 456.96               | 20.36                                | 25.43  | 75.72       | 27461 |
| 27462 | Traditional bulkhead fitting as SFA 203, die cast aluminium casing with polyester powder coated finish, hinged anti vandal polycarbonate diffuser, to IEC 60598, IP 64 c/w 1 x 13W PLC lamp..... | 274.25               | 20.36                                | 25.43  | 75.72       | 27462 |
| 27463 | Bulkhead fitting, prismatic type, glass diffuser, 35W CDMT lamp as SFA 35.....   | 1,296.84             | 20.36                                | 25.43  | 75.72       | 27463 |
| 27464 | Ditto but for 70W SON.....   | 1,746.14             | 20.36                                | 25.43  | 75.72       | 27464 |
| 27465 | Ditto but for 70W CDMT.....  | 1,625.00             | 20.36                                | 25.43  | 75.72       | 27465 |
| 27466 | Gasket for retaining flange for bulkhead fitting.....  | 24.62                | 3.72                                 | 5.01   | 13.63       | 27466 |
| 27467 | Glassware only for bulkhead fitting as SFA 35.....   | 322.77               | 10.17                                | 12.17  | 37.52       | 27467 |
| 27468 | Key for bulkhead (supply only) lighting fitting.....   | 15.70                | -                                    | -  | -           | 27468 |
| 27469 | Bulkhead lighting fitting, IP65 c/w polycarbonate diffuser and 1x26W PLC lamp.....   | 496.99               | 20.36                                | 25.43  | 75.72       | 27469 |

| Item   |  |                          |                                    |          | Item   |       |
|--|--|--------------------------|------------------------------------|----------|--------|-------|
| <b>LIGHTING FITTINGS (CONT'D)</b>  |  |                          |                                    |          |        |       |
| Floodlighting fittings including control gear, side/ back entry, cutting, and rubber grommet or stop : - |  |                          |                                    |          |        |       |
| <i>Each</i>  |  |                          |                                    |          |        |       |
|  | Supply and fix   | Take down and clear away | Take down and set aside for re-use | Fix only |        |       |
|  | A \$   | B \$                     | C \$                               | D \$     |        |       |
| 27470  | MBIL floodlighting fitting IP54 c/w 750/1000/1500W control gear.....   | 9,098.54                 | 49.81                              | 62.04    | 190.78 | 27470 |
| 27471  | Ditto but 2000W.....   | 14,978.22                | 49.81                              | 62.04    | 190.78 | 27471 |
| 27472  | H.P. sodium (SON) floodlighting fitting IP65, die cast aluminium housing c/w 70W lamp, control gear and anodized aluminium reflector (all types) as SFA 205.....   | 1,157.84                 | 46.77                              | 59.04    | 177.23 | 27472 |
| 27473  | Ditto but for 150W lamp.....   | 1,593.49                 | 46.77                              | 59.04    | 177.23 | 27473 |
| 27474  | Ditto but for 250W lamp.....   | 2,138.05                 | 46.77                              | 59.04    | 177.23 | 27474 |
| 27475  | Ditto but for 400W lamp.....   | 2,954.89                 | 46.77                              | 59.04    | 177.23 | 27475 |
| 27476  | Ditto but for 70W MBIF lamp.....   | 1,657.40                 | 46.77                              | 59.04    | 177.23 | 27476 |
| 27477  | Ditto but for 150W MBIF lamp.....  | 2,017.27                 | 46.77                              | 59.04    | 177.23 | 27477 |
| 27478  | Ditto but for 250W MBIF lamp.....  | 2,467.12                 | 46.77                              | 59.04    | 177.23 | 27478 |
| 27479  | Ditto but for 400W MBIF lamp.....  | 3,141.89                 | 46.77                              | 59.04    | 177.23 | 27479 |
| 27480  | Tungsten halogen floodlight fitting, IP54 c/w lamp, 500W.....  | -                        | 20.49                              | 25.60    | 76.19  | 27480 |
| 27481  | Ditto but with 1000W lamp.....   | -                        | 20.49                              | 25.60    | 76.19  | 27481 |
| 27482  | Ditto but with 1500W lamp.....   | -                        | 20.49                              | 25.60    | 76.19  | 27482 |
| 27483  | High bay floodlight fittings designed and manufactured to comply with IEC 60598-2, IP54 body; extruded aluminium body with high temperature polypropylene side casing and high temperature nylon body; vertical lamp, prismatic glass reflector c/w 250W MBIF control gear, lamp piece and safety chain .....                          | 3,630.73                 | 46.77                              | 59.04    | 177.23 | 27483 |
| 27484  | Ditto but with 400W MBIF control gear.....   | 4,111.65                 | 46.77                              | 59.04    | 177.23 | 27484 |
| 27485  | Ditto but with 250W SON control gear.....  | 2,930.10                 | 46.77                              | 59.04    | 177.23 | 27485 |
| 27486  | Ditto but with 400W SON control gear.....  | 3,186.89                 | 46.77                              | 59.04    | 177.23 | 27486 |
| 27487  | High bay floodlight fittings designed and manufactured to comply with IEC 60598-2, IP54 body; extruded aluminium body with high temperature polypropylene side casing and high temperature nylon body; vertical lamp, self-cleaning high purity spun aluminium reflector c/w 250W MBIF control gear, lamp piece and safety chain ..... | 3,103.39                 | 46.77                              | 59.04    | 177.23 | 27487 |
| 27488  | Ditto but with 400W MBIF control gear.....   | 3,444.29                 | 46.77                              | 59.04    | 177.23 | 27488 |
| 27489  | Ditto but with 250W SON control gear.....  | 2,508.92                 | 46.77                              | 59.04    | 177.23 | 27489 |
| 27490  | Ditto but with 400W SON control gear.....  | 2,699.49                 | 46.77                              | 59.04    | 177.23 | 27490 |

| Item  |   |                |                          |                                    | Item     |       |
|-------|---|----------------|--------------------------|------------------------------------|----------|-------|
|       | <b>LIGHTING FITTINGS (CONT'D)</b>   |                |                          |                                    |          |       |
|       | Floodlighting fittings including control gear, side/ back entry, cutting, and rubber grommet or stop : - (Cont'd)   | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only |       |
|       | <i>Each</i>   | A \$           | B \$                     | C \$                               | D \$     |       |
| 27491 | High bay floodlight fittings designed and manufactured to comply with IEC 60598-2 IP65 body; technopolymer reinforced with fiber glass body; turned aluminium sheet upper housing with grey powder paint; toughened glass cover with gasket clips; elliptical lamp, polished and anodized aluminium reflector c/w 250W MBIF control gear, lamp piece and safety chain ..... | 2,301.90       | 46.87                    | 59.16                              | 177.58   | 27491 |
| 27492 | Ditto but with 400W MBIF control gear.....  | 2,501.31       | 46.87                    | 59.16                              | 177.58   | 27492 |
| 27493 | Ditto but with 250W SON control gear.....   | 1,651.16       | 46.87                    | 59.16                              | 177.58   | 27493 |
| 27494 | Ditto but with 400W SON control gear.....   | 1,764.17       | 46.87                    | 59.16                              | 177.58   | 27494 |
| 27495 | High bay floodlight fittings designed and manufactured to comply with IEC 60598-2 IP54 body; prismatic borosilicate glass retained by a spun aluminium cover sealed reflector; tempered glass cover with stainless steel clips c/w 250W MBIF control gear, lamp piece and safety chain.....   | 3,532.29       | 46.87                    | 59.16                              | 177.58   | 27495 |
| 27496 | Ditto but with 400W MBIF control gear.....  | 3,790.90       | 46.87                    | 59.16                              | 177.58   | 27496 |
| 27497 | Ditto but with 250W SON control gear.....   | 2,748.55       | 46.87                    | 59.16                              | 177.58   | 27497 |
| 27498 | Ditto but with 400W SON control gear.....   | 3,053.65       | 46.87                    | 59.16                              | 177.58   | 27498 |
| 27499 | High bay floodlight fittings designed and manufactured to comply with IEC 60598-2 IP54 body; prismatic borosilicate glass retained by a spun aluminium cover sealed reflector c/w 250W MBIF control gear, lamp piece and safety chain .....   | 2,966.21       | 46.87                    | 59.16                              | 177.58   | 27499 |
| 27500 | Ditto but with 400W MBIF control gear.....  | 3,208.14       | 46.87                    | 59.16                              | 177.58   | 27500 |
| 27501 | Ditto but with 250W SON control gear.....   | 2,348.14       | 46.87                    | 59.16                              | 177.58   | 27501 |
| 27502 | Ditto but with 400W SON control gear.....   | 2,474.89       | 46.87                    | 59.16                              | 177.58   | 27502 |
| 27503 | High bay floodlight c/w 100W LED lamp.....  | 3,736.28       | 46.87                    | 59.16                              | 177.58   | 27503 |

| Item  |   |                          |                                    |          | Item   |       |
|---|---|--------------------------|------------------------------------|----------|--------|-------|
| <b>LIGHTING FITTINGS (CONT'D)</b>   |   |                          |                                    |          |        |       |
| Floodlighting fittings including control gear, side/ back entry, cutting, and rubber grommet or stop : - (Cont'd) |   |                          |                                    |          |        |       |
| <i>Each</i>   |   |                          |                                    |          |        |       |
|   | Supply and fix  | Take down and clear away | Take down and set aside for re-use | Fix only |        |       |
|   | A \$  | B \$                     | C \$                               | D \$     |        |       |
| 27504   | Twin lamp tennis-court floodlight with heavy gauge aluminium housing, reflector with forward throw cut-off pattern, clear tempered lens c/w 1 x 250W HP sodium lamp and 1 x 400W metal halide lamp and integral control gears, IP65.....  | 5,955.28                 | 70.91                              | 88.48    | 265.39 | 27504 |
| 27505   | Tennis court lighting as SFA 267, aluminium housing, 4mm toughened glass lens, hinged aluminium lens frame with reinforced corners, sharp cut-off forward throw anodised aluminium reflector c/w control gear and 1 x 1000W/1500W metal halide lamp.....  | 8,988.35                 | 20.43                              | 24.87    | 74.50  | 27505 |
| 27506   | 400W MBI/T floodlight fitting IP65 c/w GRP body, anodized aluminium reflector, toughened glass front cover, steel galvanized cradle, integral control gear and lamp.....  | 3,246.24                 | 61.05                              | 74.06    | 228.14 | 27506 |
| 27507   | 1000W SON/T floodlight fitting IP65 c/w aluminium reflector, galvanized steel body, integral control gear and lamp.....   | 6,918.51                 | 61.05                              | 74.06    | 228.14 | 27507 |
| 27508   | Floodlight fitting with mounting box as SFA 204, die cast aluminium housing, anodised aluminium reflector, 160° tiltable and 360° rotatable c/w safety glass and 1 x 35W metal halide lamp, IP65.....   | 1,726.84                 | 46.58                              | 58.81    | 176.52 | 27508 |
| 27509   | Asymmetrical floodlight fitting as SFA 205, marine grade 316 stainless steel construction, anodised aluminium reflector, IP67 c/w safety chain and quick release clips at front cover, adjustable stirrup bracket, internal control gear and 1 x 250W high pressure sodium or metal halide lamp.....  | 4,577.84                 | 46.58                              | 58.81    | 176.52 | 27509 |
| 27510   | Floodlight fitting as SFA 206, die cast aluminium housing with integral cooling ribs, hinged door frame for reflector changing, cast aluminium swivel with locking teeth at 5° intervals, mounting onto 50mm square tenon c/w control gear, 1 x 400W high pressure sodium or metal halide lamp, and reflector for narrow vertical flood beam, IP67..... | 6,764.93                 | 46.58                              | 58.81    | 176.52 | 27510 |
| 27511   | Ditto but reflector for wide flood beam.....  | 5,783.17                 | 46.58                              | 58.81    | 176.52 | 27511 |
| 27512   | Floodlight fitting as SFA 206, die cast aluminium housing with integral cooling ribs, hinged door frame for reflector changing, cast aluminium swivel with locking teeth at 5° intervals, wall mounted c/w control gear, 1 x 70W high pressure sodium or metal halide lamp, and reflector for wide flood beam, IP67.....                                | 4,808.29                 | 46.58                              | 58.81    | 176.52 | 27512 |
| 27513   | Ditto but stanchion mounted and reflector for wide flood beam.....  | 4,677.64                 | 46.58                              | 58.81    | 176.52 | 27513 |
| 27514   | Adjustable compact outdoor floodlight as SFA 207, injection moulded polyester body, glass-filled nylon base or spike for mounting, IP54 c/w 1 x 150W high pressure sodium or metal halide lamp.....   | 355.03                   | 14.84                              | 18.33    | 56.66  | 27514 |
| 27515   | Floodlight fitting, IP65 c/w 60W induction lamp.....  | 1,891.29                 | 46.58                              | 58.81    | 176.52 | 27515 |
| 27516   | Floodlight fitting, aluminium housing, IP65 c/w 60W LED lamp.....   | 3,241.09                 | 46.58                              | 58.81    | 176.52 | 27516 |
| 27517   | Floodlight fitting, IP65, surface mounted c/w 60W high intensity LED and glass diffusers.....   | 3,133.00                 | 46.58                              | 58.81    | 176.52 | 27517 |
| 27518   | Floodlight fitting, IP65 c/w 70W LED lamp.....  | 3,109.39                 | 46.58                              | 58.81    | 176.52 | 27518 |

| Item                               |  |                          |                                    |          | Item  |       |
|------------------------------------|--|--------------------------|------------------------------------|----------|-------|-------|
| <b>LIGHTING FITTINGS (CONT'D)</b>  |  |                          |                                    |          |       |       |
| Floodlight fitting accessories : - |  |                          |                                    |          |       |       |
| <i>Each</i>                        |  |                          |                                    |          |       |       |
|                                    | Supply and fix   | Take down and clear away | Take down and set aside for re-use | Fix only |       |       |
|                                    | A \$   | B \$                     | C \$                               | D \$     |       |       |
| 27519                              | Heat shield for floodlight.....  | 991.66                   | 10.27                              | 12.29    | 37.91 | 27519 |
| 27520                              | Wire guard for floodlight .....  | 423.04                   | 10.27                              | 12.29    | 37.91 | 27520 |
| 27521                              | Front glass assembly c/w silicone rubber gasket for floodlight.....                      | 588.72                   | 10.27                              | 12.29    | 37.91 | 27521 |
| 27522                              | Floodlight louvre for 750W fitting.....  | 1,215.45                 | 14.96                              | 18.43    | 54.61 | 27522 |
| 27523                              | Ditto but for 1000W fitting.....   | 1,236.16                 | 14.96                              | 18.43    | 54.61 | 27523 |
| 27524                              | Ditto but for 1500W fitting.....   | 1,266.07                 | 14.96                              | 18.43    | 54.61 | 27524 |
| 27525                              | Multi-use or cross arm mounting bracket c/w 2"U" clamps (hot dip galvanized steel) ..... | 268.84                   | 14.96                              | 18.46    | 57.11 | 27525 |
| 27526                              | Wall bracket (hot dip galvanized steel).....   | 224.94                   | 13.24                              | 16.87    | 49.07 | 27526 |
| 27527                              | Stainless steel (304) mounting bracket for floodlight.....                               | 591.79                   | 13.24                              | 16.87    | 49.07 | 27527 |
| 27528                              | Ditto but of stainless steel (316).....  | 671.25                   | 13.24                              | 16.87    | 49.07 | 27528 |
| 27529                              | Hot dip galvanized steel universal pole clamp for floodlight fitting .....               | 86.16                    | 5.47                               | 7.33     | 20.32 | 27529 |
| 27530                              | Stainless steel (304) universal pole clamp for floodlight fitting.....                   | 213.75                   | 5.47                               | 7.33     | 20.32 | 27530 |
| 27531                              | Ditto but of stainless steel (316).....  | 238.64                   | 5.47                               | 7.33     | 20.32 | 27531 |
| 27532                              | Stirrup assembly (hot dip galvanized steel).....   | 341.37                   | 14.96                              | 18.46    | 57.11 | 27532 |
| 27533                              | Stirrup assembly c/w blanking plate and gland (hot dip galvanized).....                  | 378.67                   | 14.96                              | 18.46    | 57.11 | 27533 |
| 27534                              | Stirrup assembly c/w blanking plate and gland (304 stainless steel).....                 | 1,083.32                 | 14.96                              | 18.46    | 57.11 | 27534 |
| 27535                              | Stirrup assembly c/w blanking plate and gland (316 stainless steel).....                 | 1,133.19                 | 14.96                              | 18.46    | 57.11 | 27535 |
| 27536                              | Special wall bracket, hot dip galvanized.....  | 354.46                   | 14.96                              | 18.46    | 57.11 | 27536 |
| 27537                              | Step up transformer c/w weatherproof metal box rated IP65.....                           | 1,434.44                 | 19.11                              | 24.10    | 71.74 | 27537 |
| 27538                              | Step down transformer c/w enclosure, 220/12V, 50VA.....                                  | 742.85                   | 8.03                               | 10.05    | 28.96 | 27538 |

| Item  |  |                      |                                      |  | Item        |       |
|-------|--|----------------------|--------------------------------------|--|-------------|-------|
|       | <b>LIGHTING FITTINGS (CONT'D)</b>  |                      |                                      |  |             |       |
|       | Floodlight fitting accessories : - (Cont'd)  | Supply<br>and<br>fix | Take<br>down<br>and<br>clear<br>away | Take<br>down<br>and set<br>aside for<br>re-use | Fix<br>only |       |
|       | <i>Each</i>  | A<br>\$              | B<br>\$                              | C<br>\$  | D<br>\$     |       |
| 27539 | Ballast for 70/150/250W H.P. Sodium lamp.....  | 207.41               | 10.26                                | 12.27  | 37.83       | 27539 |
| 27540 | Ballast for 400W H.P. Sodium lamp.....   | 243.40               | 10.26                                | 12.27  | 37.83       | 27540 |
| 27541 | Ballast for 150/250/400W white SON lamp.....   | 382.40               | 10.26                                | 12.27  | 37.83       | 27541 |
| 27542 | Ballast for 250/400W MBIF lamp.....  | 249.95               | 10.26                                | 12.27  | 37.83       | 27542 |
| 27543 | Ballast for 750W MBIL lamp.....  | 1,042.50             | 10.26                                | 12.27  | 37.83       | 27543 |
| 27544 | Ballast for 1000W MBIL lamp.....   | 1,042.50             | 10.26                                | 12.27  | 37.83       | 27544 |
| 27545 | Ballast for 1500W MBIL lamp .....  | 1,051.79             | 10.26                                | 12.27  | 37.83       | 27545 |
| 27546 | Transformer for 1500W MBIL lamp.....   | 1,664.32             | 10.26                                | 12.27  | 37.83       | 27546 |
| 27547 | Ballast for 50/80/125W MBF lamp.....   | -                    | 10.26                                | 12.27  | 37.83       | 27547 |
| 27548 | Ballast for 250/400W MBF lamp.....   | -                    | 10.26                                | 12.27  | 37.83       | 27548 |
| 27549 | Electronic Ballast for 150W Metal Halide Lamp.....   | 772.82               | 10.26                                | 12.27  | 37.83       | 27549 |
| 27550 | Capacitor for 250W H.P. Sodium white SON lamp 30mF + 10%.....  | 108.03               | 8.69                                 | 11.23  | 32.37       | 27550 |
| 27551 | Capacitor for 400W H.P. Sodium white SON lamp 40mF + 10%.....  | 147.49               | 8.69                                 | 11.23  | 32.37       | 27551 |
| 27552 | Capacitor for 250W / 400W MBIF lamp .....  | 115.54               | 8.69                                 | 11.23  | 32.37       | 27552 |
| 27553 | Capacitor for 750W MBIL lamp.....  | 274.48               | 8.69                                 | 11.23  | 32.37       | 27553 |
| 27554 | Capacitor for 1000W MBIL lamp.....   | 277.77               | 8.69                                 | 11.23  | 32.37       | 27554 |
| 27555 | Capacitor for 1500W MBIL lamp.....   | 284.96               | 8.69                                 | 11.23  | 32.37       | 27555 |
| 27556 | Ignitor for 70W H.P. Sodium lamp.....  | 138.54               | 8.69                                 | 11.23  | 32.37       | 27556 |
| 27557 | Ignitor for 150/250/400W H.P. Sodium lamp.....   | 154.05               | 8.69                                 | 11.23  | 32.37       | 27557 |
| 27558 | Ignitor for 150/250/400W white SON lamp.....   | 157.15               | 8.69                                 | 11.23  | 32.37       | 27558 |
| 27559 | Ignitor for 250W / 400W MBIF lamp.....   | 292.20               | 8.69                                 | 11.23  | 32.37       | 27559 |
| 27560 | Ignitor for 1000W MBIL lamp.....   | 375.49               | 8.69                                 | 11.23  | 32.37       | 27560 |
| 27561 | Ignitor for 1500W MBIL lamp.....   | 513.28               | 8.69                                 | 11.23  | 32.37       | 27561 |
| 27562 | Safety chain, hot dipped galvanized steel (or wrought iron) chain 25 mm oval link c/w shackles ..... | 45.18                | 1.84                                 | 2.17   | 5.39        | 27562 |

| Item                              |   |                      |                                      |  | Item        |       |
|-----------------------------------|---|----------------------|--------------------------------------|--|-------------|-------|
| <b>LIGHTING FITTINGS (CONT'D)</b> |   |                      |                                      |  |             |       |
|                                   |   | Supply<br>and<br>fix | Take<br>down<br>and<br>clear<br>away | Take<br>down<br>and set<br>aside for<br>re-use | Fix<br>only |       |
|                                   |   | A<br>\$              | B<br>\$                              | C<br>\$  | D<br>\$     |       |
|                                   | Pole top light fitting : -  |                      |                                      |  |             |       |
|                                   | <i>Each</i>   |                      |                                      |  |             |       |
| 27563                             | Pole top lantern c/w 35W/ 70W metal halide lamp and control gear as SFA 46 with large canopy.....   | 1,216.74             | 28.17                                | 34.54  | 105.27      | 27563 |
| 27564                             | Ditto but with small canopy.....  | 1,169.13             | 28.17                                | 34.54  | 105.27      | 27564 |
| 27565                             | Ditto but with large canopy 80W SON lamp.....   | 1,287.15             | 28.17                                | 34.54  | 105.27      | 27565 |
| 27566                             | Ditto but with small canopy 80W SON lamp.....   | 1,250.13             | 28.17                                | 34.54  | 105.27      | 27566 |
| 27567                             | Lighting fitting, IP23 c/w 70W SON lamp .....   | 1,248.72             | 28.17                                | 34.54  | 105.27      | 27567 |
| 27568                             | Ditto but for 70W metal halide lamp.....  | 1,101.40             | 28.17                                | 34.54  | 105.27      | 27568 |
| 27569                             | Pole top adaptor for above.....   | 386.28               | 11.52                                | 15.16  | 45.17       | 27569 |
| 27570                             | Pole top fitting as SFA208, 500mm diameter opal/clear globe made of impact resistant plastic on a black console, IP44 c/w 1 x 70W/100W metal halide lamp.....   | 1,945.02             | 59.50                                | 74.63  | 221.05      | 27570 |
| 27571                             | Ditto but 1 x 26W PLC lamp.....   | 1,450.71             | 59.50                                | 74.63  | 221.05      | 27571 |
| 27572                             | 500mm unbreakable globe only for pole top fitting as SFA 208.....   | 786.74               | 20.41                                | 25.48  | 75.88       | 27572 |
| 27573                             | Pole top luminaire as SFA 209, cast aluminium alloy housing with hinged top, clear acrylic lens, IP54 c/w cast aluminium mounting arm, control gear and 1 x 70W metal halide lamp.....  | 12,593.20            | 40.24                                | 49.49  | 149.40      | 27573 |
| 27574                             | Symmetrical pole top luminaire as SFA 210, aluminium alloy body, white/clear plastic diffuser with optical texture, anodised aluminium reflector, IP44 c/w control gear and 1 x 70W/100W metal halide lamp.....   | 3,925.16             | 28.17                                | 34.54  | 105.27      | 27574 |
| 27575                             | Pole top luminaire with additional upper light output as SFA 211, aluminium alloy body, crystal glass diffuser with optical texture, white louvred reflector, mounting height 3.5m to 5m, IP44 c/w control gear and 1 x 70W/100W metal halide lamp.....               | 4,665.59             | 28.17                                | 34.54  | 105.27      | 27575 |
| 27576                             | Cylindrical pole top luminaire as SFA 212, seamless aluminium housing, die cast aluminium door frame, tempered glass or polycarbonate lens, anodised aluminium reflector, schedule 40 steel yoke c/w control gear and 1 x 70W/ 100W/ 150W metal halide lamp.....      | 6,947.65             | 28.25                                | 34.62  | 105.49      | 27576 |
| 27577                             | Single pole top fitting as SFA 213, hinged cylindrical aluminium top housing of over 500mm diameter, injection moulded clear acrylic diffuser, hydroformed specular reflector, c/w control gear and 1 x 70W high pressure sodium or metal halide lamp .....           | 9,695.89             | 28.25                                | 34.62  | 105.49      | 27577 |
| 27578                             | Ditto but 1 x 150W high pressure sodium or metal halide lamp .....  | 10,052.50            | 28.25                                | 34.62  | 105.49      | 27578 |
| 27579                             | Pole top fitting as SFA 214, cylindrical aluminium top housing of 565mm diameter with polyester powder finish, thermoformed clear acrylic lens, hydroformed anodised aluminium reflector c/w control gear and 1 x 150W high pressure sodium or metal halide lamp..... | 4,888.84             | 28.25                                | 34.62  | 105.49      | 27579 |
| 27580                             | Pole top fitting as SFA 214, cylindrical aluminium top housing of 565mm diameter with polyester powder finish, thermoformed clear acrylic lens, hydroformed anodised aluminium reflector c/w control gear and 1 x 70W high pressure sodium or metal halide lamp.....  | 4,723.02             | 28.25                                | 34.62  | 105.49      | 27580 |



| Item                              |   | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only | Item  |
|-----------------------------------|---|----------------|--------------------------|------------------------------------|----------|-------|
| <b>LIGHTING FITTINGS (CONT'D)</b> |   | A              | B                        | C                                  | D        |       |
|                                   |   | \$             | \$                       | \$                                 | \$       |       |
|                                   | Pole top light fitting : - (Cont'd)   |                |                          |                                    |          |       |
|                                   | <i>Each</i>   |                |                          |                                    |          |       |
| 27581                             | Pole top mounted area light as SFA 215, one piece spun aluminium housing with cast aluminium door, clear contoured tempered glass or polycarbonate lens, perimeter forward throw reflector c/w extruded mounting arm, control gear and 1 x 70W high pressure sodium or metal halide lamp.....                             | 2,703.00       | 32.81                    | 41.24                              | 123.05   | 27581 |
| 27582                             | Pole top mounted area light as SFA 215, one piece spun aluminium housing with cast aluminium door, clear contoured tempered glass or polycarbonate lens, perimeter forward throw reflector c/w extruded mounting arm, 3.5m/ 4.5m lamp pole, control gear and 1 x 70W/ 150W high pressure sodium or metal halide lamp..... | 5,308.78       | 217.53                   | 271.33                             | 822.07   | 27582 |
| 27583                             | Ditto but twin lantern.....   | 8,084.80       | 218.80                   | 274.06                             | 823.04   | 27583 |
| 27584                             | Pole top fitting as SFA216, injection moulded frosted clear polycarbonate globe with decorative finial on top of globe and spun aluminium hood c/w 3.4m lamp pole from the fitting manufacturer, control gear and 1 x 70W high pressure sodium or metal halide lamp.....  | 30,874.81      | 217.53                   | 271.33                             | 822.07   | 27584 |
| 27585                             | Lighting fixture as SFA217, moulded aluminium housing and hood, cage of 4 moulded aluminium rods, welded aluminium louvre, symmetrical light distribution, overall height over 1m c/w control gear and 1 x 70W high pressure sodium or metal halide lamp.....   | 14,515.53      | 45.85                    | 53.13                              | 148.89   | 27585 |
| 27586                             | Pole top luminaire as SFA218, die cast aluminium alloy body, vandal resistant polycarbonate globe of 500mm diameter, anodised aluminium reflector, IP54 c/w control gear and 1 x 70W/ 150W high pressure sodium or metal halide lamp.....   | 3,979.46       | 28.12                    | 34.47                              | 105.06   | 27586 |
| 27587                             | Pole top globe fitting as SFA 219, top half of 400mm diameter globe being spun aluminium with outside mat and inside anodised, acrylic or polycarbonate diffuser, IP44, c/w control gear and 1 x 50W/70W HPS lamp or 1 x 35W/ 70W CDMT lamp.....  | 5,128.26       | 28.17                    | 34.54                              | 105.27   | 27587 |
| 27588                             | Pole top luminaire as SFA 220, die cast aluminium alloy body, vandal resistant polycarbonate diffuser, anodised aluminium reflector, IP54 c/w control gear and 1 x 50W/70W HPS lamp or 1 x 35W/ 70W CDMT lamp.....  | 3,654.09       | 28.17                    | 34.54                              | 105.27   | 27588 |
| 27589                             | Ditto but double heads and c/w mounting bracket.....  | 8,032.99       | 29.65                    | 37.96                              | 112.93   | 27589 |
| 27590                             | Side road lantern as SFA 221, single piece compression moulded canopy in glass reinforced polyester resin, hinged anti-vandal polycarbonate bowl, anodised aluminium reflector c/w control gear in separate compartment of body and 1 x 70W SON/T lamp.....   | 2,009.05       | 28.17                    | 34.54                              | 105.27   | 27590 |
| 27591                             | Ditto but 1 x 70W metal halide lamp.....  | 1,912.65       | 28.17                    | 34.54                              | 105.27   | 27591 |
| 27592                             | Rectangular road lighting as SFA 222, body of extruded aluminium sides and sheet aluminium top, toughened soda lime glass lens, anodised aluminium reflector, IP54 c/w control gear in hinged extruded aluminium gear tray and 1 x 100W/ 150W CDMT lamp.....  | 3,716.32       | 28.17                    | 34.54                              | 105.27   | 27592 |

| Item                              |   | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only | Item  |
|-----------------------------------|---|----------------|--------------------------|------------------------------------|----------|-------|
| <b>LIGHTING FITTINGS (CONT'D)</b> |   | A              | B                        | C                                  | D        |       |
| Ceiling mounted fittings : -      |   | \$             | \$                       | \$                                 | \$       |       |
| <i>Each</i>                       |   |                |                          |                                    |          |       |
| 27593                             | 100 mm diameter white opal glass cylindrical glassware and gallery as SFA 6.....  | 136.28         | 14.84                    | 18.33                              | 56.66    | 27593 |
| 27594                             | 115 mm diameter white opal glass cylindrical glassware and gallery as SFA 7.....  | 207.09         | 14.84                    | 18.33                              | 56.66    | 27594 |
| 27595                             | Surface mounted ceiling downlight as SFA 223, die cast aluminium body of 150mm diameter, anodised aluminium reflector, IP65 c/w safety glass, control gear and 1 x 35W metal halide discharge lamp..... | 2,130.37       | 20.41                    | 25.48                              | 75.88    | 27595 |
| 27596                             | Surface mounted ceiling downlight as SFA 223, die cast aluminium body of 150mm diameter, anodised aluminium reflector, IP65 c/w safety glass, control gear and 1 x 18W compact fluorescent lamp.....    | 1,286.27       | 20.41                    | 25.48                              | 75.88    | 27596 |
| 27597                             | Circular surface mounted fluorescent light fitting c/w opal diffuser, 1 x 13W/ 18W compact fluorescent lamp and electronic ballast.....   | 430.53         | 20.87                    | 26.54                              | 79.80    | 27597 |
| 27598                             | Surface mounted downlight, white colour cylindrical metal in specular finish, aluminium reflector, 240 mm diameter c/w integral electronic ballast and 2x18W PLC lamps (4000K).....                     | 268.39         | 20.49                    | 25.60                              | 76.19    | 27598 |
| 27599                             | Surface mounted light fitting c/w 1 x 18W compact fluorescent lamp and electronic ballast.....  | 860.59         | 17.70                    | 22.31                              | 64.03    | 27599 |
| 27600                             | Ditto with 2 hours battery pack.....  | 1,403.51       | 17.70                    | 22.31                              | 64.03    | 27600 |

| Item                              |   | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only | Item  |
|-----------------------------------|---|----------------|--------------------------|------------------------------------|----------|-------|
|                                   |   | A<br>\$        | B<br>\$                  | C<br>\$                            | D<br>\$  |       |
| <b>LIGHTING FITTINGS (CONT'D)</b> |   |                |                          |                                    |          |       |
|                                   | Wall mounting luminaire :-  |                |                          |                                    |          |       |
|                                   | <i>Each</i>   |                |                          |                                    |          |       |
| 27601                             | Vandal resistant wall mounted luminaire as SFA 225, injection moulded polycarbonate body, hinged injection moulded clear prismatic polycarbonate diffuser, IP65 c/w control gear in galvanised steel tray and 1 x 70W high pressure sodium lamp.....      | 1,234.96       | 14.89                    | 18.39                              | 56.89    | 27601 |
| 27602                             | Ditto but with 70W metal halide lamp.....   | 1,071.81       | 14.89                    | 18.39                              | 56.89    | 27602 |
| 27603                             | Wall mounted downlight as SFA 226, die cast aluminium body, anodised aluminium reflector, 190mm diameter, IP65 c/w mounting bracket with adjustable joint up to 12°, safety glass, control gear and 1 x 35W/70W CDMT lamp .....                           | 2,390.81       | 14.89                    | 18.39                              | 56.89    | 27603 |
| 27604                             | Surface mounted circular luminaire as SFA 227, die cast aluminium alloy body, polycarbonate lens, IP55 c/w control gear and 1 x 18W/ 26W compact fluorescent lamp.....  | 702.29         | 20.49                    | 25.60                              | 76.19    | 27604 |
| 27605                             | Wall mounted downlight as SFA 226, die cast aluminium body, anodised aluminium reflector, 190mm diameter, IP65 c/w mounting bracket with adjustable joint up to 12°, safety glass, control gear and 1 x 18W/ 26W compact fluorescent lamp.....            | 2,307.22       | 14.89                    | 18.39                              | 56.89    | 27605 |
| 27606                             | Enclosed polycarbonate wall mounting luminaries c/w 35W/ 70W CDMT lamp with IP65 protection and vandal-resistant fixings.....   | 1,043.21       | 14.89                    | 18.39                              | 56.89    | 27606 |
| 27607                             | Surface ceiling and wall luminaire as SFA 228, die cast aluminium body, crystal glass with optical texture or impact resistant polycarbonate diffuser, IP65 c/w control gear and 1 x 18W/ 26W compact fluorescent lamp or 1 x 35W metal halide lamp ..... | 1,237.81       | 20.49                    | 25.60                              | 76.19    | 27607 |
| 27608                             | Recessed wall luminaire as SFA 229, marine grade aluminium alloy body and frame, tempered prismatic glass lens, shielded light source, IP55 c/w control gear and 1 x 70W high pressure sodium or 1 x 70W metal halide lamp.....                           | 3,685.27       | 20.49                    | 25.60                              | 76.19    | 27608 |
| 27609                             | Wall luminaire as SFA 230, die cast aluminium body, fully shielded light source, IP43, c/w control gear and 1x 18W/ 26W compact fluorescent lamp or 1 x 35W CDMT lamp .....   | 1,469.17       | 20.49                    | 25.60                              | 76.19    | 27609 |
| 27610                             | Wall luminaire with directed light as SFA 231, die cast aluminium body, anodised aluminium reflector, safety glass with optical texture, IP55 c/w control gear and 1 x 18W/ 26W compact fluorescent lamp or 1 x 35W metal halide lamp .....               | 2,248.63       | 20.49                    | 25.60                              | 76.19    | 27610 |
| 27611                             | Wall luminaire with double-sided light output as SFA 232, die cast aluminium body, glass optical lens, anodised aluminium reflector, IP44 c/w safety glass, control gear and 1 x 14/ 18W/ 26W compact fluorescent lamp or 1 x 35W metal halide lamp ..... | 1,303.07       | 20.49                    | 25.60                              | 76.19    | 27611 |
| 27612                             | Recessed circular luminaire with shielded light as SFA 233, die cast aluminium body, 250mm outside diameter, c/w matt safety glass, control gear and 1 x 18W/ 26W compact fluorescent lamp.....   | 1,032.92       | 20.49                    | 25.60                              | 76.19    | 27612 |

| Item                              |  | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only | Item  |
|-----------------------------------|--|----------------|--------------------------|------------------------------------|----------|-------|
| <b>LIGHTING FITTINGS (CONT'D)</b> |  | A              | B                        | C                                  | D        |       |
| <i>Each</i>                       |  | \$             | \$                       | \$                                 | \$       |       |
|                                   | Wall mounting luminaire :- (Cont'd)  |                |                          |                                    |          |       |
| 27613                             | Surface mounted downlight, die cast aluminium housing, IP65 and 7W LED lamp.....   | 1,353.84       | 20.49                    | 25.60                              | 76.19    | 27613 |
| 27614                             | Single mode LED, surface mounted luminaire, IP65 c/w 20W LED lamp.....   | 1,150.32       | 20.49                    | 25.60                              | 76.19    | 27614 |
| 27615                             | Ditto c/w 2hrs emergency power pack.....   | 1,344.74       | 20.49                    | 25.60                              | 76.19    | 27615 |
| 27616                             | Surface mounted dual light, die cast aluminium body, polycarbonate diffuser, IP65, c/w microwave sensor, electronic ballast ,1x3W LED lamp & 1x28W 2D lamp.....  | 704.45         | 20.49                    | 25.60                              | 76.19    | 27616 |
| 27617                             | Surface mounted dual light, die cast aluminium body, polycarbonate diffuser, IP65, c/w microwave sensor, electronic ballast ,1x3W LED lamp & 1x28W 2D lamp and 2-hour emergency power pack.....                | 824.05         | 20.49                    | 25.60                              | 76.19    | 27617 |
| 27618                             | Surface mounted dual light , die cast aluminium body, polycarbonate diffuser, IP65, c/w 120x360 PIR detector, electronic ballast ,1x7W energy saving lamp & 1x28W 2D lamp and 2-hour emergency power pack..... | 1,190.95       | 20.49                    | 25.60                              | 76.19    | 27618 |

| Item  |  | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only | Item  |
|-------|--|----------------|--------------------------|------------------------------------|----------|-------|
|       |  | A<br>\$        | B<br>\$                  | C<br>\$                            | D<br>\$  |       |
|       | <b>LIGHTING FITTINGS (CONT'D)</b>  |                |                          |                                    |          |       |
|       | Wall mounting luminaire :- (Cont'd)  |                |                          |                                    |          |       |
|       | <i>Each</i>  |                |                          |                                    |          |       |
| 27619 | Surface mounted dual light, IP65 c/w, microwave sensor, 20W LED lamp and 2 hours emergency power pack.....   | 1,467.67       | 20.49                    | 25.60                              | 76.19    | 27619 |
| 27620 | Weatherproof ceiling/ wall mounted down light, IP65 c/w 7W LED lamp.....   | 1,233.97       | 20.49                    | 25.60                              | 76.19    | 27620 |
| 27621 | 13W 600 mm horizontal fluorescent lighting unit c/w dual voltage safety shaver and lamp tube.....  | 883.85         | 20.32                    | 25.38                              | 75.57    | 27621 |
| 27622 | Wall mounted fluorescent luminaire c/w 13W fluorescent lamp and control gear with shaver supply unit to BS EN 60742.....   | 1,051.94       | 30.03                    | 34.19                              | 81.91    | 27622 |
| 27623 | Wall mounted vandal resistant light fitting as SFA 234, oval polycarbonate housing and guard, opal polycarbonate diffuser, polished aluminium reflector, IP65 c/w control gear and 2 x 9W PL lamp.....   | 437.06         | 20.32                    | 25.38                              | 75.57    | 27623 |
| 27624 | Wall mounted vandal resistant light fitting as SFA 235, circular polycarbonate housing and guard, opal polycarbonate diffuser, polished aluminium reflector, IP65 c/w control gear and 2 x 9W PL lamp.....   | 459.01         | 20.32                    | 25.38                              | 75.57    | 27624 |
| 27625 | Rectangular recessed fitting as SFA 236, aluminium housing, opal toughened glass diffuser, IP54 c/w control gear and 1 x 18W PLC lamp.....   | 621.80         | 25.43                    | 31.70                              | 94.83    | 27625 |
| 27626 | Ditto but as SFA 237 with 45° grille for directed light.....   | 621.39         | 25.43                    | 31.70                              | 94.83    | 27626 |
| 27627 | Wall mounted luminaire as SFA 238, corrosion resistant aluminium alloy body, vandal resistant polycarbonate diffuser, IP55 c/w wall mounting base and arm, control gear and 1 x 18W PLC lamp.....  | 1,365.34       | 20.32                    | 25.38                              | 75.57    | 27627 |
| 27628 | Wall mounted circular luminaire as SFA 239, die cast aluminium alloy body, over 250mm diameter, half shielded and polycarbonate lens the other half, IP55 c/w control gear and 1 x 18W PLC lamp.....   | 796.69         | 20.32                    | 25.38                              | 75.57    | 27628 |
| 27629 | Hemispherical surface bulkhead as SFA 240, die cast aluminium body, over 250mm diameter, opal polycarbonate bowl with 4-ring quarter sphere grille, IP65 c/w control gear and 1 x 50W HPS lamp or 1 x 35W/ 70W CDMT lamp.....  | 1,922.02       | 20.32                    | 25.38                              | 75.57    | 27629 |
| 27630 | Lantern as SFA 241, hinged transparent acrylic or polycarbonate refractor bowl, IP54 c/w control gear in separate compartment and 1 x 70W HPS or CDMT lamp.....  | 1,284.89       | 28.05                    | 34.40                              | 104.82   | 27630 |
| 27631 | Vertical fixing adaptor for lantern as SFA 241.....  | 330.45         | 11.43                    | 14.63                              | 43.99    | 27631 |
| 27632 | Side entry lantern as SFA 242, glass reinforced polyester body, hinged injection moulded bowl, 2 aluminium alloy reflectors c/w control gear and 1 x 70W/ 100W CDMT lamp.....  | 2,073.06       | 28.17                    | 34.54                              | 105.27   | 27632 |
| 27633 | Side entry lantern as SFA 243, die cast aluminium body, injection moulded acrylic or polycarbonate refractor bowl c/w control gear and 1 x 70W/100W CDMT lamp.....   | 2,073.95       | 28.17                    | 34.54                              | 105.27   | 27633 |
| 27634 | Special made wall mount bracket arm for side entry lantern comprising 1 no. 300 x 300 x 9 mm thick mild steel base plate and 1 no. 25 mm diameter x 900 mm long galvanized steel pipe bent to shape and welded to base plate fixed to wall with 4 nos. anchor bolt (9 mm diameter x 75 mm long)..... | 283.78         | 18.96                    | 23.91                              | 71.16    | 27634 |

| Item                              |   | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only | Item  |
|-----------------------------------|---|----------------|--------------------------|------------------------------------|----------|-------|
| <b>LIGHTING FITTINGS (CONT'D)</b> |   |                |                          |                                    |          |       |
| Spot lights :-                    |   |                |                          |                                    |          |       |
| <i>Each</i>                       |   |                |                          |                                    |          |       |
|                                   |   | A<br>\$        | B<br>\$                  | C<br>\$                            | D<br>\$  |       |
| 27635                             | Weatherproof spot light of die cast aluminium body c/w wire guard, stand base and 1 x 500W lamp with built-in reflector.....  | 181.06         | 11.52                    | 15.16                              | 45.17    | 27635 |
| 27636                             | Spot light as SFA 244, perforated steel plate body, 90° tiltable plastic bracket, 360° rotatable plastic transadapter for track mounting, mirror-finish anodised aluminium reflector c/w safety glass with anti-dazzle cap, control gear and LED Lamp ..... | 1,609.71       | 11.52                    | 15.16                              | 45.17    | 27636 |
| 27637                             | Spot light, in black/white/bronze finish with extruded aluminium profile, spot/flood reflector for 1 x 3/3.5/5W LED lamp suitable for light track mounting as SFA 244.....  | 555.80         | 11.52                    | 15.16                              | 45.17    | 27637 |
| 27638                             | Recessed LED spot light, 1 x 3/3.5/5W LED lamp c/w hanger, anodized aluminium reflector, lamp tube and accessories.....   | 268.20         | 11.52                    | 15.16                              | 45.17    | 27638 |
| 27639                             | Recessed LED spot light, 2 x 3/3.5/5W LED lamp c/w hanger, anodized aluminium reflector, lamp tubes and accessories.....  | 394.93         | 11.52                    | 15.16                              | 45.17    | 27639 |
| 27640                             | Recessed LED spot light, 3 x 3/3.5/5W LED lamp c/w hanger, anodized aluminium reflector, lamp tubes and accessories.....  | 492.42         | 11.52                    | 15.16                              | 45.17    | 27640 |
| 27641                             | Recessed LED spot light, 4 x 3/3.5/5W LED lamp c/w hanger, anodized aluminium reflector, lamp tubes and accessories.....  | 560.67         | 11.52                    | 15.16                              | 45.17    | 27641 |
| 27642                             | Surface LED spot light, star wire suspended, 3 x 3/3.5/5W LED lamp c/w hanger, anodized aluminium reflector, lamp tubes and accessories.....  | 580.17         | 11.52                    | 15.16                              | 45.17    | 27642 |
| 27643                             | Surface LED spot light, row/matrix wire suspended, 4 x 3/3.5/5W LED lamp c/w hanger, anodized aluminium reflector, lamp tubes and accessories.....  | 667.91         | 11.52                    | 15.16                              | 45.17    | 27643 |
| 27644                             | Surface LED spot light, circle wire suspended, 6 x 3/3.5/5W LED lamp c/w hanger, anodized aluminium reflector, lamp tubes and accessories.....  | 1,009.13       | 11.52                    | 15.16                              | 45.17    | 27644 |
| 27645                             | Surface LED spot light, matrix wire suspended, 6 x 3/3.5/5W LED lamp c/w hanger, anodized aluminium reflector, lamp tubes and accessories.....  | 1,009.13       | 11.52                    | 15.16                              | 45.17    | 27645 |
| 27646                             | Surface LED spot light, matrix wire suspended, 8 x 3/3.5/5W LED lamp c/w hanger, anodized aluminium reflector, lamp tubes and accessories.....  | 1,369.84       | 11.52                    | 15.16                              | 45.17    | 27646 |
| 27647                             | Beacon light fitting, 400 mm in height and diameter 150 mm .....  | 993.74         | 20.41                    | 25.48                              | 75.88    | 27647 |
| 27648                             | PAR 38, 120W or 100W GLS eyeball spotlight for light track mounting .....   | -              | 14.84                    | 18.33                              | 56.66    | 27648 |
| 27649                             | Surface mounted spot light accent, aluminium housing and reflector, IP65, integral control gear c/w 1x35W HITT lamp (metal halide).....   | 956.87         | 14.84                    | 18.33                              | 56.66    | 27649 |

| Item  |   | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only | Item  |
|-------|---|----------------|--------------------------|------------------------------------|----------|-------|
|       |   | A<br>\$        | B<br>\$                  | C<br>\$                            | D<br>\$  |       |
|       | <b>LIGHTING FITTINGS (CONT'D)</b>   |                |                          |                                    |          |       |
|       | Recessed steplight : -  |                |                          |                                    |          |       |
|       | <i>Each</i>   |                |                          |                                    |          |       |
| 27650 | Recessed rectangular steplight as SFA 246, die cast aluminium body, anodised aluminium reflector, glare suppression and 60° light output, IP65 c/w control gear and 1 x 18W PLC lamp.....   | 1,090.32       | 20.49                    | 25.60                              | 76.19    | 27650 |
| 27651 | Recessed circular steplight as SFA 247, die cast aluminium body, IP65 c/w safety glass, control gear and 1 x 26W PLC lamp.....  | 1,097.71       | 20.49                    | 25.60                              | 76.19    | 27651 |
| 27652 | Recessed rectangular steplight as SFA 248, die cast aluminium housing with 45° grille, opal toughened glass diffuser anodised aluminium reflector, IP65 c/w control gear and 1 x 18W PLC lamp.....  | 1,070.20       | 20.49                    | 25.60                              | 76.19    | 27652 |
| 27653 | Recessed rectangular steplight as SFA 249, die cast aluminium body, anodised aluminium reflector, IP64 c/w safety glass, control gear and 1 x 7W/9W PL lamp.....  | 716.42         | 20.49                    | 25.60                              | 76.19    | 27653 |
| 27654 | Recessed rectangular steplight as SFA 250, die cast aluminium body, anodised aluminium reflector, glare suppression and 45° light output, IP64 c/w matt safety glass, control gear and 1 x 11W fluorescent lamp.....  | 814.45         | 20.49                    | 25.60                              | 76.19    | 27654 |
|       | Buried uplight : -  |                |                          |                                    |          |       |
|       | <i>Each</i>   |                |                          |                                    |          |       |
| 27655 | Buried uplight as SFA 251, die cast aluminium housing and protective front grille, toughened transparent glass diffuser, glass surface temperature 100°C, IP67 c/w matt safety glass, control gear and 1 x 19W/ 23W CFL PAR38 lamp.....                             | 1,769.21       | 28.29                    | 34.69                              | 105.70   | 27655 |
| 27656 | Buried uplight as SFA 252, die cast aluminium housing and protective front grille, aluminium rotosymmetric reflector, toughened transparent glass diffuser, glass surface temperature 72°C, IP67 c/w control gear and 1 x 70W MBI lamp.....                         | 3,231.08       | 28.29                    | 34.69                              | 105.70   | 27656 |
| 27657 | Buried drive-over luminaire as SFA 253, die cast aluminium housing, 15mm thick toughened glass with maximum surface temperature 75°C, aluminium reflector, internal anti-glare grid in die cast aluminium, IP67 c/w control gear and 1 x 70W metal halide lamp..... | 4,744.30       | 28.29                    | 34.69                              | 105.70   | 27657 |
| 27658 | Buried drive-over floodlight as SFA 254, glass fiber reinforced polymer housing, tempered heat resistant glass lens, adjustable hydroformed reflector c/w control gear and 1 x 70W metal halide lamp .....  | 1,780.93       | 28.29                    | 34.69                              | 105.70   | 27658 |
| 27659 | Semi-buried fixture as SFA 255 for low level illumination, glass fiber reinforced polymer housing, tempered heat resistant glass multiple zone prismatic refractor at side c/w control gear and 1 x 50W/70W metal halide lamp.....                                  | 4,422.05       | 28.29                    | 34.69                              | 105.70   | 27659 |
| 27660 | Buried uplight as SFA 256, injection moulded ABS housing with cast aluminium/bronze doors, spun aluminium reflector, tempered glass lens, IP67 c/w control gear and 1 x 70W metal halide lamp.....  | 5,091.11       | 20.49                    | 25.60                              | 76.19    | 27660 |

| Item                              |  | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only | Item  |
|-----------------------------------|--|----------------|--------------------------|------------------------------------|----------|-------|
|                                   |  | A              | B                        | C                                  | D        |       |
|                                   |  | \$             | \$                       | \$                                 | \$       |       |
| <b>LIGHTING FITTINGS (CONT'D)</b> |  |                |                          |                                    |          |       |
|                                   | Buried uplight : - (Cont'd)  |                |                          |                                    |          |       |
|                                   | <i>Each</i>  |                |                          |                                    |          |       |
| 27661                             | Well light as SFA 257 for installation in 230mm diameter 375mm deep direct burial pipe, spun copper housing with bronze clamping ring, convex tempered clear glass lens, cast aluminium louvre at grade, IP67 c/w control gear in separate ballast box and 1 x LED lamp.....   | 6,409.76       | 20.49                    | 25.60                              | 76.19    | 27661 |
| 27662                             | Buried drive-over uplight as SFA 258, corrosion resistant aluminium housing of 150mm diameter, 12mm thick toughened glass lens, internal die cast aluminium anti-glare grid, drive over load 3500kg at 30 km/h, IP67 c/w control gear and 1 x LED lamp.....  | 2,409.90       | 28.29                    | 34.69                              | 105.70   | 27662 |
| 27663                             | Buried uplight as SFA 259, grade 304 stainless steel body of 250mm diameter, thermal shock resistant borosilicate glass lens, internal louvred glare shield, IP67 c/w control gear and 1 x 26W compact fluorescent lamp.....   | 2,166.45       | 28.29                    | 34.69                              | 105.70   | 27663 |
|                                   | Indicating lamp : -  |                |                          |                                    |          |       |
|                                   | <i>Each</i>  |                |                          |                                    |          |       |
| 27664                             | Indicating lamp with polycarbonate bowl and gallery c/w LED lamp up to 3W .....  | 260.86         | 15.29                    | 18.76                              | 53.21    | 27664 |
|                                   | Bollard fittings :-  |                |                          |                                    |          |       |
|                                   | <i>Each</i>  |                |                          |                                    |          |       |
| 27665                             | 1.1m high bollard as SFA 260, extruded aluminium housing of 180mm diameter, vandal resistant clear polycarbonate diffuser, anodised aluminium louvre c/w control gear and 1 x 35W/50W metal halide lamp .....  | 1,722.33       | 28.25                    | 34.62                              | 105.49   | 27665 |
| 27666                             | 1.1m high bollard as SFA 260, extruded aluminium housing of 180mm diameter, vandal resistant clear polycarbonate diffuser, anodised aluminium louvre c/w control gear and 3W LED lamp .....  | 2,433.34       | 28.25                    | 34.62                              | 105.49   | 27666 |
| 27667                             | Concrete bollard as SFA 261, one piece precast concrete body of minimum 75mm thickness reinforced with internal steel cage, 13mm thick hot dip galvanised base plate for anchoring, clear/opal acrylic inner lens, horizontal cast aluminium grille of minimum thickness 6mm, vandal resistant clear polycarbonate diffuser c/w control gear and 1 x 70W/100W metal halide lamp..... | 11,914.93      | 28.25                    | 34.62                              | 105.49   | 27667 |
| 27668                             | 1m high bollard as SFA 262, extruded aluminium pole, aluminium alloy top and flange, clear polycarbonate prismatic lens c/w control gear and 1 x 26W fluorescent lamp.....   | 5,114.48       | 17.73                    | 22.36                              | 64.15    | 27668 |
| 27669                             | Border lighting for low level illumination as SFA 263, cast aluminium housing, frosted tempered borosilicate fresnel lens at side c/w control gear and 1 x 50W/70W metal halide lamp.....  | 2,481.32       | 28.25                    | 34.62                              | 105.49   | 27669 |
| 27670                             | 1m high bollard SFA 264, cylindrical aluminium body of 150mm diameter, clear glass bowl with decorative ring, IP44 c/w control gear and 1 x 50W HSE lamp or 1 x 35W CDMT lamp.....   | 3,060.46       | 28.25                    | 34.62                              | 105.49   | 27670 |
| 27671                             | 1m high bollard SFA 265, extruded aluminium pole of diameter 160mm, die cast aluminium body and louvre, vandal resistant clear polycarbonate lens, IP54 c/w control gear and 1 x 70W high pressure sodium or metal halide lamp .....   | 2,626.06       | 28.25                    | 34.62                              | 105.49   | 27671 |
| 27672                             | Stand-alone solar power LED bollard c/w vandal resistant cast aluminium body, IP65, impact resistance IK10, polycarbonate diffuser, self contained with solar panel, batteries and 1x3W LED lamp.....  | 3,366.35       | 28.25                    | 34.62                              | 105.49   | 27672 |



| Item                              |  | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only | Item  |
|-----------------------------------|--|----------------|--------------------------|------------------------------------|----------|-------|
|                                   |  | A<br>\$        | B<br>\$                  | C<br>\$                            | D<br>\$  |       |
| <b>LIGHTING FITTINGS (CONT'D)</b> |  |                |                          |                                    |          |       |
|                                   | Fiber optic lighting system : -  |                |                          |                                    |          |       |
|                                   | <i>Each</i>  |                |                          |                                    |          |       |
| 27673                             | Light generator with closed halogen dichroic lamp (12V/50W 24deg., Ra=100 and colour temperature 3000K). The generator shall concentrate the luminous flux of lamps into a fiber optic harness. Housing to be cast aluminium c/w built in transformer (230V/12V 50VA) and protective dichroic filter.....  | 1,312.55       | 8.06                     | 10.18                              | 32.33    | 27673 |
| 27674                             | Harness, 2 meter each, made of 16 nos. of fiber optic cables (bundle of 19 optical fibers in a cable diameter of 5 mm) meeting in parallel at the connecting end. Optical fiber to be made of glass (70 µm diameter) or P.M.M.A. of 1 mm diameter (polymethylmethacrylate) suitable to connect to the light generator and the optical termination..... | 6,385.81       | 13.33                    | 17.14                              | 52.83    | 27674 |
| 27675                             | Termination and accessories to put at the end of fiber optic cable equipped with an adjustable glass lens-holder to focus from 19° to 30°.....   | 340.33         | 13.33                    | 16.76                              | 51.28    | 27675 |
| 27676                             | Ditto with 12V/75W 24° lamp.....   | 1,968.27       | 13.33                    | 16.76                              | 51.28    | 27676 |
| 27677                             | Ditto with 150W metal halide lamp.....   | 7,531.46       | 13.33                    | 16.76                              | 51.28    | 27677 |
| 27678                             | Ditto with 200W metal halide lamp.....   | 8,212.06       | 13.33                    | 16.76                              | 51.28    | 27678 |
|                                   | <i>Per linear metre</i>  |                |                          |                                    |          |       |
| 27679                             | Diffusing optical cable suitable to connect to the light generator of 17 mm P.M.M.A. cable with a reflective centre core, a ultra-violet stabilized clear PVC outer protective sheath and a clear mylar wrapping around fiber optics.....  | 75.57          | 11.42                    | 14.45                              | 42.32    | 27679 |
|                                   | Bed head light fitting : -   |                |                          |                                    |          |       |
|                                   | <i>Each</i>  |                |                          |                                    |          |       |
| 27680                             | Bed head lighting fitting with B.S. lamp holder.....   | 655.15         | 12.46                    | 13.85                              | 47.22    | 27680 |
| 27681                             | Ditto but with shaver supply unit.....   | 658.84         | 12.46                    | 13.85                              | 47.22    | 27681 |
| 27682                             | Angle poise bedhead fitting c/w lamp.....  | 947.48         | 14.92                    | 18.43                              | 57.00    | 27682 |
|                                   | External lighting for construction site : - (Items 27683 to 27687 will only be paid for, if ordered by the Maintenance Surveyor in writing.)   |                |                          |                                    |          |       |
|                                   | Isolating step down transformer 220/110V, single phase, having centre tap with secondary winding earthed so that the normal voltage of circuit to earth does not exceed 55V : -  |                |                          |                                    |          |       |
|                                   | <i>Per set</i>   |                |                          |                                    |          |       |
| 27683                             | 500VA.....   | 603.43         | 8.14                     | 10.03                              | 30.56    | 27683 |
| 27684                             | 1000VA.....  | 1,056.73       | 8.14                     | 10.03                              | 30.56    | 27684 |
| 27685                             | Weatherproof surface mounted fluorescent light fitting, IP65 c/w T5 fluorescent tube, T5 electronic control gear/electronic ballast, 1 x 28W.....  | 978.52         | 22.18                    | 26.74                              | 70.67    | 27685 |
| 27686                             | Weatherproof bulkhead fittings rated IP65 c/w glassware, 100W, 110V lamp, side/back cable entry, cutting, and rubber grommet or stop where applicable.....   | 430.39         | 20.36                    | 25.43                              | 75.72    | 27686 |

| Item                              |  |                |                          |                                    | Item     |       |
|-----------------------------------|--|----------------|--------------------------|------------------------------------|----------|-------|
| <b>LIGHTING FITTINGS (CONT'D)</b> |  |                |                          |                                    |          |       |
|                                   | External lighting for construction site :- (Items 27683 to 27687 will only be paid for, if ordered by the Maintenance Surveyor in writing.) (Cont'd)   | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only |       |
|                                   | Isolating step down transformer 220/110V, single phase, having centre tap with secondary winding earthed so that the normal voltage of circuit to earth does not exceed 55V :- (Cont'd)                            |                |                          |                                    |          |       |
|                                   | <b>Per set</b>   | A \$           | B \$                     | C \$                               | D \$     |       |
| 27687                             | Weatherproof bulkhead fittings rated IP65 c/w polycarbonate diffuser, 100W lamp, 110V, side/back cable entry, cutting, and rubber grommet or stop where applicable .....   | 470.51         | 20.36                    | 25.43                              | 75.72    | 27687 |
|                                   | Miscellaneous lighting fittings :-   |                |                          |                                    |          |       |
|                                   | <b>Each</b>  |                |                          |                                    |          |       |
| 27688                             | Fluorescent insert for empty vairpoll completely wired with ballast for 1 x 18W lamp c/w lamp. Empty profile, external linear prismatic ribs, end plate, coupler, mounting bush and all necessary accessories..... | 764.52         | 18.57                    | 23.62                              | 69.71    | 27688 |
| 27689                             | Ditto, for 1 x 28W tube.....   | 900.14         | 23.44                    | 28.72                              | 85.54    | 27689 |
| 27690                             | Ditto, for 1 x 54W tube.....   | 1,097.35       | 25.02                    | 29.98                              | 92.64    | 27690 |
| 27691                             | Surface luminaire as SFA 256, circular die cast aluminium casing of minimum overall diameter 380mm, IP65 c/w control gear and 1 x 70W SON lamp.....  | 1,904.40       | 20.18                    | 25.15                              | 76.60    | 27691 |
| 27692                             | Garage pit luminaire c/w lamp and control gear suitable for use in Zone 2 hazardous area to IEC 60079-10.....  | 3,651.69       | 20.43                    | 24.87                              | 74.50    | 27692 |
|                                   | Shades :-  |                |                          |                                    |          |       |
|                                   | <b>Each</b>  |                |                          |                                    |          |       |
| 27693                             | Shades n.e. 150 mm.....  | 22.93          | 2.42                     | 2.73                               | 7.18     | 27693 |
| 27694                             | Shades (locally made) n.e. 150 mm diameter.....  | 13.17          | 2.42                     | 2.73                               | 7.18     | 27694 |
| 27695                             | Coolicon shades 230 mm diameter.....   | 27.17          | 2.42                     | 2.73                               | 7.18     | 27695 |
| 27696                             | Coolicon shades (locally made) 230 mm diameter.....  | 17.44          | 2.42                     | 2.73                               | 7.18     | 27696 |
| 27697                             | Coolicon shades 280 mm diameter.....   | 27.24          | 2.42                     | 2.73                               | 7.18     | 27697 |
| 27698                             | Coolicon shades (locally made) 280 mm diameter.....  | 19.31          | 2.42                     | 2.73                               | 7.18     | 27698 |

| Item  |  |                |                          |                                    | Item         |
|-------|--|----------------|--------------------------|------------------------------------|--------------|
|       | <b>LIGHTING FITTINGS (CONT'D)</b>  |                |                          |                                    |              |
|       | Dome cover, wall mounting :-   |                |                          |                                    |              |
|       | <i>Each</i>  | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only     |
|       |  | A \$           | B \$                     | C \$                               | D \$         |
| 27699 | 65 mm diameter.....  | 21.62          | 3.36                     | 4.07                               | 11.71 27699  |
| 27700 | 87 mm diameter.....  | 24.24          | 3.36                     | 4.07                               | 11.71 27700  |
| 27701 | 125 mm diameter.....   | 28.82          | 3.36                     | 4.07                               | 11.71 27701  |
| 27702 | Dome back plate, side entry .....  | 28.43          | 3.36                     | 4.07                               | 11.71 27702  |
|       | Dome cover :-  |                |                          |                                    |              |
|       | <i>Each</i>  |                |                          |                                    |              |
| 27703 | Dome cover 65 mm diameter.....   | 20.90          | 3.36                     | 4.07                               | 11.71 27703  |
| 27704 | Dome cover 87 mm diameter.....   | 22.27          | 3.36                     | 4.07                               | 11.71 27704  |
| 27705 | Dome cover 125 mm diameter.....  | 26.93          | 3.36                     | 4.07                               | 11.71 27705  |
| 27706 | Dome back plate, side entry.....   | 27.20          | 3.36                     | 4.07                               | 11.71 27706  |
|       | Sundries :-  |                |                          |                                    |              |
|       | <i>Each</i>  |                |                          |                                    |              |
| 27707 | Weatherproof metal box for 250/400W SON control gear.....  | 554.74         | 23.20                    | 28.46                              | 84.50 27707  |
| 27708 | Weatherproof metal box for 250/400W MBIL control gear.....   | 581.38         | 29.75                    | 36.04                              | 110.00 27708 |
| 27709 | Weatherproof metal box for 750W/1000W MBIL control gear.....   | 688.40         | 29.75                    | 36.04                              | 110.00 27709 |
| 27710 | Weatherproof metal box for 1500/1600W MBIL control gear.....   | 705.68         | 29.75                    | 36.04                              | 110.00 27710 |
| 27711 | External control gear box c/w gear for 250W SON.....   | 1,128.56       | 24.29                    | 30.03                              | 87.75 27711  |
| 27712 | External control gear box c/w gear for 400W SON.....   | 1,311.14       | 24.29                    | 30.03                              | 87.75 27712  |
| 27713 | Pendant, plain, comprising ceiling rose, flex and B.C. lampholder (labour rates including fixing of shade) ..... | 46.83          | 6.89                     | 8.33                               | 25.07 27713  |

| Item                              |   | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only | Item  |
|-----------------------------------|---|----------------|--------------------------|------------------------------------|----------|-------|
|                                   |   | A \$           | B \$                     | C \$                               | D \$     |       |
| <b>LAMP POLES AND ACCESSORIES</b> |   |                |                          |                                    |          |       |
|                                   | Lamp poles, mild steel c/w pole cap, compression gland, mounting ring, pole bracket, connector box, service box, control box and base plate etc. :-   |                |                          |                                    |          |       |
|                                   | <i>Each</i>   |                |                          |                                    |          |       |
| 27714                             | n.e. 3.5 m.....   | 2,184.35       | 175.35                   | 229.48                             | 672.20   | 27714 |
| 27715                             | 3.5 m to 4.5 m.....   | 2,545.24       | 214.93                   | 269.72                             | 820.83   | 27715 |
| 27716                             | 4.5 m to 7 m .....  | 6,940.69       | 327.27                   | 410.81                             | 1,251.31 | 27716 |
| 27717                             | 7 m to 7.5 m.....   | 7,935.07       | 395.74                   | 493.77                             | 1,508.79 | 27717 |
| 27718                             | 7.5 m to 8 m .....  | 9,425.61       | 491.39                   | 613.03                             | 1,877.24 | 27718 |
| 27719                             | 8 m to 10 m .....   | 12,701.34      | 674.26                   | 845.15                             | 2,571.68 | 27719 |
| 27720                             | 10 m to 12 m .....  | 14,977.59      | 817.60                   | 1,022.46                           | 3,120.09 | 27720 |
|                                   | Twin heads lamp pole for SFA 215, 127 mm square straight steel pole flange mounting, gauge 11 galvanised steel with bronze enamel finish :-   |                |                          |                                    |          |       |
|                                   | <i>Each</i>   |                |                          |                                    |          |       |
| 27721                             | 4.2m nominal height.....  | 4,705.83       | 218.80                   | 274.06                             | 823.04   | 27721 |
|                                   | Lamp poles, tubular steel, hot dipped galvanized to BS EN ISO 1461 c/w pole cap, compression gland, mounting ring, pole bracket, connector box, service box, control box and base plate etc. :-               |                |                          |                                    |          |       |
|                                   | <i>Each</i>   |                |                          |                                    |          |       |
| 27722                             | n.e. 4 m.....   | 3,018.97       | 207.30                   | 261.85                             | 783.49   | 27722 |
| 27723                             | 4 m to 4.5 m .....  | 3,247.57       | 232.77                   | 292.07                             | 888.84   | 27723 |
| 27724                             | 4.5 m to 7 m .....  | 7,700.28       | 327.34                   | 410.92                             | 1,251.63 | 27724 |
| 27725                             | 7 m to 7.5 m.....   | 8,756.96       | 385.17                   | 480.53                             | 1,468.28 | 27725 |
| 27726                             | 7.5 m to 8 m .....  | 10,499.86      | 499.47                   | 623.09                             | 1,908.04 | 27726 |
| 27727                             | 8 m to 12 m .....   | 16,698.71      | 810.97                   | 1,014.17                           | 3,094.74 | 27727 |
|                                   | Lamp poles, tubular steel, hot dipped galvanized to BS EN ISO 1461, wall mounted c/w pole cap, compression gland, mounting ring, pole bracket, connector box, service box, control box and base plate etc. :- |                |                          |                                    |          |       |
|                                   | <i>Each</i>   |                |                          |                                    |          |       |
| 27728                             | n.e. 3.5 m.....   | 2,774.08       | 181.49                   | 237.52                             | 695.73   | 27728 |
| 27729                             | 3.5 m to 4 m.....   | 3,150.30       | 206.71                   | 261.10                             | 781.21   | 27729 |
| 27730                             | 4 m to 4.5 m .....  | 3,435.42       | 225.72                   | 283.20                             | 861.89   | 27730 |
| 27731                             | 4.5 m to 7 m .....  | 7,017.73       | 333.03                   | 418.02                             | 1,273.32 | 27731 |

| Item  |   |                |                          |                                    | Item      |       |
|-------|---|----------------|--------------------------|------------------------------------|-----------|-------|
|       | <b>LAMP POLES AND ACCESSORIES (CONT'D)</b>  |                |                          |                                    |           |       |
|       | Lamp poles, tubular steel, hot dipped galvanized to BS EN ISO 1461, wall mounted c/w pole cap, compression gland, mounting ring, pole bracket, connector box, service box, control box and base plate etc. : - (Cont'd)   |                |                          |                                    |           |       |
|       | <i>Each</i>   | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only  |       |
|       |   | A \$           | B \$                     | C \$                               | D \$      |       |
| 27732 | 7 m to 7.5 m.....   | 8,904.03       | 399.07                   | 497.93                             | 1,521.48  | 27732 |
| 27733 | Hot-dip galvanized flange mounted type tapered polygonal high mast of 30 m nominal mounting height c/w raising and lowering system and head frame for mounting maximum 24 nos. of luminaires with the supply of foundation bolts/ nuts/washers.....<br>(The actual rate should be : \$346,851.30 for Item 27733A) | 34,685.13      | 5,738.95                 | 9,565.08                           | 24,615.38 | 27733 |
| 27734 | 4.8m-5m aluminium lamp pole .....   | 21,459.65      | 223.06                   | 278.80                             | 854.39    | 27734 |
|       | Accessories : -   |                |                          |                                    |           |       |
|       | <i>Each</i>   |                |                          |                                    |           |       |
| 27735 | Compression gland .....   | 159.50         | 10.22                    | 13.25                              | 39.03     | 27735 |
| 27736 | Working platform (hot dip galvanized steel).....  | 1,292.15       | 175.51                   | 211.42                             | 532.65    | 27736 |
| 27737 | Metal hot dip galvanized cover for weatherproof service box on lamp pole c/w gaskets, screws and washers .....  | 385.60         | 7.74                     | 9.25                               | 23.32     | 27737 |
| 27738 | Double head lamp pole bracket at 4.5 m lamp pole, including modification of the 4.5 m lamp pole and removal of the original bracket.....  | 306.34         | 17.75                    | 21.70                              | 63.93     | 27738 |
| 27739 | Pole cap.....   | 206.48         | 14.58                    | 18.42                              | 55.67     | 27739 |
| 27740 | Connector box.....  | 234.95         | 12.46                    | 15.76                              | 48.66     | 27740 |
| 27741 | Service box.....  | 235.34         | 16.17                    | 20.42                              | 61.73     | 27741 |
| 27742 | Control box.....  | 243.41         | 16.17                    | 20.42                              | 61.73     | 27742 |
| 27743 | Grade 316 stainless steel angle adjustable mounting frame for 400W floodlight.....  | 266.21         | 6.32                     | 8.75                               | 24.33     | 27743 |

| Item  |  |                |                          |                                    | Item     |       |
|-------|--|----------------|--------------------------|------------------------------------|----------|-------|
|       | <b>EMERGENCY LIGHTING</b>  |                |                          |                                    |          |       |
|       | Exit sign box to BS 5499-1: 2002, BS 5499-4: 2000, BS EN 60598-1: 2008, BS EN 60598-2-22: 1998+A2: 2008, BS 5266-1: 2011, BS EN 50172: 2004 and BS EN 1838: 1999 c/w lamp, NiMH battery for 2 hours, charger, automatic changeover device, inverter/ballast indications and switch, cables, conduits (surface or concealed in partitions and ceiling), all necessary accessories and connection to power supply switch/terminal : -  | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only |       |
|       | <i>Each</i>  | A \$           | B \$                     | C \$                               | D \$     |       |
| 27744 | Exit sign box, 400 - 650 mm long.....  | 823.53         | 55.89                    | 65.21                              | 238.44   | 27744 |
| 27745 | Exit sign box without battery, charger and changeover, 400 - 650 mm long.....  | 583.86         | 55.89                    | 65.21                              | 238.44   | 27745 |
| 27746 | Exit sign box using LED as light source, 400 – 650 mm long.....  | 842.18         | 55.89                    | 65.21                              | 238.44   | 27746 |
| 27747 | Exit sign box using LED as light source without battery, charger and changeover, 400 – 650 mm long.....  | 640.61         | 55.89                    | 65.21                              | 238.44   | 27747 |
| 27748 | Exit sign box using LED as light source, 600-1200 mm long, automatic discharge and recharge monthly.....   | 921.71         | 55.89                    | 65.21                              | 238.44   | 27748 |
|       | Exit sign plate or directional sign plate to BS 5499-1: 2002, BS 5499-4: 2000, BS EN 60598-1: 2008, BS EN 60598-2-22: 1998+A2: 2008, BS 5266-1: 2011, BS EN 50172: 2004 and BS EN 1838: 1999 c/w lamp, NiMH battery for 2 hours, charger, automatic changeover device, clear perspex front plate, coloured perspex back plates plugging and screwing to wall and all necessary accessories and connection to power supply switch/terminal, suitable for ceiling suspension / wall mounting : - |                |                          |                                    |          |       |
|       | <i>Each</i>  |                |                          |                                    |          |       |
| 27749 | Exit sign plate or directional sign plate, using fluorescent tube as light source, 400-650mm long.....   | 796.15         | 55.89                    | 65.21                              | 238.44   | 27749 |
| 27750 | Exit sign plate or directional sign plate using LED as light source, 400-650mm long.....   | 266.21         | 55.89                    | 65.21                              | 238.44   | 27750 |
| 27751 | Exit sign plate or directional sign plate using LED as light source, 1200mm long.....  | 909.87         | 55.89                    | 65.21                              | 238.44   | 27751 |
| 27752 | Exit sign plate or directional sign plate using LED as light source, 400-600mm long, automatic discharge and recharge monthly.....   | 818.88         | 55.89                    | 65.21                              | 238.44   | 27752 |
| 27753 | Exit sign plate or directional sign plate using LED as light source, 400mm long c/w NiMH battery for 3 hours.....  | 976.24         | 55.89                    | 65.21                              | 238.44   | 27753 |
| 27754 | Exit sign plate or directional sign plate using LED as light source, 400mm long, recess mounted.....   | 847.20         | 55.89                    | 65.21                              | 238.44   | 27754 |

| Item  |   |                |                          |                                    | Item         |
|-------|---|----------------|--------------------------|------------------------------------|--------------|
|       | <b>EMERGENCY LIGHTING (CONT'D)</b>  |                |                          |                                    |              |
|       | Central battery power supply system for emergency lighting  | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only     |
|       | Central power supply, monitoring and control panel c/w rectifier/charger, inverter, storage and all necessary accessories of the battery, switchgear, zone indication and control software and instrumentation, controlling following capacity :- |                |                          |                                    |              |
|       | <b>Each</b>   | A \$           | B \$                     | C \$                               | D \$         |
| 27755 | below 100 Ah.....   | 921.71         | 30.73                    | 33.53                              | 135.06 27755 |
| 27756 | 100 - 200 Ah.....   | 35,897.99      | 31.66                    | 34.47                              | 150.89 27756 |
| 27757 | 200 - 300 Ah.....   | -              | 32.60                    | 35.41                              | 163.93 27757 |
| 27758 | 300 - 400 Ah.....   | 376.37         | 33.53                    | 36.33                              | 178.84 27758 |
| 27759 | 400 - 500 Ah.....   | -              | 40.05                    | 42.85                              | 224.48 27759 |
|       | UPS or static inverter system c/w static transfer switch with synchronizing and phase maintenance bypass switch, storage battery, charger, rectifier, inverter and lock equipment, controlling following capacity :-                              |                |                          |                                    |              |
|       | <b>Each</b>   |                |                          |                                    |              |
| 27760 | below 100 Ah.....   | -              | 21.42                    | 36.33                              | 155.55 27760 |
| 27761 | 100 - 200 Ah.....   | 19,083.47      | 37.26                    | 40.05                              | 173.25 27761 |
| 27762 | 200 - 300 Ah.....   | 35,897.98      | 38.19                    | 40.98                              | 190.95 27762 |
| 27763 | 300 - 400 Ah.....   | 51,905.64      | 40.05                    | 41.91                              | 208.64 27763 |
| 27764 | 400 - 500 Ah.....   | 66,831.40      | 47.50                    | 49.36                              | 258.94 27764 |
|       | Emergency lighting fittings :-  |                |                          |                                    |              |
|       | <b>Each</b>   |                |                          |                                    |              |
| 27765 | Centrally supplied emergency lighting unit 5W - 40W, to BS EN 60598-2-22 (without battery) c/w heat resistant cable, conduits, all necessary accessories and connection to central control panel .....  | 538.01         | 42.85                    | 49.36                              | 181.63 27765 |
| 27766 | Emergency luminaire, 10W, 12V, to BS EN60598-2-22 c/w heat resistant cable, conduits, all necessary accessories and connection to central control panel .....   | 572.36         | 42.85                    | 49.36                              | 181.63 27766 |

| Item  |  |                |                          |                                    | Item     |       |
|-------|--|----------------|--------------------------|------------------------------------|----------|-------|
|       | <b>EMERGENCY LIGHTING (CONT'D)</b>   |                |                          |                                    |          |       |
|       | Self-contained emergency lighting unit, weather and vandal resistant c/w NiMH battery, charger, automatic changeover device, cables, conduits (surface or concealed in partitions and ceiling), all necessary accessories and connection to power supply switch/terminal : - | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only |       |
|       | <i>Each</i>  | A \$           | B \$                     | C \$                               | D \$     |       |
| 27767 | Luminaire 28W, 2D, with 2 hours battery operating capacity.....  | 706.38         | 44.72                    | 52.16                              | 190.01   | 27767 |
| 27768 | T8 fluorescent lamp with 2 hours battery operating capacity, electronic ballast, 18W.....  | -              | 44.72                    | 52.16                              | 190.01   | 27768 |
| 27769 | Ditto, 36W.....  | -              | 44.72                    | 52.16                              | 190.01   | 27769 |
| 27770 | Ditto, 54W.....  | -              | 44.72                    | 52.16                              | 190.01   | 27770 |
| 27771 | T5 fluorescent lamp with 2 hours battery operating capacity, electronic ballast, 14W.....  | 1,255.48       | 44.72                    | 52.16                              | 190.01   | 27771 |
| 27772 | Ditto, 28W.....  | 792.02         | 44.72                    | 52.16                              | 190.01   | 27772 |
| 27773 | Ditto, 35W.....  | 560.29         | 44.72                    | 52.16                              | 190.01   | 27773 |
| 27774 | Ditto, 49W.....  | 566.75         | 44.72                    | 52.16                              | 190.01   | 27774 |
| 27775 | Ditto, 54W.....  | 706.37         | 44.72                    | 52.16                              | 190.01   | 27775 |
| 27776 | Non-maintained type 6V, 10W tungsten halogen recessed emergency luminaries with a red LED to indicate lamp filament failure c/w nickel-metal hydride emergency power pack and silver aluminum reflector of 112 mm diameter.....  | 2,592.62       | 20.79                    | 25.56                              | 70.43    | 27776 |
| 27777 | Non-maintained type 12V, 2 x 2W LED Light source, recessed ceiling mounted type emergency luminaries with Green/ Red/ Yellow LED to indicate main on/ charging/ fault signal, c/w 2 hours Ni-MH emergency power pack.....  | 1,471.35       | 26.83                    | 35.92                              | 140.16   | 27777 |
| 27778 | Non-maintained type 12V, 2 x 2W LED Light source, wall mounted type emergency luminaries with Green/ Red/ Yellow LED to indicate main on/ charging/ fault signal, c/w 2 hours Ni-MH emergency power pack.....  | 1,379.36       | 25.01                    | 32.65                              | 128.63   | 27778 |
| 27779 | Non-maintained type 12V, 3W LED Light source, recessed ceiling mounted type emergency luminaries with Green/ Red/ Yellow LED to indicate main on/ charging/ fault signal c/w 2 hours Ni-MH emergency power pack.....   | 840.47         | 26.83                    | 35.92                              | 140.16   | 27779 |
| 27780 | Non-maintained type 12V, 3W LED Light source, recessed ceiling mounted type emergency luminaries with Green/ Red/ Yellow LED to indicate main on/ charging/ fault signal c/w 3 hours Ni-MH emergency power pack.....   | 942.91         | 26.83                    | 35.92                              | 140.16   | 27780 |
| 27781 | Non-maintained type 12V, 3W LED Light source, wall mounted type emergency luminaries with Green/ Red/ Yellow LED to indicate main on/ charging/ fault signal, c/w 2 hours Ni-MH emergency power pack.....  | 787.92         | 25.01                    | 32.65                              | 128.63   | 27781 |
| 27782 | Non-maintained type 12V, 3W LED Light source, wall mounted type emergency luminaries with Green/ Red/ Yellow LED to indicate main on/ charging/ fault signal, c/w 3 hours Ni-MH emergency power pack.....  | 792.92         | 25.01                    | 32.65                              | 128.63   | 27782 |



| Item                               |   | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only | Item  |
|------------------------------------|---|----------------|--------------------------|------------------------------------|----------|-------|
|                                    |   | A \$           | B \$                     | C \$                               | D \$     |       |
| <b>EMERGENCY LIGHTING (CONT'D)</b> |   |                |                          |                                    |          |       |
|                                    | Self-contained emergency lighting unit, weather and vandal resistant c/w NiMH battery, charger, automatic changeover device, cables, conduits (surface or concealed in partitions and ceiling), all necessary accessories and connection to power supply switch/terminal : - (Cont'd) |                |                          |                                    |          |       |
|                                    | <i>Each</i>   |                |                          |                                    |          |       |
| 27783                              | Non-maintained type 12V, 2 x 3W LED Light source, recessed ceiling mounted type emergency luminaries with Green/ Red/ Yellow LED to indicate main on/ charging/ fault signal c/w 2 hours Ni-MH emergency power pack.....  | 1,973.93       | 26.83                    | 35.92                              | 140.16   | 27783 |
| 27784                              | Non-maintained type 12V, 2 x 3W LED Light source, recessed ceiling mounted type emergency luminaries with Green/ Red/ Yellow LED to indicate main on/ charging/ fault signal c/w 3 hours Ni-MH emergency power pack.....  | 2,214.52       | 26.83                    | 35.92                              | 140.16   | 27784 |
| 27785                              | Non-maintained type 12V, 2 x 3W LED Light source, wall mounted type emergency luminaries with Green/ Red/ Yellow LED to indicate main on/ charging/ fault signal, c/w 2 hours Ni-MH emergency power pack.....   | 1,850.52       | 25.01                    | 32.65                              | 128.63   | 27785 |
| 27786                              | Non-maintained type 12V, 2 x 3W LED Light source, wall mounted type emergency luminaries with Green/ Red/ Yellow LED to indicate main on/ charging/ fault signal, c/w 3 hours Ni-MH emergency power pack.....   | 2,089.24       | 25.01                    | 32.65                              | 128.63   | 27786 |
| 27787                              | Modification of the luminaire for connection to the central control panel and centrally supplied emergency lighting point including power supply and control cable installed inside flexible conduit.....   | 265.53         | -                        | -                                  | -        | 27787 |
|                                    | NiMH battery and charger kit for self-contained emergency luminaire : -   |                |                          |                                    |          |       |
|                                    | <i>Each</i>   |                |                          |                                    |          |       |
| 27788                              | Charger kit installed inside surface mounted luminaire including necessary modification for the addition of the kit.....  | 245.53         | 9.88                     | 10.39                              | 60.54    | 27788 |
| 27789                              | Charger kit installed inside recessed mounted luminaire including necessary modification for the addition of the kit.....   | 244.36         | 9.88                     | 10.39                              | 60.54    | 27789 |
| 27790                              | Charger kit installed inside a metal box mounted next to and connected to the recessed mounted luminaire including necessary modification for the addition of the kit.....  | 421.46         | 9.88                     | 10.39                              | 60.54    | 27790 |

| Item  |  |                |                          |                                    | Item     |       |
|-------|--|----------------|--------------------------|------------------------------------|----------|-------|
|       | <b>SIMPLIFIED ITEMS</b>  |                |                          |                                    |          |       |
|       | Section 1 : Installation by galvanized steel surface conduit system/concealed conduit system   | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only |       |
|       | Lighting point : -   |                |                          |                                    |          |       |
|       | <b>Each</b>  | A \$           | B \$                     | C \$                               | D \$     |       |
| 27791 | Lighting point c/w trunking, conduits, boxes, PVC cables and all necessary accessories, same rate as (supply & fix) rate will be made even if there is no provision of new concealed conduit facilities, but the rate shall further include the taking down and clearing away of existing cables.....  | 357.96         | 88.75                    | -                                  | -        | 27791 |
| 27792 | Lighting point c/w trunking, conduits, boxes, OHLS cables and all necessary accessories, same rate as (supply & fix) rate will be made even if there is no provision of new concealed conduit facilities, but the rate shall further include the taking down and clearing away of existing cables.....   | 369.22         | 88.75                    | -                                  | -        | 27792 |
|       | Add 8% to either of Items 27791 to 27792 inclusive for provision of circuit protective conductor to MCB board in full length of conduit, another 8% for provision of additional cable to feed maintained light point and again another 8% for provision of additional cable to feed reasonable & separate control of a twin/triplet light fitting. |                |                          |                                    |          |       |
|       | Lighting switch point : -  |                |                          |                                    |          |       |
|       | <b>Each</b>  |                |                          |                                    |          |       |
| 27793 | Lighting switch point c/w trunking, conduits, boxes, PVC cables and all necessary accessories, same rate as (supply & fix) rate will be made even if there is no provision of new concealed conduit facilities, but the rate shall further include the taking down and clearing away of existing cables.....                                       | 174.92         | 43.73                    | -                                  | -        | 27793 |
| 27794 | Lighting switch point c/w trunking, conduits, boxes, OHLS cables and all necessary accessories, same rate as (supply & fix) rate will be made even if there is no provision of new concealed conduit facilities, but the rate shall further include the taking down and clearing away of existing cables.....                                      | 200.80         | 48.19                    | -                                  | -        | 27794 |

| Item  |  | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only | Item  |
|-------|--|----------------|--------------------------|------------------------------------|----------|-------|
|       | <b>SIMPLIFIED ITEMS (CONT'D)</b>   |                |                          |                                    |          |       |
|       | Section 2 : Installation by PVC surface conduit system   |                |                          |                                    |          |       |
|       | Lighting point : -   |                |                          |                                    |          |       |
|       | <i>Each</i>  | A<br>\$        | B<br>\$                  | C<br>\$                            | D<br>\$  |       |
| 27795 | Lighting point c/w trunking, conduits, boxes, PVC cables, circuit protective conductor and all necessary accessories.....    | 268.67         | 63.95                    | -                                  | -        | 27795 |
|       | Add 8% to Item 27795 for provision of additional cable to feed reasonable & separate control of a twin/triplet light fitting |                |                          |                                    |          |       |
|       | Lighting switch point : -  |                |                          |                                    |          |       |
|       | <i>Each</i>  |                |                          |                                    |          |       |
| 27796 | Lighting switch point c/w trunking, conduits, boxes, PVC cables and all necessary accessories .....                          | 118.34         | 28.40                    | -                                  | -        | 27796 |
|       | Section 3 : Installation by surface wiring system  |                |                          |                                    |          |       |
|       | Lighting point : -   |                |                          |                                    |          |       |
|       | <i>Each</i>  |                |                          |                                    |          |       |
| 27797 | Lighting point c/w PVC/PVC cables, circuit protective conductor, boxes and all necessary accessories.....                    | 187.28         | 28.29                    | -                                  | -        | 27797 |
|       | Add 8% to item 27797 for provision of additional cable to feed reasonable & separate control of a twin/triplet light fitting |                |                          |                                    |          |       |
|       | Lighting switch point : -  |                |                          |                                    |          |       |
|       | <i>Each</i>  |                |                          |                                    |          |       |
| 27798 | Lighting switch point c/w PVC/PVC cables, circuit protective conductor, boxes and all necessary accessories.....             | 68.02          | 10.20                    | -                                  | -        | 27798 |

**Section 28**

**ELECTRICAL INSTALLATION -**

**SMALL POWER DISTRIBUTION**

| Item  |   | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only | Item  |
|---|---|----------------|--------------------------|------------------------------------|----------|-------|
|   |   | A \$           | B \$                     | C \$                               | D \$     |       |
| <b>KWH METERS AND BOXES</b>                         |   |                |                          |                                    |          |       |
| KWH Meter : -                                       |   |                |                          |                                    |          |       |
| <i>Each</i>   |   |                |                          |                                    |          |       |
| 28001   | 63A single-phase meter.....   | 600.46         | 13.27                    | 17.29                              | 51.49    | 28001 |
| 28002   | 80A ditto.....  | 607.99         | 13.27                    | 17.29                              | 51.49    | 28002 |
| 28003   | 100A ditto.....   | 738.42         | 13.27                    | 17.29                              | 51.49    | 28003 |
| 28004   | 63A three-phase (4-wire) whole current meter.....   | 1,223.27       | 16.65                    | 20.67                              | 64.66    | 28004 |
| 28005   | 100A ditto.....   | 1,223.27       | 16.65                    | 20.67                              | 64.66    | 28005 |
| 28006   | 200A to 2000A current transformers operated meter (current transformers to be measured separately)..... | 1,223.27       | 16.65                    | 20.67                              | 64.66    | 28006 |
| Metal boxes for above KWH meters, approved type : - |   |                |                          |                                    |          |       |
| <i>Each</i>   |   |                |                          |                                    |          |       |
| 28007   | Up to 63A single-phase.....   | 159.50         | 10.45                    | 13.27                              | 41.61    | 28007 |
| 28008   | 80A single-phase.....   | 159.50         | 10.45                    | 13.27                              | 41.61    | 28008 |
| 28009   | 100A single-phase.....  | 159.50         | 10.45                    | 13.27                              | 41.61    | 28009 |
| 28010   | Up to 2000A three-phase.....  | 159.50         | 10.45                    | 13.27                              | 41.61    | 28010 |
| 28011   | Metal box for 4 nos. current transformers.....  | 169.95         | 13.27                    | 17.29                              | 51.85    | 28011 |
| Measuring Current Transformer : -                   |   |                |                          |                                    |          |       |
| <i>Each</i>   |   |                |                          |                                    |          |       |
| 28012   | 100/5A ratio.....   | 159.76         | 12.71                    | 16.18                              | 49.98    | 28012 |
| 28013   | 200/5A ratio.....   | 167.28         | 12.71                    | 16.18                              | 49.98    | 28013 |
| 28014   | 400/5A ratio.....   | 245.30         | 12.71                    | 16.18                              | 49.98    | 28014 |
| 28015   | 500/5A ratio.....   | 249.66         | 12.71                    | 16.18                              | 49.98    | 28015 |
| 28016   | 600/5A ratio.....   | 252.47         | 12.71                    | 16.18                              | 49.98    | 28016 |
| 28017   | 1000/5A ratio.....  | 261.61         | 12.71                    | 16.18                              | 49.98    | 28017 |
| 28018   | 2000/5A ratio.....  | 370.99         | 12.71                    | 16.18                              | 49.98    | 28018 |
| Measuring Current Transformer (Split Type) : -      |   |                |                          |                                    |          |       |
| <i>Each</i>   |   |                |                          |                                    |          |       |
| 28019   | 100/5A.....   | 730.27         | 12.74                    | 16.21                              | 50.09    | 28019 |
| 28020   | 200/5A.....   | 730.27         | 12.74                    | 16.21                              | 50.09    | 28020 |

| Item                                 |  | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only | Item  |
|--------------------------------------|--|----------------|--------------------------|------------------------------------|----------|-------|
|                                      |  | A<br>\$        | B<br>\$                  | C<br>\$                            | D<br>\$  |       |
| <b>KWH METERS AND BOXES (CONT'D)</b> |  |                |                          |                                    |          |       |
|                                      | Measuring Current Transformer (Split Type) :- (Cont'd)   |                |                          |                                    |          |       |
|                                      | <i>Each</i>  |                |                          |                                    |          |       |
| 28021                                | 400/5A.....  | 758.70         | 12.74                    | 16.21                              | 50.09    | 28021 |
| 28022                                | 500/5A.....  | 758.70         | 12.74                    | 16.21                              | 50.09    | 28022 |
| 28023                                | 600/5A.....  | 762.24         | 12.74                    | 16.21                              | 50.09    | 28023 |
| 28024                                | 1000/5A.....   | 848.50         | 12.74                    | 16.21                              | 50.09    | 28024 |
| 28025                                | 2000/5A.....   | 1,621.76       | 12.74                    | 16.21                              | 50.09    | 28025 |
|                                      | <i>Each</i>  |                |                          |                                    |          |       |
| 28026                                | 60A neutral link for meter board loop wire.....  | 79.83          | 7.88                     | 9.84                               | 30.20    | 28026 |
| <b>MOUNTING BLOCKS</b>               |  |                |                          |                                    |          |       |
|                                      | <i>Each</i>  |                |                          |                                    |          |       |
| 28027                                | Mounting blocks, solid hardwood, 20 mm thick, 75 mm diameter or 75 x 75 mm or 120 x 70 mm .....  | 22.16          | 5.95                     | 7.17                               | 18.31    | 28027 |
| 28028                                | Ditto but 100 mm diameter or 75 x 150 mm.....  | 23.83          | 5.95                     | 7.17                               | 18.31    | 28028 |
| 28029                                | Ditto but 150 mm diameter or 150 x 150 mm.....   | 30.42          | 5.95                     | 7.17                               | 18.31    | 28029 |
| 28030                                | Ditto but 250 mm diameter.....   | 45.12          | 6.90                     | 8.64                               | 22.07    | 28030 |
| 28031                                | Ditto but 150 x 250 mm.....  | 39.43          | 6.90                     | 8.64                               | 22.07    | 28031 |
| 28032                                | Ditto but 180 x 250 mm.....  | 41.86          | 6.90                     | 8.64                               | 22.07    | 28032 |
| 28033                                | Ditto but 200 x 300 mm.....  | 45.46          | 6.90                     | 8.64                               | 22.07    | 28033 |
| 28034                                | Ditto but 250 x 300 mm.....  | 46.23          | 6.90                     | 8.64                               | 22.07    | 28034 |
| 28035                                | Ditto but 150 x 380 mm.....  | 46.51          | 6.90                     | 8.64                               | 22.07    | 28035 |
| 28036                                | Ditto but 200 x 380 mm.....  | 48.04          | 6.90                     | 8.64                               | 22.07    | 28036 |
| 28037                                | Ditto but 250 x 380 mm.....  | 62.09          | 8.20                     | 9.80                               | 24.95    | 28037 |
| 28038                                | Ditto but 300 x 300 mm.....  | 62.35          | 8.20                     | 9.80                               | 24.95    | 28038 |
| 28039                                | Ditto but 300 x 450 mm.....  | 75.25          | 8.20                     | 9.80                               | 24.95    | 28039 |
| 28040                                | Ditto but 350 x 400 mm.....  | 75.41          | 8.20                     | 9.80                               | 24.95    | 28040 |
| 28041                                | Mounting blocks, solid hardwood, 32 mm thick, 150mm diameter, centre pack sunk for BESA box and conduit entry. ....  | 87.89          | 8.20                     | 9.80                               | 24.95    | 28041 |
| 28042                                | Mounting blocks, solid hardwood, 250 mm x 400 mm x 20mm thick (approved type) for bell and indicators, etc. c/w hinged cover over transformer and bell units ..... | 172.14         | 11.33                    | 14.33                              | 43.60    | 28042 |
| 28043                                | Wooden board (approved type) for desk fan fixed to wall.....   | 159.69         | 18.01                    | 22.43                              | 68.47    | 28043 |

| Item  |   |                |                          |                                    | Item     |       |
|-------|---|----------------|--------------------------|------------------------------------|----------|-------|
|       | <b>PLUGS AND SOCKET OUTLETS</b>   |                |                          |                                    |          |       |
|       | The rates include for mounting boxes frames and cutting into wall where applicable. |                |                          |                                    |          |       |
|       | Plugs only, bakelite : -  |                |                          |                                    |          |       |
|       | <i>Each</i>   |                |                          |                                    |          |       |
|       |   | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only |       |
|       |   | A \$           | B \$                     | C \$                               | D \$     |       |
| 28044 | 15A, 3 pin.....   | 19.65          | 3.85                     | 4.45                               | 13.87    | 28044 |
| 28045 | 15A, 3 pin, fused.....  | 19.65          | 3.85                     | 4.45                               | 13.87    | 28045 |
| 28046 | 13A, 3 pin.....   | 19.65          | 3.85                     | 4.45                               | 13.87    | 28046 |
| 28047 | 13A, 3 pin, fused.....  | 19.65          | 3.85                     | 4.45                               | 13.87    | 28047 |
| 28048 | 5A, 3 pin.....  | 17.17          | 3.85                     | 4.45                               | 13.87    | 28048 |
| 28049 | 5A, 3 pin, fused.....   | 24.82          | 3.85                     | 4.45                               | 13.87    | 28049 |
| 28050 | 2A, 3 pin.....  | 23.81          | 3.85                     | 4.45                               | 13.87    | 28050 |
| 28051 | 2A, 3 pin, fused.....   | 25.97          | 3.85                     | 4.45                               | 13.87    | 28051 |
| 28052 | Cartridge fuse link to B.S. 1362 (2A to 15A).....                                   | 6.92           | 1.07                     | 1.32                               | 3.68     | 28052 |
|       | Plugs only, moulded rubber : -  |                |                          |                                    |          |       |
|       | <i>Each</i>   |                |                          |                                    |          |       |
| 28053 | 15A, 3 pin.....   | 43.17          | 3.85                     | 4.45                               | 13.87    | 28053 |
| 28054 | 13A, 3 pin, fused.....  | 39.84          | 3.85                     | 4.45                               | 13.87    | 28054 |
| 28055 | 5A, 3 pin.....  | 39.84          | 3.85                     | 4.45                               | 13.87    | 28055 |
|       | Socket outlets, shuttered type, bakelite, fixed to IEC 60670 or BS 4662 boxes : -   |                |                          |                                    |          |       |
|       | <i>Each</i>   |                |                          |                                    |          |       |
| 28056 | 15A, 3 pin.....   | 46.32          | 8.56                     | 10.57                              | 32.32    | 28056 |
| 28057 | 13A, 3 pin.....   | 45.20          | 8.56                     | 10.57                              | 32.32    | 28057 |
| 28058 | 13A, 3 pin, twin.....   | 58.34          | 8.56                     | 10.57                              | 32.32    | 28058 |
| 28059 | 5A, 3 pin.....  | 45.07          | 8.56                     | 10.57                              | 32.32    | 28059 |
| 28060 | 2A, 3 pin (unshuttered).....  | 61.37          | 8.56                     | 10.57                              | 32.32    | 28060 |
| 28061 | 13A, 3 pin, socket integrated with 30mA RCD.....                                    | 430.13         | 9.23                     | 11.10                              | 35.77    | 28061 |
| 28062 | 13A, 3 pin, twin socket integrated with 30mA RCD.....                               | 537.86         | 9.23                     | 11.10                              | 35.77    | 28062 |

| Item   |   | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only | Item  |
|--|---|----------------|--------------------------|------------------------------------|----------|-------|
|  |   | A \$           | B \$                     | C \$                               | D \$     |       |
| <b>PLUGS AND SOCKET OUTLETS (CONT'D)</b>   |   |                |                          |                                    |          |       |
| The rates include for mounting boxes frames and cutting into wall where applicable.  |   |                |                          |                                    |          |       |
| Socket outlet, shuttered type, metalclad, fixed to IEC 60670 or BS 4662 boxes :-   |   |                |                          |                                    |          |       |
| <i>Each</i>  |   |                |                          |                                    |          |       |
| 28063  | 15A, 3 pin.....                                       | 128.06         | 8.51                     | 10.53                              | 32.17    | 28063 |
| 28064  | 13A, 3 pin.....                                       | 115.23         | 8.51                     | 10.53                              | 32.17    | 28064 |
| 28065  | 13A, 3 pin, twin.....                                 | 147.42         | 8.51                     | 10.53                              | 32.17    | 28065 |
| 28066  | 5A, 3 pin.....  | 112.98         | 8.51                     | 10.53                              | 32.17    | 28066 |
| 28067  | 13A, 3 pin socket with cover plate.....               | 139.18         | 8.51                     | 10.53                              | 32.17    | 28067 |
| 28068  | 13A, 3 pin twin socket with cover plate.....          | 181.90         | 8.51                     | 10.53                              | 32.17    | 28068 |
| 28069  | 13A, 3 pin, socket integrated with 30mA RCD.....      | 540.36         | 9.20                     | 11.05                              | 35.60    | 28069 |
| 28070  | 13A, 3 pin, twin socket integrated with 30mA RCD..... | 616.01         | 9.20                     | 11.05                              | 35.60    | 28070 |
| Socket outlet, round type, 50 mm fixing centre with over lapping or non-over lapping plate fixed to IEC 61035-1 conduit box :- |   |                |                          |                                    |          |       |
| <i>Each</i>  |   |                |                          |                                    |          |       |
| 28071  | 2A, 3 pin.....  | 146.48         | 8.51                     | 10.53                              | 32.17    | 28071 |
| 28072  | 5A, 3 pin.....  | 133.11         | 8.51                     | 10.53                              | 32.17    | 28072 |
| Switched-socket outlets with pilot light, shuttered type, bakelite, fixed to IEC 60670 or BS 4662 boxes :-                     |   |                |                          |                                    |          |       |
| <i>Each</i>  |   |                |                          |                                    |          |       |
| 28073  | 15A, 3 pin.....                                       | 54.78          | 8.59                     | 10.62                              | 32.45    | 28073 |
| 28074  | 13A, 3 pin.....                                       | 54.55          | 8.59                     | 10.62                              | 32.45    | 28074 |
| 28075  | 13A, 3 pin, twin.....                                 | 80.22          | 8.59                     | 10.62                              | 32.45    | 28075 |
| 28076  | 5A, 3 pin.....  | 49.23          | 8.59                     | 10.62                              | 32.45    | 28076 |
| 28077  | 13A, 3 pin socket with cover plate.....               | 76.66          | 8.59                     | 10.62                              | 32.45    | 28077 |
| 28078  | 13A, 3 pin twin socket with cover plate.....          | 114.09         | 8.59                     | 10.62                              | 32.45    | 28078 |
| 28079  | 13A, 3 pin, socket integrated with 30mA RCD.....      | 439.95         | 9.27                     | 11.14                              | 35.92    | 28079 |
| 28080  | 13A, 3 pin, twin socket integrated with 30mA RCD..... | 556.81         | 9.27                     | 11.14                              | 35.92    | 28080 |



| Item  |   |                |                          |                                    | Item     |       |
|-------|---|----------------|--------------------------|------------------------------------|----------|-------|
|       | <b>PLUGS AND SOCKET OUTLETS (CONT'D)</b>  |                |                          |                                    |          |       |
|       | The rates include for mounting boxes frames and cutting into wall where applicable.                         |                |                          |                                    |          |       |
|       | Switched-socket outlets with pilot light, shuttered type, metalclad, fixed to IEC 60670 or BS 4662 boxes :- |                |                          |                                    |          |       |
|       | <i>Each</i>   |                |                          |                                    |          |       |
|       |   | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only |       |
|       |   | A \$           | B \$                     | C \$                               | D \$     |       |
| 28081 | 5A, 3 pin.....  | 141.42         | 8.42                     | 10.40                              | 31.45    | 28081 |
| 28082 | 15A, 3 pin.....   | 182.06         | 8.42                     | 10.40                              | 31.45    | 28082 |
| 28083 | 13A, 3 pin.....   | 162.79         | 8.42                     | 10.40                              | 31.45    | 28083 |
| 28084 | 13A, 3 pin, twin.....   | 241.73         | 8.42                     | 10.40                              | 31.45    | 28084 |
| 28085 | 13A, with 30mA RCD.....   | 585.30         | 9.15                     | 10.96                              | 34.97    | 28085 |
|       | Switched-socket outlets, shuttered type, bakelite, fixed to IEC 60670 or BS 4662 boxes :-                   |                |                          |                                    |          |       |
|       | <i>Each</i>   |                |                          |                                    |          |       |
| 28086 | 15A, 3 pin.....   | 52.66          | 8.42                     | 10.40                              | 31.45    | 28086 |
| 28087 | 13A, 3 pin.....   | 49.74          | 8.42                     | 10.40                              | 31.45    | 28087 |
| 28088 | 13A, 3 pin, with 30mA RCD.....  | 423.13         | 9.15                     | 10.96                              | 34.97    | 28088 |
| 28089 | 13A, 3 pin, twin.....   | 67.88          | 8.42                     | 10.40                              | 31.45    | 28089 |
| 28090 | Ditto but with 30mA RCD.....  | 451.22         | 9.15                     | 10.96                              | 34.97    | 28090 |
| 28091 | 13A, 3 pin, triple.....   | 159.43         | 8.42                     | 10.40                              | 31.45    | 28091 |
| 28092 | 5A, 3 pin.....  | 47.49          | 8.42                     | 10.40                              | 31.45    | 28092 |

| Item  |   |                |                          |                                    | Item     |       |
|-------|---|----------------|--------------------------|------------------------------------|----------|-------|
|       | <b>PLUGS AND SOCKET OUTLETS (CONT'D)</b>  |                |                          |                                    |          |       |
|       | The rates include for mounting boxes frames and cutting into wall where applicable.         |                |                          |                                    |          |       |
|       | Switched-socket outlets, shuttered type, metalclad, fixed to IEC 60670 or BS 4662 boxes : - |                |                          |                                    |          |       |
|       | <i>Each</i>   |                |                          |                                    |          |       |
|       |   | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only |       |
|       |   | A \$           | B \$                     | C \$                               | D \$     |       |
| 28093 | 15A, 3 pin.....   | 155.61         | 8.44                     | 10.43                              | 31.52    | 28093 |
| 28094 | 13A, 3 pin.....   | 131.05         | 8.44                     | 10.43                              | 31.52    | 28094 |
| 28095 | Ditto but with 30mA RCD.....  | 524.54         | 9.17                     | 10.98                              | 35.05    | 28095 |
| 28096 | 13A, 3 pin, twin.....   | 212.34         | 8.44                     | 10.43                              | 31.52    | 28096 |
| 28097 | Ditto but with 30mA RCD.....  | 610.96         | 9.17                     | 10.98                              | 35.05    | 28097 |
| 28098 | 5A, 3 pin.....  | 122.21         | 8.44                     | 10.43                              | 31.52    | 28098 |
| 28099 | 13A, 3 pin with cover plate.....  | 207.70         | 8.44                     | 10.43                              | 31.52    | 28099 |
|       | Metalclad, surface mounted socket outlets : -   |                |                          |                                    |          |       |
|       | <i>Each</i>   |                |                          |                                    |          |       |
| 28100 | 13A.....  | 143.29         | 8.44                     | 10.43                              | 31.52    | 28100 |
| 28101 | 13A, switch.....  | 171.09         | 8.44                     | 10.43                              | 31.52    | 28101 |
| 28102 | 13A, switch socket with pilot light.....  | 188.28         | 8.44                     | 10.43                              | 31.52    | 28102 |
| 28103 | 13A, twin.....  | 224.34         | 8.44                     | 10.43                              | 31.52    | 28103 |
| 28104 | 13A, twin, switch.....  | 230.54         | 8.44                     | 10.43                              | 31.52    | 28104 |
| 28105 | 13A, twin, switch socket with pilot light.....  | 243.15         | 8.44                     | 10.43                              | 31.52    | 28105 |
| 28106 | 13A, switch socket with 30mA RCD.....   | 558.34         | 9.17                     | 10.98                              | 35.05    | 28106 |
| 28107 | Ditto but with twin switch socket.....  | 673.89         | 8.44                     | 10.43                              | 31.52    | 28107 |

| Item  |   | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only | Item  |
|-------|---|----------------|--------------------------|------------------------------------|----------|-------|
|       | <b>PLUGS AND SOCKET OUTLETS (CONT'D)</b>  |                |                          |                                    |          |       |
|       | The rates include for mounting boxes frames and cutting into wall where applicable. |                |                          |                                    |          |       |
|       | Splashproof, flush mounted Socket outlet, IP56 :-                                   |                |                          |                                    |          |       |
|       | <i>Each</i>   | A<br>\$        | B<br>\$                  | C<br>\$                            | D<br>\$  |       |
| 28108 | 13A.....  | 253.16         | 17.61                    | 21.99                              | 66.75    | 28108 |
| 28109 | 13A, twin.....  | 442.75         | 17.61                    | 21.99                              | 66.75    | 28109 |
| 28110 | 13A, DP, switch and with 30mA RCD.....  | 2,068.33       | 18.54                    | 23.15                              | 71.10    | 28110 |
|       | Enclosure for flush mounted splashproof socket :-                                   |                |                          |                                    |          |       |
|       | <i>Each</i>   |                |                          |                                    |          |       |
| 28111 | 1 gang.....   | 180.28         | 8.41                     | 10.39                              | 31.41    | 28111 |
| 28112 | 2 gang.....   | 260.81         | 8.41                     | 10.39                              | 31.41    | 28112 |
|       | Splashproof, surface mounted socket outlet, IP44 :-                                 |                |                          |                                    |          |       |
|       | <i>Each</i>   |                |                          |                                    |          |       |
| 28113 | 13A, socket with cover plate.....   | 116.51         | 17.61                    | 21.99                              | 66.75    | 28113 |
|       | Splashproof, socket outlets with plugs, IP44 :-                                     |                |                          |                                    |          |       |
|       | <i>Each</i>   |                |                          |                                    |          |       |
| 28114 | 16A, 3 pin.....   | 150.89         | 16.75                    | 20.93                              | 63.50    | 28114 |
| 28115 | 16A, 5 pin.....   | 165.46         | 21.04                    | 25.65                              | 79.55    | 28115 |
| 28116 | 32A, 3 pin.....   | 223.47         | 16.75                    | 20.93                              | 63.50    | 28116 |
| 28117 | 32A, 5 pin.....   | 228.68         | 25.96                    | 32.67                              | 97.93    | 28117 |
| 28118 | 63A, 3 pin.....   | 593.20         | 25.96                    | 32.67                              | 97.93    | 28118 |
| 28119 | 63A, 5 pin.....   | 676.61         | 29.14                    | 36.86                              | 111.64   | 28119 |

| Item   |                       | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only | Item  |
|--|-----------------------|----------------|--------------------------|------------------------------------|----------|-------|
|  |                       | A \$           | B \$                     | C \$                               | D \$     |       |
| <b>PLUGS AND SOCKET OUTLETS (CONT'D)</b>   |                       |                |                          |                                    |          |       |
| The rates include for mounting boxes frames and cutting into wall where applicable.                              |                       |                |                          |                                    |          |       |
| Socket outlet with plug, weatherproof type rated IP65 :-   |                       |                |                          |                                    |          |       |
|  | <i>Each</i>           |                |                          |                                    |          |       |
| 28120  | 13A, 3 pin.....       | 315.71         | 17.53                    | 21.91                              | 66.47    | 28120 |
| 28121  | 15A, 3 pin.....       | 372.71         | 17.53                    | 21.91                              | 66.47    | 28121 |
| 28122  | 30A, 3 pin.....       | 581.16         | 17.53                    | 21.91                              | 66.47    | 28122 |
| 28123  | 60A, 3 pin.....       | 961.45         | 25.85                    | 32.53                              | 97.51    | 28123 |
| 28124  | 15A, 5 pin.....       | 634.88         | 21.51                    | 26.19                              | 81.25    | 28124 |
| 28125  | 30A, 5 pin.....       | 688.53         | 25.85                    | 32.53                              | 97.51    | 28125 |
| 28126  | 60A, 5 pin.....       | 1,157.56       | 30.03                    | 37.98                              | 115.04   | 28126 |
| Switched socket outlet with plug, weatherproof type rated IP65 :-  |                       |                |                          |                                    |          |       |
|  | <i>Each</i>           |                |                          |                                    |          |       |
| 28127  | 13A, 3 pin.....       | 458.73         | 17.53                    | 21.91                              | 66.47    | 28127 |
| 28128  | 15A, 3 pin.....       | 659.57         | 17.53                    | 21.91                              | 66.47    | 28128 |
| 28129  | 30A, 3 pin.....       | 958.33         | 17.53                    | 21.91                              | 66.47    | 28129 |
| 28130  | 60A, 3 pin.....       | 1,523.81       | 25.85                    | 32.53                              | 97.51    | 28130 |
| 28131  | 15A, 5 pin.....       | 868.95         | 21.51                    | 26.19                              | 81.25    | 28131 |
| 28132  | 30A, 5 pin.....       | 1,057.13       | 25.85                    | 32.53                              | 97.51    | 28132 |
| 28133  | 60A, 5 pin.....       | 1,536.46       | 30.03                    | 37.98                              | 115.04   | 28133 |
| Switched socket outlet assemblies, sparkless, c/w plug, chromium plated brass cover, flush or surface pattern :- |                       |                |                          |                                    |          |       |
|  | <i>Each</i>           |                |                          |                                    |          |       |
| 28134  | 13A, 3 pin.....       | 1,025.85       | 17.53                    | 21.91                              | 66.47    | 28134 |
| 28135  | 13A, 3 pin, twin..... | 1,896.17       | 17.53                    | 21.91                              | 66.47    | 28135 |
| 28136  | 15A, 3 pin.....       | 1,150.73       | 17.53                    | 21.91                              | 66.47    | 28136 |
| 28137  | 30A, 3 pin.....       | 1,774.67       | 17.53                    | 21.91                              | 66.47    | 28137 |

| Item  |   |                |                          |                                    | Item     |       |
|-------|---|----------------|--------------------------|------------------------------------|----------|-------|
|       | <b>PLUGS AND SOCKET OUTLETS (CONT'D)</b>  |                |                          |                                    |          |       |
|       | The rates include for mounting boxes frames and cutting into wall where applicable. |                |                          |                                    |          |       |
|       | Switched socket outlet assemblies, flameproof, c/w plug :-                          |                |                          |                                    |          |       |
|       | <i>Each</i>   |                |                          |                                    |          |       |
|       |   | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only |       |
|       |   | A \$           | B \$                     | C \$                               | D \$     |       |
| 28138 | 5A, 3 pin.....  | 2,131.70       | 17.56                    | 21.96                              | 66.60    | 28138 |
| 28139 | 13A, 3 pin.....   | 2,472.13       | 17.56                    | 21.96                              | 66.60    | 28139 |
| 28140 | 15A, 3 pin.....   | 2,640.49       | 17.56                    | 21.96                              | 66.60    | 28140 |
| 28141 | 30A, 3 pin c/w 30mA RCD.....  | 3,799.42       | 18.72                    | 23.36                              | 70.96    | 28141 |
|       | Shaver supply unit to IEC 61558-1 with isolating transformer to IEC 61558-2-5: -    |                |                          |                                    |          |       |
|       | <i>Each</i>   |                |                          |                                    |          |       |
| 28142 | Dual socket of voltage 110 and 220V.....  | 320.97         | 9.11                     | 10.92                              | 34.83    | 28142 |
|       | Connection unit, Bakelite :-  |                |                          |                                    |          |       |
|       | <i>Each</i>   |                |                          |                                    |          |       |
| 28143 | 20A, Connection unit, DP.....   | 50.99          | 8.41                     | 10.39                              | 31.41    | 28143 |
| 28144 | 32A, Connection unit, DP.....   | 61.61          | 8.41                     | 10.39                              | 31.41    | 28144 |
| 28145 | 45A, Connection unit, DP.....   | 61.94          | 8.41                     | 10.39                              | 31.41    | 28145 |
| 28146 | Fused spur (2-13A), DP, with cable outlet.....                                      | 55.81          | 8.37                     | 10.37                              | 31.32    | 28146 |
| 28147 | Fused spur (2-13A), DP, switch.....   | 65.33          | 8.37                     | 10.37                              | 31.32    | 28147 |
| 28148 | Fused spur (2-13A), DP, switch, with pilot light.....                               | 87.66          | 8.37                     | 10.37                              | 31.32    | 28148 |
| 28149 | Fused spur (2-13A), DP, switch, with cable outlet.....                              | 62.87          | 8.37                     | 10.37                              | 31.32    | 28149 |
| 28150 | Fused spur (2-13A), DP, switch, with cable outlet and pilot light.....              | 86.52          | 8.37                     | 10.37                              | 31.32    | 28150 |
| 28151 | Fused spur (2-13A), DP, switch, with cable outlet and pilot light, IP55.....        | 173.55         | 8.97                     | 11.00                              | 42.64    | 28151 |
| 28152 | Fused spur (2-13A), DP, switch, with cable outlet, IP65.....                        | 190.63         | 8.97                     | 11.00                              | 42.64    | 28152 |
| 28153 | 32A, TPN connection unit.....   | 193.50         | 25.91                    | 32.60                              | 97.73    | 28153 |
| 28154 | 30A, 3 terminal junction box.....   | 163.52         | 8.37                     | 10.37                              | 31.32    | 28154 |

| Item  |   |                      |                                      |  | Item        |       |
|---|---|----------------------|--------------------------------------|--|-------------|-------|
| <b>PLUGS AND SOCKET OUTLETS (CONT'D)</b>  |   |                      |                                      |  |             |       |
| The rates include for mounting boxes frames and cutting into wall where applicable. |   |                      |                                      |  |             |       |
| Connection unit, metalclad : -  |   |                      |                                      |  |             |       |
| <i>Each</i>   |   |                      |                                      |  |             |       |
|   |   | Supply<br>and<br>fix | Take<br>down<br>and<br>clear<br>away | Take<br>down<br>and set<br>aside for<br>re-use | Fix<br>only |       |
|   |   | A<br>\$              | B<br>\$                              | C<br>\$  | D<br>\$     |       |
| 28155   | Fused spur (2-13A fuse), DP.....  | 168.30               | 8.37                                 | 10.37  | 31.32       | 28155 |
| 28156   | Fused spur (2-13A fuse), DP, with cable outlet.....                         | 192.12               | 8.37                                 | 10.37  | 31.32       | 28156 |
| 28157   | Fused spur (2-13A fuse), DP, with cable outlet and pilot light.....         | 221.14               | 8.37                                 | 10.37  | 31.32       | 28157 |
| 28158   | Fused spur (2-13A fuse), DP, switch.....                                    | 197.52               | 8.37                                 | 10.37  | 31.32       | 28158 |
| 28159   | Fused spur (2-13A fuse), DP, switch, with pilot light.....                  | 247.64               | 8.37                                 | 10.37  | 31.32       | 28159 |
| 28160   | Fused spur (2-13A fuse), DP, switch, with cable outlet.....                 | 236.05               | 8.37                                 | 10.37  | 31.32       | 28160 |
| 28161   | Fused spur (2-13A fuse), DP, switch, with cable outlet and pilot light..... | 280.22               | 8.37                                 | 10.37  | 31.32       | 28161 |
| Metal casing and socket c/w 30mA RCD : -  |   |                      |                                      |  |             |       |
| <i>Each</i>   |   |                      |                                      |  |             |       |
| 28162   | Galvanized iron casing, single socket .....                                 | 613.58               | 17.61                                | 21.99  | 66.75       | 28162 |
| 28163   | Ditto but twin.....   | 633.99               | 17.61                                | 21.99  | 66.75       | 28163 |
| 28164   | Ditto but with four sockets.....  | 728.42               | 17.61                                | 21.99  | 66.75       | 28164 |
| 28165   | Stainless steel casing, single socket.....                                  | 637.56               | 17.61                                | 21.99  | 66.75       | 28165 |
| 28166   | Ditto but twin.....   | 668.73               | 17.61                                | 21.99  | 66.75       | 28166 |
| 28167   | Ditto but with four sockets.....  | 782.56               | 17.61                                | 21.99  | 66.75       | 28167 |
| 28168   | Metal casing, single socket .....   | 488.95               | 17.61                                | 21.99  | 66.75       | 28168 |
| Telephone outlets : -   |   |                      |                                      |  |             |       |
| <i>Each</i>   |   |                      |                                      |  |             |       |
| 28169   | 1-gang 6-pin telephone socket outlet.....                                   | 47.81                | 8.37                                 | 10.37  | 31.32       | 28169 |

| Item  |  |                |                          |                                    | Item     |       |
|-------|--|----------------|--------------------------|------------------------------------|----------|-------|
|       | <b>SUB-SWITCHES</b>  |                |                          |                                    |          |       |
|       | The rates for sub-switches include the mounting boxes frames and cutting into wall where applicable. | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only |       |
|       | Plates only, bakelite to suit switches to IEC 60669-1 and socket to BS546 :-                         |                |                          |                                    |          |       |
|       | <i>Each</i>  | A \$           | B \$                     | C \$                               | D \$     |       |
| 28170 | 1 switch, 10A, flush.....  | 16.76          | 3.48                     | 4.09                               | 13.26    | 28170 |
| 28171 | 2 switches, 10A, flush.....  | 17.84          | 3.48                     | 4.09                               | 13.26    | 28171 |
| 28172 | 3 switches, 10A, flush.....  | 19.05          | 3.48                     | 4.09                               | 13.26    | 28172 |
| 28173 | 4 switches, 10A, flush.....  | 26.49          | 3.48                     | 4.09                               | 13.26    | 28173 |
| 28174 | 1 socket, 5/13/15A, 3 pin, flush.....  | 33.86          | 3.48                     | 4.09                               | 13.26    | 28174 |
|       | Moulded switch plates, c/w fixing screws suitable for 1 gang or 2 gang boxes :-                      |                |                          |                                    |          |       |
|       | <i>Each</i>  |                |                          |                                    |          |       |
| 28175 | 1 gang plate for 1 gang box.....   | 23.82          | 3.48                     | 4.09                               | 13.26    | 28175 |
| 28176 | 2 gang plate for 1 gang box.....   | 26.14          | 3.48                     | 4.09                               | 13.26    | 28176 |
| 28177 | 2 gang plate for 2 gang box.....   | 44.18          | 3.48                     | 4.09                               | 13.26    | 28177 |
| 28178 | 3 gang plate for 2 gang box.....   | 47.67          | 3.48                     | 4.09                               | 13.26    | 28178 |
| 28179 | 4 gang plate for 2 gang box.....   | 52.25          | 3.48                     | 4.09                               | 13.26    | 28179 |

| Item  |  |                |                          |                                    | Item     |       |
|-------|--|----------------|--------------------------|------------------------------------|----------|-------|
|       | <b>SUB-SWITCHES (CONT'D)</b>   |                |                          |                                    |          |       |
|       | The rates for sub-switches include the mounting boxes frames and cutting into wall where applicable. | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only |       |
|       | Stainless steel or brass switch plates, c/w fixing screws suitable for 1 gang or 2 gang boxes : -    |                |                          |                                    |          |       |
|       | <i>Each</i>  | A<br>\$        | B<br>\$                  | C<br>\$                            | D<br>\$  |       |
| 28180 | 1 gang plate for 1 gang box.....   | 95.33          | 3.48                     | 4.10                               | 13.28    | 28180 |
| 28181 | 2 gang plate for 1 gang box.....   | 110.17         | 3.48                     | 4.10                               | 13.28    | 28181 |
| 28182 | 2 gang plate for 2 gang box.....   | 121.17         | 3.48                     | 4.10                               | 13.28    | 28182 |
| 28183 | 3 gang plate for 2 gang box.....   | 132.71         | 3.48                     | 4.10                               | 13.28    | 28183 |
| 28184 | 4 gang plate for 2 gang box.....   | 145.04         | 3.48                     | 4.10                               | 13.28    | 28184 |
|       | White bakelite light switch to IEC 60669-1 : -   |                |                          |                                    |          |       |
|       | <i>Each</i>  |                |                          |                                    |          |       |
| 28185 | 10A, 1 gang SP 1 way.....  | 37.76          | 8.37                     | 10.32                              | 31.20    | 28185 |
| 28186 | 10A, 1 gang SP 2 way.....  | 43.05          | 8.37                     | 10.32                              | 31.20    | 28186 |
| 28187 | 10A, 2 gang SP 1 way or 2 way.....   | 48.18          | 8.37                     | 10.32                              | 31.20    | 28187 |
| 28188 | 10A, 3 gang SP 1 way or 2 way.....   | 55.35          | 8.37                     | 10.32                              | 31.20    | 28188 |
| 28189 | 10A, 2 way with or without "centre off" SP .....   | 46.42          | 8.37                     | 10.32                              | 31.20    | 28189 |
| 28190 | 10A, intermediate, SP.....   | 73.57          | 8.37                     | 10.32                              | 31.20    | 28190 |
| 28191 | 10A, 1 way DP.....   | 62.63          | 8.37                     | 10.32                              | 31.20    | 28191 |
| 28192 | 15A, 1 way SP.....   | 64.78          | 8.37                     | 10.32                              | 31.20    | 28192 |



| Item  |  |                |                          |                                    | Item     |       |
|-------|--|----------------|--------------------------|------------------------------------|----------|-------|
|       | <b>SUB-SWITCHES (CONT'D)</b>   |                |                          |                                    |          |       |
|       | The rates for sub-switches include the mounting boxes frames and cutting into wall where applicable.   | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only |       |
|       | Chromium plated grid switch assemblies : -   |                |                          |                                    |          |       |
|       | <b>Each</b>  | A \$           | B \$                     | C \$                               | D \$     |       |
| 28193 | 10A, 1 gang SP 1 way.....  | 198.66         | 8.36                     | 10.33                              | 31.58    | 28193 |
| 28194 | 10A, 1 gang SP 2 way.....  | 207.43         | 8.36                     | 10.33                              | 31.58    | 28194 |
| 28195 | 10A, 2 gang SP 1 way or 2 way.....   | 228.85         | 8.36                     | 10.33                              | 31.58    | 28195 |
| 28196 | 10A, 3 gang SP 1 way or 2 way.....   | 339.58         | 8.36                     | 10.33                              | 31.58    | 28196 |
| 28197 | 10A, 4 gang SP 1 way or 2 way.....   | 368.85         | 8.36                     | 10.33                              | 31.58    | 28197 |
| 28198 | 10A, DP 1 way.....   | 248.27         | 8.36                     | 10.33                              | 31.58    | 28198 |
| 28199 | 20A, DP 1 way.....   | 264.51         | 8.36                     | 10.33                              | 31.58    | 28199 |
| 28200 | 20A, 1 gang DP with pilot light .....  | 280.23         | 8.36                     | 10.33                              | 31.58    | 28200 |
| 28201 | Ditto but 45A.....   | 311.07         | 8.36                     | 10.33                              | 31.58    | 28201 |
|       | Dimmer switch, white, bakelite : -   |                |                          |                                    |          |       |
|       | <b>Each</b>  |                |                          |                                    |          |       |
| 28202 | 250W, 1 gang, 1 way or 2 way.....  | 138.47         | 8.36                     | 10.33                              | 31.58    | 28202 |
| 28203 | 500W, 1 gang, 1 way or 2 way.....  | 138.88         | 8.36                     | 10.33                              | 31.58    | 28203 |
| 28204 | 250W, 2 gang, 1 way or 2 way.....  | 247.46         | 8.36                     | 10.33                              | 31.58    | 28204 |
| 28205 | 3 level dimmer switch (50%, 70%, 100%) .....   | 105.16         | 6.50                     | 9.27                               | 28.78    | 28205 |
| 28206 | 250V/6A dimmer switch for any combination of 10 lamps, 0-10 V interface.....                           | 422.81         | 6.50                     | 9.27                               | 30.07    | 28206 |
| 28207 | Multi-sensor dimmer with housing for control of light intensity and occupancy switching operation..... | 1,106.69       | 6.50                     | 9.27                               | 30.07    | 28207 |
|       | Dimmer switch, chromium plated : -   |                |                          |                                    |          |       |
|       | <b>Each</b>  |                |                          |                                    |          |       |
| 28208 | 400W, 1 gang, 1 way or 2 way.....  | 305.25         | 8.36                     | 10.33                              | 31.58    | 28208 |
| 28209 | 500W, 2 gang, 1 way or 2 way.....  | 365.80         | 8.36                     | 10.33                              | 31.58    | 28209 |

| Item   |   |                      |                                      |  | Item        |       |
|--|---|----------------------|--------------------------------------|--|-------------|-------|
| <b>SUB-SWITCHES (CONT'D)</b>   |   |                      |                                      |  |             |       |
| The rates for sub-switches include the mounting boxes frames and cutting into wall where applicable. |   |                      |                                      |  |             |       |
| White bakelite DP switch :-  |   |                      |                                      |  |             |       |
| <i>Each</i>  |   |                      |                                      |  |             |       |
|  |   | Supply<br>and<br>fix | Take<br>down<br>and<br>clear<br>away | Take<br>down<br>and set<br>aside for<br>re-use | Fix<br>only |       |
|  |   | A<br>\$              | B<br>\$                              | C<br>\$  | D<br>\$     |       |
| 28210  | 20A.....  | 57.90                | 8.44                                 | 10.45  | 31.91       | 28210 |
| 28211  | 32A.....  | 86.58                | 8.44                                 | 10.45  | 31.91       | 28211 |
| 28212  | 45A.....  | 108.32               | 8.44                                 | 10.45  | 31.91       | 28212 |
| White bakelite DP switch with pilot light :-   |   |                      |                                      |  |             |       |
| <i>Each</i>  |   |                      |                                      |  |             |       |
| 28213  | 20A.....  | 66.02                | 8.44                                 | 10.45  | 31.91       | 28213 |
| 28214  | 32A.....  | 95.03                | 8.44                                 | 10.45  | 31.91       | 28214 |
| 28215  | 45A.....  | 114.16               | 8.44                                 | 10.45  | 31.91       | 28215 |
| Metalclad, surface mounted switch :-   |   |                      |                                      |  |             |       |
| <i>Each</i>  |   |                      |                                      |  |             |       |
| 28216  | 10A, 1 gang 1 way or 2 way.....                               | 99.15                | 8.44                                 | 10.45  | 31.91       | 28216 |
| 28217  | 10A, 2 gang 1 way or 2 way.....                               | 112.83               | 8.44                                 | 10.45  | 31.91       | 28217 |
| 28218  | 10A, 3 gang 1 way or 2 way.....                               | 153.83               | 8.44                                 | 10.45  | 31.91       | 28218 |
| 28219  | 20A, DP with pilot light.....                                 | 161.25               | 8.44                                 | 10.45  | 31.91       | 28219 |
| 28220  | 45A, DP with pilot light.....                                 | 451.21               | 8.44                                 | 10.45  | 31.91       | 28220 |
| 28221  | 32A, TPN with pilot light.....                                | 543.10               | 25.80                                | 32.63  | 98.28       | 28221 |
| 28222  | 10A, lighting switch, 1 gang chromium plated brass cover..... | 203.40               | 8.44                                 | 10.45  | 31.91       | 28222 |
| 28223  | Ditto but 2 gang.....   | 224.46               | 8.44                                 | 10.45  | 31.91       | 28223 |
| Splashproof, flush mounted switch, protection class IP 56 :-   |   |                      |                                      |  |             |       |
| <i>Each</i>  |   |                      |                                      |  |             |       |
| 28224  | 10A, 1 gang 1 way SP.....                                     | 161.48               | 17.45                                | 21.87  | 66.81       | 28224 |
| 28225  | 10A, 1 gang 2 way SP.....                                     | 163.89               | 17.45                                | 21.87  | 66.81       | 28225 |
| 28226  | 10A, 1 gang 1 way DP.....                                     | 253.80               | 17.45                                | 21.87  | 66.81       | 28226 |
| 28227  | Ditto but 20A.....  | 348.57               | 17.45                                | 21.87  | 66.81       | 28227 |
| 28228  | 10A, 2 gang 1 way SP.....                                     | 237.80               | 17.45                                | 21.87  | 66.81       | 28228 |

| Item  |  |                |                          |                                    | Item     |       |
|-------|--|----------------|--------------------------|------------------------------------|----------|-------|
|       | <b>SUB-SWITCHES (CONT'D)</b>   |                |                          |                                    |          |       |
|       | The rates for sub-switches include the mounting boxes frames and cutting into wall where applicable. | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only |       |
|       | Splashproof, surface mounted switch, protection class IP44 : -                                       |                |                          |                                    |          |       |
|       | <i>Each</i>  | A \$           | B \$                     | C \$                               | D \$     |       |
| 28229 | 10A, 1 gang 1 way SP.....  | 140.08         | 17.39                    | 21.80                              | 66.55    | 28229 |
| 28230 | 10A, 1 gang 2 way SP.....  | 141.94         | 17.39                    | 21.80                              | 66.55    | 28230 |
| 28231 | 10A, 2 gang 1 way SP.....  | 210.89         | 17.39                    | 21.80                              | 66.55    | 28231 |
| 28232 | 10A, 1 gang 1 way DP.....  | 148.03         | 17.39                    | 21.80                              | 66.55    | 28232 |
| 28233 | Ditto but 20A, c/w pilot light .....   | 215.97         | 17.39                    | 21.80                              | 66.55    | 28233 |
| 28234 | Switch, flameproof 10A.....  | 1,401.71       | 17.39                    | 21.80                              | 66.55    | 28234 |
| 28235 | Ditto but 16A.....   | 1,819.91       | 17.39                    | 21.80                              | 66.55    | 28235 |
|       | Stainless steel (304) plated grid switch c/w metal casing : -  |                |                          |                                    |          |       |
|       | <i>Each</i>  |                |                          |                                    |          |       |
| 28236 | 2 gang grid switch.....  | 185.57         | 8.37                     | 10.37                              | 31.32    | 28236 |
| 28237 | 3 gang grid switch.....  | 232.97         | 8.37                     | 10.37                              | 31.32    | 28237 |
| 28238 | 4 gang grid switch.....  | 260.18         | 8.37                     | 10.37                              | 31.32    | 28238 |
| 28239 | 5 gang grid switch.....  | 338.79         | 8.37                     | 10.37                              | 31.32    | 28239 |
| 28240 | 6 gang grid switch.....  | 436.61         | 9.08                     | 10.92                              | 35.16    | 28240 |
| 28241 | 8 gang grid switch.....  | 499.77         | 9.08                     | 10.92                              | 35.16    | 28241 |
| 28242 | 10 gang grid switch.....   | 564.88         | 9.08                     | 10.92                              | 35.16    | 28242 |
| 28243 | 12 gang grid switch.....   | 640.46         | 11.78                    | 14.63                              | 44.30    | 28243 |
| 28244 | 14 gang grid switch.....   | 907.72         | 11.78                    | 14.63                              | 44.30    | 28244 |
| 28245 | 16 gang grid switch.....   | 1,190.39       | 11.78                    | 14.63                              | 44.30    | 28245 |
| 28246 | 18 gang grid switch.....   | 1,512.81       | 13.85                    | 17.96                              | 53.16    | 28246 |
|       | Keyswitch : -  |                |                          |                                    |          |       |
|       | <i>Each</i>  |                |                          |                                    |          |       |
| 28247 | Keytag.....  | 47.30          | -                        | -                                  | -        | 28247 |
| 28248 | 10A, wall unit keyswitch.....  | 294.27         | 17.39                    | 21.80                              | 66.55    | 28248 |
| 28249 | 20A, DP wall unit keyswitch.....   | 326.68         | 17.39                    | 21.80                              | 66.55    | 28249 |

| Item  |   |                |                          |                                    | Item     |       |
|-------|---|----------------|--------------------------|------------------------------------|----------|-------|
|       | <b>SUB-SWITCHES (CONT'D)</b>  |                |                          |                                    |          |       |
|       | The rates for sub-switches include the mounting boxes frames and cutting into wall where applicable.    | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only |       |
|       | Float switch : -  |                |                          |                                    |          |       |
|       | <b>Each</b>   | A \$           | B \$                     | C \$                               | D \$     |       |
| 28250 | Mercury float switch .....  | 357.78         | 22.72                    | 28.49                              | 86.18    | 28250 |
| 28251 | Galvanized steel bracket for mercury float switch.....  | 117.66         | 11.00                    | 13.72                              | 41.69    | 28251 |
| 28252 | Ditto but of stainless steel 316.....   | 279.21         | 11.00                    | 13.72                              | 41.69    | 28252 |
|       | Ceiling switch, cord or chain operated : -  |                |                          |                                    |          |       |
|       | <b>Each</b>   |                |                          |                                    |          |       |
| 28253 | 6A, 1 way or 2 way SP.....  | 57.78          | 8.37                     | 10.35                              | 31.64    | 28253 |
| 28254 | 10A, 1 way SP.....  | 60.01          | 8.37                     | 10.35                              | 31.64    | 28254 |
| 28255 | 10A, 2 way SP.....  | 64.26          | 8.37                     | 10.35                              | 31.64    | 28255 |
| 28256 | 15A, 1 way SP.....  | 67.18          | 8.37                     | 10.35                              | 31.64    | 28256 |
| 28257 | 16A, 1 way DP.....  | 70.25          | 8.37                     | 10.35                              | 31.64    | 28257 |
|       | Miscellaneous switch : -  |                |                          |                                    |          |       |
|       | <b>Each</b>   |                |                          |                                    |          |       |
| 28258 | Emergency stop switch, metalclad, heavy duty type.....  | 328.99         | 11.00                    | 13.72                              | 41.69    | 28258 |
| 28259 | Push button switch, 5A, bakelite miniature panel mounting.....  | 200.66         | 3.48                     | 4.10                               | 13.28    | 28259 |
| 28260 | On-off pull switch, 2A, for fluorescent fitting, fitted with ball chain and metal tassel.....           | 53.18          | 3.48                     | 4.10                               | 13.28    | 28260 |
| 28261 | Toggle switch, 10/15A, 2 way.....   | 42.87          | 5.87                     | 7.01                               | 20.74    | 28261 |
| 28262 | Photo electric daylight sensitive switch 220V 50Hz (Switch on at 54 lux and switch off at 108 lux)..... | 407.67         | 21.87                    | 28.27                              | 85.11    | 28262 |
| 28263 | Dusk/Dawn Photo electric switch, light threshold from 20-500 lux, adjustable .....                      | 1,124.64       | 16.45                    | 20.63                              | 62.92    | 28263 |
| 28264 | Photo-electric control 1000W/1500VA 220-240V with standard 3-prong EEI-NEMA twist lock mounting.....    | 478.28         | 23.29                    | 29.22                              | 88.38    | 28264 |
| 28265 | Socket (or mount) with standard EEI-NEMA twist lock receptacle for photo-electric control.....          | 88.26          | 11.23                    | 14.07                              | 42.80    | 28265 |

| Item  |   |                |                          |                                    | Item     |       |
|-------|---|----------------|--------------------------|------------------------------------|----------|-------|
|       | <b>BELLS AND BELL ACCESSORIES</b>   | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only |       |
|       | <i>Each</i>   | A<br>\$        | B<br>\$                  | C<br>\$                            | D<br>\$  |       |
| 28266 | Door bell with bakelite case, battery operated type, of any rating.....                                       | 118.53         | 11.54                    | 13.61                              | 35.46    | 28266 |
| 28267 | Door bell, 2 notes, 8V, without transformer.....  | 134.50         | 11.54                    | 13.61                              | 35.46    | 28267 |
| 28268 | Door bell, 2 notes, 8V, with 220V/8V transformer.....   | 165.95         | 11.54                    | 13.61                              | 35.46    | 28268 |
| 28269 | Bell, underdome type, circular 75 mm diameter, 4.5, 6 or 12V.....   | 210.64         | 11.54                    | 13.61                              | 35.46    | 28269 |
| 28270 | Ditto but circular and insulated pattern, 100 mm diameter, 12 or 24V.....                                     | 233.45         | 11.54                    | 13.61                              | 35.46    | 28270 |
| 28271 | Alarm bell, waterproof, 150 mm diameter gong, cast iron pattern continuous ringing, 220V A.C. or 24V D.C..... | 298.31         | 11.54                    | 13.61                              | 35.46    | 28271 |
| 28272 | Alarm bell, waterproof, 225 mm diameter gong, cast iron pattern continuous ringing, 220V A.C. or 24V D.C..... | 588.97         | 11.54                    | 13.61                              | 35.46    | 28272 |
| 28273 | Mini buzzer, 51 mm diameter, 8/12V A.C. ....  | 66.12          | 11.54                    | 13.61                              | 35.46    | 28273 |
| 28274 | Mini buzzer, 71 mm diameter, 8/12V A.C. ....  | 79.58          | 11.54                    | 13.61                              | 35.46    | 28274 |
| 28275 | Buzzer 24V A.C. with case.....  | 108.62         | 11.54                    | 13.61                              | 35.46    | 28275 |
| 28276 | Buzzer 8V A.C. with case.....   | 118.98         | 11.54                    | 13.61                              | 35.46    | 28276 |
| 28277 | Bell indicator, unit pendulum type, 6 - 9 ways.....   | 50.19          | 11.54                    | 13.61                              | 35.46    | 28277 |
| 28278 | Bell push, flush type with bakelite plate on BS 4662 Box/IEC 60670 Box .....                                  | 51.41          | 9.36                     | 11.60                              | 28.88    | 28278 |
| 28279 | Weatherproof bell push, rated IP65.....   | 235.10         | 16.24                    | 20.10                              | 61.02    | 28279 |
| 28280 | Bell push, foot operated floor type.....  | 172.48         | 9.36                     | 11.60                              | 28.88    | 28280 |
| 28281 | Bell push, surface mounted.....   | 41.93          | 9.36                     | 11.60                              | 28.88    | 28281 |
| 28282 | Bell transformer, 220/4V.....   | 161.90         | 11.54                    | 13.61                              | 35.46    | 28282 |
| 28283 | Bell transformer, 220/8V.....   | 162.93         | 11.54                    | 13.61                              | 35.46    | 28283 |
| 28284 | Bell transformer, 220/12V.....  | 227.36         | 11.54                    | 13.61                              | 35.46    | 28284 |
| 28285 | Bell transformer, 220/24V.....  | 237.82         | 11.54                    | 13.61                              | 35.46    | 28285 |
| 28286 | Control relay, with bakelite case plug-in type coil voltage 12/24/48V.....                                    | 135.03         | 11.54                    | 13.61                              | 35.46    | 28286 |
| 28287 | Ditto but coil voltage 110/220V.....  | 156.98         | 11.54                    | 13.61                              | 35.46    | 28287 |

| Item  |                     |                      |                                      |  | Item        |       |
|---|---------------------|----------------------|--------------------------------------|--|-------------|-------|
| <b>CONDUITS AND CONDUIT FITTING</b>   |                     |                      |                                      |  |             |       |
| Heavy gauge galvanized welded screwed steel conduit to IEC 61386-21, c/w all necessary accessories and fixed in saddles, chases, screed, within dry partition or on shuttering :- |                     |                      |                                      |  |             |       |
| Concealed conduit :-  |                     |                      |                                      |  |             |       |
| <i>Per linear metre</i>   |                     |                      |                                      |  |             |       |
|   |                     | Supply<br>and<br>fix | Take<br>down<br>and<br>clear<br>away | Take<br>down<br>and set<br>aside for<br>re-use | Fix<br>only |       |
|   |                     | A<br>\$              | B<br>\$                              | C<br>\$  | D<br>\$     |       |
| 28288   | 20 mm diameter..... | 37.83                | -                                    | -  | 15.59       | 28288 |
| 28289   | 25 mm diameter..... | 43.09                | -                                    | -  | 15.59       | 28289 |
| 28290   | 32 mm diameter..... | 50.29                | -                                    | -  | 19.98       | 28290 |
| Surface mounted conduit including all types of spacing saddles :-   |                     |                      |                                      |  |             |       |
| <i>Per linear metre</i>   |                     |                      |                                      |  |             |       |
| 28291   | 20 mm diameter..... | 62.05                | 8.23                                 | 10.04  | 33.15       | 28291 |
| 28292   | 25 mm diameter..... | 76.99                | 8.23                                 | 10.04  | 33.15       | 28292 |
| 28293   | 32 mm diameter..... | 92.38                | 9.36                                 | 11.59  | 36.99       | 28293 |
| 28294   | 40 mm diameter..... | 96.22                | 9.48                                 | 12.16  | 38.45       | 28294 |
| 28295   | 50 mm diameter..... | 119.93               | 9.91                                 | 12.71  | 43.73       | 28295 |
| Heavy gauge PVC conduit c/w all necessary accessories and fixed in saddles, chases, screed, within dry partition, or on shuttering :-   |                     |                      |                                      |  |             |       |
| <i>Per linear metre</i>   |                     |                      |                                      |  |             |       |
| 28296   | 20 mm diameter..... | 26.16                | 4.13                                 | 5.06   | 12.64       | 28296 |
| 28297   | 25 mm diameter..... | 32.80                | 4.86                                 | 6.02   | 15.50       | 28297 |
| 28298   | 32 mm diameter..... | 41.17                | 5.08                                 | 6.33   | 16.71       | 28298 |
| Draw wire in conduit :-   |                     |                      |                                      |  |             |       |
| <i>Per linear metre</i>   |                     |                      |                                      |  |             |       |
| 28299   | Draw wire.....      | 1.66                 | -                                    | -  | 1.43        | 28299 |

| Item   |                     | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only | Item  |
|--|---------------------|----------------|--------------------------|------------------------------------|----------|-------|
| <b>CONDUITS AND CONDUIT FITTING (CONT'D)</b>   |                     |                |                          |                                    |          |       |
| Watertight flexible metallic conduit c/w all necessary accessories :-  |                     |                |                          |                                    |          |       |
| <i>Per linear metre</i>  |                     |                |                          |                                    |          |       |
|  |                     | A<br>\$        | B<br>\$                  | C<br>\$                            | D<br>\$  |       |
| 28300  | 20 mm diameter..... | 29.91          | 7.43                     | 8.92                               | 11.60    | 28300 |
| 28301  | 25 mm diameter..... | 36.86          | 7.43                     | 8.92                               | 11.60    | 28301 |
| 28302  | 32 mm diameter..... | 43.36          | 7.43                     | 8.92                               | 11.60    | 28302 |
| 28303  | 40 mm diameter..... | 65.24          | 8.12                     | 9.74                               | 12.61    | 28303 |
| 28304  | 50 mm diameter..... | 93.01          | 8.12                     | 9.74                               | 12.61    | 28304 |
| Watertight flexible metallic conduit with PVC sheathed c/w all necessary accessories :-                              |                     |                |                          |                                    |          |       |
| <i>Per linear metre</i>  |                     |                |                          |                                    |          |       |
| 28305  | 20 mm diameter..... | 29.91          | 7.43                     | 8.92                               | 11.60    | 28305 |
| 28306  | 25 mm diameter..... | 36.86          | 7.43                     | 8.92                               | 11.60    | 28306 |
| 28307  | 32 mm diameter..... | 43.36          | 7.43                     | 8.92                               | 11.60    | 28307 |
| 28308  | 40 mm diameter..... | 54.15          | 8.12                     | 9.74                               | 12.61    | 28308 |
| 28309  | 50 mm diameter..... | 99.60          | 8.12                     | 9.74                               | 12.61    | 28309 |
| Adaptors male/female for flexible metallic conduit, brass, sweated or screwed onto conduit of the following sizes :- |                     |                |                          |                                    |          |       |
| <i>Each</i>  |                     |                |                          |                                    |          |       |
| 28310  | 20 mm diameter..... | 8.70           | 2.15                     | 2.51                               | 6.38     | 28310 |
| 28311  | 25 mm diameter..... | 10.45          | 2.15                     | 2.51                               | 6.38     | 28311 |
| 28312  | 32 mm diameter..... | 13.85          | 2.15                     | 2.51                               | 6.38     | 28312 |
| 28313  | 40 mm diameter..... | 19.23          | 2.15                     | 2.51                               | 6.38     | 28313 |
| 28314  | 50 mm diameter..... | 25.49          | 2.60                     | 3.19                               | 8.05     | 28314 |

| Item  |   |                |                          |                                    | Item       |
|-------|---|----------------|--------------------------|------------------------------------|------------|
|       | <b>CONDUITS AND CONDUIT FITTING (CONT'D)</b>              |                |                          |                                    |            |
|       | Brass female bushes for conduit of the following sizes :- |                |                          |                                    |            |
|       | <i>Per linear metre</i>                                   |                |                          |                                    |            |
|       |   | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only   |
|       |   | A \$           | B \$                     | C \$                               | D \$       |
| 28315 | 20 mm diameter.....                                       | 2.54           | 0.60                     | 0.72                               | 1.73 28315 |
| 28316 | 25 mm diameter.....                                       | 3.09           | 0.60                     | 0.72                               | 1.73 28316 |
| 28317 | 32 mm diameter.....                                       | 3.68           | 0.60                     | 0.72                               | 1.73 28317 |
| 28318 | 40 mm diameter.....                                       | 4.75           | 0.72                     | 0.86                               | 1.98 28318 |
| 28319 | 50 mm diameter.....                                       | 9.65           | 1.03                     | 1.17                               | 3.10 28319 |
|       | Brass male bushes for conduit of the following sizes :-   |                |                          |                                    |            |
|       | <i>Per linear metre</i>                                   |                |                          |                                    |            |
| 28320 | 20 mm diameter.....                                       | 2.69           | 0.60                     | 0.72                               | 1.73 28320 |
| 28321 | 25 mm diameter.....                                       | 3.35           | 0.60                     | 0.72                               | 1.73 28321 |
| 28322 | 32 mm diameter.....                                       | 3.86           | 0.60                     | 0.72                               | 1.73 28322 |
| 28323 | 40 mm diameter.....                                       | 5.58           | 0.72                     | 0.86                               | 1.98 28323 |
| 28324 | 50 mm diameter.....                                       | 9.42           | 1.03                     | 1.17                               | 3.10 28324 |
|       | Rubber grommets of the following sizes :-                 |                |                          |                                    |            |
|       | <i>Per linear metre</i>                                   |                |                          |                                    |            |
| 28325 | 20 mm diameter.....                                       | 1.98           | 0.60                     | 0.72                               | 1.73 28325 |
| 28326 | 25 mm diameter.....                                       | 2.24           | 0.60                     | 0.72                               | 1.73 28326 |
| 28327 | 32 mm diameter.....                                       | 2.54           | 0.60                     | 0.72                               | 1.73 28327 |
| 28328 | 40 mm diameter.....                                       | 3.24           | 0.72                     | 0.86                               | 1.98 28328 |
| 28329 | 50 mm diameter.....                                       | 4.90           | 1.03                     | 1.17                               | 3.10 28329 |



| Item  |   |                          |                                    |          | Item  |       |
|---|---|--------------------------|------------------------------------|----------|-------|-------|
| <b>CONDUITS AND CONDUIT FITTING (CONT'D)</b>  |   |                          |                                    |          |       |       |
| Conduit boxes, malleable iron (galvanized) for heavy gauge steel conduits, round without lids for conduit of the following sizes :- |   |                          |                                    |          |       |       |
| <i>Each</i>   |   |                          |                                    |          |       |       |
|   | Supply and fix  | Take down and clear away | Take down and set aside for re-use | Fix only |       |       |
|   | A<br>\$   | B<br>\$                  | C<br>\$                            | D<br>\$  |       |       |
| 28330   | 20 mm diameter standard BESA boxes with 51 mm fixing centres.....   | 27.11                    | 5.92                               | 7.15     | 18.26 | 28330 |
| 28331   | 20 mm diameter deep pattern standard BESA boxes with 51 mm fixing centres.....  | 30.27                    | 5.92                               | 7.15     | 18.26 | 28331 |
| 28332   | Lids and screws for standard BESA boxes.....  | 8.09                     | 1.46                               | 1.80     | 4.46  | 28332 |
| 28333   | Break joint ring, galvanized iron.....  | 7.16                     | 1.46                               | 1.80     | 4.46  | 28333 |
| 28334   | Metal break ring, or overlapping plate, galvanized iron, suitable for steel conduit box with 51 mm fixing centre..... | 6.37                     | 1.46                               | 1.80     | 4.46  | 28334 |
| Heavy spacing saddles for steel conduit of the following sizes :-   |   |                          |                                    |          |       |       |
| <i>Each</i>   |   |                          |                                    |          |       |       |
| 28335   | 20 mm diameter.....   | 14.09                    | 3.48                               | 4.06     | 10.56 | 28335 |
| 28336   | 25 mm diameter.....   | 14.47                    | 3.48                               | 4.06     | 10.56 | 28336 |
| 28337   | 32 mm diameter.....   | 15.27                    | 3.48                               | 4.06     | 10.56 | 28337 |
| 28338   | 40 mm diameter.....   | 20.96                    | 4.06                               | 4.86     | 12.27 | 28338 |
| 28339   | 50 mm diameter.....   | 22.18                    | 4.06                               | 4.86     | 12.27 | 28339 |
| Heavy spacing saddles for PVC conduit of the following sizes :-   |   |                          |                                    |          |       |       |
| <i>Each</i>   |   |                          |                                    |          |       |       |
| 28340   | 20 mm diameter.....   | 12.60                    | 3.15                               | 3.84     | 9.65  | 28340 |
| 28341   | 25 mm diameter.....   | 13.43                    | 3.15                               | 3.84     | 9.65  | 28341 |
| 28342   | 32 mm diameter.....   | 14.12                    | 3.15                               | 3.84     | 9.65  | 28342 |
| Ordinary duty spacing saddles (galvanized) for conduit of the following sizes :-  |   |                          |                                    |          |       |       |
| <i>Each</i>   |   |                          |                                    |          |       |       |
| 28343   | 20 mm diameter.....   | 8.17                     | 2.12                               | 2.48     | 6.19  | 28343 |
| 28344   | 25 mm diameter.....   | 8.48                     | 2.12                               | 2.48     | 6.19  | 28344 |
| 28345   | 32 mm diameter.....   | 9.02                     | 2.12                               | 2.48     | 6.19  | 28345 |
| 28346   | 40 mm diameter.....   | 10.39                    | 2.12                               | 2.48     | 6.19  | 28346 |
| 28347   | 50 mm diameter.....   | 11.54                    | 2.12                               | 2.48     | 6.19  | 28347 |
| 28348   | Nipple, screwed, 20 mm.....   | 6.78                     | 1.16                               | 1.38     | 3.48  | 28348 |
| 28349   | Lock nut, milled edge, round 20 mm.....   | 4.64                     | 1.16                               | 1.38     | 3.48  | 28349 |

| Item  |   |                |                          |                                    |          |       |
|-------|---|----------------|--------------------------|------------------------------------|----------|-------|
|       | <b>CONDUITS AND CONDUIT FITTING (CONT'D)</b>  |                |                          |                                    |          |       |
|       | Solid couplers, screwed, malleable iron, galvanized, for steel conduit of the following sizes :-  |                |                          |                                    |          |       |
|       | <i>Each</i>   | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only |       |
|       |   | A \$           | B \$                     | C \$                               | D \$     |       |
| 28350 | 20 mm diameter.....   | 5.32           | 1.17                     | 1.41                               | 3.49     | 28350 |
| 28351 | 25 mm diameter.....   | 6.09           | 1.17                     | 1.41                               | 3.49     | 28351 |
| 28352 | 32 mm diameter.....   | 7.01           | 1.17                     | 1.41                               | 3.49     | 28352 |
| 28353 | 40 mm diameter.....   | 9.22           | 1.17                     | 1.41                               | 3.49     | 28353 |
| 28354 | 50 mm diameter.....   | 12.81          | 1.17                     | 1.41                               | 3.49     | 28354 |
|       | Adaptable junction boxes, cast iron/sheet steel, galvanized, c/w cover (including cutting and drilling holes into wall and ceiling as required) |                |                          |                                    |          |       |
|       | Cast iron, square :-  |                |                          |                                    |          |       |
|       | <i>Each</i>   |                |                          |                                    |          |       |
| 28355 | 75 x 75 x 50 mm.....  | 44.39          | 7.82                     | 9.80                               | 30.57    | 28355 |
| 28356 | 100 x 100 x 50 mm.....  | 50.13          | 8.64                     | 10.37                              | 32.37    | 28356 |
| 28357 | 150 x 150 x 75 mm.....  | 64.19          | 8.64                     | 10.37                              | 34.18    | 28357 |
| 28358 | 225 x 225 x 75 mm.....  | 121.10         | 10.37                    | 13.24                              | 42.30    | 28358 |
| 28359 | 300 x 300 x 75 mm.....  | 200.81         | 13.24                    | 17.27                              | 53.00    | 28359 |
|       | Cast iron, oblong :-  |                |                          |                                    |          |       |
|       | <i>Each</i>   |                |                          |                                    |          |       |
| 28360 | 150 x 75 x 50 mm.....   | 52.84          | 8.64                     | 10.37                              | 32.38    | 28360 |
| 28361 | 225 x 150 x 75 mm.....  | 87.70          | 8.64                     | 10.37                              | 34.18    | 28361 |
| 28362 | 300 x 200 x 90 mm.....  | 138.61         | 10.37                    | 13.24                              | 42.30    | 28362 |
| 28363 | 450 x 300 x 100 mm.....   | 251.26         | 13.24                    | 17.27                              | 53.00    | 28363 |
|       | Sheet steel, square :-  |                |                          |                                    |          |       |
|       | <i>Each</i>   |                |                          |                                    |          |       |
| 28364 | 75 x 75 x 50 mm.....  | 42.64          | 7.84                     | 9.82                               | 30.63    | 28364 |
| 28365 | 100 x 100 x 50 mm.....  | 45.37          | 8.21                     | 10.19                              | 32.44    | 28365 |
| 28366 | 150 x 150 x 75 mm.....  | 51.16          | 8.79                     | 10.98                              | 34.25    | 28366 |
| 28367 | 225 x 225 x 75 mm.....  | 71.33          | 11.55                    | 14.45                              | 44.96    | 28367 |
| 28368 | 300 x 300 x 75 mm.....  | 90.69          | 13.17                    | 17.30                              | 53.12    | 28368 |

| Item  |  |                |                          |                                    | Item     |       |
|-------|--|----------------|--------------------------|------------------------------------|----------|-------|
|       | <b>CONDUITS AND CONDUIT FITTING (CONT'D)</b>   |                |                          |                                    |          |       |
|       | PVC adaptable junction box c/w cover (including cutting and drilling holes into wall and ceiling as required) :- | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only |       |
|       | <i>Each</i>  | A<br>\$        | B<br>\$                  | C<br>\$                            | D<br>\$  |       |
| 28369 | 75 x 75 x 44 mm .....  | 26.02          | 5.95                     | 7.19                               | 17.90    | 28369 |
| 28370 | 100 x 100 x 50 mm .....  | 30.06          | 6.80                     | 8.27                               | 20.76    | 28370 |
| 28371 | 150 x 150 x 75 mm (50 mm).....   | 41.38          | 7.98                     | 9.69                               | 24.43    | 28371 |
| 28372 | 225 x 225 x 75 mm .....  | 83.92          | 10.70                    | 13.72                              | 41.42    | 28372 |
| 28373 | Blank plate, white bakelite, 1 gang.....   | 10.84          | 1.25                     | 1.50                               | 3.60     | 28373 |
| 28374 | Blank plate, white bakelite, 2 gang.....   | 17.18          | 1.25                     | 1.50                               | 3.60     | 28374 |
|       | Sheet metal cover plate c/w screws for adaptable junction box of the following sizes :-                          |                |                          |                                    |          |       |
|       | <i>Each</i>  |                |                          |                                    |          |       |
| 28375 | 75 x 75 mm.....  | 8.86           | 2.15                     | 2.50                               | 6.22     | 28375 |
| 28376 | 100 x 100 mm.....  | 9.68           | 2.15                     | 2.50                               | 6.22     | 28376 |
| 28377 | 150 x 150 mm.....  | 11.77          | 2.15                     | 2.50                               | 6.22     | 28377 |
| 28378 | 225 x 225 mm.....  | 20.36          | 2.15                     | 2.50                               | 6.22     | 28378 |
| 28379 | 300 x 300 mm.....  | 30.15          | 2.96                     | 3.55                               | 8.79     | 28379 |
| 28380 | 150 x 75 mm.....   | 9.82           | 2.15                     | 2.50                               | 6.22     | 28380 |
| 28381 | 225 x 150 mm.....  | 15.39          | 2.15                     | 2.50                               | 6.22     | 28381 |
| 28382 | 300 x 200 mm.....  | 22.21          | 2.15                     | 2.50                               | 6.22     | 28382 |
| 28383 | 450 x 300 mm.....  | 38.39          | 2.96                     | 3.55                               | 8.79     | 28383 |
| 28384 | Stainless steel blanking plate; in any size.....   | 53.33          | 3.64                     | 4.24                               | 13.46    | 28384 |

| Item   |  | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only | Item  |
|--|--|----------------|--------------------------|------------------------------------|----------|-------|
|  |  | A<br>\$        | B<br>\$                  | C<br>\$                            | D<br>\$  |       |
| <b>CONDUITS AND CONDUIT FITTING (CONT'D)</b>                                     |  |                |                          |                                    |          |       |
| Galvanized cast iron box for surface mounting, to IEC 60670 or BS 4662 boxes : - |  |                |                          |                                    |          |       |
| <i>Each</i>  |  |                |                          |                                    |          |       |
| 28385  | 35 mm deep, 1 gang.....                                | 8.78           | 2.15                     | 2.53                               | 4.19     | 28385 |
| 28386  | 47 mm deep, 1 gang.....                                | 9.57           | 2.15                     | 2.53                               | 4.19     | 28386 |
| 28387  | 35 mm deep, 2 gang.....                                | 11.48          | 2.15                     | 2.53                               | 4.19     | 28387 |
| 28388  | 47 mm deep, 2 gang.....                                | 13.90          | 2.15                     | 2.53                               | 4.19     | 28388 |
| Galvanized steel box for flush mounting, to IEC 60670 or BS 4662 boxes : -       |  |                |                          |                                    |          |       |
| <i>Each</i>  |  |                |                          |                                    |          |       |
| 28389  | 25 mm deep, 1 gang.....                                | 19.63          | 5.80                     | 7.13                               | 11.79    | 28389 |
| 28390  | 25 mm deep, 2 gang.....                                | 22.27          | 6.70                     | 7.98                               | 13.43    | 28390 |
| 28391  | 25 mm deep, 3 gang.....                                | 25.16          | 7.42                     | 8.95                               | 15.00    | 28391 |
| 28392  | 35 mm deep, 1 gang.....                                | 20.36          | 5.80                     | 7.13                               | 11.79    | 28392 |
| 28393  | 35 mm deep, 2 gang.....                                | 22.64          | 6.70                     | 7.98                               | 13.43    | 28393 |
| 28394  | 47 mm deep, 1 gang.....                                | 21.81          | 5.80                     | 7.13                               | 11.79    | 28394 |
| 28395  | 47 mm deep, 2 gang.....                                | 24.32          | 6.70                     | 7.98                               | 13.43    | 28395 |
| 28396  | 44 mm deep for shaver unit.....                        | 31.57          | 5.76                     | 7.08                               | 11.72    | 28396 |
| Galvanized steel box for surface mounting, to IEC 60670 or BS 4662 boxes : -     |  |                |                          |                                    |          |       |
| <i>Each</i>  |  |                |                          |                                    |          |       |
| 28397  | 41 mm deep, 1 gang with knockout.....                  | 18.14          | 5.12                     | 6.24                               | 10.37    | 28397 |
| 28398  | 41 mm deep, 2 gang with knockout.....                  | 21.70          | 5.59                     | 6.99                               | 11.39    | 28398 |
| 28399  | 17 mm deep, 1 gang.....                                | 17.10          | 4.95                     | 5.91                               | 10.02    | 28399 |
| 28400  | 25 mm deep, 1 gang.....                                | 17.46          | 4.95                     | 5.91                               | 10.02    | 28400 |
| 28401  | 30 mm or 32 mm deep, 1 gang.....                       | 17.63          | 4.95                     | 5.91                               | 10.02    | 28401 |
| 28402  | 30 mm or 32 mm deep, 2 gang.....                       | 18.76          | 5.28                     | 6.42                               | 10.19    | 28402 |
| 28403  | 30 mm or 32 mm deep, 3 gang.....                       | 19.99          | 5.28                     | 6.42                               | 10.19    | 28403 |
| 28404  | 38 mm or 40 mm deep, 1 gang.....                       | 19.07          | 5.12                     | 6.24                               | 10.37    | 28404 |
| 28405  | 38 mm or 40 mm deep, 2 gang.....                       | 21.88          | 5.59                     | 6.99                               | 11.39    | 28405 |
| 28406  | 38 mm or 40 mm deep for 2 x 1 gang with partition..... | 22.67          | 5.59                     | 6.99                               | 11.39    | 28406 |
| 28407  | 44 mm deep, 1 gang.....                                | 19.89          | 5.12                     | 6.24                               | 10.37    | 28407 |
| 28408  | 44 mm deep for shaver unit.....                        | 28.10          | 5.12                     | 6.24                               | 10.37    | 28408 |

| Item   |  | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only | Item  |
|--|--|----------------|--------------------------|------------------------------------|----------|-------|
| <b>CONDUITS AND CONDUIT FITTING (CONT'D)</b> |  |                |                          |                                    |          |       |
|  | PVC switch box : -                         |                |                          |                                    |          |       |
|  | <i>Each</i>                                | A              | B                        | C                                  | D        |       |
|  |  | \$             | \$                       | \$                                 | \$       |       |
| 28409  | 35 mm deep, 1 gang.....                    | 8.62           | 2.13                     | 2.51                               | 6.24     | 28409 |
| 28410  | 47 mm deep, 1 gang.....                    | 8.95           | 2.13                     | 2.51                               | 6.24     | 28410 |
| 28411  | 47 mm deep, 2 gang.....                    | 14.41          | 2.13                     | 2.51                               | 6.24     | 28411 |
| 28412  | surface switch box 35 mm deep, 1 gang..... | 8.96           | 2.13                     | 2.51                               | 6.24     | 28412 |
| 28413  | surface switch box 47 mm deep, 1 gang..... | 9.02           | 2.13                     | 2.51                               | 6.24     | 28413 |
| 28414  | surface switch box 47 mm deep, 2 gang..... | 14.40          | 2.13                     | 2.51                               | 6.24     | 28414 |
|  | Steel base box for grid switch : -         |                |                          |                                    |          |       |
|  | <i>Each</i>                                |                |                          |                                    |          |       |
| 28415  | 73 x 73 x 40 mm.....                       | 58.45          | 7.43                     | 8.97                               | 22.55    | 28415 |
| 28416  | 73 x 133 x 40 mm.....                      | 70.41          | 8.21                     | 9.88                               | 24.87    | 28416 |
| 28417  | 133 x 133 x 40 mm.....                     | 178.17         | 8.88                     | 10.63                              | 33.94    | 28417 |
| 28418  | 194 x 133 x 40 mm.....                     | 194.96         | 9.67                     | 12.88                              | 37.03    | 28418 |
|  | Moulded base box for grid switch : -       |                |                          |                                    |          |       |
|  | <i>Each</i>                                |                |                          |                                    |          |       |
| 28419  | 1 gang or 2 gang.....                      | 26.65          | 5.81                     | 6.96                               | 17.73    | 28419 |
| 28420  | 3 gang or 4 gang.....                      | 37.84          | 5.81                     | 6.96                               | 17.73    | 28420 |

| Item  |  | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only | Item  |
|---|--|----------------|--------------------------|------------------------------------|----------|-------|
| <b>CONDUITS AND CONDUIT FITTING (CONT'D)</b>  |  |                |                          |                                    |          |       |
| Accessories for weatherproof switch/socket :-   |  |                |                          |                                    |          |       |
| <i>Each</i>   |  |                |                          |                                    |          |       |
|   |  | A<br>\$        | B<br>\$                  | C<br>\$                            | D<br>\$  |       |
| 28421   | Entry blank.....   | 19.37          | 2.63                     | 3.09                               | 7.99     | 28421 |
| 28422   | PVC cable entry.....   | 19.84          | 2.63                     | 3.09                               | 7.99     | 28422 |
| 28423   | 20 mm conduit entry.....   | 20.97          | 2.63                     | 3.09                               | 7.99     | 28423 |
| 28424   | Box coupler.....   | 10.96          | 0.58                     | 0.71                               | 1.76     | 28424 |
| 28425   | Gel seal for socket.....   | 23.13          | 2.01                     | 2.47                               | 6.12     | 28425 |
| 28426   | Surface mounting 1 gang box.....   | 67.82          | 5.81                     | 7.14                               | 17.73    | 28426 |
| 28427   | Surface mounting 2 gang box.....   | 89.89          | 5.81                     | 7.14                               | 17.73    | 28427 |
| 28428   | 1 gang flush mounting frame.....   | 150.28         | 8.26                     | 10.10                              | 30.51    | 28428 |
| 28429   | 2 gang flush mounting frame.....   | 222.72         | 8.61                     | 10.43                              | 31.34    | 28429 |
| <b>UNDERFLOOR BUSBAR TRUNKING UNIT</b>  |  |                |                          |                                    |          |       |
| Underfloor busbar trunking unit (with colour) for final circuit distribution c/w trunking coupler, all necessary interconnection wirings and accessories :- |  |                |                          |                                    |          |       |
| <i>Per linear metre</i>   |  |                |                          |                                    |          |       |
|   |  | A<br>\$        | B<br>\$                  | C<br>\$                            | D<br>\$  |       |
| 28430   | Four compartments 300 mm wide, 1200 mm long.....   | 830.52         | 53.39                    | 66.53                              | 92.55    | 28430 |
| 28431   | Four compartments 300 mm wide, 2400mm long.....  | 1,649.13       | 102.60                   | 116.23                             | 131.63   | 28431 |
| Underfloor busbar trunking accessories :-   |  |                |                          |                                    |          |       |
| <i>Each</i>   |  |                |                          |                                    |          |       |
| 28432   | Flexible connector assembly c/w 2 m long flexible conduit c/w all necessary wirings..... | 116.32         | 26.03                    | 39.05                              | 39.63    | 28432 |
| 28433   | Cross over bridge assembly for four compartments trunking.....                           | 858.02         | 50.92                    | 63.26                              | 99.53    | 28433 |

| Item  |  |                |                          |                                    | Item     |       |
|-------|--|----------------|--------------------------|------------------------------------|----------|-------|
|       | <b>UNDERFLOOR BUSBAR TRUNKING UNIT (CONT'D)</b>  |                |                          |                                    |          |       |
|       | Floor outlet box or trunking service box c/w base box, cover including carpet frame & lid assembly, blank plate for spare outlet hole, mounting plate with outlet hole suitable for installing power socket, LAN socket and Telephone socket (socket outlet, cabling & wiring facilities to be measured separately) :- | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only |       |
|       | <i>Each</i>  | A \$           | B \$                     | C \$                               | D \$     |       |
| 28434 | Two compartment type with 3 outlet holes.....  | 948.63         | 53.39                    | 66.53                              | 143.51   | 28434 |
| 28435 | Two compartment type with 4 outlet holes.....  | 948.63         | 53.39                    | 66.53                              | 143.51   | 28435 |
| 28436 | Three compartment type with 6 outlet holes.....  | 980.66         | 53.39                    | 66.53                              | 150.56   | 28436 |
| 28437 | Three compartment type with 9 outlet holes.....  | 980.66         | 53.39                    | 66.53                              | 150.56   | 28437 |
| 28438 | Three compartment type with 10 outlet holes.....   | 980.66         | 53.39                    | 66.53                              | 150.56   | 28438 |
| 28439 | Four compartment type with 8 outlet holes.....   | 1,012.06       | 53.39                    | 66.53                              | 157.24   | 28439 |
|       | <b>CABLE TRUNKING AND CABLE TRAY</b>   |                |                          |                                    |          |       |
|       | Cable trunking galvanized sheet steel suspended from ceiling soffit or fixed to wall with cover, an addition of fifty (50) percent will be made to the rate involving hanger or bracket for trunking installed all the way exceeding 450mm from ceiling soffit or wall :-  | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only |       |
|       | Trunking :-  |                |                          |                                    |          |       |
|       | <i>Per linear metre</i>  | A \$           | B \$                     | C \$                               | D \$     |       |
| 28440 | 50 x 50 mm 1 compartment.....  | 93.63          | 12.27                    | 15.62                              | 54.61    | 28440 |
| 28441 | 50 x 75 mm ditto.....  | 99.92          | 12.71                    | 16.18                              | 57.24    | 28441 |
| 28442 | 75 x 75 mm ditto.....  | 103.67         | 13.27                    | 17.29                              | 59.72    | 28442 |
| 28443 | 50 x 100 mm ditto.....   | 103.67         | 13.27                    | 17.29                              | 59.72    | 28443 |
| 28444 | 75 x 100 mm ditto.....   | 107.39         | 14.94                    | 18.39                              | 66.90    | 28444 |
| 28445 | 100 x 100 mm ditto.....  | 117.72         | 14.94                    | 18.39                              | 66.90    | 28445 |
| 28446 | 100 x 150 mm ditto.....  | 126.61         | 16.05                    | 20.53                              | 72.77    | 28446 |
| 28447 | 150 x 150 mm ditto.....  | 146.74         | 18.36                    | 22.18                              | 80.27    | 28447 |
| 28448 | 150 x 200 mm ditto.....  | 157.04         | 19.50                    | 24.54                              | 87.05    | 28448 |
| 28449 | 150 x 250 mm ditto.....  | 167.33         | 21.60                    | 27.35                              | 93.31    | 28449 |
| 28450 | 150 x 500 mm ditto.....  | 222.82         | 28.40                    | 33.06                              | 111.94   | 28450 |
| 28451 | 200 x 200 mm ditto.....  | 131.33         | 28.40                    | 33.06                              | 111.94   | 28451 |
| 28452 | 300 x 300 mm ditto.....  | 211.59         | 28.40                    | 33.06                              | 111.94   | 28452 |
| 28453 | 50 x 100 mm 2 compartments.....  | 112.57         | 13.27                    | 17.29                              | 59.72    | 28453 |

| Item  |   |                |                          |                                    | Item     |       |
|-------|---|----------------|--------------------------|------------------------------------|----------|-------|
|       | <b>CABLE TRUNKING AND CABLE TRAY (CONT'D)</b>   |                |                          |                                    |          |       |
|       | Cable trunking galvanized sheet steel suspended from ceiling soffit or fixed to wall with cover, an addition of fifty (50) percent will be made to the rate involving hanger or bracket for trunking installed all the way exceeding 450mm from ceiling soffit or wall : - (Cont'd) | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only |       |
|       | Trunking : - (Cont'd)   |                |                          |                                    |          |       |
|       | <i>Per linear metre</i>   | A \$           | B \$                     | C \$                               | D \$     |       |
| 28454 | 50 x 150 mm 2 compartments.....   | 152.06         | 15.49                    | 18.94                              | 68.54    | 28454 |
| 28455 | 75 x 100 mm ditto.....  | 144.96         | 15.49                    | 18.94                              | 69.05    | 28455 |
| 28456 | 75 x 150 mm ditto.....  | 158.94         | 15.49                    | 18.94                              | 69.05    | 28456 |
| 28457 | 100 x 150 mm ditto.....   | 180.73         | 16.05                    | 20.53                              | 72.77    | 28457 |
| 28458 | 75 x 100 mm 3 compartments.....   | 160.15         | 15.49                    | 18.94                              | 69.05    | 28458 |
| 28459 | 75 x 150 mm ditto.....  | 174.11         | 15.49                    | 18.94                              | 69.05    | 28459 |
| 28460 | 100 x 150 mm ditto.....   | 188.30         | 16.05                    | 20.53                              | 72.77    | 28460 |
| 28461 | 150 x 150 mm ditto.....   | 230.36         | 18.36                    | 22.18                              | 80.27    | 28461 |
| 28462 | 150 x 200 mm ditto.....   | 250.68         | 19.50                    | 24.54                              | 87.05    | 28462 |
|       | Trunking cover : -  |                |                          |                                    |          |       |
|       | <i>Per linear metre</i>   |                |                          |                                    |          |       |
| 28463 | 50 mm wide.....   | 82.61          | 1.81                     | 2.19                               | 5.21     | 28463 |
| 28464 | 75 mm wide.....   | 85.42          | 1.81                     | 2.19                               | 5.21     | 28464 |
| 28465 | 100 mm wide.....  | 87.29          | 1.81                     | 2.19                               | 5.21     | 28465 |
| 28466 | 150 mm wide.....  | 94.06          | 2.68                     | 3.27                               | 7.88     | 28466 |
| 28467 | 200 mm wide.....  | 101.12         | 3.27                     | 3.99                               | 9.59     | 28467 |
| 28468 | 300 mm wide.....  | 110.95         | 3.99                     | 4.81                               | 11.67    | 28468 |
| 28469 | 500 mm wide.....  | 132.22         | 5.06                     | 6.02                               | 14.50    | 28469 |
|       | Extra over trunking of the following sizes for cross unit 4-way, with 4 connectors : -  |                |                          |                                    |          |       |
|       | <i>Each</i>   |                |                          |                                    |          |       |
| 28470 | 50 x 50 mm.....   | 91.04          | 10.46                    | 13.30                              | 40.44    | 28470 |
| 28471 | 75 x 75 mm.....   | 97.15          | 11.50                    | 14.38                              | 42.54    | 28471 |
| 28472 | 100 x 100 mm.....   | 104.64         | 12.17                    | 15.07                              | 45.39    | 28472 |
| 28473 | 100 x 150 mm.....   | 111.20         | 12.74                    | 15.65                              | 47.26    | 28473 |
| 28474 | 150 x 150 mm.....   | 124.31         | 13.30                    | 17.33                              | 51.53    | 28474 |



| Item  |  | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only | Item  |
|---|--|----------------|--------------------------|------------------------------------|----------|-------|
|   |  | A \$           | B \$                     | C \$                               | D \$     |       |
| <b>CABLE TRUNKING AND CABLE TRAY (CONT'D)</b> |  |                |                          |                                    |          |       |
|   | Extra over trunking for reducer unit with 2 connectors :-  |                |                          |                                    |          |       |
|   | <i>Each</i>  |                |                          |                                    |          |       |
| 28475   | 75 x 75 mm to 100 x 100 mm.....  | 90.35          | 9.88                     | 12.74                              | 37.95    | 28475 |
| 28476   | 100 x 100 mm to 100 x 150 mm.....  | 93.63          | 10.46                    | 13.30                              | 40.67    | 28476 |
| 28477   | 100 x 100 mm to 150 x 150 mm.....  | 100.18         | 11.50                    | 14.38                              | 43.27    | 28477 |
|   | Extra over trunking of the following size for flat tee, edge tee unit with connectors :-                     |                |                          |                                    |          |       |
|   | <i>Each</i>  |                |                          |                                    |          |       |
| 28478   | 50 x 50 mm.....  | 85.20          | 9.88                     | 12.18                              | 36.23    | 28478 |
| 28479   | 50 x 100 mm.....   | 89.16          | 9.88                     | 12.74                              | 37.95    | 28479 |
| 28480   | 75 x 75 mm.....  | 89.16          | 9.88                     | 12.74                              | 37.95    | 28480 |
| 28481   | 75 x 100 mm.....   | 90.58          | 10.46                    | 13.30                              | 40.67    | 28481 |
| 28482   | 100 x 100 mm.....  | 93.84          | 10.46                    | 13.30                              | 40.67    | 28482 |
| 28483   | 100 x 150 mm.....  | 97.85          | 11.50                    | 14.38                              | 43.27    | 28483 |
| 28484   | 150 x 150 mm.....  | 106.02         | 12.74                    | 15.65                              | 47.26    | 28484 |
| 28485   | 200 x 200 mm.....  | 113.97         | 13.30                    | 17.33                              | 51.53    | 28485 |
|   | Extra over trunking of the following size for flat elbow, internal or external elbow unit with connectors :- |                |                          |                                    |          |       |
|   | <i>Each</i>  |                |                          |                                    |          |       |
| 28486   | 50 x 50 mm.....  | 83.54          | 9.50                     | 12.23                              | 36.37    | 28486 |
| 28487   | 50 x 100 mm.....   | 86.61          | 9.94                     | 12.79                              | 38.10    | 28487 |
| 28488   | 50 x 150 mm.....   | 90.35          | 10.52                    | 13.36                              | 40.82    | 28488 |
| 28489   | 75 x 75 mm.....  | 86.61          | 9.94                     | 12.79                              | 38.10    | 28489 |
| 28490   | 75 x 100 mm.....   | 87.75          | 10.52                    | 13.36                              | 40.82    | 28490 |
| 28491   | 75 x 150 mm.....   | 92.44          | 11.55                    | 14.45                              | 43.44    | 28491 |
| 28492   | 100 x 100 mm.....  | 90.35          | 10.52                    | 13.36                              | 40.82    | 28492 |
| 28493   | 100 x 150 mm.....  | 93.63          | 11.55                    | 14.45                              | 43.44    | 28493 |
| 28494   | 150 x 150 mm.....  | 100.18         | 12.79                    | 15.71                              | 47.45    | 28494 |
| 28495   | 150 x 500 mm.....  | 164.54         | 14.55                    | 19.28                              | 58.41    | 28495 |

| Item  |                                     |                |                          |                                    | Item     |       |
|---|-------------------------------------|----------------|--------------------------|------------------------------------|----------|-------|
| <b>CABLE TRUNKING AND CABLE TRAY (CONT'D)</b>   |                                     |                |                          |                                    |          |       |
| Extra over trunking of the following size for flat elbow, internal or external elbow unit with connectors :- (Cont'd) |                                     |                |                          |                                    |          |       |
| <i>Each</i>   |                                     |                |                          |                                    |          |       |
|   |                                     | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only |       |
|   |                                     | A<br>\$        | B<br>\$                  | C<br>\$                            | D<br>\$  |       |
| 28496   | 200 x 200 mm.....                   | 106.48         | 13.36                    | 17.39                              | 51.73    | 28496 |
| 28497   | 300 x 300 mm.....                   | 139.26         | 14.55                    | 19.28                              | 58.41    | 28497 |
| 28498   | 50 x 100 mm 2 compartments.....     | 88.94          | 9.94                     | 12.79                              | 38.10    | 28498 |
| 28499   | 50 x 150 mm 2 compartments.....     | 93.16          | 10.52                    | 13.36                              | 40.82    | 28499 |
| 28500   | 100 x 150 mm 2 compartments.....    | 96.43          | 11.55                    | 14.45                              | 43.44    | 28500 |
| 28501   | 75 x 100 mm 3 compartments.....     | 92.44          | 10.52                    | 13.36                              | 40.82    | 28501 |
| 28502   | 75 x 150 mm 3 compartments.....     | 98.02          | 11.04                    | 13.91                              | 42.18    | 28502 |
| 28503   | 100 x 150 mm 3 compartments.....    | 99.24          | 11.55                    | 14.45                              | 43.44    | 28503 |
| 28504   | 150 x 150 mm 3 compartments.....    | 107.20         | 12.23                    | 15.16                              | 45.08    | 28504 |
| Blank end for cable trunking of the following sizes :-  |                                     |                |                          |                                    |          |       |
| <i>Each</i>   |                                     |                |                          |                                    |          |       |
| 28505   | 50 x 50 mm.....                     | 40.58          | 4.09                     | 5.28                               | 12.25    | 28505 |
| 28506   | 50 x 100 mm.....                    | 41.71          | 4.09                     | 5.28                               | 12.25    | 28506 |
| 28507   | 50 x 150 mm.....                    | 42.87          | 4.09                     | 5.28                               | 12.25    | 28507 |
| 28508   | 75 x 75 mm.....                     | 41.71          | 4.09                     | 5.28                               | 12.25    | 28508 |
| 28509   | 75 x 100 mm.....                    | 42.34          | 4.09                     | 5.28                               | 12.25    | 28509 |
| 28510   | 100 x 100 mm.....                   | 42.87          | 4.09                     | 5.28                               | 12.25    | 28510 |
| 28511   | 100 x 150 mm.....                   | 45.50          | 4.09                     | 5.28                               | 12.25    | 28511 |
| 28512   | 150 x 150 mm.....                   | 46.64          | 4.10                     | 5.29                               | 12.27    | 28512 |
| 28513   | 150 x 500 mm.....                   | 65.44          | 6.05                     | 7.81                               | 18.55    | 28513 |
| 28514   | 300 x 300 mm.....                   | 63.77          | 6.05                     | 7.81                               | 18.55    | 28514 |
| 28515   | Wiring clip for cable trunking..... | 38.29          | 0.38                     | 0.48                               | 1.01     | 28515 |

| Item  |   | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only | Item  |
|---|---|----------------|--------------------------|------------------------------------|----------|-------|
|   |   | A              | B                        | C                                  | D        |       |
|   |   | \$             | \$                       | \$                                 | \$       |       |
| <b>CABLE TRUNKING AND CABLE TRAY (CONT'D)</b>   |   |                |                          |                                    |          |       |
| PVC mini-trunking to IEC 61084-1, c/w all cross over, elbow, tee, blank end and all necessary fixing accessories :-   |   |                |                          |                                    |          |       |
| <i>Per linear metre</i>   |   |                |                          |                                    |          |       |
| 28516   | 16 x 16 mm.....                                   | 25.26          | 2.83                     | 3.60                               | 10.96    | 28516 |
| 28517   | 16 x 25 mm.....                                   | 32.77          | 4.32                     | 5.28                               | 13.30    | 28517 |
| 28518   | 16 x 40 mm.....                                   | 32.77          | 4.32                     | 5.28                               | 13.30    | 28518 |
| 28519   | 25 x 25 mm.....                                   | 32.77          | 4.32                     | 5.28                               | 13.30    | 28519 |
| 28520   | 25 x 40 mm.....                                   | 39.29          | 4.32                     | 5.28                               | 13.30    | 28520 |
| 28521   | 25 x 50 mm.....                                   | 39.29          | 4.32                     | 5.28                               | 13.30    | 28521 |
| 28522   | 32 x 50 mm.....                                   | 60.55          | 4.32                     | 5.28                               | 13.30    | 28522 |
| 28523   | 50 x 50 mm.....                                   | 60.55          | 4.32                     | 5.28                               | 13.30    | 28523 |
| Surface galvanized sheet steel weatherproof trunking, including all cross over, tee, bend, blank end and fixing accessories :-  |   |                |                          |                                    |          |       |
| <i>Per linear metre</i>   |   |                |                          |                                    |          |       |
| 28524   | 100 x 100 mm.....                                 | 305.59         | 35.44                    | 44.24                              | 139.72   | 28524 |
| 28525   | 150 x 150 mm.....                                 | 428.43         | 42.66                    | 52.78                              | 164.66   | 28525 |
| Exposed floor trunking, including all trunking fittings, crossover, tee, riser bend, outlet box and other accessories, manufactured from 1.6 mm galvanized steel, lids of 3 mm galvanized steel, flush or recessed covers, pyramid sides :- |   |                |                          |                                    |          |       |
| <i>Per linear metre</i>   |   |                |                          |                                    |          |       |
| 28526   | 153 mm x 38 mm (2 compartments) trunking.....     | 162.31         | 14.57                    | 17.98                              | 53.36    | 28526 |
| 28527   | 228 mm x 38 mm (3 compartments) trunking.....     | 193.96         | 17.50                    | 21.54                              | 65.75    | 28527 |
| <i>Each</i>   |   |                |                          |                                    |          |       |
| 28528   | 153 mm x 38 mm (2 compartments) junction box..... | 319.06         | 9.51                     | 12.01                              | 37.01    | 28528 |
| 28529   | 228 mm x 38 mm (3 compartments) junction box..... | 362.33         | 12.01                    | 14.87                              | 46.28    | 28529 |

| Item  |   |                |                          |                                    |          |       |
|-------|---|----------------|--------------------------|------------------------------------|----------|-------|
|       | <b>CABLE TRUNKING AND CABLE TRAY (CONT'D)</b>   |                |                          |                                    |          |       |
|       | Flush floor trunking, including all trunking fittings, tee, cross over, riser bend, outlet box and other accessories, manufactured from 1.6 mm galvanized steel, lids of 3 mm galvanized steel, flush or recessed covers :- | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only |       |
|       | <i>Per linear metre</i>   | A \$           | B \$                     | C \$                               | D \$     |       |
| 28530 | 153 mm x 38 mm (2 compartments) trunking.....   | 189.04         | 14.49                    | 17.87                              | 53.04    | 28530 |
| 28531 | 228 mm x 38 mm (3 compartments) trunking.....   | 233.36         | 17.39                    | 21.41                              | 65.37    | 28531 |
|       | <i>Each</i>   |                |                          |                                    |          |       |
| 28532 | 153 mm x 38 mm (2 compartments) junction box.....   | 342.47         | 9.66                     | 12.18                              | 35.97    | 28532 |
| 28533 | 228 mm x 38 mm (3 compartments) junction box.....   | 383.15         | 12.18                    | 15.09                              | 45.01    | 28533 |
|       | Underfloor trunking, including all trunking fittings, tee, cross over, riser bend, outlet box and other accessories, manufactured from 1.6 mm galvanized steel, lids of 3 mm galvanized steel, flush or recessed covers :-  |                |                          |                                    |          |       |
|       | <i>Per linear metre</i>   |                |                          |                                    |          |       |
| 28534 | 153 mm x 38 mm (2 compartments) trunking.....   | 74.97          | 14.49                    | 17.87                              | 53.04    | 28534 |
| 28535 | 228 mm x 38 mm (3 compartments) trunking.....   | 87.10          | 17.39                    | 21.41                              | 65.37    | 28535 |
|       | <i>Each</i>   |                |                          |                                    |          |       |
| 28536 | 153 mm x 38 mm (2 compartments) junction box.....   | 135.82         | 9.66                     | 12.18                              | 35.97    | 28536 |
| 28537 | 228 mm x 38 mm (3 compartments) junction box.....   | 143.01         | 12.18                    | 15.09                              | 87.39    | 28537 |
|       | Skirting trunking, including all trunking fittings, riser bend, outlet lid and other accessories, manufactured from 1.6 mm sheet steel, stove epoxy polyester powder finish :-  |                |                          |                                    |          |       |
|       | <i>Per linear metre</i>   |                |                          |                                    |          |       |
| 28538 | 153 mm x 38 mm (2 compartments).....  | 149.39         | 14.49                    | 17.87                              | 53.04    | 28538 |
| 28539 | 225 mm x 50 mm (2 compartments).....  | 197.73         | 17.39                    | 21.41                              | 66.28    | 28539 |
| 28540 | 228 mm x 38 mm (3 compartments) .....   | 196.74         | 17.39                    | 21.41                              | 65.37    | 28540 |
| 28541 | 228 mm x 50 mm (3 compartments).....  | 198.66         | 17.82                    | 21.75                              | 66.96    | 28541 |
| 28542 | 300 mm x 50 mm (3 compartments).....  | 267.55         | 21.41                    | 26.41                              | 80.23    | 28542 |
|       | Sill trunking, including all trunking fittings, riser bend, outlet lid and other accessories, manufactured from 1.2 mm sheet steel, stove epoxy polyester powder finish :-  |                |                          |                                    |          |       |
|       | <i>Per linear metre</i>   |                |                          |                                    |          |       |
| 28543 | 102 mm x 38 mm (2 compartments).....  | 132.34         | 14.49                    | 17.87                              | 53.04    | 28543 |
| 28544 | 153 mm x 38 mm (2 compartments).....  | 149.39         | 14.49                    | 17.87                              | 53.04    | 28544 |

| Item   |  | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only | Item  |
|--|--|----------------|--------------------------|------------------------------------|----------|-------|
|  |  | A              | B                        | C                                  | D        |       |
|  |  | \$             | \$                       | \$                                 | \$       |       |
| <b>CABLE TRUNKING AND CABLE TRAY (CONT'D)</b>  |  |                |                          |                                    |          |       |
| Galvanized metal sheet tray suspended from ceiling soffit, including all fittings, cross, tee, bend and other accessories :- |  |                |                          |                                    |          |       |
| <i>Per linear metre</i>  |  |                |                          |                                    |          |       |
| 28545  | 75 mm wide .....   | 84.50          | 11.48                    | 14.36                              | 45.85    | 28545 |
| 28546  | 100 mm wide.....   | 101.56         | 12.17                    | 15.07                              | 50.66    | 28546 |
| 28547  | 150 mm wide.....   | 120.32         | 13.14                    | 15.99                              | 54.26    | 28547 |
| 28548  | 225 mm wide.....   | 145.11         | 14.45                    | 17.84                              | 60.08    | 28548 |
| 28549  | 300 mm wide.....   | 176.02         | 14.94                    | 18.39                              | 62.65    | 28549 |
| 28550  | 450 mm wide.....   | 216.25         | 17.36                    | 21.36                              | 70.35    | 28550 |
| 28551  | 600 mm wide.....   | 263.25         | 18.36                    | 23.42                              | 75.51    | 28551 |
| <i>Each</i>  |  |                |                          |                                    |          |       |
| 28552  | 650mm high power post, anodised aluminium body with uPVC cover, twin compartment in cross-section of 100x100mm, composed of one full length post body, two full length cover section, 5 nos. outlet box assembly, one end load plate, one top cover, one end load plate, one earth link strap, and all necessary accessories.....  | 1,079.24       | 20.46                    | 24.94                              | 77.83    | 28552 |
| 28553  | 3.6m high power post, anodised aluminium body with uPVC cover, twin compartment in cross-section of 100x100mm, composed of one full length post body, two full length cover section, two 3m long dividing strip, 6 nos. outlet box assembly, one end load plate, one top end collar with jacking assembly, two end load plate, 3 nos. earth link strap, and all necessary accessories..... | 3,163.54       | 190.76                   | 233.53                             | 700.49   | 28553 |
| 3 compartments PVC trunking to IEC 1084-1 or BS4678 part 4, size 145mm x 40mm :-   |  |                |                          |                                    |          |       |
| <i>Per linear metre</i>  |  |                |                          |                                    |          |       |
| 28554  | Straight section of trunking, including blank end, cover and fixing accessories.....   | 667.69         | 16.89                    | 20.85                              | 63.98    | 28554 |
| <i>Each</i>  |  |                |                          |                                    |          |       |
| 28555  | Angle unit - flat, external or internal, including cover.....  | 140.05         | 12.14                    | 15.00                              | 46.85    | 28555 |
| 28556  | Flat tee unit, including cover.....  | 153.47         | 12.14                    | 15.00                              | 46.85    | 28556 |
| Plastic cable tray   |  |                |                          |                                    |          |       |
| <i>Per linear metre</i>  |  |                |                          |                                    |          |       |
| 28557  | Plastic cable tray, 150 mm wide.....   | 313.84         | 11.15                    | 14.00                              | 45.01    | 28557 |

| Item  |  | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only | Item  |
|-------|--|----------------|--------------------------|------------------------------------|----------|-------|
|       | <b>CABLE TRUNKING AND CABLE TRAY (CONT'D)</b>  |                |                          |                                    |          |       |
|       | Stainless steel weatherproof cable trunking, size 100 x 100 mm : -   |                |                          |                                    |          |       |
|       | <i>Per linear metre</i>  | A<br>\$        | B<br>\$                  | C<br>\$                            | D<br>\$  |       |
| 28558 | Straight section of trunking, including blank end, cover and fixing accessories.....   | 223.47         | 14.94                    | 18.39                              | 67.09    | 28558 |
|       | <i>Each</i>  |                |                          |                                    |          |       |
| 28559 | Extra over trunking for flat tee unit, including cover and connector.....  | 177.09         | 10.45                    | 13.27                              | 41.03    | 28559 |
| 28560 | Extra over trunking for elbow - flat, internal or external, including cover and connector.....                                   | 162.05         | 10.45                    | 13.27                              | 41.03    | 28560 |
|       | Glass Reinforced Polyester (GRP) cable tray c/w hangers at 1.5m support span : -   |                |                          |                                    |          |       |
|       | <i>Per linear metre</i>  |                |                          |                                    |          |       |
| 28561 | 200 mm width.....  | 459.53         | 11.85                    | 14.84                              | 48.50    | 28561 |
| 28562 | 300 mm width.....  | 529.46         | 11.85                    | 14.84                              | 48.50    | 28562 |
|       | Stainless steel 304 sheet tray suspended from ceiling soffit, including all fittings, cross, tee, bend and other accessories : - |                |                          |                                    |          |       |
|       | <i>Per linear metre</i>  |                |                          |                                    |          |       |
| 28563 | 200 mm wide .....  | 99.59          | 14.01                    | 17.22                              | 58.15    | 28563 |
| 28564 | 300 mm wide.....   | 144.04         | 14.94                    | 18.39                              | 62.66    | 28564 |

| Item  |  |        |        |   | Item |       |
|-------|--|--------|--------|---|------|-------|
|       | <b>SIMPLIFIED ITEMS</b>  |        |        |   |      |       |
|       | Section 1 : Installation by galvanized steel surface conduit system/concealed conduit system   |        |        |   |      |       |
|       | Power point : -  |        |        |   |      |       |
|       | Power point c/w conduits, trunking, boxes, PVC cables and all necessary accessories (socket outlet, switch, fuse spur, connection unit, RCD and the like to be measured separately), same rate as (supply & fix) rate will be made even if there is no provision of new concealed conduit facilities, but the rate shall further include the taking down and clearing away of existing cables  |        |        |   |      |       |
|       | <i>Each</i>  |        |        |   |      |       |
| 28565 | Single phase, 10A or below.....  | 384.52 | 88.75  | - | -    | 28565 |
| 28566 | Single phase, 10 - 20A.....  | 506.92 | 106.13 | - | -    | 28566 |
| 28567 | Single phase, 20 - 45A.....  | 559.90 | 106.13 | - | -    | 28567 |
| 28568 | Three phases, 30 - 45A.....  | 716.55 | 106.13 | - | -    | 28568 |
| 28569 | Three phases, 45 - 65A.....  | 898.45 | 106.13 | - | -    | 28569 |
| 28570 | Extra over power point for twin type outlet.....   | 3.29   | -      | - | -    | 28570 |
|       | Add 13% to either of Items 28565 to 28570 inclusive for provision of circuit protective conductor to MCB board in full length of conduit   |        |        |   |      |       |
|       | Power point c/w conduits, trunking, boxes, OHLS cables and all necessary accessories (socket outlet, switch, fuse spur, connection unit, RCD and the like to be measured separately), same rate as (supply & fix) rate will be made even if there is no provision of new concealed conduit facilities, but the rate shall further include the taking down and clearing away of existing cables |        |        |   |      |       |
|       | <i>Each</i>  |        |        |   |      |       |
| 28571 | Single phase, 10A or below.....  | 451.68 | 88.75  | - | -    | 28571 |
| 28572 | Single phase, 10 - 20A.....  | 555.62 | 106.87 | - | -    | 28572 |
| 28573 | Single phase, 20 - 45A.....  | 586.95 | 107.23 | - | -    | 28573 |
| 28574 | Three phases, 30 - 45A.....  | 784.12 | 106.72 | - | -    | 28574 |
| 28575 | Three phases, 45 - 65A.....  | 971.39 | 106.72 | - | -    | 28575 |
| 28576 | Extra over power point for twin type outlet.....   | 3.36   | -      | - | -    | 28576 |
|       | Add 16% to either of Items 28571 to 28576 inclusive for provision of circuit protective conductor to MCB board in full length of conduit   |        |        |   |      |       |

| Item  |   |                |                          |                                    | Item     |       |
|-------|---|----------------|--------------------------|------------------------------------|----------|-------|
|       | <b>SIMPLIFIED ITEMS (CONT'D)</b>  |                |                          |                                    |          |       |
|       | Section 1 : Installation by galvanized steel surface conduit system/concealed conduit system (Cont'd)   | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only |       |
|       | Telephone, LAN and services outlet point : -  |                |                          |                                    |          |       |
|       | <i>Each</i>   | A \$           | B \$                     | C \$                               | D \$     |       |
| 28577 | Telephone point c/w trunking, conduit, boxes, draw wire, blank plate and all necessary accessories.....   | 339.43         | 61.90                    | -                                  | -        | 28577 |
| 28578 | LAN point c/w trunking, conduit, boxes, draw wire, blank plate and all necessary accessories.....   | 364.78         | 69.63                    | -                                  | -        | 28578 |
| 28579 | Services point c/w trunking, conduit, boxes, draw wire, blank plate and all necessary accessories.....  | 339.43         | 61.90                    | -                                  | -        | 28579 |
|       | Section 2 : Installation by PVC surface conduit system  |                |                          |                                    |          |       |
|       | Power point : -   |                |                          |                                    |          |       |
|       | Power point c/w conduits, trunking, boxes, PVC cables, circuit protective conductor and all necessary accessories (socket outlet, switch, fuse spur, connection unit, RCD and the like to be measured separately) |                |                          |                                    |          |       |
|       | <i>Each</i>   |                |                          |                                    |          |       |
| 28580 | Single phase, 10 A or below.....  | 342.42         | 63.99                    | -                                  | -        | 28580 |
| 28581 | Single phase, 10 - 20A.....   | 407.73         | 78.20                    | -                                  | -        | 28581 |
| 28582 | Single phase, 20 - 45A.....   | 453.09         | 78.20                    | -                                  | -        | 28582 |
| 28583 | Three phases, 30 - 45A.....   | 671.27         | 78.20                    | -                                  | -        | 28583 |
| 28584 | Three phases, 45 - 65A.....   | 829.74         | 78.20                    | -                                  | -        | 28584 |
| 28585 | Extra over power point for twin type outlet.....  | 1.96           | -                        | -                                  | -        | 28585 |
|       | Telephone, LAN and services outlet point : -  |                |                          |                                    |          |       |
|       | <i>Each</i>   |                |                          |                                    |          |       |
| 28586 | Telephone point c/w trunking, conduit, boxes, draw wire, blank plate and all necessary accessories.....   | 168.05         | 39.80                    | -                                  | -        | 28586 |
| 28587 | LAN point c/w trunking, conduit, boxes, draw wire, blank plate and all necessary accessories.....   | 168.05         | 39.80                    | -                                  | -        | 28587 |
| 28588 | Service point c/w trunking, conduit, boxes, draw wire, blank plate and all necessary accessories.....   | 168.05         | 39.80                    | -                                  | -        | 28588 |



| Item  |   |                |                          |                                    | Item     |       |
|-------|---|----------------|--------------------------|------------------------------------|----------|-------|
|       | <b>SIMPLIFIED ITEMS (CONT'D)</b>  |                |                          |                                    |          |       |
|       | Section 3 : Installation by surface wiring system   |                |                          |                                    |          |       |
|       | Power point c/w PVC/PVC cables, circuit protective conductor, boxes and all necessary accessories (socket outlet, switch, fuse spur, connection unit, RCD and the like to be measured separately) |                |                          |                                    |          |       |
|       | <b>Each</b>   |                |                          |                                    |          |       |
|       |   | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only |       |
|       |   | A \$           | B \$                     | C \$                               | D \$     |       |
| 28589 | Single phase, 10 A or below.....  | 259.91         | 28.29                    | -                                  | -        | 28589 |
| 28590 | Single phase, 10 - 20A.....   | 322.13         | 30.26                    | -                                  | -        | 28590 |
| 28591 | Single phase, 20 - 45A.....   | 371.47         | 30.26                    | -                                  | -        | 28591 |
| 28592 | Three phases, 30 - 45A.....   | 478.81         | 30.26                    | -                                  | -        | 28592 |
| 28593 | Three phases, 45 - 65A.....   | 595.58         | 30.26                    | -                                  | -        | 28593 |

**Section 29**

**ELECTRICAL INSTALLATION -**

**MAIN DISTRIBUTION SYSTEMS**

| Item  |   | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only | Item  |
|-------|---|----------------|--------------------------|------------------------------------|----------|-------|
|       |   | A<br>\$        | B<br>\$                  | C<br>\$                            | D<br>\$  |       |
|       | <b>CABLES (COPPER)</b>  |                |                          |                                    |          |       |
|       | 300/500V TRS or PVC sheathed flexible cords, twisted core to IEC 60245 or BS6500 or acceptable recognized international standard, such as BS7919 :- |                |                          |                                    |          |       |
|       | <i>Per linear metre</i>   |                |                          |                                    |          |       |
| 29001 | 0.5 mm <sup>2</sup> 2-core.....   | 17.12          | 1.47                     | 1.81                               | 4.63     | 29001 |
| 29002 | 0.75 mm <sup>2</sup> 2-core.....  | 17.41          | 1.47                     | 1.81                               | 4.63     | 29002 |
| 29003 | 1.5 mm <sup>2</sup> 2-core.....   | 19.40          | 1.47                     | 1.81                               | 4.63     | 29003 |
| 29004 | 0.75 mm <sup>2</sup> 3-core.....  | 18.18          | 1.47                     | 1.81                               | 4.63     | 29004 |
| 29005 | 1.5 mm <sup>2</sup> 3-core.....   | 22.51          | 1.47                     | 1.81                               | 4.63     | 29005 |
| 29006 | 2.5 mm <sup>2</sup> 3-core.....   | 24.49          | 1.47                     | 1.81                               | 4.63     | 29006 |
| 29007 | 0.5 mm <sup>2</sup> 2-core, PVC flexible cords, unsheathed.....   | 16.93          | 1.47                     | 1.81                               | 4.63     | 29007 |
| 29008 | 0.75 mm <sup>2</sup> 2-core, PVC flexible cords, unsheathed.....  | 17.31          | 1.47                     | 1.81                               | 4.63     | 29008 |
| 29009 | 0.75 mm <sup>2</sup> 3-core, PVC flexible cords, unsheathed.....  | 18.04          | 1.47                     | 1.81                               | 4.63     | 29009 |
|       | 450/750V PVC insulated cable, all colours, to IEC 60227-3, drawn into conduits/trunkings (conduits and trunkings measured separately) :-            |                |                          |                                    |          |       |
|       | <i>Per linear metre</i>   |                |                          |                                    |          |       |
| 29010 | 1.5 mm <sup>2</sup> 1 core.....   | 4.05           | 0.57                     | 0.71                               | 1.76     | 29010 |
| 29011 | 2.5 mm <sup>2</sup> ditto.....  | 5.02           | 0.57                     | 0.71                               | 1.76     | 29011 |
| 29012 | 4 mm <sup>2</sup> ditto.....  | 6.96           | 0.57                     | 0.71                               | 1.76     | 29012 |
| 29013 | 6 mm <sup>2</sup> ditto.....  | 10.19          | 0.85                     | 0.95                               | 2.35     | 29013 |
| 29014 | 10 mm <sup>2</sup> ditto.....   | 17.67          | 0.85                     | 0.95                               | 2.35     | 29014 |
| 29015 | 16 mm <sup>2</sup> ditto.....   | 22.14          | 0.85                     | 0.95                               | 2.35     | 29015 |
| 29016 | 25 mm <sup>2</sup> ditto.....   | 31.97          | 0.98                     | 1.14                               | 3.05     | 29016 |
| 29017 | 35 mm <sup>2</sup> ditto.....   | 44.98          | 0.98                     | 1.14                               | 3.05     | 29017 |
| 29018 | 50 mm <sup>2</sup> ditto.....   | 59.69          | 1.14                     | 1.47                               | 3.57     | 29018 |
| 29019 | 70 mm <sup>2</sup> ditto.....   | 79.92          | 1.96                     | 2.17                               | 5.66     | 29019 |
| 29020 | 95 mm <sup>2</sup> ditto.....   | 108.90         | 2.13                     | 2.61                               | 6.75     | 29020 |
| 29021 | 120 mm <sup>2</sup> ditto.....  | 148.93         | 2.66                     | 3.29                               | 9.03     | 29021 |
| 29022 | 150 mm <sup>2</sup> ditto.....  | 242.58         | 3.18                     | 3.86                               | 11.07    | 29022 |
| 29023 | 185 mm <sup>2</sup> ditto.....  | 289.60         | 3.97                     | 4.98                               | 13.65    | 29023 |
| 29024 | 240 mm <sup>2</sup> ditto.....  | 423.49         | 4.61                     | 5.80                               | 15.93    | 29024 |

| Item  |  |                |                          |                                    | Item     |       |
|-------|--|----------------|--------------------------|------------------------------------|----------|-------|
|       | <b>CABLES (COPPER) (CONT'D)</b>  |                |                          |                                    |          |       |
|       | 450/750V PVC insulated cable, all colours, to IEC 60227-3, drawn into conduits/trunkings (conduits and trunkings measured separately) : - (Cont'd)   | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only |       |
|       | <i>Per linear metre</i>  | A<br>\$        | B<br>\$                  | C<br>\$                            | D<br>\$  |       |
| 29025 | 300 mm <sup>2</sup> 1 core.....  | 512.21         | 4.61                     | 5.80                               | 15.93    | 29025 |
| 29026 | 400 mm <sup>2</sup> ditto.....   | 626.06         | 4.61                     | 5.80                               | 15.93    | 29026 |
| 29027 | 500 mm <sup>2</sup> ditto.....   | 828.04         | 4.98                     | 6.20                               | 18.91    | 29027 |
| 29028 | 630 mm <sup>2</sup> ditto.....   | 1,021.10       | 5.23                     | 6.56                               | 20.10    | 29028 |
|       | PVC insulated and PVC sheathed all colours, to IEC 60502-1 (for cables of 600/1000V with CSA 50mm <sup>2</sup> & above), c/w and including brass buckle clips or brass fasteners, a deduction of fifty (50) and sixty (60) percent will be made to the rates involving labour for cables installed / re-installed in or taken down from conduits/ trunkings and cable trays respectively (conduits, trunkings and cable trays measured separately) : - |                |                          |                                    |          |       |
|       | <i>Per linear metre</i>  |                |                          |                                    |          |       |
| 29029 | 1.5 mm <sup>2</sup> 1 core.....  | 11.52          | 2.17                     | 2.66                               | 5.66     | 29029 |
| 29030 | 2.5 mm <sup>2</sup> ditto.....   | 14.55          | 2.17                     | 2.66                               | 5.66     | 29030 |
| 29031 | 4 mm <sup>2</sup> ditto.....   | 21.71          | 2.61                     | 3.11                               | 6.76     | 29031 |
| 29032 | 6 mm <sup>2</sup> ditto.....   | 28.97          | 2.61                     | 3.11                               | 6.76     | 29032 |
| 29033 | 10 mm <sup>2</sup> ditto.....  | 36.04          | 2.61                     | 3.11                               | 6.76     | 29033 |
| 29034 | 16 mm <sup>2</sup> ditto.....  | 40.90          | 2.61                     | 3.11                               | 6.76     | 29034 |
| 29035 | 25 mm <sup>2</sup> ditto.....  | 69.27          | 3.69                     | 4.28                               | 10.08    | 29035 |
| 29036 | 35 mm <sup>2</sup> ditto.....  | 78.23          | 3.69                     | 4.28                               | 10.08    | 29036 |
| 29037 | 50 mm <sup>2</sup> ditto.....  | 119.68         | 3.69                     | 4.28                               | 10.08    | 29037 |
| 29038 | 70 mm <sup>2</sup> ditto.....  | 143.05         | 4.83                     | 5.69                               | 13.36    | 29038 |
| 29039 | 95 mm <sup>2</sup> ditto.....  | 158.11         | 6.09                     | 7.28                               | 16.91    | 29039 |
| 29040 | 120 mm <sup>2</sup> ditto.....   | 176.10         | 7.19                     | 8.38                               | 19.91    | 29040 |
| 29041 | 150 mm <sup>2</sup> ditto.....   | 258.96         | 8.64                     | 10.19                              | 23.81    | 29041 |
| 29042 | 185 mm <sup>2</sup> ditto.....   | 263.65         | 9.49                     | 11.26                              | 26.32    | 29042 |
| 29043 | 240 mm <sup>2</sup> ditto.....   | 334.45         | 11.79                    | 14.05                              | 32.89    | 29043 |
| 29044 | 300 mm <sup>2</sup> ditto.....   | 409.22         | 14.84                    | 17.58                              | 41.20    | 29044 |
| 29045 | 400 mm <sup>2</sup> ditto.....   | 494.08         | 17.15                    | 20.22                              | 47.60    | 29045 |
| 29046 | 500 mm <sup>2</sup> ditto.....   | 645.51         | 19.96                    | 23.51                              | 55.40    | 29046 |

| Item  |   |                |                          |                                    | Item     |       |
|-------|---|----------------|--------------------------|------------------------------------|----------|-------|
|       | <b>CABLES (COPPER) (CONT'D)</b>   |                |                          |                                    |          |       |
|       | PVC insulated and PVC sheathed all colours, to IEC 60502-1 (for cables of 600/1000V with CSA 50mm <sup>2</sup> & above), c/w and including brass buckle clips or brass fasteners, a deduction of fifty (50) and sixty (60) percent will be made to the rates involving labour for cables installed / re-installed in or taken down from conduits/ trunkings and cable trays respectively (conduits, trunkings and cable trays measured separately) : - (Cont'd) | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only |       |
|       | <i>Per linear metre</i>   | A \$           | B \$                     | C \$                               | D \$     |       |
| 29047 | 630 mm <sup>2</sup> 1 core.....   | 777.25         | 22.11                    | 26.11                              | 61.14    | 29047 |
| 29048 | 800 mm <sup>2</sup> ditto.....  | 1,196.80       | 28.60                    | 33.85                              | 79.69    | 29048 |
| 29049 | 1000 mm <sup>2</sup> ditto.....   | 1,408.16       | 37.16                    | 43.96                              | 103.23   | 29049 |
| 29050 | 1.5 mm <sup>2</sup> 2-core.....   | 13.87          | 2.61                     | 3.12                               | 6.84     | 29050 |
| 29051 | 2.5 mm <sup>2</sup> ditto.....  | 18.52          | 3.47                     | 4.08                               | 9.17     | 29051 |
| 29052 | 4 mm <sup>2</sup> ditto.....  | 26.03          | 3.70                     | 4.30                               | 10.13    | 29052 |
| 29053 | 6 mm <sup>2</sup> ditto.....  | 34.08          | 3.70                     | 4.30                               | 10.13    | 29053 |
| 29054 | 10 mm <sup>2</sup> ditto.....   | 61.16          | 3.75                     | 4.46                               | 11.09    | 29054 |
| 29055 | 16 mm <sup>2</sup> ditto.....   | 81.76          | 4.87                     | 5.72                               | 13.41    | 29055 |
| 29056 | 25 mm <sup>2</sup> ditto.....   | 132.22         | 5.33                     | 6.32                               | 14.78    | 29056 |
|       | 450/750V low emission and corrosive gases, thermosetting insulated, non-sheathed, single core cable to BS 7211 drawn into conduits /trunkings (conduits and trunkings measured separately) : -  |                |                          |                                    |          |       |
|       | <i>Per linear metre</i>   |                |                          |                                    |          |       |
| 29057 | 1.5 mm <sup>2</sup> 1 core.....   | 5.26           | 0.57                     | 0.71                               | 1.76     | 29057 |
| 29058 | 2.5 mm <sup>2</sup> ditto.....  | 6.05           | 0.57                     | 0.71                               | 1.76     | 29058 |
| 29059 | 4 mm <sup>2</sup> ditto.....  | 8.39           | 0.57                     | 0.71                               | 1.76     | 29059 |
| 29060 | 6 mm <sup>2</sup> ditto.....  | 12.35          | 0.85                     | 1.03                               | 2.53     | 29060 |
| 29061 | 10 mm <sup>2</sup> ditto.....   | 21.38          | 0.85                     | 1.03                               | 2.53     | 29061 |
| 29062 | 16 mm <sup>2</sup> ditto.....   | 27.86          | 0.85                     | 1.03                               | 2.53     | 29062 |
| 29063 | 25 mm <sup>2</sup> ditto.....   | 39.59          | 1.03                     | 1.17                               | 3.12     | 29063 |
| 29064 | 35 mm <sup>2</sup> ditto.....   | 55.52          | 1.03                     | 1.17                               | 3.12     | 29064 |
| 29065 | 50 mm <sup>2</sup> ditto.....   | 68.32          | 1.17                     | 1.53                               | 3.57     | 29065 |
| 29066 | 70 mm <sup>2</sup> ditto.....   | 92.85          | 1.87                     | 2.10                               | 5.47     | 29066 |
| 29067 | 95 mm <sup>2</sup> ditto.....   | 132.43         | 2.15                     | 2.63                               | 6.77     | 29067 |
| 29068 | 120 mm <sup>2</sup> ditto.....  | 174.89         | 2.69                     | 3.30                               | 9.20     | 29068 |

| Item  |   |                |                          |                                    | Item     |       |
|-------|---|----------------|--------------------------|------------------------------------|----------|-------|
|       | <b>CABLES (COPPER) (CONT'D)</b>   |                |                          |                                    |          |       |
|       | 450/750V low emission and corrosive gases, thermosetting insulated, non-sheathed, single core cable to BS 7211 drawn into conduits /trunkings (conduits and trunkings measured separately) :- (Cont'd)  | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only |       |
|       | <i>Per linear metre</i>   | A \$           | B \$                     | C \$                               | D \$     |       |
| 29069 | 150 mm <sup>2</sup> 1 core.....   | 241.50         | 3.33                     | 4.08                               | 11.21    | 29069 |
| 29070 | 185 mm <sup>2</sup> ditto.....  | 337.65         | 3.99                     | 4.98                               | 13.62    | 29070 |
| 29071 | 240 mm <sup>2</sup> ditto.....  | 424.65         | 4.83                     | 5.92                               | 15.39    | 29071 |
| 29072 | 300 mm <sup>2</sup> ditto.....  | 545.05         | 4.83                     | 5.92                               | 15.39    | 29072 |
| 29073 | 400 mm <sup>2</sup> ditto.....  | 658.55         | 4.83                     | 5.92                               | 15.39    | 29073 |
| 29074 | 500 mm <sup>2</sup> ditto.....  | 1,000.28       | 5.30                     | 6.48                               | 18.48    | 29074 |
| 29075 | 630 mm <sup>2</sup> ditto.....  | 1,265.84       | 5.52                     | 6.86                               | 19.99    | 29075 |
|       | 450/750V low emission of smoke and corrosive gases, thermosetting insulated and sheathed cable to BS 7211, c/w and including brass buckle clips or brass fasteners, a deduction of fifty (50) and sixty (60) percent will be made to the rates involving labour for cables installed / re-installed in or taken down from conduits /trunkings and cable trays respectively (conduits, trunkings and cable trays measured separately) :- |                |                          |                                    |          |       |
|       | <i>Per linear metre</i>   |                |                          |                                    |          |       |
| 29076 | 1.5 mm <sup>2</sup> 2-core.....   | 50.92          | 2.49                     | 3.00                               | 6.84     | 29076 |
| 29077 | 2.5 mm <sup>2</sup> ditto.....  | 55.71          | 3.29                     | 3.94                               | 9.25     | 29077 |
| 29078 | 4 mm <sup>2</sup> ditto.....  | 64.96          | 3.70                     | 4.30                               | 10.14    | 29078 |
| 29079 | 6 mm <sup>2</sup> ditto.....  | 71.57          | 3.70                     | 4.30                               | 10.14    | 29079 |
| 29080 | 10 mm <sup>2</sup> ditto.....   | 94.42          | 3.97                     | 4.73                               | 11.26    | 29080 |
| 29081 | 16 mm <sup>2</sup> ditto.....   | 119.93         | 4.68                     | 5.59                               | 13.68    | 29081 |
| 29082 | 25 mm <sup>2</sup> ditto.....   | 164.46         | 5.35                     | 6.33                               | 14.82    | 29082 |
| 29083 | 35 mm <sup>2</sup> ditto.....   | 227.51         | 5.74                     | 6.72                               | 15.45    | 29083 |
| 29084 | 1.5 mm <sup>2</sup> 4-core.....   | 66.52          | 3.70                     | 4.30                               | 10.14    | 29084 |
| 29085 | 2.5 mm <sup>2</sup> ditto.....  | 72.48          | 3.97                     | 4.68                               | 11.26    | 29085 |
| 29086 | 4 mm <sup>2</sup> ditto.....  | 103.24         | 4.68                     | 5.59                               | 13.68    | 29086 |
| 29087 | 6 mm <sup>2</sup> ditto.....  | 118.77         | 5.35                     | 6.33                               | 14.82    | 29087 |
| 29088 | 10 mm <sup>2</sup> ditto.....   | 147.72         | 5.74                     | 6.72                               | 15.45    | 29088 |
| 29089 | 16 mm <sup>2</sup> ditto.....   | 183.06         | 6.10                     | 7.02                               | 16.91    | 29089 |
| 29090 | 25 mm <sup>2</sup> ditto.....   | 273.32         | 6.67                     | 7.69                               | 18.55    | 29090 |
| 29091 | 35 mm <sup>2</sup> ditto.....   | 318.31         | 7.06                     | 8.08                               | 20.06    | 29091 |

| Item  |   |                |                          |                                    | Item     |       |
|-------|---|----------------|--------------------------|------------------------------------|----------|-------|
|       | <b>CABLES (COPPER) (CONT'D)</b>   |                |                          |                                    |          |       |
|       | 600/1000V low emission of smoke and corrosive gases, cross-linked polyethylene insulated and sheathed, steel wire armoured cable to IEC 60502-01, fixed with and including cleats or saddles or fixed to cable trays, a deduction of thirty (30) percent will be made to the rates involving labour for cables installed /re-installed in or taken down from cable trays (cable trays measured separately) :- | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only |       |
|       | <i>Per linear metre</i>   | A \$           | B \$                     | C \$                               | D \$     |       |
| 29092 | 1.5 mm <sup>2</sup> 2-core.....   | 66.33          | 5.61                     | 6.84                               | 19.82    | 29092 |
| 29093 | 2.5 mm <sup>2</sup> ditto.....  | 69.63          | 5.61                     | 6.84                               | 19.82    | 29093 |
| 29094 | 4 mm <sup>2</sup> ditto.....  | 84.48          | 9.90                     | 13.09                              | 38.10    | 29094 |
| 29095 | 6 mm <sup>2</sup> ditto.....  | 91.58          | 9.90                     | 13.09                              | 38.10    | 29095 |
| 29096 | 10 mm <sup>2</sup> ditto.....   | 119.71         | 12.46                    | 15.35                              | 47.07    | 29096 |
| 29097 | 16 mm <sup>2</sup> ditto.....   | 139.00         | 12.46                    | 15.35                              | 47.07    | 29097 |
| 29098 | 25 mm <sup>2</sup> ditto.....   | 186.03         | 14.35                    | 17.98                              | 54.92    | 29098 |
| 29099 | 35 mm <sup>2</sup> ditto.....   | 235.85         | 15.67                    | 19.50                              | 58.92    | 29099 |
| 29100 | 50 mm <sup>2</sup> ditto.....   | 320.93         | 15.78                    | 19.64                              | 59.71    | 29100 |
| 29101 | 70 mm <sup>2</sup> ditto.....   | 481.21         | 18.19                    | 22.93                              | 66.38    | 29101 |
| 29102 | 95 mm <sup>2</sup> ditto.....   | 587.02         | 19.23                    | 23.57                              | 73.17    | 29102 |
| 29103 | 120 mm <sup>2</sup> ditto.....  | 709.36         | 20.16                    | 25.45                              | 78.81    | 29103 |
| 29104 | 150 mm <sup>2</sup> ditto.....  | 958.24         | 22.57                    | 28.55                              | 87.45    | 29104 |
| 29105 | 1.5 mm <sup>2</sup> 4-core.....   | 100.18         | 11.55                    | 14.40                              | 43.87    | 29105 |
| 29106 | 2.5 mm <sup>2</sup> ditto.....  | 114.25         | 12.46                    | 15.35                              | 47.07    | 29106 |
| 29107 | 4 mm <sup>2</sup> ditto.....  | 141.62         | 13.00                    | 16.37                              | 48.49    | 29107 |
| 29108 | 6 mm <sup>2</sup> ditto.....  | 150.23         | 13.68                    | 17.45                              | 53.76    | 29108 |
| 29109 | 10 mm <sup>2</sup> ditto.....   | 165.67         | 14.38                    | 18.53                              | 55.82    | 29109 |
| 29110 | 16 mm <sup>2</sup> ditto.....   | 199.27         | 15.49                    | 19.08                              | 56.64    | 29110 |
| 29111 | 25 mm <sup>2</sup> ditto.....   | 269.33         | 15.57                    | 19.16                              | 58.87    | 29111 |
| 29112 | 35 mm <sup>2</sup> ditto.....   | 309.22         | 16.10                    | 19.82                              | 60.42    | 29112 |
| 29113 | 50 mm <sup>2</sup> ditto.....   | 364.57         | 16.18                    | 19.99                              | 61.28    | 29113 |
| 29114 | 70 mm <sup>2</sup> ditto.....   | 439.34         | 17.32                    | 22.06                              | 65.58    | 29114 |
| 29115 | 95 mm <sup>2</sup> ditto.....   | 606.62         | 19.93                    | 23.67                              | 73.46    | 29115 |

| Item  |  |                |                          |                                    | Item     |       |
|-------|--|----------------|--------------------------|------------------------------------|----------|-------|
|       | <b>CABLES (COPPER) (CONT'D)</b>  |                |                          |                                    |          |       |
|       | 600/1000V low emission of smoke and corrosive gases, cross-linked polyethylene insulated and sheathed, steel wire armoured cable to IEC 60502-1, fixed with and including cleats or saddles or fixed to cable trays, a deduction of thirty (30) percent will be made to the rates involving labour for cables installed /re-installed in or taken down from cable trays (cable trays measured separately) : - (Cont'd) | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only |       |
|       | <i>Per linear metre</i>  | A \$           | B \$                     | C \$                               | D \$     |       |
| 29116 | 120 mm <sup>2</sup> 4-core.....  | 712.67         | 20.08                    | 25.34                              | 78.49    | 29116 |
| 29117 | 150 mm <sup>2</sup> ditto.....   | 911.09         | 22.49                    | 28.43                              | 87.09    | 29117 |
| 29118 | 185 mm <sup>2</sup> ditto.....   | 980.00         | 24.88                    | 30.83                              | 93.36    | 29118 |
| 29119 | 240 mm <sup>2</sup> ditto.....   | 1,256.99       | 26.16                    | 32.70                              | 101.97   | 29119 |
| 29120 | 300 mm <sup>2</sup> ditto.....   | 1,494.95       | 28.36                    | 35.48                              | 107.69   | 29120 |
| 29121 | 400 mm <sup>2</sup> ditto.....   | 1,899.81       | 29.38                    | 36.94                              | 112.95   | 29121 |
|       | 300/500V PVC insulated and PVC sheathed, all colours cores, to IEC 60227-4, c/w and including brass buckle clips or brass fasteners, a deduction of fifty (50) and sixty (60) percent will be made to the rates involving labour for cables installed/ re-installed in or taken down from conduits/trunkings and cable trays respectively (conduits, cable trays and trunkings measured separately) : -                |                |                          |                                    |          |       |
|       | <i>Per linear metre</i>  |                |                          |                                    |          |       |
| 29122 | 1.5 mm <sup>2</sup> 2-core with E.C.C.....   | 13.84          | 2.47                     | 2.95                               | 6.75     | 29122 |
| 29123 | 2.5 mm <sup>2</sup> ditto.....   | 17.41          | 2.47                     | 2.95                               | 6.75     | 29123 |
| 29124 | 4 mm <sup>2</sup> ditto.....   | 27.41          | 3.66                     | 4.26                               | 10.04    | 29124 |
| 29125 | 6 mm <sup>2</sup> ditto.....   | 35.00          | 3.66                     | 4.26                               | 10.04    | 29125 |
| 29126 | 10 mm <sup>2</sup> ditto.....  | 64.48          | 4.64                     | 5.53                               | 13.54    | 29126 |
| 29127 | 16 mm <sup>2</sup> ditto.....  | 82.28          | 4.64                     | 5.53                               | 13.54    | 29127 |
|       | 450/750V PVC insulated or ethylene-vinylacetate rubber insulated or other equivalent synthetic insulated, heat resistant, single core, copper cable to IEC 60245-7, all colours, drawn into conduits/ trunking : -   |                |                          |                                    |          |       |
|       | <i>Per linear metre</i>  |                |                          |                                    |          |       |
| 29128 | 1.5 mm <sup>2</sup> 1 core.....  | 4.28           | 0.57                     | 0.71                               | 1.76     | 29128 |
| 29129 | 2.5 mm <sup>2</sup> ditto.....   | 5.40           | 0.57                     | 0.71                               | 1.76     | 29129 |
| 29130 | 4 mm <sup>2</sup> ditto.....   | 7.38           | 0.57                     | 0.71                               | 1.76     | 29130 |
| 29131 | 6 mm <sup>2</sup> ditto.....   | 11.54          | 0.85                     | 1.03                               | 2.53     | 29131 |
| 29132 | 10 mm <sup>2</sup> ditto.....  | 20.23          | 0.85                     | 1.03                               | 2.53     | 29132 |



| Item  |  | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only | Item  |
|-------|--|----------------|--------------------------|------------------------------------|----------|-------|
|       | <b>CABLES (COPPER) (CONT'D)</b>  |                |                          |                                    |          |       |
|       | 450/750V PVC insulated or ethylene-vinylacetate rubber insulated or other equivalent synthetic insulated, heat resistant, single core, copper cable to IEC 60245-7, all colours, drawn into conduits/ trunking :- (Cont'd)   |                |                          |                                    |          |       |
|       | <i>Per linear metre</i>  | A \$           | B \$                     | C \$                               | D \$     |       |
| 29133 | 16 mm <sup>2</sup> 1 core.....   | 28.39          | 0.85                     | 1.03                               | 2.53     | 29133 |
| 29134 | 25 mm <sup>2</sup> ditto.....  | 39.92          | 1.03                     | 1.17                               | 3.12     | 29134 |
| 29135 | 35 mm <sup>2</sup> ditto.....  | 59.81          | 1.03                     | 1.17                               | 3.12     | 29135 |
| 29136 | 50 mm <sup>2</sup> ditto.....  | 83.55          | 1.17                     | 1.53                               | 3.57     | 29136 |
| 29137 | 70 mm <sup>2</sup> ditto.....  | 114.52         | 1.87                     | 2.10                               | 5.47     | 29137 |
| 29138 | 95 mm <sup>2</sup> ditto.....  | 156.39         | 2.15                     | 2.63                               | 6.77     | 29138 |
| 29139 | 120 mm <sup>2</sup> ditto.....   | 211.89         | 2.56                     | 3.15                               | 8.71     | 29139 |
| 29140 | 150 mm <sup>2</sup> ditto.....   | 333.24         | 3.33                     | 4.08                               | 11.21    | 29140 |
| 29141 | 185 mm <sup>2</sup> ditto.....   | 416.70         | 3.81                     | 4.68                               | 13.53    | 29141 |
| 29142 | 240 mm <sup>2</sup> ditto.....   | 531.79         | 4.44                     | 5.47                               | 15.27    | 29142 |
|       | 600/1000V PVC insulated and sheathed single steel wire armoured and PVC sheathed overall to IEC 60502-1 fixed with and including cleats or saddles or fixed to cable trays, a deduction of thirty (30) percent will be made to the rates involving labour for cables installed/re-installed in or taken down from cable trays (cable trays measured separately) :- |                |                          |                                    |          |       |
|       | <i>Per linear metre</i>  |                |                          |                                    |          |       |
| 29143 | 1.5 mm <sup>2</sup> 2-core.....  | 42.35          | 5.63                     | 6.86                               | 19.90    | 29143 |
| 29144 | 2.5 mm <sup>2</sup> ditto.....   | 46.18          | 5.63                     | 6.86                               | 19.90    | 29144 |
| 29145 | 4 mm <sup>2</sup> ditto.....   | 71.68          | 9.94                     | 13.14                              | 38.24    | 29145 |
| 29146 | 6 mm <sup>2</sup> ditto.....   | 80.59          | 9.94                     | 13.14                              | 38.24    | 29146 |
| 29147 | 10 mm <sup>2</sup> ditto.....  | 115.23         | 12.52                    | 15.40                              | 47.23    | 29147 |
| 29148 | 16 mm <sup>2</sup> ditto.....  | 119.03         | 12.52                    | 15.40                              | 47.23    | 29148 |
| 29149 | 25 mm <sup>2</sup> ditto.....  | 203.74         | 13.10                    | 16.10                              | 49.90    | 29149 |
| 29150 | 35 mm <sup>2</sup> ditto.....  | 254.44         | 13.80                    | 16.93                              | 50.99    | 29150 |
| 29151 | 50 mm <sup>2</sup> ditto.....  | 338.57         | 13.91                    | 17.04                              | 51.69    | 29151 |
| 29152 | 1.5 mm <sup>2</sup> 4-core.....  | 77.23          | 11.74                    | 14.50                              | 44.70    | 29152 |
| 29153 | 2.5 mm <sup>2</sup> ditto.....   | 84.77          | 12.52                    | 15.40                              | 47.23    | 29153 |
| 29154 | 4 mm <sup>2</sup> ditto.....   | 101.30         | 13.05                    | 16.44                              | 48.66    | 29154 |

| Item  |   |                |                          |                                    | Item     |       |
|-------|---|----------------|--------------------------|------------------------------------|----------|-------|
|       | <b>CABLES (COPPER) (CONT'D)</b>   |                |                          |                                    |          |       |
|       | 600/1000V PVC insulated and sheathed single steel wire armoured and PVC sheathed overall to IEC 60502-1 fixed with and including cleats or saddles or fixed to cable trays, a deduction of thirty (30) percent will be made to the rates involving labour for cables installed/re-installed in or taken down from cable trays (cable trays measured separately) :- (Cont'd) | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only |       |
|       | <i>Per linear metre</i>   | A \$           | B \$                     | C \$                               | D \$     |       |
| 29155 | 6 mm <sup>2</sup> 4-core.....   | 105.89         | 13.75                    | 17.52                              | 53.98    | 29155 |
| 29156 | 10 mm <sup>2</sup> ditto.....   | 139.24         | 14.46                    | 18.62                              | 56.06    | 29156 |
| 29157 | 16 mm <sup>2</sup> ditto.....   | 156.47         | 14.69                    | 18.87                              | 56.88    | 29157 |
| 29158 | 25 mm <sup>2</sup> ditto.....   | 192.05         | 15.62                    | 19.27                              | 59.11    | 29158 |
| 29159 | 35 mm <sup>2</sup> ditto.....   | 242.58         | 16.17                    | 19.91                              | 60.69    | 29159 |
| 29160 | 50 mm <sup>2</sup> ditto.....   | 320.32         | 16.24                    | 20.06                              | 61.54    | 29160 |
| 29161 | 70 mm <sup>2</sup> ditto.....   | 411.60         | 17.39                    | 22.18                              | 65.85    | 29161 |
| 29162 | 95 mm <sup>2</sup> ditto.....   | 503.04         | 20.00                    | 23.75                              | 73.75    | 29162 |
| 29163 | 120 mm <sup>2</sup> ditto.....  | 613.12         | 20.24                    | 25.55                              | 79.12    | 29163 |
| 29164 | 150 mm <sup>2</sup> ditto.....  | 913.44         | 22.67                    | 28.68                              | 87.83    | 29164 |
| 29165 | 185 mm <sup>2</sup> ditto.....  | 955.58         | 25.09                    | 31.07                              | 94.12    | 29165 |
| 29166 | 240 mm <sup>2</sup> ditto.....  | 1,194.83       | 26.16                    | 32.70                              | 101.97   | 29166 |
| 29167 | 300 mm <sup>2</sup> ditto.....  | 1,399.76       | 28.36                    | 35.48                              | 107.69   | 29167 |
| 29168 | 400 mm <sup>2</sup> ditto.....  | 1,788.08       | 29.38                    | 36.94                              | 112.95   | 29168 |
| 29169 | 1.5 mm <sup>2</sup> 7-core.....   | 148.47         | 14.33                    | 18.43                              | 55.59    | 29169 |
| 29170 | 1.5 mm <sup>2</sup> 12-core.....  | 183.95         | 14.33                    | 18.43                              | 55.59    | 29170 |
| 29171 | 1.5 mm <sup>2</sup> 19-core.....  | 239.37         | 16.42                    | 20.63                              | 62.07    | 29171 |
| 29172 | 1.5 mm <sup>2</sup> 27-core.....  | 301.49         | 16.46                    | 20.88                              | 63.19    | 29172 |
| 29173 | 1.5 mm <sup>2</sup> 37-core.....  | 344.40         | 17.90                    | 22.55                              | 67.18    | 29173 |
| 29174 | 1.5 mm <sup>2</sup> 48-core.....  | 597.45         | 18.94                    | 23.47                              | 71.27    | 29174 |
| 29175 | 2.5 mm <sup>2</sup> 7-core.....   | 186.62         | 17.24                    | 21.98                              | 65.30    | 29175 |
| 29176 | 2.5 mm <sup>2</sup> 12-core.....  | 231.38         | 17.24                    | 21.98                              | 65.30    | 29176 |
| 29177 | 2.5 mm <sup>2</sup> 19-core.....  | 319.07         | 18.81                    | 23.04                              | 69.65    | 29177 |
| 29178 | 2.5 mm <sup>2</sup> 27-core.....  | 402.09         | 19.42                    | 24.63                              | 72.71    | 29178 |
| 29179 | 2.5 mm <sup>2</sup> 37-core.....  | 674.70         | 19.95                    | 25.23                              | 74.26    | 29179 |
| 29180 | 2.5 mm <sup>2</sup> 48-core.....  | 1,063.30       | 20.60                    | 26.10                              | 76.60    | 29180 |

| Item  |  |                |                          |                                    | Item     |       |
|-------|--|----------------|--------------------------|------------------------------------|----------|-------|
|       | <b>CABLES (COPPER) (CONT'D)</b>  |                |                          |                                    |          |       |
|       | Fire resistant, low emission of smoke and corrosive gases, thermosetting insulated and sheathed, steel wire armoured multi-core cable to BS 7846 (for voltage rating 600/1000V) c/w and including cleats or saddles, a deduction of twenty (20) and thirty (30) percent will be made to the rates involving labour for cables installed/re-installed in or taken down from conduits/ trunkings and cable trays respectively (conduits, trunkings and cable trays measured separately) :- | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only |       |
|       | <i>Per linear metre</i>  | A \$           | B \$                     | C \$                               | D \$     |       |
| 29181 | 1.5 mm <sup>2</sup> 2-core.....  | 89.02          | 5.61                     | 6.84                               | 19.78    | 29181 |
| 29182 | 2.5 mm <sup>2</sup> ditto.....   | 108.85         | 5.61                     | 6.84                               | 19.81    | 29182 |
| 29183 | 4 mm <sup>2</sup> ditto.....   | 138.50         | 9.90                     | 13.05                              | 38.02    | 29183 |
| 29184 | 6 mm <sup>2</sup> ditto.....   | 142.33         | 9.90                     | 13.05                              | 38.02    | 29184 |
| 29185 | 10 mm <sup>2</sup> ditto.....  | 161.05         | 12.43                    | 15.32                              | 46.95    | 29185 |
| 29186 | 16 mm <sup>2</sup> ditto.....  | 177.03         | 12.43                    | 15.32                              | 46.95    | 29186 |
| 29187 | 25 mm <sup>2</sup> ditto.....  | 275.27         | 14.31                    | 17.95                              | 54.81    | 29187 |
| 29188 | 35 mm <sup>2</sup> ditto.....  | 306.58         | 15.64                    | 19.47                              | 58.78    | 29188 |
| 29189 | 50 mm <sup>2</sup> ditto.....  | 400.59         | 15.78                    | 19.59                              | 59.57    | 29189 |
| 29190 | 70 mm <sup>2</sup> ditto.....  | 561.03         | 16.70                    | 21.97                              | 65.21    | 29190 |
| 29191 | 95 mm <sup>2</sup> ditto.....  | 698.03         | 19.21                    | 23.53                              | 73.03    | 29191 |
| 29192 | 120 mm <sup>2</sup> ditto.....   | 910.09         | 20.14                    | 25.40                              | 78.67    | 29192 |
| 29193 | 150 mm <sup>2</sup> ditto.....   | 1,076.93       | 22.54                    | 28.49                              | 87.29    | 29193 |
| 29194 | 185 mm <sup>2</sup> ditto.....   | 1,183.45       | 24.93                    | 30.86                              | 93.55    | 29194 |
| 29195 | 240 mm <sup>2</sup> ditto.....   | 1,453.18       | 26.22                    | 32.77                              | 102.19   | 29195 |
| 29196 | 300 mm <sup>2</sup> ditto.....   | 1,761.01       | 28.40                    | 35.54                              | 107.90   | 29196 |
| 29197 | 400 mm <sup>2</sup> ditto.....   | 2,085.31       | 29.47                    | 37.03                              | 113.17   | 29197 |

| Item  |   |                |                          |                                    | Item     |       |
|-------|---|----------------|--------------------------|------------------------------------|----------|-------|
|       | <b>CABLES (COPPER) (CONT'D)</b>   |                |                          |                                    |          |       |
|       | Fire resistant, low emission of smoke and corrosive gases, thermosetting insulated and sheathed, steel wire armoured multi-core cable to BS 7846 (for voltage rating 600/1000V) or BS 7629-1 (for voltage rating 300/500V) , c/w and including cleats or saddles, a deduction of twenty (20) and thirty (30) percent will be made to the rates involving labour for cables installed/re-installed in or taken down from conduits/ trunkings and cable trays respectively (conduits, trunkings and cable trays measured separately) : - (Cont'd) | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only |       |
|       | <i>Per linear metre</i>   | A \$           | B \$                     | C \$                               | D \$     |       |
| 29198 | 1.5 mm <sup>2</sup> 4-core.....   | 120.75         | 11.74                    | 14.50                              | 44.70    | 29198 |
| 29199 | 2.5 mm <sup>2</sup> ditto.....  | 143.33         | 12.52                    | 15.43                              | 47.23    | 29199 |
| 29200 | 4 mm <sup>2</sup> ditto.....  | 157.26         | 13.05                    | 16.44                              | 48.66    | 29200 |
| 29201 | 6 mm <sup>2</sup> ditto.....  | 186.91         | 13.75                    | 17.52                              | 53.98    | 29201 |
| 29202 | 10 mm <sup>2</sup> ditto.....   | 220.76         | 14.46                    | 18.62                              | 56.08    | 29202 |
| 29203 | 16 mm <sup>2</sup> ditto.....   | 248.01         | 15.57                    | 19.16                              | 56.88    | 29203 |
| 29204 | 25 mm <sup>2</sup> ditto.....   | 342.89         | 15.62                    | 19.23                              | 59.11    | 29204 |
| 29205 | 35 mm <sup>2</sup> ditto.....   | 385.08         | 16.17                    | 19.91                              | 60.69    | 29205 |
| 29206 | 50 mm <sup>2</sup> ditto.....   | 486.07         | 16.24                    | 20.06                              | 61.54    | 29206 |
| 29207 | 70 mm <sup>2</sup> ditto.....   | 616.98         | 17.39                    | 22.18                              | 65.85    | 29207 |
| 29208 | 95 mm <sup>2</sup> ditto.....   | 720.23         | 20.00                    | 23.75                              | 73.75    | 29208 |
| 29209 | 120 mm <sup>2</sup> ditto.....  | 847.17         | 20.24                    | 25.55                              | 79.12    | 29209 |
| 29210 | 150 mm <sup>2</sup> ditto.....  | 1,022.00       | 22.67                    | 28.69                              | 87.83    | 29210 |
| 29211 | 185 mm <sup>2</sup> ditto.....  | 1,107.57       | 25.09                    | 31.07                              | 94.12    | 29211 |
| 29212 | 240 mm <sup>2</sup> ditto.....  | 1,388.44       | 26.38                    | 32.97                              | 102.82   | 29212 |
| 29213 | 300 mm <sup>2</sup> ditto.....  | 1,631.88       | 28.58                    | 35.78                              | 108.54   | 29213 |
| 29214 | 400 mm <sup>2</sup> ditto.....  | 2,016.59       | 29.64                    | 37.26                              | 113.87   | 29214 |

| Item  |  |                |                          |                                    | Item     |       |
|-------|--|----------------|--------------------------|------------------------------------|----------|-------|
|       | <b>CABLES (COPPER) (CONT'D)</b>  |                |                          |                                    |          |       |
|       | 600/1000V fire resistant, low emission of smoke and corrosive gases insulated, non-sheathed, single core cables to IEC 60332-1, IEC 61034-2, IEC 60754-1 and BS 6387 Cat. CWZ in conduits or trunkings (conduits and trunkings measured separately) :- |                |                          |                                    |          |       |
|       | <i>Per linear metre</i>  |                |                          |                                    |          |       |
|       |  | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only |       |
|       |  | A \$           | B \$                     | C \$                               | D \$     |       |
| 29215 | 1.5 mm <sup>2</sup> .....  | 23.11          | 1.70                     | 2.32                               | 5.57     | 29215 |
| 29216 | 2.5 mm <sup>2</sup> .....  | 25.07          | 1.70                     | 2.32                               | 5.57     | 29216 |
| 29217 | 4 mm <sup>2</sup> .....  | 30.00          | 1.92                     | 2.53                               | 6.47     | 29217 |
| 29218 | 6 mm <sup>2</sup> .....  | 35.20          | 1.92                     | 2.53                               | 6.47     | 29218 |
| 29219 | 10 mm <sup>2</sup> .....   | 67.07          | 1.92                     | 2.53                               | 6.47     | 29219 |
| 29220 | 16 mm <sup>2</sup> .....   | 87.16          | 1.92                     | 2.53                               | 6.47     | 29220 |
| 29221 | 25 mm <sup>2</sup> .....   | 115.67         | 2.63                     | 3.25                               | 10.05    | 29221 |
| 29222 | 35 mm <sup>2</sup> .....   | 256.15         | 2.63                     | 3.25                               | 10.05    | 29222 |
| 29223 | 50 mm <sup>2</sup> .....   | 289.95         | 2.63                     | 3.25                               | 10.05    | 29223 |
| 29224 | 70 mm <sup>2</sup> .....   | 359.45         | 3.70                     | 4.37                               | 13.75    | 29224 |
| 29225 | 95 mm <sup>2</sup> .....   | 428.65         | 4.39                     | 6.05                               | 16.10    | 29225 |
| 29226 | 120 mm <sup>2</sup> .....  | 504.30         | 5.66                     | 6.89                               | 19.95    | 29226 |
| 29227 | 150 mm <sup>2</sup> .....  | 634.52         | 6.21                     | 7.55                               | 23.66    | 29227 |
| 29228 | 185 mm <sup>2</sup> .....  | 702.63         | 7.40                     | 9.32                               | 27.23    | 29228 |
| 29229 | 240 mm <sup>2</sup> .....  | 837.16         | 9.20                     | 10.98                              | 33.66    | 29229 |
| 29230 | 300 mm <sup>2</sup> .....  | 933.20         | 10.63                    | 13.55                              | 41.42    | 29230 |
| 29231 | 400 mm <sup>2</sup> .....  | 1,085.86       | 12.52                    | 15.45                              | 47.32    | 29231 |
| 29232 | 500 mm <sup>2</sup> .....  | 1,296.72       | 14.41                    | 18.09                              | 55.25    | 29232 |
| 29233 | 630 mm <sup>2</sup> .....  | 1,653.03       | 17.42                    | 22.21                              | 65.99    | 29233 |

| Item  |  |                |                          |                                    | Item     |       |
|-------|--|----------------|--------------------------|------------------------------------|----------|-------|
|       | <b>CABLES (COPPER) (CONT'D)</b>  |                |                          |                                    |          |       |
|       | 600/1000V PVC insulated and sheathed single steel wire armoured and PVC sheathed overall to IEC 60502-1, laid in trench or cable ducts including suitable cable bed (excavation backfilling and cable ducts measured separately) : - |                |                          |                                    |          |       |
|       | <i>Per linear metre</i>  |                |                          |                                    |          |       |
|       |  | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only |       |
|       |  | A \$           | B \$                     | C \$                               | D \$     |       |
| 29234 | 1.5 mm <sup>2</sup> 2-core.....  | 33.45          | 3.30                     | 3.71                               | 13.15    | 29234 |
| 29235 | 2.5 mm <sup>2</sup> ditto.....   | 38.18          | 3.30                     | 3.71                               | 13.15    | 29235 |
| 29236 | 4 mm <sup>2</sup> ditto.....   | 54.13          | 6.20                     | 7.18                               | 23.66    | 29236 |
| 29237 | 6 mm <sup>2</sup> ditto.....   | 60.80          | 6.20                     | 7.18                               | 23.66    | 29237 |
| 29238 | 10 mm <sup>2</sup> ditto.....  | 90.20          | 7.18                     | 8.78                               | 26.75    | 29238 |
| 29239 | 16 mm <sup>2</sup> ditto.....  | 107.98         | 7.18                     | 8.78                               | 26.75    | 29239 |
| 29240 | 25 mm <sup>2</sup> ditto.....  | 168.90         | 8.31                     | 9.87                               | 31.97    | 29240 |
| 29241 | 35 mm <sup>2</sup> ditto.....  | 224.82         | 9.61                     | 11.87                              | 33.17    | 29241 |
| 29242 | 50 mm <sup>2</sup> ditto.....  | 292.02         | 9.61                     | 11.87                              | 33.17    | 29242 |
| 29243 | 1.5 mm <sup>2</sup> 4-core.....  | 54.91          | 7.23                     | 9.47                               | 28.80    | 29243 |
| 29244 | 2.5 mm <sup>2</sup> ditto.....   | 63.18          | 8.86                     | 10.80                              | 32.88    | 29244 |
| 29245 | 4 mm <sup>2</sup> ditto.....   | 79.49          | 9.47                     | 11.35                              | 34.54    | 29245 |
| 29246 | 6 mm <sup>2</sup> ditto.....   | 91.55          | 9.47                     | 11.35                              | 34.54    | 29246 |
| 29247 | 10 mm <sup>2</sup> ditto.....  | 118.52         | 9.82                     | 11.94                              | 36.33    | 29247 |
| 29248 | 16 mm <sup>2</sup> ditto.....  | 155.01         | 9.82                     | 11.94                              | 36.33    | 29248 |
| 29249 | 25 mm <sup>2</sup> ditto.....  | 191.43         | 10.14                    | 12.39                              | 38.01    | 29249 |
| 29250 | 35 mm <sup>2</sup> ditto.....  | 246.32         | 10.84                    | 13.36                              | 39.87    | 29250 |
| 29251 | 50 mm <sup>2</sup> ditto.....  | 323.39         | 10.84                    | 13.36                              | 39.87    | 29251 |
| 29252 | 70 mm <sup>2</sup> ditto.....  | 412.55         | 12.01                    | 14.60                              | 43.17    | 29252 |
| 29253 | 95 mm <sup>2</sup> ditto.....  | 512.52         | 12.72                    | 15.63                              | 45.23    | 29253 |
| 29254 | 120 mm <sup>2</sup> ditto.....   | 600.59         | 12.72                    | 15.63                              | 45.23    | 29254 |
| 29255 | 150 mm <sup>2</sup> ditto.....   | 863.21         | 13.45                    | 16.18                              | 48.49    | 29255 |

| Item  |   |                |                          |                                    | Item     |       |
|-------|---|----------------|--------------------------|------------------------------------|----------|-------|
|       | <b>CABLES (COPPER) (CONT'D)</b>   |                |                          |                                    |          |       |
|       | 600/1000V PVC insulated and sheathed single steel wire armoured and PVC sheathed overall to IEC 60502-1, laid in trench or cable ducts including suitable cable bed (excavation backfilling and cable ducts measured separately) : - (Cont'd) |                |                          |                                    |          |       |
|       | <i>Per linear metre</i>   |                |                          |                                    |          |       |
|       |   | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only |       |
|       |   | A \$           | B \$                     | C \$                               | D \$     |       |
| 29256 | 185 mm <sup>2</sup> 4-core.....   | 882.18         | 13.54                    | 17.22                              | 51.98    | 29256 |
| 29257 | 240 mm <sup>2</sup> ditto.....  | 1,096.78       | 15.63                    | 19.13                              | 58.23    | 29257 |
| 29258 | 300 mm <sup>2</sup> ditto.....  | 1,318.87       | 17.65                    | 21.74                              | 65.39    | 29258 |
| 29259 | 400 mm <sup>2</sup> ditto.....  | 1,693.48       | 18.19                    | 22.47                              | 68.92    | 29259 |
| 29260 | 1.5 mm <sup>2</sup> 7-core.....   | 120.96         | 9.58                     | 11.50                              | 36.19    | 29260 |
| 29261 | 1.5 mm <sup>2</sup> 12-core.....  | 159.40         | 9.58                     | 11.50                              | 36.19    | 29261 |
| 29262 | 1.5 mm <sup>2</sup> 19-core.....  | 214.50         | 12.69                    | 15.58                              | 45.06    | 29262 |
| 29263 | 1.5 mm <sup>2</sup> 27-core.....  | 272.66         | 12.69                    | 15.58                              | 45.06    | 29263 |
| 29264 | 1.5 mm <sup>2</sup> 37-core.....  | 322.04         | 12.69                    | 15.58                              | 47.14    | 29264 |
| 29265 | 1.5 mm <sup>2</sup> 48-core.....  | 552.30         | 12.69                    | 15.58                              | 47.14    | 29265 |
| 29266 | 2.5 mm <sup>2</sup> 7-core.....   | 173.40         | 12.11                    | 15.11                              | 44.87    | 29266 |
| 29267 | 2.5 mm <sup>2</sup> 12-core.....  | 220.32         | 12.11                    | 15.11                              | 44.87    | 29267 |
| 29268 | 2.5 mm <sup>2</sup> 19-core.....  | 293.81         | 12.66                    | 16.18                              | 48.55    | 29268 |
| 29269 | 2.5 mm <sup>2</sup> 27-core.....  | 381.13         | 13.18                    | 16.76                              | 49.42    | 29269 |
| 29270 | 2.5 mm <sup>2</sup> 37-core.....  | 651.62         | 13.70                    | 17.87                              | 52.69    | 29270 |
| 29271 | 2.5 mm <sup>2</sup> 48-core.....  | 993.52         | 13.74                    | 17.93                              | 53.70    | 29271 |

| Item   |                                 |                      |                                      |  | Item        |       |
|--|---------------------------------|----------------------|--------------------------------------|--|-------------|-------|
| <b>CABLES (COPPER) (CONT'D)</b>  |                                 |                      |                                      |  |             |       |
| Mineral insulated copper sheathed, 750V (heavy duty grade) cable to IEC 60702-1 and IEC 60702-2, fixed with and including spacing bar type saddles : - |                                 |                      |                                      |  |             |       |
| <i>Per linear metre</i>  |                                 |                      |                                      |  |             |       |
|  |                                 | Supply<br>and<br>fix | Take<br>down<br>and<br>clear<br>away | Take<br>down<br>and set<br>aside for<br>re-use | Fix<br>only |       |
|  |                                 | A<br>\$              | B<br>\$                              | C<br>\$  | D<br>\$     |       |
| 29272  | 6 mm <sup>2</sup> 1-core.....   | 77.58                | 6.84                                 | 8.73   | 25.58       | 29272 |
| 29273  | 10 mm <sup>2</sup> ditto.....   | 115.79               | 6.85                                 | 8.77   | 26.34       | 29273 |
| 29274  | 16 mm <sup>2</sup> ditto.....   | 143.73               | 7.89                                 | 10.48  | 29.90       | 29274 |
| 29275  | 25 mm <sup>2</sup> ditto.....   | 183.85               | 9.03                                 | 11.12  | 31.50       | 29275 |
| 29276  | 35 mm <sup>2</sup> ditto.....   | 333.09               | 9.77                                 | 11.73  | 34.15       | 29276 |
| 29277  | 50 mm <sup>2</sup> ditto.....   | 379.39               | 10.40                                | 12.87  | 35.78       | 29277 |
| 29278  | 70 mm <sup>2</sup> ditto.....   | 446.69               | 11.12                                | 14.05  | 38.74       | 29278 |
| 29279  | 95 mm <sup>2</sup> ditto.....   | 559.11               | 14.04                                | 17.55  | 49.47       | 29279 |
| 29280  | 120 mm <sup>2</sup> ditto.....  | 657.37               | 14.04                                | 17.55  | 49.47       | 29280 |
| 29281  | 150 mm <sup>2</sup> ditto.....  | 798.85               | 14.04                                | 17.55  | 49.47       | 29281 |
| 29282  | 185 mm <sup>2</sup> ditto.....  | 926.07               | 14.60                                | 18.67  | 52.88       | 29282 |
| 29283  | 240 mm <sup>2</sup> ditto.....  | 1,132.50             | 15.92                                | 19.53  | 55.49       | 29283 |
| 29284  | 1.5 mm <sup>2</sup> 2-core..... | 70.85                | 6.12                                 | 7.37   | 23.47       | 29284 |
| 29285  | 2.5 mm <sup>2</sup> ditto.....  | 80.10                | 6.84                                 | 8.73   | 25.58       | 29285 |
| 29286  | 4 mm <sup>2</sup> ditto.....    | 93.79                | 6.85                                 | 8.77   | 26.34       | 29286 |
| 29287  | 6 mm <sup>2</sup> ditto.....    | 114.94               | 7.67                                 | 9.43   | 28.10       | 29287 |
| 29288  | 10 mm <sup>2</sup> ditto.....   | 151.57               | 7.89                                 | 10.48  | 29.90       | 29288 |
| 29289  | 16 mm <sup>2</sup> ditto.....   | 185.83               | 9.03                                 | 11.09  | 31.51       | 29289 |
| 29290  | 25 mm <sup>2</sup> ditto.....   | 292.26               | 9.41                                 | 11.27  | 34.32       | 29290 |
| 29291  | 1.5 mm <sup>2</sup> 4-core..... | 86.88                | 6.84                                 | 8.73   | 25.58       | 29291 |
| 29292  | 2.5 mm <sup>2</sup> ditto.....  | 95.54                | 6.85                                 | 8.77   | 26.34       | 29292 |
| 29293  | 4 mm <sup>2</sup> ditto.....    | 124.30               | 7.43                                 | 9.70   | 28.16       | 29293 |
| 29294  | 6 mm <sup>2</sup> ditto.....    | 154.53               | 7.89                                 | 10.48  | 29.90       | 29294 |
| 29295  | 10 mm <sup>2</sup> ditto.....   | 205.86               | 9.03                                 | 11.09  | 31.51       | 29295 |
| 29296  | 16 mm <sup>2</sup> ditto.....   | 279.13               | 9.41                                 | 11.27  | 34.32       | 29296 |
| 29297  | 25 mm <sup>2</sup> ditto.....   | 383.81               | 10.13                                | 12.46  | 36.67       | 29297 |



| Item  |  |                |                          |                                    | Item     |       |
|-------|--|----------------|--------------------------|------------------------------------|----------|-------|
|       | <b>CABLES (COPPER) (CONT'D)</b>  |                |                          |                                    |          |       |
|       | Mineral insulated copper sheathed, 750V (heavy duty grade) cable to IEC 60702-1 and IEC 60702-2, with an overall protection of PVC sheath, fixed with and including spacing bar type saddles : - |                |                          |                                    |          |       |
|       | <i>Per linear metre</i>  |                |                          |                                    |          |       |
|       |  | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only |       |
|       |  | A \$           | B \$                     | C \$                               | D \$     |       |
| 29298 | 1 mm <sup>2</sup> 1-core.....  | 26.04          | 2.49                     | 3.12                               | 9.26     | 29298 |
| 29299 | 1.5 mm <sup>2</sup> ditto.....   | 29.98          | 2.49                     | 3.12                               | 9.26     | 29299 |
| 29300 | 2.5 mm <sup>2</sup> ditto.....   | 33.47          | 2.49                     | 3.12                               | 9.26     | 29300 |
| 29301 | 4 mm <sup>2</sup> ditto.....   | 57.71          | 6.84                     | 8.69                               | 25.48    | 29301 |
| 29302 | 6 mm <sup>2</sup> ditto.....   | 74.64          | 6.84                     | 8.69                               | 25.48    | 29302 |
| 29303 | 10 mm <sup>2</sup> ditto.....  | 113.65         | 6.84                     | 8.74                               | 26.22    | 29303 |
| 29304 | 16 mm <sup>2</sup> ditto.....  | 142.91         | 7.84                     | 10.43                              | 29.77    | 29304 |
| 29305 | 25 mm <sup>2</sup> ditto.....  | 179.41         | 9.00                     | 11.05                              | 31.37    | 29305 |
| 29306 | 35 mm <sup>2</sup> ditto.....  | 328.32         | 9.75                     | 11.65                              | 34.01    | 29306 |
| 29307 | 50 mm <sup>2</sup> ditto.....  | 368.85         | 10.35                    | 12.81                              | 35.63    | 29307 |
| 29308 | 70 mm <sup>2</sup> ditto.....  | 443.28         | 11.05                    | 13.99                              | 38.59    | 29308 |
| 29309 | 95 mm <sup>2</sup> ditto.....  | 562.24         | 11.70                    | 14.63                              | 42.99    | 29309 |
| 29310 | 120 mm <sup>2</sup> ditto.....   | 648.17         | 12.83                    | 15.72                              | 45.49    | 29310 |
| 29311 | 150 mm <sup>2</sup> ditto.....   | 802.12         | 13.97                    | 17.46                              | 49.25    | 29311 |
| 29312 | 185 mm <sup>2</sup> ditto.....   | 917.79         | 14.53                    | 18.58                              | 52.67    | 29312 |
| 29313 | 240 mm <sup>2</sup> ditto.....   | 1,109.80       | 15.87                    | 19.44                              | 55.26    | 29313 |
| 29314 | 1 mm <sup>2</sup> 2-core.....  | 61.24          | 6.10                     | 7.35                               | 23.37    | 29314 |
| 29315 | 1.5 mm <sup>2</sup> ditto.....   | 69.05          | 6.10                     | 7.35                               | 23.37    | 29315 |
| 29316 | 2.5 mm <sup>2</sup> ditto.....   | 78.79          | 6.84                     | 8.69                               | 25.48    | 29316 |
| 29317 | 4 mm <sup>2</sup> ditto.....   | 92.04          | 6.84                     | 8.74                               | 26.22    | 29317 |
| 29318 | 6 mm <sup>2</sup> ditto.....   | 115.66         | 7.64                     | 9.40                               | 27.95    | 29318 |
| 29319 | 10 mm <sup>2</sup> ditto.....  | 152.27         | 7.84                     | 10.42                              | 29.77    | 29319 |
| 29320 | 16 mm <sup>2</sup> ditto.....  | 184.66         | 9.00                     | 11.05                              | 31.41    | 29320 |
| 29321 | 25 mm <sup>2</sup> ditto.....  | 298.90         | 9.36                     | 11.22                              | 34.18    | 29321 |

| Item  |   |                |                          |                                    | Item     |       |
|-------|---|----------------|--------------------------|------------------------------------|----------|-------|
|       | <b>CABLES (COPPER) (CONT'D)</b>   |                |                          |                                    |          |       |
|       | Mineral insulated copper sheathed, 750V (heavy duty grade) cable to IEC 60702-1 and IEC 60702-2, with an overall protection of PVC sheath, fixed with and including spacing bar type saddles : - (Cont'd)                     |                |                          |                                    |          |       |
|       | <i>Per linear metre</i>   |                |                          |                                    |          |       |
|       |   | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only |       |
|       |   | A \$           | B \$                     | C \$                               | D \$     |       |
| 29322 | 1.5 mm <sup>2</sup> 4-core.....   | 85.62          | 6.84                     | 8.71                               | 25.52    | 29322 |
| 29323 | 2.5 mm <sup>2</sup> ditto.....  | 96.04          | 6.84                     | 8.77                               | 26.29    | 29323 |
| 29324 | 4 mm <sup>2</sup> ditto.....  | 119.40         | 7.65                     | 9.41                               | 28.04    | 29324 |
| 29325 | 6 mm <sup>2</sup> ditto.....  | 152.01         | 7.84                     | 10.45                              | 29.84    | 29325 |
| 29326 | 10 mm <sup>2</sup> ditto.....   | 198.68         | 9.02                     | 11.08                              | 31.46    | 29326 |
| 29327 | 16 mm <sup>2</sup> ditto.....   | 280.65         | 9.37                     | 11.26                              | 34.25    | 29327 |
| 29328 | 25 mm <sup>2</sup> ditto.....   | 391.00         | 10.14                    | 12.42                              | 36.59    | 29328 |
|       | Mineral insulated copper sheathed, 750V (heavy duty grade) cable to IEC 60702-1 and IEC 60702-2, laid in trenches (including suitable cable bed) or ducting (ducting, excavation and backing-filling measured separately) : - |                |                          |                                    |          |       |
|       | <i>Per linear metre</i>   |                |                          |                                    |          |       |
| 29329 | 1 mm <sup>2</sup> 2-core.....   | 46.41          | 2.96                     | 3.66                               | 11.20    | 29329 |
| 29330 | 1.5 mm <sup>2</sup> ditto.....  | 55.43          | 3.35                     | 4.15                               | 13.04    | 29330 |
| 29331 | 2.5 mm <sup>2</sup> ditto.....  | 63.52          | 3.35                     | 4.15                               | 13.04    | 29331 |
| 29332 | 4 mm <sup>2</sup> ditto.....  | 88.01          | 6.12                     | 7.10                               | 23.47    | 29332 |
| 29333 | 6 mm <sup>2</sup> ditto.....  | 105.04         | 6.12                     | 7.10                               | 23.47    | 29333 |
| 29334 | 10 mm <sup>2</sup> ditto.....   | 150.51         | 7.65                     | 9.43                               | 28.04    | 29334 |
| 29335 | 16 mm <sup>2</sup> ditto.....   | 184.41         | 7.65                     | 9.43                               | 28.04    | 29335 |
| 29336 | 25 mm <sup>2</sup> ditto.....   | 290.34         | 9.53                     | 11.48                              | 36.03    | 29336 |
| 29337 | 1.5 mm <sup>2</sup> 4-core.....   | 89.38          | 7.84                     | 10.45                              | 29.84    | 29337 |
| 29338 | 2.5 mm <sup>2</sup> ditto.....  | 103.11         | 9.02                     | 11.08                              | 31.46    | 29338 |
| 29339 | 4 mm <sup>2</sup> ditto.....  | 128.61         | 9.27                     | 11.43                              | 33.10    | 29339 |
| 29340 | 6 mm <sup>2</sup> ditto.....  | 162.74         | 9.65                     | 11.91                              | 34.10    | 29340 |
| 29341 | 10 mm <sup>2</sup> ditto.....   | 207.01         | 9.80                     | 12.42                              | 34.85    | 29341 |
| 29342 | 16 mm <sup>2</sup> ditto.....   | 292.18         | 10.06                    | 12.85                              | 36.03    | 29342 |

| Item  |   |                |                          |                                    | Item     |       |
|-------|---|----------------|--------------------------|------------------------------------|----------|-------|
|       | <b>CABLES (COPPER) (CONT'D)</b>   |                |                          |                                    |          |       |
|       | 600/1000V XLPE/SWA/PVC cable to IEC 60502-1 , fixed with and including cleats or saddles or fixed to cable trays, a deduction of thirty (30) percent will be made to the rates involving labour for cables installed /re-installed or taken down from cable trays (cable tray measured separately) :- |                |                          |                                    |          |       |
|       | <i>Per linear metre</i>   |                |                          |                                    |          |       |
|       |   | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only |       |
|       |   | A \$           | B \$                     | C \$                               | D \$     |       |
| 29343 | 500 mm <sup>2</sup> 1-core.....   | 1,058.67       | 15.73                    | 19.57                              | 55.60    | 29343 |
| 29344 | 630 mm <sup>2</sup> ditto.....  | 1,173.38       | 17.33                    | 22.13                              | 65.70    | 29344 |
| 29345 | 800 mm <sup>2</sup> ditto.....  | 1,367.81       | 20.18                    | 25.49                              | 78.97    | 29345 |
| 29346 | 1000 mm <sup>2</sup> ditto.....   | 1,658.29       | 27.13                    | 33.91                              | 105.36   | 29346 |
| 29347 | 4 mm <sup>2</sup> 2-core.....   | 70.99          | 11.23                    | 13.77                              | 38.73    | 29347 |
| 29348 | 6 mm <sup>2</sup> ditto.....  | 81.79          | 11.62                    | 14.41                              | 39.92    | 29348 |
| 29349 | 10 mm <sup>2</sup> ditto.....   | 113.38         | 11.68                    | 14.46                              | 42.92    | 29349 |
| 29350 | 16 mm <sup>2</sup> ditto.....   | 129.13         | 12.29                    | 14.89                              | 45.23    | 29350 |
| 29351 | 25 mm <sup>2</sup> ditto.....   | 194.32         | 12.81                    | 15.38                              | 46.23    | 29351 |
| 29352 | 35 mm <sup>2</sup> ditto.....   | 245.15         | 13.18                    | 16.36                              | 49.09    | 29352 |
| 29353 | 50 mm <sup>2</sup> ditto.....   | 325.14         | 16.29                    | 20.51                              | 58.17    | 29353 |
| 29354 | 70 mm <sup>2</sup> ditto.....   | 419.86         | 17.58                    | 21.41                              | 60.69    | 29354 |
| 29355 | 95 mm <sup>2</sup> ditto.....   | 508.74         | 18.77                    | 22.72                              | 64.68    | 29355 |
| 29356 | 4 mm <sup>2</sup> 4-core.....   | 81.72          | 11.35                    | 13.80                              | 42.43    | 29356 |
| 29357 | 6 mm <sup>2</sup> ditto.....  | 95.87          | 11.74                    | 14.78                              | 44.59    | 29357 |
| 29358 | 10 mm <sup>2</sup> ditto.....   | 117.29         | 12.57                    | 15.57                              | 45.78    | 29358 |
| 29359 | 16 mm <sup>2</sup> ditto.....   | 155.69         | 13.27                    | 16.19                              | 48.31    | 29359 |
| 29360 | 25 mm <sup>2</sup> ditto.....   | 186.14         | 13.97                    | 16.91                              | 50.09    | 29360 |
| 29361 | 35 mm <sup>2</sup> ditto.....   | 237.29         | 14.17                    | 17.69                              | 52.69    | 29361 |
| 29362 | 50 mm <sup>2</sup> ditto.....   | 316.55         | 17.95                    | 22.35                              | 64.02    | 29362 |
| 29363 | 70 mm <sup>2</sup> ditto.....   | 409.18         | 19.35                    | 23.18                              | 66.78    | 29363 |
| 29364 | 95 mm <sup>2</sup> ditto.....   | 497.40         | 20.46                    | 24.26                              | 71.18    | 29364 |
| 29365 | 120 mm <sup>2</sup> ditto.....  | 600.50         | 21.19                    | 25.88                              | 75.30    | 29365 |
| 29366 | 150 mm <sup>2</sup> ditto.....  | 808.61         | 21.92                    | 26.49                              | 78.13    | 29366 |

| Item  |   |                |                          |                                    | Item     |       |
|-------|---|----------------|--------------------------|------------------------------------|----------|-------|
|       | <b>CABLES (COPPER) (CONT'D)</b>   |                |                          |                                    |          |       |
|       | 600/1000V XLPE/SWA/PVC cable to IEC 60502-1, fixed with and including cleats or saddles or fixed to cable trays, a deduction of thirty (30) percent will be made to the rates involving labour for cables installed /re-installed or taken down from cable trays (cable tray measured separately) :- (Cont'd) | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only |       |
|       | <i>Per linear metre</i>   | A \$           | B \$                     | C \$                               | D \$     |       |
| 29367 | 185 mm <sup>2</sup> 4-core.....   | 849.94         | 22.98                    | 27.02                              | 80.68    | 29367 |
| 29368 | 240 mm <sup>2</sup> ditto.....  | 1,072.12       | 23.84                    | 28.83                              | 87.71    | 29368 |
| 29369 | 300 mm <sup>2</sup> ditto.....  | 1,268.35       | 26.03                    | 30.63                              | 94.34    | 29369 |
| 29370 | 400 mm <sup>2</sup> ditto.....  | 1,586.20       | 26.81                    | 32.43                              | 98.86    | 29370 |
|       | 600/1000V XLPE/SWA/PVC cable to IEC 60502-1, laid in trenches (including suitable cable bed) or ducting (ducting, excavation and back-filling measured separately) :-   |                |                          |                                    |          |       |
|       | <i>Per linear metre</i>   |                |                          |                                    |          |       |
| 29371 | 4 mm <sup>2</sup> 2-core.....   | 52.52          | 5.31                     | 6.43                               | 19.78    | 29371 |
| 29372 | 6 mm <sup>2</sup> ditto.....  | 59.11          | 5.53                     | 6.67                               | 20.81    | 29372 |
| 29373 | 10 mm <sup>2</sup> ditto.....   | 90.69          | 5.83                     | 6.99                               | 21.54    | 29373 |
| 29374 | 16 mm <sup>2</sup> ditto.....   | 99.91          | 6.34                     | 7.97                               | 22.35    | 29374 |
| 29375 | 25 mm <sup>2</sup> ditto.....   | 165.10         | 6.46                     | 8.10                               | 23.09    | 29375 |
| 29376 | 35 mm <sup>2</sup> ditto.....   | 218.93         | 7.06                     | 8.64                               | 25.16    | 29376 |
| 29377 | 50 mm <sup>2</sup> ditto.....   | 292.21         | 8.08                     | 9.71                               | 26.49    | 29377 |
| 29378 | 70 mm <sup>2</sup> ditto.....   | 374.24         | 8.60                     | 10.24                              | 28.49    | 29378 |
| 29379 | 95 mm <sup>2</sup> ditto.....   | 467.74         | 9.12                     | 11.23                              | 30.55    | 29379 |
| 29380 | 4 mm <sup>2</sup> 4-core.....   | 70.79          | 5.66                     | 7.06                               | 22.78    | 29380 |
| 29381 | 6 mm <sup>2</sup> ditto.....  | 86.37          | 5.87                     | 7.28                               | 23.52    | 29381 |
| 29382 | 10 mm <sup>2</sup> ditto.....   | 106.50         | 6.12                     | 7.57                               | 24.24    | 29382 |
| 29383 | 16 mm <sup>2</sup> ditto.....   | 138.83         | 6.72                     | 8.71                               | 25.16    | 29383 |
| 29384 | 25 mm <sup>2</sup> ditto.....   | 176.06         | 6.72                     | 8.86                               | 25.97    | 29384 |
| 29385 | 35 mm <sup>2</sup> ditto.....   | 235.11         | 7.29                     | 9.43                               | 28.75    | 29385 |
| 29386 | 50 mm <sup>2</sup> ditto.....   | 315.64         | 8.31                     | 10.48                              | 30.71    | 29386 |
| 29387 | 70 mm <sup>2</sup> ditto.....   | 398.59         | 8.88                     | 11.03                              | 33.38    | 29387 |
| 29388 | 95 mm <sup>2</sup> ditto.....   | 495.68         | 9.39                     | 12.08                              | 36.19    | 29388 |
| 29389 | 120 mm <sup>2</sup> ditto.....  | 625.09         | 9.94                     | 13.05                              | 40.38    | 29389 |
| 29390 | 150 mm <sup>2</sup> ditto.....  | 858.19         | 11.43                    | 14.53                              | 44.11    | 29390 |

| Item  |  |                |                          |                                    | Item     |       |
|-------|--|----------------|--------------------------|------------------------------------|----------|-------|
|       | <b>CABLES (COPPER) (CONT'D)</b>  |                |                          |                                    |          |       |
|       | 600/1000V XLPE/SWA/PVC cable to IEC 60502-1, laid in trenches (including suitable cable bed) or ducting (ducting, excavation and back-filling measured separately) :-<br>(Cont'd) :- | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only |       |
|       | <i>Per linear metre</i>  | A<br>\$        | B<br>\$                  | C<br>\$                            | D<br>\$  |       |
| 29391 | 185 mm <sup>2</sup> 4-core.....  | 878.94         | 12.17                    | 15.21                              | 48.01    | 29391 |
| 29392 | 240 mm <sup>2</sup> ditto.....   | 1,168.33       | 12.90                    | 16.29                              | 51.19    | 29392 |
| 29393 | 300 mm <sup>2</sup> ditto.....   | 1,352.60       | 13.66                    | 17.39                              | 55.01    | 29393 |
| 29394 | 400 mm <sup>2</sup> ditto.....   | 1,671.31       | 14.89                    | 18.07                              | 57.87    | 29394 |
|       | Multi-core twisted signal cable, AWG 24, unarmoured, c/w aluminum shield as :-   |                |                          |                                    |          |       |
|       | <i>Per linear metre</i>  |                |                          |                                    |          |       |
| 29395 | 1-pair.....  | 27.09          | 5.54                     | 6.77                               | 20.66    | 29395 |
| 29396 | 6-pair.....  | 79.08          | 14.19                    | 18.19                              | 55.40    | 29396 |
| 29397 | 10-pair.....   | 103.40         | 16.58                    | 19.76                              | 63.76    | 29397 |
|       | Multi-core twisted signal cable, fire resistant, to IEC60331 as :-   |                |                          |                                    |          |       |
|       | <i>Per linear metre</i>  |                |                          |                                    |          |       |
| 29398 | 1.5 mm <sup>2</sup> 2-core.....  | 24.67          | 5.54                     | 6.77                               | 20.66    | 29398 |
|       | 450/750V PVC insulated cable to IEC 60227, fixed with and including brass buckle clips or brass fasteners :-   |                |                          |                                    |          |       |
|       | <i>Per linear metre</i>  |                |                          |                                    |          |       |
| 29399 | 1.5 mm <sup>2</sup> 1-core.....  | 6.63           | 1.08                     | 1.44                               | 4.44     | 29399 |
| 29400 | 2.5 mm <sup>2</sup> ditto.....   | 7.57           | 1.08                     | 1.44                               | 4.44     | 29400 |
| 29401 | 4 mm <sup>2</sup> ditto.....   | 9.42           | 1.08                     | 1.44                               | 4.44     | 29401 |
| 29402 | 6 mm <sup>2</sup> ditto.....   | 11.50          | 1.08                     | 1.44                               | 4.44     | 29402 |
| 29403 | 10 mm <sup>2</sup> ditto.....  | 20.22          | 1.08                     | 1.44                               | 4.44     | 29403 |
| 29404 | 16 mm <sup>2</sup> ditto.....  | 25.74          | 1.44                     | 1.81                               | 5.52     | 29404 |
| 29405 | 25 mm <sup>2</sup> ditto.....  | 36.61          | 1.44                     | 1.81                               | 5.52     | 29405 |
| 29406 | 35 mm <sup>2</sup> ditto.....  | 53.20          | 1.76                     | 2.15                               | 6.34     | 29406 |
| 29407 | 50 mm <sup>2</sup> ditto.....  | 68.76          | 1.76                     | 2.15                               | 6.34     | 29407 |
| 29408 | 70 mm <sup>2</sup> ditto.....  | 94.20          | 3.05                     | 3.65                               | 9.95     | 29408 |
| 29409 | 95 mm <sup>2</sup> ditto.....  | 131.35         | 3.76                     | 4.31                               | 13.55    | 29409 |
| 29410 | 120 mm <sup>2</sup> ditto.....   | 179.32         | 4.55                     | 6.26                               | 16.30    | 29410 |

| Item                            |  | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only | Item  |
|---------------------------------|--|----------------|--------------------------|------------------------------------|----------|-------|
|                                 |  | A \$           | B \$                     | C \$                               | D \$     |       |
| <b>CABLES (COPPER) (CONT'D)</b> |  |                |                          |                                    |          |       |
|                                 | Cast iron cable end boxes, double loop in type. Suitable for cables with maximum cross sectional area of conductor up to : - |                |                          |                                    |          |       |
|                                 | <i>Each</i>  |                |                          |                                    |          |       |
| 29411                           | 2 x 16 mm <sup>2</sup> (conduit outlet).....   | 691.99         | 89.24                    | 111.35                             | 336.41   | 29411 |
| 29412                           | 2 x 16 mm <sup>2</sup> (PVC tails outlet).....   | 754.37         | 103.02                   | 128.77                             | 390.44   | 29412 |
| 29413                           | 16 mm <sup>2</sup> x 2-core (conduit outlet).....  | 737.43         | 93.40                    | 116.56                             | 352.77   | 29413 |
| 29414                           | 16 mm <sup>2</sup> x 2-core (PVC tails outlet).....  | 786.91         | 106.07                   | 132.82                             | 401.94   | 29414 |
| 29415                           | 1 x 16 mm <sup>2</sup> x 3-core (conduit outlet).....  | 785.39         | 95.34                    | 119.21                             | 361.48   | 29415 |
| 29416                           | 1 x 16 mm <sup>2</sup> x 3-core (PVC tails outlet).....  | 836.10         | 109.72                   | 136.98                             | 413.96   | 29416 |
|                                 | Cast iron cable end boxes, flat type, wall mounting : -  |                |                          |                                    |          |       |
|                                 | <i>Each</i>  |                |                          |                                    |          |       |
| 29417                           | 16 mm <sup>2</sup> x 4-core.....   | 751.01         | 91.81                    | 115.09                             | 346.83   | 29417 |
| 29418                           | 25 mm <sup>2</sup> x 4-core.....   | 798.41         | 97.34                    | 122.02                             | 368.45   | 29418 |
| 29419                           | 35 - 50 mm <sup>2</sup> x 3-core.....  | 914.87         | 104.04                   | 130.18                             | 393.01   | 29419 |
| 29420                           | 35 - 50 mm <sup>2</sup> x 4-core.....  | 1,055.60       | 113.86                   | 142.30                             | 431.18   | 29420 |
| 29421                           | 70 mm <sup>2</sup> x 4-core.....   | 1,207.46       | 129.79                   | 162.33                             | 490.96   | 29421 |
| 29422                           | 95 mm <sup>2</sup> x 4-core.....   | 1,310.11       | 137.33                   | 171.68                             | 520.25   | 29422 |
| 29423                           | 120 - 150 mm <sup>2</sup> x 4-core.....  | 1,489.98       | 140.36                   | 175.71                             | 532.30   | 29423 |
| 29424                           | 185 mm <sup>2</sup> x 4-core.....  | 1,784.32       | 146.84                   | 183.72                             | 555.76   | 29424 |
| 29425                           | 240 mm <sup>2</sup> x 4-core.....  | 2,099.71       | 163.46                   | 204.51                             | 618.55   | 29425 |
| 29426                           | 300 mm <sup>2</sup> x 4-core.....  | 2,349.33       | 179.94                   | 225.16                             | 680.42   | 29426 |

| Item  |  |                |                          |                                    | Item     |       |
|-------|--|----------------|--------------------------|------------------------------------|----------|-------|
|       | <b>SERVICE CABLE BOXES</b>   |                |                          |                                    |          |       |
|       | Service cable boxes, cast iron, for PVC insulated, sheathed and armoured cables, as comprising armoured bonds, claw connectors and filling with cold compound, fixed complete. Suitable for cables with maximum cross sectional area of conductor up to :-     | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only |       |
|       | <i>Each</i>  | A \$           | B \$                     | C \$                               | D \$     |       |
| 29427 | 16 - 25 mm <sup>2</sup> 2-core.....  | 856.57         | 111.32                   | -                                  | 421.80   | 29427 |
| 29428 | 35 - 50 mm <sup>2</sup> 2-core and 16 mm <sup>2</sup> 4-core.....  | 926.07         | 119.25                   | -                                  | 452.51   | 29428 |
| 29429 | 70 - 95 mm <sup>2</sup> 2-core and 25 - 50 mm <sup>2</sup> 4-core.....   | 1,206.98       | 131.83                   | -                                  | 488.51   | 29429 |
| 29430 | 120 - 185 mm <sup>2</sup> 2-core and 70 - 120 mm <sup>2</sup> 4-core.....  | 1,497.26       | 146.74                   | -                                  | 547.10   | 29430 |
| 29431 | 240 - 300 mm <sup>2</sup> 2-core and 150 - 185 mm <sup>2</sup> 4-core.....   | 2,140.72       | 166.21                   | -                                  | 628.53   | 29431 |
| 29432 | 400 mm <sup>2</sup> 2-core and 240 - 300 mm <sup>2</sup> 4-core.....   | 2,482.97       | 190.38                   | -                                  | 704.73   | 29432 |
|       | Straight through boxes, cast iron for PVC insulated, sheathed and armoured cables as comprising armoured bonds, jointing sleeves and filling with cold compounds, fixed complete. Suitable for cables with maximum cross sectional area of conductors up to :- |                |                          |                                    |          |       |
|       | <i>Each</i>  |                |                          |                                    |          |       |
| 29433 | 16 - 25 mm <sup>2</sup> 2-core.....  | 795.22         | 111.30                   | -                                  | 425.19   | 29433 |
| 29434 | 35 - 50 mm <sup>2</sup> 2-core and 16 mm <sup>2</sup> 4-core.....  | 955.81         | 121.47                   | -                                  | 463.66   | 29434 |
| 29435 | 70 - 95 mm <sup>2</sup> 2-core and 25 - 50 mm <sup>2</sup> 4-core.....   | 1,108.70       | 133.99                   | -                                  | 511.65   | 29435 |
| 29436 | 120 - 185 mm <sup>2</sup> 2-core and 70 - 120 mm <sup>2</sup> 4-core.....  | 1,481.78       | 147.00                   | -                                  | 561.52   | 29436 |
| 29437 | 240 - 300 mm <sup>2</sup> 2-core and 150 - 185 mm <sup>2</sup> 4-core.....   | 2,121.61       | 163.65                   | -                                  | 625.54   | 29437 |
| 29438 | 400 mm <sup>2</sup> 2-core and 240 - 300 mm <sup>2</sup> 4-core.....   | 2,759.66       | 188.60                   | -                                  | 720.49   | 29438 |

| Item  |  |                |                          |                                    | Item     |       |
|-------|--|----------------|--------------------------|------------------------------------|----------|-------|
|       | <b>SERVICE CABLE BOXES (CONT'D)</b>  |                |                          |                                    |          |       |
|       | Plastic straight through cable joint comprising armoured bonds, jointing sleeves and filling with cold compounds, fixed complete. Suitable for cables with maximum cross sectional area of conductor up to : - | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only |       |
|       | <i>Each</i>  | A \$           | B \$                     | C \$                               | D \$     |       |
| 29439 | 1.5 - 4 mm <sup>2</sup> 2-core.....  | 485.69         | 80.63                    | -                                  | 297.88   | 29439 |
| 29440 | 6 - 10 mm <sup>2</sup> 2-core.....   | 524.92         | 90.35                    | -                                  | 338.00   | 29440 |
| 29441 | 16 - 25 mm <sup>2</sup> 2-core.....  | 580.44         | 99.60                    | -                                  | 374.96   | 29441 |
| 29442 | 35 - 50 mm <sup>2</sup> 2-core and 16 mm <sup>2</sup> 4-core.....  | 739.29         | 109.37                   | -                                  | 411.55   | 29442 |
| 29443 | 70 - 95 mm <sup>2</sup> 2-core and 25 - 50 mm <sup>2</sup> 4-core.....   | 905.19         | 122.00                   | -                                  | 459.35   | 29443 |
| 29444 | 120 - 185 mm <sup>2</sup> 2-core and 70 - 120 mm <sup>2</sup> 4-core.....  | 1,810.45       | 132.50                   | -                                  | 498.36   | 29444 |
| 29445 | Link box for 240mm <sup>2</sup> 1 core MICS cable.....   | 1,551.36       | 17.84                    | 22.26                              | 67.60    | 29445 |
|       | Plastic tee cable joint comprising armoured bonds, jointing sleeves and filling with cold compounds, fixed complete. Suitable for cables with maximum cross sectional area of conductor up to : -              |                |                          |                                    |          |       |
|       | <i>Each</i>  |                |                          |                                    |          |       |
| 29446 | 1.5 - 6 mm <sup>2</sup> 2-core.....  | 785.48         | 79.00                    | -                                  | 291.87   | 29446 |



| Item  |  | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only | Item  |
|---|--|----------------|--------------------------|------------------------------------|----------|-------|
|   |  | A \$           | B \$                     | C \$                               | D \$     |       |
| <b>CABLE FIXING</b>   |  |                |                          |                                    |          |       |
| Terminating glands for PVC insulated steel wire armoured and PVC sheathed overall c/w PVC shroud suitable for cable of overall diameter with maximum outer sheath of :- |  |                |                          |                                    |          |       |
| <i>Each</i>   |  |                |                          |                                    |          |       |
| 29447   | 500 mm <sup>2</sup> 1-core.....                                      | 138.68         | 25.92                    | 32.26                              | 99.53    | 29447 |
| 29448   | 630 mm <sup>2</sup> ditto.....                                       | 138.68         | 25.92                    | 32.26                              | 99.53    | 29448 |
| 29449   | 800 mm <sup>2</sup> ditto.....                                       | 187.36         | 31.73                    | 39.63                              | 116.70   | 29449 |
| 29450   | 1000 mm <sup>2</sup> ditto.....                                      | 208.95         | 36.80                    | 46.92                              | 136.98   | 29450 |
| 29451   | 1.5 - 4 mm <sup>2</sup> 2-core.....                                  | 67.47          | 15.74                    | 19.66                              | 57.60    | 29451 |
| 29452   | 1.5 - 2.5 mm <sup>2</sup> 4-core, 6 - 10 mm <sup>2</sup> 2-core..... | 79.01          | 18.83                    | 23.25                              | 67.36    | 29452 |
| 29453   | 4 - 6 mm <sup>2</sup> 4-core, 16 - 35 mm <sup>2</sup> 2-core.....    | 90.13          | 20.25                    | 25.93                              | 74.39    | 29453 |
| 29454   | 10 - 35 mm <sup>2</sup> 4-core, 50 - 95 mm <sup>2</sup> 2-core.....  | 107.19         | 23.51                    | 29.35                              | 86.86    | 29454 |
| 29455   | 50 - 95 mm <sup>2</sup> 4-core.....                                  | 126.82         | 24.69                    | 31.97                              | 93.50    | 29455 |
| 29456   | 120 - 150 mm <sup>2</sup> ditto.....                                 | 136.41         | 25.69                    | 33.10                              | 96.93    | 29456 |
| 29457   | 185 mm <sup>2</sup> ditto.....                                       | 188.66         | 30.98                    | 38.45                              | 115.49   | 29457 |
| 29458   | 240 mm <sup>2</sup> ditto.....                                       | 209.31         | 37.18                    | 46.05                              | 135.42   | 29458 |
| 29459   | 300 mm <sup>2</sup> ditto.....                                       | 273.43         | 44.30                    | 55.52                              | 168.08   | 29459 |
| 29460   | 400 mm <sup>2</sup> ditto.....                                       | 349.16         | 51.45                    | 63.38                              | 188.99   | 29460 |
| PVC shroud only for PVC / SWA / PVCS cable of size :-   |  |                |                          |                                    |          |       |
| <i>Each</i>   |  |                |                          |                                    |          |       |
| 29461   | 1.5 - 4 mm <sup>2</sup> 2-core.....                                  | 7.50           | -                        | -                                  | -        | 29461 |
| 29462   | 1.5 - 2.5 mm <sup>2</sup> 4-core, 6 - 10 mm <sup>2</sup> 2-core..... | 11.28          | -                        | -                                  | -        | 29462 |
| 29463   | 4 - 6 mm <sup>2</sup> 4-core, 16 - 35 mm <sup>2</sup> 2-core.....    | 11.48          | -                        | -                                  | -        | 29463 |
| 29464   | 10 - 35 mm <sup>2</sup> 4-core, 50 - 95 mm <sup>2</sup> 2-core.....  | 20.50          | -                        | -                                  | -        | 29464 |
| 29465   | 50 - 95 mm <sup>2</sup> 4-core.....                                  | 21.46          | -                        | -                                  | -        | 29465 |
| 29466   | 120 - 150 mm <sup>2</sup> ditto.....                                 | 26.94          | -                        | -                                  | -        | 29466 |
| 29467   | 185 mm <sup>2</sup> ditto.....                                       | 31.17          | -                        | -                                  | -        | 29467 |
| 29468   | 240 mm <sup>2</sup> ditto.....                                       | 36.51          | -                        | -                                  | -        | 29468 |
| 29469   | 300 mm <sup>2</sup> ditto.....                                       | 45.52          | -                        | -                                  | -        | 29469 |
| 29470   | 400 mm <sup>2</sup> ditto.....                                       | 49.97          | -                        | -                                  | -        | 29470 |

| Item  |   |                |                          |                                    | Item     |       |
|-------|---|----------------|--------------------------|------------------------------------|----------|-------|
|       | <b>CABLE FIXING (CONT'D)</b>  |                |                          |                                    |          |       |
|       | Saddle clips or bridge, heavy gauge tinned brass, fixed to wood battens with round head brass screws (battens measured separately) :- | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only |       |
|       | <i>Each</i>   | A<br>\$        | B<br>\$                  | C<br>\$                            | D<br>\$  |       |
| 29471 | 20 x 40 mm.....   | 5.95           | 0.98                     | 1.14                               | 3.18     | 29471 |
| 29472 | 20 x 50 mm.....   | 6.30           | 0.98                     | 1.14                               | 3.18     | 29472 |
| 29473 | 20 x 60 mm.....   | 6.76           | 0.98                     | 1.14                               | 3.18     | 29473 |
| 29474 | 20 x 70 mm.....   | 8.52           | 1.08                     | 1.41                               | 4.32     | 29474 |
| 29475 | 20 x 80 mm.....   | 9.15           | 1.08                     | 1.41                               | 4.32     | 29475 |
| 29476 | 20 x 100 mm.....  | 9.87           | 1.08                     | 1.41                               | 4.32     | 29476 |
| 29477 | 20 x 120 mm.....  | 10.16          | 1.08                     | 1.41                               | 4.32     | 29477 |
|       | Complete termination for MICS cables :-   |                |                          |                                    |          |       |
|       | Including :-  |                |                          |                                    |          |       |
|       | (a) a complete seal, (brass pot, disc, compound and required number of 150 mm PVC insulating sleeves for the conductor) and           |                |                          |                                    |          |       |
|       | (b) a complete gland (gland body, gland nut and compression ring).  |                |                          |                                    |          |       |
|       | <i>Each</i>   |                |                          |                                    |          |       |
| 29478 | 6 mm <sup>2</sup> 1-core.....   | 48.02          | 10.04                    | 12.81                              | 39.01    | 29478 |
| 29479 | 10 mm <sup>2</sup> ditto.....   | 56.10          | 10.60                    | 13.46                              | 40.83    | 29479 |
| 29480 | 16 mm <sup>2</sup> ditto.....   | 67.49          | 11.77                    | 14.55                              | 43.70    | 29480 |
| 29481 | 25 mm <sup>2</sup> ditto.....   | 71.83          | 12.40                    | 15.26                              | 47.72    | 29481 |
| 29482 | 35 mm <sup>2</sup> - 50 mm <sup>2</sup> ditto.....  | 81.81          | 13.48                    | 17.15                              | 52.38    | 29482 |
| 29483 | 70 mm <sup>2</sup> ditto.....   | 89.21          | 15.66                    | 19.07                              | 58.66    | 29483 |
| 29484 | 95 mm <sup>2</sup> ditto.....   | 94.03          | 16.29                    | 20.76                              | 62.26    | 29484 |
| 29485 | 120 mm <sup>2</sup> ditto.....  | 98.60          | 17.33                    | 21.41                              | 66.52    | 29485 |
| 29486 | 150 mm <sup>2</sup> ditto.....  | 110.50         | 18.43                    | 22.33                              | 70.70    | 29486 |
| 29487 | 185 mm <sup>2</sup> ditto.....  | 124.67         | 19.01                    | 23.80                              | 75.22    | 29487 |
| 29488 | 240 mm <sup>2</sup> ditto.....  | 146.59         | 19.58                    | 24.03                              | 77.63    | 29488 |

| Item  |   |                |                          |                                    | Item     |       |
|-------|---|----------------|--------------------------|------------------------------------|----------|-------|
|       | <b>CABLE FIXING (CONT'D)</b>  |                |                          |                                    |          |       |
|       | Complete termination for MICS cables : - (Cont'd)   |                |                          |                                    |          |       |
|       | Including : -   |                |                          |                                    |          |       |
|       | (a) a complete seal, (brass pot, disc, compound and required number of 150 mm PVC insulating sleeves for the conductor) and |                |                          |                                    |          |       |
|       | (b) a complete gland (gland body, gland nut and compression ring).  |                |                          |                                    |          |       |
|       | <b>Each</b>   |                |                          |                                    |          |       |
|       |   | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only |       |
|       |   | A \$           | B \$                     | C \$                               | D \$     |       |
| 29489 | 1 mm <sup>2</sup> 2-core.....   | 76.16          | 12.71                    | 15.49                              | 47.18    | 29489 |
| 29490 | 1.5 mm <sup>2</sup> ditto.....  | 79.34          | 13.27                    | 16.87                              | 50.38    | 29490 |
| 29491 | 2.5 mm <sup>2</sup> ditto.....  | 85.72          | 14.38                    | 17.56                              | 55.16    | 29491 |
| 29492 | 4 mm <sup>2</sup> ditto.....  | 90.10          | 15.62                    | 19.32                              | 58.87    | 29492 |
| 29493 | 6 mm <sup>2</sup> ditto.....  | 94.10          | 16.30                    | 20.78                              | 62.26    | 29493 |
| 29494 | 10 mm <sup>2</sup> ditto.....   | 95.09          | 16.30                    | 20.78                              | 63.40    | 29494 |
| 29495 | 16 mm <sup>2</sup> ditto.....   | 102.39         | 16.85                    | 21.43                              | 67.57    | 29495 |
| 29496 | 25 mm <sup>2</sup> ditto.....   | 107.31         | 18.64                    | 22.81                              | 71.45    | 29496 |
| 29497 | 1.5 mm <sup>2</sup> 4-core.....   | 91.87          | 15.49                    | 18.94                              | 57.02    | 29497 |
| 29498 | 2.5 mm <sup>2</sup> ditto.....  | 97.32          | 16.30                    | 20.43                              | 61.84    | 29498 |
| 29499 | 4 mm <sup>2</sup> ditto.....  | 100.66         | 16.51                    | 20.74                              | 63.74    | 29499 |
| 29500 | 6 mm <sup>2</sup> ditto.....  | 103.55         | 17.52                    | 21.68                              | 65.88    | 29500 |
| 29501 | 10 mm <sup>2</sup> ditto.....   | 107.11         | 17.52                    | 21.68                              | 68.11    | 29501 |
| 29502 | 16 mm <sup>2</sup> ditto.....   | 112.10         | 18.64                    | 22.57                              | 72.02    | 29502 |
| 29503 | 25 mm <sup>2</sup> ditto.....   | 136.81         | 19.20                    | 24.11                              | 76.85    | 29503 |
|       | Cables cleats, 2-bolt cleat for cable with overall diameter of the following : -  |                |                          |                                    |          |       |
|       | <b>Each</b>   |                |                          |                                    |          |       |
| 29504 | 50 mm - 75 mm.....  | 24.92          | 4.26                     | 5.47                               | 15.26    | 29504 |
| 29505 | 75 mm - 100 mm.....   | 37.72          | 5.37                     | 6.62                               | 20.36    | 29505 |
|       | Cable tiles approved type (sample to be produced) : -   |                |                          |                                    |          |       |
|       | <b>Each</b>   |                |                          |                                    |          |       |
| 29506 | 450 x 100 x 25 mm.....  | 14.10          | 1.09                     | 1.48                               | 4.40     | 29506 |
| 29507 | 600 x 175 x 50 mm.....  | 21.91          | 1.48                     | 2.19                               | 6.60     | 29507 |

| Item  |  | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only | Item  |
|---|--|----------------|--------------------------|------------------------------------|----------|-------|
|   |  | A<br>\$        | B<br>\$                  | C<br>\$                            | D<br>\$  |       |
| <b>CABLE FIXING (CONT'D)</b>  |  |                |                          |                                    |          |       |
| Cable sockets, forged copper, tinned, for the following size single core cables : - |  |                |                          |                                    |          |       |
| <i>Each</i>   |  |                |                          |                                    |          |       |
| 29508   | 2.5 mm <sup>2</sup> .....                          | 6.48           | -                        | -                                  | 6.09     | 29508 |
| 29509   | 4 mm <sup>2</sup> .....                            | 9.31           | -                        | -                                  | 8.69     | 29509 |
| 29510   | 6 mm <sup>2</sup> .....                            | 9.46           | -                        | -                                  | 8.79     | 29510 |
| 29511   | 10 mm <sup>2</sup> .....                           | 10.50          | -                        | -                                  | 9.90     | 29511 |
| 29512   | 16 mm <sup>2</sup> .....                           | 11.66          | -                        | -                                  | 10.77    | 29512 |
| 29513   | 25 mm <sup>2</sup> .....                           | 12.13          | -                        | -                                  | 10.83    | 29513 |
| 29514   | 35 mm <sup>2</sup> .....                           | 15.72          | -                        | -                                  | 14.14    | 29514 |
| 29515   | 50 mm <sup>2</sup> .....                           | 18.43          | -                        | -                                  | 15.89    | 29515 |
| 29516   | 70 mm <sup>2</sup> .....                           | 23.57          | -                        | -                                  | 19.16    | 29516 |
| 29517   | 95 mm <sup>2</sup> .....                           | 29.70          | -                        | -                                  | 23.95    | 29517 |
| 29518   | 120 mm <sup>2</sup> .....                          | 36.37          | -                        | -                                  | 28.08    | 29518 |
| 29519   | 150 mm <sup>2</sup> .....                          | 42.46          | -                        | -                                  | 31.46    | 29519 |
| 29520   | 185 mm <sup>2</sup> .....                          | 50.69          | -                        | -                                  | 36.15    | 29520 |
| 29521   | 240 mm <sup>2</sup> .....                          | 61.25          | -                        | -                                  | 40.36    | 29521 |
| 29522   | 300 mm <sup>2</sup> .....                          | 74.67          | -                        | -                                  | 45.45    | 29522 |
| 29523   | 400 mm <sup>2</sup> .....                          | 95.34          | -                        | -                                  | 52.76    | 29523 |
| 29524   | 500 mm <sup>2</sup> .....                          | 116.40         | -                        | -                                  | 58.36    | 29524 |
| 29525   | 630 mm <sup>2</sup> .....                          | 156.74         | -                        | -                                  | 64.73    | 29525 |
| 29526   | 800 mm <sup>2</sup> .....                          | 242.77         | -                        | -                                  | 73.50    | 29526 |
| 29527   | 1000 mm <sup>2</sup> .....                         | 311.34         | -                        | -                                  | 85.42    | 29527 |
| Cable marker : -  |  |                |                          |                                    |          |       |
| <i>Each</i>   |  |                |                          |                                    |          |       |
| 29528   | Concrete cable marker 230 x 180 x 100 mm.....      | 48.79          | 2.40                     | 2.92                               | 8.24     | 29528 |
| 29529   | Cable tape off unit with insulating shroud.....    | 72.52          | 6.99                     | 8.78                               | 26.77    | 29529 |
| Jointing compound : -   |  |                |                          |                                    |          |       |
| <i>Per kg</i>   |  |                |                          |                                    |          |       |
| 29530   | Jointing compound, cold pouring (Supply only)..... | 113.39         | -                        | -                                  | -        | 29530 |

| Item  |   |                |                          |                                    | Item     |       |
|-------|---|----------------|--------------------------|------------------------------------|----------|-------|
|       | <b>BUSBAR TRUNKING AND BUS DUCT</b>   |                |                          |                                    |          |       |
|       | Busbar trunking, IP54, all-insulated, TPN, c/w ends, elbows and tee units, etc., copper busbar, trunking, supports, hangers, fixing accessories, labels and warning notice of the rated current : - | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only |       |
|       | <i>Per linear metre</i>   | A \$           | B \$                     | C \$                               | D \$     |       |
| 29531 | 600A.....   | 4,635.63       | 85.01                    | 127.02                             | 444.10   | 29531 |
| 29532 | 800A.....   | 4,890.70       | 148.22                   | 189.74                             | 666.04   | 29532 |
| 29533 | 1000A.....  | 5,628.00       | 171.93                   | 220.17                             | 775.91   | 29533 |
| 29534 | 1200A.....  | 7,005.71       | 196.32                   | 251.84                             | 888.12   | 29534 |
| 29535 | 1350A.....  | 7,696.63       | 212.37                   | 271.78                             | 948.98   | 29535 |
| 29536 | 1600A.....  | 8,890.79       | 235.51                   | 300.83                             | 1,049.19 | 29536 |
| 29537 | 2000A.....  | 10,440.28      | 258.63                   | 330.52                             | 1,156.07 | 29537 |
| 29538 | 2500A.....  | 14,280.62      | 284.22                   | 364.20                             | 1,262.03 | 29538 |
|       | Busbar trunking, IP65, all-insulated, TPN, c/w ends, elbows and tee units, etc., copper busbar, trunking, supports, hangers, fixing accessories, labels and warning notice of the rated current : - |                |                          |                                    |          |       |
|       | <i>Per linear metre</i>   |                |                          |                                    |          |       |
| 29539 | 600A.....   | 4,784.36       | 84.68                    | 126.54                             | 442.39   | 29539 |
| 29540 | 800A.....   | 5,040.91       | 147.64                   | 189.00                             | 663.49   | 29540 |
| 29541 | 1000A.....  | 5,796.96       | 171.28                   | 219.33                             | 772.95   | 29541 |
| 29542 | 1200A.....  | 7,173.26       | 195.56                   | 250.90                             | 884.72   | 29542 |
| 29543 | 1350A.....  | 7,923.79       | 211.54                   | 270.76                             | 945.37   | 29543 |
| 29544 | 1600A.....  | 9,197.06       | 234.59                   | 299.69                             | 1,045.18 | 29544 |
| 29545 | 2000A.....  | 10,704.20      | 257.64                   | 329.29                             | 1,151.66 | 29545 |
| 29546 | 2500A.....  | 14,641.36      | 283.14                   | 362.80                             | 1,257.28 | 29546 |

| Item  |   |                |                          |                                    | Item     |       |
|-------|---|----------------|--------------------------|------------------------------------|----------|-------|
|       | <b>BUSBAR TRUNKING AND BUS DUCT (CONT'D)</b>  |                |                          |                                    |          |       |
|       | Busbar trunking, IP66, all-insulated, TPN, c/w ends, elbows and tee units, etc., copper busbar, trunking, supports, hangers, fixing accessories, labels and warning notice of the rated current : - | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only |       |
|       | <i>Per linear metre</i>   | A \$           | B \$                     | C \$                               | D \$     |       |
| 29547 | 600A.....   | 5,014.74       | 84.68                    | 126.54                             | 442.39   | 29547 |
| 29548 | 800A.....   | 5,282.73       | 147.64                   | 189.00                             | 663.49   | 29548 |
| 29549 | 1000A.....  | 6,007.40       | 171.28                   | 219.33                             | 772.95   | 29549 |
| 29550 | 1200A.....  | 7,380.65       | 195.56                   | 250.90                             | 884.72   | 29550 |
| 29551 | 1350A.....  | 8,103.49       | 211.58                   | 270.76                             | 945.37   | 29551 |
| 29552 | 1600A.....  | 9,291.75       | 234.59                   | 299.69                             | 1,045.18 | 29552 |
| 29553 | 2000A.....  | 10,753.52      | 257.64                   | 329.29                             | 1,151.66 | 29553 |
| 29554 | 2500A.....  | 15,280.57      | 283.14                   | 362.80                             | 1,257.28 | 29554 |
|       | Cable tap box, TPN metal clad with copper busbars for all-insulated totally enclosed plug-in type or feeder type busduct of the rated current : -   |                |                          |                                    |          |       |
|       | <i>Each</i>   |                |                          |                                    |          |       |
| 29555 | 600A.....   | 10,556.83      | 95.22                    | 142.74                             | 502.39   | 29555 |
| 29556 | 800A.....   | 11,639.12      | 114.15                   | 171.45                             | 602.24   | 29556 |
| 29557 | 1000A.....  | 12,634.65      | 132.62                   | 199.03                             | 704.83   | 29557 |
| 29558 | 1200A.....  | 13,081.72      | 151.45                   | 226.25                             | 806.97   | 29558 |
| 29559 | 1350A.....  | 15,312.91      | 168.27                   | 252.33                             | 898.47   | 29559 |
| 29560 | 1600A.....  | 16,354.45      | 185.09                   | 277.47                             | 988.02   | 29560 |
| 29561 | 2000A.....  | 18,025.75      | 203.82                   | 306.17                             | 1,095.70 | 29561 |
| 29562 | 2500A.....  | 26,336.62      | 230.39                   | 344.39                             | 1,243.12 | 29562 |

| Item  |  |                |                          |                                    | Item     |       |
|-------|--|----------------|--------------------------|------------------------------------|----------|-------|
|       | <b>BUSBAR TRUNKING AND BUS DUCT (CONT'D)</b>   |                |                          |                                    |          |       |
|       | 90° elbow, edgewise or flatwise, IP54, with copper busbar, trunking, weatherproof type for all-insulated totally enclosed TPN copper busduct of the rated current (linear length excluded and measured separately) : - | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only |       |
|       | <i>Each</i>  | A \$           | B \$                     | C \$                               | D \$     |       |
| 29563 | 600A.....  | 3,904.33       | 94.64                    | 141.88                             | 499.38   | 29563 |
| 29564 | 800A.....  | 4,034.00       | 113.47                   | 170.42                             | 598.64   | 29564 |
| 29565 | 1000A.....   | 4,342.91       | 131.83                   | 197.87                             | 700.57   | 29565 |
| 29566 | 1200A.....   | 4,786.35       | 150.56                   | 224.94                             | 802.10   | 29566 |
| 29567 | 1350A.....   | 5,084.79       | 168.27                   | 252.33                             | 898.47   | 29567 |
| 29568 | 1600A.....   | 5,500.14       | 185.09                   | 277.47                             | 988.02   | 29568 |
| 29569 | 2000A.....   | 6,011.31       | 203.82                   | 306.17                             | 1,095.70 | 29569 |
| 29570 | 2500A.....   | 8,300.15       | 230.39                   | 344.39                             | 1,243.12 | 29570 |
|       | 90° elbow, edgewise or flatwise, IP65, with copper busbar, trunking, weatherproof type for all-insulated totally enclosed TPN copper busduct of the rated current (linear length excluded and measured separately) : - |                |                          |                                    |          |       |
|       | <i>Each</i>  |                |                          |                                    |          |       |
| 29571 | 600A.....  | 4,005.68       | 94.64                    | 141.88                             | 499.38   | 29571 |
| 29572 | 800A.....  | 4,135.87       | 113.47                   | 170.42                             | 598.61   | 29572 |
| 29573 | 1000A.....   | 4,448.88       | 131.83                   | 197.87                             | 700.57   | 29573 |
| 29574 | 1200A.....   | 4,903.04       | 150.56                   | 224.94                             | 802.10   | 29574 |
| 29575 | 1350A.....   | 5,208.00       | 168.27                   | 252.33                             | 898.47   | 29575 |
| 29576 | 1600A.....   | 5,633.47       | 185.09                   | 277.47                             | 988.02   | 29576 |
| 29577 | 2000A.....   | 6,156.22       | 203.82                   | 306.17                             | 1,095.70 | 29577 |
| 29578 | 2500A.....   | 8,449.62       | 230.39                   | 344.39                             | 1,243.12 | 29578 |

| Item  |   |                |                          |                                    | Item     |       |
|-------|---|----------------|--------------------------|------------------------------------|----------|-------|
|       | <b>BUSBAR TRUNKING AND BUS DUCT (CONT'D)</b>  |                |                          |                                    |          |       |
|       | 90° elbow, edgewise or flatwise, IP66, with copper busbar, trunking, weatherproof type for all-insulated totally enclosed TPN copper busduct of the rated current (linear length excluded and measured separately) :- |                |                          |                                    |          |       |
|       | <i>Each</i>   | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only |       |
|       |   | A \$           | B \$                     | C \$                               | D \$     |       |
| 29579 | 600A.....   | 4,203.18       | 94.83                    | 142.17                             | 500.39   | 29579 |
| 29580 | 800A.....   | 4,334.12       | 113.68                   | 170.75                             | 599.82   | 29580 |
| 29581 | 1000A.....  | 4,613.32       | 132.07                   | 198.26                             | 702.00   | 29581 |
| 29582 | 1200A.....  | 5,068.82       | 150.85                   | 225.38                             | 803.74   | 29582 |
| 29583 | 1350A.....  | 5,369.30       | 168.59                   | 252.85                             | 900.32   | 29583 |
| 29584 | 1600A.....  | 5,772.68       | 185.47                   | 278.05                             | 990.05   | 29584 |
| 29585 | 2000A.....  | 6,264.51       | 204.22                   | 306.78                             | 1,097.96 | 29585 |
| 29586 | 2500A.....  | 8,975.40       | 230.88                   | 345.09                             | 1,245.71 | 29586 |
|       | Combination elbow, IP54, for all-insulated totally enclosed TPN copper busbar trunking of the rated current (linear length excluded and measured separately) :-   |                |                          |                                    |          |       |
|       | <i>Each</i>   |                |                          |                                    |          |       |
| 29587 | 600A.....   | 7,569.72       | 150.85                   | 225.38                             | 803.74   | 29587 |
| 29588 | 800A.....   | 7,784.87       | 180.56                   | 270.53                             | 964.35   | 29588 |
| 29589 | 1000A.....  | 8,356.24       | 209.78                   | 315.27                             | 1,125.22 | 29589 |
| 29590 | 1200A.....  | 9,195.34       | 239.86                   | 358.90                             | 1,284.97 | 29590 |
| 29591 | 1350A.....  | 9,751.00       | 265.13                   | 396.23                             | 1,420.64 | 29591 |
| 29592 | 1600A.....  | 10,542.40      | 291.56                   | 437.65                             | 1,563.09 | 29592 |
| 29593 | 2000A.....  | 11,520.51      | 321.86                   | 482.66                             | 1,721.85 | 29593 |
| 29594 | 2500A.....  | 16,023.20      | 363.46                   | 545.37                             | 1,946.58 | 29594 |
|       | Combination elbow, IP65, for all-insulated totally enclosed TPN copper busbar trunking of the rated current (linear length excluded and measured separately) :-   |                |                          |                                    |          |       |
|       | <i>Each</i>   |                |                          |                                    |          |       |
| 29595 | 600A.....   | 7,771.86       | 150.85                   | 225.38                             | 803.74   | 29595 |
| 29596 | 800A.....   | 7,988.12       | 180.56                   | 270.53                             | 964.35   | 29596 |
| 29597 | 1000A.....  | 8,567.73       | 209.78                   | 315.27                             | 1,125.22 | 29597 |
| 29598 | 1200A.....  | 9,428.09       | 239.86                   | 358.90                             | 1,284.97 | 29598 |
| 29599 | 1350A.....  | 9,996.73       | 265.13                   | 396.23                             | 1,420.64 | 29599 |



| Item  |  |                      |                                      |  | Item        |       |
|-------|--|----------------------|--------------------------------------|--|-------------|-------|
|       | <b>BUSBAR TRUNKING AND BUS DUCT (CONT'D)</b>   |                      |                                      |  |             |       |
|       | Combination elbow, IP65, for all-insulated totally enclosed TPN copper busbar trunking of the rated current (linear length excluded and measured separately) :- (Cont'd) |                      |                                      |  |             |       |
|       |  | Supply<br>and<br>fix | Take<br>down<br>and<br>clear<br>away | Take<br>down<br>and set<br>aside for<br>re-use | Fix<br>only |       |
|       | <b>Each</b>  | A<br>\$              | B<br>\$                              | C<br>\$  | D<br>\$     |       |
| 29600 | 1600A.....   | 10,808.46            | 291.56                               | 437.65   | 1,563.09    | 29600 |
| 29601 | 2000A.....   | 11,809.73            | 321.86                               | 482.66   | 1,721.85    | 29601 |
| 29602 | 2500A.....   | 16,437.17            | 363.46                               | 545.37   | 1,946.58    | 29602 |
|       | Combination elbow, IP66, for all-insulated totally enclosed TPN copper busbar trunking of the rated current (linear length excluded and measured separately) :-          |                      |                                      |  |             |       |
|       | <b>Each</b>  |                      |                                      |  |             |       |
| 29603 | 600A.....  | 8,202.48             | 151.45                               | 226.27   | 806.97      | 29603 |
| 29604 | 800A.....  | 8,421.44             | 181.26                               | 271.58   | 968.24      | 29604 |
| 29605 | 1000A.....   | 8,935.82             | 210.59                               | 316.51   | 1,129.74    | 29605 |
| 29606 | 1200A.....   | 9,803.11             | 240.79                               | 360.33   | 1,290.14    | 29606 |
| 29607 | 1350A.....   | 10,365.36            | 266.17                               | 397.78   | 1,426.33    | 29607 |
| 29608 | 1600A.....   | 11,136.34            | 292.65                               | 439.34   | 1,569.33    | 29608 |
| 29609 | 2000A.....   | 12,079.85            | 323.13                               | 484.53   | 1,728.73    | 29609 |
| 29610 | 2500A.....   | 17,448.25            | 364.86                               | 547.48   | 1,954.34    | 29610 |
|       | End closer, IP54, for all-insulated totally enclosed TPN copper busbar trunking of the rated current (linear length excluded and measured separately) :-                 |                      |                                      |  |             |       |
|       | <b>Each</b>  |                      |                                      |  |             |       |
| 29611 | 600A.....  | 938.65               | 52.91                                | 79.80  | 274.71      | 29611 |
| 29612 | 800A.....  | 989.64               | 58.60                                | 87.83  | 302.36      | 29612 |
| 29613 | 1000A.....   | 1,023.45             | 63.75                                | 95.37  | 329.88      | 29613 |
| 29614 | 1200A.....   | 1,067.09             | 69.26                                | 102.89   | 358.07      | 29614 |
| 29615 | 1350A.....   | 1,108.77             | 73.79                                | 110.68   | 385.30      | 29615 |
| 29616 | 1600A.....   | 1,183.66             | 82.03                                | 122.55   | 428.48      | 29616 |
| 29617 | 2000A.....   | 1,258.96             | 90.46                                | 135.90   | 472.53      | 29617 |
| 29618 | 2500A.....   | 1,435.48             | 102.46                               | 154.00   | 537.38      | 29618 |

| Item   |            | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only | Item  |
|--|------------|----------------|--------------------------|------------------------------------|----------|-------|
|  |            | A              | B                        | C                                  | D        |       |
|  |            | \$             | \$                       | \$                                 | \$       |       |
| <b>BUSBAR TRUNKING AND BUS DUCT (CONT'D)</b>   |            |                |                          |                                    |          |       |
| End closer, IP65, for all-insulated totally enclosed TPN copper busbar trunking of the rated current (linear length excluded and measured separately) :- |            |                |                          |                                    |          |       |
| <i>Each</i>  |            |                |                          |                                    |          |       |
| 29619  | 600A.....  | 938.65         | 52.91                    | 79.80                              | 274.71   | 29619 |
| 29620  | 800A.....  | 989.64         | 58.60                    | 87.83                              | 302.36   | 29620 |
| 29621  | 1000A..... | 1,023.45       | 63.75                    | 95.37                              | 329.88   | 29621 |
| 29622  | 1200A..... | 1,067.09       | 69.26                    | 102.89                             | 358.07   | 29622 |
| 29623  | 1350A..... | 1,108.77       | 73.79                    | 110.68                             | 385.30   | 29623 |
| 29624  | 1600A..... | 1,183.66       | 82.03                    | 122.55                             | 428.49   | 29624 |
| 29625  | 2000A..... | 1,258.96       | 90.46                    | 135.90                             | 472.53   | 29625 |
| 29626  | 2500A..... | 1,435.48       | 102.46                   | 154.00                             | 537.38   | 29626 |
| End closer, IP66, for all-insulated totally enclosed TPN copper busbar trunking of the rated current (linear length excluded and measured separately) :- |            |                |                          |                                    |          |       |
| <i>Each</i>  |            |                |                          |                                    |          |       |
| 29627  | 600A.....  | 938.65         | 52.60                    | 79.32                              | 273.09   | 29627 |
| 29628  | 800A.....  | 989.64         | 58.26                    | 87.29                              | 300.57   | 29628 |
| 29629  | 1000A..... | 1,023.45       | 63.37                    | 94.78                              | 327.95   | 29629 |
| 29630  | 1200A..... | 1,067.09       | 68.85                    | 102.29                             | 355.94   | 29630 |
| 29631  | 1350A..... | 1,108.77       | 73.34                    | 110.03                             | 383.00   | 29631 |
| 29632  | 1600A..... | 1,183.66       | 81.54                    | 121.83                             | 425.94   | 29632 |
| 29633  | 2000A..... | 1,258.96       | 89.92                    | 135.10                             | 469.71   | 29633 |
| 29634  | 2500A..... | 1,435.48       | 101.87                   | 153.10                             | 534.21   | 29634 |

| Item  |            | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only | Item  |
|---|------------|----------------|--------------------------|------------------------------------|----------|-------|
|   |            | A              | B                        | C                                  | D        |       |
|   |            | \$             | \$                       | \$                                 | \$       |       |
| <b>BUSBAR TRUNKING AND BUS DUCT (CONT'D)</b>  |            |                |                          |                                    |          |       |
| Expansion joint, IP54, for all-insulated totally enclosed TPN copper busbar trunking of the rated current (linear length excluded and measured separately) :- |            |                |                          |                                    |          |       |
| <i>Each</i>   |            |                |                          |                                    |          |       |
| 29635   | 600A.....  | 10,942.78      | 94.64                    | 141.88                             | 499.38   | 29635 |
| 29636   | 800A.....  | 11,227.47      | 113.47                   | 170.42                             | 598.61   | 29636 |
| 29637   | 1000A..... | 11,269.93      | 131.83                   | 197.87                             | 700.57   | 29637 |
| 29638   | 1200A..... | 12,394.94      | 150.56                   | 224.94                             | 802.10   | 29638 |
| 29639   | 1350A..... | 13,992.62      | 168.27                   | 252.33                             | 898.47   | 29639 |
| 29640   | 1600A..... | 14,584.51      | 185.09                   | 277.47                             | 988.02   | 29640 |
| 29641   | 2000A..... | 15,075.86      | 203.82                   | 306.17                             | 1,095.70 | 29641 |
| 29642   | 2500A..... | 20,806.34      | 230.39                   | 344.39                             | 1,243.12 | 29642 |
| Expansion joint, IP65, for all-insulated totally enclosed TPN copper busbar trunking of the rated current (linear length excluded and measured separately) :- |            |                |                          |                                    |          |       |
| <i>Each</i>   |            |                |                          |                                    |          |       |
| 29643   | 600A.....  | 10,942.78      | 94.64                    | 141.88                             | 499.38   | 29643 |
| 29644   | 800A.....  | 11,227.47      | 113.47                   | 170.42                             | 598.61   | 29644 |
| 29645   | 1000A..... | 11,269.93      | 131.83                   | 197.87                             | 700.57   | 29645 |
| 29646   | 1200A..... | 12,394.94      | 150.56                   | 224.94                             | 802.10   | 29646 |
| 29647   | 1350A..... | 13,992.62      | 168.27                   | 252.33                             | 898.47   | 29647 |
| 29648   | 1600A..... | 14,584.51      | 185.09                   | 277.47                             | 988.02   | 29648 |
| 29649   | 2000A..... | 15,075.86      | 203.82                   | 306.17                             | 1,095.70 | 29649 |
| 29650   | 2500A..... | 20,806.34      | 230.39                   | 344.39                             | 1,243.12 | 29650 |

| Item  |            | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only | Item  |
|---|------------|----------------|--------------------------|------------------------------------|----------|-------|
|   |            | A              | B                        | C                                  | D        |       |
|   |            | \$             | \$                       | \$                                 | \$       |       |
| <b>BUSBAR TRUNKING AND BUS DUCT (CONT'D)</b>  |            |                |                          |                                    |          |       |
| Expansion joint, IP66, for all-insulated totally enclosed TPN copper busbar trunking of the rated current (linear length excluded and measured separately) :- |            |                |                          |                                    |          |       |
| <i>Each</i>   |            |                |                          |                                    |          |       |
| 29651   | 600A.....  | 10,919.03      | 94.83                    | 142.17                             | 500.39   | 29651 |
| 29652   | 800A.....  | 11,203.03      | 113.68                   | 170.79                             | 599.82   | 29652 |
| 29653   | 1000A..... | 11,245.57      | 132.07                   | 198.26                             | 702.00   | 29653 |
| 29654   | 1200A..... | 12,368.15      | 150.85                   | 225.38                             | 803.74   | 29654 |
| 29655   | 1350A..... | 13,962.44      | 168.59                   | 252.85                             | 900.32   | 29655 |
| 29656   | 1600A..... | 14,552.77      | 185.47                   | 278.01                             | 990.05   | 29656 |
| 29657   | 2000A..... | 15,043.12      | 204.22                   | 306.78                             | 1,097.96 | 29657 |
| 29658   | 2500A..... | 20,760.96      | 230.88                   | 345.09                             | 1,245.71 | 29658 |
| Flanged end, weatherproof type for all-insulated totally enclosed TPN copper busduct of the rated current (linear length excluded and measured separately) :- |            |                |                          |                                    |          |       |
| <i>Each</i>   |            |                |                          |                                    |          |       |
| 29659   | 600A.....  | 2,651.77       | 52.70                    | 79.48                              | 273.63   | 29659 |
| 29660   | 800A.....  | 2,922.70       | 58.36                    | 87.46                              | 301.16   | 29660 |
| 29661   | 1000A..... | 2,982.39       | 63.52                    | 94.98                              | 328.60   | 29661 |
| 29662   | 1200A..... | 3,293.43       | 68.97                    | 102.53                             | 356.67   | 29662 |
| 29663   | 1350A..... | 3,472.57       | 73.48                    | 110.25                             | 383.79   | 29663 |
| 29664   | 1600A..... | 3,839.25       | 81.72                    | 122.09                             | 426.81   | 29664 |
| 29665   | 2000A..... | 4,290.80       | 90.13                    | 135.37                             | 470.67   | 29665 |
| 29666   | 2500A..... | 6,190.69       | 102.06                   | 153.41                             | 535.27   | 29666 |

| Item   |  | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only | Item  |
|--|--|----------------|--------------------------|------------------------------------|----------|-------|
|  |  | A \$           | B \$                     | C \$                               | D \$     |       |
| <b>BUSBAR TRUNKING AND BUS DUCT (CONT'D)</b> |  |                |                          |                                    |          |       |
|  | Fuseswitch TPN, metal clad, plug-in type c/w HRC fuses for all-insulated totally enclosed TPN copper busduct of the rated current :-   |                |                          |                                    |          |       |
|  | <i>Each</i>  |                |                          |                                    |          |       |
| 29667  | 200A.....  | 6,470.22       | 131.39                   | 172.54                             | 605.48   | 29667 |
| 29668  | 400A.....  | 11,321.38      | 171.57                   | 225.38                             | 803.74   | 29668 |
| 29669  | 600A.....  | 15,201.11      | 219.33                   | 287.78                             | 1,027.31 | 29669 |
|  | Busduct, TPN copper busbars, all-insulated, totally enclosed, indoor feeder type c/w ends, elbows, tee unit, supports, hangers, fixing accessories, etc. of the rated current :- |                |                          |                                    |          |       |
|  | <i>Per linear metre</i>  |                |                          |                                    |          |       |
| 29670  | 600A.....  | 4,214.26       | 85.86                    | 127.83                             | 440.72   | 29670 |
| 29671  | 800A.....  | 4,374.97       | 101.35                   | 151.03                             | 522.81   | 29671 |
| 29672  | 1000A.....   | 5,058.99       | 116.52                   | 174.82                             | 602.70   | 29672 |
| 29673  | 1200A.....   | 6,385.30       | 132.16                   | 197.54                             | 686.03   | 29673 |
| 29674  | 1350A.....   | 7,052.50       | 146.14                   | 219.33                             | 754.77   | 29674 |
| 29675  | 1600A.....   | 8,181.58       | 162.12                   | 242.07                             | 836.85   | 29675 |
| 29676  | 2000A.....   | 9,548.05       | 178.83                   | 268.24                             | 927.61   | 29676 |
| 29677  | 2500A.....   | 13,088.18      | 197.76                   | 295.90                             | 1,020.74 | 29677 |
|  | Busduct, TPN copper busbars, all-insulated totally enclosed, indoor plug-in type c/w ends, elbows, tee unit, supports, hangers, fixing accessories, etc. of the rated current :- |                |                          |                                    |          |       |
|  | <i>Per linear metre</i>  |                |                          |                                    |          |       |
| 29678  | 600A.....  | 4,942.55       | 85.86                    | 127.83                             | 456.96   | 29678 |
| 29679  | 800A.....  | 5,113.92       | 101.35                   | 151.03                             | 522.81   | 29679 |
| 29680  | 1000A.....   | 5,832.56       | 116.52                   | 174.82                             | 602.70   | 29680 |
| 29681  | 1200A.....   | 7,135.49       | 132.16                   | 197.54                             | 686.03   | 29681 |
| 29682  | 1350A.....   | 7,816.08       | 146.14                   | 219.33                             | 754.77   | 29682 |
| 29683  | 1600A.....   | 9,043.74       | 162.12                   | 242.07                             | 836.85   | 29683 |
| 29684  | 2000A.....   | 10,490.95      | 178.83                   | 268.24                             | 927.61   | 29684 |
| 29685  | 2500A.....   | 14,811.80      | 197.76                   | 295.90                             | 1,020.74 | 29685 |

| Item   |   | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only | Item  |
|--|---|----------------|--------------------------|------------------------------------|----------|-------|
|  |   | A \$           | B \$                     | C \$                               | D \$     |       |
| <b>BUSBAR TRUNKING AND BUS DUCT (CONT'D)</b> |   |                |                          |                                    |          |       |
|  | MCCB, TPN, metal clad, plug-in type, minimum 40kA at 380V, for all-insulated totally enclosed TPN copper busduct of the rated current :-                                      |                |                          |                                    |          |       |
|  | <i>Each</i>   |                |                          |                                    |          |       |
| 29686  | 200A.....   | 7,388.68       | 136.36                   | 174.82                             | 602.70   | 29686 |
| 29687  | 400A.....   | 11,658.84      | 178.04                   | 228.78                             | 789.84   | 29687 |
| 29688  | 600A.....   | 15,007.05      | 227.11                   | 291.51                             | 1,007.57 | 29688 |
|  | Busduct, TPN copper busbars, all-insulated totally enclosed, outdoor feeder c/w ends, elbows, tee unit, supports, hangers, fixing accessories, etc. of the rated current :-   |                |                          |                                    |          |       |
|  | <i>Per linear metre</i>   |                |                          |                                    |          |       |
| 29689  | 600A.....   | 4,951.89       | 85.18                    | 126.83                             | 437.33   | 29689 |
| 29690  | 800A.....   | 5,084.14       | 100.57                   | 149.85                             | 518.76   | 29690 |
| 29691  | 1000A.....  | 5,345.83       | 115.62                   | 173.47                             | 598.07   | 29691 |
| 29692  | 1200A.....  | 6,392.64       | 131.13                   | 196.03                             | 680.77   | 29692 |
| 29693  | 1350A.....  | 7,037.66       | 145.03                   | 217.64                             | 748.98   | 29693 |
| 29694  | 1600A.....  | 8,061.87       | 160.88                   | 240.21                             | 830.46   | 29694 |
| 29695  | 2000A.....  | 9,365.44       | 177.45                   | 266.19                             | 920.50   | 29695 |
| 29696  | 2500A.....  | 12,838.20      | 196.24                   | 293.63                             | 1,013.00 | 29696 |
|  | 90° offset, edgewise or flatwise, IP54 for all insulated totally enclosed TPN copper busbar trunking of the rated current (linear length excluded and measured separately) :- |                |                          |                                    |          |       |
|  | <i>Each</i>   |                |                          |                                    |          |       |
| 29697  | 600A.....   | 7,474.97       | 150.27                   | 225.38                             | 803.74   | 29697 |
| 29698  | 800A.....   | 7,687.28       | 180.26                   | 269.51                             | 964.37   | 29698 |
| 29699  | 1000A.....  | 8,284.97       | 209.42                   | 314.69                             | 1,123.40 | 29699 |
| 29700  | 1200A.....  | 9,079.92       | 240.06                   | 358.53                             | 1,284.31 | 29700 |
| 29701  | 1350A.....  | 9,609.09       | 265.94                   | 398.84                             | 1,426.33 | 29701 |
| 29702  | 1600A.....  | 10,472.06      | 292.37                   | 439.15                             | 1,569.42 | 29702 |
| 29703  | 2000A.....  | 11,376.62      | 322.58                   | 483.76                             | 1,730.73 | 29703 |
| 29704  | 2500A.....  | 15,822.68      | 364.62                   | 547.24                             | 1,963.05 | 29704 |

| Item  |   |                |                          |                                    | Item     |       |
|-------|---|----------------|--------------------------|------------------------------------|----------|-------|
|       | <b>BUSBAR TRUNKING AND BUS DUCT (CONT'D)</b>  |                |                          |                                    |          |       |
|       | 90° offset, edgewise or flatwise, IP65 for all insulated totally enclosed TPN copper busbar trunking of the rated current (linear length excluded and measured separately) :- | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only |       |
|       | <i>Each</i>   | A \$           | B \$                     | C \$                               | D \$     |       |
| 29705 | 600A.....   | 7,674.60       | 150.56                   | 225.84                             | 805.35   | 29705 |
| 29706 | 800A.....   | 7,887.97       | 180.61                   | 270.02                             | 966.33   | 29706 |
| 29707 | 1000A.....  | 8,494.61       | 209.83                   | 315.29                             | 1,125.66 | 29707 |
| 29708 | 1200A.....  | 9,309.71       | 240.53                   | 359.24                             | 1,286.90 | 29708 |
| 29709 | 1350A.....  | 9,851.23       | 266.46                   | 399.62                             | 1,429.22 | 29709 |
| 29710 | 1600A.....  | 10,736.33      | 292.95                   | 440.02                             | 1,572.57 | 29710 |
| 29711 | 2000A.....  | 11,662.22      | 323.23                   | 484.71                             | 1,734.26 | 29711 |
| 29712 | 2500A.....  | 16,231.45      | 365.33                   | 548.29                             | 1,967.00 | 29712 |
|       | 90° offset, edgewise or flatwise, IP66 for all insulated totally enclosed TPN copper busbar trunking of the rated current (linear length excluded and measured separately) :- |                |                          |                                    |          |       |
|       | <i>Each</i>   |                |                          |                                    |          |       |
| 29713 | 600A.....   | 8,082.06       | 150.56                   | 225.84                             | 805.35   | 29713 |
| 29714 | 800A.....   | 8,297.60       | 180.61                   | 270.02                             | 966.33   | 29714 |
| 29715 | 1000A.....  | 8,494.61       | 209.83                   | 315.29                             | 1,125.66 | 29715 |
| 29716 | 1200A.....  | 9,627.59       | 240.53                   | 359.24                             | 1,286.90 | 29716 |
| 29717 | 1350A.....  | 9,851.23       | 266.46                   | 399.62                             | 1,429.22 | 29717 |
| 29718 | 1600A.....  | 11,037.69      | 292.95                   | 440.02                             | 1,572.57 | 29718 |
| 29719 | 2000A.....  | 11,902.87      | 323.23                   | 484.71                             | 1,734.26 | 29719 |
| 29720 | 2500A.....  | 17,192.08      | 365.33                   | 548.29                             | 1,967.00 | 29720 |

| Item   |            | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only | Item  |
|--|------------|----------------|--------------------------|------------------------------------|----------|-------|
| <b>BUSBAR TRUNKING AND BUS DUCT (CONT'D)</b>   |            | A              | B                        | C                                  | D        |       |
| Tee unit, weatherproof type for all-insulated totally enclosed TPN copper busduct of the rated current (linear length excluded and measured separately) :- |            | \$             | \$                       | \$                                 | \$       |       |
| <i>Each</i>  |            |                |                          |                                    |          |       |
| 29721  | 200A.....  | 3,250.33       | 75.86                    | 128.97                             | 513.34   | 29721 |
| 29722  | 400A.....  | 3,521.11       | 75.86                    | 138.17                             | 526.16   | 29722 |
| 29723  | 600A.....  | 3,691.99       | 103.85                   | 155.56                             | 537.30   | 29723 |
| 29724  | 800A.....  | 3,960.48       | 123.53                   | 185.08                             | 645.44   | 29724 |
| 29725  | 1000A..... | 4,264.70       | 144.11                   | 216.10                             | 751.35   | 29725 |
| 29726  | 1200A..... | 4,748.54       | 165.47                   | 247.61                             | 856.21   | 29726 |
| 29727  | 1350A..... | 5,059.90       | 184.16                   | 276.14                             | 938.18   | 29727 |
| 29728  | 1600A..... | 5,481.09       | 202.85                   | 304.52                             | 1,037.77 | 29728 |
| 29729  | 2000A..... | 6,015.52       | 223.18                   | 334.29                             | 1,145.62 | 29729 |
| 29730  | 2500A..... | 8,299.78       | 252.46                   | 379.12                             | 1,297.84 | 29730 |



**Section 30**

**ELECTRICAL INSTALLATION -**

**MISCELLANEOUS**

| Item  |  |                |                     |                             | Item     |       |
|-------|--|----------------|---------------------|-----------------------------|----------|-------|
|       | <b>DISTRIBUTION BOARDS</b>   |                |                     |                             |          |       |
|       | Fuseboard to BS EN 60439-3 with 500V fuse base and holder, fixed, connected retained with labels, circuit list etc., including solid copper bars for neutral and for earth, suitable for fuses to IEC 60269-1 (HRC fuses measured separately) :- |                |                     |                             |          |       |
|       | <i>Each</i>  |                |                     |                             |          |       |
|       |  | Supply and fix | Take down and clear | Take down and set aside for | Fix only |       |
|       |  | A \$           | B \$                | C \$                        | D \$     |       |
| 30001 | 20/ 32A SPN 4 way .....  | 1,388.71       | 26.60               | 31.38                       | 81.77    | 30001 |
| 30002 | 20/ 32A SPN 6 way .....  | 1,775.68       | 28.55               | 34.10                       | 91.41    | 30002 |
| 30003 | 20/ 32A SPN 8 way .....  | 2,084.81       | 28.55               | 34.10                       | 91.41    | 30003 |
| 30004 | 20/ 32A SPN 10 way .....   | 2,418.15       | 30.16               | 37.76                       | 115.98   | 30004 |
| 30005 | 20/ 32A SPN 12 way .....   | 2,748.89       | 30.16               | 37.76                       | 115.98   | 30005 |
| 30006 | 20/ 32A TPN 2 way.....   | 1,852.26       | 26.60               | 31.38                       | 81.77    | 30006 |
| 30007 | 20/ 32A TPN 4 way.....   | 2,586.81       | 30.16               | 37.76                       | 115.98   | 30007 |
| 30008 | 20/ 32A TPN 6 way.....   | 3,408.99       | 30.16               | 37.76                       | 115.98   | 30008 |
| 30009 | 20/ 32A TPN 8 way.....   | 4,314.42       | 37.76               | 46.85                       | 145.03   | 30009 |
| 30010 | 63A TPN 2 way .....  | 4,128.74       | 26.60               | 31.38                       | 81.77    | 30010 |
| 30011 | 63A TPN 4 way .....  | 5,897.76       | 30.16               | 37.76                       | 115.98   | 30011 |
| 30012 | 63A TPN 6 way .....  | 7,696.67       | 30.16               | 37.76                       | 115.98   | 30012 |
| 30013 | 63A TPN 8 way .....  | 9,428.01       | 37.76               | 46.85                       | 145.03   | 30013 |
|       | Metal boxes only for distribution boards 250/ 500 V (as per approved pattern) including solid copper earth bar, neutral bar, circuit list etc., (fuses base and holder not included), for fuse-way of the following sizes :-                     |                |                     |                             |          |       |
|       | <i>Each</i>  |                |                     |                             |          |       |
| 30014 | 32A SPN 4 - 6 way.....   | 447.67         | 15.06               | 18.96                       | 59.98    | 30014 |
| 30015 | 32A SPN 7 - 9 way .....  | 772.08         | 20.25               | 25.22                       | 80.90    | 30015 |
| 30016 | 32A SPN 10 - 12 way.....   | 831.66         | 28.27               | 35.58                       | 113.10   | 30016 |
| 30017 | 32A TPN 2 - 4 way.....   | 1,051.34       | 28.27               | 35.58                       | 113.10   | 30017 |
| 30018 | 63A TPN 4 way .....  | 1,711.05       | 28.27               | 35.58                       | 113.10   | 30018 |
| 30019 | 63A TPN 6 way.....   | 1,830.81       | 36.13               | 45.08                       | 144.16   | 30019 |
| 30020 | 63A TPN 8 way.....   | 1,949.75       | 43.38               | 54.55                       | 173.55   | 30020 |

| Item   | Item   |
|--|--|
| <b>DISTRIBUTION BOARDS (CONT'D)</b>  |  |
| MCB distribution boards to IEC 60439-3, metal clad, flush mounting with 100 A DP isolating switch for MCB to IEC 60898 (excluding MCBs and cutting into wall measured separately where applicable) :-  |  |
| <i>Each</i>  |  |
|  | Supply and fix                                       |
|  | Take down and clear                                  |
|  | Take down and set aside for                          |
|  | Fix only   |
|  | A B C D  |
|  | \$ \$ \$ \$  |
| 30021  | SPN 4 - 6 way..... 339.85 9.94 12.83 40.69 30021     |
| 30022  | SPN 7 - 9 way..... 396.18 15.03 18.42 58.41 30022    |
| 30023  | SPN 10 - 12 way..... 456.54 19.43 24.36 78.81 30023  |
| 30024  | SPN 13 - 15 way..... 533.49 24.44 30.42 104.04 30024 |
| 30025  | SPN 16 - 18 way..... 596.75 29.11 36.94 132.82 30025 |
| MCB distribution boards to IEC 60439-3, metal clad, surface mounting with 100 A DP isolating switch for MCB to IEC 60898 (excluding MCBs) :-   |  |
| <i>Each</i>  |  |
| 30026  | SPN 4 - 6 way..... 404.57 15.06 18.96 60.95 30026    |
| 30027  | SPN 7 - 9 way..... 495.43 20.25 25.22 81.50 30027    |
| 30028  | SPN 10 - 12 way..... 550.34 28.27 35.58 114.04 30028 |
| 30029  | SPN 13 - 15 way..... 605.10 44.40 54.85 180.40 30029 |
| 30030  | SPN 16 - 18 way..... 669.75 53.88 67.49 220.09 30030 |
| MCB distribution boards, metal case (locally made) surface mounting, with space for isolating switch if required, fixed, connected with labels, circuit list etc., including solid copper bars for neutral and for earth (MCBs & isolating switch not included) :- |  |
| <i>Each</i>  |  |
| 30031  | SPN 1 - 3 way..... 234.47 14.75 18.12 56.96 30031    |
| 30032  | TPN 2 way..... 327.18 15.36 19.47 61.78 30032        |
| MCB distribution boards, metal clad, to IEC 60439-3, surface mounting with 80A DP RCCB (30mA) for MCBs to IEC 60898 (excluding MCBs) :-  |  |
| <i>Each</i>  |  |
| 30033  | SPN 6 way..... 613.48 15.36 18.96 59.59 30033        |
| 30034  | SPN 8 way..... 649.78 20.44 24.97 79.63 30034        |

| Item  |  |                |                     |                             | Item     |       |
|-------|--|----------------|---------------------|-----------------------------|----------|-------|
|       | <b>DISTRIBUTION BOARDS (CONT'D)</b>  |                |                     |                             |          |       |
|       | MCB distribution boards, metal clad, to IEC 60439-3, surface mounting split bar board with 80/ 100A DP switch and 60/ 80A, 30 mA RCD for MCBs to IEC 60898 (excluding MCBs) :- | Supply and fix | Take down and clear | Take down and set aside for | Fix only |       |
|       | <i>Each</i>  | A<br>\$        | B<br>\$             | C<br>\$                     | D<br>\$  |       |
| 30035 | Single-phase 4 - 6 way.....  | 682.26         | 15.40               | 18.99                       | 59.71    | 30035 |
| 30036 | Single-phase 7 - 9 way.....  | 726.91         | 20.49               | 25.02                       | 79.78    | 30036 |
| 30037 | Single-phase 10 - 12 way.....  | 779.52         | 28.17               | 35.55                       | 112.34   | 30037 |
|       | MCB distribution boards, metal clad, to IEC 60439-3, surface mounting with busbar rated at not less than 200A for MCBs to IEC 60898 (excluding MCBs) :-                        |                |                     |                             |          |       |
|       | <i>Each</i>  |                |                     |                             |          |       |
| 30038 | TPN 4 way (Direct termination).....  | 952.51         | 28.17               | 35.55                       | 112.34   | 30038 |
| 30039 | TPN 4 way with 100A TP isolator.....   | 1,037.46       | 28.17               | 35.55                       | 112.34   | 30039 |
| 30040 | TPN 6 way (Direct termination).....  | 1,006.45       | 36.14               | 45.05                       | 142.20   | 30040 |
| 30041 | TPN 6 way with 100A TP isolator.....   | 1,174.96       | 36.14               | 45.05                       | 142.20   | 30041 |
| 30042 | TPN 8 way (Direct termination).....  | 1,198.35       | 43.43               | 54.86                       | 173.93   | 30042 |
| 30043 | TPN 8 way with 100A TP isolator.....   | 1,299.83       | 43.43               | 54.86                       | 173.93   | 30043 |
| 30044 | TPN 10 way (Direct termination).....   | 1,222.20       | 52.20               | 66.81                       | 212.74   | 30044 |
| 30045 | TPN 10 way with 100A TP isolator.....  | 1,332.45       | 52.20               | 66.81                       | 212.74   | 30045 |
| 30046 | TPN 12 way (Direct termination).....   | 1,449.00       | 54.48               | 68.47                       | 218.79   | 30046 |
| 30047 | TPN 12 way with 100A TP isolator.....  | 1,701.69       | 54.48               | 68.47                       | 218.79   | 30047 |
| 30048 | TPN 18 way (Direct termination).....   | 2,349.92       | 71.86               | 89.83                       | 280.83   | 30048 |
| 30049 | TPN 18 way with 160A TP isolator.....  | 2,759.72       | 71.86               | 89.83                       | 280.83   | 30049 |
|       | MCB distribution board accessories :-  |                |                     |                             |          |       |
|       | <i>Each</i>  |                |                     |                             |          |       |
| 30050 | Cable clamp.....   | 11.76          | 1.44                | 1.80                        | 4.44     | 30050 |
| 30051 | Blanking plate.....  | 7.29           | 1.44                | 1.80                        | 4.44     | 30051 |
| 30052 | Back plate for mounting 1-3 MCB.....   | 22.92          | 1.44                | 1.80                        | 4.44     | 30052 |

| Item  |   |                |                     |                             | Item     |       |
|-------|---|----------------|---------------------|-----------------------------|----------|-------|
|       | <b>DISTRIBUTION BOARDS (CONT'D)</b>   |                |                     |                             |          |       |
|       | Miniature circuit breakers to IEC 60898 with rated instantaneous tripping current of Type B/ Type C classification and rated short circuit breaking capacity of at least 6000 short circuit rating. The rates shall include opening and closing of MCB board covers or front plates, taking down and re-fixing of blanking plate where required : - | Supply and fix | Take down and clear | Take down and set aside for | Fix only |       |
|       | <i>Each</i>   | A \$           | B \$                | C \$                        | D \$     |       |
| 30053 | 5/ 10/ 16/ 20/ 32/ 40/ 50/ 63A SP.....  | 43.12          | 4.24                | 5.03                        | 13.39    | 30053 |
| 30054 | 5/ 10/ 16/ 20/ 32/ 40/ 50/ 63A DP.....  | 108.79         | 4.24                | 5.03                        | 13.39    | 30054 |
| 30055 | 5/ 10/ 16/ 20/ 32/ 40/ 50/ 63A TP.....  | 193.37         | 6.47                | 7.74                        | 20.51    | 30055 |
| 30056 | Complete set 40A lateral main MCB tap off unit.....   | 374.60         | 8.65                | 10.84                       | 34.62    | 30056 |
|       | Isolating switches, all insulated for MCB board, include opening and closing of MCB board cover/ front plates : -   |                |                     |                             |          |       |
|       | <i>Each</i>   |                |                     |                             |          |       |
| 30057 | 30/ 32A DP.....   | 115.52         | 8.49                | 10.24                       | 26.57    | 30057 |
| 30058 | 60/ 63A DP.....   | 120.18         | 8.49                | 10.24                       | 26.57    | 30058 |
| 30059 | 100A DP.....  | 154.64         | 9.66                | 11.45                       | 30.39    | 30059 |
| 30060 | 63A TP.....   | 169.79         | 9.66                | 11.45                       | 30.39    | 30060 |
| 30061 | 100A TP.....  | 208.93         | 9.66                | 11.45                       | 30.39    | 30061 |
| 30062 | 200A DP.....  | 623.50         | 10.26               | 13.19                       | 41.48    | 30062 |
| 30063 | 200A TP.....  | 931.70         | 10.26               | 13.19                       | 41.48    | 30063 |

| Item  |                      | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only | Item  |
|---|----------------------|----------------|--------------------------|------------------------------------|----------|-------|
| <b>DISTRIBUTION BOARDS (CONT'D)</b>   |                      | A              | B                        | C                                  | D        |       |
| MCCB distribution boards to IEC 60439-1 and 60439-3 surface mounting with moulded-case isolating switch, suitable for MCCB to IEC 60947-2 : - |                      | \$             | \$                       | \$                                 | \$       |       |
| <i>Each</i>   |                      |                |                          |                                    |          |       |
| 30064   | 100A TPN 4 way.....  | 2,909.09       | 35.87                    | 44.70                              | 141.10   | 30064 |
| 30065   | 200A TPN 4 way.....  | 3,094.78       | 35.87                    | 44.70                              | 141.10   | 30065 |
| 30066   | 250A TPN 4 way.....  | 3,311.73       | 35.87                    | 44.70                              | 141.10   | 30066 |
| 30067   | 300A TPN 4 way.....  | 3,552.03       | 35.87                    | 44.70                              | 141.10   | 30067 |
| 30068   | 400A TPN 4 way.....  | 3,935.30       | 35.87                    | 44.70                              | 141.10   | 30068 |
| 30069   | 600A TPN 4 way.....  | 4,874.05       | 35.87                    | 44.70                              | 141.10   | 30069 |
| 30070   | 800A TPN 4 way.....  | 5,462.69       | 35.87                    | 44.70                              | 141.10   | 30070 |
| 30071   | 200A TPN 6 way.....  | 3,894.83       | 43.12                    | 54.44                              | 172.59   | 30071 |
| 30072   | 250A TPN 6 way.....  | 4,022.46       | 43.12                    | 54.44                              | 172.59   | 30072 |
| 30073   | 300A TPN 6 way.....  | 4,314.33       | 43.12                    | 54.44                              | 172.59   | 30073 |
| 30074   | 400A TPN 6 way.....  | 4,883.41       | 43.12                    | 54.44                              | 172.59   | 30074 |
| 30075   | 600A TPN 6 way.....  | 5,237.55       | 43.12                    | 54.44                              | 172.59   | 30075 |
| 30076   | 800A TPN 6 way.....  | 5,796.57       | 43.12                    | 54.44                              | 172.59   | 30076 |
| 30077   | 100A TPN 8 way.....  | 4,680.72       | 55.30                    | 69.63                              | 219.79   | 30077 |
| 30078   | 200A TPN 8 way.....  | 4,764.40       | 55.30                    | 69.63                              | 219.79   | 30078 |
| 30079   | 250A TPN 8 way.....  | 5,081.52       | 55.30                    | 69.63                              | 219.79   | 30079 |
| 30080   | 300A TPN 8 way.....  | 5,313.96       | 55.30                    | 69.63                              | 219.79   | 30080 |
| 30081   | 400A TPN 8 way.....  | 5,859.68       | 55.30                    | 69.63                              | 219.79   | 30081 |
| 30082   | 600A TPN 8 way.....  | 6,644.89       | 55.30                    | 69.63                              | 219.79   | 30082 |
| 30083   | 800A TPN 8 way.....  | 7,379.65       | 55.30                    | 69.63                              | 219.79   | 30083 |
| 30084   | 300A TPN 10 way..... | 6,166.54       | 67.03                    | 84.29                              | 266.17   | 30084 |
| 30085   | 400A TPN 10 way..... | 6,592.86       | 67.03                    | 84.29                              | 266.17   | 30085 |
| 30086   | 600A TPN 10 way..... | 7,378.63       | 67.03                    | 84.29                              | 266.17   | 30086 |
| 30087   | 300A TPN 12 way..... | 6,995.13       | 78.50                    | 98.13                              | 311.69   | 30087 |
| 30088   | 400A TPN 12 way..... | 7,410.57       | 78.50                    | 98.13                              | 311.69   | 30088 |
| 30089   | 600A TPN 12 way..... | 8,491.97       | 78.50                    | 98.13                              | 311.69   | 30089 |
| 30090   | 600A TPN 14 way..... | 9,449.38       | 90.56                    | 113.49                             | 360.47   | 30090 |

| Item  |  | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only | Item  |
|-------|--|----------------|--------------------------|------------------------------------|----------|-------|
|       |  | A \$           | B \$                     | C \$                               | D \$     |       |
|       | <b>MOULDED CASE CIRCUIT BREAKERS</b>   |                |                          |                                    |          |       |
|       | TP moulded case circuit breaker (MCCB), 23kA breaking capacity and type-tested to IEC 60947-2 of the rated current : -   |                |                          |                                    |          |       |
|       | <i>Each</i>  |                |                          |                                    |          |       |
| 30091 | 15/ 20/ 30/ 32A.....   | 577.09         | 19.14                    | 24.20                              | 76.20    | 30091 |
| 30092 | 40/ 50/ 60/ 63A.....   | 602.26         | 24.65                    | 30.90                              | 99.57    | 30092 |
| 30093 | 75/ 100A.....  | 617.14         | 28.07                    | 35.42                              | 112.26   | 30093 |
| 30094 | 225/ 300A.....   | 1,902.52       | 28.07                    | 35.42                              | 112.26   | 30094 |
| 30095 | 400A.....  | 2,139.51       | 28.07                    | 35.42                              | 112.26   | 30095 |
|       | TP moulded case circuit breaker (MCCB) c/ w shunt trip coil for external tripping or connection, 40kA breaking capacity and type-tested to IEC 60947-2 of the rated current : -  |                |                          |                                    |          |       |
|       | <i>Each</i>  |                |                          |                                    |          |       |
| 30096 | 30/ 32/ 40/ 50A.....   | 890.56         | 21.43                    | 26.96                              | 84.79    | 30096 |
| 30097 | 60/ 63/ 75/ 100A.....  | 916.04         | 28.07                    | 35.42                              | 112.26   | 30097 |
| 30098 | 125/ 150/ 175/ 200/ 225A.....  | 1,304.82       | 28.07                    | 35.42                              | 112.26   | 30098 |
| 30099 | 250/ 300/ 315/ 350/ 400A.....  | 2,882.11       | 28.07                    | 35.42                              | 112.26   | 30099 |
| 30100 | 500/ 600/ 630A.....  | 3,951.76       | 33.12                    | 41.69                              | 131.39   | 30100 |
|       | TP moulded case circuit breaker (MCCB) c/ w shunt trip coil for external tripping or connection, 50kA breaking capacity and type-tested to IEC 60947-2 of the rated current : -  |                |                          |                                    |          |       |
|       | <i>Each</i>  |                |                          |                                    |          |       |
| 30101 | 250 - 400A.....  | 3,780.85       | 28.07                    | 35.42                              | 112.26   | 30101 |
| 30102 | 500 - 600A.....  | 4,867.79       | 33.12                    | 41.69                              | 131.39   | 30102 |
| 30103 | 630 - 800A.....  | 5,821.99       | 37.18                    | 47.41                              | 150.54   | 30103 |
|       | TPN moulded case circuit breaker (MCCB) c/ w shunt trip coil for external tripping or connection, 23kA breaking capacity and type-tested to IEC 60947-2 of the rated current : - |                |                          |                                    |          |       |
|       | <i>Each</i>  |                |                          |                                    |          |       |
| 30104 | 15/ 20/ 30/ 32A.....   | 629.63         | 19.14                    | 24.20                              | 76.20    | 30104 |
| 30105 | 40/ 50/ 60/ 63A.....   | 655.42         | 24.65                    | 30.90                              | 99.57    | 30105 |
| 30106 | 75/ 100A.....  | 669.13         | 28.07                    | 35.42                              | 112.26   | 30106 |
| 30107 | 225/ 300A.....   | 2,874.92       | 28.07                    | 35.42                              | 112.26   | 30107 |
| 30108 | 400A.....  | 3,298.28       | 28.07                    | 35.42                              | 112.26   | 30108 |

| Item  |   |                      |                                      |  | Item        |       |
|-------|---|----------------------|--------------------------------------|--|-------------|-------|
|       | <b>MOULDED CASE CIRCUIT BREAKERS (CONT'D)</b>   | Supply<br>and<br>fix | Take<br>down<br>and<br>clear<br>away | Take<br>down<br>and set<br>aside for<br>re-use | Fix<br>only |       |
|       |   | A<br>\$              | B<br>\$                              | C<br>\$  | D<br>\$     |       |
|       | SP moulded case circuit breaker (MCCB), 23kA breaking capacity and type-tested to IEC 60947-2 of the rated current : -  |                      |                                      |  |             |       |
|       | <i>Each</i>   |                      |                                      |  |             |       |
| 30109 | 15/ 20/ 30/ 32A.....  | 442.97               | 19.11                                | 24.15  | 76.03       | 30109 |
| 30110 | 40/ 50/ 60/ 63A.....  | 505.29               | 24.60                                | 30.82  | 99.37       | 30110 |
|       | TPN moulded case circuit breaker (MCCB) c/ w shunt trip coil for external tripping or connection, 40kA breaking capacity and type-tested to IEC 60947-2 of the rated current : -          |                      |                                      |  |             |       |
|       | <i>Each</i>   |                      |                                      |  |             |       |
| 30111 | up to 50A.....  | 1,150.43             | 21.39                                | 26.91  | 84.62       | 30111 |
| 30112 | 50A to 100A.....  | 1,187.80             | 28.02                                | 35.35  | 112.05      | 30112 |
| 30113 | 100A to 250A.....   | 1,674.67             | 28.02                                | 35.35  | 112.05      | 30113 |
| 30114 | 250A to 400A.....   | 3,068.34             | 28.02                                | 35.35  | 112.05      | 30114 |
| 30115 | 400A to 630A.....   | 4,411.98             | 33.05                                | 41.60  | 131.13      | 30115 |
|       | TPN moulded case circuit breaker (MCCB) c/ w shunt trip coil for external tripping or connection, 50kA breaking capacity and type-tested to IEC 60947-2 of the rated current : -          |                      |                                      |  |             |       |
|       | <i>Each</i>   |                      |                                      |  |             |       |
| 30116 | 250 to 400A.....  | 4,879.34             | 28.02                                | 35.35  | 112.05      | 30116 |
| 30117 | 500 to 600A.....  | 6,486.15             | 33.05                                | 41.60  | 131.13      | 30117 |
| 30118 | 600 to 800A.....  | 7,702.87             | 37.11                                | 47.34  | 150.24      | 30118 |
|       | Metal box for TPN MCCB : -  |                      |                                      |  |             |       |
|       | <i>Each</i>   |                      |                                      |  |             |       |
| 30119 | Metal box for TPN MCCB up to 100A.....  | 277.57               | 11.52                                | 14.34  | 42.87       | 30119 |
| 30120 | Metal box for TPN MCCB of 100A to 225A.....   | 413.03               | 11.52                                | 14.34  | 42.87       | 30120 |
| 30121 | Metal box for TPN MCCB of 225A to 400A.....   | 547.93               | 16.80                                | 21.14  | 66.22       | 30121 |
| 30122 | Metal box for TPN MCCB of 400A to 800A.....   | 1,039.34             | 16.80                                | 21.14  | 66.22       | 30122 |
|       | IDMT earth fault relay : -  |                      |                                      |  |             |       |
|       | <i>Each</i>   |                      |                                      |  |             |       |
| 30123 | IDMT earth fault relay c/ w necessary current transformers, accessories and interconnections etc. including site test to be witnessed and to the satisfaction of the supply company ..... | 4,697.82             | 33.05                                | 41.60  | 131.13      | 30123 |



| Item  |  | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only | Item  |
|---|--|----------------|--------------------------|------------------------------------|----------|-------|
| <b>MOULDED CASE CIRCUIT BREAKERS (CONT'D)</b> |  |                |                          |                                    |          |       |
|   | Metal box for IDMT relay :-  |                |                          |                                    |          |       |
|   | <i>Each</i>  | A \$           | B \$                     | C \$                               | D \$     |       |
| 30124   | Metal box for TPN MCCB up to 100A & IDMT relay.....  | 499.59         | 17.04                    | 21.36                              | 67.28    | 30124 |
| 30125   | Metal box for TPN MCCB of 100A to 225A & IDMT relay.....                                       | 623.91         | 17.04                    | 21.36                              | 67.28    | 30125 |
| 30126   | Metal box for TPN MCCB of 225A to 400A & IDMT relay.....                                       | 798.73         | 17.04                    | 21.36                              | 67.28    | 30126 |
| 30127   | Metal box for TPN MCCB of 400A to 800A & IDMT relay.....                                       | 810.38         | 17.04                    | 21.36                              | 67.28    | 30127 |
| <b>CONTACTORS</b>                             |  |                |                          |                                    |          |       |
|   | Contactors to IEC 60947-4-1 :-   |                |                          |                                    |          |       |
|   | <i>Each</i>  | A \$           | B \$                     | C \$                               | D \$     |       |
| 30128   | 30/ 40A TPN with 220/ 380V coil.....   | 226.26         | 10.43                    | 13.39                              | 42.56    | 30128 |
| 30129   | 60A TPN with 220/ 380V coil.....   | 344.67         | 17.07                    | 21.40                              | 67.86    | 30129 |
| 30130   | 80/ 100A TPN with 220/ 380V coil.....  | 559.92         | 21.43                    | 26.96                              | 84.79    | 30130 |
| 30131   | Metal box for 30/ 40A TPN contactor.....   | 150.28         | 12.81                    | 16.14                              | 49.23    | 30131 |
| 30132   | Metal box for 60A TPN contactor.....   | 222.35         | 15.02                    | 18.54                              | 57.02    | 30132 |
| 30133   | Metal box for 80/ 100A TPN contactor.....  | 338.11         | 17.07                    | 21.40                              | 67.40    | 30133 |
| <b>BUSBAR CHAMBER UNITS AND ACCESSORIES</b>   |  |                |                          |                                    |          |       |
|   | Busbar chamber units, 4 full size solid drawn copper busbars, c/ w cover and main terminals :- |                |                          |                                    |          |       |
|   | <i>Each</i>  | A \$           | B \$                     | C \$                               | D \$     |       |
| 30134   | 200A, 600 mm long.....   | 1,960.28       | 76.12                    | 95.92                              | 286.12   | 30134 |
| 30135   | 200A 900 mm long.....  | 2,314.04       | 107.12                   | 133.64                             | 404.29   | 30135 |
| 30136   | 200A, 1200 mm long.....  | 2,718.95       | 129.33                   | 162.51                             | 487.36   | 30136 |
| 30137   | 200A, 1500 mm long.....  | 3,409.61       | 139.48                   | 175.62                             | 521.20   | 30137 |
| 30138   | 300A, 600 mm long.....   | 2,018.49       | 76.12                    | 95.92                              | 286.12   | 30138 |
| 30139   | 300A, 900 mm long.....   | 2,389.72       | 107.12                   | 133.64                             | 404.29   | 30139 |
| 30140   | 300A, 1200 mm long.....  | 2,879.04       | 129.33                   | 162.51                             | 487.36   | 30140 |
| 30141   | 300A, 1500 mm long.....  | 3,625.32       | 139.48                   | 175.62                             | 521.20   | 30141 |

| Item   |                         | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only | Item  |
|--|-------------------------|----------------|--------------------------|------------------------------------|----------|-------|
|  |                         | A \$           | B \$                     | C \$                               | D \$     |       |
| <b>BUSBAR CHAMBER UNITS AND ACCESSORIES (CONT'D)</b>   |                         |                |                          |                                    |          |       |
| Busbar chamber units, 4 full size solid drawn copper busbars, c/ w cover and main terminals : - (Cont'd) |                         |                |                          |                                    |          |       |
|  | <i>Each</i>             |                |                          |                                    |          |       |
| 30142  | 400A, 600 mm long.....  | 2,188.85       | 76.12                    | 95.92                              | 286.12   | 30142 |
| 30143  | 400A, 900 mm long.....  | 2,619.66       | 107.12                   | 133.64                             | 404.29   | 30143 |
| 30144  | 400A, 1200 mm long..... | 3,704.64       | 129.33                   | 162.51                             | 487.36   | 30144 |
| 30145  | 400A, 1500 mm long..... | 4,384.77       | 139.48                   | 175.62                             | 521.20   | 30145 |
| 30146  | 500A, 600 mm long.....  | 2,511.20       | 76.12                    | 95.92                              | 286.12   | 30146 |
| 30147  | 500A, 900 mm long.....  | 3,026.05       | 107.12                   | 133.64                             | 404.29   | 30147 |
| 30148  | 500A, 1200 mm long..... | 4,343.25       | 129.33                   | 162.51                             | 487.36   | 30148 |
| 30149  | 500A, 1500 mm long..... | 4,819.17       | 139.48                   | 175.62                             | 521.20   | 30149 |
| 30150  | 630A, 600 mm long.....  | 2,898.71       | 129.07                   | 162.19                             | 486.41   | 30150 |
| 30151  | 630A, 900 mm long.....  | 3,520.32       | 160.05                   | 201.51                             | 604.52   | 30151 |
| 30152  | 630A, 1200 mm long..... | 4,752.43       | 186.84                   | 235.51                             | 705.74   | 30152 |
| 30153  | 630A, 1500 mm long..... | 5,515.05       | 216.35                   | 271.32                             | 816.94   | 30153 |
| 30154  | 800A, 600 mm long.....  | 3,229.22       | 129.07                   | 162.19                             | 486.41   | 30154 |
| 30155  | 800A, 900 mm long.....  | 4,157.44       | 160.05                   | 201.51                             | 604.52   | 30155 |
| 30156  | 800A, 1200 mm long..... | 5,226.59       | 186.84                   | 235.51                             | 705.74   | 30156 |
| 30157  | 800A, 1500 mm long..... | 6,328.78       | 216.35                   | 271.32                             | 816.94   | 30157 |
| Cover for busbar chamber unit of the following length and rating between 200A and 800A : -               |                         |                |                          |                                    |          |       |
|  | <i>Each</i>             |                |                          |                                    |          |       |
| 30158  | 600 mm.....             | 291.56         | 6.60                     | 7.78                               | 20.29    | 30158 |
| 30159  | 900 mm.....             | 340.09         | 6.60                     | 7.78                               | 20.29    | 30159 |
| 30160  | 1200 mm.....            | 404.26         | 6.60                     | 7.78                               | 20.29    | 30160 |
| 30161  | 1500 mm.....            | 459.64         | 6.60                     | 7.78                               | 20.29    | 30161 |
| Busbar clamp : -   |                         |                |                          |                                    |          |       |
|  | <i>Each</i>             |                |                          |                                    |          |       |
| 30162  | 160A.....               | 90.39          | 2.27                     | 2.85                               | 8.90     | 30162 |
| 30163  | 160A to 400A.....       | 166.09         | 2.41                     | 3.11                               | 9.89     | 30163 |
| 30164  | 400A to 800A.....       | 230.20         | 2.75                     | 3.47                               | 10.74    | 30164 |

| Item  |                         |                      |                                      |  | Item        |       |
|---|-------------------------|----------------------|--------------------------------------|--|-------------|-------|
| <b>BUSBAR CHAMBER UNITS AND ACCESSORIES (CONT'D)</b>  |                         |                      |                                      |  |             |       |
| Cable clamps and brass cable sockets for use with busbar chambers : -   |                         |                      |                                      |  |             |       |
|   |                         | Supply<br>and<br>fix | Take<br>down<br>and<br>clear<br>away | Take<br>down<br>and set<br>aside for<br>re-use | Fix<br>only |       |
|   |                         | A<br>\$              | B<br>\$                              | C<br>\$  | D<br>\$     |       |
| 30165   | 32A.....                | 70.40                | 2.27                                 | 2.72   | 6.99        | 30165 |
| 30166   | 63A.....                | 70.40                | 2.27                                 | 2.72   | 6.99        | 30166 |
| 30167   | 100A.....               | 91.96                | 2.27                                 | 2.72   | 6.99        | 30167 |
| 30168   | 160A.....               | 95.70                | 3.64                                 | 4.41   | 11.21       | 30168 |
| 30169   | 200A.....               | 101.26               | 4.28                                 | 5.08   | 13.18       | 30169 |
| 30170   | 315A.....               | 114.10               | 5.08                                 | 6.26   | 15.89       | 30170 |
| 30171   | 400A.....               | 176.02               | 5.89                                 | 7.23   | 20.13       | 30171 |
| 30172   | 500A.....               | 194.34               | 6.48                                 | 7.82   | 22.12       | 30172 |
| 30173   | 630A.....               | 196.59               | 7.29                                 | 8.74   | 24.44       | 30173 |
| 30174   | 800A.....               | 248.11               | 9.22                                 | 11.32  | 31.11       | 30174 |
| Connection flanges (including cutting and drilling busbar chamber, assembly of switch to flange, and flange to busbar chamber with provision and installation of interconnections as necessary) : - |                         |                      |                                      |  |             |       |
| <i>Each</i>   |                         |                      |                                      |  |             |       |
| 30175   | SPN 32A.....            | 90.32                | 8.60                                 | 10.36  | 34.74       | 30175 |
| 30176   | SPN 63A.....            | 90.32                | 8.60                                 | 10.36  | 34.74       | 30176 |
| 30177   | SPN 100A.....           | 113.65               | 11.43                                | 14.16  | 45.26       | 30177 |
| 30178   | TPN 32A.....            | 109.77               | 10.26                                | 13.08  | 41.95       | 30178 |
| 30179   | TPN 63A.....            | 137.73               | 10.92                                | 13.63  | 42.90       | 30179 |
| 30180   | TPN 100A.....           | 174.45               | 13.10                                | 16.98  | 52.01       | 30180 |
| 30181   | TPN 160/ 200A.....      | 211.46               | 15.78                                | 20.33  | 62.82       | 30181 |
| 30182   | TPN 300/ 315A.....      | 265.32               | 21.51                                | 27.15  | 85.94       | 30182 |
| 30183   | TPN 400/ 500A.....      | 298.99               | 26.87                                | 33.65  | 106.50      | 30183 |
| 30184   | TPN 600/ 630/ 800A..... | 337.09               | 32.70                                | 41.08  | 129.79      | 30184 |
| Porcelain support for busbar or for use in link box : -   |                         |                      |                                      |  |             |       |
| <i>Per linear metre</i>   |                         |                      |                                      |  |             |       |
| 30185   | Not exceeding 300A..... | 24.75                | 4.11                                 | 5.70   | 15.84       | 30185 |
| 30186   | 300A - 500A.....        | 31.36                | 5.28                                 | 6.67   | 20.20       | 30186 |
| 30187   | 500A - 1000A.....       | 42.98                | 6.33                                 | 8.06   | 24.61       | 30187 |

| Item  |   | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only | Item  |
|-------|---|----------------|--------------------------|------------------------------------|----------|-------|
|       | <b>BUSBAR CHAMBER UNITS AND ACCESSORIES (CONT'D)</b>  | A              | B                        | C                                  | D        |       |
|       | Cable entry/ conduit box of approved type for switchfuses, all necessary work including cutting and drilling of trunking, assembly and connection of switchfuses, etc. :- | \$             | \$                       | \$                                 | \$       |       |
|       | <i>Each</i>   |                |                          |                                    |          |       |
| 30188 | TPN 160/ 200A.....  | 247.83         | 21.51                    | 27.15                              | 85.94    | 30188 |
| 30189 | TPN 315A.....   | 296.76         | 26.87                    | 33.65                              | 106.50   | 30189 |
| 30190 | TPN 400/ 500A.....  | 378.90         | 32.70                    | 41.08                              | 129.79   | 30190 |
| 30191 | TPN 630/ 800A.....  | 469.34         | 38.37                    | 47.89                              | 151.46   | 30191 |
|       | Insulating sheet as paxolin or ebonite, etc., used in conjunction with distribution boxes and switch gear (to be drilled and cut to shape as required) :-                 |                |                          |                                    |          |       |
|       | <i>Per square metre</i>   |                |                          |                                    |          |       |
| 30192 | 1.5 mm thick.....   | 220.18         | 25.32                    | 31.64                              | 99.11    | 30192 |
| 30193 | 3 mm thick.....   | 331.00         | 34.00                    | 42.57                              | 132.30   | 30193 |
| 30194 | 7 mm thick.....   | 560.56         | 42.57                    | 52.92                              | 164.67   | 30194 |
| 30195 | 10 mm thick.....  | 752.69         | 51.31                    | 63.77                              | 198.18   | 30195 |
| 30196 | 12 mm thick.....  | 1,050.83       | 68.01                    | 85.01                              | 264.98   | 30196 |
| 30197 | 20 mm thick.....  | 1,284.59       | 85.01                    | 105.54                             | 331.88   | 30197 |
| 30198 | 25 mm thick.....  | 1,527.16       | 89.11                    | 111.04                             | 347.47   | 30198 |

| Item  |                                      | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only | Item  |
|---|--------------------------------------|----------------|--------------------------|------------------------------------|----------|-------|
|   |                                      | A \$           | B \$                     | C \$                               | D \$     |       |
| <b>RESIDUAL CURRENT CIRCUIT BREAKERS</b>  |                                      |                |                          |                                    |          |       |
| Residual current operated circuit breaker (RCCB) to IEC 61008-1 with minimum rated short circuit breaking capacity of 3 kA :-       |                                      |                |                          |                                    |          |       |
| <i>Each</i>   |                                      |                |                          |                                    |          |       |
| 30199   | 10/ 13/ 16/ 20A DP, 30 mA trip.....  | 229.59         | 8.64                     | 9.94                               | 27.77    | 30199 |
| 30200   | 25/ 32/ 40A DP, 30 mA trip.....      | 229.59         | 8.64                     | 9.94                               | 27.77    | 30200 |
| 30201   | 25/ 32/ 40A DP, 100 mA trip.....     | 335.16         | 9.51                     | 10.92                              | 29.74    | 30201 |
| 30202   | 63A DP, 30 mA trip.....              | 309.54         | 8.64                     | 9.94                               | 27.77    | 30202 |
| 30203   | 80A DP, 30 mA trip.....              | 507.89         | 8.64                     | 9.94                               | 27.77    | 30203 |
| 30204   | 100A DP, 30 mA trip.....             | 712.16         | 8.64                     | 9.94                               | 27.77    | 30204 |
| 30205   | 10/ 13/ 16/ 20A TPN, 30 mA trip..... | 353.98         | 12.81                    | 16.22                              | 51.00    | 30205 |
| 30206   | 25/ 32A TPN, 30 mA trip.....         | 353.98         | 12.81                    | 16.22                              | 51.00    | 30206 |
| 30207   | 25/ 40A TPN, 30 mA trip.....         | 353.98         | 12.81                    | 16.22                              | 51.00    | 30207 |
| 30208   | 25/ 40A TPN, 100 mA trip.....        | 363.14         | 12.81                    | 16.22                              | 51.00    | 30208 |
| 30209   | 63A TPN, 30 mA trip.....             | 368.49         | 12.81                    | 16.22                              | 51.00    | 30209 |
| 30210   | 63A TPN, 100 mA trip.....            | 387.02         | 12.81                    | 16.22                              | 51.00    | 30210 |
| 30211   | 63A TPN, 300/ 500 mA trip.....       | 387.02         | 12.81                    | 16.22                              | 51.00    | 30211 |
| 30212   | 100A TPN, 30 mA trip.....            | 1,081.34       | 12.81                    | 16.22                              | 51.00    | 30212 |
| 30213   | 100A TPN, 100 mA trip.....           | 1,126.19       | 12.81                    | 16.22                              | 51.00    | 30213 |
| Residual current operated circuit breaker (RCCB) to IEC 61008-1 with minimum rated short circuit breaking capacity of 22 - 40 kA :- |                                      |                |                          |                                    |          |       |
| <i>Each</i>   |                                      |                |                          |                                    |          |       |
| 30214   | 100A TPN, 500 mA trip.....           | 2,268.35       | 16.87                    | 21.07                              | 67.42    | 30214 |
| 30215   | 200A TPN, 500 mA trip.....           | 2,833.30       | 19.16                    | 24.16                              | 77.89    | 30215 |
| 30216   | 400A TPN, 500 mA trip.....           | 3,428.27       | 21.53                    | 27.18                              | 87.05    | 30216 |

| Item  |  | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only | Item  |
|-------|--|----------------|--------------------------|------------------------------------|----------|-------|
|       | <b>RESIDUAL CURRENT CIRCUIT BREAKERS (CONT'D)</b>  |                |                          |                                    |          |       |
|       | Metal box for RCCB, 10 to 100A SP/ DP :-   |                |                          |                                    |          |       |
|       | <i>Each</i>  | A              | B                        | C                                  | D        |       |
|       |  | \$             | \$                       | \$                                 | \$       |       |
| 30217 | 2 ways.....  | 97.26          | 11.37                    | 14.14                              | 42.75    | 30217 |
| 30218 | 4 ways.....  | 140.00         | 11.37                    | 14.14                              | 42.75    | 30218 |
| 30219 | 6 ways.....  | 248.93         | 16.76                    | 20.83                              | 65.19    | 30219 |
| 30220 | 8 ways.....  | 346.99         | 16.76                    | 20.83                              | 65.19    | 30220 |
| 30221 | 12 ways.....   | 447.72         | 16.76                    | 20.83                              | 65.19    | 30221 |
|       | Metal box for RCCB, 10 to 100A TP :-   |                |                          |                                    |          |       |
|       | <i>Each</i>  |                |                          |                                    |          |       |
| 30222 | 2 ways.....  | 138.32         | 11.37                    | 14.14                              | 42.75    | 30222 |
| 30223 | 4 ways.....  | 320.07         | 11.37                    | 14.14                              | 42.75    | 30223 |
| 30224 | 6 ways.....  | 460.93         | 16.76                    | 20.83                              | 65.19    | 30224 |
| 30225 | 8 ways.....  | 551.43         | 16.76                    | 20.83                              | 65.19    | 30225 |
|       | Residual current operated circuit breaker with integral over current protection (RCBO) to IEC 61009 with rated instantaneous tripping current of Type B/ Type C classification and minimum rated short circuit breaking capacity of 6kA :- |                |                          |                                    |          |       |
|       | <i>Each</i>  |                |                          |                                    |          |       |
| 30226 | 10/ 13/ 16/ 20A DP, 30 mA trip.....  | 233.73         | 8.59                     | 9.87                               | 27.62    | 30226 |
| 30227 | 25A DP, 30 mA trip.....  | 233.73         | 8.59                     | 9.87                               | 27.62    | 30227 |
| 30228 | 32A/ 40A DP, 30 mA trip.....   | 233.73         | 8.59                     | 9.87                               | 27.62    | 30228 |

| Item  |   |                |                          |                                    | Item     |       |
|-------|---|----------------|--------------------------|------------------------------------|----------|-------|
|       | <b>SWITCH AND FUSE GEAR</b>   | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only |       |
|       |   | A              | B                        | C                                  | D        |       |
|       |   | \$             | \$                       | \$                                 | \$       |       |
|       | Switch fuses, metal clad, surface mounting, c/ w HRC fuses :-                                     |                |                          |                                    |          |       |
|       | <i>Each</i>   |                |                          |                                    |          |       |
| 30229 | Switch fuse 20A, SPN.....   | 439.07         | 13.31                    | 16.65                              | 49.86    | 30229 |
| 30230 | Ditto 32A, SPN.....   | 463.90         | 14.81                    | 18.18                              | 55.64    | 30230 |
| 30231 | Ditto 63A, SPN.....   | 529.75         | 18.77                    | 23.59                              | 71.53    | 30231 |
| 30232 | Ditto 100A, SPN.....  | 668.83         | 29.02                    | 36.19                              | 110.60   | 30232 |
| 30233 | Ditto 20A, TPN.....   | 564.85         | 16.87                    | 21.19                              | 65.14    | 30233 |
| 30234 | Ditto 32A, TPN.....   | 599.17         | 16.87                    | 21.19                              | 65.14    | 30234 |
| 30235 | Ditto 63A, TPN.....   | 722.97         | 29.31                    | 36.85                              | 110.60   | 30235 |
| 30236 | Ditto 100A, TPN.....  | 959.72         | 40.10                    | 50.20                              | 154.02   | 30236 |
|       | Neutral terminal :-   |                |                          |                                    |          |       |
|       | <i>Each</i>   |                |                          |                                    |          |       |
| 30237 | Neutral terminal for switchfuse 15A.....  | 54.15          | 4.38                     | 5.38                               | 13.51    | 30237 |
| 30238 | Neutral terminal for switchfuse 30A.....  | 54.15          | 4.38                     | 5.38                               | 13.51    | 30238 |
| 30239 | Neutral terminal for switchfuse 60A.....  | 58.89          | 5.70                     | 6.82                               | 17.14    | 30239 |
| 30240 | Neutral terminal for switchfuse 100A.....   | 73.01          | 7.93                     | 9.82                               | 28.71    | 30240 |
|       | Fuse switches, metal clad, c/ w conduit boxes, busbar chamber connection flanges and HRC fuses :- |                |                          |                                    |          |       |
|       | <i>Each</i>   |                |                          |                                    |          |       |
| 30241 | 160A, TPN.....  | 1,474.12       | 48.12                    | 60.13                              | 181.59   | 30241 |
| 30242 | 200A, TPN.....  | 1,716.48       | 48.12                    | 60.13                              | 181.59   | 30242 |
| 30243 | 300A, TPN.....  | 3,192.25       | 76.95                    | 95.97                              | 291.48   | 30243 |
| 30244 | 400A, TPN.....  | 3,798.12       | 96.26                    | 120.27                             | 359.36   | 30244 |
| 30245 | 600A, TPN.....  | 5,400.85       | 113.41                   | 140.61                             | 422.90   | 30245 |
| 30246 | 800A, TPN.....  | 7,075.40       | 128.94                   | 162.38                             | 488.12   | 30246 |
|       | Switch fuses all insulated SPN surface mounting, back or side entry c/ w IEC 60269-1 fuses :-     |                |                          |                                    |          |       |
|       | <i>Each</i>   |                |                          |                                    |          |       |
| 30247 | 20A - 80A.....  | 475.94         | 14.75                    | 18.11                              | 55.41    | 30247 |

| Item   |                |                      |                                      |  | Item        |       |
|--|----------------|----------------------|--------------------------------------|--|-------------|-------|
| <b>SWITCH AND FUSE GEAR (CONT'D)</b>                 |                |                      |                                      |  |             |       |
| Isolating switches, metal clad, surface mounting : - |                |                      |                                      |  |             |       |
| <i>Each</i>  |                |                      |                                      |  |             |       |
| Isolating switches, indoor type : -                  |                |                      |                                      |  |             |       |
| <i>Each</i>  |                |                      |                                      |  |             |       |
|  |                | Supply<br>and<br>fix | Take<br>down<br>and<br>clear<br>away | Take<br>down<br>and set<br>aside for<br>re-use | Fix<br>only |       |
|  |                | A<br>\$              | B<br>\$                              | C<br>\$  | D<br>\$     |       |
| 30248  | 20A, DP.....   | 432.65               | 14.75                                | 18.11  | 55.41       | 30248 |
| 30249  | 32A, DP.....   | 449.98               | 14.75                                | 18.11  | 55.41       | 30249 |
| 30250  | 63A, DP.....   | 530.76               | 19.40                                | 24.20  | 72.33       | 30250 |
| 30251  | 100A, DP.....  | 739.32               | 19.40                                | 24.20  | 72.33       | 30251 |
| 30252  | 20A, TPN.....  | 500.41               | 19.40                                | 24.20  | 72.33       | 30252 |
| 30253  | 32A, TPN.....  | 535.40               | 19.40                                | 24.20  | 72.33       | 30253 |
| 30254  | 63A, TPN.....  | 605.13               | 20.40                                | 25.66  | 76.77       | 30254 |
| 30255  | 100A, TPN..... | 876.93               | 21.45                                | 26.85  | 80.51       | 30255 |
| 30256  | 200A, TPN..... | 1,541.16             | 47.66                                | 60.04  | 180.15      | 30256 |
| 30257  | 300A, TPN..... | 2,525.56             | 52.03                                | 64.97  | 202.37      | 30257 |
| 30258  | 400A, TPN..... | 2,994.09             | 55.88                                | 69.51  | 219.16      | 30258 |
| 30259  | 20A, DP.....   | 306.98               | 11.66                                | 15.09  | 44.40       | 30259 |
| 30260  | 32A, DP.....   | 325.79               | 11.66                                | 15.09  | 44.40       | 30260 |
| 30261  | 63A, DP.....   | 385.96               | 14.94                                | 18.55  | 54.51       | 30261 |
| 30262  | 80A, DP.....   | 441.88               | 14.94                                | 18.55  | 54.51       | 30262 |
| 30263  | 100A, DP.....  | 535.73               | 14.94                                | 18.55  | 54.51       | 30263 |
| 30264  | 32A, TPN.....  | 472.52               | 14.96                                | 19.05  | 55.26       | 30264 |
| 30265  | 63A, TPN.....  | 556.18               | 16.35                                | 20.20  | 59.36       | 30265 |
| 30266  | 100A, TPN..... | 822.98               | 18.00                                | 21.34  | 63.47       | 30266 |
| 30267  | 160A, TPN..... | 1,320.54             | 43.60                                | 53.45  | 162.31      | 30267 |
| 30268  | 200A, TPN..... | 1,409.68             | 43.60                                | 53.45  | 162.31      | 30268 |



| Item  |                    | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only | Item  |
|---|--------------------|----------------|--------------------------|------------------------------------|----------|-------|
|   |                    | A<br>\$        | B<br>\$                  | C<br>\$                            | D<br>\$  |       |
| <b>SWITCH AND FUSE GEAR (CONT'D)</b>            |                    |                |                          |                                    |          |       |
| Isolating switch, weatherproof rated to IP65 :- |                    |                |                          |                                    |          |       |
|   | <i>Each</i>        |                |                          |                                    |          |       |
| 30269   | 20A, DP.....       | 522.75         | 24.02                    | 30.71                              | 94.46    | 30269 |
| 30270   | 32A, DP.....       | 604.18         | 26.23                    | 32.60                              | 96.90    | 30270 |
| 30271   | 63A, DP.....       | 826.76         | 33.46                    | 42.74                              | 132.01   | 30271 |
| 30272   | 80A, DP.....       | 1,166.85       | 39.29                    | 48.37                              | 163.54   | 30272 |
| 30273   | 100A, DP.....      | 1,251.09       | 42.04                    | 51.71                              | 174.56   | 30273 |
| 30274   | 32A, TPN.....      | 690.68         | 29.88                    | 37.30                              | 111.84   | 30274 |
| 30275   | 63A, TPN.....      | 837.66         | 38.55                    | 48.94                              | 145.60   | 30275 |
| 30276   | 100A, TPN.....     | 1,253.24       | 48.01                    | 59.43                              | 177.28   | 30276 |
| 30277   | 160A, TPN.....     | 1,734.59       | 56.69                    | 70.34                              | 209.05   | 30277 |
| 30278   | 200A, TPN.....     | 2,264.63       | 65.21                    | 80.56                              | 242.18   | 30278 |
| Changeover switches, metal clad :-              |                    |                |                          |                                    |          |       |
|   | <i>Each</i>        |                |                          |                                    |          |       |
| 30279   | 30A/ 32A, DP.....  | 1,706.02       | 14.81                    | 18.18                              | 56.96    | 30279 |
| 30280   | 60A/ 63A, DP.....  | 2,096.67       | 19.47                    | 24.29                              | 74.12    | 30280 |
| 30281   | 100A, DP.....      | 3,069.15       | 24.27                    | 30.45                              | 91.66    | 30281 |
| 30282   | 30A/ 32A, TP.....  | 1,725.27       | 19.47                    | 24.29                              | 74.12    | 30282 |
| 30283   | 60A/ 63A, TP.....  | 2,100.69       | 24.27                    | 30.45                              | 91.66    | 30283 |
| 30284   | 100A, TP.....      | 3,105.91       | 33.24                    | 41.28                              | 126.89   | 30284 |
| 30285   | 30A/ 32A, TPN..... | 1,749.02       | 24.27                    | 30.45                              | 91.66    | 30285 |
| 30286   | 60A/ 63A, TPN..... | 2,412.90       | 29.84                    | 35.87                              | 106.00   | 30286 |
| 30287   | 100A, TPN.....     | 3,133.13       | 37.96                    | 48.00                              | 142.40   | 30287 |

| Item  |  | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only | Item  |
|-------|--|----------------|--------------------------|------------------------------------|----------|-------|
|       | <b>SWITCH AND FUSE GEAR (CONT'D)</b>   |                |                          |                                    |          |       |
|       | Automatic changeover contactor c/ w mechanical interlock and metal casing :-               |                |                          |                                    |          |       |
|       | <i>Each</i>  | A<br>\$        | B<br>\$                  | C<br>\$                            | D<br>\$  |       |
| 30288 | 40A, TPN.....  | 1,086.08       | 33.71                    | 42.03                              | 129.79   | 30288 |
| 30289 | 60A/ 63A, TPN.....   | 1,948.93       | 33.71                    | 42.03                              | 129.79   | 30289 |
| 30290 | 100A, TPN.....   | 3,664.34       | 40.14                    | 49.74                              | 151.42   | 30290 |
| 30291 | 200A, TPN.....   | 5,886.50       | 44.14                    | 55.07                              | 166.48   | 30291 |
| 30292 | 300A/ 320A, TPN.....   | 9,446.61       | 44.14                    | 55.07                              | 166.48   | 30292 |
| 30293 | 400A, TPN.....   | 12,928.67      | 44.14                    | 55.07                              | 166.48   | 30293 |
| 30294 | 60A/ 63A, 4P.....  | 2,518.87       | 34.94                    | 43.54                              | 136.37   | 30294 |
| 30295 | 100A, 4P.....  | 5,724.15       | 42.17                    | 51.95                              | 158.96   | 30295 |
| 30296 | 200A, 4P.....  | 7,082.55       | 46.46                    | 55.51                              | 176.22   | 30296 |
| 30297 | 300A/ 320A, 4P.....  | 12,313.60      | 46.46                    | 55.51                              | 176.22   | 30297 |
| 30298 | 400A, 4P.....  | 16,005.25      | 46.46                    | 55.51                              | 176.22   | 30298 |
|       | <b>FUSE</b>  |                |                          |                                    |          |       |
|       | The rates shall include opening and closing of switch board/ box covering, where required. |                |                          |                                    |          |       |
|       | Metal clad cutouts, cast metal or sheet steel :-   |                |                          |                                    |          |       |
|       | <i>Each</i>  | A<br>\$        | B<br>\$                  | C<br>\$                            | D<br>\$  |       |
| 30299 | 30A/ 32A, SPN.....   | 112.50         | 9.95                     | 12.34                              | 35.31    | 30299 |
| 30300 | 60A/ 63A, SPN.....   | 125.32         | 9.95                     | 12.34                              | 35.31    | 30300 |
| 30301 | 100A, SPN.....   | 168.08         | 14.82                    | 18.34                              | 53.56    | 30301 |
| 30302 | 30A/ 32A, TPN.....   | 181.40         | 14.82                    | 18.34                              | 53.56    | 30302 |
| 30303 | 60A/ 63A, TPN.....   | 322.69         | 16.87                    | 21.19                              | 62.18    | 30303 |
| 30304 | 100A, TPN.....   | 389.94         | 19.44                    | 23.69                              | 71.25    | 30304 |

| Item  |  |                |                          |                                    | Item     |       |
|-------|--|----------------|--------------------------|------------------------------------|----------|-------|
|       | <b>FUSE (CONT'D)</b>   |                |                          |                                    |          |       |
|       | The rates shall include opening and closing of switch board/ box covering, where required.     |                |                          |                                    |          |       |
|       | Fuse holder only ceramic porcelain or thermoplastic, rewirable or cartridge type : -           |                |                          |                                    |          |       |
|       | <i>Each</i>  |                |                          |                                    |          |       |
|       |  | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only |       |
|       |  | A<br>\$        | B<br>\$                  | C<br>\$                            | D<br>\$  |       |
| 30305 | 500V 30A/ 32A.....   | 16.90          | 2.57                     | 3.12                               | 7.50     | 30305 |
| 30306 | 500V 60A/ 63A.....   | 28.20          | 2.57                     | 3.12                               | 7.50     | 30306 |
| 30307 | 500V 100A.....   | 43.66          | 2.57                     | 3.12                               | 7.50     | 30307 |
| 30308 | 500V 200A.....   | 52.81          | 3.71                     | 4.44                               | 11.37    | 30308 |
|       | Fuse base only ceramic porcelain or thermoplastic : -  |                |                          |                                    |          |       |
|       | <i>Each</i>  |                |                          |                                    |          |       |
| 30309 | 500V 30A/ 32A.....   | 28.66          | 3.71                     | 4.44                               | 11.37    | 30309 |
| 30310 | 500V 60A/ 63A.....   | 52.39          | 4.46                     | 5.44                               | 13.74    | 30310 |
| 30311 | 500V 100A.....   | 70.50          | 4.98                     | 5.97                               | 15.87    | 30311 |
| 30312 | 500V 200A.....   | 79.16          | 5.97                     | 7.25                               | 18.96    | 30312 |
|       | Cartridge fuse links to IEC 60269-1: -   |                |                          |                                    |          |       |
|       | <i>Each</i>  |                |                          |                                    |          |       |
| 30313 | Suitable for 13A plug-tops, 2A (yellow), 3A (blue), 5A (red), 10A (black) and 13A (brown)..... | 7.80           | 1.06                     | 1.28                               | 3.15     | 30313 |

| Item  |  | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only | Item  |
|-------|--|----------------|--------------------------|------------------------------------|----------|-------|
|       | <b>FUSE (CONT'D)</b>   |                |                          |                                    |          |       |
|       | The rates shall include opening and closing of switch board/ box covering, where required. |                |                          |                                    |          |       |
|       | HRC cartridge fuses to IEC 60269-1, with off-set tags or central tags of rating : -        |                |                          |                                    |          |       |
|       | <i>Each</i>  | A \$           | B \$                     | C \$                               | D \$     |       |
| 30314 | 6A or 10A.....   | 15.36          | 1.73                     | 2.12                               | 5.28     | 30314 |
| 30315 | 16A.....   | 15.84          | 1.73                     | 2.12                               | 5.28     | 30315 |
| 30316 | 20A.....   | 15.84          | 1.73                     | 2.12                               | 5.28     | 30316 |
| 30317 | 25A.....   | 16.79          | 1.73                     | 2.12                               | 5.28     | 30317 |
| 30318 | 32A.....   | 16.79          | 1.73                     | 2.12                               | 5.28     | 30318 |
| 30319 | 40A.....   | 21.70          | 1.73                     | 2.12                               | 5.28     | 30319 |
| 30320 | 50A.....   | 21.70          | 1.73                     | 2.12                               | 5.28     | 30320 |
| 30321 | 63A.....   | 21.70          | 1.73                     | 2.12                               | 5.28     | 30321 |
| 30322 | 80A.....   | 36.08          | 2.22                     | 2.72                               | 7.52     | 30322 |
| 30323 | 100A.....  | 37.52          | 2.22                     | 2.72                               | 7.52     | 30323 |
| 30324 | 125A.....  | 53.09          | 2.48                     | 2.99                               | 9.02     | 30324 |
| 30325 | 160A.....  | 53.09          | 2.48                     | 2.99                               | 9.02     | 30325 |
| 30326 | 200A.....  | 54.12          | 2.48                     | 2.99                               | 9.02     | 30326 |
| 30327 | 250A.....  | 88.12          | 2.99                     | 3.48                               | 11.14    | 30327 |
| 30328 | 315A.....  | 97.21          | 2.99                     | 3.48                               | 11.14    | 30328 |
| 30329 | 350A.....  | 129.48         | 2.99                     | 3.48                               | 11.14    | 30329 |
| 30330 | 400A.....  | 134.32         | 3.87                     | 4.88                               | 14.82    | 30330 |
| 30331 | 450A.....  | 173.99         | 3.87                     | 4.88                               | 14.82    | 30331 |
| 30332 | 500A.....  | 193.18         | 3.87                     | 4.88                               | 14.82    | 30332 |
| 30333 | 630A.....  | 228.95         | 4.88                     | 5.89                               | 17.05    | 30333 |
| 30334 | 800A.....  | 292.59         | 4.88                     | 5.89                               | 17.05    | 30334 |
|       | Semi-enclosed fuse to BS 3036 of rating : -  |                |                          |                                    |          |       |
|       | <i>Each</i>  |                |                          |                                    |          |       |
| 30335 | 3/ 5A.....   | 16.20          | 1.73                     | 2.12                               | 5.67     | 30335 |
| 30336 | 10/ 15/ 20A.....   | 20.91          | 1.73                     | 2.12                               | 6.29     | 30336 |
| 30337 | 25/ 30A.....   | 24.43          | 1.73                     | 2.12                               | 6.76     | 30337 |

| Item   |  | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only | Item  |
|--|--|----------------|--------------------------|------------------------------------|----------|-------|
| <b>TIME SWITCHES &amp; BOXES</b>                 |  |                |                          |                                    |          |       |
|  |  | A              | B                        | C                                  | D        |       |
|  | <i>Each</i>  | \$             | \$                       | \$                                 | \$       |       |
| 30338  | 20A (1-day) integrated with cassette type alkaline battery back-up to provide 360 hours continuous operation upon power failure.....   | 292.03         | 3.92                     | 6.00                               | 15.31    | 30338 |
| 30339  | 20A (7-day) integrated with cassette type alkaline battery back-up to provide 360 hours continuous operation upon power failure.....   | 482.88         | 3.92                     | 6.00                               | 15.31    | 30339 |
| 30340  | 30A (1-day) integrated with cassette type alkaline battery back-up to provide 360 hours continuous operation upon power failure.....   | 383.53         | 3.92                     | 6.00                               | 15.31    | 30340 |
| 30341  | 30A (7-day) integrated with cassette type alkaline battery back-up to provide 360 hours continuous operation upon power failure.....   | 584.16         | 3.92                     | 6.00                               | 15.31    | 30341 |
| 30342  | Metal box for 20A/ 30A time switch.....  | 148.75         | 3.92                     | 6.00                               | 15.31    | 30342 |
| 30343  | IP53 Plastic box for 20A/ 30A time switch.....   | 454.83         | 3.92                     | 6.00                               | 15.31    | 30343 |
| 30344  | Programmable quartz class changing bell timer with two control output channels, choice of a minimum of 4 melodies, up to 120 weekly programs and 366 weekly programs of minimum one minute setting, with sockets for microphone and external speaker, power failure backup by lithium primary battery and rechargeable NiCd battery for not less than 800 hours..... | 4,047.98       | 45.30                    | 56.33                              | 175.05   | 30344 |
| <b>E.L.V. TERMINAL UNITS</b>                     |  |                |                          |                                    |          |       |
|  |  | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only |       |
|  | <i>Each</i>  | A              | B                        | C                                  | D        |       |
|  |  | \$             | \$                       | \$                                 | \$       |       |
| 30345  | Extra low voltage terminal unit with stainless steel sign plate, each unit shall incorporate a 13A fuse.....   | 221.48         | 6.84                     | 8.56                               | 26.26    | 30345 |
| <b>EARTHING AND LIGHTNING CONDUCTOR FITTINGS</b> |  |                |                          |                                    |          |       |
|  |  | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only |       |
|  | <i>Per linear metre</i>  | A              | B                        | C                                  | D        |       |
|  |  | \$             | \$                       | \$                                 | \$       |       |
| 30346  | Copper tape, without tinned, 25x3mm with saddles.....  | 88.38          | 7.26                     | 8.81                               | 27.19    | 30346 |
| 30347  | Copper tape, tinned entire length 25x3mm with saddles.....   | 91.90          | 7.26                     | 8.81                               | 27.19    | 30347 |
| 30348  | Copper tape, PVC sheathed, 25x3mm with saddles.....  | 125.65         | 7.26                     | 8.81                               | 27.19    | 30348 |
| 30349  | Copper tape, without tinned, 25x3mm laid in trench or duct (ducting, excavation and back-filling measured separately).....   | 78.84          | 5.81                     | 7.11                               | 20.05    | 30349 |
| 30350  | Copper tape, tinned entire length, 25x3mm laid in trench or duct (ducting, excavation and back-filling measured separately).....   | 79.48          | 5.81                     | 7.11                               | 20.05    | 30350 |
| 30351  | Aluminum type 25 x 3 mm with saddles ( for lightning conductors ).....   | 57.19          | 8.05                     | 10.05                              | 30.18    | 30351 |
| 30352  | Braided copper tape with PVC sheath 25 x 3 mm.....   | 112.35         | 7.26                     | 8.81                               | 27.19    | 30352 |

| Item  | Supply and fix   | Take down and clear away | Take down and set aside for re-use | Fix only | Item   |       |
|---|--|--------------------------|------------------------------------|----------|--------|-------|
| <i>Each</i>   | A<br>\$  | B<br>\$                  | C<br>\$                            | D<br>\$  |        |       |
| <b>EARTHING AND LIGHTNING CONDUCTOR FITTINGS (CONT'D)</b> |  |                          |                                    |          |        |       |
| 30353   | Copper bond earth rod 16 mm diameter 1.2 m long consists of pure electrolytic copper uniformly molecularly bonded onto a high tensile steel core to a minimum thickness of 0.25 mm c/ w driving head and coupling .....  | 116.57                   | -                                  | -        | 74.04  | 30353 |
| 30354   | Ditto but 2.4 m.....   | 182.83                   | -                                  | -        | 90.97  | 30354 |
| 30355   | Copper earth plate, lattice type 600 x 600 mm (excavation measured separately) .....   | 1,814.37                 | 39.29                              | 48.81    | 148.35 | 30355 |
| 30356   | Ditto but 900 x 900 mm (ditto).....  | 2,630.61                 | 39.73                              | 50.08    | 150.26 | 30356 |
| 30357   | Earth clips with plugs, tinned copper, for pipes n.e. 25 mm diameter.....  | 16.93                    | 3.83                               | 4.70     | 11.85  | 30357 |
| 30358   | Ditto for pipes exc. 25 mm diameter but n.e. 38 mm diameter .....  | 17.94                    | 3.83                               | 4.70     | 11.85  | 30358 |
| 30359   | Ditto for pipes exc. 38 mm diameter but n.e. 75 mm diameter .....  | 22.28                    | 3.83                               | 4.70     | 11.85  | 30359 |
| 30360   | Tape clip only, for tape 25 x 3 mm wide.....   | 24.75                    | 3.83                               | 4.70     | 11.85  | 30360 |
| 30361   | Saddle only, for securing tapes by and including single set screw.....   | 30.54                    | 5.16                               | 6.17     | 15.65  | 30361 |
| 30362   | Light duty air terminal, with 16 mm diameter rod up to 300 mm long (copper rod taper pointed) .....  | 134.78                   | 15.55                              | 19.16    | 58.44  | 30362 |
| 30363   | Ditto 300 mm - 500 mm long (ditto).....  | 156.98                   | 15.55                              | 19.16    | 58.44  | 30363 |
| 30364   | Ditto 500 mm - 1000 mm long (ditto).....   | 214.21                   | 15.55                              | 19.16    | 58.44  | 30364 |
| 30365   | Ditto but with 20 mm diameter rod, 1000 mm long (ditto).....   | 242.92                   | 15.55                              | 19.16    | 58.44  | 30365 |
| 30366   | Ditto but with 25 mm diameter rod, 1000 mm long (ditto).....   | 264.57                   | 15.55                              | 19.16    | 58.44  | 30366 |
| 30367   | Multi-pointed air terminal c/ w 300 mm - 600 mm long copper rod and base .....   | 278.23                   | 15.55                              | 19.16    | 58.44  | 30367 |
| 30368   | Tape connection for 25 mm tape.....  | 31.07                    | 5.73                               | 6.86     | 17.50  | 30368 |
| 30369   | Tape to plate connector.....   | 50.78                    | 7.13                               | 8.68     | 24.05  | 30369 |
| 30370   | Circular plate type test clamp for 25 mm tape.....   | 74.49                    | 7.13                               | 8.68     | 24.05  | 30370 |
| 30371   | Connector clamp for 16 mm, 20 mm and 25 mm diameter rod, pressure type.....  | 48.28                    | 7.13                               | 8.68     | 24.05  | 30371 |
| <b>Per linear metre</b>                                   |  |                          |                                    |          |        |       |
| 30372   | Down conductor for early streamer lightning protection system, composing of two identical conductors placed one coaxially about the other with separation by a layer of insulator to form a high capacitance between the conducting layers, designed to withstand 250kV transient at 1/ 50 wave to IEC 60230 c/ w saddles..... | 736.72                   | 12.48                              | 16.71    | 42.05  | 30372 |

| Item  |   | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only | Item  |
|---|---|----------------|--------------------------|------------------------------------|----------|-------|
| <b>EARTHING AND LIGHTNING CONDUCTOR FITTINGS (CONT'D)</b> |   | A              | B                        | C                                  | D        |       |
| <i>Each</i>   |   | \$             | \$                       | \$                                 | \$       |       |
| 30373   | Early streamer emission lightning protection system to French standard NF C17-102, comprising of lightning terminal in a 2m 316 stainless steel pole, supporting insulation mast / stainless steel mast, connection clamps, lightning counter and all necessary accessories. The lightning terminal shall generate a leader to capture the lightning and direct it to earth during a lightning event. Radius of protection (level 1) with the terminal 5m above the protected surface at 20m striking distance being 48m. Down conductors shall be measured separately..... | 35,700.03      | 395.83                   | 496.19                             | 1,451.92 | 30373 |
| 30374   | Ditto but radius of protection (level 1) with the terminal 5m above the protected surface at 20m striking distance being 63m.....   | 42,970.81      | 395.83                   | 496.19                             | 1,451.92 | 30374 |
| 30375   | Ditto but radius of protection (level 1) with the terminal 5m above the protected surface at 20m striking distance being 79m.....   | 51,666.61      | 395.83                   | 496.19                             | 1,451.92 | 30375 |
| 30376   | Early streamer lightning terminal to French standard NF C17-102; Radius of protection (level 1) with the terminal 5m above the protected surface at 20m striking distance being 48m.....  | 22,278.46      | 306.05                   | 459.78                             | 989.47   | 30376 |
| 30377   | Early streamer lightning terminal to French standard NF C17-102; Radius of protection (level 1) with the terminal 5m above the protected surface at 20m striking distance being 63m.....  | 29,355.61      | 306.05                   | 459.78                             | 989.47   | 30377 |
| 30378   | Early streamer lightning terminal to French standard NF C17-102; Radius of protection (level 1) with the terminal 5m above the protected surface at 20m striking distance being 79m.....  | 37,127.82      | 306.05                   | 459.78                             | 989.47   | 30378 |
| 30379   | Air termination support c/ w connection clamps and all necessary accessories.....   | 10,580.08      | 162.15                   | 202.79                             | 491.23   | 30379 |
| 30380   | Stainless steel mast assembly.....  | 3,291.19       | 291.88                   | 375.30                             | 1,179.05 | 30380 |
| 30381   | Lightning event counter.....  | 3,214.56       | 33.19                    | 41.48                              | 125.70   | 30381 |

| Item  |   |                      |                                      |  | Item        |       |
|-------|---|----------------------|--------------------------------------|--|-------------|-------|
|       | <b>EARTHING AND LIGHTNING CONDUCTOR FITTINGS<br/>(CONT'D)</b>                 |                      |                                      |  |             |       |
|       | Power surge protection devices in compliance with IEC 61643-1                 | Supply<br>and<br>fix | Take<br>down<br>and<br>clear<br>away | Take<br>down<br>and set<br>aside for<br>re-use | Fix<br>only |       |
|       | Shunt type Surge Protection Devices for primary incoming power protection : - |                      |                                      |  |             |       |
|       | <b>Each</b>   | A<br>\$              | B<br>\$                              | C<br>\$  | D<br>\$     |       |
| 30382 | 20 kA (8/ 20 μs), single-phase .....  | 693.72               | 8.05                                 | 10.77  | 31.46       | 30382 |
| 30383 | Ditto but three phase.....  | 2,118.58             | 8.05                                 | 10.77  | 31.46       | 30383 |
| 30384 | 40 kA (8/ 20 μs), single-phase .....  | 701.74               | 8.05                                 | 10.77  | 31.46       | 30384 |
| 30385 | Ditto but three-phase.....  | 2,122.04             | 8.05                                 | 10.77  | 31.46       | 30385 |
| 30386 | 65 kA (8/ 20 μs), single-phase .....  | 1,495.83             | 10.63                                | 13.14  | 39.97       | 30386 |
| 30387 | Ditto but three-phase.....  | 4,180.41             | 10.63                                | 13.14  | 39.97       | 30387 |
| 30388 | 80 kA (8/ 20 μs), single-phase .....  | 1,990.18             | 10.63                                | 13.14  | 39.97       | 30388 |
| 30389 | Ditto but three-phase.....  | 5,927.88             | 10.63                                | 13.14  | 39.97       | 30389 |
| 30390 | 100 kA (8/ 20 μs), single-phase .....   | 2,033.44             | 12.31                                | 15.42  | 47.09       | 30390 |
| 30391 | Ditto but three-phase.....  | 6,046.68             | 12.31                                | 15.42  | 47.09       | 30391 |
| 30392 | 150 kA (8/ 20 μs), single-phase .....   | 2,867.81             | 12.31                                | 15.42  | 47.09       | 30392 |
| 30393 | Ditto but three-phase c/ w counter.....                                       | 10,080.08            | 12.31                                | 15.42  | 47.09       | 30393 |
|       | Surge Reduction Filters for electronic equipment with surge rating : -        |                      |                                      |  |             |       |
|       | <b>Each</b>   |                      |                                      |  |             |       |
| 30394 | 6A, 4-16 kA (8/ 20 μs), single-phase.....                                     | 2,260.09             | 8.03                                 | 10.75  | 31.38       | 30394 |
| 30395 | 10A, 55 kA (8/ 20 μs), single-phase.....                                      | 3,444.94             | 8.03                                 | 10.75  | 31.38       | 30395 |
| 30396 | 20A, 40-55 kA (8/ 20 μs), single-phase.....                                   | 3,444.94             | 8.03                                 | 10.75  | 31.38       | 30396 |
| 30397 | 20A, 40-55 kA (8/ 20 μs), three-phase.....                                    | 5,296.51             | 10.72                                | 13.07  | 39.32       | 30397 |
| 30398 | 32A, 135 kA (8/ 20 μs), single-phases.....                                    | 4,069.38             | 8.03                                 | 10.75  | 31.38       | 30398 |
| 30399 | 63A, 135 kA (8/ 20 μs), single-phase.....                                     | 4,142.29             | 8.03                                 | 10.75  | 31.38       | 30399 |
| 30400 | 125A, 135 kA (8/ 20 μs), single-phase.....                                    | 4,142.29             | 8.03                                 | 10.75  | 31.38       | 30400 |
| 30401 | 32A, 135 kA (8/ 20 μs), three-phase.....                                      | 5,667.25             | 10.72                                | 13.07  | 39.32       | 30401 |
| 30402 | 64A, 135 kA (8/ 20 μs), three-phase.....                                      | 5,741.39             | 10.72                                | 13.07  | 39.32       | 30402 |
| 30403 | 125A, 135 kA (8/ 20 μs), three-phase.....                                     | 5,745.51             | 10.72                                | 13.07  | 39.32       | 30403 |
| 30404 | 200A, 135 kA (8/ 20 μs), three-phase.....                                     | 5,869.46             | 10.72                                | 13.07  | 39.32       | 30404 |
| 30405 | 315A, 135 kA (8/ 20 μs), three-phase.....                                     | 5,869.46             | 10.72                                | 13.07  | 39.32       | 30405 |
| 30406 | 630A, 135 kA (8/ 20 μs), three-phase.....                                     | 5,921.57             | 10.72                                | 13.07  | 39.32       | 30406 |



| Item  |  |                      |                                      |  | Item        |       |
|-------|--|----------------------|--------------------------------------|--|-------------|-------|
|       | <b>EARTHING AND LIGHTNING CONDUCTOR FITTINGS<br/>(CONT'D)</b>  | Supply<br>and<br>fix | Take<br>down<br>and<br>clear<br>away | Take<br>down<br>and set<br>aside for<br>re-use | Fix<br>only |       |
|       | Surge protectors for radio, telecommunications & signal protection : -   |                      |                                      |  |             |       |
|       | <i>Each</i>  | A<br>\$              | B<br>\$                              | C<br>\$  | D<br>\$     |       |
| 30407 | 500A (8/ 20 $\mu$ s).....  | 1,345.64             | 8.03                                 | 10.75  | 31.38       | 30407 |
| 30408 | 2.5 kA (8/ 20 $\mu$ s).....  | 1,345.79             | 8.03                                 | 10.75  | 31.38       | 30408 |
| 30409 | 10 kA (8/ 20 $\mu$ s).....   | 1,356.48             | 8.03                                 | 10.75  | 31.38       | 30409 |
| 30410 | 20 kA (8/ 20 $\mu$ s).....   | 1,361.14             | 8.03                                 | 10.75  | 31.38       | 30410 |
|       | Miscellaneous item : -   |                      |                                      |  |             |       |
|       | <i>Each</i>  |                      |                                      |  |             |       |
| 30411 | Supplementary bonding to metal type ceiling grid, window frame and service pipes c/ w box<br>for wiring not exceeding 2 m..... | 12.79                | 2.41                                 | -  | -           | 30411 |
|       | Chemicals for soil treatment : -   |                      |                                      |  |             |       |
|       | <i>Per kg</i>  |                      |                                      |  |             |       |
| 30412 | Ammonium chloride.....   | 32.88                | -                                    | -  | 15.88       | 30412 |
| 30413 | Copper sulphate.....   | 35.90                | -                                    | -  | 15.88       | 30413 |
| 30414 | Bentonite.....   | 33.38                | -                                    | -  | 15.88       | 30414 |
| 30415 | Lime powder for mixing of earthing chemical.....   | 19.96                | -                                    | -  | 15.88       | 30415 |
| 30416 | Industrial salt for mixing of earthing chemical.....   | 30.27                | -                                    | -  | 15.88       | 30416 |
| 30417 | Carbolic powder for mixing of earthing chemical.....   | 31.67                | -                                    | -  | 15.88       | 30417 |

| Item                         |   |                      |                                      |  | Item        |       |
|------------------------------|---|----------------------|--------------------------------------|--|-------------|-------|
| <b>ELECTRICAL APPLIANCES</b> |   |                      |                                      |  |             |       |
| <i>Each</i>                  |   |                      |                                      |  |             |       |
|                              |   | Supply<br>and<br>fix | Take<br>down<br>and<br>clear<br>away | Take<br>down<br>and set<br>aside for<br>re-use | Fix<br>only |       |
|                              |   | A<br>\$              | B<br>\$                              | C<br>\$  | D<br>\$     |       |
| 30418                        | Electric rice cooker for 10 persons.....                          | 359.84               | 3.41                                 | 4.80   | 13.70       | 30418 |
| 30419                        | Electric rice cooker for 15 persons.....                          | 488.23               | 3.41                                 | 4.80   | 13.70       | 30419 |
| 30420                        | Electric cooker 2 rings.....                                      | 1,441.61             | 14.29                                | 17.87  | 53.49       | 30420 |
| 30421                        | Electric cooker 3 or 4 rings.....                                 | 3,327.04             | 23.95                                | 30.21  | 88.78       | 30421 |
| 30422                        | Electric cooker control switch.....                               | 404.02               | 6.62                                 | 8.23   | 24.81       | 30422 |
| 30423                        | Water heater, instantaneous type, 6 kW, single-phase.....         | 1,179.74             | 14.29                                | 17.87  | 53.49       | 30423 |
| 30424                        | Water heater, instantaneous type, 18 kW, three-phase.....         | 1,886.84             | 14.29                                | 17.87  | 59.40       | 30424 |
| 30425                        | Water heater, instantaneous type, 24 kW, three-phase.....         | 2,041.64             | 23.95                                | 30.21  | 88.78       | 30425 |
| 30426                        | Water heater, storage type, n.e. 10 litres, single-phase.....     | 1,782.81             | 14.29                                | 17.87  | 53.49       | 30426 |
| 30427                        | Water heater, storage type, 13 litres, single-phase.....          | 1,782.81             | 14.29                                | 17.87  | 53.49       | 30427 |
| 30428                        | Water heater, storage type, 25 litres, single-phase.....          | 2,165.40             | 14.29                                | 17.87  | 53.49       | 30428 |
| 30429                        | Water heater, storage type, 38 litres, single-phase.....          | 2,983.19             | 14.29                                | 17.87  | 53.49       | 30429 |
| 30430                        | Water heater, storage type, 57 litres, single-phase.....          | 3,318.47             | 14.29                                | 17.87  | 53.49       | 30430 |
| 30431                        | Water heater, storage type, 90 litres, single-phase.....          | 4,530.55             | 23.95                                | 30.21  | 88.78       | 30431 |
| 30432                        | Water heater, storage type, 135 litres, single-phase.....         | 6,153.23             | 23.95                                | 30.21  | 88.78       | 30432 |
| 30433                        | Water heater, storage type, 135 litres, three-phase.....          | 6,849.72             | 23.95                                | 30.21  | 88.78       | 30433 |
| 30434                        | Water heater, storage type, 150 litres, single-phase.....         | 6,672.72             | 23.95                                | 30.21  | 88.78       | 30434 |
| 30435                        | Water heater, storage type, 150 litres, three-phase.....          | 7,432.33             | 23.95                                | 30.21  | 88.78       | 30435 |
| 30436                        | Electric water heater, storage type, 180 litres, three-phase..... | 10,158.52            | 23.95                                | 30.21  | 88.78       | 30436 |
| 30437                        | Electric water heater, storage type, 225 litres, three-phase..... | 11,812.80            | 23.95                                | 30.21  | 88.78       | 30437 |
| 30438                        | Tubular heater, 300 mm.....                                       | 119.39               | 7.77                                 | 9.76   | 28.38       | 30438 |
| 30439                        | Tubular heater, 600 mm.....                                       | 401.07               | 7.77                                 | 9.76   | 28.38       | 30439 |
| 30440                        | Tubular heater, 1200 mm.....                                      | 453.71               | 7.77                                 | 9.76   | 28.38       | 30440 |
| 30441                        | Kettle, 3.5 - 4.5 litre, 2 kW (max.), single-phase.....           | 320.11               | 3.41                                 | 4.80   | 13.70       | 30441 |
| 30442                        | Water boiler, 3 kW (max.), single-phase.....                      | 3,701.46             | 3.41                                 | 4.80   | 13.70       | 30442 |
| 30443                        | Tea urn, 18 litres.....   | 1,036.49             | 3.41                                 | 4.80   | 13.70       | 30443 |
| 30444                        | Electric fire, 1 kW (max.), wall mounted.....                     | 196.74               | 9.74                                 | 12.11  | 36.91       | 30444 |

| Item  |   | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only | Item  |
|-------|---|----------------|--------------------------|------------------------------------|----------|-------|
|       | <b>ELECTRICAL APPLIANCES (CONT'D)</b>   | A              | B                        | C                                  | D        |       |
|       | <i>Each</i>   | \$             | \$                       | \$                                 | \$       |       |
| 30445 | Radiator, 1.5 kW (max.), oil filled.....  | 744.09         | 14.36                    | 17.94                              | 53.71    | 30445 |
| 30446 | Radiator, 2 kW (max.), oil filled.....  | 799.52         | 14.36                    | 17.94                              | 53.71    | 30446 |
| 30447 | Radiator, 3 kW (max.), oil filled.....  | 806.10         | 14.36                    | 17.94                              | 53.71    | 30447 |
| 30448 | Radiator, 1 kW (max.), infra-red.....   | 395.89         | 14.36                    | 17.94                              | 53.71    | 30448 |
| 30449 | Radiator, 1.5 kW (max.), infra-red.....   | 461.01         | 14.36                    | 17.94                              | 53.71    | 30449 |
| 30450 | Radiator, 2 kW (max.), infra-red.....   | 472.00         | 14.36                    | 17.94                              | 53.71    | 30450 |
| 30451 | Convactor heater, 1.2 kW (max.).....  | 681.19         | 14.36                    | 17.94                              | 53.71    | 30451 |
| 30452 | Wall mounted fan heater, 2 kW (max.).....   | 434.32         | 14.36                    | 17.94                              | 53.71    | 30452 |
| 30453 | Convection heater, heavy duty, wall mounted, 3 kW c/ w temperature cut-out and thermostat .....   | 5,509.14       | 14.63                    | 18.16                              | 54.41    | 30453 |
| 30454 | Wall clock, 300 mm diameter, battery operated, quartz.....  | 300.59         | 3.42                     | 4.82                               | 13.75    | 30454 |
| 30455 | Hand dryer.....   | 759.21         | 5.83                     | 7.30                               | 22.31    | 30455 |
| 30456 | Hand/ face dryer, with deflector for hand or face drying, heater rating not less than 2.2 kW.....   | 801.79         | 5.83                     | 7.30                               | 22.31    | 30456 |
| 30457 | Wall mounted hair dryer.....  | 854.04         | 5.95                     | 7.85                               | 22.89    | 30457 |
| 30458 | Domestic refrigerator, 170 - 250 litres (CFC free).....   | 2,656.81       | 14.36                    | 17.94                              | 53.71    | 30458 |
| 30459 | Domestic refrigerator, 250 - 320 litres (CFC free).....   | 3,489.36       | 14.36                    | 17.94                              | 53.71    | 30459 |
| 30460 | Domestic refrigerator, 320 - 370 litres (CFC free).....   | 4,135.42       | 14.36                    | 17.94                              | 53.71    | 30460 |
| 30461 | Dehumidifier, moisture removal capacity 13 litres/ day.....   | 2,388.85       | 14.63                    | 18.16                              | 54.41    | 30461 |
| 30462 | High capacity industrial type dehumidifier, air flow 2500 m <sup>3</sup> / hr.....  | 51,086.61      | 14.63                    | 18.16                              | 54.41    | 30462 |
| 30463 | Ditto but air flow 5000 m <sup>3</sup> / hr.....  | 69,701.53      | 14.63                    | 18.16                              | 54.41    | 30463 |
| 30464 | Insect killer, single-phase c/ w twin 18W UV fluorescent tubes, effective area not less than 30 m <sup>2</sup> for indoor application ..... | 1,455.10       | 14.36                    | 17.94                              | 53.71    | 30464 |
| 30465 | Ditto but weatherproof type for outdoor application.....  | 2,041.64       | 14.36                    | 17.94                              | 53.71    | 30465 |

| Item  | Rate   | Item  |
|---|--------|-------|
| <b>TESTING</b>  |        |       |
| Periodic inspection, testing and certification (PITC) of electrical installation  |        |       |
| Testing and inspection of electrical installation comprising rising mains, feeder circuit, sub-main circuit, final circuit, protective conductors, earthing facilities, power supplies to all communal services, but excluding main switch board, for the premises in accordance with the requirements as specified in Chapter 406, Electricity Ordinance and the latest edition of Code of Practice for Electricity (Wiring) Regulations published by Electrical and Mechanical Services Department and all subsequent amendments thereto issued prior to the date of tendering c/ w the provision of electrical schematic, test report and test certificate which should be certified by Registered Electrical Worker of the appropriate grade and submit Form WR2. |        |       |
| Testing of installed rating of outgoing switch of switchboard or cut-out switch comprising rising mains and feeder circuit in single-phase or three-phase : -<br>(Testing of plug-in unit/ tee-off switch, sub-main circuit/ final circuit, functional test of RCD shall be measured separately)  |        |       |
| <i>Per item</i>   |        |       |
| 30466   | 392.33 | 30466 |
| 30467   | 524.51 | 30467 |
| 30468   | 818.61 | 30468 |
| Testing of plug-in unit/ tee-off switch   |        |       |
| <i>Each</i>   |        |       |
| 30469   | 57.94  | 30469 |
| Type of premises : Clinic & Child Care Centre; Control Point; Prison; Correctional Institution and Detention Centre : -   |        |       |
| Testing of sub-main circuit : -   |        |       |
| <i>Per circuit</i>  |        |       |
| 30470   | 36.02  | 30470 |
| 30471   | 47.71  | 30471 |
| Testing of 13A socket outlet circuit : -  |        |       |
| <i>Per circuit</i>  |        |       |
| 30472   | 159.78 | 30472 |
| Testing of final circuit for lighting fittings : -  |        |       |
| <i>Per circuit</i>  |        |       |
| 30473   | 186.18 | 30473 |

| Item   | Item                                 |
|--|--------------------------------------|
| <b>TESTING (CONT'D)</b>  |                                      |
| Periodic inspection, testing and certification (PITC) of electrical installation (Cont'd)  |                                      |
| Type of premises : Clinic & Child Care Centre; Control Point; Prison; Correctional Institution and Detention Centre : - (Cont'd) |                                      |
| Testing of final circuit other than 13A socket outlet and lighting fittings : -  |                                      |
| <i>Per circuit</i>   |                                      |
| 30474  | Testing of single phase circuit..... |
| 36.02  | 30474                                |
| 30475  | Testing of three phase circuit.....  |
| 47.71  | 30475                                |
| Type of premises : Dangerous Goods store : -   |                                      |
| Testing of sub-main circuit : -  |                                      |
| <i>Per circuit</i>   |                                      |
| 30476  | Testing of single phase circuit..... |
| 35.31  | 30476                                |
| 30477  | Testing of three phase circuit.....  |
| 46.75  | 30477                                |
| Testing of 13A socket outlet circuit : -   |                                      |
| <i>Per circuit</i>   |                                      |
| 30478  | Testing of single phase circuit..... |
| 156.59   | 30478                                |
| Testing of final circuit for lighting fittings : -   |                                      |
| <i>Per circuit</i>   |                                      |
| 30479  | Testing of single phase circuit..... |
| 182.45   | 30479                                |
| Testing of final circuit other than 13A socket outlet and lighting fittings : -  |                                      |
| <i>Per circuit</i>   |                                      |
| 30480  | Testing of single phase circuit..... |
| 35.31  | 30480                                |
| 30481  | Testing of three phase circuit.....  |
| 46.75  | 30481                                |

| Item  |  | Rate    | Item  |
|-------|--|---------|-------|
|       | <b>TESTING (CONT'D)</b>  |         |       |
|       | Periodic inspection, testing and certification (PITC) of electrical installation (Cont'd)  |         |       |
|       | Type of premises : Institution Buildings including Primary, Secondary and Vocational Training School; Police Stations; F.S. Stations; Ambulance Depots; Prestige Buildings including Museums, Art Galleries, Legislative Council Buildings and Court; Playground; Stadium; Sportsground; Park; Hawker Bazaars; Pier; Cemeteries; Public Latrines; Bath House; Refuse Collection Point; Toilet Block; and all other single-user building :- |         |       |
|       | Testing of sub-main circuit :-   |         |       |
|       | <i>Per circuit</i>   | A<br>\$ |       |
| 30482 | Testing of single phase circuit.....   | 35.31   | 30482 |
| 30483 | Testing of three phase circuit.....  | 46.75   | 30483 |
|       | Testing of 13A socket outlet circuit :-  |         |       |
|       | <i>Per circuit</i>   |         |       |
| 30484 | Testing of single phase circuit.....   | 156.59  | 30484 |
|       | Testing of final circuit for lighting fittings :-  |         |       |
|       | <i>Per circuit</i>   |         |       |
| 30485 | Testing of single phase circuit.....   | 182.45  | 30485 |
|       | Testing of final circuit other than 13A socket outlet and lighting fittings :-   |         |       |
|       | <i>Per circuit</i>   |         |       |
| 30486 | Testing of single phase circuit.....   | 35.31   | 30486 |
| 30487 | Testing of three phase circuit.....  | 46.75   | 30487 |

| Item  |  |          | Item  |
|-------|--|----------|-------|
|       | <b>TESTING (CONT'D)</b>  |          |       |
|       | Periodic inspection, testing and certification (PITC) of electrical installation (Cont'd)  |          |       |
|       | Type of premises : Office Building including Office, Government House, Carpark and Post Office; Quarters; Municipal Building including Civic Centre, Community Centre, Culture Centre, Theatre, Swimming Pool, Market, Mortuaries, Libraries, Indoor Game Hall; Industrial Building including Workshop, Depot, Laboratory and Plant; and all other multi-user building : - | Rate     |       |
|       | Testing of sub-main circuit : -  |          |       |
|       | <i>Per circuit</i>   | A<br>\$  |       |
| 30488 | Testing of single phase circuit.....   | 34.22    | 30488 |
| 30489 | Testing of three phase circuit.....  | 45.32    | 30489 |
|       | Testing of 13A socket outlet circuit : -   |          |       |
|       | <i>Per circuit</i>   |          |       |
| 30490 | Testing of single phase circuit.....   | 151.79   | 30490 |
|       | Testing of final circuit for lighting fittings : -   |          |       |
|       | <i>Per circuit</i>   |          |       |
| 30491 | Testing of single phase circuit.....   | 176.87   | 30491 |
|       | Testing of final circuit other than 13A socket outlet and lighting fittings : -  |          |       |
|       | <i>Per circuit</i>   |          |       |
| 30492 | Testing of single phase circuit.....   | 34.22    | 30492 |
| 30493 | Testing of three phase circuit.....  | 45.32    | 30493 |
|       | Submission of Form WR2 to EMSD   |          |       |
|       | <i>Per item</i>  |          |       |
| 30494 | Submit Form WR2 to EMSD including endorsement fee.....   | 2,292.10 | 30494 |

| Item  |   | Rate      | Item  |
|-------|---|-----------|-------|
|       | <b>TESTING (CONT'D)</b>   |           |       |
|       | Periodic inspection, testing and certification (PITC) of electrical installation (Cont'd)   |           |       |
|       | <i>Per installation</i>   | A<br>\$   |       |
| 30495 | Testing of power factor correction installation up to 240 kVAr at 380V nominal voltage including PF control relays, circuit protective devices, contactors and capacitors.....  | 1,726.29  | 30495 |
| 30496 | Testing of power factor correction installation exceeding 240 kVAr at 380V nominal voltage including PF control relays, circuit protective devices, contactors and capacitors.....  | 2,298.34  | 30496 |
|       | Testing and inspection of electrical installation of the low voltage cubicle switchboard where all existing switchgear, busbar, IDMT, circuit breaker, earthing devices and etc. are inspected, tested and issue of test certificate. |           |       |
|       | Current Capacity of Low voltage cubicle switchboard :-  |           |       |
|       | <i>Per item</i>   |           |       |
| 30497 | below 800A 3 Phase (1 - 3 cubicle column) .....   | 9,794.65  | 30497 |
| 30498 | below 800A 3 Phase (4 -6 cubicle column) .....  | 17,372.82 | 30498 |
| 30499 | 800A/ 1000A 3 Phase (1 - 3 cubicle column) .....  | 9,794.65  | 30499 |
| 30500 | 800A/ 1000A 3 Phase (4 - 6 cubicle column) .....  | 17,372.82 | 30500 |
| 30501 | 1200A/ 1600A 3 Phase (1 - 3 cubicle column) .....   | 10,522.30 | 30501 |
| 30502 | 1200A/ 1600A 3 Phase (4 - 6 cubicle column) .....   | 20,283.42 | 30502 |
| 30503 | 1200A/ 1600A 3 Phase (7 - 9 cubicle column) .....   | 28,786.78 | 30503 |
| 30504 | 2000A/ 2250A/ 2500A 3 Phase (1 - 3 cubicle column) .....  | 10,522.30 | 30504 |
| 30505 | 2000A/ 2250A/ 2500A 3 Phase (4 - 6 cubicle column) .....  | 20,283.42 | 30505 |
| 30506 | 2000A/ 2250A/ 2500A 3 Phase (7 - 9 cubicle column) .....  | 28,786.78 | 30506 |
| 30507 | 2000A/ 2250A/ 2500A 3 Phase (10 - 12 cubicle column) .....  | 38,382.37 | 30507 |
| 30508 | 2000A/ 2250A/ 2500A 3 Phase (Extra for each addition cubicle column over 12 cubicle column) .....   | 3,198.53  | 30508 |
| 30509 | 3000A/ 3200A 3 Phase (1 - 3 cubicle column) .....   | 13,031.72 | 30509 |
| 30510 | 3000A/ 3200A 3 Phase (4 - 6 cubicle column) .....   | 20,646.49 | 30510 |
| 30511 | 3000A/ 3200A 3 Phase (7 - 9 cubicle column) .....   | 33,880.33 | 30511 |
| 30512 | 3000A/ 3200A 3 Phase (10 - 12 cubicle column) .....   | 41,292.97 | 30512 |
| 30513 | 3000A/ 3200A 3 Phase (Extra for each addition cubicle column over 12 cubicle column) .....  | 3,441.08  | 30513 |
|       | Testing of IDMT earth fault relay :-  |           |       |
|       | <i>Per item</i>   |           |       |
| 30514 | Carry out site testing work for IDMT earth fault relay including provision of full set of test report and Form WR2A .....   | 4,719.88  | 30514 |



| Item   | Rate     | Item  |
|--|----------|-------|
| <b>TESTING (CONT'D)</b>  |          |       |
| Measurement of circuit :-  |          |       |
| <i>Per way</i>   |          |       |
| 30515  | 74.08    | 30515 |
| 30516  | 103.81   | 30516 |
| 30517  | 114.48   | 30517 |
| (Note : The following items are not applicable for new installation. It will only be paid for testing on existing installation if ordered by the Maintenance Surveyor in writing.)   |          |       |
| Testing of each emergency lighting :-  |          |       |
| <i>Per item</i>  |          |       |
| 30518  | 108.15   | 30518 |
| 30519  | 91.87    | 30519 |
| 30520  | 91.87    | 30520 |
| 30521  | 91.87    | 30521 |
| 30522  | 68.16    | 30522 |
| 30523  | 1,472.32 | 30523 |
| Testing and inspection of electrical installation for domestic quarters where all existing switchgear, wiring, lighting, power points, appliances, etc. are inspected and tested, and test certificate is issued to enable the new tenant to obtain electricity supply from Power Company upon change of tenancy (with usable floor area of quarters) :- |          |       |
| <i>Per item</i>  |          |       |
| 30524  | 1,140.08 | 30524 |
| 30525  | 1,631.04 | 30525 |
| 30526  | 1,727.96 | 30526 |
| 30527  | 2,067.57 | 30527 |
| 30528  | 3,284.59 | 30528 |

| Item  |   | Rate    | Item  |
|-------|---|---------|-------|
|       | <b>TESTING (CONT'D)</b>   |         |       |
|       | Entrusted services on periodic inspection, testing and certification (PITC) of electrical installation  |         |       |
|       | Entrusted testing and inspection of electrical installation comprising rising mains, feeder circuit, sub-main circuit, final circuit, protective conductors, earthing facilities, power supplies to all communal services, but excluding main switch board, for the premises in accordance with the requirements as specified in Chapter 406, Electricity Ordinance and the latest edition of Code of Practice for Electricity (Wiring) Regulations published by Electrical and Mechanical Services Department and all subsequent amendments thereto issued prior to the date of tendering c/ w the provision of electrical schematic, test report and test certificate which should be certified by Registered Electrical Worker of the appropriate grade and submit Form WR2. The cost of planning and arrangement of venues, engagement of the Independent PITC Checker and uploading the PITC record to the "Electronic System for Planning, Programming, Data Inputting, Storage and Retrievals of Inspection and Maintenance Works in Buildings" shall be deemed to be included in the respective items for PITC works, in addition, the Contractor shall also proceed with the rectification work and submit the test certificate upon completion. |         |       |
|       | Testing of installed rating of outgoing switch of switchboard or cut-out switch comprising rising mains and feeder circuit in single-phase or three-phase : -<br>(Testing of plug-in unit/ tee-off switch, sub-main circuit/ final circuit, functional test of RCD shall be measured separately)  |         |       |
|       | <i>Per item</i>   | A<br>\$ |       |
| 30529 | Not exceeding 630A.....   | 465.09  | 30529 |
| 30530 | 630A - 1600A.....   | 597.28  | 30530 |
| 30531 | 1600A - 3200A.....  | 891.37  | 30531 |
|       | Testing of plug-in unit/ tee-off switch   |         |       |
|       | <i>Each</i>   |         |       |
| 30532 | Tee off switch/ plug in unit from the rising main.....  | 94.32   | 30532 |
|       | Type of premises : Clinic & Child Care Centre; Control Point; Prison; Correctional Institution and Detention Centre : -   |         |       |
|       | Testing of sub-main circuit : -   |         |       |
|       | <i>Per circuit</i>  |         |       |
| 30533 | Testing of single phase circuit.....  | 50.58   | 30533 |
| 30534 | Testing of three phase circuit.....   | 62.26   | 30534 |
|       | Testing of 13A socket outlet circuit : -  |         |       |
|       | <i>Per circuit</i>  |         |       |
| 30535 | Testing of single phase circuit.....  | 174.33  | 30535 |
|       | Testing of final circuit for lighting fittings : -  |         |       |
|       | <i>Per circuit</i>  |         |       |
| 30536 | Testing of single phase circuit.....  | 200.73  | 30536 |

| Item  |  |         | Item  |
|-------|--|---------|-------|
|       | <b>TESTING (CONT'D)</b>  |         |       |
|       | Entrusted services on periodic inspection, testing and certification (PITC) of electrical installation (Cont'd)                  |         |       |
|       | Type of premises : Clinic & Child Care Centre; Control Point; Prison; Correctional Institution and Detention Centre : - (Cont'd) | Rate    |       |
|       | Testing of final circuit other than 13A socket outlet and lighting fittings : -  |         |       |
|       | <i>Per circuit</i>   | A<br>\$ |       |
| 30537 | Testing of single phase circuit.....   | 50.58   | 30537 |
| 30538 | Testing of three phase circuit.....  | 62.26   | 30538 |
|       | Type of premises : Dangerous Goods store : -   |         |       |
|       | Testing of sub-main circuit : -  |         |       |
|       | <i>Per circuit</i>   |         |       |
| 30539 | Testing of single phase circuit.....   | 49.86   | 30539 |
| 30540 | Testing of three phase circuit.....  | 61.31   | 30540 |
|       | Testing of 13A socket outlet circuit : -   |         |       |
|       | <i>Per circuit</i>   |         |       |
| 30541 | Testing of single phase circuit.....   | 171.14  | 30541 |
|       | Testing of final circuit for lighting fittings : -   |         |       |
|       | <i>Per circuit</i>   |         |       |
| 30542 | Testing of single phase circuit.....   | 197.00  | 30542 |
|       | Testing of final circuit other than 13A socket outlet and lighting fittings : -  |         |       |
|       | <i>Per circuit</i>   |         |       |
| 30543 | Testing of single phase circuit.....   | 49.86   | 30543 |
| 30544 | Testing of three phase circuit.....  | 61.31   | 30544 |

| Item  |  |         | Item  |
|-------|--|---------|-------|
|       | <b>TESTING (CONT'D)</b>  |         |       |
|       | Entrusted services on periodic inspection, testing and certification (PITC) of electrical installation (Cont'd)  |         |       |
|       | Type of premises : Institution Buildings including Primary, Secondary and Vocational Training School; Police Stations; F.S. Stations; Ambulance Depots; Prestige Buildings including Museums, Art Galleries, Legislative Council Buildings and Court; Playground; Stadium; Sportsground; Park; Hawker Bazaars; Pier; Cemeteries; Public Latrines; Bath House; Refuse Collection Point; Toilet Block; and all other single-user building :- | Rate    |       |
|       | Testing of sub-main circuit :-   |         |       |
|       | <i>Per circuit</i>   | A<br>\$ |       |
| 30545 | Testing of single phase circuit.....   | 49.86   | 30545 |
| 30546 | Testing of three phase circuit.....  | 61.31   | 30546 |
|       | Testing of 13A socket outlet circuit :-  |         |       |
|       | <i>Per circuit</i>   |         |       |
| 30547 | Testing of single phase circuit.....   | 171.14  | 30547 |
|       | Testing of final circuit for lighting fittings :-  |         |       |
|       | <i>Per circuit</i>   |         |       |
| 30548 | Testing of single phase circuit.....   | 197.00  | 30548 |
|       | Testing of final circuit other than 13A socket outlet and lighting fittings :-   |         |       |
|       | <i>Per circuit</i>   |         |       |
| 30549 | Testing of single phase circuit.....   | 49.86   | 30549 |
| 30550 | Testing of three phase circuit.....  | 61.31   | 30550 |

| Item  |  | Rate     | Item  |
|-------|--|----------|-------|
|       | <b>TESTING (CONT'D)</b>  |          |       |
|       | Entrusted services on periodic inspection, testing and certification (PITC) of electrical installation (Cont'd)  |          |       |
|       | Type of premises : Office Building including Office, Government House, Carpark and Post Office; Quarters; Municipal Building including Civic Centre, Community Centre, Culture Centre, Theatre, Swimming Pool, Market, Mortuaries, Libraries, Indoor Game Hall; Industrial Building including Workshop, Depot, Laboratory and Plant; and all other multi-user building : - |          |       |
|       | Testing of sub-main circuit : -  |          |       |
|       | <i>Per circuit</i>   | A<br>\$  |       |
| 30551 | Testing of single phase circuit.....   | 48.77    | 30551 |
| 30552 | Testing of three phase circuit.....  | 59.88    | 30552 |
|       | Testing of 13A socket outlet circuit : -   |          |       |
|       | <i>Per circuit</i>   |          |       |
| 30553 | Testing of single phase circuit.....   | 166.34   | 30553 |
|       | Testing of final circuit for lighting fittings : -   |          |       |
|       | <i>Per circuit</i>   |          |       |
| 30554 | Testing of single phase circuit.....   | 191.43   | 30554 |
|       | Testing of final circuit other than 13A socket outlet and lighting fittings : -  |          |       |
|       | <i>Per circuit</i>   |          |       |
| 30555 | Testing of single phase circuit.....   | 48.77    | 30555 |
| 30556 | Testing of three phase circuit.....  | 59.88    | 30556 |
|       | Submission of Form WR2 to EMSD   |          |       |
|       | <i>Per item</i>  |          |       |
| 30557 | Submit Form WR2 to EMSD including endorsement fee.....   | 2,292.10 | 30557 |

| Item  | Rate    | Item  |
|---|---------|-------|
| <b>TESTING (CONT'D)</b>   |         |       |
| Entrusted services on periodic inspection, testing and certification (PITC) of electrical installation (Cont'd)   |         |       |
| <i>Per installation</i>   |         |       |
| 30558   | A<br>\$ | 30558 |
| 30559   | A<br>\$ | 30559 |
| Testing and inspection of electrical installation of the low voltage cubicle switchboard where all existing switchgear, busbar, IDMT, circuit breaker, earthing devices and etc. are inspected, tested and issue of test certificate. |         |       |
| Current Capacity of Low voltage cubicle switchboard :-  |         |       |
| <i>Per item</i>   |         |       |
| 30560   | A<br>\$ | 30560 |
| 30561   | A<br>\$ | 30561 |
| 30562   | A<br>\$ | 30562 |
| 30563   | A<br>\$ | 30563 |
| 30564   | A<br>\$ | 30564 |
| 30565   | A<br>\$ | 30565 |
| 30566   | A<br>\$ | 30566 |
| 30567   | A<br>\$ | 30567 |
| 30568   | A<br>\$ | 30568 |
| 30569   | A<br>\$ | 30569 |
| 30570   | A<br>\$ | 30570 |
| 30571   | A<br>\$ | 30571 |
| 30572   | A<br>\$ | 30572 |
| 30573   | A<br>\$ | 30573 |
| 30574   | A<br>\$ | 30574 |
| 30575   | A<br>\$ | 30575 |
| 30576   | A<br>\$ | 30576 |
| Testing of IDMT earth fault relay :-  |         |       |
| <i>Per item</i>   |         |       |
| 30577   | A<br>\$ | 30577 |

| Item  |   | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only | Item  |
|-------|---|----------------|--------------------------|------------------------------------|----------|-------|
|       |   | A \$           | B \$                     | C \$                               | D \$     |       |
|       | <b>MISCELLANEOUS</b>  |                |                          |                                    |          |       |
|       | Isolating transformer comply with IEC 60076, including submission of test certificates :-   |                |                          |                                    |          |       |
|       | <i>Each</i>   |                |                          |                                    |          |       |
| 30578 | Not exceeding 5 kVA.....  | 9,410.84       | 558.85                   | 698.66                             | 2,090.14 | 30578 |
| 30579 | 5 - 25 kVA.....   | 25,476.34      | 835.12                   | 1,041.99                           | 3,125.19 | 30579 |
| 30580 | 25 - 50 kVA.....  | 43,386.42      | 1,260.28                 | 1,574.92                           | 4,883.56 | 30580 |
| 30581 | 50 - 100 kVA.....   | 56,365.65      | 1,654.00                 | 2,065.33                           | 6,281.57 | 30581 |
| 30582 | Add to last item for each additional 50 kVA or part thereof .....   | 13,753.00      | 419.54                   | 524.66                             | 1,574.47 | 30582 |
|       | Active harmonic filter  |                |                          |                                    |          |       |
|       | Active harmonic filter c/ w current transformer, wiring and all necessary accessories; with total rms current rating (Arms) rating up to :- |                |                          |                                    |          |       |
|       | <i>Each</i>   |                |                          |                                    |          |       |
| 30583 | 50A.....  | 73,114.36      | 1,279.03                 | 1,698.34                           | 2,541.25 | 30583 |
| 30584 | 100A.....<br>(The actual rate should be : \$100,345.40 for Item 30584A)   | 10,034.54      | 1,693.10                 | 2,119.06                           | 3,264.62 | 30584 |
| 30585 | 300A.....<br>(The actual rate should be : \$299,901.50 for Item 30585A)   | 29,990.15      | 1,905.01                 | 2,759.58                           | 3,685.64 | 30585 |
|       | Surge protection device   |                |                          |                                    |          |       |
|       | Surge protection device c/ w necessary cable and wiring, which shall be capable of diverting the following current levels :-                |                |                          |                                    |          |       |
|       | <i>Each</i>   |                |                          |                                    |          |       |
| 30586 | 80A per phase.....  | 7,890.82       | 53.89                    | 88.75                              | 104.04   | 30586 |
| 30587 | 120A per phase.....   | 7,890.82       | 53.89                    | 88.75                              | 104.04   | 30587 |
| 30588 | 160A per phase.....   | 7,890.82       | 53.89                    | 88.75                              | 104.04   | 30588 |
| 30589 | 200A per phase.....   | 8,390.26       | 53.89                    | 88.75                              | 123.61   | 30589 |
| 30590 | 240A per phase.....   | 8,390.26       | 53.89                    | 88.75                              | 123.61   | 30590 |
| 30591 | 360A per phase.....   | 8,390.26       | 53.89                    | 88.75                              | 123.61   | 30591 |
| 30592 | 480A per phase.....   | 8,390.26       | 53.89                    | 88.75                              | 123.61   | 30592 |
| 30593 | 600A per phase.....   | 10,959.71      | 107.70                   | 126.72                             | 154.44   | 30593 |
| 30594 | 720A per phase.....   | 10,959.71      | 107.70                   | 126.72                             | 154.44   | 30594 |
| 30595 | 960A per phase.....   | 14,192.92      | 154.00                   | 192.62                             | 211.72   | 30595 |

| Item  |  |                |                          |                                    | Item     |       |
|-------|--|----------------|--------------------------|------------------------------------|----------|-------|
|       | <b>MISCELLANEOUS (CONT'D)</b>  |                |                          |                                    |          |       |
|       | Electronic power meter c/ w current transformer (all types), wiring for sampling current & voltage supply sources, power point with spur/ connection unit and all necessary accessories, using in circuit current rating up to : - | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only |       |
|       | <i>Each</i>  | A \$           | B \$                     | C \$                               | D \$     |       |
| 30596 | 60A.....   | 18,025.53      | 1,077.87                 | 1,495.32                           | 1,645.96 | 30596 |
| 30597 | 100A.....  | 18,025.53      | 1,077.87                 | 1,495.32                           | 1,645.96 | 30597 |
| 30598 | 200A.....  | 20,138.47      | 1,077.87                 | 1,495.32                           | 1,645.96 | 30598 |
| 30599 | 400A.....  | 22,453.70      | 1,290.55                 | 1,928.50                           | 2,050.20 | 30599 |
| 30600 | 600A.....  | 22,453.70      | 1,290.55                 | 1,928.50                           | 2,050.20 | 30600 |
| 30601 | 800A.....  | 22,453.70      | 1,290.55                 | 1,928.50                           | 2,050.20 | 30601 |
| 30602 | 1000A.....   | 24,600.52      | 1,599.02                 | 2,131.74                           | 2,571.34 | 30602 |
| 30603 | 1600A.....   | 24,600.52      | 1,599.02                 | 2,131.74                           | 2,571.34 | 30603 |
| 30604 | 2250A.....   | 24,600.52      | 1,599.02                 | 2,131.74                           | 2,571.34 | 30604 |
|       | Ceiling rose and connector : -   |                |                          |                                    |          |       |
|       | <i>Each</i>  |                |                          |                                    |          |       |
| 30605 | Ceiling rose surface 2 or 3 terminal cordgrip pattern.....   | 41.71          | 6.62                     | 7.94                               | 20.45    | 30605 |
| 30606 | Ditto, small cap type.....   | 32.72          | 5.21                     | 6.46                               | 19.77    | 30606 |
| 30607 | Connector porcelain, single way.....   | 7.01           | 0.88                     | 1.08                               | 2.63     | 30607 |
| 30608 | Connector porcelain, double way.....   | 7.91           | 0.88                     | 1.08                               | 2.63     | 30608 |
|       | <i>Per way</i>   |                |                          |                                    |          |       |
| 30609 | Connector moulded with non-rotatable tinned brass inserts 5 - 10A.....   | 2.88           | 0.33                     | 0.40                               | 1.00     | 30609 |
| 30610 | Ditto, 15 - 30A.....   | 3.50           | 0.33                     | 0.40                               | 1.00     | 30610 |



| Item  |   |                |                          |                                    | Item     |       |
|-------|---|----------------|--------------------------|------------------------------------|----------|-------|
|       | <b>MISCELLANEOUS (CONT'D)</b>   |                |                          |                                    |          |       |
|       | Sundries :-   |                |                          |                                    |          |       |
|       | <i>Each</i>   | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only |       |
|       |   | A<br>\$        | B<br>\$                  | C<br>\$                            | D<br>\$  |       |
| 30611 | Provision of framed as-built drawing/ safety instruction/ operation instruction in an aluminium frame suitable for A2 size paper c/ w 3 mm thick clear plastic front sheet & wooden back plate..... | 721.63         | 8.46                     | 10.35                              | 26.31    | 30611 |
| 30612 | Ditto, for A3 size paper.....   | 618.52         | 6.39                     | 7.70                               | 19.81    | 30612 |
| 30613 | Numbered ferrule for 1 core PVC cable per way.....  | 12.30          | 2.20                     | -                                  | 8.67     | 30613 |
| 30614 | Label for distribution board per way.....   | 7.38           | 0.74                     | 0.82                               | 1.69     | 30614 |
| 30615 | Adhesive circuitry label at least 4mm in height showing circuit numbers.....  | 1.18           | 0.30                     | 0.32                               | 0.69     | 30615 |
| 30616 | Traffolyte type warning notice for switch room, size 300 x 150 mm.....  | 118.94         | 4.22                     | 5.29                               | 14.98    | 30616 |
| 30617 | Traffolyte type label with engraved English and Chinese lettering, size up to 0.002 m <sup>2</sup> .....  | 6.72           | 0.74                     | 0.96                               | 2.51     | 30617 |
| 30618 | Traffolyte type label with engraved English and Chinese lettering, size 0.002 - 0.006 m <sup>2</sup> .....  | 14.65          | 0.74                     | 0.96                               | 2.51     | 30618 |
| 30619 | Warning label for different cable colour code.....  | 67.69          | 4.22                     | 5.29                               | 14.98    | 30619 |
| 30620 | Label on next date of Periodic Inspection and Testing.....  | 33.47          | 0.74                     | 0.96                               | 2.51     | 30620 |
| 30621 | Label on testing of residual current device.....  | 22.34          | 0.74                     | 0.96                               | 2.51     | 30621 |
|       | Motor starter D.O.L. T.P. with enclosure :-   |                |                          |                                    |          |       |
|       | <i>Each</i>   |                |                          |                                    |          |       |
| 30622 | 15/ 30A.....  | 541.54         | 13.87                    | 17.38                              | 53.24    | 30622 |
| 30623 | 45A.....  | 938.00         | 16.92                    | 20.66                              | 64.81    | 30623 |
| 30624 | 60A.....  | 1,094.48       | 17.92                    | 22.54                              | 68.75    | 30624 |
| 30625 | Packing gland for circular P.V.C. or T.R.S. flexible cord (1 mm <sup>2</sup> or 1.5 mm <sup>2</sup> ) brass, with compression ring as required .....  | 14.43          | 0.22                     | 0.33                               | 1.03     | 30625 |
|       | Heat-shrunk corrosion protection sleeve standard length 450 mm suitable for pipe size of :-   |                |                          |                                    |          |       |
|       | <i>Per piece</i>  |                |                          |                                    |          |       |
| 30626 | 150/ 104 mm.....  | 491.68         | 11.62                    | 14.43                              | 44.19    | 30626 |
| 30627 | 165/ 127 mm.....  | 541.93         | 12.58                    | 15.86                              | 48.47    | 30627 |
| 30628 | 196/ 140 mm.....  | 590.20         | 13.53                    | 16.81                              | 52.16    | 30628 |
| 30629 | 255/ 150 mm.....  | 623.26         | 14.50                    | 18.31                              | 55.11    | 30629 |
| 30630 | 300/ 210 mm.....  | 645.13         | 15.02                    | 18.79                              | 57.24    | 30630 |

| Item   | Item   |                                    |                          |                                    |          |         |         |         |         |
|--|--|------------------------------------|--------------------------|------------------------------------|----------|---------|---------|---------|---------|
| <b>MISCELLANEOUS (CONT'D)</b>  |  |                                    |                          |                                    |          |         |         |         |         |
| Auto transformer :-  |  |                                    |                          |                                    |          |         |         |         |         |
| <i>Each</i>  |  |                                    |                          |                                    |          |         |         |         |         |
|  | <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: center;">Supply and fix</th> <th style="text-align: center;">Take down and clear away</th> <th style="text-align: center;">Take down and set aside for re-use</th> <th style="text-align: center;">Fix only</th> </tr> <tr> <th style="text-align: center;">A<br/>\$</th> <th style="text-align: center;">B<br/>\$</th> <th style="text-align: center;">C<br/>\$</th> <th style="text-align: center;">D<br/>\$</th> </tr> </thead> </table> | Supply and fix                     | Take down and clear away | Take down and set aside for re-use | Fix only | A<br>\$ | B<br>\$ | C<br>\$ | D<br>\$ |
| Supply and fix   | Take down and clear away   | Take down and set aside for re-use | Fix only                 |                                    |          |         |         |         |         |
| A<br>\$  | B<br>\$  | C<br>\$                            | D<br>\$                  |                                    |          |         |         |         |         |
| 30631 Auto transformer 15 kVA, single phase, 50 Hz, with 400/ 260/ 240/ 220V tappings.....   | 10,430.51    55.24    69.18    214.42    30631   |                                    |                          |                                    |          |         |         |         |         |
| 30632 Auto transformer 25 kVA, single phase, 50 Hz, with 400/ 260/ 240/ 220V tappings.....   | 14,474.60    55.24    69.18    214.42    30632   |                                    |                          |                                    |          |         |         |         |         |
| 30633 Auto transformer 45 kVA, three phases, 50 Hz, with 600/ 420/ 400/ 380/ 346V tappings.....  | 20,516.79    60.44    75.52    233.87    30633   |                                    |                          |                                    |          |         |         |         |         |
| Weatherproof stainless steel grade 316 metal box/ chamber other than those item explicitly specified for housing electrical instrument, switches, relays, socket outlets, MCB units etc. with minimum thickness 1.6 mm for casing and 2 mm for front panel, and with hinged cover, lock and handle, viewing glass. Square or rectangular pattern, including all bends, ends, inlets, junctions, connections, flanged joints and the like of the following sizes in volume: -             |  |                                    |                          |                                    |          |         |         |         |         |
| <i>Each</i>  |  |                                    |                          |                                    |          |         |         |         |         |
| 30634 Not exceeding 0.005 m <sup>3</sup> .....   | 681.42    60.08    100.25    119.93    30634   |                                    |                          |                                    |          |         |         |         |         |
| 30635 0.005 m <sup>3</sup> - 0.01 m <sup>3</sup> .....   | 760.54    60.08    100.25    119.93    30635   |                                    |                          |                                    |          |         |         |         |         |
| 30636 0.01 m <sup>3</sup> - 0.03 m <sup>3</sup> .....  | 1,126.71    60.08    100.25    119.93    30636   |                                    |                          |                                    |          |         |         |         |         |
| 30637 0.03 m <sup>3</sup> - 0.05 m <sup>3</sup> .....  | 1,604.25    99.89    127.87    158.94    30637   |                                    |                          |                                    |          |         |         |         |         |
| 30638 0.05 m <sup>3</sup> - 0.1 m <sup>3</sup> .....   | 2,051.74    99.89    127.87    158.94    30638   |                                    |                          |                                    |          |         |         |         |         |
| 30639 0.1 m <sup>3</sup> - 0.3 m <sup>3</sup> .....  | 5,031.25    158.94    200.42    217.93    30639  |                                    |                          |                                    |          |         |         |         |         |
| Galvanized sheet metal box/ chamber other than those items explicitly specified for housing electrical instrument, switches, relays, socket outlets, MCB units etc. with minimum thickness 1.6 mm for casing and 2 mm for front panel, and with hinged cover, lock and handle, viewing glass, painted overall where necessary. Square or rectangular pattern, including all bends, ends, inlets, junctions, connections, flanged joints and the like of the following sizes in volume: - |  |                                    |                          |                                    |          |         |         |         |         |
| <i>Each</i>  |  |                                    |                          |                                    |          |         |         |         |         |
| 30640 Not exceeding 0.005 m <sup>3</sup> .....   | 252.11    9.61    12.05    36.12    30640  |                                    |                          |                                    |          |         |         |         |         |
| 30641 0.005 m <sup>3</sup> - 0.01 m <sup>3</sup> .....   | 276.74    9.61    12.05    36.12    30641  |                                    |                          |                                    |          |         |         |         |         |
| 30642 0.01 m <sup>3</sup> - 0.03 m <sup>3</sup> .....  | 344.75    11.54    14.98    44.35    30642   |                                    |                          |                                    |          |         |         |         |         |
| 30643 0.03 m <sup>3</sup> - 0.05 m <sup>3</sup> .....  | 530.38    14.55    18.18    54.94    30643   |                                    |                          |                                    |          |         |         |         |         |
| 30644 0.05 m <sup>3</sup> - 0.1 m <sup>3</sup> .....   | 749.75    16.75    21.08    64.06    30644   |                                    |                          |                                    |          |         |         |         |         |
| 30645 0.1 m <sup>3</sup> - 0.3 m <sup>3</sup> .....  | 1,641.78    24.11    30.35    91.90    30645   |                                    |                          |                                    |          |         |         |         |         |

| Item  |  |                |                          |                                    | Item     |       |
|-------|--|----------------|--------------------------|------------------------------------|----------|-------|
|       | <b>MISCELLANEOUS (CONT'D)</b>  |                |                          |                                    |          |       |
|       | Weather proof galvanized sheet metal box/ chamber other than those items explicitly specified for housing electrical instrument, switches, relays, socket outlets, MCB units etc. with minimum thickness 1.6 mm for casing and 2 mm for front panel, and with hinged cover, lock and handle, viewing glass, painted overall where necessary. Square or rectangular pattern, including all bends, ends, inlets, junctions, connections, flanged joints and the like of the following sizes in volume :- | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only |       |
|       | <i>Each</i>  | A \$           | B \$                     | C \$                               | D \$     |       |
| 30646 | Not exceeding 0.005 m <sup>3</sup> .....   | 348.09         | 60.08                    | 100.25                             | 119.93   | 30646 |
| 30647 | 0.005 m <sup>3</sup> - 0.01 m <sup>3</sup> .....   | 380.42         | 60.08                    | 100.25                             | 119.93   | 30647 |
| 30648 | 0.01 m <sup>3</sup> - 0.03 m <sup>3</sup> .....  | 522.80         | 60.08                    | 100.25                             | 119.93   | 30648 |
| 30649 | 0.03 m <sup>3</sup> - 0.05 m <sup>3</sup> .....  | 736.80         | 99.89                    | 127.87                             | 158.94   | 30649 |
| 30650 | 0.05 m <sup>3</sup> - 0.1 m <sup>3</sup> .....   | 919.33         | 99.89                    | 127.87                             | 158.94   | 30650 |
| 30651 | 0.1 m <sup>3</sup> - 0.3 m <sup>3</sup> .....  | 2,168.15       | 158.94                   | 200.42                             | 217.93   | 30651 |
|       | Emergency call system :-   |                |                          |                                    |          |       |
|       | <i>Each</i>  |                |                          |                                    |          |       |
| 30652 | Emergency call panel c/ w pull cord connected to metal case, weatherproof indication panel integrated with indicating lamp buzzer unit, timer for timer for auto-mute of buzzer unit, lamp test button, transformer, conduit and wiring for emergency call system.....   | 2,251.56       | 64.95                    | 69.38                              | 263.38   | 30652 |
| 30653 | Alarm and indication panel connected from the Emergency Call Panel and integrated with indicating lamp, buzzer unit, lamp test button, conduit and wiring and weatherproof metal casting.....  | 6,006.30       | 125.53                   | 131.59                             | 411.92   | 30653 |
| 30654 | Emergency call supervisory panel, weatherproof type, connected from a Emergency Call Panel (ONE ZONE of emergency of call system) c/ w indicating lamp, buzzer unit, mute switch, reset switch, lamp test button, metal casing, conduit and wiring .....   | 6,959.81       | 123.56                   | 127.46                             | 371.31   | 30654 |
| 30655 | Additional 1 zone of emergency system connected to emergency call supervisory panel including wiring and accessories.....  | 1,054.17       | 43.09                    | 54.06                              | 102.49   | 30655 |
| 30656 | Emergency call button equipped with a pull cord connected to Supervisory Panel.....  | 399.56         | 60.58                    | 62.39                              | 145.36   | 30656 |
| 30657 | Transformer, charger and battery pack for 2 hours power backup.....  | 304.16         | 15.66                    | 18.63                              | 47.09    | 30657 |

| Item  |  |            | Item  |
|-------|--|------------|-------|
|       | <b>MISCELLANEOUS (CONT'D)</b>  |            |       |
|       | Buildings Energy Efficiency Ordinance (BEEO) Submission  |            |       |
|       | All lighting installations, unless otherwise specified, in a prescribed building should be assessed in accordance with the energy efficient requirements, for the premises in accordance with the requirements as specified in the latest edition of Code of Practice for Energy Efficiency of Building Services Installation (Building Energy Code or BEC in abbreviation), preparation and completion of the installation summaries and worksheets, including but not limited to Form EE-LG, LG-G, LG-1 and LG-2 as required by the BEEO and to coordinate with the Registered Energy Assessor for submission. | Rate       |       |
|       | Type of premises : Prison; Fire Station; Judiciary Building; Police Station; Correctional Institution; Government Offices Building : -<br>The Area as below is independent on total floor area of superstructures inclusive of ancillary buildings within the building complex of the premises specified in the Works Order:   |            |       |
|       | <i>Per item</i>  | A<br>\$    |       |
| 30658 | Not exceeding 1000m <sup>2</sup> .....   | 39,793.32  | 30658 |
| 30659 | Exceeding 1000m <sup>2</sup> but not exceeding 2000m <sup>2</sup> .....  | 55,710.65  | 30659 |
| 30660 | Exceeding 2000m <sup>2</sup> but not exceeding 3000m <sup>2</sup> .....  | 63,669.31  | 30660 |
| 30661 | Exceeding 3000m <sup>2</sup> .....   | 95,503.97  | 30661 |
|       | Type of premises : Hospital/ Health Care Building :-<br>The Area as below is independent on total floor area of superstructures inclusive of ancillary buildings within the building complex of the premises specified in the Works Order:   |            |       |
|       | <i>Per item</i>  |            |       |
| 30662 | Not exceeding 1000m <sup>2</sup> .....   | 41,782.99  | 30662 |
| 30663 | Exceeding 1000m <sup>2</sup> but not exceeding 2000m <sup>2</sup> .....  | 58,496.18  | 30663 |
| 30664 | Exceeding 2000m <sup>2</sup> but not exceeding 3000m <sup>2</sup> .....  | 66,852.78  | 30664 |
| 30665 | Exceeding 3000m <sup>2</sup> .....   | 100,279.17 | 30665 |

| Item  |  |           | Item  |
|-------|--|-----------|-------|
|       | <b>MISCELLANEOUS (CONT'D)</b>  |           |       |
|       | Buildings Energy Efficiency Ordinance (BEEO) Submission (Cont'd)   |           |       |
|       | Type of premises : District Open Space/ Park (with Toilet Block, Service Block and Fountain);<br>District Open Space/ Park (with Toilet Block and Service Block); District Open Space/ Park (with Toilet Block only);<br>Library; Indoor Games Hall; Indoor Swimming Pool; Sport Ground/ Stadium :-<br>The Area as below is independent on total floor area of superstructures inclusive of ancillary buildings within the<br>building complex of the premises specified in the Works Order: | Rate      |       |
|       | <i>Per item</i>  | A<br>\$   |       |
| 30666 | Not exceeding 1000m <sup>2</sup> .....   | 40,987.12 | 30666 |
| 30667 | Exceeding 1000m <sup>2</sup> but not exceeding 2000m <sup>2</sup> .....  | 57,381.97 | 30667 |
| 30668 | Exceeding 2000m <sup>2</sup> but not exceeding 3000m <sup>2</sup> .....  | 65,579.39 | 30668 |
| 30669 | Exceeding 3000m <sup>2</sup> .....   | 98,369.09 | 30669 |
|       | Type of premises : School with Noise Abatement; School with No Noise Abatement :-<br>The Area as below is independent on total floor area of superstructures inclusive of ancillary buildings within the<br>building complex of the premises specified in the Works Order:   |           |       |
|       | <i>Per item</i>  |           |       |
| 30670 | Not exceeding 1000m <sup>2</sup> .....   | 40,987.12 | 30670 |
| 30671 | Exceeding 1000m <sup>2</sup> but not exceeding 2000m <sup>2</sup> .....  | 57,381.97 | 30671 |
| 30672 | Exceeding 2000m <sup>2</sup> but not exceeding 3000m <sup>2</sup> .....  | 65,579.39 | 30672 |
| 30673 | Exceeding 3000m <sup>2</sup> .....   | 98,369.09 | 30673 |

| Item  |   |           | Item  |
|-------|---|-----------|-------|
|       | <b>MISCELLANEOUS (CONT'D)</b>   |           |       |
|       | Buildings Energy Efficiency Ordinance (BEEO) Submission (Cont'd)  |           |       |
|       | All electrical installations, unless otherwise specified, in a prescribed building should be assessed in accordance with the energy efficient requirements, for the premises in accordance with the requirements as specified in the latest edition of Code of Practice for Energy Efficiency of Building Services Installation (Building Energy Code or BEC in abbreviation), preparation and completion of the installation summaries and worksheets, including but not limited to Form EE-EL, EL-1 to EL-5 as required by the BEEO and to coordinate with the Registered Energy Assessor for submission. | Rate      |       |
|       | Type of premises : Prison; Fire Station; Judiciary Building; Police Station; ;Correctional Institution; Government Offices Building :-  |           |       |
|       | <i>Per item</i>   | A<br>\$   |       |
| 30674 | up to 50 nos. of circuits/ motors.....  | 3,759.53  | 30674 |
| 30675 | 51 nos. of circuits to 100 nos. of circuits/ motors.....  | 7,033.96  | 30675 |
| 30676 | 101 nos. of circuits to 200 nos. of circuits/ motors.....   | 14,310.46 | 30676 |
| 30677 | 201 nos. of circuits to 300 nos. of circuits/ motors.....   | 21,344.39 | 30677 |
| 30678 | 301 nos. of circuits to 400 nos. of circuits/ motors.....   | 28,620.89 | 30678 |
| 30679 | 401 nos. of circuits to 500 nos. of circuits/ motors.....   | 35,654.85 | 30679 |
| 30680 | Every 100 nos. of additional circuits above 500 nos. of circuits/ motors.....   | 7,519.04  | 30680 |
|       | Type of premises : Hospital/ Health Care Building :-<br>The Area as below is independent on total floor area of superstructures inclusive of ancillary buildings within the building complex of the premises specified in the Works Order:  |           |       |
|       | <i>Per item</i>   |           |       |
| 30681 | up to 50 nos. of circuits/ motors.....  | 3,759.53  | 30681 |
| 30682 | 51 nos. of circuits to 100 nos. of circuits/ motors.....  | 7,033.96  | 30682 |
| 30683 | 101 nos. of circuits to 200 nos. of circuits/ motors.....   | 14,310.46 | 30683 |
| 30684 | 201 nos. of circuits to 300 nos. of circuits/ motors.....   | 21,344.39 | 30684 |
| 30685 | 301 nos. of circuits to 400 nos. of circuits/ motors.....   | 28,620.89 | 30685 |
| 30686 | 401 nos. of circuits to 500 nos. of circuits/ motors.....   | 35,654.85 | 30686 |
| 30687 | Every 100 nos. of additional circuits above 500 nos. of circuits/ motors.....   | 7,519.04  | 30687 |

| Item  |   |           | Item  |
|-------|---|-----------|-------|
|       | <b>MISCELLANEOUS (CONT'D)</b>   |           |       |
|       | Buildings Energy Efficiency Ordinance (BEEO) Submission (Cont'd)  | Rate      |       |
|       | Type of premises : District Open Space/ Park (with Toilet Block, Service Block and Fountain);<br>District Open Space/ Park (with Toilet Block and Service Block); District Open Space/ Park (with Toilet Block only);<br>Library; Indoor Games Hall; Indoor Swimming Pool; Sport Ground/ Stadium :- |           |       |
|       | <i>Per item</i>   | A<br>\$   |       |
| 30688 | up to 50 nos. of circuits/ motors.....  | 3,759.53  | 30688 |
| 30689 | 51 nos. of circuits to 100 nos. of circuits/ motors.....  | 7,033.96  | 30689 |
| 30690 | 101 nos. of circuits to 200 nos. of circuits/ motors.....   | 14,310.46 | 30690 |
| 30691 | 201 nos. of circuits to 300 nos. of circuits/ motors.....   | 21,344.39 | 30691 |
| 30692 | 301 nos. of circuits to 400 nos. of circuits/ motors.....   | 28,620.89 | 30692 |
| 30693 | 401 nos. of circuits to 500 nos. of circuits/ motors.....   | 35,654.85 | 30693 |
| 30694 | Every 100 nos. of additional circuits above 500 nos. of circuits/ motors.....   | 7,519.04  | 30694 |
|       | Type of premises : School with Noise Abatement; School with No Noise Abatement :-   |           |       |
|       | <i>Per item</i>   |           |       |
| 30695 | up to 50 nos. of circuits/ motors.....  | 3,759.53  | 30695 |
| 30696 | 51 nos. of circuits to 100 nos. of circuits/ motors.....  | 7,033.96  | 30696 |
| 30697 | 101 nos. of circuits to 200 nos. of circuits/ motors.....   | 14,310.46 | 30697 |
| 30698 | 201 nos. of circuits to 300 nos. of circuits/ motors.....   | 21,344.39 | 30698 |
| 30699 | 301 nos. of circuits to 400 nos. of circuits/ motors.....   | 28,620.89 | 30699 |
| 30700 | 401 nos. of circuits to 500 nos. of circuits/ motors.....   | 35,654.85 | 30700 |
| 30701 | Every 100 nos. of additional circuits above 500 nos. of circuits/ motors.....   | 7,519.04  | 30701 |

| Item  |  |                      |                                      |  | Item        |       |
|-------|--|----------------------|--------------------------------------|--|-------------|-------|
|       | <b>FANS &amp; VENTILATION SYSTEM</b>   | Supply<br>and<br>fix | Take<br>down<br>and<br>clear<br>away | Take<br>down<br>and set<br>aside for<br>re-use | Fix<br>only |       |
|       |  | A<br>\$              | B<br>\$                              | C<br>\$  | D<br>\$     |       |
|       | Ceiling fan, c/ w regulator and down rod of any length including application of glue to all thread parts of the fan : -  |                      |                                      |  |             |       |
|       | <b>Each</b>  |                      |                                      |  |             |       |
| 30702 | 900 mm diameter.....   | 508.67               | 25.53                                | 31.80  | 96.36       | 30702 |
| 30703 | 1200 mm diameter.....  | 548.40               | 28.85                                | 33.64  | 102.11      | 30703 |
| 30704 | 1400 mm diameter.....  | 598.50               | 33.64                                | 38.39  | 109.48      | 30704 |
| 30705 | For existing ceiling fan only, application of rust inhibitor to screw thread, of each ceiling fan down rod (taking down and refix ceiling fan, where required, measured separately)..... | 24.00                | -                                    | -  | -           | 30705 |
|       | Wall mounted fan, 3-speed c/ w off pull switch and oscillation control pull switch, cord-operated : -  |                      |                                      |  |             |       |
|       | <b>Each</b>  |                      |                                      |  |             |       |
| 30706 | 400 mm diameter.....   | 515.14               | 13.83                                | 17.38  | 53.32       | 30706 |
| 30707 | 500 mm diameter.....   | 1,105.98             | 19.01                                | 21.32  | 60.62       | 30707 |
| 30708 | 600 mm diameter.....   | 1,299.67             | 21.32                                | 23.78  | 67.88       | 30708 |
| 30709 | 630 mm diameter.....   | 1,385.43             | 22.05                                | 24.33  | 69.94       | 30709 |
|       | Ceiling mounted rotary fan c/ w regulator : -  |                      |                                      |  |             |       |
|       | <b>Each</b>  |                      |                                      |  |             |       |
| 30710 | 400 mm diameter.....   | 790.56               | 19.40                                | 22.13  | 65.77       | 30710 |
|       | Regulator for fan : -  |                      |                                      |  |             |       |
|       | <b>Each</b>  |                      |                                      |  |             |       |
| 30711 | Regulator for fan, 3 speed or above.....   | 196.21               | 7.64                                 | 9.57   | 28.39       | 30711 |
|       | Domestic type exhaust fan, wall/ window mounted c/ w automatic/ cord operated shutter : -  |                      |                                      |  |             |       |
|       | <b>Each</b>  |                      |                                      |  |             |       |
| 30712 | 150 mm diameter.....   | 331.57               | 15.25                                | 19.10  | 58.66       | 30712 |
| 30713 | 200 mm diameter.....   | 333.74               | 15.25                                | 19.10  | 58.66       | 30713 |
| 30714 | 250 mm diameter.....   | 356.82               | 15.25                                | 19.10  | 58.66       | 30714 |
| 30715 | 300 mm diameter.....   | 430.72               | 15.25                                | 19.10  | 58.66       | 30715 |



| Item  |   |                |                          |                                    | Item     |       |
|-------|---|----------------|--------------------------|------------------------------------|----------|-------|
|       | <b>FANS &amp; VENTILATION SYSTEM (CONT'D)</b>   |                |                          |                                    |          |       |
|       | Domestic type exhaust fan, wall/ window mounted c/ w louvre and automatic/ cord operated shutter :- | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only |       |
|       | <i>Each</i>   | A<br>\$        | B<br>\$                  | C<br>\$                            | D<br>\$  |       |
| 30716 | 150 mm diameter.....  | 361.62         | 18.57                    | 23.28                              | 72.22    | 30716 |
| 30717 | 200 mm diameter.....  | 382.23         | 18.57                    | 23.28                              | 72.22    | 30717 |
| 30718 | 250 mm diameter.....  | 412.51         | 18.57                    | 23.28                              | 72.22    | 30718 |
| 30719 | 300 mm diameter.....  | 497.21         | 18.57                    | 23.28                              | 72.22    | 30719 |
|       | Domestic type exhaust fan, wall/ window mounted c/ w louvre and electrical operated shutter :-      |                |                          |                                    |          |       |
|       | <i>Each</i>   |                |                          |                                    |          |       |
| 30720 | 150 mm diameter.....  | 1,001.30       | 15.25                    | 19.10                              | 58.66    | 30720 |
| 30721 | 200 mm diameter.....  | 1,172.15       | 15.25                    | 19.10                              | 58.66    | 30721 |
| 30722 | 230 mm diameter.....  | 1,387.80       | 15.25                    | 19.10                              | 58.66    | 30722 |
| 30723 | 300 mm diameter.....  | 1,820.42       | 15.25                    | 19.10                              | 58.66    | 30723 |
|       | Exhaust fan, propeller type :-  |                |                          |                                    |          |       |
|       | <i>Each</i>   |                |                          |                                    |          |       |
| 30724 | 250 mm diameter.....  | 532.34         | 19.45                    | 24.73                              | 75.29    | 30724 |
| 30725 | 315 mm diameter.....  | 680.97         | 19.45                    | 24.73                              | 75.29    | 30725 |
| 30726 | 335 mm diameter.....  | 760.45         | 19.45                    | 24.73                              | 75.29    | 30726 |
| 30727 | 400 mm diameter.....  | 1,068.20       | 24.73                    | 30.86                              | 94.93    | 30727 |
| 30728 | 450 mm diameter.....  | 1,181.17       | 27.94                    | 34.93                              | 106.82   | 30728 |
| 30729 | 500 mm diameter.....  | 1,339.94       | 30.86                    | 38.40                              | 118.83   | 30729 |
| 30730 | 630 mm diameter.....  | 2,495.59       | 52.21                    | 64.83                              | 200.87   | 30730 |
| 30731 | 800 mm diameter.....  | 4,075.36       | 75.95                    | 95.09                              | 293.48   | 30731 |

| Item  |   | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only | Item  |
|---|---|----------------|--------------------------|------------------------------------|----------|-------|
|   |   | A<br>\$        | B<br>\$                  | C<br>\$                            | D<br>\$  |       |
| <b>FANS &amp; VENTILATION SYSTEM (CONT'D)</b> |   |                |                          |                                    |          |       |
|   | Plate axial fan, wall mounted c/ w speed controller :-                            |                |                          |                                    |          |       |
|   | <i>Each</i>   |                |                          |                                    |          |       |
| 30732   | 315 mm diameter; speed up to 1000 rpm, sound level less than 39dBA.....           | 2,745.74       | 33.28                    | 41.37                              | 125.92   | 30732 |
| 30733   | 375 mm diameter; speed up to 1000 rpm, sound level less than 45dBA.....           | 3,337.17       | 41.37                    | 51.80                              | 157.00   | 30733 |
| 30734   | 450 mm diameter; speed up to 1000rpm, sound level less than 50dBA.....            | 4,106.22       | 49.29                    | 61.76                              | 188.41   | 30734 |
| 30735   | 630 mm diameter; speed up to 750 rpm, sound level less than 51dBA.....            | 5,549.58       | 81.87                    | 102.34                             | 314.24   | 30735 |
|   | Fume cupboard exhaust fan :-  |                |                          |                                    |          |       |
|   | <i>Each</i>   |                |                          |                                    |          |       |
| 30736   | 152 mm diameter; speed up to 3000 rpm.....  | 7,178.96       | 15.25                    | 19.10                              | 58.66    | 30736 |
| 30737   | 241 mm diameter; speed up to 1500 rpm.....  | 7,991.17       | 25.94                    | 30.71                              | 62.36    | 30737 |
| 30738   | 241 mm diameter; speed up to 3000 rpm.....  | 9,864.77       | 25.94                    | 30.71                              | 62.36    | 30738 |
| 30739   | 305 mm diameter; speed up to 1500 rpm.....  | 11,904.70      | 30.71                    | 37.34                              | 68.30    | 30739 |
|   | Exhaust fan, axial, speed up to 750rpm, 380V/ 3-phase/ 50Hz. :-                   |                |                          |                                    |          |       |
|   | <i>Each</i>   |                |                          |                                    |          |       |
| 30740   | 560 mm diameter, 1.5 m <sup>3</sup> / sec. air volume, 30 pa static pressure..... | 5,530.55       | 39.86                    | 49.56                              | 153.20   | 30740 |
| 30741   | 600 mm diameter, 2.3 m <sup>3</sup> / sec. air volume, 40 pa static pressure..... | 6,889.70       | 52.21                    | 64.83                              | 200.87   | 30741 |
| 30742   | 800 mm diameter, 5.0 m <sup>3</sup> / sec. air volume, 50 pa static pressure..... | 8,654.57       | 75.95                    | 95.09                              | 294.41   | 30742 |
|   | Wire mesh protective guard for exhaust fan (all types) :-                         |                |                          |                                    |          |       |
|   | <i>Each</i>   |                |                          |                                    |          |       |
| 30743   | 250 mm diameter.....  | 86.18          | 14.01                    | 17.30                              | 52.04    | 30743 |
| 30744   | 315 mm diameter.....  | 89.66          | 14.01                    | 17.30                              | 52.04    | 30744 |
| 30745   | 335 mm diameter.....  | 94.44          | 14.45                    | 17.73                              | 52.69    | 30745 |
| 30746   | 400 mm diameter.....  | 100.13         | 14.91                    | 18.67                              | 55.44    | 30746 |
| 30747   | 450 mm diameter.....  | 112.33         | 16.76                    | 20.85                              | 62.43    | 30747 |
| 30748   | 500 mm diameter.....  | 118.41         | 17.19                    | 21.32                              | 63.86    | 30748 |
| 30749   | 630 mm diameter.....  | 140.21         | 17.62                    | 22.16                              | 66.49    | 30749 |
| 30750   | 800 mm diameter.....  | 179.22         | 18.06                    | 22.61                              | 68.49    | 30750 |

| Item  |  | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only | Item  |
|---|--|----------------|--------------------------|------------------------------------|----------|-------|
|   |  | A<br>\$        | B<br>\$                  | C<br>\$                            | D<br>\$  |       |
| <b>FANS &amp; VENTILATION SYSTEM (CONT'D)</b> |  |                |                          |                                    |          |       |
|   | Galvanized sheet metal wall cowl for exhaust fan (all types) :-  |                |                          |                                    |          |       |
|   | <i>Each</i>  |                |                          |                                    |          |       |
| 30751   | 250 mm diameter.....   | 95.48          | 14.01                    | 17.30                              | 52.04    | 30751 |
| 30752   | 315 mm diameter.....   | 100.33         | 14.01                    | 17.30                              | 52.04    | 30752 |
| 30753   | 335 mm diameter.....   | 106.35         | 14.45                    | 17.73                              | 52.69    | 30753 |
| 30754   | 400 mm diameter.....   | 109.42         | 14.91                    | 18.67                              | 55.44    | 30754 |
| 30755   | 450 mm diameter.....   | 123.48         | 16.76                    | 20.85                              | 62.43    | 30755 |
| 30756   | 500 mm diameter.....   | 130.73         | 17.19                    | 21.32                              | 63.86    | 30756 |
| 30757   | 630 mm diameter.....   | 153.54         | 17.62                    | 22.16                              | 66.49    | 30757 |
| 30758   | 800 mm diameter.....   | 201.10         | 18.06                    | 22.61                              | 68.49    | 30758 |
|   | Air curtain c/w galvanized sheet metal casing with powder coating finishing coat.<br>Fan motor shall have 2-step air flow rate changeover and c/w a controller of on/off and Hi/Lo speed operation, including all supporting mild steel hanger and wall bracket fixed to structural member, c/w all necessary accessories :- |                |                          |                                    |          |       |
|   | <i>Each</i>  |                |                          |                                    |          |       |
| 30759   | 600 mm long.....   | 1,223.91       | 24.60                    | 30.73                              | 91.78    | 30759 |
| 30760   | 900 mm long.....   | 1,487.88       | 35.10                    | 40.69                              | 99.24    | 30760 |
| 30761   | 1200 mm long.....  | 1,741.11       | 46.57                    | 60.16                              | 106.50   | 30761 |

| Item  |  |                |                          |                                    | Item     |       |
|-------|--|----------------|--------------------------|------------------------------------|----------|-------|
|       | <b>BEDHEAD TRUNKING AND STAFF/ EMERGENCY/ NURSE CALL SYSTEM</b>  | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only |       |
|       | Bedhead trunking : -   |                |                          |                                    |          |       |
|       | <i>Per linear metre</i>  | A<br>\$        | B<br>\$                  | C<br>\$                            | D<br>\$  |       |
| 30762 | Bedhead trunking, constructed from aluminium extrusions of minimum size 180 mm(H) x 90 mm(D), 3 compartments c/ w front plate and panel to accommodate electrical and medical gas bedhead services ..... | 1,537.11       | 12.97                    | 13.87                              | 41.69    | 30762 |
| 30763 | Ditto, size 250 mm(H) x 90 mm(D).....  | 1,779.59       | 13.45                    | 14.43                              | 43.27    | 30763 |
|       | <i>Each</i>  |                |                          |                                    |          |       |
| 30764 | Right angle vertical bend for bedhead trunking.....  | 1,465.83       | 10.99                    | 11.45                              | 34.73    | 30764 |
| 30765 | End cap for bedhead trunking.....  | 181.06         | 8.41                     | 8.54                               | 13.88    | 30765 |
| 30766 | Bedhead 13A single socket .....  | 410.75         | 9.14                     | 9.65                               | 34.28    | 30766 |
| 30767 | Bedhead 13A single socket (switched).....  | 423.84         | 9.14                     | 9.65                               | 34.28    | 30767 |
| 30768 | Bedhead 13A twin socket.....   | 619.68         | 9.14                     | 9.65                               | 34.28    | 30768 |
| 30769 | Bedhead 13A single socket c/ w RCD.....  | 1,335.76       | 9.14                     | 9.65                               | 34.28    | 30769 |
| 30770 | Bedhead 13A single socket (switched) c/ w RCD .....  | 1,352.70       | 9.14                     | 9.65                               | 34.28    | 30770 |
| 30771 | Bedhead 13A twin socket c/ w RCD.....  | 1,539.23       | 9.14                     | 9.65                               | 34.28    | 30771 |
| 30772 | Bedhead 13A twin socket (switched) c/ w RCD.....   | 1,564.04       | 9.14                     | 9.65                               | 34.28    | 30772 |
| 30773 | Bedhead single switch c/ w fuse spur.....  | 551.79         | 9.14                     | 9.65                               | 34.28    | 30773 |
| 30774 | Bedlight switch c/ w bedlight mounting bracket.....  | 746.06         | 9.14                     | 9.65                               | 34.28    | 30774 |
| 30775 | Bedhead staff call socket.....   | 100.31         | 9.14                     | 9.65                               | 34.28    | 30775 |
| 30776 | Angle poise bedlight unit c/ w trunking mounting bracket for 11W compact fluorescent lamp.....   | 3,064.72       | 18.49                    | 19.40                              | 70.21    | 30776 |
|       | Bedhead trunking-mounted fluorescent luminaries : -  |                |                          |                                    |          |       |
|       | <i>Each</i>  |                |                          |                                    |          |       |
| 30777 | 400 mm length.....   | 2,017.03       | 14.31                    | 14.79                              | 84.02    | 30777 |
| 30778 | 600 mm length.....   | 2,247.70       | 14.31                    | 14.79                              | 84.92    | 30778 |
| 30779 | 1000 mm length.....  | 2,702.21       | 14.31                    | 14.79                              | 85.65    | 30779 |
|       | Indicator lamp : -   |                |                          |                                    |          |       |
|       | <i>Each</i>  |                |                          |                                    |          |       |
| 30780 | Overdoor indicator lamp (red).....   | 381.67         | 9.14                     | 9.65                               | 34.28    | 30780 |

| Item   |   | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only | Item  |
|--|---|----------------|--------------------------|------------------------------------|----------|-------|
|  |   | A<br>\$        | B<br>\$                  | C<br>\$                            | D<br>\$  |       |
| <b>BEDHEAD TRUNKING AND STAFF/ EMERGENCY/ NURSE CALL SYSTEM (CONT'D)</b>   |   |                |                          |                                    |          |       |
| Hard-wire staff/ emergency/ nurse call system :-   |   |                |                          |                                    |          |       |
| <i>Each</i>  |   |                |                          |                                    |          |       |
| 30781  | Bedhead staff call push/ reset.....   | 990.49         | 9.63                     | 10.09                              | 41.88    | 30781 |
| 30782  | Bedhead nurse call/ present/ reset unit with reassurance indicator and handset jack socket.....   | 1,496.80       | 9.63                     | 10.09                              | 41.88    | 30782 |
| 30783  | Bedhead nurse call/ present/ reset unit with reassurance indicator, emergency pull/ push unit and handset jack socket .....                   | 1,760.37       | 9.63                     | 10.09                              | 41.88    | 30783 |
| 30784  | Bedhead RDS control station.....  | 1,929.60       | 9.20                     | 9.69                               | 34.58    | 30784 |
| 30785  | Staff/ emergency/ nurse call panel c/ w intercom.....   | 3,378.04       | 13.72                    | 14.63                              | 103.51   | 30785 |
| 30786  | Nurse call/ reset unit with reset push.....   | 1,023.69       | 11.47                    | 11.94                              | 68.88    | 30786 |
| 30787  | Nurse call/ reset unit with reassurance indicator.....  | 1,091.51       | 11.47                    | 11.94                              | 68.88    | 30787 |
| 30788  | Nurse call/ reset unit with reassurance indicator and emergency pull/ push unit.....  | 1,352.11       | 11.94                    | 12.42                              | 70.43    | 30788 |
| Nurse/ staff/ emergency call control & monitoring console/ panel for hard-wire system c/w intercom and wiring :- |   |                |                          |                                    |          |       |
| <i>Each</i>  |   |                |                          |                                    |          |       |
| 30789  | Up to 10 ways.....  | 6,035.03       | 67.79                    | 72.48                              | 416.80   | 30789 |
| 30790  | 10 - 20 ways.....   | 6,444.50       | 72.48                    | 76.90                              | 455.53   | 30790 |
| 30791  | 20 - 30 ways.....   | 6,886.76       | 76.82                    | 81.35                              | 490.81   | 30791 |
| 30792  | 30 - 40 ways.....   | 7,977.49       | 81.35                    | 85.87                              | 528.94   | 30792 |
| Multiplexed/ microprocessor staff/ emergency/ nurse call system :-   |   |                |                          |                                    |          |       |
| <i>Each</i>  |   |                |                          |                                    |          |       |
| 30793  | Bedhead nurse call/ present/ reset unit with reassurance indicator, emergency pull/ push unit and handset jack socket .....                   | 2,090.60       | 9.55                     | 10.02                              | 41.88    | 30793 |
| 30794  | Bedhead nurse call/ present/ reset unit with reassurance indicator, RDS control and handset jack socket .....                                 | 3,718.97       | 10.02                    | 10.47                              | 46.30    | 30794 |
| 30795  | Bedhead nurse call/ present/ reset unit with reassurance indicator, emergency pull/ push, RDS control and handset jack socket .....           | 3,981.03       | 10.02                    | 10.47                              | 46.30    | 30795 |
| 30796  | Bedhead nurse call/ present/ reset unit with reassurance indicator, RDS control, intercom and handset jack socket .....                       | 5,177.66       | 10.02                    | 10.47                              | 46.30    | 30796 |
| 30797  | Bedhead nurse call/ present/ reset unit with reassurance indicator, emergency pull/ push, RDS control, intercom and handset jack socket ..... | 5,395.73       | 10.02                    | 10.47                              | 46.30    | 30797 |
| 30798  | Bedhead speaker microphone unit.....  | 1,495.08       | 9.14                     | 9.65                               | 34.28    | 30798 |

| Item  |   |                      |                                      |  | Item        |       |
|---|---|----------------------|--------------------------------------|--|-------------|-------|
| <b>BEDHEAD TRUNKING AND STAFF/ EMERGENCY/ NURSE CALL SYSTEM (CONT'D)</b>  |   |                      |                                      |  |             |       |
| Multiplexed/ microprocessor staff/ emergency/ nurse call system : - (Cont'd)  |   |                      |                                      |  |             |       |
| <i>Each</i>   |   |                      |                                      |  |             |       |
|   |   | Supply<br>and<br>fix | Take<br>down<br>and<br>clear<br>away | Take<br>down<br>and set<br>aside for<br>re-use | Fix<br>only |       |
|   |   | A<br>\$              | B<br>\$                              | C<br>\$  | D<br>\$     |       |
| 30799   | Light dimmer; PCB type.....   | 1,254.63             | 9.14                                 | 9.65   | 34.28       | 30799 |
| 30800   | Nurse call/ present/ reset unit.....  | 1,209.86             | 11.47                                | 11.94  | 68.88       | 30800 |
| 30801   | Nurse call/ present/ reset unit with reassurance indicator.....                         | 1,289.56             | 11.47                                | 11.94  | 68.88       | 30801 |
| 30802   | Nurse call/ present/ reset unit with reassurance indicator and intercom.....            | 2,747.06             | 11.94                                | 12.42  | 72.49       | 30802 |
| 30803   | Nurse/ staff/ emergency call panel c/ w touch screen control, intercom and wiring ..... | 63,684.51            | 56.40                                | 70.53  | 451.61      | 30803 |
| Nurse/ staff/ emergency call control & monitoring console/ panel for multiplexed/ microprocessor system c/ w intercom and wiring : -  |   |                      |                                      |  |             |       |
| <i>Each</i>   |   |                      |                                      |  |             |       |
| 30804   | Up to 10 ways.....  | 8,991.74             | 72.48                                | 76.90  | 457.56      | 30804 |
| 30805   | 10 - 20 ways.....   | 11,357.86            | 76.82                                | 81.35  | 494.17      | 30805 |
| 30806   | 20 - 30 ways.....   | 14,275.77            | 81.35                                | 85.87  | 529.96      | 30806 |
| 30807   | 30 - 40 ways.....   | 17,254.44            | 85.91                                | 90.36  | 566.89      | 30807 |
| 30808   | 40 - 60 ways.....   | 28,524.30            | 95.22                                | 99.63  | 639.03      | 30808 |
| 30809   | Keyboard console, 70 ways c/ w LCD display and intercom.....                            | 49,652.22            | 101.91                               | 110.74   | 783.50      | 30809 |
| Control circuit c/ w cables/ wiring, trunking, conduits (surface or concealed in partition and ceiling) and all necessary accessories and connected to nurse/ emergency/ staff call control panel : - |   |                      |                                      |  |             |       |
| <i>Each</i>   |   |                      |                                      |  |             |       |
| 30810   | Nurse call point.....   | 364.77               | 56.11                                | 60.77  | 251.59      | 30810 |
| 30811   | Nurse present/ reset point.....   | 375.97               | 56.66                                | 61.18  | 260.13      | 30811 |
| 30812   | Nurse call/ present/ reset point.....   | 386.37               | 57.11                                | 61.77  | 267.46      | 30812 |
| 30813   | Emergency call point.....   | 364.77               | 56.11                                | 60.77  | 251.59      | 30813 |
| 30814   | Emergency reset point.....  | 364.77               | 56.11                                | 60.77  | 251.59      | 30814 |
| 30815   | Emergency call/ reset point.....  | 375.97               | 56.66                                | 61.18  | 260.13      | 30815 |
| 30816   | Staff call point.....   | 364.77               | 56.11                                | 60.77  | 251.59      | 30816 |
| 30817   | Staff reset point.....  | 364.77               | 56.11                                | 60.77  | 251.59      | 30817 |
| 30818   | Staff call/ reset point.....  | 375.97               | 56.66                                | 61.18  | 260.13      | 30818 |

| Item  |  |                |                          |                                    | Item     |       |
|---|--|----------------|--------------------------|------------------------------------|----------|-------|
| <b>BEDHEAD TRUNKING AND STAFF/ EMERGENCY/ NURSE CALL SYSTEM (CONT'D)</b>                    |  |                |                          |                                    |          |       |
| General items applicable to all bedhead trunking and staff/ emergency/ nurse call system :- |  |                |                          |                                    |          |       |
| <i>Each</i>   |  |                |                          |                                    |          |       |
|   |  | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only |       |
|   |  | A<br>\$        | B<br>\$                  | C<br>\$                            | D<br>\$  |       |
| 30819   | Headset; stethoscope type c/ w parking bracket/ hood to bedhead trunking.....  | 243.19         | 1.89                     | 2.78                               | 7.21     | 30819 |
| 30820   | Dummy handset jack plug.....   | 45.75          | 1.89                     | 2.78                               | 7.21     | 30820 |
| 30821   | Nurse call handset c/ w call button only.....  | 625.47         | 4.64                     | 5.14                               | 11.20    | 30821 |
| 30822   | Nurse call handset c/ w call button and RDS control.....   | 722.97         | 4.64                     | 5.14                               | 11.20    | 30822 |
| 30823   | Nurse call handset parking bracket.....  | 54.35          | 4.64                     | 5.14                               | 14.48    | 30823 |
| 30824   | Nurse call handset linen clip.....   | 29.18          | 4.64                     | 5.14                               | 14.48    | 30824 |
| 30825   | Nurse call handset socket.....   | 53.44          | 4.64                     | 5.14                               | 14.48    | 30825 |
| 30826   | Nurse call handset c/ w call button, RDS control and intercom microphone.....  | 3,505.66       | 4.64                     | 5.14                               | 14.69    | 30826 |
| 30827   | Nurse call handset/ patient remote call unit with nurse call push, power supply unit, reassurance indicator, intercom, bedlight switch, sound channel selector, volume control and flexible cable..... | 3,672.50       | 4.64                     | 5.14                               | 14.69    | 30827 |
| 30828   | Staff call unit, vandal-proof push.....  | 337.48         | 11.47                    | 11.94                              | 68.88    | 30828 |
| 30829   | Emergency call unit.....   | 819.88         | 11.47                    | 11.94                              | 68.88    | 30829 |
| 30830   | Present/ reset unit.....   | 340.62         | 11.47                    | 11.94                              | 68.88    | 30830 |
| 30831   | Present/ reset unit with emergency pull/ push unit .....   | 937.95         | 11.94                    | 12.42                              | 73.05    | 30831 |
| 30832   | Repeater unit with indicator and mute switch .....   | 1,016.39       | 11.94                    | 12.42                              | 73.05    | 30832 |
| 30833   | Pull-cord type nurse call unit with reassurance indicator.....   | 269.27         | 11.47                    | 11.94                              | 68.88    | 30833 |
| 30834   | Splash-proof nurse call unit with reassurance indicator.....   | 463.40         | 11.47                    | 11.94                              | 68.88    | 30834 |
| 30835   | Splash-proof nurse call/ present/ reset unit with reassurance indicator.....   | 1,033.21       | 11.94                    | 12.42                              | 73.05    | 30835 |
| 30836   | Splash-proof present/ reset unit.....  | 745.19         | 11.94                    | 12.42                              | 73.05    | 30836 |
| 30837   | RDS jack socket unit.....  | 143.22         | 4.64                     | 5.14                               | 14.48    | 30837 |
| 30838   | Buzzer unit.....   | 423.58         | 9.14                     | 9.65                               | 34.28    | 30838 |
| 30839   | Call indicator.....  | 270.58         | 9.14                     | 9.65                               | 34.28    | 30839 |
| 30840   | Call indicator c/ w buzzer unit.....   | 614.49         | 9.55                     | 10.02                              | 37.96    | 30840 |
| 30841   | Power supply unit 220/ 24V or 220/ 28V for multi-zone nurse/ emergency/ staff call system .....  | 10,901.82      | 23.62                    | 25.89                              | 130.98   | 30841 |

| Item  |   |                |                          |                                    | Item      |       |
|-------|---|----------------|--------------------------|------------------------------------|-----------|-------|
|       | <b>DETECTION SENSOR</b>   |                |                          |                                    |           |       |
|       | Occupancy/ Motion Sensor :-   | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only  |       |
|       | <i>Each</i>   | A \$           | B \$                     | C \$                               | D \$      |       |
| 30842 | Wall mounted occupancy sensor, single pole switching, 400W 150o field of view, switches lights ON by passive infrared technology and OFF after an adjustable time delay, with manual overriding switch.....   | 311.72         | 10.45                    | 12.65                              | 31.41     | 30842 |
| 30843 | Ditto but single pole and 3 way switching, 180° field of view.....  | 412.56         | 10.45                    | 12.65                              | 31.41     | 30843 |
| 30844 | Ceiling mounted occupancy sensor, 10A, 360° detection using passive infrared technology, effective coverage up to 74m <sup>2</sup> at 2.4m ceiling height.....  | 910.38         | 10.45                    | 13.41                              | 32.79     | 30844 |
|       | <b>PHOTOVOLTAIC SYSTEM</b>  |                |                          |                                    |           |       |
|       | Photovoltaic system with photovoltaic modules to IEC 60904, mounted on fixed rack with approximate 22 degree titling angle with aluminium frame, inverter, circuit breaker, connectors, wiring works, structurally support, controller and all necessary accessories: - | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only  |       |
|       | Mono-crystalline type photovoltaic panel :-<br>(Total maximum power of PV module under standard test condition)   | A \$           | B \$                     | C \$                               | D \$      |       |
|       | <i>Each</i>   |                |                          |                                    |           |       |
| 30845 | 180 - 360 Wp .....  | 27,666.17      | 3,511.22                 | 5,304.42                           | 9,648.28  | 30845 |
| 30846 | 540 - 720 Wp.....   | 55,668.05      | 6,063.47                 | 9,125.87                           | 19,186.57 | 30846 |
| 30847 | 720 - 900 Wp.....   | 69,832.22      | 8,617.93                 | 12,969.79                          | 24,093.45 | 30847 |
| 30848 | Extra 180 Wp, up to 3,000 Wp.....   | 14,249.28      | 2,133.55                 | 3,187.57                           | 4,824.14  | 30848 |
|       | Multi-crystalline type photovoltaic panel :-<br>(Total maximum power of PV module under standard test condition)  |                |                          |                                    |           |       |
|       | <i>Each</i>   |                |                          |                                    |           |       |
| 30849 | 180 - 360 Wp .....  | 26,691.95      | 3,325.44                 | 4,949.40                           | 9,509.19  | 30849 |
| 30850 | 540 - 720Wp.....  | 53,619.89      | 5,703.10                 | 8,531.94                           | 18,672.73 | 30850 |
| 30851 | 720 - 900Wp.....  | 67,396.93      | 8,067.31                 | 12,026.91                          | 23,445.29 | 30851 |
| 30852 | Extra 180 Wp, up to 3,000 Wp.....   | 13,670.24      | 1,994.66                 | 2,989.22                           | 4,901.21  | 30852 |



| Item  |   |          |  | Item  |
|-------|---|----------|--|-------|
|       | <b>RECONDITIONING OF LAMP POLE</b>  |          |  |       |
|       | Refurbishment of lamp pole including surface reconditioning, apply coating with priming paint and finishing paint of identical colours, replacement of safety chain, safety platform and scaffolding where applicable : - | Rate     |  |       |
|       | <i>Each</i>   | A<br>\$  |  |       |
| 30853 | for lamp pole height up to 4.5 m.....   | 3,699.31 |  | 30853 |
| 30854 | for lamp pole height 4.5 m to 7.5 m.....  | 4,812.00 |  | 30854 |
| 30855 | for lamp pole height 7.5 m to 12 m.....   | 6,310.14 |  | 30855 |
| 30856 | for lamp pole height above or equal to 12m.....   | 8,380.28 |  | 30856 |

| Item   | Item  |                          |         |       |       |       |
|--|---|--------------------------|---------|-------|-------|-------|
| <b>SUNDRIES</b>  |   |                          |         |       |       |       |
| Labour to disconnect all existing electrical installation for an area inside a building, take down and clear the entire electrical installation inside the area (area shall be measured net on the gross floor area of the building covered by the electrical installation) :- |   |                          |         |       |       |       |
| <i>Per square metre</i>  |   |                          |         |       |       |       |
| 30857  | for area up to 100 m <sup>2</sup> .....   |                          |         |       |       |       |
| 30858  | for area 101 - 500 m <sup>2</sup> .....   |                          |         |       |       |       |
| 30859  | for area above 500 m <sup>2</sup> .....   |                          |         |       |       |       |
|  | <table border="1"> <tr> <td data-bbox="1369 297 1422 432">Take down and clear away</td> </tr> <tr> <td data-bbox="1385 465 1406 510">A<br/>\$</td> </tr> <tr> <td data-bbox="1385 544 1422 566">20.01</td> </tr> <tr> <td data-bbox="1385 600 1422 622">19.71</td> </tr> <tr> <td data-bbox="1385 656 1422 678">19.35</td> </tr> </table> | Take down and clear away | A<br>\$ | 20.01 | 19.71 | 19.35 |
| Take down and clear away   |   |                          |         |       |       |       |
| A<br>\$  |   |                          |         |       |       |       |
| 20.01  |   |                          |         |       |       |       |
| 19.71  |   |                          |         |       |       |       |
| 19.35  |   |                          |         |       |       |       |
|  | 30857   |                          |         |       |       |       |
|  | 30858   |                          |         |       |       |       |
|  | 30859   |                          |         |       |       |       |

**Section 31**

**LOW VOLTAGE CUBICLE SWITCHBOARD**

## SECTION 31

### LOW VOLTAGE CUBICLE SWITCHBOARD

#### SPECIAL CONDITIONS

**Measurement  
generally**

**SC31.01**

For the avoidance of doubt, all rates in this Section shall only apply to the works executed by the Approved Suppliers of Materials and Specialist Contractors for Public Works : Low Voltage Cubicle Switchboard Installation.

Unless otherwise specified separately in items under this Section, switchboard cubicle shall be measured on the basis of complete unit.

All electrical and other related work items except those items specifically included in this Section shall be measured and paid for at the appropriate rates under Section 28 - Small Power Distribution, Section 29 - Main Distribution Systems and Section 30 - Miscellaneous Electrical Installations or other applicable Work Sections of this Schedule.

**Measurement  
of multi-cubicle  
type switchboard**

**SC31.02**

The multi-cubicle type switchboard shall consist of cubicle columns (items are included in this Section) to accommodate different arrangement of switchgear, protective and metering units. To facilitate payment, the basic cubicle column shall consist of two base types basing on their panel widths :-

Type A Cubicle Column : cubicle width - 750mm to 900mm

The cubicle column with this width shall accommodate the major switchgear units, such as air circuit breakers (ACB), automatic changeover units, MCCBs, fuseswitches and overcurrent and earth fault relays units for ACBs etc. It may also accommodate some switchgear units of smaller ratings together with the major units in the same cubicle column as indicated in the Works Order.

Type B Cubicle Column : cubicle width - 350mm to 450mm

The cubicle column with this width shall accommodate largely the smaller switchgear units, such as MCCBs, fuseswitches, switchfuses, isolators etc. of smaller ratings.

The arrangement of a whole cubicle switchboard as specified by the Works Order shall be a combination of different cubicle columns with the abovementioned width types to suit different requirements as required by the Works Order. The rate for the combined switchboard cubicle shall be the summation of the single and/or multiples of the rates of the cubicle columns items under this Section which also describes the requirements on the height and depth of the cubicle columns. The side end panels of the utmost left and right cubicle columns shall be deemed to be included in the rates.

### SPECIAL CONDITIONS

**Measurement  
of temporary  
supply**

**SC31.03**

Where a temporary supply is ordered by the Maintenance Surveyor, the provision of all articles, labour and accessory materials (nails, screws, rawplugs and similar) necessary for fixing shall be of temporary nature. For "use and waste" of all materials, such as cables, fittings, switchgear and accessories, etc., for a period of not exceeding four weeks from the date of certified completion, 50 per cent of the value of the appropriate "supply and fix" items after the adjustment of contract percentages will be paid. For a period exceeding four weeks and not exceeding eight weeks, 55 per cent will be paid and for each subsequent month a further addition of 5 per cent will be made.

For a period of more than six months, the full rates, as for permanent works will be paid, and the materials will become the property of the Employer.

No extra payment will be made for the removal of materials in connection with the temporary supply, but the cost of which shall have been included in the payment as aforementioned in the first paragraph hereof. The date of certified completion of a temporary supply shall be the date when the installation is first brought into service. The date when it ceases to be used shall be the date from which the Maintenance Surveyor instructs the dismantlement of the installation, or the date when the installation is no longer in use, whichever is earlier.

**Rates generally**

**SC31.04**

The rates for all items shall generally include for : -

- (a) Colour band and colour identification work.
- (b) Lettering and engraving for identification, signs, labels in both English and Chinese.
- (c) Identification plates, signs, notice plates, discs and labels in both English and Chinese.
- (d) Priming or painting off site and proprietary finishes or surface treatment applied as part of the production process whether applied before or after fabrication and assembly.
- (e) All protective and finishing painting work, apart from additional painting work specifically ordered by the Maintenance Surveyor in writing which shall be measured separately and paid for at the appropriate rates under Section 15 - Painting of this Schedule.
- (f) Any kind of fixing method including drilling of the background and provision of all supporting frames, fixings, hangers, brackets, nails, bolts, nuts, holes, screws, plugs, shotfired pins and the like.
- (g) Assembling and jointing together with the component parts of composite units and providing any necessary jointing materials.
- (h) Provision of all indication lamps.
- (i) Earth/equipotential bonding.
- (j) Design and submission of design drawings and the like.

**SPECIAL CONDITIONS**

**Rates generally  
(Cont'd)**

**SC31.04  
(Cont'd)**

- (k) Submission of catalogues, technical literature, data, calculations, test certificates and approval documentation covering the equipment and materials being supplied.
- (l) Preparing and submitting detail working drawings as required and all shop drawings for the fabrication and installation.
- (m) Attendance, as required, of the manufacturers' representative to assist in the installation and subsequent testing and commissioning.
- (n) Testing and commissioning including submission of Testing and Commissioning Certificates and Records of Tests.
- (o) Provision all necessary power, labour and testing instrument of approved type for testing and commissioning.
- (p) Preparing and submitting operation and maintenance manuals and as-fitted drawings for items of works as required.
- (q) Provision of schematic diagrams covered front and back with plastic sheet including fixing to wall.
- (r) Provision of complete set of spare fuses complete with spare fuse board as specified.
- (s) Provision of manufacturer's guarantee.

**Rates for "Take  
down and clear  
away" or "Take  
down and set aside  
for re-use"**

**SC31.05**

The rates for "Take down and clear away" or " Take down and set aside for re-use" existing items in connection with low voltage cubicle switchboard installation shall further include for : -

- (a) Taking down all associated building services works.
- (b) Plugging off remaining ends with plugs or caps as required.
- (c) Preparing remaining ends of building services works to receive connections with new work if required.
- (d) Making good all works disturbed.

**Particular  
Specification**

**SC31.06**

The Particular Specification for low voltage cubicle switchboard can be found in the Contract.

| Item  | Item   |
|---|--|
| <b>LOW VOLTAGE CUBICLE SWITCHBOARD</b>  |  |
| Multi-cubicle type switchboard, factory built assembly (suitable for incoming / outgoing cabling from top or bottom), height : 2 to 2.2 m, depth : 1 to 1.5 m c/w compartments for switchgear / busbars / cables, segregations, door / panels, indication labels, engraved labels, push buttons, selector switches, all interconnecting, control and ancillary wiring and fixings, earth terminals, rubber insulating mat, operating handles and all necessary accessories :- | Supply and fix<br>Take down and clear away<br>Take down and set aside for re-use<br>Fix only |
| <b>Each</b>   | A<br>\$ B<br>\$ C<br>\$ D<br>\$  |
| 31001 Type A cubicle column (750 - 900 mm).....   | 23,022.85 2,051.21 2,125.92 3,170.88 31001   |
| 31002 Type B cubicle column (350 - 450 mm).....   | 18,336.78 1,741.83 1,833.98 2,987.67 31002   |
| Draw-out type air-circuit breaker c/w DC shunt trip coil/release, electrical and mechanical interlock device and keys, control wiring and all necessary accessories :-  |  |
| <b>Each</b>   |  |
| 31003 400A; 3-pole.....   | 14,516.62 1,117.51 1,238.66 1,981.09 31003   |
| 31004 500A; 3-pole.....   | 14,873.17 1,117.51 1,238.66 1,981.09 31004   |
| 31005 600A; 3-pole.....   | 15,178.78 1,117.51 1,238.66 1,981.09 31005   |
| 31006 800A; 3-pole.....   | 15,382.52 1,160.37 1,281.72 2,073.95 31006   |
| 31007 1000A; 3-pole.....  | 16,554.04 1,162.81 1,288.30 2,091.24 31007   |
| 31008 1200A; 3-pole.....  | 17,623.68 1,165.25 1,294.31 2,107.14 31008   |
| 31009 1500/1600A; 3-pole.....   | 19,508.30 1,216.48 1,352.12 2,188.73 31009   |
| 31010 2000A; 3-pole.....  | 23,022.85 1,272.17 1,425.49 2,307.65 31010   |
| 31011 2500A; 3-pole.....  | 25,569.62 1,277.01 1,433.80 2,329.46 31011   |
| 31012 3000/3200A; 3-pole.....   | 28,320.14 1,329.54 1,493.29 2,437.44 31012   |
| 31013 400A; 4-pole.....   | 15,031.07 1,131.18 1,260.31 2,037.06 31013   |
| 31014 500A; 4-pole.....   | 15,275.56 1,131.18 1,260.31 2,037.06 31014   |
| 31015 600A; 4-pole.....   | 15,433.46 1,131.18 1,260.31 2,037.06 31015   |
| 31016 800A; 4-pole.....   | 15,886.79 1,175.13 1,304.92 2,135.38 31016   |
| 31017 1000A; 4-pole.....  | 17,206.01 1,176.80 1,309.61 2,147.97 31017   |
| 31018 1200A; 4-pole.....  | 18,153.41 1,179.86 1,313.95 2,159.68 31018   |
| 31019 1500/1600A; 4-pole.....   | 19,732.41 1,227.92 1,372.32 2,242.17 31019   |
| 31020 2000A; 4-pole.....  | 26,690.20 1,282.47 1,442.97 2,353.82 31020   |
| 31021 2500A; 4-pole.....  | 29,644.46 1,285.69 1,450.54 2,374.00 31021   |
| 31022 3000/3200A; 4-pole.....   | 33,520.66 1,336.70 1,506.01 2,471.52 31022   |

| Item  |   |                |                          |                                    | Item     |       |
|-------|---|----------------|--------------------------|------------------------------------|----------|-------|
|       | <b>LOW VOLTAGE CUBICLE SWITCHBOARD (CONT'D)</b>   |                |                          |                                    |          |       |
|       | Four-pole air-circuit breaker (ACB) for automatic transfer switch c/w DC shunt trip coil/release, electrical and mechanical interlock device and keys, control wiring and all necessary accessories : - | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only |       |
|       | <i>Each</i>   | A \$           | B \$                     | C \$                               | D \$     |       |
| 31023 | 1500/1600A.....   | 29,542.59      | 2,047.59                 | 2,299.41                           | 4,774.17 | 31023 |
| 31024 | 2000A.....  | 31,580.01      | 2,093.14                 | 2,347.00                           | 4,861.72 | 31024 |
|       | Four-pole automatic changeover switch c/w E&M interlock : -   |                |                          |                                    |          |       |
|       | <i>Each</i>   |                |                          |                                    |          |       |
| 31025 | 200A.....   | 6,366.94       | 167.22                   | 177.29                             | 428.68   | 31025 |
| 31026 | 300A.....   | 7,237.94       | 167.22                   | 177.29                             | 428.68   | 31026 |
|       | Four-pole automatic changeover contactor c/w E&M interlock : -  |                |                          |                                    |          |       |
|       | <i>Each</i>   |                |                          |                                    |          |       |
| 31027 | 400A.....   | 9,168.39       | 163.43                   | 173.83                             | 399.09   | 31027 |
| 31028 | 500A.....   | 12,733.88      | 163.43                   | 173.83                             | 399.09   | 31028 |
| 31029 | 600/630A.....   | 19,355.49      | 163.43                   | 173.83                             | 399.09   | 31029 |
| 31030 | 800A.....   | 24,958.40      | 165.61                   | 177.04                             | 405.25   | 31030 |
| 31031 | 1000A.....  | 26,486.46      | 165.61                   | 177.04                             | 405.25   | 31031 |
|       | Moulded case circuit breaker (MCCB) for automatic transfer switch c/w electrical and mechanical interlock device and all necessary accessories; four-pole type : -                                      |                |                          |                                    |          |       |
|       | <i>Each</i>   |                |                          |                                    |          |       |
| 31032 | 200A.....   | 19,355.49      | 163.43                   | 173.83                             | 399.09   | 31032 |
| 31033 | 300A/ 400A.....   | 26,486.46      | 163.43                   | 173.83                             | 399.09   | 31033 |
| 31034 | 500A/ 600A.....   | 29,695.40      | 163.43                   | 173.83                             | 399.09   | 31034 |



| Item  |  |                |                          |                                    | Item     |       |
|-------|--|----------------|--------------------------|------------------------------------|----------|-------|
|       | <b>LOW VOLTAGE CUBICLE SWITCHBOARD (CONT'D)</b>  |                |                          |                                    |          |       |
|       | Moulded case circuit breaker (MCCB); breaking capacity 50 kA r.m.s. c/w shunt trip coil, wiring and all necessary accessories; three-pole type : - | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only |       |
|       | <i>Each</i>  | A \$           | B \$                     | C \$                               | D \$     |       |
| 31035 | 32A to 63A.....  | 1,446.57       | 192.80                   | 203.09                             | 373.55   | 31035 |
| 31036 | 100A to 225A.....  | 1,945.74       | 198.32                   | 210.82                             | 400.55   | 31036 |
| 31037 | 225A to 400A.....  | 2,816.74       | 209.09                   | 219.50                             | 428.41   | 31037 |
| 31038 | 500A.....  | 3,972.97       | 225.19                   | 238.42                             | 495.21   | 31038 |
| 31039 | 600/ 630A.....   | 4,492.51       | 225.76                   | 238.95                             | 509.60   | 31039 |
| 31040 | 800A.....  | 6,051.14       | 227.97                   | 242.56                             | 526.29   | 31040 |
|       | Moulded case circuit breaker (MCCB); breaking capacity 50 kA r.m.s. c/w shunt trip coil, wiring and all necessary accessories; four-pole type : -  |                |                          |                                    |          |       |
|       | <i>Each</i>  |                |                          |                                    |          |       |
| 31041 | 100A to 225A.....  | 2,302.28       | 207.65                   | 215.74                             | 418.70   | 31041 |
| 31042 | 225A to 400A.....  | 3,509.46       | 211.20                   | 221.65                             | 441.57   | 31042 |
| 31043 | 500A.....  | 5,587.63       | 226.57                   | 240.62                             | 504.83   | 31043 |
| 31044 | 600/ 630A.....   | 5,587.63       | 227.15                   | 241.18                             | 519.79   | 31044 |
| 31045 | 800A.....  | 7,064.76       | 228.87                   | 244.15                             | 533.81   | 31045 |
|       | Fuse-switch; TP&N c/w fuses : -  |                |                          |                                    |          |       |
|       | <i>Each</i>  |                |                          |                                    |          |       |
| 31046 | 32A.....   | 916.84         | 136.04                   | 138.18                             | 268.49   | 31046 |
| 31047 | 63A.....   | 1,018.71       | 136.04                   | 138.18                             | 268.49   | 31047 |
| 31048 | 100A.....  | 1,120.58       | 136.04                   | 138.18                             | 268.49   | 31048 |
| 31049 | 200A.....  | 1,426.19       | 140.11                   | 144.92                             | 295.17   | 31049 |
| 31050 | 300A.....  | 2,444.90       | 149.76                   | 154.14                             | 355.18   | 31050 |
| 31051 | 400A.....  | 2,648.65       | 154.61                   | 157.25                             | 357.76   | 31051 |
| 31052 | 500A.....  | 3,107.07       | 164.74                   | 173.00                             | 462.56   | 31052 |
| 31053 | 600A.....  | 3,972.97       | 164.96                   | 173.15                             | 462.97   | 31053 |

| Item  |  |                      |                                      |  | Item        |       |
|---|--|----------------------|--------------------------------------|--|-------------|-------|
| <b>LOW VOLTAGE CUBICLE SWITCHBOARD (CONT'D)</b> |  |                      |                                      |  |             |       |
|   | Isolating switch; TP & N :-  | Supply<br>and<br>fix | Take<br>down<br>and<br>clear<br>away | Take<br>down<br>and set<br>aside for<br>re-use | Fix<br>only |       |
|   | <i>Each</i>  | A<br>\$              | B<br>\$                              | C<br>\$  | D<br>\$     |       |
| 31054   | 32A.....   | 636.70               | 142.73                               | 157.90   | 339.47      | 31054 |
| 31055   | 63A.....   | 814.97               | 142.73                               | 157.90   | 339.47      | 31055 |
| 31056   | 100A.....  | 942.31               | 142.73                               | 157.90   | 339.47      | 31056 |
| 31057   | 200A.....  | 1,273.39             | 146.42                               | 157.90   | 361.15      | 31057 |
| 31058   | 300A.....  | 2,139.29             | 152.49                               | 165.08   | 412.88      | 31058 |
| 31059   | 400A.....  | 2,485.65             | 152.49                               | 165.08   | 412.88      | 31059 |
| 31060   | 500A.....  | 2,979.73             | 162.71                               | 177.18   | 475.98      | 31060 |
| 31061   | 600A.....  | 3,463.61             | 162.71                               | 177.18   | 475.98      | 31061 |
|   | Power factor correction module; 25kVAr at 380V nominal voltage per stage control<br>c/w capacitor banks, automatic switching facilities, fuses, control relays, contactors,<br>ammeters and all necessary control accessories; wiring and interconnection with<br>other devices for functioning :-   |                      |                                      |  |             |       |
|   | <i>Each</i>  |                      |                                      |  |             |       |
| 31062   | 150 kVAr.....  | 14,985.22            | 448.52                               | 471.38   | 1,318.52    | 31062 |
| 31063   | 200 kVAr.....  | 20,165.37            | 589.86                               | 613.76   | 1,600.18    | 31063 |
| 31064   | 250 kVAr.....  | 24,703.72            | 731.42                               | 756.25   | 1,818.92    | 31064 |
| 31065   | 300 kVAr.....  | 29,063.80            | 872.46                               | 899.27   | 2,568.08    | 31065 |
| 31066   | Add to last item for each additional 50 kVAr.....  | 3,972.97             | 140.99                               | 143.11   | 465.61      | 31066 |
|   | Real time power factor correction module; 25/ 50kVAr at 380V nominal voltage per stage<br>control c/w capacitor banks, automatic switching facilities, fuses, control relays, ammeters<br>and all necessary control accessories; wiring and interconnection with other devices for<br>functioning :- |                      |                                      |  |             |       |
|   | <i>Each</i>  |                      |                                      |  |             |       |
| 31067   | 150 kVAr.....  | 73,856.48            | 448.52                               | 471.38   | 1,318.52    | 31067 |
| 31068   | 200 kVAr.....  | 81,394.93            | 589.86                               | 613.76   | 1,600.18    | 31068 |
| 31069   | 250 kVAr.....  | 87,099.71            | 731.42                               | 756.25   | 1,818.92    | 31069 |
| 31070   | 300 kVAr.....  | 92,702.61            | 872.46                               | 899.27   | 2,568.08    | 31070 |

| Item   |                |                          |                                    |          | Item  |
|--|----------------|--------------------------|------------------------------------|----------|-------|
| <b>LOW VOLTAGE CUBICLE SWITCHBOARD (CONT'D)</b>  |                |                          |                                    |          |       |
| Sundries :-  | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only |       |
| <i>Each</i>  | A<br>\$        | B<br>\$                  | C<br>\$                            | D<br>\$  |       |
| 31071 Electro-mechanical type earth fault relay (single element) c/w wiring and accessories.....   | 3,315.90       | 179.34                   | 194.08                             | 422.56   | 31071 |
| 31072 Electro-mechanical type overcurrent relay (three element) c/w wiring and accessories.....  | 7,548.64       | 250.22                   | 277.30                             | 576.72   | 31072 |
| 31073 Microprocessor-based digital protection relay c/w wiring and accessories.....  | 8,266.83       | 233.40                   | 257.74                             | 487.59   | 31073 |
| 31074 Secondary battery system comprising trickle type battery chargers, sealed Ni-Cd/Ni-MH batteries, voltmeter, ammeter and battery test facilities, for voltage rating below 50V D.C..... | 6,174.55       | 341.26                   | 371.25                             | 747.10   | 31074 |
| 31075 Voltmeter and associated wiring.....   | 1,212.26       | 207.22                   | 212.00                             | 320.66   | 31075 |
| 31076 Ammeter and associated wiring.....   | 1,135.86       | 207.22                   | 212.00                             | 320.66   | 31076 |
| 31077 Power factor meter and associated wiring.....  | 2,139.29       | 198.85                   | 209.61                             | 474.47   | 31077 |
| 31078 Maximum demand indicating meter and associated wiring.....   | 738.57         | 152.43                   | 170.54                             | 207.36   | 31078 |
| 31079 Microprocessor based digital multifunction power meter c/w all necessary interconnection wiring for functioning.....   | 3,479.04       | 221.12                   | 244.44                             | 410.68   | 31079 |
| 31080 Microprocessor based digital power analyzer c/w all necessary interconnection wiring for functioning.....  | 6,649.75       | 318.15                   | 455.77                             | 520.15   | 31080 |
| 31081 Anti-condensation heaters and thermostats in switchboard c/w with wiring and accessories .....   | 1,233.70       | 201.39                   | 204.45                             | 306.90   | 31081 |
| 31082 Undervoltage relay.....  | 575.57         | 135.03                   | 153.01                             | 179.68   | 31082 |

| Item  |              |                      |                                      |  | Item        |       |
|---|--------------|----------------------|--------------------------------------|--|-------------|-------|
| <b>LOW VOLTAGE CUBICLE SWITCHBOARD (CONT'D)</b>                               |              |                      |                                      |  |             |       |
| Current transformer (for protection) including all wiring and accessories :-  |              |                      |                                      |  |             |       |
| <i>Each</i>   |              |                      |                                      |  |             |       |
|   |              | Supply<br>and<br>fix | Take<br>down<br>and<br>clear<br>away | Take<br>down<br>and set<br>aside for<br>re-use | Fix<br>only |       |
|   |              | A<br>\$              | B<br>\$                              | C<br>\$  | D<br>\$     |       |
| 31083   | 200/5A.....  | 458.42               | 125.69                               | 140.69   | 213.31      | 31083 |
| 31084   | 300/5A.....  | 458.42               | 125.69                               | 140.69   | 213.31      | 31084 |
| 31085   | 400/5A.....  | 458.42               | 125.69                               | 140.69   | 213.31      | 31085 |
| 31086   | 500/5A.....  | 458.42               | 125.69                               | 140.69   | 213.31      | 31086 |
| 31087   | 600/5A.....  | 483.89               | 125.69                               | 140.69   | 213.31      | 31087 |
| 31088   | 800/5A.....  | 483.89               | 125.69                               | 140.69   | 213.31      | 31088 |
| 31089   | 1000/5A..... | 483.89               | 125.69                               | 140.69   | 213.31      | 31089 |
| 31090   | 1200/5A..... | 499.17               | 125.69                               | 140.69   | 213.31      | 31090 |
| 31091   | 1500/5A..... | 499.17               | 127.90                               | 143.00   | 216.64      | 31091 |
| 31092   | 1600/5A..... | 519.54               | 127.90                               | 143.00   | 216.64      | 31092 |
| 31093   | 2000/5A..... | 519.54               | 127.90                               | 143.00   | 219.66      | 31093 |
| 31094   | 2250/5A..... | 534.83               | 131.46                               | 146.79   | 224.85      | 31094 |
| 31095   | 2500/5A..... | 534.83               | 131.46                               | 146.79   | 224.85      | 31095 |
| 31096   | 3000/5A..... | 585.76               | 132.92                               | 148.38   | 229.19      | 31096 |
| 31097   | 3200/5A..... | 636.70               | 132.92                               | 148.38   | 229.19      | 31097 |
| Current transformer (for measurement) including all wiring and accessories :- |              |                      |                                      |  |             |       |
| <i>Each</i>   |              |                      |                                      |  |             |       |
| 31098   | 200/5A.....  | 305.61               | 125.69                               | 140.69   | 213.31      | 31098 |
| 31099   | 300/5A.....  | 315.80               | 125.69                               | 140.69   | 213.31      | 31099 |
| 31100   | 400/5A.....  | 315.80               | 125.69                               | 140.69   | 213.31      | 31100 |
| 31101   | 500/5A.....  | 320.90               | 125.69                               | 140.69   | 213.31      | 31101 |
| 31102   | 600/5A.....  | 320.90               | 125.69                               | 140.69   | 213.31      | 31102 |

| Item   |  |                      |                                      |  | Item        |       |
|--|--|----------------------|--------------------------------------|--|-------------|-------|
| <b>LOW VOLTAGE CUBICLE SWITCHBOARD (CONT'D)</b>  |  |                      |                                      |  |             |       |
| Current transformer (for measurement) including all wiring and accessories : -<br>(Cont'd)                                   |  |                      |                                      |  |             |       |
| <i>Each</i>  |  |                      |                                      |  |             |       |
|  |  | Supply<br>and<br>fix | Take<br>down<br>and<br>clear<br>away | Take<br>down<br>and set<br>aside for<br>re-use | Fix<br>only |       |
|  |  | A<br>\$              | B<br>\$                              | C<br>\$  | D<br>\$     |       |
| 31103  | 800/5A.....  | 331.08               | 125.69                               | 140.69   | 213.31      | 31103 |
| 31104  | 1000/5A.....   | 356.55               | 125.69                               | 140.69   | 213.31      | 31104 |
| 31105  | 1200/5A.....   | 366.74               | 125.69                               | 140.69   | 213.31      | 31105 |
| 31106  | 1500/5A.....   | 382.02               | 125.69                               | 140.69   | 213.31      | 31106 |
| 31107  | 1600/5A.....   | 382.02               | 125.69                               | 140.69   | 213.31      | 31107 |
| 31108  | 2000/5A.....   | 392.21               | 125.69                               | 140.69   | 213.31      | 31108 |
| 31109  | 2250/5A.....   | 397.30               | 125.69                               | 140.69   | 213.31      | 31109 |
| 31110  | 2500/5A.....   | 417.67               | 125.69                               | 140.69   | 213.31      | 31110 |
| 31111  | 3000/5A.....   | 438.05               | 125.69                               | 140.69   | 213.31      | 31111 |
| 31112  | 3200/5A.....   | 438.05               | 125.69                               | 140.69   | 213.31      | 31112 |
| Copper busbar, triple pole and full neutral, enclosed inside switchboard c/w<br>insulation and all necessary accessories : - |  |                      |                                      |  |             |       |
| <i>Per linear meter</i>  |  |                      |                                      |  |             |       |
| 31113  | 400A.....  | 2,118.92             | 80.79                                | 86.91  | 241.91      | 31113 |
| 31114  | 600A.....  | 2,332.85             | 85.82                                | 93.69  | 257.97      | 31114 |
| 31115  | 800A.....  | 2,791.27             | 89.67                                | 97.66  | 273.80      | 31115 |
| 31116  | 1000A.....   | 3,066.32             | 94.51                                | 102.56   | 288.33      | 31116 |
| 31117  | 1500A.....   | 4,349.89             | 98.61                                | 107.30   | 300.20      | 31117 |
| 31118  | 2000A.....   | 5,282.01             | 102.49                               | 111.18   | 311.81      | 31118 |
| 31119  | 2500A.....   | 6,555.40             | 110.79                               | 120.12   | 343.14      | 31119 |
| 31120  | 3000A.....   | 7,640.33             | 110.79                               | 120.12   | 343.14      | 31120 |
| <i>Each</i>  |  |                      |                                      |  |             |       |
| 31121  | Portable earthing equipment for main incoming air circuit breaker.....   | 2,862.58             | 148.94                               | 158.62   | 387.12      | 31121 |
| 31122  | Hydraulic operated truck for handling air circuit breaker, and all necessary accessories.....  | 5,083.36             | 240.62                               | 318.69   | 680.89      | 31122 |
| <i>Per square meter</i>  |  |                      |                                      |  |             |       |
| 31123  | Rubber mats; ribbed surface comply with BS 921:1976 or IEC 6111:2009, laid in front of<br>and at the rear of switchboard; minimum 10mm thick continuous sheet..... | 509.36               | 30.56                                | 36.67  | 152.81      | 31123 |

**Section 32**

**EMERGENCY GENERATOR INSTALLATION**

## SECTION 32

### EMERGENCY GENERATOR INSTALLATION

#### SPECIAL CONDITIONS

|  |                |  |
|--|----------------|--|
| <b>Measurement of power supply</b>     | <b>SC32.01</b> | <p>All works of electrical power supply up to power supply points (e.g. switchfuse or isolator or spur unit and the like) for the equipment shall be measured separately and paid for at the appropriate rates under Section 27 - Lighting System and Fixtures, Section 28 - Small Power Distribution, Section 29 - Main Distribution Systems and Section 30 - Miscellaneous Electrical Installations or other applicable Work Sections of this Schedule.</p>  |
| <b>Measurement of temporary supply</b> | <b>SC32.02</b> | <p>Where a temporary supply is ordered by the Maintenance Surveyor, the provision of all articles, labour and accessory materials (nails, screws, rawplugs and similar) necessary for fixing shall be of temporary nature. For "use and waste" of all materials, such as cables, fittings, switchgear and accessories, etc., for a period of not exceeding four weeks from the date of certified completion, 50 per cent of the value of the appropriate "supply and fix" items after the adjustment of contract percentages will be paid. For a period exceeding four weeks and not exceeding eight weeks, 55 per cent will be paid and for each subsequent month a further addition of 5 per cent will be made.</p> <p>For a period of more than six months, the full rates, as for permanent works will be paid, and the materials will become the property of the Employer.</p> <p>No extra payment will be made for the removal of materials in connection with the temporary supply, but the cost of which shall have been included in the payment as aforementioned in the first paragraph hereof. The date of certified completion of a temporary supply shall be the date when the installation is first brought into service. The date when it ceases to be used shall be the date from which the Maintenance Surveyor instructs the dismantlement of the installation, or the date when the installation is no longer in use, whichever is earlier.</p> |
| <b>Rates generally</b>                 | <b>SC32.03</b> | <p>The rates for all items shall generally include for : -</p> <ul style="list-style-type: none"> <li>(a) Colour band and colour identification work.</li> <li>(b) Lettering and engraving for identification, signs, labels in both English and Chinese.</li> <li>(c) Identification plates, signs, notice plates, discs and labels in both English and Chinese.</li> <li>(d) Priming or painting off site and proprietary finishes or surface treatment applied as part of the production process whether applied before or after fabrication and assembly.</li> <li>(e) All protective and finishing painting work, apart from additional painting work specifically ordered by the Maintenance Surveyor in writing which shall be measured separately and paid for at the appropriate rates under Section 15 - Painting of this Schedule.</li> </ul>   |

**SPECIAL CONDITIONS**

**Rates generally  
(Cont'd)**

**SC32.03  
(Cont'd)**

- (f) Any kind of fixing method including drilling of the background and provision of all fixings, hangers, nails, bolts, nuts, holes, screws, washers, plugs, shotfired pins and the like.
- (g) Assembling and jointing together with the component parts of composite units and providing any necessary jointing materials.
- (h) All brackets and methods of supports including supporting frames and anti-vibration mounting.
- (i) Provision of expansion joints in service runs wherever they coincide with structural expansion joints.
- (j) Submission of catalogues, technical literature, data, calculations, original official birth certificate, manufacturing certificates, official test certificates for major components and approval documentation covering the equipment and materials being supplied.
- (k) Preparing and submitting detail working drawings as required and all shop drawings for the fabrication and installation.
- (l) Attendance, as required, of the manufacturers' representative to assist in the installation and subsequent testing and commissioning.
- (m) Testing and commissioning including submission of Testing and Commissioning Certificates and Records of Tests.
- (n) Provision of all necessary power, fuel, labour and testing instrument of approved type for testing and commissioning.
- (o) Submitting all relevant documentation to Fire Services Department and obtaining necessary approval.
- (p) Obtaining necessary approval from Environment Protection Department including submission of all relevant documentation.
- (q) Preparing and submitting operation and maintenance manuals and as-fitted drawings for items of works as required.
- (r) Provision of schematic diagrams covered front and back with plastic sheet including fixing to wall.
- (s) Provision of manufacturer's guarantee. Submission of sample board for all materials and accessories, and supply of samples of materials for testing (including testing to destruction).
- (t) Submission of sample board for all compact sized materials and accessories, and supply of samples of materials for testing (including testing to destruction).



### SPECIAL CONDITIONS

**Rates for  
emergency  
generator set**

**SC32.04**

The rates for emergency generator set shall further include for : -

- (a) All necessary assembly, orientation, alignment, levelling, lifting and bolting down facilities, together with the provision of shims and packing pieces, the clocking of couplings between drivers and rotating equipment, strainers, instrumentation and the like.
- (b) Electric starting equipment including starter motor, starting battery with hardwood stand and cover, battery charger and all necessary wiring and switchgear.
- (c) Alternator complete with exciter, automatic voltage regulator and termination box including insulation as specified.
- (d) Engine mounted instrument panel including gauges, tachometer and hourmeter.
- (e) Protective screens for flywheel and coupling (if exposed) and other exposed moving parts.
- (f) Engine cooling system including pumps, pipework and valves, regulating devices, radiator with fan, heat exchanger, expansion tank if required, ductwork and silencers.
- (g) All necessary pipework and associated fittings for filling, overflow, outlet, drain, return and vent including necessary connection and jointing, valves, pipework hangers, supports, anchor and the like.
- (h) Engine exhaust system including fan, silencer, bellows, hangers with anti-vibration spring mechanism, pipework, ductwork, insulation, cladding, clamps, flange couplings, heat resisting jointing and the like.
- (i) All necessary operational and control accessories (e.g. selector switch, key switch, fuel control solenoid, relays, fuses, contactors, push button, indication lamp, meters and the like) that are required to put the generator set in proper operation.
- (j) Anti-vibration materials and sound insulation materials in generator set bases.
- (k) Earth/ equipotential bonding.
- (l) All lubricating oil and greases, including initial charge and subsequent replenishment during warranty period.

### SPECIAL CONDITIONS

**Rates for fuel  
oil supply system**

**SC32.05**

The rates for fuel oil supply system shall further include for : -

- (a) Daily services fuel tank complete with socket connections for filling, overflow, outlet, drain, return and vent including all necessary fittings, union couplings, strainers, valves and the like, content gauge units, oil drip trays and all necessary accessories.
- (b) All necessary pipework and associated fittings for filling, overflow, outlet, drain, return and vent including necessary connections and jointing with diesel resistant jointing materials, valves, pipework hangers, supports, anchors and the like.
- (c) Oil transfer pump, injection pump, oil hand pump, injectors and filters.
- (d) Dial gauge, float switch, quick closing mechanism comprising break glass unit, pull handle, pulley, steel wire rope and the like.
- (e) Mild steel stand and all necessary accessories required for the completion of the system.
- (f) Hydraulic test on the system including draining, drying and flushing all pipework, fittings and valves after the test.

**Rates for  
lifting hoist**

**SC32.06**

The rates for lifting hoist shall further include for : -

- (a) Geared trolley, load chain, hooks with catch and ball or roller bearings.
- (b) Submission of test certificate for the load chain.
- (c) Submission of test certificate for the lift hoist.
- (d) Structural calculation and surveyor's certificate of I-beam.

**Rates for  
acoustic  
treatment  
installation**

**SC32.07**

The rates for acoustic treatment installation shall further include for providing all necessary suitable acoustic treatment to achieve acceptable noise levels as specified, including : -

- (a) Pipework acoustic sleeving to all pipes penetrating building structure and provision of split clamping rings, resilient hangers and seals.
- (b) Acoustic treatment to walls, doors, louvres and ceiling of the emergency generator room and provision of galvanized steel framing with fixing accessories, polyester membrane lining and protective perforated steel sheeting.
- (c) Duct silencers for ventilation fans, air inlet louvres, air discharge louvres, coupled radiators and all other air passage.
- (d) Mufflers for engine exhaust air system.

**SPECIAL CONDITIONS**

**Rates for "Take down and clear away" or "Take down and set aside for re-use"**

**SC32.08**

The rates for "Take down and clear away" or " Take down and set aside for re-use" existing items in connection with emergency generator set shall further include for :-

- (a) Taking down all associated plumbing works and building services works.
- (b) Plugging off remaining ends with plugs or caps as required.
- (c) Preparing remaining ends of plumbing works and building services works to receive connections with new work if required.
- (d) Making good all works disturbed.

**Particular Specification**

**SC32.09**

The Particular Specification for emergency generator set can be found in the Contract.

| Item  |  |                      |                                   |  | Item        |       |
|-------|--|----------------------|-----------------------------------|--|-------------|-------|
|       | <b>EMERGENCY GENERATOR SET</b>   |                      |                                   |  |             |       |
|       | Emergency generator installation comprising diesel engine, alternator, electrical starting system, cooling system, fresh air supply/exhaust air system, exhaust air ductwork, exhaust pipework with cladding and thermal insulation (each within 10m), intake/discharge silencers, protection device and all necessary accessories : - |                      |                                   |  |             |       |
|       | <i>Per item</i>  |                      |                                   |  |             |       |
|       |  | Supply<br>and<br>fix | Take<br>down<br>and clear<br>away | Take<br>down<br>and set<br>aside for<br>re-use | Fix<br>only |       |
|       |  | A<br>\$              | B<br>\$                           | C<br>\$  | D<br>\$     |       |
| 32001 | Not exceeding 100 kVA .....<br>(The actual rate should be : \$218,295.00 for Item 32001A)  | 21,829.50            | 2,008.53                          | 2,224.52                                       | 6,010.38    | 32001 |
| 32002 | 100 - 150 kVA.....<br>(The actual rate should be : \$254,677.50 for Item 32002A)   | 25,467.75            | 2,301.33                          | 2,509.71                                       | 7,371.70    | 32002 |
| 32003 | 150 - 200 kVA.....<br>(The actual rate should be : \$291,060.00 for Item 32003A)   | 29,106.00            | 2,447.35                          | 2,651.93                                       | 8,367.22    | 32003 |
| 32004 | 200 - 250 kVA.....<br>(The actual rate should be : \$327,442.50 for Item 32004A)   | 32,744.25            | 2,699.84                          | 2,902.90                                       | 9,463.89    | 32004 |
| 32005 | 250 - 300 kVA.....<br>(The actual rate should be : \$400,207.50 for Item 32005A)   | 40,020.75            | 2,745.47                          | 2,944.73                                       | 9,805.36    | 32005 |
| 32006 | 300 - 350 kVA.....<br>(The actual rate should be : \$458,419.50 for Item 32006A)   | 45,841.95            | 2,884.64                          | 3,124.21                                       | 10,979.60   | 32006 |
| 32007 | 350 - 400 kVA.....<br>(The actual rate should be : \$509,355.00 for Item 32007A)   | 50,935.50            | 2,884.64                          | 3,124.21                                       | 10,979.60   | 32007 |
| 32008 | 400 - 450 kVA.....<br>(The actual rate should be : \$618,502.50 for Item 32008A)   | 61,850.25            | 3,011.65                          | 3,254.26                                       | 11,957.62   | 32008 |
| 32009 | 450 - 500 kVA.....<br>(The actual rate should be : \$654,885.00 for Item 32009A)   | 65,488.50            | 3,011.65                          | 3,254.26                                       | 11,957.62   | 32009 |
| 32010 | 500 - 550 kVA.....<br>(The actual rate should be : \$727,650.00 for Item 32010A)   | 72,765.00            | 3,302.17                          | 3,585.85                                       | 13,970.72   | 32010 |
| 32011 | 550 - 600 kVA.....<br>(The actual rate should be : \$800,415.00 for Item 32011A)   | 80,041.50            | 3,302.17                          | 3,585.85                                       | 13,970.72   | 32011 |

| Item  | Item   |                                    |                          |                                    |          |         |         |         |         |
|---|--|------------------------------------|--------------------------|------------------------------------|----------|---------|---------|---------|---------|
| <b>EMERGENCY GENERATOR SET (CONT'D)</b>   |  |                                    |                          |                                    |          |         |         |         |         |
| Emergency generator installation (remote radiator type) comprises with diesel engine, alternator, electrical starting system, cooling system (excluding remote radiator), fresh air supply/ exhaust air system, exhaust air ductwork, exhaust pipework with cladding and thermal insulation (each within 10m), intake/ discharge silencers, protection device and all necessary accessories : - |  |                                    |                          |                                    |          |         |         |         |         |
| <i>Per item</i>   |  |                                    |                          |                                    |          |         |         |         |         |
|   | <table border="1"> <thead> <tr> <th style="text-align: center;">Supply and fix</th> <th style="text-align: center;">Take down and clear away</th> <th style="text-align: center;">Take down and set aside for re-use</th> <th style="text-align: center;">Fix only</th> </tr> <tr> <th style="text-align: center;">A<br/>\$</th> <th style="text-align: center;">B<br/>\$</th> <th style="text-align: center;">C<br/>\$</th> <th style="text-align: center;">D<br/>\$</th> </tr> </thead> </table> | Supply and fix                     | Take down and clear away | Take down and set aside for re-use | Fix only | A<br>\$ | B<br>\$ | C<br>\$ | D<br>\$ |
| Supply and fix  | Take down and clear away   | Take down and set aside for re-use | Fix only                 |                                    |          |         |         |         |         |
| A<br>\$   | B<br>\$  | C<br>\$                            | D<br>\$                  |                                    |          |         |         |         |         |
| 32012   | for generator set n.e. 100 kVA ..... 43,659.00 2,008.53 2,224.52 6,010.38 32012  |                                    |                          |                                    |          |         |         |         |         |
| 32013   | for generator set 100 - 150 kVA..... 44,871.75 2,301.33 2,509.71 7,371.70 32013  |                                    |                          |                                    |          |         |         |         |         |
| 32014   | for generator set 150 - 200 kVA..... 46,084.50 2,447.35 2,651.93 8,367.22 32014  |                                    |                          |                                    |          |         |         |         |         |
| 32015   | for generator set 200 - 250 kVA..... 47,297.25 2,699.84 2,902.90 9,463.89 32015  |                                    |                          |                                    |          |         |         |         |         |
| 32016   | for generator set 250 - 300 kVA..... 49,376.25 2,745.47 2,944.73 9,805.36 32016  |                                    |                          |                                    |          |         |         |         |         |
| 32017   | for generator set 300 - 350 kVA..... 51,455.25 2,884.64 3,124.21 10,979.60 32017   |                                    |                          |                                    |          |         |         |         |         |
| 32018   | for generator set 350 - 400 kVA..... 53,534.25 2,884.64 3,124.21 10,979.60 32018   |                                    |                          |                                    |          |         |         |         |         |
| 32019   | for generator set 400 - 450 kVA..... 55,613.25 3,011.65 3,254.27 11,957.62 32019   |                                    |                          |                                    |          |         |         |         |         |
| 32020   | for generator set 450 - 500 kVA..... 57,692.25 3,011.65 3,254.27 11,957.62 32020   |                                    |                          |                                    |          |         |         |         |         |
| 32021   | for generator set 500 - 550 kVA..... 59,771.25 3,302.17 3,585.85 13,970.72 32021   |                                    |                          |                                    |          |         |         |         |         |
| 32022   | for generator set 550 - 600 kVA..... 61,850.25 3,302.17 3,585.85 13,970.72 32022   |                                    |                          |                                    |          |         |         |         |         |
| Remote radiator for emergency generator set c/w remote radiator system, cooling system and pipework, fresh air supply/exhaust air system, exhaust air ductwork, intake/discharge silencers, protection device, all cabling and wiring works and all necessary accessories : -   |  |                                    |                          |                                    |          |         |         |         |         |
| <i>Per item</i>   |  |                                    |                          |                                    |          |         |         |         |         |
| 32023   | for generator set n.e. 100 kVA ..... 50,935.50 2,008.53 2,224.52 6,010.38 32023  |                                    |                          |                                    |          |         |         |         |         |
| 32024   | for generator set 100 - 150 kVA..... 52,148.25 2,301.33 2,509.71 7,371.70 32024  |                                    |                          |                                    |          |         |         |         |         |
| 32025   | for generator set 150 - 200 kVA..... 53,361.00 2,447.35 2,651.93 8,367.22 32025  |                                    |                          |                                    |          |         |         |         |         |
| 32026   | for generator set 200 - 250 kVA..... 54,573.75 2,699.84 2,902.90 9,463.89 32026  |                                    |                          |                                    |          |         |         |         |         |
| 32027   | for generator set 250 - 300 kVA..... 56,652.75 2,745.47 2,944.73 9,805.36 32027  |                                    |                          |                                    |          |         |         |         |         |
| 32028   | for generator set 300 - 350 kVA..... 58,731.75 2,884.64 3,124.21 10,979.60 32028   |                                    |                          |                                    |          |         |         |         |         |
| 32029   | for generator set 350 - 400 kVA..... 60,810.75 2,884.64 3,124.21 10,979.60 32029   |                                    |                          |                                    |          |         |         |         |         |
| 32030   | for generator set 400 - 450 kVA..... 62,889.75 3,011.65 3,254.27 11,957.62 32030   |                                    |                          |                                    |          |         |         |         |         |
| 32031   | for generator set 450 - 500 kVA..... 64,968.75 3,011.65 3,254.27 11,957.62 32031   |                                    |                          |                                    |          |         |         |         |         |
| 32032   | for generator set 500 - 550 kVA..... 67,047.75 3,302.17 3,585.85 13,970.72 32032   |                                    |                          |                                    |          |         |         |         |         |
| 32033   | for generator set 550 - 600 kVA..... 69,126.75 3,302.17 3,585.85 13,970.72 32033   |                                    |                          |                                    |          |         |         |         |         |

| Item  |                                      |                      |                                   |  | Item        |       |
|---|--------------------------------------|----------------------|-----------------------------------|--|-------------|-------|
| <b>EMERGENCY GENERATOR SET (CONT'D)</b>   |                                      |                      |                                   |  |             |       |
| Exhaust pipework c/w cladding, thermal insulation and necessary accessories :-  |                                      |                      |                                   |  |             |       |
| <i>Per linear metre</i>   |                                      |                      |                                   |  |             |       |
|   |                                      | Supply<br>and<br>fix | Take<br>down<br>and clear<br>away | Take<br>down<br>and set<br>aside for<br>re-use | Fix<br>only |       |
|   |                                      | A<br>\$              | B<br>\$                           | C<br>\$  | D<br>\$     |       |
| 32034   | for generator set n.e. 100 kVA ..... | 2,364.86             | 64.64                             | 76.05  | 291.28      | 32034 |
| 32035   | for generator set 100 - 150 kVA..... | 2,546.78             | 64.64                             | 76.05  | 291.28      | 32035 |
| 32036   | for generator set 150 - 200 kVA..... | 2,728.69             | 79.10                             | 87.46  | 329.31      | 32036 |
| 32037   | for generator set 200 - 250 kVA..... | 2,910.60             | 79.10                             | 98.11  | 360.49      | 32037 |
| 32038   | for generator set 250 - 300 kVA..... | 3,209.46             | 82.14                             | 100.39   | 369.61      | 32038 |
| 32039   | for generator set 300 - 350 kVA..... | 3,508.31             | 101.15                            | 117.88   | 435.78      | 32039 |
| 32040   | for generator set 350 - 400 kVA..... | 3,807.17             | 104.20                            | 121.68   | 467.72      | 32040 |
| 32041   | for generator set 400 - 450 kVA..... | 4,106.03             | 111.79                            | 142.22   | 502.71      | 32041 |
| 32042   | for generator set 450 - 500 kVA..... | 4,404.88             | 137.66                            | 162.75   | 590.17      | 32042 |
| 32043   | for generator set 500 - 550 kVA..... | 4,703.74             | 155.14                            | 182.54   | 661.65      | 32043 |
| 32044   | for generator set 550 - 600 kVA..... | 5,002.59             | 172.65                            | 196.98   | 736.94      | 32044 |
| Fuel oil supply system including daily services fuel tank c/w socket connections<br>for filling, overflow, outlet, drain, return and vent including all necessary fittings, union<br>couplings, strainer, valve and the like, content gauge unit, oil drip tray and all<br>necessary accessories :- |                                      |                      |                                   |  |             |       |
| <i>Per item</i>   |                                      |                      |                                   |  |             |       |
| 32045   | for generator set n.e. 100 kVA ..... | 43,659.00            | 545.30                            | 595.49   | 1,350.68    | 32045 |
| 32046   | for generator set 100 - 150 kVA..... | 46,305.00            | 674.59                            | 732.38   | 1,685.31    | 32046 |
| 32047   | for generator set 150 - 200 kVA..... | 48,951.00            | 712.60                            | 784.85   | 1,743.10    | 32047 |
| 32048   | for generator set 200 - 250 kVA..... | 51,597.00            | 765.85                            | 842.66   | 1,876.96    | 32048 |
| 32049   | for generator set 250 - 300 kVA..... | 54,243.00            | 808.43                            | 876.88   | 2,010.81    | 32049 |
| 32050   | for generator set 300 - 350 kVA..... | 56,889.00            | 945.31                            | 1,013.77                                       | 2,381.94    | 32050 |
| 32051   | for generator set 350 - 400 kVA..... | 59,535.00            | 980.31                            | 1,110.35                                       | 2,629.12    | 32051 |
| 32052   | for generator set 400 - 450 kVA..... | 62,181.00            | 1,087.54                          | 1,151.43                                       | 2,785.78    | 32052 |
| 32053   | for generator set 450 - 500 kVA..... | 64,827.00            | 1,139.26                          | 1,194.78                                       | 3,106.71    | 32053 |
| 32054   | for generator set 500 - 550 kVA..... | 67,473.00            | 1,220.63                          | 1,287.56                                       | 3,240.57    | 32054 |
| 32055   | for generator set 550 - 600 kVA..... | 70,119.00            | 1,403.15                          | 1,562.10                                       | 3,645.16    | 32055 |

| Item   | Supply and fix   | Take down and clear away | Take down and set aside for re-use | Fix only | Item     |       |
|--|--|--------------------------|------------------------------------|----------|----------|-------|
|  | A<br>\$  | B<br>\$                  | C<br>\$                            | D<br>\$  |          |       |
| <b>EMERGENCY GENERATOR SET (CONT'D)</b>  |  |                          |                                    |          |          |       |
| Topping up of fuel oil tanks with fuel of 0.005% sulphur content and of capacity : - |  |                          |                                    |          |          |       |
| <i>Per item</i>  |  |                          |                                    |          |          |       |
| 32056  | Not exceeding 300 litres .....                                       | 3,274.42                 | -                                  | -        | 32056    |       |
| 32057  | 300 - 400 litres.....  | 4,365.90                 | -                                  | -        | 32057    |       |
| 32058  | 400 - 500 litres.....  | 5,457.37                 | -                                  | -        | 32058    |       |
| 32059  | 500 - 600 litres.....  | 6,548.85                 | -                                  | -        | 32059    |       |
| 32060  | 600 - 700 litres.....  | 7,640.32                 | -                                  | -        | 32060    |       |
| 32061  | 700 - 800 litres.....  | 8,731.80                 | -                                  | -        | 32061    |       |
| 32062  | 800 - 900 litres.....  | 9,823.27                 | -                                  | -        | 32062    |       |
| 32063  | 900 -1000 litres.....  | 10,914.75                | -                                  | -        | 32063    |       |
| 32064  | Add to last item for each additional 100 litres or part thereof..... | 1,091.47                 | -                                  | -        | 32064    |       |
| Lifting hoist c/w geared trolley and all necessary accessories : -                   |  |                          |                                    |          |          |       |
| <i>Per item</i>  |  |                          |                                    |          |          |       |
| 32065  | for generator set n.e. 100 kVA .....                                 | 15,954.29                | 626.67                             | 697.39   | 2,142.37 | 32065 |
| 32066  | for generator set 100 - 150 kVA.....                                 | 19,422.82                | 746.06                             | 830.48   | 2,604.02 | 32066 |
| 32067  | for generator set 150 - 200 kVA.....                                 | 20,106.75                | 746.06                             | 830.48   | 2,604.02 | 32067 |
| 32068  | for generator set 200 - 250 kVA.....                                 | 21,292.95                | 817.56                             | 913.39   | 2,883.12 | 32068 |
| 32069  | for generator set 250 - 300 kVA.....                                 | 22,406.34                | 866.24                             | 961.30   | 3,051.20 | 32069 |
| 32070  | for generator set 300 - 350 kVA.....                                 | 25,792.31                | 1,003.89                           | 1,114.92 | 3,537.17 | 32070 |
| 32071  | for generator set 350 - 400 kVA.....                                 | 27,850.30                | 1,034.30                           | 1,133.94 | 3,607.13 | 32071 |
| 32072  | for generator set 400 - 450 kVA.....                                 | 29,592.41                | 1,065.49                           | 1,159.03 | 3,747.83 | 32072 |
| 32073  | for generator set 450 - 500 kVA.....                                 | 31,680.66                | 1,099.71                           | 1,199.34 | 3,902.98 | 32073 |
| 32074  | for generator set 500 - 550 kVA.....                                 | 33,555.10                | 1,136.22                           | 1,244.20 | 4,048.25 | 32074 |
| 32075  | for generator set 550 - 600 kVA.....                                 | 36,129.57                | 1,196.29                           | 1,292.88 | 4,255.09 | 32075 |

| Item  |  |                |                          |                                    | Item      |       |
|-------|--|----------------|--------------------------|------------------------------------|-----------|-------|
|       | <b>EMERGENCY GENERATOR SET (CONT'D)</b>  |                |                          |                                    |           |       |
|       | Acoustic treatment installation to the whole emergency generator set; all as necessary to achieve the specified noise levels :-  |                |                          |                                    |           |       |
|       | <i>Per item</i>  | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only  |       |
|       |  | A<br>\$        | B<br>\$                  | C<br>\$                            | D<br>\$   |       |
| 32076 | for generator set n.e. 100 kVA .....   | 52,972.53      | 2,913.55                 | 2,997.20                           | 10,053.29 | 32076 |
| 32077 | for generator set 100 - 150 kVA.....   | 58,040.47      | 3,134.10                 | 3,221.55                           | 10,930.92 | 32077 |
| 32078 | for generator set 150 - 200 kVA.....   | 61,449.99      | 3,309.01                 | 3,409.40                           | 11,541.62 | 32078 |
| 32079 | for generator set 200 - 250 kVA.....   | 65,724.54      | 3,518.92                 | 3,623.86                           | 12,361.46 | 32079 |
| 32080 | for generator set 250 - 300 kVA.....   | 70,731.03      | 3,746.31                 | 3,854.30                           | 13,257.35 | 32080 |
| 32081 | for generator set 300 - 350 kVA.....   | 74,663.37      | 3,969.91                 | 4,082.47                           | 14,113.69 | 32081 |
| 32082 | for generator set 350 - 400 kVA.....   | 78,851.98      | 4,193.50                 | 4,318.22                           | 14,955.59 | 32082 |
| 32083 | for generator set 400 - 450 kVA.....   | 82,355.04      | 4,415.56                 | 4,535.74                           | 15,785.32 | 32083 |
| 32084 | for generator set 450 - 500 kVA.....   | 88,101.48      | 4,635.36                 | 4,756.28                           | 16,650.01 | 32084 |
| 32085 | for generator set 500 - 550 kVA.....   | 91,744.47      | 4,874.91                 | 5,003.45                           | 17,507.89 | 32085 |
| 32086 | for generator set 550 - 600 kVA.....   | 97,609.59      | 5,119.80                 | 5,250.62                           | 18,331.53 | 32086 |
|       | Electrical installation c/w all cabling and wiring works including sensor cables, motor starters, conduits and trunking from switches to the equipment, earthing system and all necessary accessories :- |                |                          |                                    |           |       |
|       | <i>Per item</i>  |                |                          |                                    |           |       |
| 32087 | for generator set n.e. 100 kVA .....   | 33,456.18      | 1,395.55                 | 1,521.03                           | 4,480.21  | 32087 |
| 32088 | for generator set 100 - 150 kVA.....   | 35,662.54      | 1,410.01                 | 1,534.72                           | 4,769.22  | 32088 |
| 32089 | for generator set 150 - 200 kVA.....   | 37,275.18      | 1,457.16                 | 1,581.12                           | 4,952.50  | 32089 |
| 32090 | for generator set 200 - 250 kVA.....   | 38,887.82      | 1,504.31                 | 1,627.52                           | 5,135.78  | 32090 |
| 32091 | for generator set 250 - 300 kVA.....   | 40,089.72      | 1,518.75                 | 1,640.43                           | 5,296.25  | 32091 |
| 32092 | for generator set 300 - 350 kVA.....   | 41,966.66      | 1,549.18                 | 1,671.63                           | 5,519.83  | 32092 |
| 32093 | for generator set 350 - 400 kVA.....   | 43,336.96      | 1,581.88                 | 1,704.31                           | 5,667.38  | 32093 |
| 32094 | for generator set 400 - 450 kVA.....   | 45,551.62      | 1,610.01                 | 1,732.46                           | 5,771.57  | 32094 |
| 32095 | for generator set 450 - 500 kVA.....   | 47,082.62      | 1,641.96                 | 1,764.40                           | 5,929.01  | 32095 |
| 32096 | for generator set 500 - 550 kVA.....   | 47,879.78      | 1,670.85                 | 1,789.50                           | 6,044.60  | 32096 |
| 32097 | for generator set 550 - 600 kVA.....   | 49,256.03      | 1,699.77                 | 1,818.40                           | 6,150.31  | 32097 |



| Item  |  |                |                          |                                    | Item     |       |
|-------|--|----------------|--------------------------|------------------------------------|----------|-------|
|       | <b>EMERGENCY GENERATOR SET (CONT'D)</b>  |                |                          |                                    |          |       |
|       | Control cubicle c/w switchgear, wiring, contactors, starters, relays, meters, air circuit breaker, switches, battery charger, push buttons, cable terminal box, safety and protection devices, timers, control equipment, indicator lights, alarm, rubber mats and all necessary accessories : - | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only |       |
|       | <i>Per item</i>  | A<br>\$        | B<br>\$                  | C<br>\$                            | D<br>\$  |       |
| 32098 | for generator set n.e. 100 kVA .....   | 46,351.58      | 895.14                   | 978.78                             | 2,974.39 | 32098 |
| 32099 | for generator set 100 - 150 kVA.....   | 48,934.23      | 1,013.00                 | 1,052.56                           | 3,435.27 | 32099 |
| 32100 | for generator set 150 - 200 kVA.....   | 61,868.45      | 1,073.85                 | 1,163.59                           | 3,781.30 | 32100 |
| 32101 | for generator set 200 - 250 kVA.....   | 74,802.67      | 1,134.70                 | 1,274.62                           | 4,127.33 | 32101 |
| 32102 | for generator set 250 - 300 kVA.....   | 76,735.78      | 1,162.07                 | 1,300.48                           | 4,193.50 | 32102 |
| 32103 | for generator set 300 - 350 kVA.....   | 95,135.46      | 1,254.09                 | 1,365.89                           | 4,594.29 | 32103 |
| 32104 | for generator set 350 - 400 kVA.....   | 97,398.76      | 1,279.19                 | 1,388.71                           | 4,661.22 | 32104 |
| 32105 | for generator set 400 - 450 kVA.....<br>(The actual rate should be : \$109,618.20 for Item 32105A)   | 10,961.82      | 1,373.49                 | 1,486.05                           | 4,971.51 | 32105 |
| 32106 | for generator set 450 - 500 kVA.....<br>(The actual rate should be : \$111,890.10 for Item 32106A)   | 11,189.01      | 1,396.31                 | 1,507.34                           | 5,035.39 | 32106 |
| 32107 | for generator set 500 - 550 kVA.....<br>(The actual rate should be : \$122,224.30 for Item 32107A)   | 12,222.43      | 1,453.35                 | 1,559.06                           | 5,363.94 | 32107 |
| 32108 | for generator set 550 - 600 kVA.....<br>(The actual rate should be : \$124,433.80 for Item 32108A)   | 12,443.38      | 1,473.12                 | 1,578.07                           | 5,427.05 | 32108 |

**Section 33**

**BURGLAR ALARM AND SECURITY**

## SECTION 33

### BURGLAR ALARM AND SECURITY

#### SPECIAL CONDITIONS

|  |                |  |
|--|----------------|--|
| <b>Measurement of power supply</b>                     | <b>SC33.01</b> | <p>All works of electrical power supply up to power supply points (e.g. switchgear or isolator or spur unit and the like) for the equipment shall be measured separately and paid for at the appropriate rates under Section 27 - Lighting System and Fixtures, Section 28 - Small Power Distribution, Section 29 - Main Distribution Systems and Section 30 - Miscellaneous Electrical Installations or other applicable Work Sections of this Schedule.</p>  |
| <b>Measurement of security alarm control panel</b>     | <b>SC33.02</b> | <p>The interconnecting cables and the cable containment for the control panel connecting to external equipment or existing panel shall be measured separately.</p>   |
| <b>Measurement of coaxial cables and shield cables</b> | <b>SC33.03</b> | <p>Cables for the equipment, control panels, push buttons, door contacts, etc. have been allowed in the rates under this Section. No measurement shall be made for cables except for coaxial cables and shield cables where specifically ordered by the Maintenance Surveyor in writing.</p> <p>Coaxial cables and shield cables shall be measured the net length as fixed in linear metres.</p>   |
| <b>Measurement of temporary supply</b>                 | <b>SC33.04</b> | <p>Where a temporary supply is ordered by the Maintenance Surveyor, the provision of all articles, labour and accessory materials (nails, screws, rawplugs and similar) necessary for fixing shall be of temporary nature. For "use and waste" of all materials, such as cables, fittings and accessories, etc., for a period of not exceeding four weeks from the date of certified completion, 50 per cent of the value of the appropriate "supply and fix" items after the adjustment of contract percentages will be paid. For a period exceeding four weeks and not exceeding eight weeks, 55 per cent will be paid and for each subsequent month a further addition of 5 per cent will be made.</p> <p>For a period of more than six months, the full rates, as for permanent works will be paid, and the materials will become the property of the Employer.</p> <p>No extra payment will be made for the removal of materials in connection with the temporary supply, but the cost of which shall have been included in the payment as aforementioned in the first paragraph hereof. The date of certified completion of a temporary supply shall be the date when the installation is first brought into service. The date when it ceases to be used shall be the date from which the Maintenance Surveyor instructs the dismantlement of the installation, or the date when the installation is no longer in use, whichever is earlier.</p> |

**SPECIAL CONDITIONS**

**Rates generally**

**SC33.05**

The rates for all items shall generally include for : -

- (a) Colour band and colour identification work.
- (b) Lettering and engraving for identification, signs, labels in both English and Chinese.
- (c) Identification plates, signs, notice plates, discs and labels in both English and Chinese.
- (d) Priming or painting off site and proprietary finishes or surface treatment applied as part of the production process whether applied before or after fabrication and assembly.
- (e) All protective and finishing painting work, apart from additional painting work specifically ordered by the Maintenance Surveyor in writing which shall be measured separately and paid for at the appropriate rates under Section 15 - Painting of this Schedule.
- (f) Any kind of fixing method including drilling of the background and provision of all fixings, nails, bolts, nuts, washers, holes, screws, plugs, shotfired pins and the like.
- (g) Assembling and jointing together with the component parts of composite units and providing any necessary jointing materials.
- (h) All brackets and methods of supports.
- (i) Provision of expansion joints in service runs wherever they coincide with structural expansion joints.
- (j) Submission of catalogues, technical literature, data, calculations, test certificates and approval documentation covering the equipment and materials being supplied.
- (k) Preparing and submitting detail working drawings as required and all shop drawings for the fabrication and installation.
- (l) Attendance, as required, of the manufacturers' representative to assist in the installation and subsequent testing and commissioning.
- (m) Testing and commissioning including submission of Testing and Commissioning Certificates and Records of Tests.
- (n) Provision of all necessary power, labour and testing instrument of approved type for testing and commissioning.
- (o) Preparing and submitting operation and maintenance manuals and as-fitted drawings for items of works as required.
- (p) Provision of schematic diagrams covered front and back with plastic sheet including fixing to wall.
- (q) Provision of manufacturer's guarantee.

**SPECIAL CONDITIONS**

|  |                |   |
|--|----------------|---|
| <b>Rates for equipment</b>                         | <b>SC33.06</b> | <p>The rates for equipment shall further include for : -</p> <ul style="list-style-type: none"> <li>(a) Interfacing, connecting, interconnecting cables, jointing and making all bus bar, cable, conduit, trunking and cable tray connections and the like and provision of all associated components.</li> <li>(b) Provision of all components forming part of the equipment including batteries and chargers with all supply and interconnecting wiring and the like and provision of software including back-up copies (if required).</li> <li>(c) All necessary sensors, instruments, devices and the like including appropriate connections thereto.</li> <li>(d) Cables, conduits including flexible conduits and adaptors, trunkings, trays, ladders, outlet boxes, junction boxes, universal boxes including special boxes, all fixings, bending, cutting, screwing and jointing.</li> <li>(e) Earth/ equipotential bonding.</li> </ul> |
| <b>Rates for push buttons, door contacts, etc.</b> | <b>SC33.07</b> | <p>The rates for push buttons, door contacts, window contacts, detectors, tamper switches, alarm sirens, kick bars and keyswitches shall further include for cables, conduits, trunkings and all necessary accessories including provision of all associated fixing components for connection to the security alarm control panel.</p>  |
| <b>Rates for control panels</b>                    | <b>SC33.08</b> | <p>Control panel shall be measured on the basis of complete unit monitoring and controlling the number of zones as specified. The rates for control panels shall further include for all necessary relays, alarms, indicating lamps, buzzers, zone isolation switches, test key switches, internal wiring and all necessary accessories. The cables and cable containment between the equipment and the control/ indicating panel and/ or for connection to existing control/ indicating panel shall be measured separately and paid for at appropriate rates under this Section and Sections 27 to 30.</p>   |
| <b>Rates for coaxial cables and shield cables</b>  | <b>SC33.09</b> | <p>The rates for coaxial cables and shield cables shall further include for : -</p> <ul style="list-style-type: none"> <li>(a) Laying or fixing in different locations, such as drawing into underground pipe ducts, laying or drawing into trunkings, drawing into conduits, suspending from insulators or catenaries, wrapping around equipment.</li> <li>(b) In case of cables drawn into existing conduits, existing ducts or existing trunkings, removing and putting back existing covers, existing inspection lids and the like.</li> <li>(c) Making cable-joints.</li> <li>(d) All necessary fixings complete with accessories and fittings as required.</li> <li>(e) Provision of all sleeves for casting in or building in where cables pass through slabs, walls or beams and caulking between cable and sleeve where required.</li> </ul>   |

**SPECIAL CONDITIONS**

**Rates for "Take down and clear away" or "Take down and set aside for re-use"**

**SC33.10**

The rates for "Take down and clear away" or " Take down and set aside for re-use" existing items in connection with burglar alarm and security installation shall further include for : -

- (a) Taking down all associated building services works.
- (b) Plugging off remaining ends with plugs or caps as required.
- (c) Preparing remaining ends of building services works to receive connections with new work if required.
- (d) Making good all works disturbed.

**Particular Specification**

**SC33.11**

The Particular Specification for burglar alarm and security installation can be found in the Contract.

| Item  |  | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only | Item  |
|-------|--|----------------|--------------------------|------------------------------------|----------|-------|
|       | <b>CENTRAL CONTROL STATION EQUIPMENT</b>   | A              | B                        | C                                  | D        |       |
|       | Galvanized mild steel gas pipe c/w all necessary accessories : -   | \$             | \$                       | \$                                 | \$       |       |
|       | <i>Per set</i>   |                |                          |                                    |          |       |
| 33001 | Security system computer designed for multi-user, multi-tasking point monitoring and control c/w CPU and mother board, disk drives/streamer/DVD writer drive, interface connection parts, keyboard, I/O card, mouse, cables, standard application software, software programmes for burglar alarm and security installation with unlimited usage licences..... | 10,914.75      | 48.68                    | 61.60                              | 330.06   | 33001 |
| 33002 | Standby computer c/w CPU and mother board, disk drives/streamer/ DVD writer drive, interface connection ports, keyboard, I/O card, mouse, cables, standard application software.....   | 10,914.75      | 48.68                    | 61.60                              | 282.91   | 33002 |
| 33003 | Uninterrupted power supply for the operation of the security computer and terminal, and matrix switcher of the Closed Circuit Television System, for a minimum of 30 minutes c/w changeover switch, isolation switches, static bypass, manual bypass, microprocessor managed mimic and control panel, LCD display and keyboard .....                           | 4,365.90       | 22.06                    | 22.81                              | 92.79    | 33003 |
|       | <i>Each</i>  |                |                          |                                    |          |       |
| 33004 | Video display units, flat square type, active screen size 380 mm minimum diagonally measured, super high resolution colour monitor, 1024 x 768 pixels resolutions multiscanning with tilt/swivel base c/w add-on anti-glare high quality circular polarizer screen filter .....  | 1,348.12       | 8.37                     | 9.88                               | 22.81    | 33004 |
| 33005 | LCD video display unit, active screen size 350mm diagonally measured, colour display, minimum of 1024x768 pixels resolutions with tilt/swivel base.....  | 1,448.65       | 8.37                     | 9.88                               | 22.81    | 33005 |
| 33006 | Ditto active screen size 380mm .....   | 1,515.27       | 8.37                     | 9.88                               | 22.81    | 33006 |
| 33007 | Ditto active screen size 430mm .....   | 1,800.38       | 8.37                     | 9.88                               | 22.81    | 33007 |
| 33008 | Ditto active screen size 480mm.....  | 2,029.68       | 8.37                     | 9.88                               | 22.81    | 33008 |
| 33009 | Report printer, dry-type laser type, monochrome, random access memory, paper tray .....  | 1,441.70       | 8.37                     | 9.88                               | 50.95    | 33009 |
| 33010 | Event printer, ink jet type.....   | 711.48         | 8.37                     | 9.88                               | 50.95    | 33010 |
| 33011 | Intelligent local control units, microprocessor based controller, housed in tamper-proof housing c/w tampering switches, control programme, backup battery, database file and connector plugs and all necessary accessories.....   | 2,199.39       | 22.06                    | 26.62                              | 94.30    | 33011 |

| Item  |  |                |                          |                                    | Item     |       |
|-------|--|----------------|--------------------------|------------------------------------|----------|-------|
|       | <b>CENTRAL CONTROL STATION EQUIPMENT (CONT'D)</b>  |                |                          |                                    |          |       |
|       | Alarm/security control panel, stainless steel type c/w battery and chargers, ammeter, control components and all other necessary accessories : -   | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only |       |
|       | <i>Each</i>  | A<br>\$        | B<br>\$                  | C<br>\$                            | D<br>\$  |       |
| 33012 | Panel of 4 zones or less.....  | 2,979.54       | 66.16                    | 69.97                              | 264.67   | 33012 |
| 33013 | Panel of 5 - 8 zones.....  | 4,139.77       | 70.72                    | 74.53                              | 279.12   | 33013 |
| 33014 | Panel of 9 - 12 zones.....   | 5,249.71       | 75.29                    | 79.10                              | 292.80   | 33014 |
| 33015 | Panel of 13 - 18 zones.....  | 6,277.90       | 79.87                    | 82.90                              | 306.49   | 33015 |
| 33016 | Panel of 19 - 24 zones.....  | 7,228.07       | 84.41                    | 87.46                              | 315.61   | 33016 |
|       | Standby battery set : -  |                |                          |                                    |          |       |
| 33017 | Standby battery set.....   | 1,280.33       | 22.06                    | 22.81                              | 44.87    | 33017 |
|       | Sundries : -   |                |                          |                                    |          |       |
| 33018 | Interconnection point for with F.S. panel .....  | 166.85         | 24.33                    | 25.85                              | 93.54    | 33018 |
| 33019 | Interconnection point for matrix switching system of the CCTV system .....   | 163.11         | 24.33                    | 25.85                              | 93.54    | 33019 |
| 33020 | Security equipment console and racks, hairline stainless steel, c/w a 1500 x 700 mm deep (min) horizontal flat surface section finished with plastic laminate and 1500 mm high vertical rack sections attached together to form a continuous rack system including full height locking doors, front below counter solid doors with recessed handle and lock, a armrest swivel leather chair and all necessary accessories..... | 16,537.53      | 122.45                   | 130.81                             | 314.87   | 33020 |
|       | <i>Per lot</i>   |                |                          |                                    |          |       |
| 33021 | Provide system grounding for the burglar alarm and security system.....  | 1,112.56       | -                        | -                                  | -        | 33021 |
| 33022 | Provide direct link to the security control centre including the first year rental charge .....  | 4,132.96       | -                        | -                                  | -        | 33022 |



| Item  |  | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only | Item  |
|-------|--|----------------|--------------------------|------------------------------------|----------|-------|
|       |  | A              | B                        | C                                  | D        |       |
|       |  | \$             | \$                       | \$                                 | \$       |       |
|       | <b>ACCESS CONTROL SYSTEM</b>   |                |                          |                                    |          |       |
|       | Proximity card system components : -   |                |                          |                                    |          |       |
|       | <i>Each</i>  |                |                          |                                    |          |       |
| 33023 | Proximity card reader c/w 12V power supply, tamper-proof housing with tampering switches.....  | 1,091.47       | 25.85                    | 28.14                              | 40.31    | 33023 |
| 33024 | Interfacing module.....  | 2,146.57       | 25.85                    | 28.14                              | 40.31    | 33024 |
| 33025 | Central card access controller.....  | 8,731.80       | 25.85                    | 28.14                              | 47.15    | 33025 |
| 33026 | Emergency break glass; for card access reader.....   | 181.91         | 42.59                    | 47.92                              | 86.70    | 33026 |
| 33027 | Proximity card.....  | 7.28           | -                        | -                                  | -        | 33027 |
|       | Video door phone system component including conduits, trunkings, cables, and all other accessories, and connection to the control panel : -  |                |                          |                                    |          |       |
| 33028 | Intercom video handset c/w door release button.....  | 2,247.83       | 67.68                    | 73.01                              | 150.57   | 33028 |
| 33029 | Wall mounted s.s. intercom panel c/w camera & all necessary accessories .....  | 3,171.41       | 70.72                    | 75.29                              | 200.78   | 33029 |
|       | Intercom door lock system component including conduits, trunkings, cables and all other accessories, and connection to the control panel : - |                |                          |                                    |          |       |
| 33030 | Intercom handset c/w door release button.....  | 1,455.30       | 67.68                    | 73.01                              | 150.57   | 33030 |
| 33031 | Wall mounted s.s. intercom panel c/w camera & all necessary accessories.....   | 1,843.17       | 70.72                    | 75.29                              | 200.78   | 33031 |

| Item  |   |                |                          |                                    | Item     |       |
|-------|---|----------------|--------------------------|------------------------------------|----------|-------|
|       | <b>FIELD ALARM DEVICES SYSTEM</b>   |                |                          |                                    |          |       |
|       | Equipment/components c/w all necessary accessories :-   | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only |       |
|       | <i>Per set</i>  | A<br>\$        | B<br>\$                  | C<br>\$                            | D<br>\$  |       |
| 33032 | Personal attack push button c/w necessary accessories.....  | 363.82         | 42.59                    | 44.11                              | 82.90    | 33032 |
| 33033 | Magnetic door contact for door, concealed/surface type c/w necessary accessories .....                                    | 181.91         | 44.87                    | 45.63                              | 86.70    | 33033 |
| 33034 | Magnetic door contact, heavy duty type, concealed/surface, for roller shutter/strong room c/w necessary accessories ..... | 363.82         | 44.87                    | 45.63                              | 86.70    | 33034 |
| 33035 | Motion detector, combined infrared and ultrasonic detection type c/w necessary accessories .....                          | 582.12         | 44.87                    | 45.63                              | 86.70    | 33035 |
| 33036 | Magnetic window contact c/w necessary accessories.....  | 363.82         | 44.87                    | 45.63                              | 86.70    | 33036 |
| 33037 | Glass break detectors, housed in tamper-proof housing with tampering switches c/w necessary accessories .....             | 582.12         | 44.87                    | 45.63                              | 86.70    | 33037 |
| 33038 | Kick bar underneath counter, 450 mm length c/w necessary accessories .....  | 727.65         | 44.87                    | 45.63                              | 93.54    | 33038 |
| 33039 | Duress push button, self-locking type c/w necessary accessories .....   | 363.82         | 42.59                    | 43.35                              | 82.14    | 33039 |
| 33040 | Tamper switch, plunger type c/w necessary accessories.....  | 363.82         | 42.59                    | 43.35                              | 82.14    | 33040 |
| 33041 | Alarm shunt key switch unit c/w necessary accessories.....  | 363.82         | 42.59                    | 43.35                              | 82.14    | 33041 |
| 33042 | Alarm push button, stainless steel vandal resistant type c/w necessary accessories.....                                   | 363.82         | 42.59                    | 43.35                              | 82.14    | 33042 |
| 33043 | Over-ride key switch c/w necessary accessories.....   | 181.91         | 42.59                    | 43.35                              | 82.14    | 33043 |
| 33044 | Alarm siren c/w necessary accessories.....  | 363.82         | 44.87                    | 45.63                              | 93.54    | 33044 |
| 33045 | Alarm siren, weatherproof type c/w necessary accessories.....   | 582.12         | 44.87                    | 45.63                              | 93.54    | 33045 |

| Item  |  |                |                          |                                    | Item     |       |
|-------|--|----------------|--------------------------|------------------------------------|----------|-------|
|       | <b>EXIT CONTROL LOCK SYSTEM</b>  | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only |       |
|       |  | A              | B                        | C                                  | D        |       |
|       |  | \$             | \$                       | \$                                 | \$       |       |
|       | Equipment/components c/w all necessary accessories : -   |                |                          |                                    |          |       |
|       | <i>Per set</i>   |                |                          |                                    |          |       |
| 33046 | Exit device, fail-secure or fail-open electric lock strikes, c/w internal thumb-turn, pushbar and cylinder for single door .....   | 1,019.69       | 14.45                    | 16.74                              | 44.87    | 33046 |
| 33047 | Exit device, fail-secure or fail-open electric lock strikes, c/w internal thumb-turn, pushbar and cylinder for double door .....   | 1,540.89       | 14.45                    | 16.74                              | 50.20    | 33047 |
| 33048 | Weather proof electronic digital keypad c/w stainless steel panel and box, numeric keypad, suitable for outdoor environment .....  | 595.24         | 14.45                    | 16.74                              | 46.40    | 33048 |
|       | Power supply unit : -  |                |                          |                                    |          |       |
| 33049 | Power supply unit for electronic digital security c/w 6 Ah maintenance free standby-battery, 12V charger and metal box .....   | 582.12         | 22.06                    | 22.81                              | 44.87    | 33049 |
|       | Door lock system : -   |                |                          |                                    |          |       |
| 33050 | Scramble door lock system including cable containments, cables, electronic digital push-button c/w stainless steel panel & box, numeric keypad, combination lock, suitable for outdoor environment and all other accessories and connection to the alarm panel .....                                   | 2,995.69       | 73.77                    | 76.05                              | 174.92   | 33050 |
| 33051 | Push button door lock system including cable containments, trunkings, cables, electronic digital push-button c/w stainless steel panel & box, numeric keypad, combination lock, suitable for outdoor environment and all other accessories and connection to the alarm panel .....                     | 2,298.10       | 73.77                    | 76.05                              | 174.92   | 33051 |
| 33052 | Push button door lock system c/w remote door release button including cable containments, cables, electronic digital push-button c/w stainless steel panel & box, numeric keypad, combination lock, suitable for outdoor environment and all other accessories and connection to the alarm panel ..... | 2,481.54       | 87.46                    | 92.02                              | 238.04   | 33052 |
| 33053 | Screening area door lock system for two access doors with interlock door locks and two remote release buttons, door indicator unit and associated cable containments to ensure the two doors not to be opened at one time .....  | 3,331.59       | 84.41                    | 88.22                              | 200.78   | 33053 |
|       | Control panel : -  |                |                          |                                    |          |       |
| 33054 | Door release control panel connection to digital keypad locking devices and to a designated power supply point .....   | 1,448.29       | 70.72                    | 75.29                              | 200.78   | 33054 |
| 33055 | Fire alarm interface control panel connection to the dry contact of fire alarm panel & door release control panel and to a designated power supply point .....   | 1,421.10       | 70.72                    | 75.29                              | 200.78   | 33055 |

| Item   |   |           |       |       | Item   |       |
|--|---|-----------|-------|-------|--------|-------|
| <b>CLOSED CIRCUIT TELEVISION SURVEILLANCE SYSTEM</b>   |   |           |       |       |        |       |
| Equipment/components c/w all necessary accessories : -   |   |           |       |       |        |       |
| <i>Per set</i>   |   |           |       |       |        |       |
| Supply and fix      Take down and clear away      Take down and set aside for re-use      Fix only |   |           |       |       |        |       |
| A      B      C      D   |   |           |       |       |        |       |
| \$      \$      \$      \$   |   |           |       |       |        |       |
| 33056  | Colour CCD video camera c/w lens, housing & bracket.....  | 1,559.58  | 39.55 | 45.63 | 146.02 | 33056 |
| 33057  | Digital Colour CCD video camera c/w auto-iris lens, housing & bracket.....  | 2,105.58  | 39.55 | 45.63 | 146.02 | 33057 |
| 33058  | Dome colour camera c/w lens.....  | 986.59    | 39.55 | 45.63 | 136.13 | 33058 |
| 33059  | Matrix switcher c/w control keypad, 16-way.....   | 31,685.30 | 22.06 | 23.57 | 69.97  | 33059 |
| 33060  | Colour CRT CCTV monitor, 390mm.....   | -         | 19.01 | 20.53 | 46.40  | 33060 |
| 33061  | Colour CRT CCTV monitor, 550mm.....   | -         | 19.01 | 20.53 | 46.40  | 33061 |
| 33062  | Black and white CRT CCTV monitor, 390 mm.....   | -         | 19.01 | 20.53 | 46.40  | 33062 |
| 33063  | Colour TFT LCD CCTV monitor, 430 mm with BNC in/out.....  | 2,824.38  | 19.01 | 20.53 | 46.40  | 33063 |
| 33064  | Colour TFT LCD CCTV monitor, 480 mm with BNC in/out.....  | 3,371.84  | 19.01 | 20.53 | 46.40  | 33064 |
| 33065  | Colour TFT LCD CCTV monitor, 550 mm with BNC in/out.....  | 4,872.72  | 19.01 | 20.53 | 46.40  | 33065 |
| 33066  | 1/3" CCD colour dynaview dome camera.....   | 1,913.55  | 39.55 | 45.63 | 146.02 | 33066 |
| 33067  | High resolution network camera.....   | 1,149.54  | 39.55 | 45.63 | 146.02 | 33067 |
| 33068  | DVI extender.....   | 4,471.82  | 22.06 | 23.57 | 69.97  | 33068 |
| 33069  | IP based KVM with LDC display panel.....  | 5,566.18  | 19.01 | 20.53 | 46.40  | 33069 |
| 33070  | Video server (32 Channels).....   | 26,211.39 | 19.01 | 20.53 | 46.40  | 33070 |
| 33071  | Video multiplexer, 16-way, duplex type.....   | 5,797.09  | 28.14 | 29.66 | 82.90  | 33071 |
| 33072  | Quad unit, 4-way.....   | 2,360.33  | 28.14 | 29.66 | 64.64  | 33072 |
| 33073  | Video cassette recorder, 24 hours time lapse type.....  | -         | 19.01 | 21.29 | 46.40  | 33073 |
| 33074  | Digital video recorder, DVD recording operation, with built-in hard disk of minimum 1TB storage capacity, can record 9/16 channels video to up to 25fps per channel ..... | 2,125.60  | 19.01 | 21.29 | 46.40  | 33074 |
| 33075  | Extra for each additional 500 GB hard disk storage.....   | 517.28    | -     | -     | -      | 33075 |
| 33076  | CD-recordable (CD-R) computer disc of minimum 680 MB storage capacity, supports recording speed at least 24x.....   | 0.86      | -     | -     | -      | 33076 |
| 33077  | CD-rewritable (CD-RW) computer disc of minimum 680 MB storage capacity, supports rewriting speed at least 12x .....   | 3.04      | -     | -     | -      | 33077 |
| 33078  | DVD recordable computer disc of minimum 4.7 GB storage capacity, support recording speed at least 8x.....   | 1.68      | -     | -     | -      | 33078 |

| Item  |   |                      |                                      |  | Item        |       |
|---|---|----------------------|--------------------------------------|--|-------------|-------|
| <b>CLOSED CIRCUIT TELEVISION SURVEILLANCE SYSTEM (CONT'D)</b>   |   |                      |                                      |  |             |       |
| Equipment/components c/w all necessary accessories : - (Cont'd) |   |                      |                                      |  |             |       |
| <i>Per set</i>  |   |                      |                                      |  |             |       |
|   |   | Supply<br>and<br>fix | Take<br>down<br>and<br>clear<br>away | Take<br>down<br>and set<br>aside for<br>re-use | Fix<br>only |       |
|   |   | A<br>\$              | B<br>\$                              | C<br>\$  | D<br>\$     |       |
| 33079   | DVD rewritable computer disc of minimum 4.7 GB storage capacity, support writing speed at least 4x.....   | 6.43                 | -                                    | -  | -           | 33079 |
| 33080   | Super VHS video tapes - 180 mins.....   | 16.83                | -                                    | -  | -           | 33080 |
| 33081   | Video distribution amplifier.....   | 390.21               | 19.01                                | 21.29  | 46.40       | 33081 |
| 33082   | Pan/tilt driver, 360° pan, ±75° tilt (minimum).....   | 5,249.99             | 67.68                                | 73.01  | 150.57      | 33082 |
| 33083   | Pan/tilt controller.....  | 1,946.02             | 19.01                                | 21.29  | 46.40       | 33083 |
| 33084   | Video splitter.....   | 72.98                | 3.80                                 | 5.32   | 13.70       | 33084 |
| <b>DIGITAL VIDEO MOTION DETECTION SYSTEM</b>                    |   |                      |                                      |  |             |       |
| Equipment/components c/w all necessary accessories : -          |   |                      |                                      |  |             |       |
| <i>Per set</i>  |   |                      |                                      |  |             |       |
| 33085   | Video motion detector, able to handle 16 cameras simultaneously and independently c/w remote keyboard for set up, control and all other accessories, connection to the central control station located at the same floor .....                | 24,303.36            | 123.96                               | 130.04   | 349.83      | 33085 |
| <b>WATCHMAN TOUR SYSTEM</b>                                     |   |                      |                                      |  |             |       |
| Equipment/components c/w all necessary accessories : -          |   |                      |                                      |  |             |       |
| <i>Per set</i>  |   |                      |                                      |  |             |       |
| 33086   | Data collector, handheld intelligent type, vandal proof and weatherproof construction, LCD readout, record minimum 2000 checkpoint readings, 99 user programmable incident codes, automatic downloading capability, pass word controller..... | 10,114.53            | -                                    | -  | -           | 33086 |
| 33087   | Check point, magnetic type, tamper-proof, vandal resistant.....   | 225.92               | 22.06                                | 22.81  | 46.40       | 33087 |
| 33088   | Data transfer unit; able to transmit and receives data from data collector c/w battery charge, and necessary accessories .....  | 6,267.67             | 7.61                                 | 9.12   | 27.37       | 33088 |

| Item  |  | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only | Item  |
|-------|--|----------------|--------------------------|------------------------------------|----------|-------|
|       | <b>RADIO FREQUENCY DISTRIBUTION SYSTEM</b>   |                |                          |                                    |          |       |
|       | Equipment/components c/w all necessary accessories :-  |                |                          |                                    |          |       |
|       | <i>Per set</i>   | A<br>\$        | B<br>\$                  | C<br>\$                            | D<br>\$  |       |
| 33089 | Radio frequency distribution system for long distance signal transmission between camera multi-channel video signals and monitors .....  | 2,240.80       | 43.35                    | 52.47                              | 184.80   | 33089 |
| 33090 | Fibre optics transmission system c/w transmitter and receiver for convey single and multi video signals through optical fibre over long distance. Fibre optics cable shall be measured separately..... | 2,660.66       | 43.35                    | 52.47                              | 152.86   | 33090 |
|       | <b>CALL BELL SYSTEM</b>  |                |                          |                                    |          |       |
|       | Call bell control/indication panel, stainless steel type c/w all necessary accessories and connection to a designated power supply point :-  |                |                          |                                    |          |       |
|       | <i>Each</i>  |                |                          |                                    |          |       |
| 33091 | Panel of 4 zones or less.....  | 2,383.97       | 56.27                    | 66.16                              | 231.96   | 33091 |
| 33092 | Panel of 5 - 8 zones.....  | 3,386.49       | 60.83                    | 70.72                              | 244.89   | 33092 |
| 33093 | Panel of 9 - 12 zones.....   | 4,325.30       | 65.39                    | 74.53                              | 255.53   | 33093 |
|       | <b>Call push button</b>  |                |                          |                                    |          |       |
| 33094 | Call push button c/w necessary accessories and connection to the call bell control/indication panel .....  | 309.78         | 60.83                    | 63.13                              | 146.02   | 33094 |

| Item  |  |                |                          |                                    | Item     |       |
|-------|--|----------------|--------------------------|------------------------------------|----------|-------|
|       | <p><b>COAXIAL CABLES AND SHIELDED CABLES</b><br/>                     (Note : The following five items will only be paid for if ordered by the Maintenance Surveyor in writing)</p> <p>Coaxial cables : -</p> <p><i>Per linear metre</i></p> |                |                          |                                    |          |       |
|       |  | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only |       |
|       |  | A<br>\$        | B<br>\$                  | C<br>\$                            | D<br>\$  |       |
| 33095 | Coaxial cables, RG-6 / RG-11 / RG-58 / RG-59.....  | 9.76           | 1.51                     | 2.29                               | 5.33     | 33095 |
|       | Twisted pair shielded cables : -   |                |                          |                                    |          |       |
| 33096 | 1-pair.....  | 8.79           | 1.76                     | 2.13                               | 5.33     | 33096 |
| 33097 | 2-pair.....  | 10.61          | 1.76                     | 2.13                               | 5.33     | 33097 |
| 33098 | 4-pair.....  | 12.96          | 1.94                     | 2.38                               | 6.09     | 33098 |
| 33099 | 8-pair.....  | 20.42          | 2.59                     | 3.10                               | 6.85     | 33099 |

**Section 34**

**PUBLIC ADDRESS SYSTEM**



## SECTION 34

### PUBLIC ADDRESS SYSTEM

#### SPECIAL CONDITIONS

|   |                |  |
|---|----------------|--|
| <b>Measurement of power supply</b>  | <b>SC34.01</b> | All works of electrical power supply up to power supply points (e.g. switchgear or isolator or spur unit and the like) for the equipment shall be measured separately and paid for at the appropriate rates under Section 27 - Lighting System and Fixtures, Section 28 - Small Power Distribution, Section 29 - Main Distribution Systems and Section 30 - Miscellaneous Electrical Installations or other applicable Work Sections of this Schedule.   |
| <b>Measurement of excavations, ducts, chases, holes and other subsidiary work</b> | <b>SC34.02</b> | All trench excavation shall be measured separately and paid for at the appropriate rates under Section 03 - Excavation of this Schedule. All pipe ducts, concrete thrust blocks and anchor blocks, chases in, and holes through existing walls, ceilings and similar for pipes, etc., (but not mortices or holes for brackets) except specifically stated, shall be measured and paid for at the appropriate rates under Section 04 - Concrete Work and Section 05 - Brickwork and Blockwork or other applicable Work Sections of this Schedule.   |
| <b>Measurement of microphone cables and loudspeaker cables</b>                    | <b>SC34.03</b> | <p>Cables for the equipment have been allowed in the rates under this Section. No measurement shall be made for cables except for microphone cables and loudspeaker cables where specifically ordered by the Maintenance Surveyor in writing.</p> <p>Microphone cables and loudspeaker cables shall be measured the net length as fixed in linear metres.</p>  |
| <b>Measurement of temporary supply</b>  | <b>SC34.04</b> | <p>Where a temporary supply is ordered by the Maintenance Surveyor, the provision of all articles, labour and accessory materials (nails, screws, rawplugs and similar) necessary for fixing shall be of temporary nature. For "use and waste" of all materials, such as cables, fittings and accessories, etc., for a period of not exceeding four weeks from the date of certified completion, 50 per cent of the value of the appropriate "supply and fix" items after the adjustment of contract percentages will be paid. For a period exceeding four weeks and not exceeding eight weeks, 55 per cent will be paid and for each subsequent month a further addition of 5 per cent will be made.</p> <p>For a period of more than six months, the full rates, as for permanent works will be paid, and the materials will become the property of the Employer.</p> <p>No extra payment will be made for the removal of materials in connection with the temporary supply, but the cost of which shall have been included in the payment as aforementioned in the first paragraph hereof. The date of certified completion of a temporary supply shall be the date when the installation is first brought into service. The date when it ceases to be used shall be the date from which the Maintenance Surveyor instructs the dismantlement of the installation, or the date when the installation is no longer in use, whichever is earlier.</p> |

**SPECIAL CONDITIONS**

**Rates generally**

**SC34.05**

The rates for all items shall generally include for : -

- (a) Colour band and colour identification work.
- (b) Lettering and engraving for identification, signs, labels in both English and Chinese.
- (c) Identification plates, signs, notice plates, discs and labels in both English and Chinese.
- (d) Priming or painting off site and proprietary finishes or surface treatment applied as part of the production process whether applied before or after fabrication and assembly.
- (e) All protective and finishing painting work, apart from additional painting work specifically ordered by the Maintenance Surveyor in writing which shall be measured separately and paid for at the appropriate rates under Section 15 - Painting of this Schedule.
- (f) Any kind of fixing method including drilling of the background and provision of all fixings, nails, bolts, nuts, washers, holes, screws, plugs, shotfired pins and the like.
- (g) Assembling and jointing together with the component parts of composite units and providing any necessary jointing materials.
- (h) All brackets and methods of supports.
- (i) Provision of expansion joints in service runs wherever they coincide with structural expansion joints.
- (j) Submission of catalogues, technical literature, data, calculations, test certificates and approval documentation covering the equipment and materials being supplied.
- (k) Preparing and submitting detail working drawings as required and all shop drawings for the fabrication and installation.
- (l) Attendance, as required, of the manufacturers' representative to assist in the installation and subsequent testing and commissioning.
- (m) Testing and commissioning including submission of Testing and Commissioning Certificates and Records of Tests.
- (n) Provision of all necessary power, labour and testing instrument of approved type for testing and commissioning.
- (o) Preparing and submitting operation and maintenance manuals and as-fitted drawings for items of works as required.
- (p) Provision of schematic diagrams covered front and back with plastic sheet including fixing to wall.
- (q) Provision of manufacturer's guarantee.

### SPECIAL CONDITIONS

|   |                |  |
|---|----------------|--|
| <b>Rates for equipment</b>  | <b>SC34.06</b> | <p>The rates for equipment shall further include for : -</p> <ul style="list-style-type: none"> <li>(a) Connecting, interconnecting cables, jointing and making all cable, conduit, trunking and cable tray connections and the like and provision of all associated components.</li> <li>(b) Provision of all components forming part of the equipment complete with all supply and interconnecting wiring and the like.</li> <li>(c) All necessary instruments, devices and the like including appropriate connections thereto.</li> <li>(d) Cables, conduits including flexible conduits and adaptors, trunkings, trays, ladders, outlet boxes, junction boxes, universal boxes including special boxes, all fixings, bending, cutting, screwing and jointing.</li> <li>(e) Earth/ equipotential bonding.</li> </ul>  |
| <b>Rates for microphone cables and loudspeaker cables</b>                           | <b>SC34.07</b> | <p>The rates for microphone cables and loudspeaker cables shall further include for : -</p> <ul style="list-style-type: none"> <li>(a) Laying or fixing in different locations, such as drawing into underground pipe ducts, laying or drawing into trunkings, drawing into conduits, suspending from insulators or catenaries, wrapping around equipment.</li> <li>(b) In case of cables drawn into existing conduits, existing ducts or existing trunkings, removing and putting back existing covers, existing inspection lids and the like.</li> <li>(c) Making cable-joints.</li> <li>(d) All necessary fixings completed with accessories and fittings as required.</li> <li>(e) Provision of all sleeves for casting in or building in where cables pass through slabs, walls or beams and caulking between cable and sleeve where required.</li> </ul> |
| <b>Rates for "Take down and clear away" or "Take down and set aside for re-use"</b> | <b>SC34.08</b> | <p>The rates for "Take down and clear away" or "Take down and set aside for re-use" existing items in connection with public address installation shall further include for : -</p> <ul style="list-style-type: none"> <li>(a) Taking down all associated building services works.</li> <li>(b) Plugging off remaining ends with plugs or caps as required.</li> <li>(c) Preparing remaining ends of building services works to receive connections with new work if required.</li> <li>(d) Making good all works disturbed.</li> </ul>  |
| <b>Particular Specification</b>   | <b>SC34.09</b> | <p>The Particular Specification for public address system can be found in the Contract.</p>  |

| Item   |   | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only | Item  |
|--|---|----------------|--------------------------|------------------------------------|----------|-------|
| <b>PUBLIC ADDRESS SYSTEM</b>                         |   | A              | B                        | C                                  | D        |       |
| Equipment/component c/w all necessary accessories :- |   | \$             | \$                       | \$                                 | \$       |       |
| <i>Each</i>  |   |                |                          |                                    |          |       |
| 34001  | Ceiling panel speaker, surface-mount type, 3W c/w matching transformer.....   | 526.33         | 21.97                    | 24.21                              | 88.22    | 34001 |
| 34002  | Ceiling panel speaker, surface-mount type, 6W c/w matching transformer.....   | 550.59         | 21.97                    | 24.21                              | 88.22    | 34002 |
| 34003  | Ceiling panel speaker, ceiling-recessed, 3W c/w matching transformer .....  | 730.07         | 21.97                    | 24.21                              | 92.02    | 34003 |
| 34004  | Ceiling panel speaker, ceiling-recessed, 6W c/w matching transformer.....   | 814.97         | 21.97                    | 24.21                              | 92.02    | 34004 |
| 34005  | Box speaker, 3W.....  | 727.65         | 21.97                    | 24.21                              | 88.22    | 34005 |
| 34006  | Box speaker, 6W.....  | 782.23         | 21.97                    | 24.21                              | 88.22    | 34006 |
| 34007  | Horn speaker, 3W.....   | 744.62         | 21.97                    | 24.21                              | 88.22    | 34007 |
| 34008  | Horn speaker, 6W.....   | 817.39         | 21.97                    | 24.21                              | 88.22    | 34008 |
| 34009  | Speaker column; 95 dB/W (min.); four dynamic cone speaker units (min.); wooden enclosure c/w front grille cloth, insulation, matching transformer.....  | 3,293.84       | 24.25                    | 26.06                              | 92.78    | 34009 |
| 34010  | Desk top microphone c/w chime unit.....   | 1,661.46       | 3.46                     | 4.35                               | 12.93    | 34010 |
| 34011  | Unidirectional microphone c/w built-in blast and pop protection, microphone holder, mike cable and connector.....   | 2,420.66       | 3.46                     | 4.35                               | 12.93    | 34011 |
| 34012  | Paging microphone c/w desk stand, microphone holder, mike cable and connector .....   | 3,104.65       | 3.46                     | 4.35                               | 13.70    | 34012 |
| 34013  | Miniature omnidirectional lavalier microphone c/w long-life-cable and lavalier holder.....  | 3,250.18       | 1.28                     | 1.69                               | 3.81     | 34013 |
| 34014  | Microphone floor stand and boom arm c/w 900 to 1600 mm nominal length floor stand, 700 mm minimum length boom arm of 360° adjustment direction, locking device and microphone and boom adaptor..... | 1,406.78       | 3.46                     | 4.35                               | 13.70    | 34014 |
| 34015  | Microphone desk stand and flexible gooseneck shaft c/w 100 to 200 mm adjustable support and connector.....  | 1,712.40       | 3.46                     | 4.35                               | 12.93    | 34015 |
| 34016  | Volume control unit with wall mounting box, 30W c/w all necessary accessories .....   | 667.02         | 57.02                    | 67.98                              | 201.54   | 34016 |
| 34017  | UHF Hand-held (vocal) Wireless Microphone.....  | 1,539.72       | 1.28                     | 1.69                               | 3.81     | 34017 |
| 34018  | UHF Tuner.....  | 1,680.89       | 57.02                    | 67.98                              | 201.54   | 34018 |
| 34019  | UHF Wireless Tuner.....   | 3,375.02       | 57.02                    | 67.98                              | 201.54   | 34019 |
| 34020  | UHF Wireless Antenna.....   | 878.70         | 57.02                    | 67.98                              | 201.54   | 34020 |

| Item   | Supply and fix   | Take down and clear away | Take down and set aside for re-use | Fix only | Item   |       |
|--|--|--------------------------|------------------------------------|----------|--------|-------|
|  | A<br>\$  | B<br>\$                  | C<br>\$                            | D<br>\$  |        |       |
| <b>PUBLIC ADDRESS SYSTEM (CONT'D)</b>                          |  |                          |                                    |          |        |       |
| Equipment/component c/w all necessary accessories : - (Cont'd) |  |                          |                                    |          |        |       |
| <i>Each</i>  |  |                          |                                    |          |        |       |
| 34021  | Mixer power amplifier, 60W r.m.s., 3 inputs.....   | 3,031.88                 | 17.63                              | 19.37    | 51.73  | 34021 |
| 34022  | Mixer power amplifier, 120W r.m.s., 3 inputs.....  | 4,217.95                 | 17.63                              | 19.37    | 51.73  | 34022 |
| 34023  | Mixer pre-amplifier panel with 6-channel pre-amplifier unit (4 microphone inputs) .....  | 6,170.47                 | 17.63                              | 19.37    | 51.73  | 34023 |
| 34024  | Cassette deck c/w tape recorder and player, microphone and headphone jacks, input/output level control and meters, 3-digital resetable tape counter, automatic shut-off and noise reduction system ..... | 1,600.83                 | 17.63                              | 19.37    | 51.73  | 34024 |
| 34025  | Background music CD/ DVD player.....   | 1,557.17                 | 17.63                              | 19.37    | 51.73  | 34025 |
| 34026  | Remote microphone unit in sheet metal cabinet comprising of 1 no. flexible gooseneck microphone and zone selection buttons (6 zone) .....  | 7,603.94                 | 8.74                               | 9.68     | 18.25  | 34026 |
| 34027  | Monitor panel; stainless steel enclosure c/w monitor speaker with volume control, system power on/off switch, sound level meter, channel selector switch and line voltage selector switch.....           | 6,730.76                 | 52.43                              | 69.43    | 265.42 | 34027 |
| Sundries : -   |  |                          |                                    |          |        |       |
| 34028  | Jack point c/w jack plug and socket, conduit and wiring and all necessary accessories.....   | 254.68                   | 57.02                              | 67.98    | 205.34 | 34028 |
| 34029  | Speaker point c/w 2A - 3pin plug and socket, conduit and wiring and all necessary accessories .....  | 236.49                   | 57.02                              | 67.98    | 205.34 | 34029 |
| Equipment cabinet : -  |  |                          |                                    |          |        |       |
| <i>Per linear metre</i>  |  |                          |                                    |          |        |       |
| 34030  | Equipment cabinet; well ventilated 483 mm standard high; teakwood construction c/w locking doors and 3-pin power sockets and all necessary accessories .....   | 3,201.66                 | 15.00                              | 15.84    | 22.06  | 34030 |
| 34031  | Equipment cabinet; well ventilated 483mm standard high; stainless steel construction c/w locking doors and 3-pin power sockets and all necessary accessories .....                                       | 4,002.07                 | 15.00                              | 15.84    | 22.06  | 34031 |

| Item  |  |                      |                                      |  | Item        |       |
|-------|--|----------------------|--------------------------------------|--|-------------|-------|
|       | <b>PUBLIC ADDRESS SYSTEM (CONT'D)</b>  |                      |                                      |  |             |       |
|       | Microphone cables and loudspeaker cables : -<br>(Note : The following six items will only be paid for if ordered by the Maintenance Surveyor in writing) |                      |                                      |  |             |       |
|       | <i>Per linear metre</i>  |                      |                                      |  |             |       |
|       |  | Supply<br>and<br>fix | Take<br>down<br>and<br>clear<br>away | Take<br>down<br>and set<br>aside for<br>re-use | Fix<br>only |       |
|       |  | A<br>\$              | B<br>\$                              | C<br>\$  | D<br>\$     |       |
| 34032 | Microphone cable.....  | 11.93                | 1.77                                 | 2.63   | 5.32        | 34032 |
| 34033 | Loudspeaker cable.....   | 15.36                | 1.77                                 | 2.63   | 5.32        | 34033 |
| 34034 | Underground microphone cable.....  | 30.60                | 1.69                                 | 2.45   | 4.57        | 34034 |
| 34035 | Underground loudspeaker cable.....   | 46.66                | 1.69                                 | 2.45   | 4.57        | 34035 |
| 34036 | Waterproof type microphone cable.....  | 26.96                | 1.77                                 | 2.63   | 5.32        | 34036 |
| 34037 | Waterproof type loudspeaker cable.....   | 44.84                | 1.77                                 | 2.63   | 5.32        | 34037 |

## **Section 35**

### **BROADCAST RECEPTION**

## SECTION 35

### BROADCAST RECEPTION

#### SPECIAL CONDITIONS

|  |                |  |
|--|----------------|--|
| <b>Measurement of power supply</b>     | <b>SC35.01</b> | <p>All works of electrical power supply up to power supply points (e.g. switchgear or isolator or spur unit and the like) for the equipment shall be measured separately and paid for at the appropriate rates under Section 27 - Lighting System and Fixtures, Section 28 - Small Power Distribution, Section 29 - Main Distribution Systems and Section 30 - Miscellaneous Electrical Installations or other applicable Work Sections of this Schedule.</p>  |
| <b>Measurement of coaxial cables</b>   | <b>SC35.02</b> | <p>Cables for the equipment have been allowed in the rates under this Section. No measurement shall be made for cables except for coaxial cables where specifically ordered by the Maintenance Surveyor in writing.</p> <p>Coaxial cables shall be measured the net length as fixed in linear metres.</p>  |
| <b>Measurement of temporary supply</b> | <b>SC35.03</b> | <p>Where a temporary supply is ordered by the Maintenance Surveyor, the provision of all articles, labour and accessory materials (nails, screws, rawplugs and similar) necessary for fixing shall be of temporary nature. For "use and waste" of all materials, such as cables, fittings and accessories, etc., for a period of not exceeding four weeks from the date of certified completion, 50 per cent of the value of the appropriate "supply and fix" items after the adjustment of contract percentages will be paid. For a period exceeding four weeks and not exceeding eight weeks, 55 per cent will be paid and for each subsequent month a further addition of 5 per cent will be made.</p> <p>For a period of more than six months, the full rates, as for permanent works will be paid, and the materials will become the property of the Employer.</p> <p>No extra payment will be made for the removal of materials in connection with the temporary supply, but the cost of which shall have been included in the payment as aforementioned in the first paragraph hereof. The date of certified completion of a temporary supply shall be the date when the installation is first brought into service. The date when it ceases to be used shall be the date from which the Maintenance Surveyor instructs the dismantlement of the installation, or the date when the installation is no longer in use, whichever is earlier.</p> |
| <b>Rates generally</b>                 | <b>SC35.04</b> | <p>The rates for all items shall generally include for : -</p> <ul style="list-style-type: none"> <li>(a) Colour band and colour identification work.</li> <li>(b) Lettering and engraving for identification, signs, labels in both English and Chinese.</li> <li>(c) Identification plates, signs, notice plates, discs and labels in both English and Chinese.</li> </ul>   |



**SPECIAL CONDITIONS**

**Rates generally  
(Cont'd)**

**SC35.04  
(Cont'd)**

- (d) Priming or painting off site and proprietary finishes or surface treatment applied as part of the production process whether applied before or after fabrication and assembly.
- (e) All protective and finishing painting work, apart from additional painting work specifically ordered by the Maintenance Surveyor in writing which shall be measured separately and paid for at the appropriate rates under Section 15 - Painting of this Schedule.
- (f) Any kind of fixing method including drilling of the background and provision of all fixings, nails, bolts, nuts, washers, holes, screws, plugs, shotfired pins and the like.
- (g) Assembling and jointing together with the component parts of composite units and providing any necessary jointing materials.
- (h) All brackets and methods of supports.
- (i) Provision of expansion joints in service runs wherever they coincide with structural expansion joints.
- (j) Submission of catalogues, technical literature, data, calculations, test certificates and approval documentation covering the equipment and materials being supplied.
- (k) Preparing and submitting detail working drawings as required and all shop drawings for the fabrication and installation.
- (l) Attendance, as required, of the manufacturers' representative to assist in the installation and subsequent testing and commissioning.
- (m) Testing and commissioning including submission of Testing and Commissioning Certificates and Records of Tests.
- (n) Provision of all necessary power, labour and testing instrument of approved type for testing and commissioning.
- (o) Preparing and submitting operation and maintenance manuals and as-fitted drawings for items of works as required.
- (p) Provision of schematic diagrams covered front and back with plastic sheet including fixing to wall.
- (q) Provision of manufacturer's guarantee.

**Rates for  
equipment**

**SC35.05**

The rates for equipment shall further include for : -

- (a) Interfacing, connecting, interconnecting cables, jointing and making all bus bar, cable, conduit, trunking and cable tray connections and the like and provision of all associated components.
- (b) Provision of all components forming part of the equipment including batteries and chargers with all supply and interconnecting wiring and the like.

## SPECIAL CONDITIONS

|   |                         |   |
|---|-------------------------|---|
| <b>Rates for equipment (Cont'd)</b>   | <b>SC35.05 (Cont'd)</b> | <ul style="list-style-type: none"> <li>(c) All necessary sensors, instruments, devices and the like including appropriate connections thereto.</li> <li>(d) Cables, conduits including flexible conduits and adaptors, trunkings, trays, ladders, outlet boxes, junction boxes, universal boxes including special boxes, all fixings, bending, cutting, screwing and jointing.</li> <li>(e) Earth/ equipotential bonding.</li> </ul>  |
| <b>Rates for coaxial cables</b>   | <b>SC35.06</b>          | <p>The rates for coaxial cables shall further include for : -</p> <ul style="list-style-type: none"> <li>(a) Laying or fixing in different locations, such as drawing into underground pipe ducts, laying or drawing into trunkings, drawing into conduits, suspending from insulators or catenaries, wrapping around equipment.</li> <li>(b) In case of cables drawn into existing conduits, existing ducts or existing trunkings, removing and putting back existing covers, existing inspection lids and the like.</li> <li>(c) Making cable-joints.</li> <li>(d) All necessary fixings complete with accessories and fittings as required.</li> <li>(e) Provision of all sleeves for casting in or building in where cables pass through slabs, walls or beams and caulking between cable and sleeve where required.</li> </ul> |
| <b>Rates for "Take down and clear away" or "Take down and set aside for re-use"</b> | <b>SC35.07</b>          | <p>The rates for "Take down and clear away" or " Take down and set aside for re-use" existing items in connection with broadcast reception installation shall further include for : -</p> <ul style="list-style-type: none"> <li>(a) Taking down all associated building services works.</li> <li>(b) Plugging off remaining ends with plugs or caps as required.</li> <li>(c) Preparing remaining ends of building services works to receive connections with new work if required.</li> <li>(d) Making good all works disturbed.</li> </ul>   |
| <b>Particular Specification</b>   | <b>SC35.08</b>          | <p>The Particular Specification for broadcast reception installation can be found in the Contract.</p>  |

| Item  |   |          |       |       | Item   |       |
|---|---|----------|-------|-------|--------|-------|
| <b>BROADCAST RECEPTION INSTALLATION</b>           |   |          |       |       |        |       |
| Equipment/components c/w necessary accessories :- |   |          |       |       |        |       |
| <i>Each</i>                                       |   |          |       |       |        |       |
| Supply and fix                                    |   |          |       |       |        |       |
| Take down and clear away                          |   |          |       |       |        |       |
| Take down and set aside for re-use                |   |          |       |       |        |       |
| Fix only  |   |          |       |       |        |       |
| A   |   |          |       |       |        |       |
| B   |   |          |       |       |        |       |
| C   |   |          |       |       |        |       |
| D   |   |          |       |       |        |       |
| \$  |   |          |       |       |        |       |
| 35001   | FM aerial c/w stainless steel aerial masts/poles.....   | 2,215.46 | 81.36 | 87.01 | 348.31 | 35001 |
| 35002   | UHF multi-channel aerial including receiving high definition television signal, minimize ghost image type, c/w stainless steel aerial masts/poles.....      | 2,548.29 | 81.36 | 87.01 | 348.31 | 35002 |
| 35003   | Aerial, combining-unit, FM/UHF including receiving high definition television signal, minimize ghost image type c/w stainless steel aerial masts/poles..... | 3,338.03 | 83.38 | 87.87 | 371.14 | 35003 |
| 35004   | Pre-amplifiers.....   | 933.11   | 19.73 | 20.87 | 51.73  | 35004 |
| 35005   | Frequency converter.....  | 1,954.34 | 21.95 | 24.92 | 62.36  | 35005 |
| 35006   | Wideband and channel amplifier.....   | 2,811.36 | 21.95 | 24.92 | 62.36  | 35006 |
| 35007   | TV bandpass pre-amplifier.....  | 950.16   | 19.73 | 20.87 | 51.73  | 35007 |
| 35008   | FM bandpass pre-amplifier.....  | 731.42   | 19.73 | 20.87 | 51.73  | 35008 |
| 35009   | TV bandpass filter.....   | 677.75   | 19.73 | 20.87 | 51.73  | 35009 |
| 35010   | FM bandpass filter.....   | 514.07   | 19.73 | 20.87 | 51.73  | 35010 |
| Sundries :-                                       |   |          |       |       |        |       |
| 35011   | TV/FM socket outlet c/w co-axial cables, conduits (surface or concealed type) and all necessary accessories .....   | 433.66   | 70.02 | 82.37 | 249.44 | 35011 |
| 35012   | Splitter unit.....  | 59.13    | 2.03  | 2.54  | 7.61   | 35012 |
| 35013   | Tee unit.....   | 61.09    | 2.03  | 2.54  | 7.61   | 35013 |
| 35014   | Lockable well-ventilated metal enclosure to house all headend circuit components.....   | 1,022.56 | 48.98 | 54.27 | 176.44 | 35014 |
| Coaxial cable :-                                  |   |          |       |       |        |       |
| <i>Per linear metre</i>                           |   |          |       |       |        |       |
| 35015   | Coaxial cable, 75 ohm.....<br>(Note : The above item will only be paid for if ordered by the Maintenance Surveyor in writing)                               | 12.33    | 1.98  | 2.48  | 6.09   | 35015 |

| Item  |   |                |                          |                                    |          |       |
|-------|---|----------------|--------------------------|------------------------------------|----------|-------|
|       | <b>BROADCAST RECEPTION INSTALLATION (CONT'D)</b>  |                |                          |                                    |          |       |
|       | The satellite master antenna TV sub-system c/w steel supporting framework, stray wires and certification by a Registered Structural Engineer under Section 3 of the Building Ordinance (Cap123) | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only |       |
|       | Diameter of the antenna : -   |                |                          |                                    |          |       |
|       | <b>Each</b>   | A \$           | B \$                     | C \$                               | D \$     |       |
| 35016 | 4 metres.....   | 37,432.50      | 1,969.57                 | 2,984.61                           | 5,177.60 | 35016 |
| 35017 | 6 metres.....<br>(The actual rate should be : \$232,959.70 for Item 35017A)   | 23,295.97      | 2,491.03                 | 3,971.78                           | 7,171.69 | 35017 |
|       | Feedhorn c/w low noise block down converter and mounting supports : -   |                |                          |                                    |          |       |
| 35018 | Ku-Band.....  | 4,254.11       | 20.00                    | 29.55                              | 51.73    | 35018 |
| 35019 | C-Band.....   | 3,910.05       | 20.00                    | 29.55                              | 51.73    | 35019 |
|       | Satellite receivers/modulators c/w racks : -  |                |                          |                                    |          |       |
| 35020 | Analogue type.....  | 6,800.69       | 20.00                    | 29.55                              | 51.73    | 35020 |
| 35021 | Digital type.....   | 4,270.89       | 20.00                    | 29.55                              | 51.73    | 35021 |
| 35022 | Satellite amplifier.....  | 2,357.02       | 22.12                    | 25.14                              | 61.61    | 35022 |

## **Section 36**

### **HEATING, VENTILATION AND AIR-CONDITIONING - PIPEWORK**

## SECTION 36

### HEATING, VENTILATION AND AIR-CONDITIONING

#### SPECIAL CONDITIONS

(Note: The following special conditions shall apply equally where appropriate to rates under Sections 36 to 39)

|  |                |  |
|--|----------------|--|
| <b>Measurement of power supply</b>                       | <b>SC36.01</b> | All works of electrical power supply up to power supply points (e.g. MCB switchboard or switchgear or isolator or spur unit and the like) for the equipment shall be measured separately and paid for at the appropriate rates under Sections 28 to 30 or other applicable Work Sections of this Schedule.   |
| <b>Measurement of water supply or gas supply</b>         | <b>SC36.02</b> | All works of water supply and gas supply up to the respective termination points for the equipment and boilers shall be measured separately and paid for at the appropriate rates under applicable Work Sections of this Schedule.   |
| <b>Measurement of pipework</b>                           | <b>SC36.03</b> | Pipework shall be measured in linear metres over all in-line fittings, short running lengths and branches (but not through the items of in-line equipment, headers and trapping sets).   |
| <b>Measurement of ductwork</b>                           | <b>SC36.04</b> | Ductwork rectangular in section shall be measured in square metres whereas ductwork circular and oval in section shall be measured in linear metres. All types of ductwork shall be measured over all in-line fittings, short running lengths and branches (but not through the items of in-line equipment).<br><br>Ductwork rectangular in section shall be measured net as the area of sheet material fabricated. Allowance for seams, joints and the like shall be included in the rates. |
| <b>Measurement of insulation to rectangular ductwork</b> | <b>SC36.05</b> | Insulation to ductwork rectangular in section shall be measured in square metres and to the net area in contact with the base of all ducting as installed and over all ducting fittings and joints.  |
| <b>Measurement of insulation to pipework</b>             | <b>SC36.06</b> | Insulation to pipework shall be measured in linear metres for the diameter of the pipes to be insulated.   |

### SPECIAL CONDITIONS

**Measurement  
of temporary  
supply**

**SC36.07**

Where a temporary supply is ordered by the Maintenance Surveyor, the provision of all articles, labour and accessory materials (nails, screws, rawplugs and similar) necessary for fixing shall be of temporary nature. For "use and waste" of all materials, such as cables, fittings, switchgear and accessories, etc., for a period of not exceeding four weeks from the date of certified completion, 50 per cent of the value of the appropriate "supply and fix" items after the adjustment of contract percentages will be paid. For a period exceeding four weeks and not exceeding eight weeks, 55 per cent will be paid and for each subsequent month a further addition of 5 per cent will be made.

For a period of more than six months, the full rates, as for permanent works will be paid, and the materials will become the property of the Employer.

No extra payment will be made for the removal of materials in connection with the temporary supply, but the cost of which shall have been included in the payment as aforementioned in the first paragraph hereof. The date of certified completion of a temporary supply shall be the date when the installation is first brought into service. The date when it ceases to be used shall be the date from which the Maintenance Surveyor instructs the dismantlement of the installation, or the date when the installation is no longer in use, whichever is earlier.

**Rates  
generally**

**SC36.08**

The rates for all items shall generally include for : -

- (a) Colour band and colour identification work.
- (b) Lettering and engraving for identification, signs, labels in both English and Chinese.
- (c) Identification plates, signs, notice plates, discs and labels in both English and Chinese.
- (d) Priming or painting off site and proprietary finishes or surface treatment applied as part of the production process whether applied before or after fabrication and assembly.
- (e) All supports in outdoor environment which shall be hot dip galvanized, unless they are part of the ex-factory painted proprietary equipment in which case the ex-factory paint finish may be accepted.
- (f) All protective and finishing painting work, apart from additional painting work specifically ordered by the Maintenance Surveyor in writing which shall be measured separately and paid for at the appropriate rates under Section 15 - Painting of this Schedule.
- (g) Any kind of fixing method including provision of screws, nuts, bolts, shims, washers, spring compensated and seismic restraints and isolated components and the like.
- (h) Provision of expansion joints in service runs wherever they coincide with structural expansion joints.

**SPECIAL CONDITIONS**

**Rates generally (Cont'd)**

**SC36.08 (Cont'd)**

- (i) Submission of catalogues, technical literature, data, calculations, test certificates and approval documentation covering the equipment and materials being supplied.
- (j) Preparing and submitting detail working drawings and combined services drawings as required and all shop drawings for the fabrication and installation.
- (k) Attendance, as required, of the manufacturers' representative to assist in the installation and subsequent testing and commissioning.
- (l) Testing and commissioning including submission of Testing and Commissioning Certificates and Records of Tests.
- (m) Provision of all necessary power, fuel, labour and testing instrument of approved type for testing and commissioning.
- (n) Submitting all relevant documentation to Fire Services Department and obtaining necessary approval.
- (o) Preparing and submitting operation and maintenance manuals and as-fitted drawings for items of works including soft copies as required.
- (p) Provision of schematic diagrams in plastic envelopes including fixing to wall.
- (q) Provision of manufacturer's guarantee.
- (r) Attending fault and complaint during the Maintenance Period.
- (s) Meeting statutory requirements for disposal of waste materials
- (t) Submission of sample board for all compact sized materials and accessories, and supply of samples of materials for testing (including testing to destruction).

**Rates for equipment**

**SC36.09**

The rates for equipment (e.g. chillers, heat pumps, air handling units, variable refrigerant volume air-conditioning units, fresh air pre-conditioner, split type air-conditioning units, fan coil units, room coolers, fans, pumps, tanks, heat exchangers and the like) shall further include for : -

- (a) All necessary assembly, orientation, alignment, levelling, lifting and bolting down facilities, together with the provision of shims and packing pieces, the clocking of couplings between drivers and rotating equipment, strainers, instrumentation and the like.
- (b) All supporting frames required for proper installation of equipment except the supporting frames for floor slab structure, reinforcement or other special requirements. When the equipment supporting beams have to be extended beyond the requirements, or have to be incorporated into the elevated structure, the extra structural cost of the supporting frames shall be measured separately and paid for at the appropriate rates under Section 10 Steel and Metal Work. For major equipment or equipment as requested by the Maintenance Surveyor, the Contractor shall submit the installation and structural details of the supporting frames for endorsement by the Maintenance Surveyor before carrying out the installation works.



**SPECIAL CONDITIONS**

**Rates for  
equipment  
(Cont'd)**

**SC36.09  
(Cont'd)**

- (c) Connections including flexible joints between pipework and equipment.
- (d) All necessary operational and control accessories (e.g. valves, gauges, mechanical flow meters, indicating lamps and the like) forming part of the equipment, connection and termination.
- (e) Condensate drain pipes forming part of the equipment.
- (f) Final connections and terminations to electrical supply, control and interfacing monitoring and water supply including cables, wirings, conduits, trunkings, cable trays, fuses, control boxes, pipework, valves, gauges and necessary accessories required for energizing the equipment to properly operate at specified duties.
- (g) Anti-vibration mountings for plant, machinery and the like.
- (h) Anti-vibration materials and sound insulating materials in plant and machinery bases, so that when the installed equipment is put into operation, the resulting noise and vibration level at the location within the building and at the building adjacent or nearby shall not exceed the acceptable limit as promulgated by the latest statutory requirements of the Environmental Protection Department.
- (i) Thermal insulation for plant, machinery and the like if required.
- (j) Direct-on-line or Star-Delta motor starters (if the equipment requires motor starters).
- (k) Earth/ equipotential bonding.

**Rates for ductwork  
generally**

**SC36.10**

The rates for ductwork (rectangular in section or circular or oval in section) shall further include for :-

- (a) All short lengths, cutting and waste, joints including stiffeners and flanges in the running length and forming openings for branches.
- (b) All connections to fittings, equipment and ancillaries including flexible connections and providing all necessary materials, bolts, nuts, washers, brackets, supports, hangers and everything necessary for making joints and connections.
- (c) Alternative method of jointing and fixing as specified (if any).
- (d) Connections between ductwork of different materials.
- (e) Spring compensated components of ductwork supports.
- (f) Ductwork turns, splitter dampers, mid-feathers, air duct cleaning points, access doors and openings, test holes and covers, flashing plates, companion frames and the like.
- (g) In-line fittings (e.g. bends, branches, elbows, reducers, tees, air turning vanes and the like).
- (h) All necessary components for earth continuity as specified.

### SPECIAL CONDITIONS

**Rates for ductwork circular or oval in section**

**SC36.11**

The rates for ductwork circular or oval in section shall, in addition to the appropriate sub-clauses of Clause SC36.10, include for insulation including working or cutting around supports, small drains, vents or similar obstructions, joints, bends, tees, duct fittings, stiffeners, access doors, ancillaries and the like, and provision of adhesive, sealing tapes and vapour barriers, and finishing with aluminium foil or cement plaster and painting or metal cladding as required.

**Rates for pipework**

**SC36.12**

The rates for pipework shall further include for : -

- (a) All short lengths, cutting and waste, and joints in the running length.
- (b) All pipework brackets, supports, hangers, guides, anchors and the like and alternative method of jointing and fixing as specified (if any).
- (c) All in-line pipework fittings (e.g. bends, elbows, branches, reducers, tees, caps and the like) including connections, cutting and jointing pipes to fittings.
- (d) Screwed sockets, tappings, bosses and welding-necks welded to pipes or flanges including perforating the pipework or flanges.
- (e) Connections between pipework of different materials and differing grades of same material.
- (f) Spring compensated components of pipework supports.
- (g) Provision of wall plates, ceiling plates, floor plates, high tensile holding down bolts, tapered washers and the like for casting into the reinforced concrete corbels.
- (h) Trapping sets.
- (i) Any flanges, unions or other devices used solely for erection purposes.
- (j) All jointing including provision of flexible connections and/ or necessary adaptors and connectors, welding consumable, jointing tapes, flanges, unions, gasket, bolts and nuts and the like where required.
- (k) Expansion loops and compensators including connections, cutting and jointing to pipes and fittings.
- (l) Provision of all sleeves for casting in or building in where pipes pass through slabs, walls or beams and caulking between pipe and sleeve where required.
- (m) Fixing in any position to floors, walls and ceilings and fixing in chases, ducts, false ceilings and similar positions.

**SPECIAL CONDITIONS**

**Rates for  
in-line pipework  
equipment**

**SC36.13**

The rates for in-line pipework equipment (e.g. valves, mechanical flow meters, gauges, strainers and the like) shall further include for : -

- (a) Cutting and jointing to pipes and fittings.
- (b) Stripping down repacking glands and preparing spindles, as appropriate, prior to installation.

**Rates for  
supervisory  
panel**

**SC36.14**

The supervisory panel shall be measured on the basis of complete unit monitoring and controlling a series of equipment with interaction. Rates for supervisory panel shall further include for all necessary relays, contactors, circuit protection devices, indicating lamps, push button package and selector switches and the like for the efficient operation of the whole series of equipment. The cable and cable containment to external equipment or existing panel shall be measured separately and paid for at the appropriate rates under Sections 28 to 30.

For the avoidance of doubt, every set of pump (including one standby pump), condenser, condensation unit, air handling unit, package chiller, heat pump, contactor for a group of fans or fan coil units shall mean one set of equipment. An evaporator and an outdoor condensing unit of a split unit shall also mean one set of equipment. An actuator for operating a motorized valve or damper shall also be regarded as one set of equipment. Switches and devices (e.g. pressure switch, thermostat, humidistat, level switch, sail switch and the like) that provide contacts for control functions shall not be measured as equipment.

Furthermore, the local control panel which is an integral part of the equipment shall be regarded as a complete monitoring and controlling unit including all necessary relays, contactors, circuit protection devices, indicating lamps, push button package and switches and the like for the efficient operation of the equipment and thus shall not be measured separately. Rather, the costs of which shall be deemed to have been included in the rates of the concerned equipment. Only those switches and devices (sensors/ controllers) for additional functions shall be measured separately and the rates thereof shall include for all necessary control wiring to the local control panel.

**Rates for  
boilers**

**SC36.15**

The rates for boilers shall further include for : -

- (a) All necessary assembly, orientation, alignment, levelling, lifting and bolting down facilities, together with the provision of shims and packing pieces, strainers, instrumentation and the like.
- (b) Supporting frames.
- (c) Provision of associated components.
- (d) All necessary operational and control accessories (e.g. heat exchanger, air nozzle, valves, thermostat, control panels, gauges, pumps, switches and the like), connection and termination.

**SPECIAL CONDITIONS**

**Rates for  
boilers  
(Cont'd)**

**SC36.15  
(Cont'd)**

- (e) Thermal insulation.
- (f) Storage tank with copper lining internally and thermal insulation and decoration as specified externally.
- (g) Final connections and terminations to electrical supply, water supply and/ or gas supply including cables, wirings, conduits, trunkings, cable trays, fuses, control boxes, pipework, valves, gauges and necessary accessories required to energize the equipment in operating properly at specified duties.
- (h) Earth/ equipotential bonding.

**Rates for  
"Take down  
and clear away"  
or "Take down  
and set aside  
for re-use"**

**SC36.16**

The rates for "Take down and clear away" or "Take down and set aside for re-use" existing pipework, ductwork, equipment, boiler and the like shall further include for where applicable : -

- (a) All in-line pipework fittings and in-line pipework equipment including brackets, supports, hangers and the like.
- (b) Cutting into existing pipework, ductwork and the like in position.
- (c) Preparing remaining ends to receive joints with new work if required.
- (d) Plugging off remaining ends with plugs or caps as required.
- (e) In the case of equipment, boiler and the like, taking down all associated plumbing works and/ or building services work.
- (f) Making good all works disturbed.

**Rates for  
insulation to  
rectangular  
ductwork**

**SC36.17**

The rates for insulation to ductwork rectangular in section shall further include for : -

- (a) All fixings, adhesive, sealing tapes, vapour barriers and the like.
- (b) Forming laps, welts, cut outs, recesses and the like.
- (c) Pointing, sealing, trowelling smooth, chamfered and sealed edges and the like.
- (d) Working around supports, small drains, vents or similar obstructions.
- (e) Working around ducting fittings, stiffeners, joints, access doors, ancillaries and the like.
- (f) Forming of angles and all other labour.
- (g) Finishing with aluminium foils or cement plaster and painting or metal cladding as required.

## SPECIAL CONDITIONS

Rates for  
insulation  
to pipework

## SC36.18

The rates for insulation to pipework shall further include for : -

- (a) Cutting into existing insulation to pipework in position.
- (b) Taking down existing insulation either in whole or in part as required.
- (c) All preparation work including preparing remaining ends to receive new insulation if required.
- (d) All fixings, adhesive, sealing tapes, vapour barriers and the like.
- (e) Forming laps, welts, cut outs, recesses and the like.
- (f) Pointing, sealing, trowelling smooth, chamfered and sealed edges and the like.
- (g) Working around supports, small drains, vents or similar obstructions.
- (h) Working around in-line fittings, joints and the like.
- (i) Forming of angles and all other labour.
- (j) Finishing with aluminium foil or cement plaster or metal cladding and painting as required.
- (k) Making good all works disturbed.

Cooling capacity  
criteria

## SC36.19

Cooling capacity shall be based on the following criteria except otherwise specified : -

- |       |                           |                                       |                     |
|-------|---------------------------|---------------------------------------|---------------------|
| (i)   | Condenser                 | Condensing air temperature            | 35°C                |
|       |                           | (for air-cooled chiller only)         |                     |
|       |                           | Condensing water entering temperature | 32°C                |
|       |                           | (for water-cooled chiller only)       |                     |
|       |                           | Condensing water leaving temperature  | 37°C                |
|       |                           | (for water-cooled chiller only)       |                     |
| (ii)  | Chiller                   | Chilled water return temperature      | 12.5°C              |
|       |                           | Chilled water leaving temperature     | 7°C                 |
| (iii) | Air handling<br>equipment | Entering air on evaporator            | 27°C DB<br>21°C WB  |
|       |                           | Supply air                            | 13°C DB (Saturated) |
|       |                           | Entering air                          | 33°C DB<br>28°C WB  |
| (iv)  | PAU                       |                                       |                     |

**SPECIAL CONDITIONS****Rates for Buildings Energy Efficiency Ordinance****SC36.20**

- (a) In order to fulfil the energy efficiency requirements by the Buildings Energy Efficiency Ordinance, the Contractor is required to appoint a Registered Energy Assessors (REA) at his own cost for the completion and submission of the Form of Compliance - Form EE4 to the EMSD for approval including but not limited to compilation and certification of the required forms and worksheets for the electrical installations, lighting installations and air-conditioning installations, where applicable, including any necessary endorsement fees.
- (b) The rates as separately scheduled for the Buildings Energy Efficiency Ordinance submission shall generally include for the preparation of the installation summaries, worksheets, relevant drawings, drawing lists and other supportive documents by the Contractor. The Contractor shall further coordinate with the REA and provide the required information at no extra cost for his submission of the Form of Compliance to the EMSD as required to fulfil the latest requirements of the Buildings Energy Efficiency Ordinance.

**Particular Specification****SC36.21**

The Particular Specification for air-conditioning, heating and ventilation can be found in the Contract.

| Item  |            | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only | Item  |
|---|------------|----------------|--------------------------|------------------------------------|----------|-------|
|   |            | A              | B                        | C                                  | D        |       |
|   |            | \$             | \$                       | \$                                 | \$       |       |
| <b>REFRIGERANT CIRCUIT</b>  |            |                |                          |                                    |          |       |
| Copper refrigerant pipes without insulation of pipe diameter : -  |            |                |                          |                                    |          |       |
| <i>Per linear metre</i>   |            |                |                          |                                    |          |       |
| 36001   | 9 mm.....  | 89.82          | 3.17                     | 3.39                               | 50.18    | 36001 |
| 36002   | 15 mm..... | 109.73         | 3.32                     | 3.53                               | 57.17    | 36002 |
| 36003   | 18 mm..... | 120.20         | 3.53                     | 3.68                               | 60.91    | 36003 |
| 36004   | 22 mm..... | 137.67         | 4.06                     | 4.21                               | 64.71    | 36004 |
| 36005   | 28 mm..... | 165.99         | 4.28                     | 4.57                               | 72.69    | 36005 |
| 36006   | 35 mm..... | 203.31         | 4.84                     | 5.10                               | 77.94    | 36006 |
| Copper refrigerant pipes c/w polystyrene insulation, cement plaster, painting and finish of pipe diameter : - |            |                |                          |                                    |          |       |
| <i>Per linear metre</i>   |            |                |                          |                                    |          |       |
| 36007   | 9 mm.....  | 171.34         | 5.43                     | 5.89                               | 83.99    | 36007 |
| 36008   | 15 mm..... | 206.44         | 5.73                     | 6.20                               | 96.09    | 36008 |
| 36009   | 18 mm..... | 226.34         | 5.89                     | 6.34                               | 101.52   | 36009 |
| 36010   | 22 mm..... | 252.84         | 6.77                     | 7.35                               | 107.89   | 36010 |
| 36011   | 28 mm..... | 299.33         | 7.51                     | 7.83                               | 119.65   | 36011 |
| 36012   | 35 mm..... | 349.71         | 8.15                     | 8.61                               | 129.62   | 36012 |
| Copper refrigerant pipes c/w phenolic foam insulation of pipe diameter : -                                    |            |                |                          |                                    |          |       |
| <i>Per linear metre</i>   |            |                |                          |                                    |          |       |
| 36013   | 9 mm.....  | 147.77         | 3.91                     | 4.10                               | 58.30    | 36013 |
| 36014   | 15 mm..... | 182.80         | 4.10                     | 4.32                               | 67.49    | 36014 |
| 36015   | 18 mm..... | 207.09         | 4.10                     | 4.46                               | 71.66    | 36015 |
| 36016   | 22 mm..... | 228.54         | 4.84                     | 5.06                               | 76.73    | 36016 |
| 36017   | 28 mm..... | 269.02         | 5.16                     | 5.38                               | 85.12    | 36017 |
| 36018   | 35 mm..... | 318.74         | 5.70                     | 5.90                               | 93.21    | 36018 |

| Item  |            | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only | Item  |
|---|------------|----------------|--------------------------|------------------------------------|----------|-------|
|   |            | A              | B                        | C                                  | D        |       |
|   |            | \$             | \$                       | \$                                 | \$       |       |
| <b>REFRIGERANT CIRCUIT (CONT'D)</b>   |            |                |                          |                                    |          |       |
| Copper refrigerant pipes c/w phenolic foam insulation, cement plaster, painting and finish of pipe diameter : - |            |                |                          |                                    |          |       |
| <i>Per linear metre</i>   |            |                |                          |                                    |          |       |
| 36019   | 9 mm.....  | 196.89         | 5.43                     | 5.89                               | 84.97    | 36019 |
| 36020   | 15 mm..... | 239.73         | 5.73                     | 6.20                               | 97.19    | 36020 |
| 36021   | 18 mm..... | 264.85         | 5.89                     | 6.34                               | 103.18   | 36021 |
| 36022   | 22 mm..... | 301.04         | 6.77                     | 7.35                               | 109.46   | 36022 |
| 36023   | 28 mm..... | 359.89         | 7.51                     | 7.83                               | 122.14   | 36023 |
| 36024   | 35 mm..... | 442.38         | 8.15                     | 8.61                               | 132.13   | 36024 |
| Copper refrigerant pipes c/w flexible closed cell elastomeric insulation of pipe diameter : -                   |            |                |                          |                                    |          |       |
| <i>Per linear metre</i>   |            |                |                          |                                    |          |       |
| 36025   | 9 mm.....  | 131.25         | 3.91                     | 4.10                               | 57.57    | 36025 |
| 36026   | 15 mm..... | 159.18         | 4.10                     | 4.32                               | 66.97    | 36026 |
| 36027   | 18 mm..... | 172.42         | 4.10                     | 4.46                               | 71.66    | 36027 |
| 36028   | 22 mm..... | 191.92         | 4.84                     | 5.06                               | 76.97    | 36028 |
| 36029   | 28 mm..... | 227.66         | 5.16                     | 5.38                               | 85.36    | 36029 |
| 36030   | 35 mm..... | 277.46         | 5.70                     | 5.90                               | 92.31    | 36030 |
| Refrigerant circuit accessories   |            |                |                          |                                    |          |       |
| Refrigerant stop valves for copper refrigerant pipe diameter : -  |            |                |                          |                                    |          |       |
| <i>Each</i>   |            |                |                          |                                    |          |       |
| 36031   | 9 mm.....  | 99.44          | 16.30                    | 21.26                              | 26.83    | 36031 |
| 36032   | 15 mm..... | 166.53         | 18.36                    | 23.98                              | 32.63    | 36032 |
| 36033   | 18 mm..... | 221.90         | 18.46                    | 24.63                              | 34.19    | 36033 |
| 36034   | 22 mm..... | 289.25         | 18.82                    | 25.07                              | 38.74    | 36034 |
| 36035   | 28 mm..... | 319.13         | 19.09                    | 25.52                              | 42.54    | 36035 |
| 36036   | 35 mm..... | 457.31         | 19.42                    | 26.26                              | 47.15    | 36036 |



| Item   |             |                      |                                      |  | Item        |       |
|--|-------------|----------------------|--------------------------------------|--|-------------|-------|
| <b>REFRIGERANT CIRCUIT (CONT'D)</b>  |             |                      |                                      |  |             |       |
| Refrigerant solenoid valves for copper refrigerant pipe diameter :-        |             |                      |                                      |  |             |       |
|  |             | Supply<br>and<br>fix | Take<br>down<br>and<br>clear<br>away | Take<br>down<br>and set<br>aside for<br>re-use | Fix<br>only |       |
|  | <i>Each</i> | A<br>\$              | B<br>\$                              | C<br>\$  | D<br>\$     |       |
| 36037  | 9 mm.....   | 388.08               | 16.78                                | 21.39  | 25.35       | 36037 |
| 36038  | 15 mm.....  | 460.69               | 19.81                                | 24.21  | 29.64       | 36038 |
| 36039  | 18 mm.....  | 676.19               | 19.95                                | 24.75  | 31.71       | 36039 |
| 36040  | 22 mm.....  | 956.96               | 20.52                                | 25.18  | 34.24       | 36040 |
| 36041  | 28 mm.....  | 1,256.23             | 20.95                                | 25.64  | 40.50       | 36041 |
| 36042  | 35 mm.....  | 1,835.70             | 21.51                                | 26.40  | 44.11       | 36042 |
| Cartridge refrigerant filter/dryer for copper refrigerant pipe diameter :- |             |                      |                                      |  |             |       |
|  | <i>Each</i> |                      |                                      |  |             |       |
| 36043  | 9 mm.....   | 90.14                | 17.87                                | 22.79  | 27.06       | 36043 |
| 36044  | 15 mm.....  | 123.20               | 21.11                                | 25.77  | 31.63       | 36044 |
| 36045  | 18 mm.....  | 229.50               | 21.26                                | 26.38  | 33.84       | 36045 |
| 36046  | 22 mm.....  | 327.00               | 21.87                                | 26.83  | 36.54       | 36046 |
| 36047  | 28 mm.....  | 735.97               | 22.33                                | 27.33  | 43.21       | 36047 |
| 36048  | 35 mm.....  | 889.54               | 22.91                                | 28.12  | 47.05       | 36048 |
| Refrigerant oil separator for copper refrigerant pipe diameter :-          |             |                      |                                      |  |             |       |
|  | <i>Each</i> |                      |                                      |  |             |       |
| 36049  | 9 mm.....   | 364.20               | 17.87                                | 22.79  | 29.16       | 36049 |
| 36050  | 15 mm.....  | 574.48               | 21.11                                | 25.77  | 34.34       | 36050 |
| 36051  | 18 mm.....  | 672.30               | 21.26                                | 26.38  | 36.58       | 36051 |
| 36052  | 22 mm.....  | 778.06               | 21.87                                | 26.83  | 39.48       | 36052 |
| 36053  | 28 mm.....  | 820.51               | 22.33                                | 27.33  | 45.57       | 36053 |
| 36054  | 35 mm.....  | 910.26               | 22.91                                | 28.12  | 49.31       | 36054 |

| Item  |                                       |                      |                                      |  | Item        |       |
|---|---------------------------------------|----------------------|--------------------------------------|--|-------------|-------|
| <b>REFRIGERANT CIRCUIT (CONT'D)</b>   |                                       |                      |                                      |  |             |       |
| Refrigerant sight glass of copper refrigerant pipe diameter :-                                |                                       |                      |                                      |  |             |       |
|   |                                       | Supply<br>and<br>fix | Take<br>down<br>and<br>clear<br>away | Take<br>down<br>and set<br>aside for<br>re-use | Fix<br>only |       |
|   |                                       | A<br>\$              | B<br>\$                              | C<br>\$  | D<br>\$     |       |
|   | <i>Each</i>                           |                      |                                      |  |             |       |
| 36055   | 9 mm.....                             | 128.33               | 16.78                                | 21.39  | 27.34       | 36055 |
| 36056   | 15 mm.....                            | 149.44               | 19.81                                | 24.21  | 32.20       | 36056 |
| 36057   | 18 mm.....                            | 165.40               | 19.95                                | 24.75  | 34.31       | 36057 |
| 36058   | 22 mm.....                            | 185.52               | 20.52                                | 25.18  | 37.01       | 36058 |
| 36059   | 28 mm.....                            | 209.81               | 20.95                                | 25.64  | 42.74       | 36059 |
| 36060   | 35 mm.....                            | 500.52               | 21.51                                | 26.40  | 45.47       | 36060 |
| Liquid receiver c/w liquid level gauge, purge valve, pressure relief valve and accessories :- |                                       |                      |                                      |  |             |       |
|   |                                       |                      |                                      |  |             |       |
|   | <i>Each</i>                           |                      |                                      |  |             |       |
| 36061   | 0.02 - 0.03 m <sup>3</sup> .....      | 2,021.36             | 17.29                                | 18.94  | 35.54       | 36061 |
| 36062   | 0.03 - 0.14 m <sup>3</sup> .....      | 2,440.01             | 22.67                                | 24.36  | 46.97       | 36062 |
| 36063   | 0.14 - 0.2 m <sup>3</sup> .....       | 3,031.92             | 25.24                                | 26.89  | 51.61       | 36063 |
| 36064   | 0.2 - 0.3 m <sup>3</sup> .....        | 3,602.20             | 27.98                                | 29.60  | 54.05       | 36064 |
| 36065   | 0.3 - 0.52 m <sup>3</sup> .....       | 5,366.91             | 30.62                                | 32.27  | 61.07       | 36065 |
| Gauges c/w stop valve :-  |                                       |                      |                                      |  |             |       |
|   |                                       |                      |                                      |  |             |       |
|   | <i>Each</i>                           |                      |                                      |  |             |       |
| 36066   | Refrigerant high pressure gauge.....  | 225.63               | 20.85                                | 24.92  | 34.04       | 36066 |
| 36067   | Refrigerant low pressure gauge.....   | 225.63               | 20.85                                | 24.92  | 34.04       | 36067 |
| Refrigerant :-  |                                       |                      |                                      |  |             |       |
|   |                                       |                      |                                      |  |             |       |
|   | <i>Per kg</i>                         |                      |                                      |  |             |       |
| 36068   | Refrigerant (R134a) c/w charging..... | 53.55                | -                                    | -  | 12.46       | 36068 |
| 36069   | Refrigerant (R407C) c/w charging..... | 165.24               | -                                    | -  | 12.46       | 36069 |
| 36070   | Refrigerant (R410a) c/w charging..... | 215.31               | -                                    | -  | 12.46       | 36070 |
| 36071   | Lubricating oil c/w charging.....     | 170.87               | -                                    | -  | 12.51       | 36071 |

| Item  |   | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only | Item  |
|-------|---|----------------|--------------------------|------------------------------------|----------|-------|
|       | <b>REFRIGERANT CIRCUIT (CONT'D)</b>   |                |                          |                                    |          |       |
|       | Hi /Lo pressure cut-out :-  |                |                          |                                    |          |       |
|       | <i>Each</i>   | A<br>\$        | B<br>\$                  | C<br>\$                            | D<br>\$  |       |
| 36072 | Hi /Lo pressure cut-out c/w manual reset.....   | 334.44         | 17.43                    | 21.07                              | 28.60    | 36072 |
|       | Aluminium metal cladding not less than 0.8mm for insulated refrigerant pipe work of diameter :- |                |                          |                                    |          |       |
|       | <i>Per linear metre</i>   |                |                          |                                    |          |       |
| 36073 | 9 mm.....   | 87.54          | 0.45                     | 0.55                               | 7.25     | 36073 |
| 36074 | 15 mm.....  | 94.31          | 0.51                     | 0.60                               | 7.84     | 36074 |
| 36075 | 18 mm.....  | 98.53          | 0.55                     | 0.69                               | 8.57     | 36075 |
| 36076 | 22 mm.....  | 100.85         | 0.65                     | 0.77                               | 9.14     | 36076 |
| 36077 | 28 mm.....  | 104.96         | 0.77                     | 0.91                               | 9.77     | 36077 |
| 36078 | 35 mm.....  | 113.01         | 0.91                     | 1.06                               | 10.41    | 36078 |

| Item  |   |                |                          |                                    | Item     |       |
|-------|---|----------------|--------------------------|------------------------------------|----------|-------|
|       | <b>VALVE, PIPE WORKS AND ACCESSORIES</b>  |                |                          |                                    |          |       |
|       | Chilled water pipes   | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only |       |
|       | Chilled water pipework (bare pipe) of pipe diameter: -  |                |                          |                                    |          |       |
|       | <i>Per linear metre</i>   | A<br>\$        | B<br>\$                  | C<br>\$                            | D<br>\$  |       |
| 36079 | 25 mm.....  | 128.34         | 3.07                     | 3.40                               | 42.92    | 36079 |
| 36080 | 32 mm.....  | 137.40         | 3.40                     | 3.82                               | 45.64    | 36080 |
| 36081 | 40 mm.....  | 154.38         | 3.73                     | 4.15                               | 49.01    | 36081 |
| 36082 | 50 mm.....  | 198.29         | 4.06                     | 4.42                               | 56.77    | 36082 |
| 36083 | 65 mm.....  | 234.68         | 4.81                     | 5.20                               | 64.87    | 36083 |
| 36084 | 80 mm.....  | 278.53         | 5.61                     | 6.02                               | 73.14    | 36084 |
| 36085 | 100 mm.....   | 350.19         | 6.30                     | 6.77                               | 83.56    | 36085 |
| 36086 | 125 mm.....   | 445.13         | 9.34                     | 10.12                              | 97.53    | 36086 |
| 36087 | 150 mm.....   | 523.37         | 10.42                    | 11.30                              | 111.07   | 36087 |
| 36088 | 200 mm.....   | 695.85         | 12.22                    | 13.51                              | 135.62   | 36088 |
| 36089 | 250 mm.....   | 733.60         | 13.83                    | 15.02                              | 161.51   | 36089 |
| 36090 | 300 mm.....   | 818.97         | 15.77                    | 18.09                              | 192.81   | 36090 |
|       | Chilled water pipework c/w 50 mm polystyrene insulation, cement plaster, painting & finish of pipe diameter : - |                |                          |                                    |          |       |
|       | <i>Per linear metre</i>   |                |                          |                                    |          |       |
| 36091 | 20 mm or below.....   | 167.23         | 4.71                     | 5.43                               | 69.12    | 36091 |
| 36092 | 25 mm.....  | 187.49         | 5.33                     | 5.92                               | 75.07    | 36092 |
| 36093 | 32 mm.....  | 203.72         | 5.92                     | 6.66                               | 79.95    | 36093 |
| 36094 | 40 mm.....  | 222.97         | 6.51                     | 7.25                               | 85.86    | 36094 |
| 36095 | 50 mm.....  | 264.56         | 7.11                     | 7.73                               | 99.46    | 36095 |
| 36096 | 65 mm.....  | 309.05         | 8.39                     | 9.08                               | 113.75   | 36096 |
| 36097 | 80 mm.....  | 358.95         | 9.80                     | 10.52                              | 128.21   | 36097 |
| 36098 | 100 mm.....   | 440.07         | 11.03                    | 11.85                              | 146.88   | 36098 |
| 36099 | 125 mm.....   | 520.57         | 13.87                    | 15.02                              | 167.66   | 36099 |
| 36100 | 150 mm.....   | 632.63         | 17.89                    | 19.52                              | 194.62   | 36100 |

| Item  |  |                |                          |                                    | Item     |       |
|-------|--|----------------|--------------------------|------------------------------------|----------|-------|
|       | <b>VALVE, PIPE WORKS AND ACCESSORIES (CONT'D)</b>  |                |                          |                                    |          |       |
|       | Chilled water pipes (Cont'd)   |                |                          |                                    |          |       |
|       | Chilled water pipework c/w 50 mm polystyrene insulation, cement plaster, painting & finish of pipe diameter : - (Cont'd) |                |                          |                                    |          |       |
|       | <i>Per linear metre</i>  |                |                          |                                    |          |       |
|       |  | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only |       |
|       |  | A \$           | B \$                     | C \$                               | D \$     |       |
| 36101 | 200 mm.....  | 739.63         | 19.36                    | 20.25                              | 229.16   | 36101 |
| 36102 | 250 mm.....  | 882.30         | 21.75                    | 23.09                              | 281.34   | 36102 |
| 36103 | 300 mm.....  | 994.91         | 24.93                    | 27.62                              | 335.93   | 36103 |
|       | Chilled water pipework c/w 50 mm phenolic foam insulation, cement plaster, painting & finish of pipe diameter : -        |                |                          |                                    |          |       |
|       | <i>Per linear metre</i>  |                |                          |                                    |          |       |
| 36104 | 20 mm or below.....  | 277.40         | 4.71                     | 5.43                               | 69.12    | 36104 |
| 36105 | 25 mm.....   | 321.11         | 5.33                     | 5.92                               | 75.07    | 36105 |
| 36106 | 32 mm.....   | 358.85         | 5.92                     | 6.66                               | 79.95    | 36106 |
| 36107 | 40 mm.....   | 390.02         | 6.51                     | 7.25                               | 85.86    | 36107 |
| 36108 | 50 mm.....   | 466.05         | 7.11                     | 7.73                               | 99.46    | 36108 |
| 36109 | 65 mm.....   | 552.54         | 8.39                     | 9.08                               | 113.75   | 36109 |
| 36110 | 80 mm.....   | 628.11         | 9.80                     | 10.52                              | 128.21   | 36110 |
| 36111 | 100 mm.....  | 765.87         | 11.03                    | 11.85                              | 146.88   | 36111 |
| 36112 | 125 mm.....  | 1,056.89       | 13.87                    | 15.02                              | 167.66   | 36112 |
| 36113 | 150 mm.....  | 1,100.08       | 17.89                    | 19.52                              | 194.62   | 36113 |
| 36114 | 200 mm.....  | 1,498.82       | 19.36                    | 20.25                              | 229.16   | 36114 |
| 36115 | 250 mm.....  | 1,810.51       | 21.75                    | 23.09                              | 281.34   | 36115 |
| 36116 | 300 mm.....  | 2,327.16       | 24.93                    | 27.62                              | 335.93   | 36116 |

| Item  |   |                |                          |                                    | Item     |       |
|-------|---|----------------|--------------------------|------------------------------------|----------|-------|
|       | <b>VALVE, PIPE WORKS AND ACCESSORIES (CONT'D)</b>   |                |                          |                                    |          |       |
|       | Chilled water pipes (Cont'd)  |                |                          |                                    |          |       |
|       | Chilled water pipework c/w 50 mm phenolic foam insulation of pipe diameter :-   |                |                          |                                    |          |       |
|       | <i>Per linear metre</i>   |                |                          |                                    |          |       |
|       |   | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only |       |
|       |   | A \$           | B \$                     | C \$                               | D \$     |       |
| 36117 | 20 mm or below.....   | 210.33         | 2.93                     | 3.42                               | 44.94    | 36117 |
| 36118 | 25 mm.....  | 240.28         | 3.32                     | 3.85                               | 48.74    | 36118 |
| 36119 | 32 mm.....  | 268.41         | 3.75                     | 4.28                               | 51.87    | 36119 |
| 36120 | 40 mm.....  | 293.68         | 4.18                     | 4.71                               | 55.77    | 36120 |
| 36121 | 50 mm.....  | 344.48         | 4.61                     | 5.13                               | 64.28    | 36121 |
| 36122 | 65 mm.....  | 409.59         | 5.33                     | 5.86                               | 73.73    | 36122 |
| 36123 | 80 mm.....  | 477.13         | 6.22                     | 6.71                               | 83.11    | 36123 |
| 36124 | 100 mm.....   | 592.00         | 7.04                     | 7.66                               | 105.68   | 36124 |
| 36125 | 125 mm.....   | 707.98         | 10.03                    | 10.94                              | 122.87   | 36125 |
| 36126 | 150 mm.....   | 875.82         | 11.58                    | 12.43                              | 140.48   | 36126 |
| 36127 | 200 mm.....   | 985.82         | 12.05                    | 13.17                              | 160.78   | 36127 |
| 36128 | 250 mm.....   | 1,201.59       | 14.26                    | 15.44                              | 200.51   | 36128 |
| 36129 | 300 mm.....   | 1,398.85       | 16.03                    | 17.44                              | 242.30   | 36129 |
|       | Chilled water pipework c/w 25 mm flexible closed cell elastomeric insulation, cement plaster, painting & finish of pipe diameter :- |                |                          |                                    |          |       |
|       | <i>Per linear metre</i>   |                |                          |                                    |          |       |
| 36130 | 20 mm or below.....   | 143.35         | 4.71                     | 5.43                               | 69.12    | 36130 |
| 36131 | 25 mm.....  | 162.98         | 5.33                     | 5.92                               | 75.07    | 36131 |
| 36132 | 32 mm.....  | 181.16         | 5.92                     | 6.66                               | 79.95    | 36132 |
| 36133 | 40 mm.....  | 198.73         | 6.51                     | 7.25                               | 85.86    | 36133 |
| 36134 | 50 mm.....  | 242.44         | 7.11                     | 7.73                               | 99.46    | 36134 |
| 36135 | 65 mm.....  | 287.63         | 8.39                     | 9.08                               | 113.75   | 36135 |
| 36136 | 80 mm.....  | 336.07         | 9.80                     | 10.52                              | 128.21   | 36136 |
| 36137 | 100 mm.....   | 414.99         | 11.03                    | 11.85                              | 146.88   | 36137 |
| 36138 | 150 mm.....   | 617.24         | 18.22                    | 19.76                              | 195.14   | 36138 |

| Item  |  |                |                          |                                    | Item     |       |
|-------|--|----------------|--------------------------|------------------------------------|----------|-------|
|       | <b>VALVE, PIPE WORKS AND ACCESSORIES (CONT'D)</b>  |                |                          |                                    |          |       |
|       | Chilled water pipes (Cont'd)   |                |                          |                                    |          |       |
|       | Chilled water pipe c/w 20 mm flexible closed cell elastomeric insulation & finish of pipe diameter : - |                |                          |                                    |          |       |
|       | <i>Per linear metre</i>  |                |                          |                                    |          |       |
|       |  | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only |       |
|       |  | A \$           | B \$                     | C \$                               | D \$     |       |
| 36139 | 25 mm or below.....  | 132.44         | 5.10                     | 5.65                               | 58.55    | 36139 |
| 36140 | 32 mm.....   | 148.47         | 5.48                     | 6.12                               | 62.37    | 36140 |
| 36141 | 40 mm.....   | 161.99         | 6.12                     | 6.72                               | 66.64    | 36141 |
| 36142 | 50 mm.....   | 187.39         | 7.11                     | 7.73                               | 76.75    | 36142 |
| 36143 | 65 mm.....   | 221.57         | 8.39                     | 9.08                               | 87.97    | 36143 |
| 36144 | 80 mm.....   | 263.20         | 9.80                     | 10.52                              | 98.03    | 36144 |
| 36145 | 100 mm.....  | 326.59         | 11.03                    | 11.85                              | 113.09   | 36145 |
| 36146 | 125 mm.....  | 403.69         | 14.25                    | 14.45                              | 129.37   | 36146 |
| 36147 | 150 mm.....  | 488.68         | 18.22                    | 19.76                              | 149.94   | 36147 |
| 36148 | 200 mm.....  | 639.44         | 25.65                    | 26.16                              | 176.53   | 36148 |
| 36149 | 250 mm.....  | 773.33         | 34.62                    | 37.47                              | 220.32   | 36149 |
| 36150 | 300 mm.....  | 903.14         | 44.30                    | 48.91                              | 297.22   | 36150 |

| Item  |  |                |                          |                                    | Item     |       |
|-------|--|----------------|--------------------------|------------------------------------|----------|-------|
|       | <b>VALVE, PIPE WORKS AND ACCESSORIES (CONT'D)</b>  |                |                          |                                    |          |       |
|       | Chilled water pipes (Cont'd)   |                |                          |                                    |          |       |
|       | Chilled water pipe c/w 25 mm flexible closed cell elastomeric insulation & finish of pipe diameter : -                           |                |                          |                                    |          |       |
|       | <i>Per linear metre</i>  |                |                          |                                    |          |       |
|       |  | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only |       |
|       |  | A \$           | B \$                     | C \$                               | D \$     |       |
| 36151 | 20 mm or below.....  | 119.76         | 3.29                     | 3.68                               | 50.25    | 36151 |
| 36152 | 25 mm.....   | 135.22         | 3.72                     | 4.13                               | 55.32    | 36152 |
| 36153 | 32 mm.....   | 156.87         | 4.21                     | 4.61                               | 58.41    | 36153 |
| 36154 | 40 mm.....   | 182.96         | 4.64                     | 5.20                               | 62.14    | 36154 |
| 36155 | 50mm.....  | 214.06         | 5.15                     | 5.78                               | 72.91    | 36155 |
|       | Chilled water pipe c/w 50 mm flexible closed cell elastomeric insulation & finish of pipe diameter : -                           |                |                          |                                    |          |       |
|       | <i>Per linear metre</i>  |                |                          |                                    |          |       |
| 36156 | 65 mm.....   | 295.67         | 4.95                     | 6.72                               | 67.28    | 36156 |
| 36157 | 80 mm.....   | 344.16         | 5.87                     | 7.80                               | 73.14    | 36157 |
| 36158 | 100 mm.....  | 416.30         | 7.61                     | 8.86                               | 90.30    | 36158 |
| 36159 | 150 mm.....  | 538.76         | 11.79                    | 15.67                              | 121.99   | 36159 |
|       | Chilled water pipe c/w 50 mm flexible closed cell elastomeric insulation, cement plaster, painting & finish of pipe diameter : - |                |                          |                                    |          |       |
|       | <i>Per linear metre</i>  |                |                          |                                    |          |       |
| 36160 | 20 mm or below.....  | 162.29         | 4.04                     | 4.48                               | 60.56    | 36160 |
| 36161 | 25 mm.....   | 188.10         | 4.42                     | 4.98                               | 65.70    | 36161 |
| 36162 | 32 mm.....   | 207.28         | 5.06                     | 5.59                               | 70.15    | 36162 |
| 36163 | 40 mm.....   | 225.33         | 5.54                     | 6.10                               | 75.50    | 36163 |
| 36164 | 50 mm.....   | 273.38         | 6.05                     | 6.58                               | 86.88    | 36164 |
| 36165 | 65 mm.....   | 319.94         | 7.17                     | 7.69                               | 97.71    | 36165 |
| 36166 | 80 mm.....   | 382.09         | 8.36                     | 8.86                               | 108.58   | 36166 |
| 36167 | 100 mm.....  | 466.01         | 9.14                     | 10.05                              | 125.43   | 36167 |
| 36168 | 150 mm.....  | 693.72         | 15.15                    | 16.61                              | 171.96   | 36168 |



| Item  |  |                |                          |                                    | Item     |       |
|-------|--|----------------|--------------------------|------------------------------------|----------|-------|
|       | <b>VALVE, PIPE WORKS AND ACCESSORIES (CONT'D)</b>  |                |                          |                                    |          |       |
|       | Chilled water pipes (Cont'd)   |                |                          |                                    |          |       |
|       | Pre-insulated chilled water pipe c/w galvanized iron metal jacket for outdoor conditions : - |                |                          |                                    |          |       |
|       | <i>Per linear metre</i>  |                |                          |                                    |          |       |
|       |  | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only |       |
|       |  | A \$           | B \$                     | C \$                               | D \$     |       |
| 36169 | 25 mm diameter chilled water pipe c/w 50 mm thick insulation .....                           | 258.57         | 3.56                     | 4.09                               | 52.74    | 36169 |
| 36170 | 32 mm diameter chilled water pipe c/w 50 mm thick insulation .....                           | 288.19         | 3.95                     | 4.44                               | 57.32    | 36170 |
| 36171 | 40 mm diameter chilled water pipe c/w 50 mm thick insulation .....                           | 308.76         | 4.44                     | 4.97                               | 61.27    | 36171 |
| 36172 | 50 mm diameter chilled water pipe c/w 65 mm thick insulation .....                           | 459.23         | 4.84                     | 5.43                               | 65.61    | 36172 |
| 36173 | 65 mm diameter chilled water pipe c/w 65 mm thick insulation .....                           | 506.87         | 5.32                     | 5.86                               | 75.91    | 36173 |
| 36174 | 80 mm diameter chilled water pipe c/w 65 mm thick insulation .....                           | 576.71         | 6.16                     | 6.77                               | 86.76    | 36174 |
| 36175 | 100 mm diameter chilled water pipe c/w 65 mm thick insulation .....                          | 681.21         | 7.26                     | 7.89                               | 97.27    | 36175 |
| 36176 | 125 mm diameter chilled water pipe c/w 65 mm thick insulation .....                          | 805.92         | 8.28                     | 8.85                               | 112.17   | 36176 |
| 36177 | 150 mm diameter chilled water pipe c/w 75 mm thick insulation .....                          | 1,149.20       | 13.61                    | 14.72                              | 148.82   | 36177 |
| 36178 | 200 mm diameter chilled water pipe c/w 75 mm thick insulation .....                          | 1,444.60       | 20.44                    | 21.98                              | 192.73   | 36178 |
| 36179 | 250 mm diameter chilled water pipe c/w 75 mm thick insulation .....                          | 1,782.16       | 27.18                    | 30.24                              | 242.74   | 36179 |
| 36180 | 300 mm diameter chilled water pipe c/w 75 mm thick insulation .....                          | 2,040.43       | 33.94                    | 38.34                              | 292.52   | 36180 |
|       | Pre-insulated chilled water pipe c/w galvanized iron metal jacket for indoor conditions : -  |                |                          |                                    |          |       |
|       | <i>Per linear metre</i>  |                |                          |                                    |          |       |
| 36181 | 25 mm diameter chilled water pipe c/w 25 mm thick insulation .....                           | 172.69         | 3.56                     | 4.09                               | 52.47    | 36181 |
| 36182 | 32 mm diameter chilled water pipe c/w 25 mm thick insulation .....                           | 194.27         | 3.95                     | 4.44                               | 57.04    | 36182 |
| 36183 | 40 mm diameter chilled water pipe c/w 25 mm thick insulation .....                           | 211.26         | 4.44                     | 4.97                               | 60.99    | 36183 |
| 36184 | 50 mm diameter chilled water pipe c/w 40 mm thick insulation .....                           | 315.85         | 4.84                     | 5.43                               | 65.43    | 36184 |
| 36185 | 65 mm diameter chilled water pipe c/w 40 mm thick insulation .....                           | 365.01         | 5.32                     | 5.86                               | 75.63    | 36185 |
| 36186 | 80 mm diameter chilled water pipe c/w 40 mm thick insulation .....                           | 402.89         | 6.16                     | 6.77                               | 86.66    | 36186 |
| 36187 | 100 mm diameter chilled water pipe c/w 40 mm thick insulation .....                          | 533.11         | 7.26                     | 7.89                               | 97.23    | 36187 |
| 36188 | 125 mm diameter chilled water pipe c/w 40 mm thick insulation .....                          | 611.30         | 8.28                     | 8.85                               | 112.13   | 36188 |
| 36189 | 150 mm diameter chilled water pipe c/w 50 mm thick insulation .....                          | 797.42         | 13.61                    | 14.72                              | 148.25   | 36189 |
| 36190 | 200 mm diameter chilled water pipe c/w 50 mm thick insulation .....                          | 996.65         | 20.44                    | 21.98                              | 192.70   | 36190 |
| 36191 | 250 mm diameter chilled water pipe c/w 50 mm thick insulation .....                          | 1,246.75       | 27.18                    | 30.24                              | 242.69   | 36191 |
| 36192 | 300 mm diameter chilled water pipe c/w 50 mm thick insulation .....                          | 1,493.26       | 33.94                    | 38.34                              | 291.66   | 36192 |

| Item   |                     | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only | Item  |
|--|---------------------|----------------|--------------------------|------------------------------------|----------|-------|
|  |                     | A \$           | B \$                     | C \$                               | D \$     |       |
| <b>VALVE, PIPE WORKS AND ACCESSORIES (CONT'D)</b>  |                     |                |                          |                                    |          |       |
| Condensate drain   |                     |                |                          |                                    |          |       |
| GI drain pipe c/w 50 mm phenolic foam insulation, cement plaster, painting & finish of pipe diameter : - |                     |                |                          |                                    |          |       |
| <i>Per linear metre</i>  |                     |                |                          |                                    |          |       |
| 36193  | 20 mm or below..... | 285.99         | 4.71                     | 5.43                               | 69.12    | 36193 |
| 36194  | 25 mm.....          | 334.08         | 5.33                     | 5.92                               | 75.07    | 36194 |
| 36195  | 32 mm.....          | 374.23         | 5.92                     | 6.66                               | 79.95    | 36195 |
| 36196  | 40 mm.....          | 402.25         | 6.51                     | 7.25                               | 85.86    | 36196 |
| 36197  | 50 mm.....          | 488.06         | 7.11                     | 7.73                               | 99.46    | 36197 |
| 36198  | 65 mm.....          | 582.36         | 8.39                     | 9.08                               | 113.75   | 36198 |
| 36199  | 80 mm.....          | 675.93         | 9.80                     | 10.52                              | 128.21   | 36199 |
| GI drain pipe c/w 50 mm polystyrene insulation, cement plaster, painting & finish of pipe diameter : -   |                     |                |                          |                                    |          |       |
| <i>Per linear metre</i>  |                     |                |                          |                                    |          |       |
| 36200  | 20 mm or below..... | 175.22         | 4.71                     | 5.43                               | 69.12    | 36200 |
| 36201  | 25 mm.....          | 203.74         | 5.33                     | 5.92                               | 75.07    | 36201 |
| 36202  | 32 mm.....          | 226.95         | 5.92                     | 6.66                               | 79.95    | 36202 |
| 36203  | 40 mm.....          | 243.56         | 6.51                     | 7.25                               | 85.86    | 36203 |
| 36204  | 50 mm.....          | 297.11         | 7.11                     | 7.73                               | 99.46    | 36204 |
| 36205  | 65 mm.....          | 347.31         | 8.39                     | 9.08                               | 113.75   | 36205 |
| 36206  | 80 mm.....          | 409.64         | 9.80                     | 10.52                              | 128.21   | 36206 |
| GI drain pipe c/w 20 mm flexible closed cell elastomeric insulation and finish of pipe diameter : -      |                     |                |                          |                                    |          |       |
| <i>Per linear metre</i>  |                     |                |                          |                                    |          |       |
| 36207  | 20 mm or below..... | 149.12         | 4.71                     | 5.43                               | 69.12    | 36207 |
| 36208  | 25 mm.....          | 178.89         | 5.33                     | 5.92                               | 75.07    | 36208 |
| 36209  | 32 mm.....          | 202.94         | 5.92                     | 6.66                               | 79.95    | 36209 |
| 36210  | 40 mm.....          | 218.95         | 6.51                     | 7.25                               | 85.86    | 36210 |
| 36211  | 50 mm.....          | 272.12         | 7.11                     | 7.73                               | 99.46    | 36211 |

| Item  |   | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only | Item  |
|-------|---|----------------|--------------------------|------------------------------------|----------|-------|
|       | <b>VALVE, PIPE WORKS AND ACCESSORIES (CONT'D)</b>   |                |                          |                                    |          |       |
|       | Condensate drain (Cont'd)   |                |                          |                                    |          |       |
|       | PVC drain pipe c/w 20 mm flexible closed cell elastomeric insulation and finish of pipe diameter :- |                |                          |                                    |          |       |
|       | <i>Per linear metre</i>   | A \$           | B \$                     | C \$                               | D \$     |       |
| 36212 | 20 mm or below.....   | 132.16         | 4.81                     | 5.55                               | 70.88    | 36212 |
| 36213 | 25 mm.....  | 145.74         | 5.45                     | 6.06                               | 76.98    | 36213 |
| 36214 | 32 mm.....  | 159.19         | 6.06                     | 6.80                               | 82.04    | 36214 |
|       | PVC flexible drain pipe of pipe diameter :-   |                |                          |                                    |          |       |
|       | <i>Per linear metre</i>   |                |                          |                                    |          |       |
| 36215 | 20 mm or below.....   | 26.62          | 3.63                     | 3.97                               | 17.91    | 36215 |
| 36216 | 25 mm.....  | 37.53          | 4.81                     | 5.25                               | 25.12    | 36216 |
| 36217 | 32 mm.....  | 41.88          | 5.45                     | 5.76                               | 27.79    | 36217 |
|       | GI drain pan c/w 50 mm phenolic foam insulation of size :-  |                |                          |                                    |          |       |
|       | <i>Each</i>   |                |                          |                                    |          |       |
| 36218 | up to 0.55 m <sup>2</sup> .....   | 326.69         | 5.47                     | 5.76                               | 39.66    | 36218 |
| 36219 | 0.55 - 0.73 m <sup>2</sup> .....  | 463.67         | 11.71                    | 16.90                              | 59.47    | 36219 |
| 36220 | 0.73 - 0.9 m <sup>2</sup> .....   | 656.23         | 25.10                    | 30.44                              | 78.92    | 36220 |
|       | uPVC pipework of diameter :-  |                |                          |                                    |          |       |
|       | <i>Per linear metre</i>   |                |                          |                                    |          |       |
| 36221 | 25 mm or below.....   | 67.86          | 3.18                     | 3.73                               | 24.20    | 36221 |
| 36222 | 32 mm.....  | 80.39          | 3.60                     | 4.12                               | 25.46    | 36222 |
| 36223 | 40 mm.....  | 73.76          | 3.97                     | 4.55                               | 27.25    | 36223 |
| 36224 | 50 mm.....  | 132.84         | 4.42                     | 4.93                               | 31.33    | 36224 |

| Item  |                     |                      |                                      |  | Item        |       |
|---|---------------------|----------------------|--------------------------------------|--|-------------|-------|
| <b>VALVE, PIPE WORKS AND ACCESSORIES (CONT'D)</b> |                     |                      |                                      |  |             |       |
| Condensate drain (Cont'd)                         |                     |                      |                                      |  |             |       |
| uPVC pipework of diameter : - (Cont'd)            |                     |                      |                                      |  |             |       |
| <i>Per linear metre</i>                           |                     |                      |                                      |  |             |       |
|   |                     | Supply<br>and<br>fix | Take<br>down<br>and<br>clear<br>away | Take<br>down<br>and set<br>aside for<br>re-use | Fix<br>only |       |
|   |                     | A<br>\$              | B<br>\$                              | C<br>\$  | D<br>\$     |       |
| 36225   | 65 mm.....          | 177.70               | 5.07                                 | 5.66   | 35.71       | 36225 |
| 36226   | 80 mm.....          | 234.93               | 5.98                                 | 6.56   | 40.36       | 36226 |
| 36227   | 100 mm.....         | 263.14               | 6.75                                 | 7.48   | 51.81       | 36227 |
| 36228   | 150 mm.....         | 383.08               | 11.14                                | 12.18  | 68.89       | 36228 |
| Chilled water valves                              |                     |                      |                                      |  |             |       |
| Chilled water gate valves :-                      |                     |                      |                                      |  |             |       |
| <i>Each</i>                                       |                     |                      |                                      |  |             |       |
| 36229   | 20 mm or below..... | 134.39               | 17.09                                | 21.48  | 27.07       | 36229 |
| 36230   | 25 mm.....          | 169.64               | 17.42                                | 21.96  | 29.45       | 36230 |
| 36231   | 32 mm.....          | 233.07               | 17.72                                | 22.25  | 31.67       | 36231 |
| 36232   | 40 mm.....          | 296.07               | 18.31                                | 22.80  | 34.00       | 36232 |
| 36233   | 50 mm.....          | 481.78               | 19.22                                | 23.54  | 36.28       | 36233 |
| 36234   | 65 mm.....          | 959.63               | 20.27                                | 24.61  | 38.57       | 36234 |
| 36235   | 80 mm.....          | 1,120.93             | 21.34                                | 25.96  | 40.44       | 36235 |
| 36236   | 100 mm.....         | 1,346.52             | 24.58                                | 29.38  | 45.52       | 36236 |
| 36237   | 150 mm.....         | 2,395.69             | 32.53                                | 38.32  | 58.81       | 36237 |
| Chilled water check valves :-                     |                     |                      |                                      |  |             |       |
| <i>Each</i>                                       |                     |                      |                                      |  |             |       |
| 36238   | 20 mm or below..... | 212.21               | 17.09                                | 21.48  | 27.07       | 36238 |
| 36239   | 25 mm.....          | 233.49               | 17.42                                | 21.96  | 29.45       | 36239 |
| 36240   | 32 mm.....          | 274.23               | 17.72                                | 22.25  | 31.67       | 36240 |
| 36241   | 40 mm.....          | 347.26               | 18.31                                | 22.80  | 34.00       | 36241 |
| 36242   | 50 mm.....          | 455.58               | 19.22                                | 23.54  | 36.28       | 36242 |

| Item  |                     |                      |                                      |  | Item        |       |
|---|---------------------|----------------------|--------------------------------------|--|-------------|-------|
| <b>VALVE, PIPE WORKS AND ACCESSORIES (CONT'D)</b> |                     |                      |                                      |  |             |       |
| Chilled water valves (Cont'd)                     |                     |                      |                                      |  |             |       |
| Chilled water check valves : - (Cont'd)           |                     |                      |                                      |  |             |       |
|   |                     | Supply<br>and<br>fix | Take<br>down<br>and<br>clear<br>away | Take<br>down<br>and set<br>aside for<br>re-use | Fix<br>only |       |
|   | <i>Each</i>         | A<br>\$              | B<br>\$                              | C<br>\$  | D<br>\$     |       |
| 36243   | 65 mm.....          | 490.59               | 20.27                                | 24.61  | 38.57       | 36243 |
| 36244   | 80 mm.....          | 592.39               | 21.34                                | 25.96  | 40.44       | 36244 |
| 36245   | 100 mm.....         | 974.30               | 24.58                                | 29.38  | 45.52       | 36245 |
| 36246   | 150 mm.....         | 1,621.34             | 32.53                                | 38.32  | 58.81       | 36246 |
| Chilled water globe valves : -                    |                     |                      |                                      |  |             |       |
|   | <i>Each</i>         |                      |                                      |  |             |       |
| 36247   | 20 mm or below..... | 281.67               | 17.09                                | 21.48  | 27.07       | 36247 |
| 36248   | 25 mm.....          | 334.45               | 17.42                                | 21.96  | 29.45       | 36248 |
| 36249   | 32 mm.....          | 343.11               | 17.72                                | 22.25  | 31.67       | 36249 |
| 36250   | 40 mm.....          | 449.70               | 18.31                                | 22.80  | 34.00       | 36250 |
| 36251   | 50 mm.....          | 651.51               | 19.22                                | 23.54  | 36.28       | 36251 |
| 36252   | 65 mm.....          | 788.92               | 20.27                                | 24.61  | 38.57       | 36252 |
| 36253   | 80 mm.....          | 1,021.09             | 21.34                                | 25.96  | 40.44       | 36253 |
| 36254   | 100 mm.....         | 1,347.98             | 24.58                                | 29.38  | 45.52       | 36254 |
| 36255   | 150 mm.....         | 2,427.33             | 32.53                                | 38.32  | 58.81       | 36255 |
| Pressure reducing valve : -                       |                     |                      |                                      |  |             |       |
|   | <i>Each</i>         |                      |                                      |  |             |       |
| 36256   | 15 mm or below..... | 425.77               | 13.44                                | 16.78  | 19.65       | 36256 |
| 36257   | 20 mm.....          | 528.17               | 13.89                                | 17.19  | 22.60       | 36257 |
| 36258   | 25 mm.....          | 618.60               | 14.27                                | 17.65  | 24.15       | 36258 |
| 36259   | 32 mm.....          | 766.29               | 14.64                                | 17.99  | 26.40       | 36259 |
| 36260   | 40 mm.....          | 905.85               | 14.91                                | 18.40  | 28.60       | 36260 |

| Item  |   |                |                          |                                    | Item     |       |
|-------|---|----------------|--------------------------|------------------------------------|----------|-------|
|       | <b>VALVE, PIPE WORKS AND ACCESSORIES (CONT'D)</b>                     |                |                          |                                    |          |       |
|       | Chilled water valves (Cont'd)   |                |                          |                                    |          |       |
|       | Balancing valve : -   |                |                          |                                    |          |       |
|       | <i>Each</i>   |                |                          |                                    |          |       |
|       |   | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only |       |
|       |   | A \$           | B \$                     | C \$                               | D \$     |       |
| 36261 | 20 mm or below.....   | 322.72         | 12.80                    | 16.24                              | 22.45    | 36261 |
| 36262 | 25 mm.....  | 346.13         | 14.07                    | 17.31                              | 24.39    | 36262 |
| 36263 | 32 mm.....  | 371.95         | 14.42                    | 17.65                              | 26.90    | 36263 |
| 36264 | 40 mm.....  | 445.23         | 14.99                    | 18.16                              | 28.50    | 36264 |
| 36265 | 50 mm.....  | 934.83         | 15.30                    | 18.83                              | 30.39    | 36265 |
| 36266 | 65 mm.....  | 1,465.76       | 16.34                    | 19.62                              | 32.42    | 36266 |
| 36267 | 80 mm.....  | 2,612.98       | 17.29                    | 20.78                              | 33.94    | 36267 |
| 36268 | 100 mm.....   | 4,062.11       | 20.02                    | 23.14                              | 38.22    | 36268 |
| 36269 | 150 mm.....   | 6,095.21       | 27.29                    | 40.11                              | 61.48    | 36269 |
|       | Chilled water valves c/w 50 mm phenolic foam insulation               |                |                          |                                    |          |       |
|       | Chilled water gate valves c/w filled galvanized steel split boxes : - |                |                          |                                    |          |       |
|       | <i>Each</i>   |                |                          |                                    |          |       |
| 36270 | n.e. 20 mm.....   | 174.84         | 21.67                    | 26.55                              | 32.20    | 36270 |
| 36271 | 25 mm.....  | 210.82         | 22.04                    | 27.18                              | 35.24    | 36271 |
| 36272 | 32 mm.....  | 274.76         | 22.40                    | 27.57                              | 37.89    | 36272 |
| 36273 | 40 mm.....  | 338.69         | 22.91                    | 27.94                              | 40.88    | 36273 |
| 36274 | 50 mm.....  | 527.05         | 23.88                    | 28.85                              | 43.65    | 36274 |
| 36275 | 65 mm.....  | 1,011.60       | 25.22                    | 29.73                              | 46.49    | 36275 |
| 36276 | 80 mm.....  | 1,175.18       | 26.54                    | 31.62                              | 49.34    | 36276 |
| 36277 | 100 mm.....   | 1,403.33       | 28.02                    | 33.04                              | 51.17    | 36277 |
| 36278 | 150 mm.....   | 2,466.03       | 35.53                    | 40.65                              | 62.36    | 36278 |

| Item  |   |                |                          |                                    | Item     |       |
|-------|---|----------------|--------------------------|------------------------------------|----------|-------|
|       | <b>VALVE, PIPE WORKS AND ACCESSORIES (CONT'D)</b>                     |                |                          |                                    |          |       |
|       | Chilled water valves c/w 50 mm phenolic foam insulation (Cont'd)      |                |                          |                                    |          |       |
|       | Chilled water check valves c/w filled galvanized steel split boxes :- |                |                          |                                    |          |       |
|       | <i>Each</i>   |                |                          |                                    |          |       |
|       |   | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only |       |
|       |   | A \$           | B \$                     | C \$                               | D \$     |       |
| 36279 | n.e. 20 mm .....  | 255.35         | 21.67                    | 26.55                              | 32.20    | 36279 |
| 36280 | 25 mm.....  | 276.43         | 22.04                    | 27.18                              | 35.24    | 36280 |
| 36281 | 32 mm.....  | 317.19         | 22.40                    | 27.57                              | 37.89    | 36281 |
| 36282 | 40 mm.....  | 390.98         | 22.91                    | 27.94                              | 40.88    | 36282 |
| 36283 | 50 mm.....  | 500.34         | 23.88                    | 28.85                              | 43.65    | 36283 |
| 36284 | 65 mm.....  | 536.07         | 25.22                    | 29.73                              | 46.49    | 36284 |
| 36285 | 80 mm.....  | 639.39         | 26.54                    | 31.62                              | 49.34    | 36285 |
| 36286 | 100 mm.....   | 1,026.77       | 28.02                    | 33.04                              | 51.17    | 36286 |
| 36287 | 150 mm.....   | 1,682.18       | 35.53                    | 40.65                              | 62.36    | 36287 |
|       | Chilled water globe valves c/w filled galvanized steel split boxes :- |                |                          |                                    |          |       |
|       | <i>Each</i>   |                |                          |                                    |          |       |
| 36288 | n.e. 20 mm .....  | 326.80         | 21.67                    | 26.55                              | 32.20    | 36288 |
| 36289 | 25 mm.....  | 377.29         | 22.04                    | 27.18                              | 35.24    | 36289 |
| 36290 | 32 mm.....  | 386.39         | 22.40                    | 27.57                              | 37.89    | 36290 |
| 36291 | 40 mm.....  | 494.46         | 22.91                    | 27.94                              | 40.88    | 36291 |
| 36292 | 50 mm.....  | 699.30         | 23.88                    | 28.85                              | 43.65    | 36292 |
| 36293 | 65 mm.....  | 838.60         | 25.22                    | 29.73                              | 46.49    | 36293 |
| 36294 | 80 mm.....  | 1,074.23       | 26.54                    | 31.62                              | 49.34    | 36294 |
| 36295 | 100 mm.....   | 1,405.29       | 28.02                    | 33.04                              | 51.17    | 36295 |
| 36296 | 150 mm.....   | 2,500.26       | 35.53                    | 40.65                              | 62.36    | 36296 |

| Item   |                  | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only | Item  |
|--|------------------|----------------|--------------------------|------------------------------------|----------|-------|
|  |                  | A \$           | B \$                     | C \$                               | D \$     |       |
| <b>VALVE, PIPE WORKS AND ACCESSORIES (CONT'D)</b>  |                  |                |                          |                                    |          |       |
| Chilled water valves c/w 50 mm phenolic foam insulation (Cont'd)   |                  |                |                          |                                    |          |       |
| Chilled water 3 way modulating control valve c/w electric motors couplings, unions, adapters and filled galvanized steel split box :-    |                  |                |                          |                                    |          |       |
| <i>Each</i>  |                  |                |                          |                                    |          |       |
| 36297  | n.e. 20 mm ..... | 382.32         | 17.34                    | 21.17                              | 27.47    | 36297 |
| 36298  | 25 mm.....       | 482.66         | 17.84                    | 21.80                              | 29.80    | 36298 |
| 36299  | 32 mm.....       | 851.01         | 27.21                    | 33.35                              | 45.98    | 36299 |
| 36300  | 40 mm.....       | 1,390.78       | 27.71                    | 33.85                              | 49.63    | 36300 |
| 36301  | 50 mm.....       | 1,818.77       | 28.82                    | 35.05                              | 53.18    | 36301 |
| 36302  | 65 mm.....       | 4,068.86       | 29.47                    | 36.21                              | 55.58    | 36302 |
| 36303  | 80 mm.....       | 5,886.63       | 32.38                    | 38.57                              | 60.33    | 36303 |
| 36304  | 100 mm.....      | 8,302.85       | 34.18                    | 40.36                              | 62.87    | 36304 |
| 36305  | 150 mm.....      | 11,132.94      | 35.49                    | 42.97                              | 67.77    | 36305 |
| Chilled water 3 way, 2 position electric control valve c/w motor, couplings, unions, adapters and filled galvanized steel split boxes :- |                  |                |                          |                                    |          |       |
| <i>Each</i>  |                  |                |                          |                                    |          |       |
| 36306  | n.e. 20 mm ..... | 338.31         | 17.34                    | 21.17                              | 27.47    | 36306 |
| 36307  | 25 mm.....       | 436.84         | 17.84                    | 21.80                              | 29.80    | 36307 |
| 36308  | 32 mm.....       | 695.51         | 27.21                    | 33.35                              | 45.98    | 36308 |
| 36309  | 40 mm.....       | 1,031.06       | 27.71                    | 33.85                              | 49.63    | 36309 |
| 36310  | 50 mm.....       | 1,471.82       | 28.82                    | 35.05                              | 53.18    | 36310 |
| 36311  | 65 mm.....       | 3,276.35       | 29.47                    | 36.21                              | 55.58    | 36311 |
| 36312  | 80 mm.....       | 5,122.47       | 32.38                    | 38.57                              | 60.33    | 36312 |
| 36313  | 100 mm.....      | 7,565.78       | 34.18                    | 40.36                              | 62.87    | 36313 |
| 36314  | 150 mm.....      | 9,427.60       | 35.49                    | 42.97                              | 67.77    | 36314 |



| Item  |  | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only | Item  |
|---|--|----------------|--------------------------|------------------------------------|----------|-------|
|   |  | A \$           | B \$                     | C \$                               | D \$     |       |
| <b>VALVE, PIPE WORKS AND ACCESSORIES (CONT'D)</b> |  |                |                          |                                    |          |       |
|   | Chilled water valves c/w 50 mm phenolic foam insulation (Cont'd)   |                |                          |                                    |          |       |
|   | Chilled water 2 way electric operated solenoid valve c/w unions, adapters, filled galvanized steel split box, insulation and finish :- |                |                          |                                    |          |       |
|   | <i>Each</i>  |                |                          |                                    |          |       |
| 36315   | n.e. 20 mm .....   | 342.75         | 27.78                    | 33.70                              | 40.13    | 36315 |
| 36316   | 25 mm.....   | 507.66         | 28.18                    | 34.15                              | 42.99    | 36316 |
| 36317   | 32 mm.....   | 618.70         | 25.19                    | 30.83                              | 44.53    | 36317 |
| 36318   | 40 mm.....   | 917.17         | 25.74                    | 31.36                              | 49.63    | 36318 |
| 36319   | 50 mm.....   | 1,272.17       | 26.87                    | 32.42                              | 52.52    | 36319 |
| 36320   | 65 mm.....   | 2,785.36       | 27.40                    | 33.49                              | 53.97    | 36320 |
| 36321   | 80 mm.....   | 4,364.85       | 29.99                    | 35.54                              | 58.68    | 36321 |
| 36322   | 100 mm.....  | 6,533.53       | 31.43                    | 37.14                              | 61.05    | 36322 |
| 36323   | 150 mm.....  | 9,801.34       | 37.47                    | 44.21                              | 72.88    | 36323 |
|   | Chilled water double regulating valve c/w metering station, insulation and finish, filled galvanized iron split boxes :-               |                |                          |                                    |          |       |
|   | <i>Each</i>  |                |                          |                                    |          |       |
| 36324   | 40 mm.....   | 798.42         | 25.74                    | 31.36                              | 49.63    | 36324 |
| 36325   | 50 mm.....   | 1,055.80       | 26.87                    | 32.42                              | 52.52    | 36325 |
| 36326   | 65 mm.....   | 2,213.52       | 27.40                    | 33.49                              | 53.97    | 36326 |
| 36327   | 80 mm.....   | 3,408.57       | 29.99                    | 35.54                              | 58.68    | 36327 |
| 36328   | 100 mm.....  | 3,588.61       | 31.43                    | 37.14                              | 61.05    | 36328 |
| 36329   | 150 mm.....  | 4,232.01       | 35.92                    | 40.65                              | 65.56    | 36329 |
|   | Pressure reducing valve :-   |                |                          |                                    |          |       |
|   | <i>Each</i>  |                |                          |                                    |          |       |
| 36330   | 15 mm or below.....  | 514.29         | 14.31                    | 17.67                              | 21.62    | 36330 |
| 36331   | 20 mm.....   | 639.03         | 14.62                    | 18.04                              | 25.12    | 36331 |
| 36332   | 25 mm.....   | 744.45         | 14.92                    | 18.35                              | 26.49    | 36332 |
| 36333   | 32 mm.....   | 929.67         | 15.30                    | 18.87                              | 29.31    | 36333 |
| 36334   | 40 mm.....   | 1,100.33       | 15.67                    | 19.18                              | 31.43    | 36334 |

| Item   |   | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only | Item  |
|--|---|----------------|--------------------------|------------------------------------|----------|-------|
|  |   | A<br>\$        | B<br>\$                  | C<br>\$                            | D<br>\$  |       |
| <b>VALVE, PIPE WORKS AND ACCESSORIES (CONT'D)</b>                |   |                |                          |                                    |          |       |
| Chilled water valves c/w 50 mm phenolic foam insulation (Cont'd) |   |                |                          |                                    |          |       |
| Balancing valve : -  |   |                |                          |                                    |          |       |
| <i>Each</i>  |   |                |                          |                                    |          |       |
| 36335  | n.e. 20 mm .....  | 332.07         | 14.16                    | 17.24                              | 23.67    | 36335 |
| 36336  | 25 mm.....  | 356.88         | 14.61                    | 17.92                              | 25.54    | 36336 |
| 36337  | 32 mm.....  | 454.76         | 17.87                    | 21.96                              | 32.70    | 36337 |
| 36338  | 40 mm.....  | 503.61         | 18.28                    | 22.33                              | 35.14    | 36338 |
| 36339  | 50 mm.....  | 598.24         | 19.06                    | 23.06                              | 37.50    | 36339 |
| 36340  | 65 mm.....  | 1,207.23       | 19.44                    | 23.79                              | 39.10    | 36340 |
| 36341  | 80 mm.....  | 1,926.36       | 21.32                    | 25.31                              | 42.39    | 36341 |
| 36342  | 100 mm.....   | 3,509.28       | 22.41                    | 26.45                              | 44.03    | 36342 |
| 36343  | 150 mm.....   | 5,394.83       | 28.52                    | 32.66                              | 54.43    | 36343 |
| Chilled water pipe work accessories : -                          |   |                |                          |                                    |          |       |
| <i>Each</i>  |   |                |                          |                                    |          |       |
| 36344  | Water flow switch.....  | 591.07         | 3.75                     | 5.40                               | 9.91     | 36344 |
| 36345  | Direct reading type electromagnetic/ultrasonic water flow meter c/w flow sensor, an integral signal converter/transmitter and a digital display unit..... | 5,906.92       | 28.23                    | 29.02                              | 52.58    | 36345 |
| 36346  | Pressure gauge & cock.....  | 154.22         | 3.75                     | 5.40                               | 9.91     | 36346 |
| 36347  | Thermometer & stainless steel thermometer well.....   | 2,003.24       | 13.43                    | 16.24                              | 35.32    | 36347 |
| 36348  | Low temp cutout thermostat with manual reset.....   | 240.57         | 3.75                     | 5.40                               | 9.91     | 36348 |
| Gate valve for sea water application 316 stainless steel : -     |   |                |                          |                                    |          |       |
| <i>Each</i>  |   |                |                          |                                    |          |       |
| 36349  | 25 mm.....  | 699.32         | 17.44                    | 21.45                              | 29.84    | 36349 |
| 36350  | 32 mm .....   | 743.68         | 17.87                    | 21.96                              | 32.70    | 36350 |
| 36351  | 40 mm.....  | 817.08         | 18.28                    | 22.33                              | 35.14    | 36351 |
| 36352  | 50 mm.....  | 894.25         | 19.06                    | 23.06                              | 37.50    | 36352 |
| 36353  | 65 mm.....  | 992.14         | 19.44                    | 23.79                              | 39.10    | 36353 |

| Item  |             | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only | Item  |
|---|-------------|----------------|--------------------------|------------------------------------|----------|-------|
|   |             | A              | B                        | C                                  | D        |       |
|   |             | \$             | \$                       | \$                                 | \$       |       |
| <b>VALVE, PIPE WORKS AND ACCESSORIES (CONT'D)</b>                     |             |                |                          |                                    |          |       |
| Gate valve for sea water application 316 stainless steel : - (Cont'd) |             |                |                          |                                    |          |       |
|   | <i>Each</i> |                |                          |                                    |          |       |
| 36354   | 80 mm.....  | 1,153.25       | 21.32                    | 25.31                              | 42.39    | 36354 |
| 36355   | 100 mm..... | 1,598.08       | 22.41                    | 26.45                              | 44.03    | 36355 |
| 36356   | 125 mm..... | 2,088.77       | 25.12                    | 28.40                              | 48.43    | 36356 |
| 36357   | 150 mm..... | 2,578.45       | 28.52                    | 32.66                              | 54.43    | 36357 |
| 36358   | 200 mm..... | 4,510.58       | 34.18                    | 38.35                              | 62.77    | 36358 |
| Globe valve for sea water application 316 stainless steel : -         |             |                |                          |                                    |          |       |
|   | <i>Each</i> |                |                          |                                    |          |       |
| 36359   | 25 mm.....  | 514.68         | 17.44                    | 21.45                              | 29.84    | 36359 |
| 36360   | 32 mm ..... | 621.03         | 17.87                    | 21.96                              | 32.70    | 36360 |
| 36361   | 40 mm.....  | 771.33         | 18.28                    | 22.33                              | 35.14    | 36361 |
| 36362   | 50 mm.....  | 930.96         | 19.06                    | 23.06                              | 37.50    | 36362 |
| 36363   | 65 mm.....  | 1,172.95       | 19.44                    | 23.79                              | 39.10    | 36363 |
| 36364   | 80 mm.....  | 1,398.27       | 21.32                    | 25.31                              | 42.39    | 36364 |
| 36365   | 100 mm..... | 1,862.41       | 22.41                    | 26.45                              | 44.03    | 36365 |
| 36366   | 125 mm..... | 2,459.82       | 25.12                    | 28.40                              | 48.43    | 36366 |
| 36367   | 150 mm..... | 3,765.30       | 28.52                    | 32.66                              | 54.43    | 36367 |
| 36368   | 200 mm..... | 6,727.91       | 34.18                    | 38.35                              | 62.77    | 36368 |
| Swing check valve for sea water application 316 stainless steel : -   |             |                |                          |                                    |          |       |
|   | <i>Each</i> |                |                          |                                    |          |       |
| 36369   | 25 mm.....  | 367.69         | 17.44                    | 21.45                              | 29.84    | 36369 |
| 36370   | 32 mm ..... | 411.04         | 17.87                    | 21.96                              | 32.70    | 36370 |
| 36371   | 40 mm.....  | 516.11         | 18.28                    | 22.33                              | 35.14    | 36371 |
| 36372   | 50 mm.....  | 640.34         | 19.06                    | 23.06                              | 37.50    | 36372 |
| 36373   | 65 mm.....  | 841.69         | 19.44                    | 23.79                              | 39.10    | 36373 |

| Item  |   |                      |                                      |  | Item        |       |
|-------|---|----------------------|--------------------------------------|--|-------------|-------|
|       | <b>VALVE, PIPE WORKS AND ACCESSORIES (CONT'D)</b>                           |                      |                                      |  |             |       |
|       |   | Supply<br>and<br>fix | Take<br>down<br>and<br>clear<br>away | Take<br>down<br>and set<br>aside for<br>re-use | Fix<br>only |       |
|       |   | A<br>\$              | B<br>\$                              | C<br>\$  | D<br>\$     |       |
|       | Swing check valve for sea water application 316 stainless steel :- (Cont'd) |                      |                                      |  |             |       |
|       | <i>Each</i>   |                      |                                      |  |             |       |
| 36374 | 80 mm.....  | 987.50               | 21.32                                | 25.31  | 42.39       | 36374 |
| 36375 | 100 mm.....   | 1,407.81             | 22.41                                | 26.45  | 44.03       | 36375 |
| 36376 | 150 mm.....   | 2,454.21             | 28.52                                | 32.66  | 54.43       | 36376 |
| 36377 | 200 mm.....   | 4,302.78             | 34.18                                | 38.35  | 62.77       | 36377 |
|       | Drain cock :-   |                      |                                      |  |             |       |
|       | <i>Each</i>   |                      |                                      |  |             |       |
| 36378 | 25 mm diameter or below.....  | 175.34               | 17.44                                | 21.45  | 29.84       | 36378 |
| 36379 | 50 mm diameter.....   | 214.31               | 19.06                                | 23.06  | 37.50       | 36379 |
|       | Strainer :-   |                      |                                      |  |             |       |
|       | <i>Each</i>   |                      |                                      |  |             |       |
| 36380 | 32 mm diameter or below.....  | 195.33               | 15.86                                | 19.49  | 28.82       | 36380 |
| 36381 | 50 mm diameter.....   | 228.62               | 16.92                                | 20.46  | 33.06       | 36381 |
| 36382 | 80 mm diameter.....   | 272.99               | 18.91                                | 22.46  | 37.38       | 36382 |
| 36383 | 100 mm diameter.....  | 297.76               | 19.89                                | 23.49  | 38.85       | 36383 |
| 36384 | 125 mm diameter.....  | 311.07               | 21.38                                | 24.83  | 41.37       | 36384 |
| 36385 | 150 mm diameter.....  | 337.09               | 25.31                                | 28.98  | 47.97       | 36385 |
|       | Pipework vibration isolation  |                      |                                      |  |             |       |
|       | Pipe flexible rubber connector :-   |                      |                                      |  |             |       |
|       | <i>Each</i>   |                      |                                      |  |             |       |
| 36386 | 50 mm.....  | 369.10               | 16.92                                | 20.46  | 33.06       | 36386 |
| 36387 | 65 mm.....  | 485.69               | 17.24                                | 21.11  | 34.49       | 36387 |
| 36388 | 80 mm.....  | 553.58               | 18.91                                | 22.46  | 37.38       | 36388 |
| 36389 | 100 mm.....   | 606.44               | 19.89                                | 23.49  | 38.85       | 36389 |
| 36390 | 125 mm.....   | 929.48               | 22.60                                | 24.83  | 43.29       | 36390 |
| 36391 | 150 mm.....   | 1,713.40             | 25.31                                | 28.98  | 47.97       | 36391 |

| Item  |                      |                                      |  |             | Item  |
|---|----------------------|--------------------------------------|--|-------------|-------|
| <b>VALVE, PIPE WORKS AND ACCESSORIES (CONT'D)</b>                   |                      |                                      |  |             |       |
| Pipework vibration isolation (Cont'd)                               |                      |                                      |  |             |       |
| Pipe flexible metallic hose : -                                     |                      |                                      |  |             |       |
| <i>Per linear metre</i>   |                      |                                      |  |             |       |
|   | Supply<br>and<br>fix | Take<br>down<br>and<br>clear<br>away | Take<br>down<br>and set<br>aside for<br>re-use | Fix<br>only |       |
|   | A<br>\$              | B<br>\$                              | C<br>\$  | D<br>\$     |       |
| 36392 50 mm.....  | 454.35               | 0.84                                 | 0.93   | 10.79       | 36392 |
| 36393 65 mm.....  | 559.32               | 0.96                                 | 1.13   | 12.27       | 36393 |
| 36394 80 mm.....  | 626.16               | 1.13                                 | 1.21   | 14.11       | 36394 |
| 36395 100 mm.....   | 683.81               | 1.21                                 | 1.29   | 17.97       | 36395 |
| 36396 125 mm.....   | 1,026.18             | 1.55                                 | 1.71   | 20.79       | 36396 |
| 36397 150 mm.....   | 1,761.41             | 1.91                                 | 2.08   | 23.69       | 36397 |
| Sundries : -  |                      |                                      |  |             |       |
| <i>Each</i>   |                      |                                      |  |             |       |
| 36398 Chiller sequence controller including transmitter, etc.....   | 559.64               | 9.07                                 | 10.48  | 18.46       | 36398 |
| 36399 Water flow sensor c/w all necessary mounting accessories..... | 449.32               | 7.33                                 | 8.35   | 14.76       | 36399 |
| 36400 Temperature sensor.....                                       | 192.53               | 7.33                                 | 8.35   | 15.91       | 36400 |
| 36401 Sail switch.....  | 209.70               | 6.60                                 | 7.94   | 13.84       | 36401 |
| 36402 Electromagnetic flow meter c/w digital display unit.....      | 3,253.54             | 62.95                                | 90.56  | 195.73      | 36402 |
| 36403 Chemical storage tank.....                                    | 5,136.94             | 54.94                                | 84.07  | 145.60      | 36403 |
| 36404 Chemical feed pump.....                                       | 3,560.97             | 47.36                                | 67.01  | 131.90      | 36404 |
| 36405 Manual air vent.....  | 81.35                | 11.87                                | 13.46  | 24.58       | 36405 |
| 36406 Automatic air vent.....                                       | 131.51               | 12.92                                | 14.36  | 25.92       | 36406 |
| 36407 Temperature gauge with pocket.....                            | 596.29               | 11.48                                | 12.96  | 24.82       | 36407 |
| 36408 Testing point.....  | 267.73               | 9.07                                 | 9.99   | 17.43       | 36408 |

| Item  |  | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only | Item  |
|---|--|----------------|--------------------------|------------------------------------|----------|-------|
|   |  | A<br>\$        | B<br>\$                  | C<br>\$                            | D<br>\$  |       |
| <b>VALVE, PIPE WORKS AND ACCESSORIES (CONT'D)</b> |  |                |                          |                                    |          |       |
|   | Butterfly valve :-   |                |                          |                                    |          |       |
|   | <i>Each</i>  |                |                          |                                    |          |       |
| 36409   | 25 mm or below.....  | 279.15         | 16.10                    | 19.79                              | 27.43    | 36409 |
| 36410   | 32 mm.....   | 352.03         | 16.49                    | 20.27                              | 30.04    | 36410 |
| 36411   | 40 mm.....   | 438.78         | 16.88                    | 20.61                              | 32.29    | 36411 |
| 36412   | 50 mm.....   | 529.08         | 17.60                    | 21.29                              | 34.47    | 36412 |
| 36413   | 65 mm.....   | 1,094.49       | 17.94                    | 21.96                              | 35.95    | 36413 |
| 36414   | 80 mm.....   | 1,153.86       | 19.67                    | 23.36                              | 38.97    | 36414 |
| 36415   | 100 mm.....  | 1,242.37       | 20.68                    | 24.42                              | 40.50    | 36415 |
| 36416   | 125 mm .....   | 1,334.73       | 22.63                    | 26.57                              | 45.68    | 36416 |
| 36417   | 150 mm.....  | 1,521.93       | 26.33                    | 30.14                              | 50.00    | 36417 |
|   | Protection coating paint :-  |                |                          |                                    |          |       |
|   | <i>Per linear metre</i>  |                |                          |                                    |          |       |
| 36418   | Protection coating paint for thermal insulation (flexible closed cell elastomeric) of same manufacturer as the thermal insulation for refrigerant pipework (25mm diameter or below) at outdoor area..... | 85.64          | -                        | -                                  | -        | 36418 |

| Item  |  |                |                          |                                    | Item     |       |
|-------|--|----------------|--------------------------|------------------------------------|----------|-------|
|       | <b>VALVE, PIPE WORKS AND ACCESSORIES (CONT'D)</b>  |                |                          |                                    |          |       |
|       | Insulation to pipework   |                |                          |                                    |          |       |
|       | Polystyrene insulation c/w cement plaster, finish and painting for chilled water pipework of diameter : -                      |                |                          |                                    |          |       |
|       | <i>Per linear metre</i>  |                |                          |                                    |          |       |
|       |  | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only |       |
|       |  | A \$           | B \$                     | C \$                               | D \$     |       |
| 36419 | 25 mm or below.....  | 81.49          | 3.75                     | 4.19                               | 23.94    | 36419 |
| 36420 | 32 mm.....   | 87.32          | 3.91                     | 4.44                               | 25.36    | 36420 |
| 36421 | 40 mm.....   | 93.06          | 4.16                     | 4.64                               | 26.83    | 36421 |
| 36422 | 50 mm.....   | 105.31         | 5.10                     | 5.58                               | 31.15    | 36422 |
| 36423 | 65 mm.....   | 119.13         | 5.50                     | 5.99                               | 35.70    | 36423 |
| 36424 | 80 mm.....   | 132.13         | 5.91                     | 6.44                               | 41.20    | 36424 |
| 36425 | 100 mm.....  | 156.29         | 7.78                     | 8.33                               | 48.36    | 36425 |
| 36426 | 125 mm.....  | 181.55         | 9.14                     | 9.66                               | 54.11    | 36426 |
| 36427 | 150 mm.....  | 205.77         | 10.48                    | 10.97                              | 63.31    | 36427 |
| 36428 | 200 mm.....  | 250.00         | 12.59                    | 13.26                              | 76.32    | 36428 |
| 36429 | 250 mm.....  | 317.32         | 16.28                    | 16.95                              | 98.37    | 36429 |
| 36430 | 300 mm.....  | 482.75         | 25.05                    | 27.33                              | 148.09   | 36430 |
|       | Flexible closed cell elastomeric insulation c/w cement plaster, painting and finish for chilled water pipework of diameter : - |                |                          |                                    |          |       |
|       | <i>Per linear metre</i>  |                |                          |                                    |          |       |
| 36431 | 25 mm or below.....  | 61.15          | 3.75                     | 4.19                               | 23.94    | 36431 |
| 36432 | 32 mm.....   | 67.41          | 3.91                     | 4.44                               | 25.36    | 36432 |
| 36433 | 40 mm.....   | 72.05          | 4.16                     | 4.64                               | 26.83    | 36433 |
| 36434 | 50 mm.....   | 84.25          | 5.10                     | 5.58                               | 31.15    | 36434 |
| 36435 | 65 mm.....   | 96.89          | 5.50                     | 5.99                               | 35.70    | 36435 |
| 36436 | 80 mm.....   | 110.89         | 5.91                     | 6.44                               | 41.20    | 36436 |
| 36437 | 100 mm.....  | 129.25         | 7.78                     | 8.33                               | 48.36    | 36437 |
| 36438 | 150 mm.....  | 181.19         | 10.48                    | 10.97                              | 63.31    | 36438 |

| Item  |   |                |                          |                                    | Item     |       |
|-------|---|----------------|--------------------------|------------------------------------|----------|-------|
|       | <b>VALVE, PIPE WORKS AND ACCESSORIES (CONT'D)</b>   |                |                          |                                    |          |       |
|       | Insulation to pipework (Cont'd)   |                |                          |                                    |          |       |
|       | Aluminium metal cladding for insulated chilled water pipes of diameter : -                                  |                |                          |                                    |          |       |
|       | <i>Per linear metre</i>   |                |                          |                                    |          |       |
|       |   | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only |       |
|       |   | A \$           | B \$                     | C \$                               | D \$     |       |
| 36439 | 25 mm or below.....   | 84.53          | 0.57                     | 0.69                               | 7.99     | 36439 |
| 36440 | 32 mm.....  | 89.93          | 0.69                     | 0.77                               | 8.59     | 36440 |
| 36441 | 40 mm.....  | 95.33          | 0.77                     | 0.84                               | 9.17     | 36441 |
| 36442 | 50 mm.....  | 104.13         | 0.84                     | 0.93                               | 10.56    | 36442 |
| 36443 | 65 mm.....  | 117.24         | 0.98                     | 1.06                               | 12.29    | 36443 |
| 36444 | 80 mm.....  | 130.35         | 1.06                     | 1.14                               | 14.18    | 36444 |
| 36445 | 100 mm.....   | 145.84         | 1.14                     | 1.22                               | 18.13    | 36445 |
| 36446 | 125 mm.....   | 162.86         | 1.59                     | 1.76                               | 20.40    | 36446 |
| 36447 | 150 mm.....   | 184.38         | 1.91                     | 2.08                               | 22.60    | 36447 |
| 36448 | 200 mm.....   | 213.41         | 2.17                     | 2.32                               | 25.97    | 36448 |
| 36449 | 250 mm.....   | 259.86         | 2.63                     | 2.85                               | 32.20    | 36449 |
| 36450 | 300 mm.....   | 312.90         | 3.24                     | 3.55                               | 39.67    | 36450 |
|       | Phenolic foam insulation c/w cement plaster, painting and finish for chilled water pipework of diameter : - |                |                          |                                    |          |       |
|       | <i>Per linear metre</i>   |                |                          |                                    |          |       |
| 36451 | 25 mm or below.....   | 188.23         | 3.75                     | 4.19                               | 23.94    | 36451 |
| 36452 | 32 mm.....  | 211.57         | 3.91                     | 4.44                               | 25.36    | 36452 |
| 36453 | 40 mm.....  | 228.36         | 4.16                     | 4.64                               | 26.83    | 36453 |
| 36454 | 50 mm.....  | 267.90         | 5.10                     | 5.58                               | 31.15    | 36454 |
| 36455 | 65 mm.....  | 313.78         | 5.50                     | 5.99                               | 35.70    | 36455 |
| 36456 | 80 mm.....  | 353.25         | 5.91                     | 6.44                               | 41.20    | 36456 |
| 36457 | 100 mm.....   | 417.44         | 7.78                     | 8.33                               | 48.36    | 36457 |
| 36458 | 150 mm.....   | 600.23         | 10.48                    | 10.97                              | 63.31    | 36458 |



| Item  |  |          |      |       | Item  |
|-------|--|----------|------|-------|-------|
|       | <b>VALVE, PIPE WORKS AND ACCESSORIES (CONT'D)</b>  |          |      |       |       |
|       | Insulation to pipework (Cont'd)  |          |      |       |       |
|       | Phenolic foam insulation for chilled water pipework of diameter :-   |          |      |       |       |
|       | <i>Per linear metre</i>  |          |      |       |       |
|       |  | A        | B    | C     | D     |
|       |  | \$       | \$   | \$    | \$    |
| 36459 | 25 mm or below.....  | 127.98   | 0.57 | 0.69  | 7.99  |
| 36460 | 32 mm.....   | 142.27   | 0.69 | 0.77  | 8.59  |
| 36461 | 40 mm.....   | 153.30   | 0.77 | 0.84  | 9.17  |
| 36462 | 50 mm.....   | 176.87   | 0.84 | 0.93  | 10.56 |
| 36463 | 65 mm.....   | 210.64   | 0.93 | 1.06  | 12.29 |
| 36464 | 80 mm.....   | 236.34   | 1.06 | 1.14  | 14.18 |
| 36465 | 100 mm.....  | 284.92   | 1.14 | 1.22  | 18.13 |
| 36466 | 150 mm.....  | 409.01   | 1.91 | 2.08  | 22.60 |
|       | Flue pipe :-   |          |      |       |       |
|       | <i>Per linear metre</i>  |          |      |       |       |
| 36467 | 200 mm stainless steel flue pipe c/w fittings, 50 mm thick fiberglass insulation and 0.8 mm galvanized iron sheet cladding rain cap and steel wire ..... | 2,235.67 | 9.25 | 15.89 | 27.88 |

| Item  |   |                |                          |                                    | Item     |       |
|-------|---|----------------|--------------------------|------------------------------------|----------|-------|
|       | <b>STEAM AND HOT WATER SYSTEM</b>   |                |                          |                                    |          |       |
|       | Black mild steel steam return pipeworks c/w preformed rigid glass fiber insulation system, hammered aluminium sheeting of pipe diameter : - | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only |       |
|       | Heavy quality   |                |                          |                                    |          |       |
|       | <i>Per linear metre</i>   | A \$           | B \$                     | C \$                               | D \$     |       |
| 36468 | 15 mm.....  | 129.97         | 4.26                     | 4.84                               | 54.18    | 36468 |
| 36469 | 20 mm.....  | 152.10         | 4.50                     | 5.12                               | 66.43    | 36469 |
| 36470 | 25 mm.....  | 177.75         | 5.11                     | 5.68                               | 72.15    | 36470 |
| 36471 | 32 mm.....  | 204.55         | 5.68                     | 6.21                               | 77.10    | 36471 |
| 36472 | 40 mm.....  | 224.62         | 6.27                     | 6.89                               | 82.83    | 36472 |
| 36473 | 50 mm.....  | 286.01         | 7.02                     | 7.44                               | 95.99    | 36473 |
| 36474 | 65 mm.....  | 349.44         | 8.08                     | 8.80                               | 109.93   | 36474 |
| 36475 | 80 mm.....  | 423.84         | 9.49                     | 10.03                              | 123.87   | 36475 |
| 36476 | 100 mm.....   | 591.24         | 10.67                    | 11.40                              | 142.75   | 36476 |
| 36477 | 150 mm.....   | 787.68         | 17.89                    | 18.90                              | 189.52   | 36477 |
|       | Copper pipe for cold water system of pipe diameter : -  |                |                          |                                    |          |       |
|       | <i>Per linear metre</i>   |                |                          |                                    |          |       |
| 36478 | below 12 mm.....  | 59.94          | 2.68                     | 2.88                               | 40.00    | 36478 |
| 36479 | 12 mm.....  | 70.10          | 2.75                     | 2.97                               | 42.96    | 36479 |
| 36480 | 15 mm.....  | 83.24          | 2.80                     | 3.06                               | 46.46    | 36480 |
| 36481 | 18 mm.....  | 96.02          | 2.97                     | 3.18                               | 48.48    | 36481 |
| 36482 | 22 mm.....  | 113.15         | 3.64                     | 3.78                               | 52.23    | 36482 |
| 36483 | 28 mm.....  | 137.33         | 3.78                     | 3.92                               | 58.37    | 36483 |
| 36484 | 35 mm.....  | 186.32         | 4.30                     | 4.48                               | 61.84    | 36484 |
| 36485 | 42 mm.....  | 214.95         | 4.58                     | 4.77                               | 67.45    | 36485 |
| 36486 | 54 mm.....  | 263.40         | 5.11                     | 5.25                               | 77.53    | 36486 |
| 36487 | 67 mm.....  | 358.30         | 5.20                     | 5.39                               | 85.54    | 36487 |

| Item  |                     |                      |                                      |  | Item        |       |
|---|---------------------|----------------------|--------------------------------------|--|-------------|-------|
| <b>STEAM AND HOT WATER SYSTEM (CONT'D)</b>  |                     |                      |                                      |  |             |       |
| Copper pipe for cold water system of pipe diameter : - (Cont'd)   |                     |                      |                                      |  |             |       |
| <i>Per linear metre</i>   |                     |                      |                                      |  |             |       |
|   |                     | Supply<br>and<br>fix | Take<br>down<br>and<br>clear<br>away | Take<br>down<br>and set<br>aside for<br>re-use | Fix<br>only |       |
|   |                     | A<br>\$              | B<br>\$                              | C<br>\$  | D<br>\$     |       |
| 36488   | 76 mm.....          | 478.08               | 6.21                                 | 6.55   | 92.87       | 36488 |
| 36489   | 108 mm.....         | 623.68               | 7.18                                 | 7.43   | 119.25      | 36489 |
| 36490   | 133 mm.....         | 726.16               | 8.54                                 | 8.75   | 138.52      | 36490 |
| 36491   | 159 mm.....         | 839.85               | 9.65                                 | 9.92   | 159.51      | 36491 |
| Steam, condensate return, compressed air and hot water valves c/w preformed rigid glass fiber insulation. |                     |                      |                                      |  |             |       |
| Y-type strainers c/w filled aluminium split boxes : -   |                     |                      |                                      |  |             |       |
| <i>Each</i>   |                     |                      |                                      |  |             |       |
| 36492   | 32 mm or below..... | 341.28               | 21.82                                | 27.08  | 43.10       | 36492 |
| 36493   | 40 mm.....          | 360.83               | 22.41                                | 27.63  | 46.36       | 36493 |
| 36494   | 50 mm.....          | 393.42               | 23.49                                | 28.46  | 48.79       | 36494 |
| 36495   | 65 mm.....          | 436.97               | 24.06                                | 29.80  | 51.75       | 36495 |
| 36496   | 80 mm.....          | 444.87               | 26.67                                | 31.46  | 55.99       | 36496 |
| 36497   | 100 mm.....         | 530.50               | 28.08                                | 33.38  | 58.37       | 36497 |
| 36498   | 150 mm.....         | 593.37               | 35.23                                | 40.31  | 72.57       | 36498 |
| Globe valve c/w filled aluminium split boxes : -  |                     |                      |                                      |  |             |       |
| <i>Each</i>   |                     |                      |                                      |  |             |       |
| 36499   | 15mm.....           | 93.32                | 21.46                                | 26.67  | 34.39       | 36499 |
| 36500   | 20 mm.....          | 119.24               | 22.04                                | 27.11  | 37.68       | 36500 |
| 36501   | 25 mm.....          | 151.43               | 22.47                                | 27.62  | 41.40       | 36501 |
| 36502   | 32 mm.....          | 205.63               | 22.91                                | 28.09  | 44.81       | 36502 |
| 36503   | 40 mm.....          | 267.92               | 23.53                                | 28.38  | 47.83       | 36503 |
| 36504   | 50 mm.....          | 403.64               | 24.45                                | 29.25  | 51.17       | 36504 |

| Item  |  |                |                          |                                    | Item     |       |
|-------|--|----------------|--------------------------|------------------------------------|----------|-------|
|       | <b>STEAM AND HOT WATER SYSTEM (CONT'D)</b>   |                |                          |                                    |          |       |
|       | Steam, condensate return, compressed air and hot water valves c/w preformed rigid glass fiber insulation. (Cont'd) |                |                          |                                    |          |       |
|       | Parallel slide valve c/w filled aluminium split boxes : -  |                |                          |                                    |          |       |
|       | <i>Each</i>  |                |                          |                                    |          |       |
|       |  | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only |       |
|       |  | A \$           | B \$                     | C \$                               | D \$     |       |
| 36505 | 65 mm.....   | 1,837.66       | 23.55                    | 28.94                              | 51.12    | 36505 |
| 36506 | 80 mm.....   | 3,194.76       | 25.99                    | 30.76                              | 55.67    | 36506 |
| 36507 | 100 mm.....  | 4,840.17       | 27.78                    | 32.54                              | 57.58    | 36507 |
| 36508 | 150 mm.....  | 9,086.82       | 34.68                    | 40.16                              | 71.25    | 36508 |
|       | Safety and relief valve c/w filled aluminium split boxes : -   |                |                          |                                    |          |       |
|       | <i>Each</i>  |                |                          |                                    |          |       |
| 36509 | 32 mm or below.....  | 1,078.72       | 23.72                    | 29.02                              | 46.17    | 36509 |
| 36510 | 40 mm.....   | 1,592.87       | 24.20                    | 29.42                              | 49.78    | 36510 |
| 36511 | 50 mm.....   | 1,926.00       | 25.34                    | 30.54                              | 53.52    | 36511 |
| 36512 | 65 mm.....   | 3,864.42       | 25.80                    | 31.58                              | 55.79    | 36512 |
| 36513 | 80 mm.....   | 5,761.81       | 28.20                    | 33.59                              | 60.34    | 36513 |
| 36514 | 100 mm.....  | 8,342.57       | 29.90                    | 35.13                              | 62.81    | 36514 |
| 36515 | 150 mm.....  | 10,697.40      | 37.83                    | 43.22                              | 77.40    | 36515 |
|       | Pressure reducing valve c/w filled aluminium split boxes : -   |                |                          |                                    |          |       |
|       | <i>Each</i>  |                |                          |                                    |          |       |
| 36516 | 32 mm or below.....  | 1,716.26       | 23.72                    | 29.02                              | 46.17    | 36516 |
| 36517 | 40 mm.....   | 2,130.58       | 24.20                    | 29.42                              | 49.78    | 36517 |
| 36518 | 50 mm.....   | 2,635.84       | 25.34                    | 30.54                              | 53.52    | 36518 |
| 36519 | 65 mm.....   | 3,393.29       | 25.80                    | 31.58                              | 55.79    | 36519 |
| 36520 | 80 mm.....   | 5,024.65       | 28.20                    | 33.59                              | 60.34    | 36520 |
| 36521 | 100 mm.....  | 5,656.03       | 29.90                    | 35.13                              | 62.81    | 36521 |
| 36522 | 150 mm.....  | 7,086.06       | 37.83                    | 43.22                              | 77.40    | 36522 |

| Item                                       |   |                |                          |                                    | Item     |       |
|--|---|----------------|--------------------------|------------------------------------|----------|-------|
| <b>STEAM AND HOT WATER SYSTEM (CONT'D)</b> |   |                |                          |                                    |          |       |
|  | Steam, condensate return, compressed air and hot water valves c/w preformed rigid glass fiber insulation. (Cont'd)  | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only |       |
|  | Temperature and pressure gauge : -  |                |                          |                                    |          |       |
|  | <i>Each</i>   | A \$           | B \$                     | C \$                               | D \$     |       |
| 36523                                      | Temperature gauge c/w filled aluminium split boxes.....   | 850.52         | 13.83                    | 16.05                              | 32.63    | 36523 |
| 36524                                      | Pressure gauge c/w filled aluminium split boxes.....  | 230.24         | 13.83                    | 16.05                              | 32.63    | 36524 |
|  | Steam separator c/w filled aluminium split boxes : -  |                |                          |                                    |          |       |
|  | <i>Each</i>   |                |                          |                                    |          |       |
| 36525                                      | 32 mm or below.....   | 2,549.16       | 23.72                    | 29.02                              | 46.17    | 36525 |
| 36526                                      | 40 mm.....  | 3,183.23       | 24.20                    | 29.42                              | 49.78    | 36526 |
| 36527                                      | 50 mm.....  | 3,974.19       | 25.34                    | 30.54                              | 53.52    | 36527 |
| 36528                                      | 65 mm.....  | 5,141.88       | 25.80                    | 31.58                              | 55.79    | 36528 |
| 36529                                      | 80 mm.....  | 6,243.40       | 28.20                    | 33.59                              | 60.34    | 36529 |
| 36530                                      | 100 mm.....   | 7,763.07       | 29.90                    | 35.13                              | 62.81    | 36530 |
| 36531                                      | 150 mm.....   | 11,302.10      | 37.83                    | 43.22                              | 77.40    | 36531 |
|  | Steam trap set comprising of globe valve, strainer, float operated steam trap, sight glass, check valve, gate valve and all union c/w filled aluminium split boxes; connect to pipe diameter of : - |                |                          |                                    |          |       |
|  | <i>Per set</i>  |                |                          |                                    |          |       |
| 36532                                      | 32 mm or below.....   | 5,694.00       | 102.73                   | 124.23                             | 457.74   | 36532 |
| 36533                                      | 40 mm.....  | 7,486.98       | 120.61                   | 139.08                             | 485.02   | 36533 |
| 36534                                      | 50 mm.....  | 8,484.76       | 134.77                   | 154.92                             | 505.87   | 36534 |
| 36535                                      | 65 mm.....  | 10,126.38      | 151.97                   | 167.47                             | 540.35   | 36535 |
| 36536                                      | 80 mm.....  | 11,537.25      | 167.88                   | 184.95                             | 569.00   | 36536 |
| 36537                                      | 100 mm.....   | 13,735.64      | 180.60                   | 200.84                             | 609.30   | 36537 |
| 36538                                      | 150 mm.....   | 18,584.06      | 196.44                   | 217.72                             | 634.57   | 36538 |

| Item                                       |  | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only | Item  |
|--|--|----------------|--------------------------|------------------------------------|----------|-------|
|  |  | A \$           | B \$                     | C \$                               | D \$     |       |
| <b>STEAM AND HOT WATER SYSTEM (CONT'D)</b> |  |                |                          |                                    |          |       |
|  | Steam, condensate return, compressed air and hot water valves c/w preformed rigid glass fiber insulation. (Cont'd) |                |                          |                                    |          |       |
|  | Check valve c/w filled aluminium split boxes :-  |                |                          |                                    |          |       |
|  | <i>Each</i>  |                |                          |                                    |          |       |
| 36539                                      | 65 mm.....   | 520.33         | 23.71                    | 29.14                              | 51.52    | 36539 |
| 36540                                      | 80 mm.....   | 627.40         | 25.99                    | 30.31                              | 55.47    | 36540 |
| 36541                                      | 100 mm.....  | 998.61         | 27.06                    | 32.06                              | 56.28    | 36541 |
| 36542                                      | 150 mm.....  | 1,641.19       | 33.78                    | 39.24                              | 68.54    | 36542 |
|  | Drain valve c/w hose union ends and loose key and filled aluminium split box :-                                    |                |                          |                                    |          |       |
|  | <i>Each</i>  |                |                          |                                    |          |       |
| 36543                                      | 50 mm.....   | 552.44         | 23.32                    | 28.15                              | 49.23    | 36543 |
| 36544                                      | 65 mm.....   | 724.22         | 23.91                    | 29.41                              | 50.01    | 36544 |
| 36545                                      | 80 mm.....   | 910.59         | 26.21                    | 32.06                              | 55.71    | 36545 |
| 36546                                      | 100 mm.....  | 1,165.40       | 27.46                    | 33.60                              | 56.83    | 36546 |
| 36547                                      | 150 mm.....  | 1,796.12       | 35.26                    | 39.96                              | 69.80    | 36547 |
|  | Gate valve c/w filled aluminium split boxes :-   |                |                          |                                    |          |       |
|  | <i>Each</i>  |                |                          |                                    |          |       |
| 36548                                      | 50 mm.....   | 740.07         | 23.32                    | 28.15                              | 49.23    | 36548 |
| 36549                                      | 65 mm.....   | 832.44         | 23.91                    | 29.41                              | 50.01    | 36549 |
| 36550                                      | 80 mm.....   | 977.29         | 26.21                    | 32.06                              | 55.71    | 36550 |
| 36551                                      | 100 mm.....  | 1,243.75       | 27.46                    | 33.60                              | 56.83    | 36551 |
| 36552                                      | 150 mm.....  | 2,335.66       | 35.26                    | 39.96                              | 69.80    | 36552 |

| Item  |   |                |                          |                                    | Item     |       |
|-------|---|----------------|--------------------------|------------------------------------|----------|-------|
|       | <b>STEAM AND HOT WATER SYSTEM (CONT'D)</b>  |                |                          |                                    |          |       |
|       | Insulation of pipeworks   |                |                          |                                    |          |       |
|       | Preformed rigid glass fiber insulation c/w hammered aluminium cladding for black mild steel condensate pipe of diameter : - |                |                          |                                    |          |       |
|       | <i>Per linear metre</i>   |                |                          |                                    |          |       |
|       |   | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only |       |
|       |   | A \$           | B \$                     | C \$                               | D \$     |       |
| 36553 | 15 mm.....  | 51.52          | 3.70                     | 3.84                               | 19.07    | 36553 |
| 36554 | 20 mm.....  | 60.42          | 4.21                     | 4.32                               | 23.66    | 36554 |
| 36555 | 25 mm.....  | 68.63          | 4.30                     | 4.40                               | 26.60    | 36555 |
| 36556 | 32 mm.....  | 74.14          | 4.42                     | 4.77                               | 27.92    | 36556 |
| 36557 | 40 mm.....  | 81.35          | 4.81                     | 5.48                               | 29.80    | 36557 |
| 36558 | 50 mm.....  | 94.73          | 5.61                     | 6.37                               | 33.98    | 36558 |
| 36559 | 65 mm.....  | 110.31         | 6.37                     | 6.89                               | 39.34    | 36559 |
| 36560 | 80 mm.....  | 127.13         | 6.96                     | 7.59                               | 44.89    | 36560 |
| 36561 | 100 mm.....   | 148.66         | 8.88                     | 9.48                               | 51.09    | 36561 |
| 36562 | 150 mm.....   | 242.46         | 12.25                    | 12.92                              | 67.78    | 36562 |
|       | Preformed rigid glass fiber insulation c/w hammered aluminium cladding for black mild steel steam pipe of diameter : -      |                |                          |                                    |          |       |
|       | <i>Per linear metre</i>   |                |                          |                                    |          |       |
| 36563 | 15 mm.....  | 70.86          | 3.70                     | 3.84                               | 19.07    | 36563 |
| 36564 | 20 mm.....  | 81.00          | 4.21                     | 4.32                               | 23.66    | 36564 |
| 36565 | 25 mm.....  | 88.82          | 4.30                     | 4.40                               | 26.60    | 36565 |
| 36566 | 32 mm.....  | 97.46          | 4.42                     | 4.77                               | 27.92    | 36566 |
| 36567 | 40 mm.....  | 105.20         | 4.81                     | 5.48                               | 29.80    | 36567 |
| 36568 | 50 mm.....  | 140.24         | 5.61                     | 6.37                               | 33.98    | 36568 |
| 36569 | 65 mm.....  | 160.87         | 6.37                     | 6.89                               | 39.34    | 36569 |
| 36570 | 80 mm.....  | 205.84         | 6.96                     | 7.59                               | 44.89    | 36570 |
| 36571 | 100 mm.....   | 315.59         | 8.88                     | 9.48                               | 51.09    | 36571 |
| 36572 | 150 mm.....   | 391.07         | 12.25                    | 12.92                              | 67.78    | 36572 |

| Item  |  |                |                          |                                    | Item     |       |
|-------|--|----------------|--------------------------|------------------------------------|----------|-------|
|       | <b>STEAM AND HOT WATER SYSTEM (CONT'D)</b>   |                |                          |                                    |          |       |
|       | Insulation of pipeworks (Cont'd)   |                |                          |                                    |          |       |
|       | Preformed rigid glass fiber insulation c/w hammered aluminium cladding for copper pipe of hot water system of diameter : - |                |                          |                                    |          |       |
|       | <b>Per linear metre</b>  |                |                          |                                    |          |       |
|       |  | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only |       |
|       |  | A \$           | B \$                     | C \$                               | D \$     |       |
| 36573 | n.e. 12 mm.....  | 62.82          | 3.58                     | 4.14                               | 27.92    | 36573 |
| 36574 | 12 mm.....   | 67.88          | 3.97                     | 4.48                               | 31.07    | 36574 |
| 36575 | 15 mm.....   | 70.77          | 4.33                     | 4.77                               | 32.98    | 36575 |
| 36576 | 18 mm.....   | 75.10          | 4.66                     | 5.18                               | 35.20    | 36576 |
| 36577 | 22 mm.....   | 99.04          | 5.04                     | 5.57                               | 36.92    | 36577 |
| 36578 | 28 mm.....   | 110.68         | 5.35                     | 5.87                               | 41.23    | 36578 |
| 36579 | 35 mm.....   | 122.20         | 5.81                     | 6.26                               | 43.80    | 36579 |
| 36580 | 42 mm.....   | 130.91         | 6.21                     | 6.82                               | 48.37    | 36580 |
| 36581 | 54 mm.....   | 148.88         | 6.76                     | 7.20                               | 54.69    | 36581 |
| 36582 | 67 mm.....   | 170.21         | 7.25                     | 7.77                               | 61.82    | 36582 |
| 36583 | 76 mm.....   | 184.90         | 8.39                     | 9.56                               | 68.10    | 36583 |
| 36584 | 108 mm.....  | 267.07         | 10.43                    | 11.35                              | 84.36    | 36584 |
| 36585 | 133 mm.....  | 343.76         | 12.34                    | 14.04                              | 99.44    | 36585 |
| 36586 | 159 mm.....  | 391.26         | 14.79                    | 15.44                              | 113.63   | 36586 |
|       | Plugged branch : -   |                |                          |                                    |          |       |
|       | <b>Each</b>  |                |                          |                                    |          |       |
| 36587 | 25 mm plugged branch.....  | 33.18          | 4.21                     | 5.30                               | 12.73    | 36587 |



**Section 37**

**HEATING, VENTILATION AND AIR-CONDITIONING - DUCTWORK**

| Item  |   | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only | Item  |
|---|---|----------------|--------------------------|------------------------------------|----------|-------|
| <b>AIR DUCTS, THERMAL INSULATION &amp; ACCESSORIES</b>  |   |                |                          |                                    |          |       |
| Sheet metal ducts (rates for taking down of ductwork shall include for taking down of ALL duct accessories including dampers, registers, diffuser, heater, batteries, etc.) |   |                |                          |                                    |          |       |
| GI sheet metal ductwork including air plenum; un-insulated :-   |   |                |                          |                                    |          |       |
| <i>Per square metre</i>   |   | A \$           | B \$                     | C \$                               | D \$     |       |
| 37001   | 0.6 mm thick.....   | 324.03         | 7.57                     | 9.77                               | 18.39    | 37001 |
| 37002   | 0.8 mm thick.....   | 368.51         | 8.69                     | 10.18                              | 20.87    | 37002 |
| 37003   | 1 mm thick.....   | 389.63         | 9.15                     | 10.74                              | 21.68    | 37003 |
| 37004   | 1.2 mm thick.....   | 438.13         | 9.63                     | 11.23                              | 22.48    | 37004 |
| 37005   | 1.5 mm thick.....   | 518.14         | 10.19                    | 11.81                              | 23.31    | 37005 |
| Glass fibre duct (rectangular/round/oval shape) :-  |   |                |                          |                                    |          |       |
| <i>Per square metre</i>   |   |                |                          |                                    |          |       |
| 37006   | 48 kg/m <sup>3</sup> .....  | 514.99         | 8.61                     | 10.09                              | 20.67    | 37006 |
| 37007   | 64 kg/m <sup>3</sup> .....  | 534.32         | 9.07                     | 10.65                              | 21.51    | 37007 |
| Factory made GI round/oval spiral duct c/w insulation equivalent round diameter for equal capacity and friction loss :-   |   |                |                          |                                    |          |       |
| <i>Per linear metre</i>   |   |                |                          |                                    |          |       |
| 37008   | up to 165 mm diameter.....  | 747.75         | 35.66                    | 38.52                              | 288.17   | 37008 |
| 37009   | 166 - 255 mm diameter.....  | 784.46         | 40.72                    | 43.67                              | 312.83   | 37009 |
| 37010   | 256 - 355 mm diameter.....  | 889.41         | 43.14                    | 46.22                              | 336.51   | 37010 |
| 37011   | 356 - 470 mm diameter.....  | 1,000.74       | 45.71                    | 48.76                              | 360.81   | 37011 |
| 37012   | 471 - 546 mm diameter.....  | 1,103.99       | 48.30                    | 51.35                              | 385.16   | 37012 |
| 37013   | 547 - 622 mm diameter.....  | 1,197.21       | 50.83                    | 56.44                              | 418.08   | 37013 |
| 37014   | 623 - 800 mm diameter.....  | 1,385.05       | 53.23                    | 58.82                              | 441.97   | 37014 |
| Ductboard air duct :-   |   |                |                          |                                    |          |       |
| <i>Per square metre</i>   |   |                |                          |                                    |          |       |
| 37015   | Ductboard air duct including air plenum (phenolic foam or PU) ..... | 402.54         | 8.98                     | 10.52                              | 21.55    | 37015 |

| Item  |                      | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only | Item  |
|---|----------------------|----------------|--------------------------|------------------------------------|----------|-------|
| <b>AIR DUCTS, THERMAL INSULATION &amp; ACCESSORIES (CONT'D)</b>   |                      |                |                          |                                    |          |       |
| 0.8 mm thick grade 316 stainless steel round duct with hairline finish c/w stainless steel frame support and all necessary accessories :- |                      |                |                          |                                    |          |       |
| <i>Per linear metre</i>   |                      | A<br>\$        | B<br>\$                  | C<br>\$                            | D<br>\$  |       |
| 37016   | 150 mm diameter..... | 695.41         | 2.78                     | 4.84                               | 8.59     | 37016 |
| 37017   | 200 mm diameter..... | 1,230.08       | 3.70                     | 6.45                               | 11.45    | 37017 |
| 37018   | 250 mm diameter..... | 1,935.65       | 4.63                     | 8.07                               | 14.31    | 37018 |
| 37019   | 600 mm diameter..... | 6,308.20       | 11.10                    | 19.36                              | 34.34    | 37019 |
| 37020   | 700 mm diameter..... | 7,539.80       | 12.95                    | 22.58                              | 40.07    | 37020 |
| 37021   | 800 mm diameter..... | 7,866.51       | 14.80                    | 25.81                              | 45.79    | 37021 |
| Stainless steel grade 304 sheet metal air duct (including air plenum) :-  |                      |                |                          |                                    |          |       |
| <i>Per square metre</i>   |                      |                |                          |                                    |          |       |
| 37022   | 0.6 mm thick.....    | 443.52         | 7.57                     | 9.77                               | 18.39    | 37022 |
| 37023   | 0.8 mm thick.....    | 562.92         | 8.69                     | 10.18                              | 20.87    | 37023 |
| 37024   | 1 mm thick.....      | 681.04         | 9.15                     | 10.74                              | 21.68    | 37024 |
| 37025   | 1.2 mm thick.....    | 735.18         | 9.63                     | 11.23                              | 22.48    | 37025 |
| 37026   | 1.5 mm thick.....    | 962.58         | 10.19                    | 11.81                              | 23.31    | 37026 |
| Stainless steel grade 304 sheet metal air duct (including air plenum) with colour powder coating on one surface :-                        |                      |                |                          |                                    |          |       |
| <i>Per square metre</i>   |                      |                |                          |                                    |          |       |
| 37027   | 0.6 mm thick.....    | 514.06         | 7.57                     | 9.77                               | 18.39    | 37027 |
| 37028   | 0.8 mm thick.....    | 626.47         | 8.69                     | 10.18                              | 20.87    | 37028 |
| 37029   | 1 mm thick.....      | 739.19         | 9.15                     | 10.74                              | 21.68    | 37029 |

| Item   |                            | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only | Item  |
|--|----------------------------|----------------|--------------------------|------------------------------------|----------|-------|
| <b>AIR DUCTS, THERMAL INSULATION &amp; ACCESSORIES (CONT'D)</b>                |                            |                |                          |                                    |          |       |
| Stainless steel 316 sheet metal air duct (including air plenum) :-             |                            |                |                          |                                    |          |       |
| <i>Per square metre</i>  |                            |                |                          |                                    |          |       |
| 37030  | 0.6 mm thick.....          | 551.79         | 7.57                     | 9.77                               | 18.39    | 37030 |
| 37031  | 0.8 mm thick.....          | 663.78         | 8.69                     | 10.18                              | 20.87    | 37031 |
| 37032  | 1 mm thick.....            | 788.87         | 9.15                     | 10.74                              | 21.68    | 37032 |
| 37033  | 1.2 mm thick.....          | 898.82         | 9.63                     | 11.23                              | 22.48    | 37033 |
| 37034  | 1.5 mm thick.....          | 1,123.66       | 10.19                    | 11.81                              | 23.31    | 37034 |
| Factory made aluminium flexible duct bare without insulation :-                |                            |                |                          |                                    |          |       |
| <i>Per linear metre</i>  |                            |                |                          |                                    |          |       |
| 37035  | up to 150 mm diameter..... | 229.56         | 8.35                     | 9.78                               | 20.02    | 37035 |
| 37036  | 151 - 200 mm diameter..... | 253.80         | 8.79                     | 10.32                              | 20.82    | 37036 |
| 37037  | 201 - 250 mm diameter..... | 293.09         | 9.26                     | 10.79                              | 21.59    | 37037 |
| 37038  | 251 - 300 mm diameter..... | 409.74         | 9.79                     | 11.34                              | 22.38    | 37038 |
| Factory made aluminium flexible duct with 25 mm thick fiberglass insulation :- |                            |                |                          |                                    |          |       |
| <i>Per linear metre</i>  |                            |                |                          |                                    |          |       |
| 37039  | up to 150 mm diameter..... | 323.87         | 12.56                    | 16.36                              | 33.41    | 37039 |
| 37040  | 151 - 200 mm diameter..... | 380.13         | 12.98                    | 16.91                              | 34.10    | 37040 |
| 37041  | 201 - 250 mm diameter..... | 453.90         | 13.43                    | 17.36                              | 34.85    | 37041 |
| 37042  | 251 - 300 mm diameter..... | 594.99         | 13.94                    | 17.78                              | 35.66    | 37042 |
| UPVC seamless circular duct :-   |                            |                |                          |                                    |          |       |
| <i>Per linear metre</i>  |                            |                |                          |                                    |          |       |
| 37043  | 150 mm diameter.....       | 163.13         | 8.35                     | 9.77                               | 20.15    | 37043 |
| 37044  | 200 mm diameter.....       | 209.40         | 9.27                     | 10.79                              | 21.68    | 37044 |
| 37045  | 250 mm diameter.....       | 256.11         | 10.29                    | 11.83                              | 23.24    | 37045 |

| Item  |   |                      |                                      |  | Item        |       |
|-------|---|----------------------|--------------------------------------|--|-------------|-------|
|       | <b>AIR DUCTS, THERMAL INSULATION &amp; ACCESSORIES<br/>(CONT'D)</b>   |                      |                                      |  |             |       |
|       | Slim duct in associated with air-conditioning installation  | Supply<br>and<br>fix | Take<br>down<br>and<br>clear<br>away | Take<br>down<br>and set<br>aside for<br>re-use | Fix<br>only |       |
|       | Slim duct system, suitable in use at corrosive environment (Rates shall include all associated mounting bracket, support and fittings including all straight runs, joints, flanges, tees and elbows etc.), U.V. resistant and fireproof to BS 476 Part 7 Class I :- |                      |                                      |  |             |       |
|       | <b>Per linear metre</b>   | A<br>\$              | B<br>\$                              | C<br>\$  | D<br>\$     |       |
| 37046 | slim duct; n.e. 300 mm girth.....   | 171.96               | 1.26                                 | 7.73   | 10.08       | 37046 |
| 37047 | slim duct; 300 - 400 mm girth.....  | 258.75               | 1.26                                 | 7.73   | 10.08       | 37047 |
| 37048 | slim duct; 400 - 500 mm girth.....  | 307.36               | 1.26                                 | 8.59   | 12.44       | 37048 |
|       | Insulation for air duct/air plenum  |                      |                                      |  |             |       |
|       | Polystyrene insulation c/w cement plaster, galvanized wire netting, painting and finish :-  |                      |                                      |  |             |       |
|       | <b>Per square metre</b>   |                      |                                      |  |             |       |
| 37049 | 25 mm thick.....  | 331.24               | 9.16                                 | 12.98  | 28.15       | 37049 |
| 37050 | 50 mm thick.....  | 382.47               | 9.65                                 | 13.46  | 29.07       | 37050 |
|       | Fiberglass insulation :-  |                      |                                      |  |             |       |
|       | <b>Per square metre</b>   |                      |                                      |  |             |       |
| 37051 | 25 mm thick; density 32 kg/m <sup>3</sup> .....   | 91.64                | 4.07                                 | 6.62   | 13.95       | 37051 |
| 37052 | 50 mm thick; density 32 kg/m <sup>3</sup> .....   | 128.87               | 4.55                                 | 7.07   | 14.79       | 37052 |
| 37053 | 25 mm thick; density 48 kg/m <sup>3</sup> .....   | 153.68               | 4.55                                 | 7.07   | 14.79       | 37053 |
| 37054 | 50 mm thick; density 48 kg/m <sup>3</sup> .....   | 205.72               | 5.00                                 | 7.63   | 15.62       | 37054 |
| 37055 | 25 mm thick; density 64 kg/m <sup>3</sup> .....   | 231.63               | 5.00                                 | 7.63   | 15.62       | 37055 |
| 37056 | 50 mm thick; density 64 kg/m <sup>3</sup> .....   | 287.58               | 5.55                                 | 8.09   | 16.36       | 37056 |
|       | Phenolic foam insulation :-   |                      |                                      |  |             |       |
|       | <b>Per square metre</b>   |                      |                                      |  |             |       |
| 37057 | 25 mm thick.....  | 242.17               | 3.91                                 | 4.91   | 13.19       | 37057 |
| 37058 | 50 mm thick.....  | 358.80               | 4.35                                 | 5.89   | 14.79       | 37058 |

| Item   |   |                      |                                      |  | Item        |       |
|--|---|----------------------|--------------------------------------|--|-------------|-------|
| <b>AIR DUCTS, THERMAL INSULATION &amp; ACCESSORIES<br/>(CONT'D)</b>                          |   |                      |                                      |  |             |       |
| Insulation for air duct/air plenum (Cont'd)  |   |                      |                                      |  |             |       |
| Phenolic foam insulation c/w cement plaster, galvanized wire netting, painting and finish :- |   |                      |                                      |  |             |       |
| <i>Per square metre</i>  |   |                      |                                      |  |             |       |
|  |   | Supply<br>and<br>fix | Take<br>down<br>and<br>clear<br>away | Take<br>down<br>and set<br>aside for<br>re-use | Fix<br>only |       |
|  |   | A<br>\$              | B<br>\$                              | C<br>\$  | D<br>\$     |       |
| 37059  | 25 mm thick.....  | 382.42               | 8.58                                 | 12.16  | 26.41       | 37059 |
| 37060  | 50 mm thick.....  | 505.30               | 9.07                                 | 14.70  | 28.29       | 37060 |
| Elastomeric insulation :-  |   |                      |                                      |  |             |       |
| <i>Per square metre</i>  |   |                      |                                      |  |             |       |
| 37061  | 25 mm thick.....  | 272.93               | 3.91                                 | 4.91   | 13.19       | 37061 |
| 37062  | 50 mm thick.....  | 396.48               | 4.35                                 | 5.89   | 14.79       | 37062 |
| Elastomeric insulation c/w cement plaster, galvanized wire netting, painting and finish :-   |   |                      |                                      |  |             |       |
| <i>Per square metre</i>  |   |                      |                                      |  |             |       |
| 37063  | 25 mm thick.....  | 412.56               | 8.58                                 | 12.16  | 26.41       | 37063 |
| 37064  | 50 mm thick.....  | 541.11               | 9.07                                 | 14.70  | 28.29       | 37064 |
| Flexible closed cell elastomeric insulation to air duct/air plenum :-                        |   |                      |                                      |  |             |       |
| <i>Per square metre</i>  |   |                      |                                      |  |             |       |
| 37065  | 19 mm thick.....  | 282.84               | 3.91                                 | 4.91   | 13.19       | 37065 |
| 37066  | 25 mm thick.....  | 339.15               | 4.35                                 | 5.35   | 13.95       | 37066 |
| Flexible closed cell elastomeric internal lining to air duct/air plenum :-                   |   |                      |                                      |  |             |       |
| <i>Per square metre</i>  |   |                      |                                      |  |             |       |
| 37067  | 19 mm thick.....  | 308.73               | 3.91                                 | 4.91   | 13.19       | 37067 |
| 37068  | 25 mm thick.....  | 368.10               | 4.35                                 | 5.35   | 13.95       | 37068 |
| 37069  | Vapour barrier of double faced aluminium foil .....     | 30.25                | 3.82                                 | 4.79   | 12.78       | 37069 |
| 37070  | Aluminium cladding for air ductwork; hammer finish..... | 221.64               | 3.82                                 | 4.79   | 12.78       | 37070 |

| Item  |                                |                |                          |                                    | Item     |       |
|---|--------------------------------|----------------|--------------------------|------------------------------------|----------|-------|
| <b>AIR DUCTS, THERMAL INSULATION &amp; ACCESSORIES (CONT'D)</b>               |                                |                |                          |                                    |          |       |
| Insulation for air duct/air plenum (Cont'd)                                   |                                |                |                          |                                    |          |       |
| FRP (Promat) Ductwork without insulation : -                                  |                                |                |                          |                                    |          |       |
| <i>Per square metre</i>   |                                |                |                          |                                    |          |       |
|   |                                | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only |       |
|   |                                | A \$           | B \$                     | C \$                               | D \$     |       |
| 37071   | 9 mm thick.....                | 779.47         | 8.33                     | 10.92                              | 31.03    | 37071 |
| 37072   | 12 mm thick.....               | 1,057.62       | 8.30                     | 11.85                              | 35.86    | 37072 |
| 37073   | 25 mm thick.....               | 1,353.66       | 10.14                    | 13.17                              | 37.94    | 37073 |
| FRP (Durasteel) Ductwork without insulation : -                               |                                |                |                          |                                    |          |       |
| <i>Per square metre</i>   |                                |                |                          |                                    |          |       |
| 37074   | 9 mm thick.....                | 1,098.94       | 11.59                    | 13.91                              | 33.92    | 37074 |
| 37075   | 12 mm thick.....               | 1,558.94       | 12.23                    | 14.75                              | 38.82    | 37075 |
| 37076   | 25mm thick.....                | 1,892.41       | 14.00                    | 16.25                              | 40.94    | 37076 |
| Air registers and diffusers   |                                |                |                          |                                    |          |       |
| Air registers (aluminium type) c/w volume control damper of size : -          |                                |                |                          |                                    |          |       |
| <i>Each</i>   |                                |                |                          |                                    |          |       |
| 37077   | up to 0.1 m <sup>2</sup> ..... | 242.21         | 3.81                     | 4.77                               | 11.04    | 37077 |
| 37078   | 0.1 - 0.3 m <sup>2</sup> ..... | 477.35         | 4.67                     | 5.72                               | 12.80    | 37078 |
| 37079   | 0.3 - 0.5 m <sup>2</sup> ..... | 1,046.55       | 5.63                     | 6.59                               | 14.36    | 37079 |
| 37080   | 0.5 - 0.8 m <sup>2</sup> ..... | 1,655.36       | 6.59                     | 7.55                               | 15.83    | 37080 |
| Air registers (metal type c/w painting) c/w volume control damper of size : - |                                |                |                          |                                    |          |       |
| <i>Each</i>   |                                |                |                          |                                    |          |       |
| 37081   | up to 0.1 m <sup>2</sup> ..... | 187.20         | 3.81                     | 4.77                               | 11.04    | 37081 |
| 37082   | 0.1 - 0.3 m <sup>2</sup> ..... | 361.22         | 4.67                     | 5.72                               | 12.80    | 37082 |
| 37083   | 0.3 - 0.5 m <sup>2</sup> ..... | 705.10         | 5.63                     | 6.59                               | 14.36    | 37083 |
| 37084   | 0.5 - 0.8 m <sup>2</sup> ..... | 1,394.33       | 6.59                     | 7.55                               | 15.83    | 37084 |

| Item   |                                |                |                          |                                    | Item     |       |
|--|--------------------------------|----------------|--------------------------|------------------------------------|----------|-------|
| <b>AIR DUCTS, THERMAL INSULATION &amp; ACCESSORIES (CONT'D)</b>                                |                                |                |                          |                                    |          |       |
| Air registers and diffusers (Cont'd)   |                                |                |                          |                                    |          |       |
| Ceiling diffusers of all shape (aluminium type) with volume control damper of size :-          |                                |                |                          |                                    |          |       |
|  | <i>Each</i>                    | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only |       |
|  |                                | A \$           | B \$                     | C \$                               | D \$     |       |
| 37085  | up to 0.1 m <sup>2</sup> ..... | 272.67         | 3.81                     | 5.10                               | 12.80    | 37085 |
| 37086  | 0.1 - 0.2 m <sup>2</sup> ..... | 442.69         | 4.28                     | 5.67                               | 13.55    | 37086 |
| 37087  | 0.2 - 0.3 m <sup>2</sup> ..... | 619.31         | 4.71                     | 6.41                               | 14.31    | 37087 |
| 37088  | 0.3 - 0.5 m <sup>2</sup> ..... | 993.65         | 5.24                     | 7.22                               | 15.06    | 37088 |
| Ceiling diffusers of all shape (metal type c/w painting) with volume control damper of size :- |                                |                |                          |                                    |          |       |
|  | <i>Each</i>                    |                |                          |                                    |          |       |
| 37089  | up to 0.1 m <sup>2</sup> ..... | 188.40         | 3.81                     | 5.10                               | 12.80    | 37089 |
| 37090  | 0.1 - 0.2 m <sup>2</sup> ..... | 359.90         | 4.28                     | 5.67                               | 13.55    | 37090 |
| 37091  | 0.2 - 0.3 m <sup>2</sup> ..... | 576.30         | 4.71                     | 6.41                               | 14.31    | 37091 |
| 37092  | 0.3 - 0.5 m <sup>2</sup> ..... | 959.92         | 5.24                     | 7.22                               | 15.06    | 37092 |
| 4 way supply air diffuser (metal type c/w painting) c/w adjustable damper and accessories :-   |                                |                |                          |                                    |          |       |
|  | <i>Each</i>                    |                |                          |                                    |          |       |
| 37093  | up to 0.1 m <sup>2</sup> ..... | 210.88         | 4.70                     | 6.16                               | 11.04    | 37093 |
| 37094  | 0.1 - 0.3 m <sup>2</sup> ..... | 361.00         | 5.21                     | 6.61                               | 11.79    | 37094 |
| 37095  | 0.3 - 0.5 m <sup>2</sup> ..... | 508.97         | 5.65                     | 7.14                               | 12.47    | 37095 |
| Linear diffusers   |                                |                |                          |                                    |          |       |
| Aluminium linear diffuser c/w adjustable damper and accessories :-                             |                                |                |                          |                                    |          |       |
|  | <i>Per linear metre</i>        |                |                          |                                    |          |       |
| 37096  | 1 slot.....                    | 323.59         | 4.70                     | 6.16                               | 11.98    | 37096 |
| 37097  | 2 slots.....                   | 388.05         | 4.70                     | 6.16                               | 11.98    | 37097 |
| 37098  | 3 slots.....                   | 454.36         | 4.70                     | 6.16                               | 11.98    | 37098 |
| 37099  | 4 slots.....                   | 517.45         | 4.70                     | 6.16                               | 11.98    | 37099 |



| Item  |   | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only | Item  |
|---|---|----------------|--------------------------|------------------------------------|----------|-------|
| <b>AIR DUCTS, THERMAL INSULATION &amp; ACCESSORIES (CONT'D)</b> |   |                |                          |                                    |          |       |
|   | Linear diffusers (Cont'd)   |                |                          |                                    |          |       |
|   | Aluminium linear diffuser c/w distribution plenum, adjustable damper and accessories :- |                |                          |                                    |          |       |
|   | <i>Per linear metre</i>   | A \$           | B \$                     | C \$                               | D \$     |       |
| 37100   | 1 slot.....   | 384.20         | 4.70                     | 6.16                               | 11.98    | 37100 |
| 37101   | 2 slots.....  | 450.26         | 4.70                     | 6.16                               | 11.98    | 37101 |
| 37102   | 3 slots.....  | 520.22         | 4.70                     | 6.16                               | 11.98    | 37102 |
| 37103   | 4 slots.....  | 591.81         | 4.70                     | 6.16                               | 11.98    | 37103 |
|   | Return air grille   |                |                          |                                    |          |       |
|   | Return air grille (metal type c/w painting) c/w air filter (including hinged type) :-   |                |                          |                                    |          |       |
|   | <i>Each</i>   |                |                          |                                    |          |       |
| 37104   | up to 0.1 m <sup>2</sup> .....  | 291.99         | 3.81                     | 5.19                               | 11.04    | 37104 |
| 37105   | 0.1 - 0.3 m <sup>2</sup> .....  | 598.54         | 4.67                     | 6.61                               | 11.79    | 37105 |
| 37106   | 0.3 - 0.5 m <sup>2</sup> .....  | 940.48         | 5.63                     | 7.14                               | 12.47    | 37106 |
| 37107   | 0.5 - 0.8 m <sup>2</sup> .....  | 1,257.06       | 6.10                     | 7.58                               | 13.28    | 37107 |
| 37108   | 0.8 - 1.1 m <sup>2</sup> .....  | 1,573.64       | 6.10                     | 7.58                               | 13.28    | 37108 |
|   | Return air grille (aluminium type) c/w air filter :-                                    |                |                          |                                    |          |       |
|   | <i>Each</i>   |                |                          |                                    |          |       |
| 37109   | up to 0.1 m <sup>2</sup> .....  | 349.48         | 4.70                     | 6.16                               | 11.04    | 37109 |
| 37110   | 0.1 - 0.3 m <sup>2</sup> .....  | 942.47         | 5.21                     | 7.12                               | 12.80    | 37110 |
| 37111   | 0.3 - 0.5 m <sup>2</sup> .....  | 1,278.57       | 5.65                     | 7.55                               | 14.35    | 37111 |
| 37112   | 0.5 - 0.8 m <sup>2</sup> .....  | 1,538.96       | 6.59                     | 8.90                               | 15.83    | 37112 |
| 37113   | 0.8 - 1.1 m <sup>2</sup> .....  | 1,799.35       | 6.59                     | 8.90                               | 15.83    | 37113 |
|   | Exhaust air grille (hinged type) c/w volume control damper                              |                |                          |                                    |          |       |
|   | Aluminium type :-   |                |                          |                                    |          |       |
|   | <i>Each</i>   |                |                          |                                    |          |       |
| 37114   | up to 0.2 m <sup>2</sup> .....  | 330.21         | 4.70                     | 6.16                               | 11.79    | 37114 |
| 37115   | 0.2 - 0.4 m <sup>2</sup> .....  | 519.03         | 5.21                     | 6.61                               | 12.47    | 37115 |
| 37116   | 0.4 - 0.6 m <sup>2</sup> .....  | 768.57         | 5.65                     | 7.14                               | 13.28    | 37116 |

| Item  |   |                      |                                      |  | Item        |       |
|-------|---|----------------------|--------------------------------------|--|-------------|-------|
|       | <b>AIR DUCTS, THERMAL INSULATION &amp; ACCESSORIES<br/>(CONT'D)</b>   |                      |                                      |  |             |       |
|       |   | Supply<br>and<br>fix | Take<br>down<br>and<br>clear<br>away | Take<br>down<br>and set<br>aside for<br>re-use | Fix<br>only |       |
|       |   | A<br>\$              | B<br>\$                              | C<br>\$  | D<br>\$     |       |
|       | Exhaust air grille (hinged type) c/w volume control damper (Cont'd)   |                      |                                      |  |             |       |
|       | Metal type with painting : -  |                      |                                      |  |             |       |
|       | <b>Each</b>   |                      |                                      |  |             |       |
| 37117 | up to 0.2 m <sup>2</sup> .....  | 249.08               | 4.70                                 | 6.16   | 11.79       | 37117 |
| 37118 | 0.2 - 0.4 m <sup>2</sup> .....  | 352.83               | 5.21                                 | 6.61   | 12.47       | 37118 |
| 37119 | 0.4 - 0.6 m <sup>2</sup> .....  | 603.99               | 5.65                                 | 7.14   | 13.28       | 37119 |
|       | <b>Per square metre</b>   |                      |                                      |  |             |       |
| 37120 | Stainless steel 316 exhaust air grille.....   | 1,913.89             | 10.60                                | 13.27  | 23.34       | 37120 |
|       | Duct work accessories : -   |                      |                                      |  |             |       |
|       | <b>Each</b>   |                      |                                      |  |             |       |
| 37121 | Ventglass L.A.....  | 227.53               | 4.31                                 | 5.41   | 10.19       | 37121 |
| 37122 | Ventglass L.A. c/w insulation .....   | 343.69               | 4.31                                 | 5.86   | 10.97       | 37122 |
|       | Dampers   |                      |                                      |  |             |       |
|       | Fire damper (all type c/w holding frame, enclosure, access panel, electrical thermal link etc.) of F.S.D. approved type : -                                       |                      |                                      |  |             |       |
|       | <b>Each</b>   |                      |                                      |  |             |       |
| 37123 | up to 0.1 m <sup>2</sup> .....  | 627.87               | 7.42                                 | 11.12  | 25.26       | 37123 |
| 37124 | 0.1 - 0.3 m <sup>2</sup> .....  | 952.48               | 8.29                                 | 12.00  | 27.13       | 37124 |
| 37125 | 0.3 - 0.5 m <sup>2</sup> .....  | 1,235.97             | 9.15                                 | 12.86  | 28.26       | 37125 |
| 37126 | 0.5 - 0.8 m <sup>2</sup> .....  | 1,686.02             | 10.17                                | 13.88  | 29.80       | 37126 |
|       | Fire damper (all type c/w stainless steel blades, galvanised steel holding frame, enclosure, access panel, electro thermal link etc.) of F.S.D. approved type : - |                      |                                      |  |             |       |
|       | <b>Each</b>   |                      |                                      |  |             |       |
| 37127 | up to 0.1 m <sup>2</sup> .....  | 859.40               | 7.42                                 | 11.12  | 25.26       | 37127 |
| 37128 | 0.1 - 0.3 m <sup>2</sup> .....  | 1,303.72             | 8.29                                 | 12.00  | 27.13       | 37128 |
| 37129 | 0.3 - 0.5 m <sup>2</sup> .....  | 1,691.75             | 9.15                                 | 12.86  | 28.26       | 37129 |
| 37130 | 0.5 - 0.8 m <sup>2</sup> .....  | 2,307.76             | 10.17                                | 13.88  | 29.80       | 37130 |

| Item  | Supply and fix                 | Take down and clear away | Take down and set aside for re-use | Fix only | Item  |       |
|---|--------------------------------|--------------------------|------------------------------------|----------|-------|-------|
|   | A<br>\$                        | B<br>\$                  | C<br>\$                            | D<br>\$  |       |       |
| <b>AIR DUCTS, THERMAL INSULATION &amp; ACCESSORIES<br/>(CONT'D)</b>   |                                |                          |                                    |          |       |       |
| Dampers (Cont'd)  |                                |                          |                                    |          |       |       |
| Fire damper (all type c/w holding frame, enclosure, access panel, fusible link etc.)<br>of F.S.D. approved type :-  |                                |                          |                                    |          |       |       |
| <i>Each</i>   |                                |                          |                                    |          |       |       |
| 37131   | up to 0.1 m <sup>2</sup> ..... | 696.65                   | 4.06                               | 6.17     | 14.30 | 37131 |
| 37132   | 0.1 - 0.3 m <sup>2</sup> ..... | 1,075.99                 | 4.55                               | 6.66     | 15.21 | 37132 |
| 37133   | 0.3 - 0.5 m <sup>2</sup> ..... | 1,583.13                 | 5.01                               | 7.13     | 15.86 | 37133 |
| 37134   | 0.5 - 0.8 m <sup>2</sup> ..... | 2,585.10                 | 5.57                               | 7.69     | 16.63 | 37134 |
| Fire damper (all type c/w stainless steel blades, galvanised steel holding frame,<br>enclosure, access panel, fusible link etc.) of F.S.D. approved type :- |                                |                          |                                    |          |       |       |
| <i>Each</i>   |                                |                          |                                    |          |       |       |
| 37135   | up to 0.1 m <sup>2</sup> ..... | 953.55                   | 4.06                               | 6.17     | 14.30 | 37135 |
| 37136   | 0.1 - 0.3 m <sup>2</sup> ..... | 1,472.77                 | 4.55                               | 6.66     | 15.21 | 37136 |
| 37137   | 0.3 - 0.5 m <sup>2</sup> ..... | 2,166.93                 | 5.01                               | 7.13     | 15.86 | 37137 |
| 37138   | 0.5 - 0.8 m <sup>2</sup> ..... | 3,538.39                 | 5.57                               | 7.69     | 16.63 | 37138 |
| Combined smoke and fire damper c/w holding frame, enclosure, access panel,<br>fusible link or electromagnet release of F.S.D. approved type :-              |                                |                          |                                    |          |       |       |
| <i>Each</i>   |                                |                          |                                    |          |       |       |
| 37139   | up to 0.1 m <sup>2</sup> ..... | 2,545.53                 | 4.31                               | 6.55     | 15.28 | 37139 |
| 37140   | 0.1 - 0.3 m <sup>2</sup> ..... | 3,446.59                 | 4.81                               | 7.04     | 16.22 | 37140 |
| 37141   | 0.3 - 0.5 m <sup>2</sup> ..... | 4,672.56                 | 5.31                               | 7.55     | 16.94 | 37141 |
| 37142   | 0.5 - 0.8 m <sup>2</sup> ..... | 6,028.41                 | 5.91                               | 8.15     | 17.80 | 37142 |
| Combined smoke and fire damper c/w actuator and electrical connection :-  |                                |                          |                                    |          |       |       |
| <i>Each</i>   |                                |                          |                                    |          |       |       |
| 37143   | up to 0.1 m <sup>2</sup> ..... | 2,069.92                 | 3.85                               | 5.86     | 13.48 | 37143 |
| 37144   | 0.1 - 0.3 m <sup>2</sup> ..... | 2,917.66                 | 4.17                               | 6.16     | 14.38 | 37144 |
| 37145   | 0.3 - 0.5 m <sup>2</sup> ..... | 3,801.74                 | 4.53                               | 6.53     | 15.67 | 37145 |
| 37146   | 0.5 - 0.8 m <sup>2</sup> ..... | 4,419.87                 | 5.15                               | 7.05     | 17.58 | 37146 |

| Item  |                                | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only | Item  |
|---|--------------------------------|----------------|--------------------------|------------------------------------|----------|-------|
|   |                                | A \$           | B \$                     | C \$                               | D \$     |       |
| <b>AIR DUCTS, THERMAL INSULATION &amp; ACCESSORIES (CONT'D)</b>   |                                |                |                          |                                    |          |       |
| Dampers (Cont'd)  |                                |                |                          |                                    |          |       |
| Fire damper to louver door c/w all necessary accessories of F.S.D. approved type :-                         |                                |                |                          |                                    |          |       |
| <i>Each</i>   |                                |                |                          |                                    |          |       |
| 37147   | up to 0.1 m <sup>2</sup> ..... | 779.17         | 81.99                    | 87.23                              | 222.72   | 37147 |
| 37148   | 0.1 - 0.3 m <sup>2</sup> ..... | 957.23         | 92.60                    | 97.30                              | 259.89   | 37148 |
| 37149   | 0.3 - 0.5 m <sup>2</sup> ..... | 1,120.30       | 100.56                   | 106.16                             | 296.52   | 37149 |
| 37150   | 0.5 - 0.8 m <sup>2</sup> ..... | 1,367.62       | 110.64                   | 115.70                             | 370.69   | 37150 |
| Motorized damper c/w actuator, coupling, electrical connection, connected to an electricity supply point :- |                                |                |                          |                                    |          |       |
| <i>Each</i>   |                                |                |                          |                                    |          |       |
| 37151   | up to 0.1 m <sup>2</sup> ..... | 1,075.73       | 15.88                    | 25.80                              | 101.75   | 37151 |
| 37152   | 0.1 - 0.3 m <sup>2</sup> ..... | 2,136.56       | 22.94                    | 32.20                              | 118.63   | 37152 |
| 37153   | 0.3 - 0.5 m <sup>2</sup> ..... | 2,845.21       | 25.53                    | 39.86                              | 131.67   | 37153 |
| 37154   | 0.5 - 0.8 m <sup>2</sup> ..... | 3,512.57       | 29.39                    | 44.87                              | 142.88   | 37154 |
| Stainless Steel 304 Volume Control Damper (Motorized type) :-   |                                |                |                          |                                    |          |       |
| <i>Each</i>   |                                |                |                          |                                    |          |       |
| 37155   | 150 x 150 x 150 mm.....        | 2,532.64       | 11.74                    | 17.34                              | 26.91    | 37155 |
| 37156   | 400 x 300 x 200 mm.....        | 3,523.10       | 11.74                    | 17.34                              | 26.91    | 37156 |
| 37157   | 500 x 300 x 200 mm.....        | 4,527.53       | 11.74                    | 17.34                              | 26.91    | 37157 |
| Stainless Steel 316 Volume Control Damper (Motorized type) :-   |                                |                |                          |                                    |          |       |
| <i>Each</i>   |                                |                |                          |                                    |          |       |
| 37158   | 150 x 150 x 150 mm.....        | 3,246.72       | 11.74                    | 17.34                              | 26.91    | 37158 |
| 37159   | 400 x 300 x 200 mm.....        | 4,202.42       | 11.74                    | 17.34                              | 26.91    | 37159 |
| 37160   | 500 x 300 x 200 mm.....        | 5,281.02       | 11.74                    | 17.34                              | 26.91    | 37160 |

| Item   | Supply and fix  | Take down and clear away | Take down and set aside for re-use | Fix only | Item  |       |
|--|---|--------------------------|------------------------------------|----------|-------|-------|
|  | A<br>\$   | B<br>\$                  | C<br>\$                            | D<br>\$  |       |       |
| <b>AIR DUCTS, THERMAL INSULATION &amp; ACCESSORIES<br/>(CONT'D)</b>  |   |                          |                                    |          |       |       |
| Dampers (Cont'd)   |   |                          |                                    |          |       |       |
| Self-closing (non-return) damper c/w device for position and locking the damper blades, access panel and label etc. :- |   |                          |                                    |          |       |       |
| <b>Each</b>  |   |                          |                                    |          |       |       |
| 37161  | up to 0.1 m <sup>2</sup> .....  | 140.92                   | 3.54                               | 5.37     | 13.30 | 37161 |
| 37162  | 0.1 - 0.3 m <sup>2</sup> .....  | 273.89                   | 3.92                               | 5.76     | 14.00 | 37162 |
| 37163  | 0.3 - 0.5 m <sup>2</sup> .....  | 530.12                   | 4.35                               | 6.16     | 14.89 | 37163 |
| 37164  | 0.5 - 0.8 m <sup>2</sup> .....  | 1,055.58                 | 4.81                               | 6.62     | 16.08 | 37164 |
| Air filter c/w enclosure, holding frame and air gasket :-  |   |                          |                                    |          |       |       |
| <b>Per square metre of surface area facing air stream</b>  |   |                          |                                    |          |       |       |
| 37165  | Filter for FCU/fresh air filter/pre-filter.....   | 1,322.20                 | 7.00                               | 9.44     | 15.37 | 37165 |
| 37166  | Main filter cartridge type.....   | 1,652.04                 | 7.00                               | 9.44     | 15.37 | 37166 |
| 37167  | HEPA filter.....  | 3,302.39                 | 7.00                               | 9.44     | 15.37 | 37167 |
| 37168  | Bag filter of high efficiency with extended area, deep pleated type mounted to modular sections and equipped with holding frames & c/w at least four heavy duty spring type positive sealing latches (Air velocity flow rate of 1.0 to 3.5 m <sup>3</sup> /s )..... | 1,116.28                 | 7.04                               | 10.04    | 16.34 | 37168 |
| Perforated diffuser c/w volume control damper and HEPA filter :-   |   |                          |                                    |          |       |       |
| <b>Per set</b>   |   |                          |                                    |          |       |       |
| 37169  | 1200 mm x 600 mm.....   | 9,246.31                 | 16.29                              | 21.90    | 36.09 | 37169 |
| 37170  | 600 mm x 600 mm.....  | 4,925.33                 | 12.99                              | 17.46    | 29.02 | 37170 |
| Electro-static filter and accessories  |   |                          |                                    |          |       |       |
| Nominal airflow rate :-  |   |                          |                                    |          |       |       |
| <b>Per set</b>   |   |                          |                                    |          |       |       |
| 37171  | up to 0.5 m <sup>3</sup> /s.....  | 4,608.88                 | 11.20                              | 13.53    | 42.63 | 37171 |
| 37172  | 0.5 - 1 m <sup>3</sup> /s.....  | 9,159.56                 | 13.46                              | 15.79    | 46.87 | 37172 |
| 37173  | 1 - 2 m <sup>3</sup> /s.....  | 18,420.73                | 15.59                              | 18.01    | 51.16 | 37173 |
| 37174  | 2 - 3 m <sup>3</sup> /s.....  | 19,693.52                | 17.80                              | 20.20    | 55.46 | 37174 |
| 37175  | 3 - 4 m <sup>3</sup> /s.....  | 21,611.14                | 20.05                              | 22.46    | 63.80 | 37175 |
| 37176  | 4 - 5 m <sup>3</sup> /s.....  | 24,715.60                | 22.18                              | 24.82    | 68.01 | 37176 |
| 37177  | 5 - 6 m <sup>3</sup> /s.....  | 28,483.05                | 24.40                              | 26.89    | 75.99 | 37177 |

| Item   |  |                      |                                      |  | Item        |       |
|--|--|----------------------|--------------------------------------|--|-------------|-------|
| <b>AIR DUCTS, THERMAL INSULATION &amp; ACCESSORIES<br/>(CONT'D)</b>  |  |                      |                                      |  |             |       |
| Active carbon filter c/w high-grade activated carbon filters and pre-filter and housed in a frame structure                                  |  |                      |                                      |  |             |       |
| Nominal airflow rate : -   |  |                      |                                      |  |             |       |
| <b>Per set</b>   |  |                      |                                      |  |             |       |
|  |  | Supply<br>and<br>fix | Take<br>down<br>and<br>clear<br>away | Take<br>down<br>and set<br>aside for<br>re-use | Fix<br>only |       |
|  |  | A<br>\$              | B<br>\$                              | C<br>\$  | D<br>\$     |       |
| 37178  | up to 0.5 m <sup>3</sup> /s.....   | 4,129.51             | 7.28                                 | 9.81   | 23.15       | 37178 |
| 37179  | 0.5 - 1 m <sup>3</sup> /s.....   | 6,169.79             | 9.70                                 | 12.15  | 27.80       | 37179 |
| 37180  | 1 - 2 m <sup>3</sup> /s.....   | 9,639.61             | 12.12                                | 14.63  | 32.45       | 37180 |
| 37181  | 2 - 3 m <sup>3</sup> /s.....   | 13,798.81            | 14.55                                | 17.07  | 37.09       | 37181 |
| 37182  | 3 - 4 m <sup>3</sup> /s.....   | 16,465.21            | 16.85                                | 19.44  | 41.61       | 37182 |
| 37183  | 4 - 5 m <sup>3</sup> /s.....   | 21,820.82            | 19.18                                | 21.78  | 46.26       | 37183 |
| 37184  | 5 - 6 m <sup>3</sup> /s.....   | 25,981.63            | 21.61                                | 24.21  | 50.83       | 37184 |
| Electric duct heater of black sheathed element type c/w enclosure, access panel, safety cut-off, thermostat, sail switch and accessories : - |  |                      |                                      |  |             |       |
| <b>Each</b>  |  |                      |                                      |  |             |       |
| 37185  | up to 3 kW.....  | 1,632.54             | 6.78                                 | 8.13   | 19.22       | 37185 |
| 37186  | 3 - 6 kW.....  | 2,045.35             | 7.21                                 | 8.62   | 20.07       | 37186 |
| 37187  | 6 - 9 kW.....  | 2,440.82             | 7.72                                 | 9.07   | 20.90       | 37187 |
| 37188  | 9 - 12 kW.....   | 2,716.23             | 8.13                                 | 9.54   | 21.75       | 37188 |
| Duct silencers : -   |  |                      |                                      |  |             |       |
| <b>Per set</b>   |  |                      |                                      |  |             |       |
| 37189  | up to 0.5 m <sup>3</sup> /s.....   | 2,149.83             | 13.84                                | 23.13  | 75.23       | 37189 |
| 37190  | 0.5 - 0.75 m <sup>3</sup> /s.....  | 2,270.37             | 16.93                                | 26.24  | 82.08       | 37190 |
| 37191  | 0.75 - 1 m <sup>3</sup> /s.....  | 3,118.10             | 20.74                                | 30.15  | 88.71       | 37191 |
| 37192  | Add to last item for each additional 0.25 m <sup>3</sup> /s or part thereof..... | 859.32               | 3.20                                 | 3.70   | 7.06        | 37192 |
| Ductwork acoustic insulation : -   |  |                      |                                      |  |             |       |
| <b>Per square metre</b>  |  |                      |                                      |  |             |       |
| 37193  | Ductwork acoustic insulation, 50mm thick including metal perforated sheet.....   | 788.87               | 7.92                                 | 11.59  | 26.85       | 37193 |

| Item  | Supply and fix  | Take down and clear away | Take down and set aside for re-use | Fix only | Item  |       |
|---|---|--------------------------|------------------------------------|----------|-------|-------|
| A   | B   | C                        | D                                  |          |       |       |
| \$  | \$  | \$                       | \$                                 |          |       |       |
| <b>AIR DUCTS, THERMAL INSULATION &amp; ACCESSORIES (CONT'D)</b>                           |   |                          |                                    |          |       |       |
| Duct access panel : -   |   |                          |                                    |          |       |       |
| <i>Each</i>   |   |                          |                                    |          |       |       |
| 37194   | up to 0.1 m <sup>2</sup> .....  | 233.26                   | 5.99                               | 7.01     | 13.19 | 37194 |
| 37195   | 0.1 - 0.25 m <sup>2</sup> .....   | 347.33                   | 7.02                               | 8.05     | 14.79 | 37195 |
| 37196   | 0.25 - 0.5 m <sup>2</sup> .....   | 612.18                   | 8.52                               | 9.54     | 17.14 | 37196 |
| Regulation damper : -   |   |                          |                                    |          |       |       |
| <i>Each</i>   |   |                          |                                    |          |       |       |
| 37197   | Regulation damper c/w operating handle, access panel, device for position and locking the damper blades, label etc. ....                  | 219.26                   | 11.73                              | 15.61    | 29.99 | 37197 |
| Galvanized iron wire mesh : -   |   |                          |                                    |          |       |       |
| <i>Per square metre</i>   |   |                          |                                    |          |       |       |
| 37198   | Galvanized iron wire mesh (straight lattice mesh/diamond mesh).....   | 121.35                   | 8.07                               | 9.65     | 18.57 | 37198 |
| Galvanized iron air duct c/w volume control damper, painted with anti-corrosive paint : - |   |                          |                                    |          |       |       |
| <i>Per square metre</i>   |   |                          |                                    |          |       |       |
| 37199   | 1 mm thick.....   | 451.22                   | 9.10                               | 13.38    | 28.38 | 37199 |
| 37200   | 1.2 mm thick.....   | 508.84                   | 10.09                              | 14.48    | 30.09 | 37200 |
| Anti-acidic/anti-corrosive PVC duct for exhaust fans of diameter : -                      |   |                          |                                    |          |       |       |
| <i>Per linear metre</i>   |   |                          |                                    |          |       |       |
| 37201   | 150 mm.....   | 808.79                   | 4.55                               | 7.92     | 14.03 | 37201 |
| 37202   | 250 mm .....  | 846.41                   | 5.59                               | 9.10     | 17.50 | 37202 |
| 37203   | 300 mm.....   | 982.28                   | 6.77                               | 10.27    | 20.97 | 37203 |
| Air duct cleaning : -   |   |                          |                                    |          |       |       |
| <i>Each</i>   |   |                          |                                    |          |       |       |
| 37204   | Air duct cleaning point c/w metal flange and air tight screw plug fixing on air duct with no work on ceiling or demountable ceiling ..... | 42.63                    | -                                  | -        | -     | 37204 |
| 37205   | Air duct cleaning point c/w metal flange, extended collar, air tight screw plug fixing on air duct with fixed ceiling .....               | 51.21                    | -                                  | -        | -     | 37205 |

| Item  |   | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only | Item  |
|---|---|----------------|--------------------------|------------------------------------|----------|-------|
| <b>AIR DUCTS, THERMAL INSULATION &amp; ACCESSORIES (CONT'D)</b> |   | A              | B                        | C                                  | D        |       |
| Air duct cleaning : - (Cont'd)                                  |   | \$             | \$                       | \$                                 | \$       |       |
| <i>Per linear metre</i>   |   |                |                          |                                    |          |       |
| 37206   | Air duct cleaning and disinfection process with proprietary type compressed air lance, disinfection application lance, sampling probe and necessary accessories, video recording, video inspection and reporting..... | 80.02          | -                        | -                                  | -        | 37206 |
| <i>Per point</i>  |   |                |                          |                                    |          |       |
| 37207   | Inspection and photograph taking using borescope, c/w particulate and micro-biological monitoring report .....  | 361.29         | -                        | -                                  | -        | 37207 |
| Protection coating paint : -                                    |   |                |                          |                                    |          |       |
| <i>Per square metre</i>   |   |                |                          |                                    |          |       |
| 37208   | Protection coating paint for thermal insulation (flexible closed cell elastomeric) of same manufacturer as the thermal insulation for ductwork at outdoor area.....   | 1,070.41       | -                        | -                                  | -        | 37208 |



**Section 38**

**HEATING, VENTILATION AND AIR-CONDITIONING - EQUIPMENT**

| Item  |   |                |                          |                                    | Item     |       |
|-------|---|----------------|--------------------------|------------------------------------|----------|-------|
|       | <b>UNITARY AIR CONDITIONERS</b>   |                |                          |                                    |          |       |
|       | Air to air packaged air conditioner (refrigerant R22) c/w motors, compressors, filter, filter chamber, noise control equipment, copper tube with pre-corrosion resisting treated aluminium fins cooling coils, condensers, blowers, starters, refrigerant, drain pan, emergency stop button, probe type smoke detector, local control panel.      | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only |       |
|       | External or internally mounted, of cooling capacity : -   |                |                          |                                    |          |       |
|       | <i>Each</i>   | A \$           | B \$                     | C \$                               | D \$     |       |
| 38001 | up to 15 kW.....  | -              | 158.19                   | 174.84                             | 606.10   | 38001 |
| 38002 | 15 - 21 kW.....   | -              | 171.56                   | 181.52                             | 621.09   | 38002 |
| 38003 | 21 - 30 kW.....   | -              | 175.81                   | 198.20                             | 633.09   | 38003 |
| 38004 | 30 - 50 kW.....   | -              | 180.09                   | 208.03                             | 653.58   | 38004 |
|       | Air to air packaged air conditioner (refrigerant zero ODP) c/w motors, compressors, filter, filter chamber, noise control equipment, copper tube with pre-corrosion resisting treated aluminium fins cooling coils, condensers, blowers, starters, refrigerant, drain pan, emergency stop button, probe type smoke detector, local control panel. |                |                          |                                    |          |       |
|       | External or internally mounted, of cooling capacity : -   |                |                          |                                    |          |       |
|       | <i>Each</i>   |                |                          |                                    |          |       |
| 38005 | up to 15 kW.....  | 19,223.52      | 158.19                   | 174.84                             | 606.10   | 38005 |
| 38006 | 15 - 21 kW.....   | 24,761.82      | 171.56                   | 181.52                             | 621.09   | 38006 |
| 38007 | 21 - 30 kW.....   | 36,059.91      | 175.81                   | 198.20                             | 633.09   | 38007 |
| 38008 | 30 - 50 kW.....   | 45,529.99      | 180.09                   | 208.03                             | 653.58   | 38008 |
| 38009 | 50 - 61 kW.....   | 52,345.38      | 185.90                   | 215.52                             | 674.54   | 38009 |
| 38010 | 61 - 91 kW.....   | 62,198.70      | 187.63                   | 224.82                             | 696.29   | 38010 |

| Item  |  |                |                          |                                    | Item      |       |
|-------|--|----------------|--------------------------|------------------------------------|-----------|-------|
|       | <b>UNITARY AIR CONDITIONERS (CONT'D)</b>   |                |                          |                                    |           |       |
|       | Air cooled packaged heat recovery chiller (refrigerant zero ODP) c/w motor, compressor, condenser, blower, noise control equipment, copper tube with pre-corrosion resisting treated copper fins evaporators, filter drier, water strainer, crank case heater, switch, muffler, refrigerant, oil separator, safety cutout, control metering device, temperature thermometers, starter, receiver, seamless copper tubing, weather-proof cabinet, emergency stop button. | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only  |       |
|       | Cooling capacity :-  |                |                          |                                    |           |       |
|       | <b>Each</b>  | A \$           | B \$                     | C \$                               | D \$      |       |
| 38011 | 300 - 400 kW.....<br>(The actual rate should be : \$870,713.50 for Item 38011A)  | 87,071.35      | 3,377.17                 | 4,544.18                           | 12,491.05 | 38011 |
| 38012 | 400 - 500 kW.....<br>(The actual rate should be : \$968,662.50 for Item 38012A)  | 96,866.25      | 3,730.99                 | 5,012.35                           | 13,863.81 | 38012 |
| 38013 | 500 - 600 kW.....<br>(The actual rate should be : \$1,135,955.00 for Item 38013A)  | 11,359.55      | 4,403.73                 | 5,497.20                           | 15,837.81 | 38013 |
| 38014 | 600 - 700 kW.....<br>(The actual rate should be : \$1,359,976.00 for Item 38014A)  | 13,599.76      | 4,827.71                 | 6,239.34                           | 17,210.10 | 38014 |
| 38015 | 700 - 800 kW.....<br>(The actual rate should be : \$1,519,652.00 for Item 38015A)  | 15,196.52      | 5,056.15                 | 6,327.76                           | 18,181.66 | 38015 |
| 38016 | 800 - 900 kW.....<br>(The actual rate should be : \$1,660,184.00 for Item 38016A)  | 16,601.84      | 5,187.53                 | 6,504.83                           | 18,877.61 | 38016 |
|       | Acoustic enclosure for above chillers :-   |                |                          |                                    |           |       |
|       | <b>Each</b>  |                |                          |                                    |           |       |
| 38017 | 300 - 400 kW.....  | 91,413.30      | 601.35                   | 918.06                             | 2,116.94  | 38017 |
| 38018 | 400 - 500 kW.....<br>(The actual rate should be : \$102,632.80 for Item 38018A)  | 10,263.28      | 690.60                   | 984.51                             | 2,497.75  | 38018 |
| 38019 | 500 - 600 kW.....<br>(The actual rate should be : \$127,207.20 for Item 38019A)  | 12,720.72      | 884.38                   | 1,286.62                           | 3,372.19  | 38019 |
| 38020 | 600 - 700 kW.....<br>(The actual rate should be : \$160,285.10 for Item 38020A)  | 16,028.51      | 1,034.28                 | 1,442.08                           | 3,948.22  | 38020 |
| 38021 | 700 - 800 kW.....<br>(The actual rate should be : \$178,070.80 for Item 38021A)  | 17,807.08      | 1,171.30                 | 1,753.16                           | 4,420.31  | 38021 |
| 38022 | 800 - 900 kW.....<br>(The actual rate should be : \$192,246.60 for Item 38022A)  | 19,224.66      | 1,292.45                 | 1,939.83                           | 4,876.60  | 38022 |

| Item  |   |                |                          |                                    | Item      |       |
|-------|---|----------------|--------------------------|------------------------------------|-----------|-------|
|       | <b>UNITARY AIR CONDITIONERS (CONT'D)</b>  |                |                          |                                    |           |       |
|       | Air cooled packaged water chiller (refrigerant zero ODP) for external mounting c/w motors, compressors, condensers, blowers, noise control equipment, copper tube with pre-corrosion resisting treated copper fins, evaporators, filter drier, water strainer, capacity controller, liquid receivers, starters, refrigerant, weather-proof cabinet, emergency stop button, local control panel. | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only  |       |
|       | Cooling capacity : -  |                |                          |                                    |           |       |
|       | <i>Each</i>   | A \$           | B \$                     | C \$                               | D \$      |       |
| 38023 | up to 44 kW.....<br>(The actual rate should be : \$107,653.50 for Item 38024A)  | 80,398.22      | 929.39                   | 1,123.23                           | 3,538.24  | 38023 |
| 38024 | 44 - 68 kW.....<br>(The actual rate should be : \$107,653.50 for Item 38024A)   | 10,765.35      | 1,146.54                 | 1,682.24                           | 4,707.62  | 38024 |
| 38025 | 68 - 100 kW.....<br>(The actual rate should be : \$162,164.10 for Item 38025A)  | 16,216.41      | 1,530.23                 | 2,269.92                           | 6,113.16  | 38025 |
| 38026 | 100 - 150kW.....<br>(The actual rate should be : \$226,812.60 for Item 38026A)  | 22,681.26      | 1,887.91                 | 2,804.22                           | 6,498.52  | 38026 |
| 38027 | 150 - 200 kW.....<br>(The actual rate should be : \$282,211.30 for Item 38027A)   | 28,221.13      | 2,360.04                 | 3,384.46                           | 7,868.27  | 38027 |
| 38028 | 200 - 300 kW.....<br>(The actual rate should be : \$326,003.90 for Item 38028A)   | 32,600.39      | 2,496.10                 | 3,641.31                           | 8,718.89  | 38028 |
| 38029 | 300 - 350 kW.....<br>(The actual rate should be : \$521,807.20 for Item 38029A)   | 52,180.72      | 3,015.78                 | 4,011.38                           | 9,242.07  | 38029 |
| 38030 | 350 - 450 kW.....<br>(The actual rate should be : \$596,708.30 for Item 38030A)   | 59,670.83      | 3,551.35                 | 4,858.08                           | 10,439.30 | 38030 |
|       | Acoustic enclosure for above chillers : -   |                |                          |                                    |           |       |
|       | <i>Each</i>   |                |                          |                                    |           |       |
| 38031 | up to 100 kW.....   | 31,978.66      | 267.41                   | 439.85                             | 1,435.96  | 38031 |
| 38032 | 100 - 150 kW.....   | 44,647.85      | 320.52                   | 540.70                             | 1,555.90  | 38032 |
| 38033 | 150 - 200 kW.....   | 55,700.82      | 378.45                   | 736.55                             | 1,880.59  | 38033 |
| 38034 | 200 - 300 kW.....   | 64,719.59      | 455.63                   | 846.70                             | 1,980.93  | 38034 |
| 38035 | 300 - 350 kW.....<br>(The actual rate should be : \$104,123.20 for Item 38035A)   | 10,412.32      | 534.77                   | 929.55                             | 2,276.03  | 38035 |
| 38036 | 350 - 450 kW.....<br>(The actual rate should be : \$126,960.40 for Item 38036A)   | 12,696.04      | 644.21                   | 1,027.99                           | 2,401.60  | 38036 |

| Item  |   |                |                          |                                    | Item      |       |
|-------|---|----------------|--------------------------|------------------------------------|-----------|-------|
|       | <b>UNITARY AIR CONDITIONERS (CONT'D)</b>  |                |                          |                                    |           |       |
|       | Air cooled packaged water chiller (refrigerant zero ODP) for external mounting c/w motors, 'scroll' compressor, condensers, blowers, copper tube with pre-corrosion resisting treated aluminium fins, evaporator, filter drier, water strainer, capacity controller, starters, refrigerant, weather-proof cabinet, emergency stop button, local control panel, expansion vessel and circulating pump set. | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only  |       |
|       | Cooling capacity : -  |                |                          |                                    |           |       |
|       | <i>Each</i>   | A \$           | B \$                     | C \$                               | D \$      |       |
| 38037 | up to 25 kW.....<br>(The actual rate should be : \$185,923.60 for Item 38039A)  | 56,571.16      | 755.29                   | 964.35                             | 3,565.40  | 38037 |
| 38038 | 25 - 45 kW.....   | 77,702.11      | 917.25                   | 1,077.04                           | 4,174.37  | 38038 |
| 38039 | 45 - 100 kW.....<br>(The actual rate should be : \$221,654.00 for Item 38040A)  | 18,592.36      | 1,236.45                 | 1,801.43                           | 5,009.21  | 38039 |
| 38040 | 100 - 140 kW.....<br>(The actual rate should be : \$250,079.80 for Item 38041A)   | 22,165.40      | 1,801.43                 | 2,554.61                           | 6,226.69  | 38040 |
| 38041 | 140 - 170 kW.....<br>(The actual rate should be : \$324,160.00 for Item 38042A)   | 25,007.98      | 1,886.26                 | 2,819.15                           | 6,712.91  | 38041 |
| 38042 | 170 - 230 kW.....<br>(The actual rate should be : \$410,586.90 for Item 38043A)   | 32,416.00      | 2,370.91                 | 3,225.90                           | 7,610.42  | 38042 |
| 38043 | 230 - 300 kW.....<br>(The actual rate should be : \$472,320.40 for Item 38044A)   | 41,058.69      | 2,936.34                 | 3,700.44                           | 8,657.52  | 38043 |
| 38044 | 300 - 350 kW.....<br>(The actual rate should be : \$534,053.90 for Item 38045A)   | 47,232.04      | 3,340.22                 | 4,039.40                           | 9,405.45  | 38044 |
| 38045 | 350 - 400kW.....  | 53,405.39      | 3,744.10                 | 4,378.36                           | 10,153.38 | 38045 |

| Item  |  |                |                          |                                    | Item     |       |
|-------|--|----------------|--------------------------|------------------------------------|----------|-------|
|       | <b>UNITARY AIR CONDITIONERS (CONT'D)</b>   |                |                          |                                    |          |       |
|       | Air cooled packaged water chiller (refrigerant zero ODP) for external mounting c/w motors, 'screw' compressor, condensers, blowers, copper tube with pre-corrosion resisting treated aluminium fins, evaporator, filter drier, water strainer, capacity controller, starters, refrigerant, weather-proof cabinet, emergency stop button, local control panel, expansion vessel and circulating pump set. | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only |       |
|       | Cooling capacity : -   |                |                          |                                    |          |       |
|       | <i>Each</i>  | A \$           | B \$                     | C \$                               | D \$     |       |
| 38046 | up to 25 kW.....<br>(The actual rate should be : \$145,836.50 for Item 38048A)   | 38,438.05      | 681.98                   | 869.70                             | 3,224.62 | 38046 |
| 38047 | 25 - 45 kW.....  | 69,081.85      | 825.96                   | 967.24                             | 3,776.22 | 38047 |
| 38048 | 45 - 100 kW.....<br>(The actual rate should be : \$218,456.40 for Item 38049A)   | 14,583.65      | 1,108.03                 | 1,609.93                           | 4,531.45 | 38048 |
| 38049 | 100 - 140 kW.....<br>(The actual rate should be : \$279,690.70 for Item 38050A)  | 21,845.64      | 1,609.93                 | 2,276.16                           | 5,619.40 | 38049 |
| 38050 | 140 - 170 kW.....<br>(The actual rate should be : \$336,680.40 for Item 38051A)  | 27,969.07      | 1,686.83                 | 2,515.19                           | 6,045.74 | 38050 |
| 38051 | 170 - 230 kW.....<br>(The actual rate should be : \$403,168.40 for Item 38052A)  | 33,668.04      | 2,117.50                 | 2,870.72                           | 6,841.97 | 38051 |
| 38052 | 230 - 300 kW.....<br>(The actual rate should be : \$450,659.80 for Item 38053A)  | 40,316.84      | 2,619.95                 | 3,285.51                           | 7,770.91 | 38052 |
| 38053 | 300 - 350 kW.....<br>(The actual rate should be : \$498,151.20 for Item 38054A)  | 45,065.98      | 2,978.84                 | 3,581.79                           | 8,434.43 | 38053 |
| 38054 | 350 - 400kW.....   | 49,815.12      | 3,337.73                 | 3,878.07                           | 9,097.97 | 38054 |

| Item  |  |                |                          |                                    | Item      |       |
|-------|--|----------------|--------------------------|------------------------------------|-----------|-------|
|       | <b>UNITARY AIR CONDITIONERS (CONT'D)</b>   |                |                          |                                    |           |       |
|       | Water-cooled packaged chiller (refrigerant zero ODP) c/w motor, semi-hermetic screw type compressor, shell and tube evaporator / condenser, refrigeration components, and control panel :- | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only  |       |
|       | Cooling capacity :-  |                |                          |                                    |           |       |
|       | <b>Each</b>  | A \$           | B \$                     | C \$                               | D \$      |       |
| 38055 | 400 - 500 kW.....<br>(The actual rate should be : \$565,271.20 for Item 38055A)  | 56,527.12      | 3,024.09                 | 4,085.95                           | 9,249.50  | 38055 |
| 38056 | 500 - 600 kW.....<br>(The actual rate should be : \$656,857.90 for Item 38056A)  | 65,685.79      | 3,630.07                 | 4,905.79                           | 11,066.61 | 38056 |
| 38057 | 600 - 700 kW.....<br>(The actual rate should be : \$784,064.60 for Item 38057A)  | 78,406.46      | 4,181.30                 | 5,660.47                           | 13,240.32 | 38057 |
| 38058 | 700 - 800 kW.....<br>(The actual rate should be : \$923,341.30 for Item 38058A)  | 92,334.13      | 4,909.16                 | 6,644.11                           | 15,579.20 | 38058 |
| 38059 | 800 - 900 kW.....<br>(The actual rate should be : \$1,163,981.00 for Item 38059A)  | 11,639.81      | 6,683.35                 | 8,631.81                           | 19,835.20 | 38059 |
| 38060 | 900 - 1000 kW.....<br>(The actual rate should be : \$1,346,808.00 for Item 38060A)   | 13,468.08      | 8,602.49                 | 11,229.05                          | 23,635.75 | 38060 |
|       | Automatic tube cleaning system for above chiller :-  |                |                          |                                    |           |       |
|       | <b>Each</b>  |                |                          |                                    |           |       |
| 38061 | 400 - 500 kW.....  | 13,803.88      | 43.00                    | 44.92                              | 282.83    | 38061 |
| 38062 | 500 - 600 kW.....  | 15,486.12      | 47.28                    | 49.31                              | 310.96    | 38062 |
| 38063 | 600 - 700 kW.....  | 16,605.52      | 50.83                    | 53.04                              | 332.79    | 38063 |
| 38064 | 700 - 800 kW.....  | 17,405.29      | 53.58                    | 55.93                              | 357.45    | 38064 |
| 38065 | 800 - 900 kW.....  | 18,475.69      | 56.41                    | 58.85                              | 371.92    | 38065 |
| 38066 | 900 - 1000 kW.....   | 19,284.99      | 57.51                    | 60.57                              | 398.92    | 38066 |

| Item  |                  |                      |                                      |  | Item        |       |
|---|------------------|----------------------|--------------------------------------|--|-------------|-------|
| <b>UNITARY AIR CONDITIONERS (CONT'D)</b>  |                  |                      |                                      |  |             |       |
| Air to air split type air conditioners (refrigerant zero ODP) of cooling capacity as specified (direct expansion)   |                  |                      |                                      |  |             |       |
| Condensing units c/w motors, compressors, condenser, copper tubes and pre-painted anti-corrosion resin coated aluminium fins, blowers, filter drier, refrigerant, refrigerant pipework to the internally mounted AHU/FCU, starters, weather-proof cabinet, emergency stop button, liquid receivers. |                  |                      |                                      |  |             |       |
| Cooling capacity : -  |                  |                      |                                      |  |             |       |
| <b>Each</b>   |                  |                      |                                      |  |             |       |
|   |                  | Supply<br>and<br>fix | Take<br>down<br>and<br>clear<br>away | Take<br>down<br>and set<br>aside for<br>re-use | Fix<br>only |       |
|   |                  | A<br>\$              | B<br>\$                              | C<br>\$  | D<br>\$     |       |
| 38067   | up to 14 kW..... | 15,198.74            | 403.51                               | 564.42   | 1,574.49    | 38067 |
| 38068   | 14 - 20 kW.....  | 19,650.40            | 483.37                               | 606.19   | 1,849.58    | 38068 |
| 38069   | 20 - 30 kW.....  | 27,094.54            | 500.43                               | 688.01   | 2,048.07    | 38069 |
| 38070   | 30 - 44 kW.....  | 35,330.97            | 550.82                               | 677.45   | 2,231.21    | 38070 |
| 38071   | 44 - 58 kW.....  | 53,427.32            | 595.00                               | 725.29   | 2,410.33    | 38071 |
| 38072   | 58 - 86 kW.....  | 69,968.42            | 659.44                               | 792.62   | 2,568.74    | 38072 |
| Condensing units c/w motors, compressors, condenser, copper tubes and pre-painted anti-corrosion resin coated aluminium fins, blowers, filter drier, refrigerant, refrigerant pipework to the internally mounted PAU, starters, weather-proof cabinet, emergency stop button, liquid receivers.     |                  |                      |                                      |  |             |       |
| Cooling capacity : -  |                  |                      |                                      |  |             |       |
| <b>Each</b>   |                  |                      |                                      |  |             |       |
| 38073   | Up to 14 kW..... | 16,119.62            | 417.72                               | 604.83   | 2,160.14    | 38073 |
| 38074   | 14 - 20 kW.....  | 20,333.94            | 464.71                               | 679.72   | 2,051.56    | 38074 |
| 38075   | 20 - 30 kW.....  | 29,063.83            | 522.59                               | 690.51   | 2,160.14    | 38075 |
| 38076   | 30 - 44 kW.....  | 39,959.24            | 538.57                               | 809.75   | 2,353.30    | 38076 |
| 38077   | 44 - 58 kW.....  | 64,452.02            | 601.72                               | 881.42   | 2,496.18    | 38077 |
| 38078   | 58 - 86 kW.....  | 80,693.17            | 677.05                               | 959.45   | 2,681.91    | 38078 |



| Item  |                  |                |                          |                                    | Item     |       |
|---|------------------|----------------|--------------------------|------------------------------------|----------|-------|
| <b>UNITARY AIR CONDITIONERS (CONT'D)</b>  |                  |                |                          |                                    |          |       |
| Air to air split type air conditioners (refrigerant zero ODP) of cooling capacity as specified (direct expansion) (Cont'd)  |                  |                |                          |                                    |          |       |
| Internal mounted DX AHU/FCU of copper tube and pre-treated anti-corrosion aluminium fin cooling coil, c/w filter chamber, flexible connector, air filters, filter clog indicator, starters, emergency stop button, local control panel. |                  |                |                          |                                    |          |       |
| Cooling capacity :-   |                  |                |                          |                                    |          |       |
| <i>Each</i>   |                  |                |                          |                                    |          |       |
|   |                  | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only |       |
|   |                  | A \$           | B \$                     | C \$                               | D \$     |       |
| 38079   | up to 14 kW..... | 7,583.13       | 127.37                   | 206.17                             | 641.45   | 38079 |
| 38080   | 14 - 20 kW.....  | 9,191.82       | 142.73                   | 219.99                             | 678.57   | 38080 |
| 38081   | 20 - 30 kW.....  | 11,670.68      | 149.62                   | 225.59                             | 715.47   | 38081 |
| 38082   | 30 - 44 kW.....  | 18,121.20      | 157.73                   | 229.54                             | 753.14   | 38082 |
| 38083   | 44 - 58 kW.....  | 23,792.35      | 173.39                   | 241.60                             | 790.72   | 38083 |
| 38084   | 58 - 86 kW.....  | 28,649.57      | 178.49                   | 251.05                             | 813.19   | 38084 |
| Internal mounted DX PAU of copper tube and pre-treated anti-corrosion aluminium fin cooling coil, c/w filter chamber, flexible connector, air filters, filter clog indicator, starters, emergency stop button, local control panel.     |                  |                |                          |                                    |          |       |
| Cooling capacity :-   |                  |                |                          |                                    |          |       |
| <i>Each</i>   |                  |                |                          |                                    |          |       |
| 38085   | Up to 14 kW..... | 7,575.66       | 131.07                   | 207.59                             | 679.52   | 38085 |
| 38086   | 14 - 20 kW.....  | 9,177.88       | 146.33                   | 220.48                             | 743.61   | 38086 |
| 38087   | 20 - 30 kW.....  | 11,654.06      | 153.59                   | 226.00                             | 789.25   | 38087 |
| 38088   | 30 - 44 kW.....  | 19,305.52      | 162.17                   | 229.63                             | 838.56   | 38088 |
| 38089   | 44 - 58 kW.....  | 25,218.33      | 173.44                   | 243.18                             | 891.43   | 38089 |
| 38090   | 58 - 86 kW.....  | 29,638.00      | 178.76                   | 254.23                             | 930.40   | 38090 |

| Item   |                   |                      |                                      |  | Item        |       |
|--|-------------------|----------------------|--------------------------------------|--|-------------|-------|
| <b>UNITARY AIR CONDITIONERS (CONT'D)</b>   |                   |                      |                                      |  |             |       |
| Air to air split type room air conditioner (direct expansion type), (refrigerant zero ODP), indoor and outdoor unit (shall consist of copper tube and pre-treated anti-corrosion aluminium fins), refrigerant pipe work not exceeding manufacturer's maximum permitted length, refrigerant, local control panel. |                   |                      |                                      |  |             |       |
| Complete set with indoor unit of wall mounted type, cooling only   |                   |                      |                                      |  |             |       |
| Cooling capacity :-  |                   |                      |                                      |  |             |       |
| <b>Each</b>  |                   |                      |                                      |  |             |       |
|  |                   | Supply<br>and<br>fix | Take<br>down<br>and<br>clear<br>away | Take<br>down<br>and set<br>aside for<br>re-use | Fix<br>only |       |
|  |                   | A<br>\$              | B<br>\$                              | C<br>\$  | D<br>\$     |       |
| 38091  | up to 3.5 kW..... | 8,718.97             | 301.11                               | 363.70   | 1,164.47    | 38091 |
| 38092  | 3.5 - 5.2 kW..... | 11,949.84            | 326.68                               | 390.81   | 1,250.83    | 38092 |
| 38093  | 5.2 - 6.5 kW..... | 15,342.29            | 351.50                               | 415.82   | 1,408.46    | 38093 |
| 38094  | 6.5 - 7.5 kW..... | 18,345.57            | 376.27                               | 441.60   | 1,486.17    | 38094 |
| 38095  | 7.5 - 9.5 kW..... | 21,749.06            | 400.92                               | 467.11   | 1,552.41    | 38095 |
| 38096  | 9.5 - 12 kW.....  | 26,923.18            | 425.53                               | 488.85   | 1,634.04    | 38096 |
| Complete set with indoor unit of ceiling suspended type, cooling only  |                   |                      |                                      |  |             |       |
| Cooling capacity :-  |                   |                      |                                      |  |             |       |
| <b>Each</b>  |                   |                      |                                      |  |             |       |
| 38097  | up to 6.5 kW..... | 14,660.01            | 390.15                               | 460.45   | 1,459.95    | 38097 |
| 38098  | 6.5 - 7.5 kW..... | 16,561.89            | 416.48                               | 489.90   | 1,520.13    | 38098 |
| 38099  | 7.5 - 9 kW.....   | 20,588.56            | 442.23                               | 517.08   | 1,563.62    | 38099 |
| 38100  | 9 - 11 kW.....    | 24,562.86            | 467.72                               | 543.73   | 1,645.97    | 38100 |
| 38101  | 11 - 13 kW.....   | 29,433.43            | 519.55                               | 599.71   | 1,727.05    | 38101 |
| 38102  | 13 - 17 kW.....   | 36,010.13            | 567.67                               | 648.06   | 1,817.25    | 38102 |
| Complete set with indoor unit of ceiling cassette type, cooling only   |                   |                      |                                      |  |             |       |
| Cooling capacity :-  |                   |                      |                                      |  |             |       |
| <b>Each</b>  |                   |                      |                                      |  |             |       |
| 38103  | up to 5kW.....    | 12,761.20            | 370.03                               | 418.54   | 1,106.94    | 38103 |
| 38104  | 5 - 6 kW.....     | 15,062.04            | 378.28                               | 436.99   | 1,236.03    | 38104 |
| 38105  | 6 - 8 kW.....     | 19,663.73            | 394.78                               | 473.89   | 1,494.21    | 38105 |
| 38106  | 8 -11 kW.....     | 26,630.74            | 451.45                               | 515.43   | 1,643.88    | 38106 |
| 38107  | 11 - 13 kW.....   | 31,411.11            | 467.72                               | 543.73   | 1,714.77    | 38107 |
| 38108  | 13 - 16.5 kW..... | 40,125.90            | 524.05                               | 602.19   | 1,790.45    | 38108 |

| Item  |   |                |                          |                                    | Item     |       |
|-------|---|----------------|--------------------------|------------------------------------|----------|-------|
|       | <b>UNITARY AIR CONDITIONERS (CONT'D)</b>  |                |                          |                                    |          |       |
|       | Air to air split type room air conditioner (direct expansion type), (refrigerant zero ODP), indoor and outdoor unit (shall consist of copper tube and pre-treated anti-corrosion aluminium fins), refrigerant pipe work not exceeding manufacturer's maximum permitted length, refrigerant, local control panel. (Cont'd) | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only |       |
|       | Complete set with indoor unit of ceiling mounted ducted type, cooling only  |                |                          |                                    |          |       |
|       | Cooling capacity :-   |                |                          |                                    |          |       |
|       | <b>Each</b>   | A \$           | B \$                     | C \$                               | D \$     |       |
| 38109 | up to 5kW.....  | 10,208.96      | 370.03                   | 418.54                             | 1,106.94 | 38109 |
| 38110 | 5 - 6 kW.....   | 12,049.63      | 378.28                   | 436.99                             | 1,236.03 | 38110 |
| 38111 | 6 - 8 kW.....   | 15,730.98      | 394.78                   | 473.89                             | 1,494.21 | 38111 |
| 38112 | 8 -11 kW.....   | 21,304.59      | 451.45                   | 515.43                             | 1,643.88 | 38112 |
| 38113 | 11 - 13 kW.....   | 25,128.89      | 467.72                   | 543.73                             | 1,714.77 | 38113 |
| 38114 | 13 - 16.5 kW.....   | 32,100.72      | 524.05                   | 602.19                             | 1,790.45 | 38114 |
|       | Complete set with indoor unit of wall mounted type; cooling/heating (reverse cycle heat pump)   |                |                          |                                    |          |       |
|       | Cooling and heating capacity :-   |                |                          |                                    |          |       |
|       | <b>Each</b>   |                |                          |                                    |          |       |
| 38115 | up to 6 kW (cooling) and up to 7.5 kW (heating).....  | 15,151.61      | 380.80                   | 444.31                             | 1,409.92 | 38115 |
| 38116 | 6 - 8 kW (cooling) and 7.5 - 9 kW (heating).....  | 19,231.08      | 413.71                   | 478.84                             | 1,518.72 | 38116 |
| 38117 | 8 - 11 kW (cooling) and 9 - 11 kW (heating).....  | 25,350.28      | 463.06                   | 530.63                             | 1,681.92 | 38117 |
|       | Complete set with indoor unit of ceiling mounted ducted type; cooling/heating (reverse cycle heat pump)   |                |                          |                                    |          |       |
|       | Cooling and heating capacity :-   |                |                          |                                    |          |       |
|       | <b>Each</b>   |                |                          |                                    |          |       |
| 38118 | up to 6 kW (cooling) and up to 7.5 kW (heating).....  | 12,121.29      | 380.80                   | 444.31                             | 1,409.92 | 38118 |
| 38119 | 6 - 8 kW (cooling) and 7.5 - 9 kW (heating).....  | 15,384.86      | 413.71                   | 478.84                             | 1,518.72 | 38119 |
| 38120 | 8 - 11 kW (cooling) and 9 - 11 kW (heating).....  | 20,280.22      | 463.06                   | 530.63                             | 1,681.92 | 38120 |

| Item  |   |                |                          |                                    | Item     |       |
|-------|---|----------------|--------------------------|------------------------------------|----------|-------|
|       | <b>UNITARY AIR CONDITIONERS (CONT'D)</b>  |                |                          |                                    |          |       |
|       | Air to air split type room air conditioner (direct expansion type), (refrigerant zero ODP), indoor and outdoor unit (shall consist of copper tube and pre-treated anti-corrosion aluminium fins), refrigerant pipe work not exceeding manufacturer's maximum permitted length, refrigerant, local control panel. (Cont'd) | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only |       |
|       | Complete set with indoor unit of ceiling suspended type, cooling/heating (heat pump)  |                |                          |                                    |          |       |
|       | Cooling and heating capacity :-   |                |                          |                                    |          |       |
|       | <b>Each</b>   | A \$           | B \$                     | C \$                               | D \$     |       |
| 38121 | up to 6 kW (cooling) and up to 7.5 kW (heating).....  | 16,828.86      | 379.24                   | 442.75                             | 1,558.71 | 38121 |
| 38122 | 6 - 8 kW (cooling) and 7.5 - 9 kW (heating).....  | 21,187.49      | 447.19                   | 517.78                             | 1,648.31 | 38122 |
| 38123 | 8 - 11 kW (cooling) and 9 - 11 kW (heating).....  | 27,725.44      | 549.11                   | 630.33                             | 1,782.71 | 38123 |
|       | Complete set with indoor unit of ceiling cassette type, cooling/heating (heat pump)   |                |                          |                                    |          |       |
|       | Cooling and heating capacity :-   |                |                          |                                    |          |       |
|       | <b>Each</b>   |                |                          |                                    |          |       |
| 38124 | up to 6 kW (cooling) and up to 7.5 kW (heating).....  | 17,924.25      | 375.95                   | 467.85                             | 1,451.93 | 38124 |
| 38125 | 6 - 8 kW (cooling) and 7.5 - 9 kW (heating).....  | 23,074.39      | 432.65                   | 516.06                             | 1,572.52 | 38125 |
| 38126 | 8 - 11 kW (cooling) and 9 - 11 kW (heating).....  | 30,799.60      | 517.70                   | 588.38                             | 1,753.40 | 38126 |
|       | Complete set with indoor unit of ceiling mounted ducted type, cooling/heating (heat pump)   |                |                          |                                    |          |       |
|       | Cooling and heating capacity :-   |                |                          |                                    |          |       |
|       | <b>Each</b>   |                |                          |                                    |          |       |
| 38127 | up to 6 kW (cooling) and up to 7.5 kW (heating).....  | 14,339.40      | 375.95                   | 467.85                             | 1,451.93 | 38127 |
| 38128 | 6 - 8 kW (cooling) and 7.5 - 9 kW (heating).....  | 18,459.51      | 432.65                   | 516.06                             | 1,572.52 | 38128 |
| 38129 | 8 - 11 kW (cooling) and 9 - 11 kW (heating).....  | 24,639.68      | 517.70                   | 588.38                             | 1,753.40 | 38129 |
|       | Window-split type air-conditioner with remote controller  |                |                          |                                    |          |       |
|       | Cooling capacity :-   |                |                          |                                    |          |       |
|       | <b>Each</b>   |                |                          |                                    |          |       |
| 38130 | up to 2.8 kW.....   | 8,252.57       | 327.20                   | 395.01                             | 1,264.11 | 38130 |
| 38131 | 2.8 - 3.7kW.....  | 10,671.73      | 354.95                   | 424.10                             | 1,384.87 | 38131 |
| 38132 | 3.7 - 5.5kW.....  | 13,934.88      | 382.62                   | 453.11                             | 1,536.49 | 38132 |
| 38133 | 3.7 - 5.5kW for dual indoor units.....  | 16,659.08      | 440.25                   | 524.56                             | 1,825.66 | 38133 |
| 38134 | 5.5 - 7.0kW.....  | 16,654.17      | 405.68                   | 477.29                             | 1,662.84 | 38134 |

| Item  |  |                      |                                      |  | Item        |       |
|-------|--|----------------------|--------------------------------------|--|-------------|-------|
|       | <b>UNITARY AIR CONDITIONERS (CONT'D)</b>   |                      |                                      |  |             |       |
|       | Window-split type air-conditioner with remote controller (Cont'd)  | Supply<br>and<br>fix | Take<br>down<br>and<br>clear<br>away | Take<br>down<br>and set<br>aside for<br>re-use | Fix<br>only |       |
|       | Cooling capacity : - (Cont'd)  |                      |                                      |  |             |       |
|       | <b>Each</b>  | A<br>\$              | B<br>\$                              | C<br>\$  | D<br>\$     |       |
| 38135 | 7.0 - 7.9kW.....   | 18,285.74            | 424.90                               | 497.44   | 1,768.13    | 38135 |
|       | Panel housing gauges : -   |                      |                                      |  |             |       |
|       | <b>Each</b>  |                      |                                      |  |             |       |
| 38136 | Panel housing gauges for split type A/C outdoor units (stainless steel 316 weatherproof).....  | 2,716.43             | 74.43                                | 128.59   | 290.64      | 38136 |
|       | Computer room air conditioning unit (direct expansion type with refrigerant zero ODP), indoor and outdoor unit (outdoor unit shall consist of copper pipes and pre-treated anti-corrosion aluminium fins) with electrode boiler humidifier, electric reheat, microprocessor control with local alarm and BMS interface provisions, high efficient filter, refrigerant pipework with length not exceeding manufacturer's maximum permitted length, local control panel. Operating room conditions are 22°C, 50% RH at ambient 35°C. |                      |                                      |  |             |       |
|       | Cooling capacity : -   |                      |                                      |  |             |       |
|       | <b>Each</b>  |                      |                                      |  |             |       |
| 38137 | up to 13 kW.....   | 59,143.16            | 464.14                               | 606.44   | 1,941.67    | 38137 |
| 38138 | 13 - 26 kW.....  | 77,515.24            | 564.04                               | 702.54   | 2,277.49    | 38138 |
| 38139 | 26 - 35 kW.....  | 91,002.70            | 617.73                               | 762.31   | 2,429.36    | 38139 |
| 38140 | 35 - 50 kW.....<br>(The actual rate should be : \$103,176.80 for Item 38140A)  | 10,317.68            | 671.05                               | 815.74   | 2,579.93    | 38140 |
| 38141 | 50 - 75 kW.....<br>(The actual rate should be : \$135,053.50 for Item 38141A)  | 13,505.35            | 715.23                               | 847.85   | 2,688.25    | 38141 |
| 38142 | 75 - 84 kW.....<br>(The actual rate should be : \$146,529.10 for Item 38142A)  | 14,652.91            | 731.13                               | 859.41   | 2,727.25    | 38142 |
|       | Acoustic enclosure for above computer room air conditioning units c/w acoustic panels and supporting framework: -  |                      |                                      |  |             |       |
|       | <b>Each</b>  |                      |                                      |  |             |       |
| 38143 | up to 13 kW.....   | 6,470.94             | 133.55                               | 237.48   | 788.01      | 38143 |
| 38144 | 13 - 26 kW.....  | 7,265.14             | 149.94                               | 266.63   | 884.73      | 38144 |
| 38145 | 26 - 35 kW.....  | 9,004.71             | 185.84                               | 330.47   | 1,096.57    | 38145 |
| 38146 | 35 - 50 kW.....  | 11,346.22            | 234.16                               | 416.40   | 1,381.71    | 38146 |
| 38147 | 50 - 75 kW.....  | 12,605.23            | 260.14                               | 462.61   | 1,535.03    | 38147 |
| 38148 | 75 - 84 kW.....  | 13,608.70            | 280.85                               | 499.44   | 1,657.23    | 38148 |

| Item  |   |                |                          |                                    | Item     |       |
|-------|---|----------------|--------------------------|------------------------------------|----------|-------|
|       | <b>UNITARY AIR CONDITIONERS (CONT'D)</b>  |                |                          |                                    |          |       |
|       | Water detection system :-   | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only |       |
|       | <i>Each</i>   | A \$           | B \$                     | C \$                               | D \$     |       |
| 38149 | Water detection system with control panel providing audio and visual alarm, location of leak, connected to water-sensing cable for operation .....  | 15,574.07      | 222.92                   | 241.84                             | 754.79   | 38149 |
|       | <i>Per linear metre</i>   |                |                          |                                    |          |       |
| 38150 | Water sensing cable complete with branch connector, zone connector, compatible with the above water detection system c/w all necessary mountings .....  | 179.00         | 2.32                     | 5.31                               | 21.58    | 38150 |
|       | <i>Per set</i>  |                |                          |                                    |          |       |
| 38151 | Temperature and humidity recorder.....  | 5,818.40       | 4.79                     | 6.07                               | 37.88    | 38151 |
|       | Reheat coil air conditioners for dehumidity Internal mounted direct expansion fan coil unit of copper tube aluminium fins coils c/w filter and chamber, air filter, filter clog indicator, electric expansion valve, thermostat humidistat, fan speed control unit, auto-swing mechanism, starters, drain pan, connection to outdoor condensing unit. |                |                          |                                    |          |       |
|       | Ceiling concealed type :-   |                |                          |                                    |          |       |
|       | <i>Per set</i>  |                |                          |                                    |          |       |
| 38152 | up to 5.8 kW.....   | 38,594.69      | 101.24                   | 512.47                             | 538.01   | 38152 |
| 38153 | 5.8 - 14.5 kW.....  | 52,904.86      | 101.24                   | 719.30                             | 785.65   | 38153 |
|       | Ceiling suspended type :-   |                |                          |                                    |          |       |
|       | <i>Per set</i>  |                |                          |                                    |          |       |
| 38154 | up to 5.8 kW.....   | 34,594.23      | 101.24                   | 512.47                             | 591.55   | 38154 |
| 38155 | 5.8 - 14.5 kW.....  | 48,494.31      | 101.24                   | 719.30                             | 785.65   | 38155 |

| Item   |  |                      |                                      |  | Item        |       |
|--|--|----------------------|--------------------------------------|--|-------------|-------|
| <b>UNITARY AIR CONDITIONERS (CONT'D)</b>   |  |                      |                                      |  |             |       |
| Variable refrigerant volume (VRV) system (refrigerant zero ODP)  |  |                      |                                      |  |             |       |
| Outdoor condensing units c/w insulated gate bipolar transistor type inverter or the equivalent, hermetic scroll compressor, anti-corrosion resin coated condensing fin, propeller fan, accumulator, high pressure switch, crank case heater, over current protection for inverter, short recycling timer and oil recovery system, refrigerant (zero ODP), refrigerant pipework (with length not exceeding manufacturer's maximum permitted length) to the indoor units, weather proof cabinet, emergency stop button, local control panel for operation. |  |                      |                                      |  |             |       |
| Cooling and heating (heat pump), capacity : -  |  |                      |                                      |  |             |       |
| <i>Per set</i>   |  |                      |                                      |  |             |       |
|  |  | Supply<br>and<br>fix | Take<br>down<br>and<br>clear<br>away | Take<br>down<br>and set<br>aside for<br>re-use | Fix<br>only |       |
|  |  | A<br>\$              | B<br>\$                              | C<br>\$  | D<br>\$     |       |
| 38156  | up to 14 kW.....   | 59,126.10            | 517.33                               | 627.71   | 2,201.50    | 38156 |
| 38157  | 14 - 20 kW.....  | 80,977.59            | 610.32                               | 733.65   | 2,368.40    | 38157 |
| 38158  | 20 - 30 kW.....  | 85,285.57            | 704.55                               | 838.61   | 2,548.22    | 38158 |
| 38159  | 30 - 44 kW.....<br>(The actual rate should be : \$117,062.00 for Item 38159A)      | 11,706.20            | 799.66                               | 939.40   | 2,705.23    | 38159 |
| 38160  | 44 - 58 kW.....<br>(The actual rate should be : \$153,708.50 for Item 38160A)      | 15,370.85            | 891.14                               | 1,021.53                                       | 2,866.62    | 38160 |
| 38161  | 58 - 86 kW.....<br>(The actual rate should be : \$212,330.70 for Item 38161A)      | 21,233.07            | 1,007.74                             | 1,181.10                                       | 3,051.63    | 38161 |
| 38162  | 86 - 90 kW.....<br>(The actual rate should be : \$220,705.30 for Item 38162A)      | 22,070.53            | 1,024.40                             | 1,203.90                                       | 3,078.06    | 38162 |
| Cooling only, capacity : -   |  |                      |                                      |  |             |       |
| <i>Per set</i>   |  |                      |                                      |  |             |       |
| 38163  | up to 14 kW.....   | 55,156.91            | 517.33                               | 627.71   | 2,201.50    | 38163 |
| 38164  | 14 - 20 kW.....  | 68,260.63            | 610.32                               | 733.65   | 2,368.40    | 38164 |
| 38165  | 20 - 30 kW.....  | 81,996.94            | 704.55                               | 838.61   | 2,548.22    | 38165 |
| 38166  | 30 - 44 kW.....<br>(The actual rate should be : \$113,187.80 for Item 38166A)      | 11,318.78            | 799.66                               | 939.40   | 2,705.23    | 38166 |
| 38167  | 44 - 58 kW.....<br>(The actual rate should be : \$147,992.40 for Item 38167A)      | 14,799.24            | 891.14                               | 1,021.53                                       | 2,866.62    | 38167 |
| 38168  | 58 - 86 kW.....<br>(The actual rate should be : \$202,693.70 for Item 38168A)      | 20,269.37            | 1,007.74                             | 1,181.10                                       | 3,051.63    | 38168 |
| Panel housing gauges : -   |  |                      |                                      |  |             |       |
| <i>Per set</i>   |  |                      |                                      |  |             |       |
| 38169  | Panel housing gauges for VRV outdoor units (stainless steel 316 weatherproof)..... | 3,001.94             | 74.43                                | 128.59   | 290.64      | 38169 |

| Item   |  |                      |                                      |  | Item        |       |
|--|--|----------------------|--------------------------------------|--|-------------|-------|
| <b>UNITARY AIR CONDITIONERS (CONT'D)</b>   |  |                      |                                      |  |             |       |
| Variable refrigerant volume (VRV) system (refrigerant zero ODP)  |  |                      |                                      |  |             |       |
| Water cooled outdoor condensing units c/w insulated gate bipolar transistor type inverter or the equivalent, hermetic scroll compressor, over current protection for inverter, and short recycling timer, refrigerant (zero ODP), refrigerant pipework (with length not exceeding manufacturer's maximum permitted length) to the indoor units, weather proof cabinet, emergency stop button, local control panel for operation.                             |  |                      |                                      |  |             |       |
| Cooling and heating (heat pump), capacity : -  |  |                      |                                      |  |             |       |
| <i>Per set</i>   |  |                      |                                      |  |             |       |
|  |  | Supply<br>and<br>fix | Take<br>down<br>and<br>clear<br>away | Take<br>down<br>and set<br>aside for<br>re-use | Fix<br>only |       |
|  |  | A<br>\$              | B<br>\$                              | C<br>\$  | D<br>\$     |       |
| 38170  | up to 22.7 kW.....<br>(The actual rate should be : \$106,652.00 for Item 38171A)     | 88,235.66            | 657.83                               | 781.63   | 2,418.83    | 38170 |
| 38171  | 22.7 - 27 kW.....<br>(The actual rate should be : \$106,652.00 for Item 38171A)      | 10,665.20            | 769.03                               | 907.07   | 2,721.47    | 38171 |
| 38172  | 27 - 45.4 kW.....<br>(The actual rate should be : \$124,430.10 for Item 38172A)      | 12,443.01            | 859.28                               | 1,023.37                                       | 2,994.96    | 38172 |
| 38173  | 45.4 - 49.7 kW.....<br>(The actual rate should be : \$157,755.60 for Item 38173A)    | 15,775.56            | 1,010.63                             | 1,166.73                                       | 3,406.66    | 38173 |
| 38174  | 49.7 - 54 kW.....<br>(The actual rate should be : \$197,894.40 for Item 38174A)      | 19,789.44            | 1,205.61                             | 1,413.97                                       | 3,883.92    | 38174 |
| Dehumidify variable refrigerant volume (VRV) system (refrigerant zero ODP) outdoor condensing units c/w motors, compressors, copper pipes and aluminium fins, condensers, blowers, filter drier, refrigerant drier, refrigerant (zero ODP), refrigerant pipework (with length not exceeding manufacturer's maximum permitted length) to the internally mounted control unit, weatherproof cabinet, emergency stop button, local control panel for operation. |  |                      |                                      |  |             |       |
| Cooling and heating capacity : -   |  |                      |                                      |  |             |       |
| <i>Per set</i>   |  |                      |                                      |  |             |       |
| 38175  | up to 14 kW.....<br>(The actual rate should be : \$179,175.40 for Item 38175A)       | 17,917.54            | 1,455.50                             | 2,204.78                                       | 3,590.24    | 38175 |
| 38176  | 14 - 20 kW.....<br>(The actual rate should be : \$193,529.70 for Item 38176A)        | 19,352.97            | 1,724.98                             | 2,440.38                                       | 4,172.44    | 38176 |
| 38177  | 20 - 44 kW.....<br>(The actual rate should be : \$345,589.70 for Item 38177A)        | 34,558.97            | 2,117.18                             | 4,233.97                                       | 6,258.67    | 38177 |
| 38178  | 44 - 56 kW.....<br>(The actual rate should be : \$373,236.80 for Item 38178A)        | 37,323.68            | 2,415.91                             | 4,517.04                                       | 6,889.38    | 38178 |
| Internally mounted refrigerant distributing and recirculating unit c/w valves, wiring and all necessary devices for controlling refrigerant flows and distributions : -  |  |                      |                                      |  |             |       |
| <i>Per set</i>   |  |                      |                                      |  |             |       |
| 38179  | up to 6 branches.....  | 97,636.19            | 247.19                               | 1,262.03                                       | 1,478.30    | 38179 |
| 38180  | up to 10 branches.....<br>(The actual rate should be : \$157,275.30 for Item 38180A) | 15,727.53            | 295.07                               | 1,499.76                                       | 1,771.89    | 38180 |



| Item  |   |                      |                                      |  | Item        |       |
|-------|---|----------------------|--------------------------------------|--|-------------|-------|
|       | <b>UNITARY AIR CONDITIONERS (CONT'D)</b>  | Supply<br>and<br>fix | Take<br>down<br>and<br>clear<br>away | Take<br>down<br>and set<br>aside for<br>re-use | Fix<br>only |       |
|       |   | A<br>\$              | B<br>\$                              | C<br>\$  | D<br>\$     |       |
|       | VRV master controller : -   |                      |                                      |  |             |       |
|       | <i>Per set</i>  |                      |                                      |  |             |       |
| 38181 | VRV air-conditioning unit master controller.....  | 13,893.67            | 329.58                               | 988.75   | 1,977.51    | 38181 |
|       | Internal mounted direct expansion fan coil unit of copper tube aluminium fins coils<br>c/w filter and chamber, air filter, filter clog indicator, electric expansion valve,<br>thermostat, fan speed control unit, auto-swing mechanism, starters, drain pan,<br>connection to outdoor condensing unit. |                      |                                      |  |             |       |
|       | Ceiling cassette type/concealed type; cooling only  |                      |                                      |  |             |       |
|       | Cooling capacity : -  |                      |                                      |  |             |       |
|       | <i>Per set</i>  |                      |                                      |  |             |       |
| 38182 | up to 3.8 kW.....   | 10,082.30            | 86.52                                | 96.54  | 378.86      | 38182 |
| 38183 | 3.8 - 5.8 kW.....   | 10,942.08            | 97.14                                | 107.79   | 411.10      | 38183 |
| 38184 | 5.8 - 9.4 kW.....   | 13,353.83            | 106.13                               | 117.51   | 444.05      | 38184 |
| 38185 | 9.4 - 14.5 kW.....  | 15,270.68            | 115.35                               | 127.23   | 477.04      | 38185 |
| 38186 | 14.5 - 22.3 kW.....   | 19,690.56            | 172.73                               | 195.81   | 679.63      | 38186 |
| 38187 | 22.3 - 29.1 kW.....   | 23,643.35            | 230.32                               | 251.04   | 1,016.25    | 38187 |
|       | Ceiling suspended type; cooling only  |                      |                                      |  |             |       |
|       | Cooling capacity : -  |                      |                                      |  |             |       |
|       | <i>Per set</i>  |                      |                                      |  |             |       |
| 38188 | up to 3.8 kW.....   | 9,476.30             | 72.15                                | 79.39  | 333.01      | 38188 |
| 38189 | 3.8 - 5.8 kW.....   | 10,752.05            | 82.28                                | 89.96  | 369.12      | 38189 |
| 38190 | 5.8 - 9.4 kW.....   | 11,142.52            | 92.91                                | 97.88  | 406.19      | 38190 |
| 38191 | 9.4 - 14.5 kW.....  | 11,924.30            | 97.55                                | 112.45   | 442.75      | 38191 |
|       | Ceiling mounted ducted type, cooling only   |                      |                                      |  |             |       |
|       | Cooling capacity : -  |                      |                                      |  |             |       |
|       | <i>Per set</i>  |                      |                                      |  |             |       |
| 38192 | up to 3.8 kW.....   | 8,538.06             | 72.15                                | 79.39  | 333.01      | 38192 |
| 38193 | 3.8 - 5.8 kW.....   | 9,347.49             | 82.28                                | 89.96  | 369.12      | 38193 |
| 38194 | 5.8 - 9.4 kW.....   | 11,390.56            | 92.91                                | 97.88  | 406.19      | 38194 |
| 38195 | 9.4 - 14.5 kW.....  | 12,907.99            | 97.55                                | 112.45   | 442.75      | 38195 |

| Item   |                    |                      |                                      |  | Item        |       |
|--|--------------------|----------------------|--------------------------------------|--|-------------|-------|
| <b>UNITARY AIR CONDITIONERS (CONT'D)</b>   |                    |                      |                                      |  |             |       |
| Internal mounted direct expansion fan coil unit of copper tube aluminium fins coils<br>c/w filter and chamber, air filter, filter clog indicator, electric expansion valve,<br>thermostat, fan speed control unit, auto-swing mechanism, starters, drain pan,<br>connection to outdoor condensing unit. (Cont'd) |                    |                      |                                      |  |             |       |
| Exposed wall mounted type, cooling only  |                    |                      |                                      |  |             |       |
| Cooling capacity :-  |                    |                      |                                      |  |             |       |
| <i>Per set</i>   |                    |                      |                                      |  |             |       |
|  |                    | Supply<br>and<br>fix | Take<br>down<br>and<br>clear<br>away | Take<br>down<br>and set<br>aside for<br>re-use | Fix<br>only |       |
|  |                    | A<br>\$              | B<br>\$                              | C<br>\$  | D<br>\$     |       |
| 38196  | up to 3.8 kW.....  | 9,092.85             | 61.08                                | 67.39  | 279.87      | 38196 |
| 38197  | 3.8 - 5.8 kW.....  | 10,358.78            | 69.57                                | 76.04  | 310.67      | 38197 |
| 38198  | 5.8 - 9.4 kW.....  | 10,719.68            | 78.38                                | 82.47  | 355.45      | 38198 |
| 38199  | 9.4 - 14.5 kW..... | 11,491.63            | 82.28                                | 94.51  | 388.60      | 38199 |
| Ceiling cassette type/concealed type; cooling and heating (heat pump)  |                    |                      |                                      |  |             |       |
| Cooling and heating capacity :-  |                    |                      |                                      |  |             |       |
| <i>Per set</i>   |                    |                      |                                      |  |             |       |
| 38200  | up to 3.8 kW.....  | 10,666.47            | 86.52                                | 96.54  | 378.86      | 38200 |
| 38201  | 3.8 - 5.8 kW.....  | 11,666.46            | 97.14                                | 107.79   | 411.10      | 38201 |
| 38202  | 5.8 - 9.4 kW.....  | 14,243.07            | 106.13                               | 117.51   | 444.05      | 38202 |
| 38203  | 9.4 - 14.5 kW..... | 16,103.47            | 115.35                               | 127.23   | 477.04      | 38203 |
| Ceiling suspended type; cooling and heating (heat pump)  |                    |                      |                                      |  |             |       |
| Cooling and heating capacity :-  |                    |                      |                                      |  |             |       |
| <i>Per set</i>   |                    |                      |                                      |  |             |       |
| 38204  | up to 3.8 kW.....  | 11,708.58            | 72.15                                | 79.39  | 333.01      | 38204 |
| 38205  | 3.8 - 5.8 kW.....  | 12,246.86            | 82.28                                | 89.96  | 369.12      | 38205 |
| 38206  | 5.8 - 9.4 kW.....  | 12,713.33            | 92.91                                | 97.88  | 406.19      | 38206 |
| 38207  | 9.4 - 14.5 kW..... | 13,515.03            | 97.55                                | 112.45   | 442.75      | 38207 |

| Item                                     |  |                      |                                      |  | Item           |
|--|--|----------------------|--------------------------------------|--|----------------|
| <b>UNITARY AIR CONDITIONERS (CONT'D)</b> |  |                      |                                      |  |                |
|  | Internal mounted direct expansion fan coil unit of copper tube aluminium fins coils<br>c/w filter and chamber, air filter, filter clog indicator, electric expansion valve,<br>thermostat, fan speed control unit, auto-swing mechanism, starters, drain pan,<br>connection to outdoor condensing unit. (Cont'd) | Supply<br>and<br>fix | Take<br>down<br>and<br>clear<br>away | Take<br>down<br>and set<br>aside for<br>re-use | Fix<br>only    |
|  | Ceiling mounted ducted type, cooling and heating (heat pump)   |                      |                                      |  |                |
|  | Cooling and heating capacity :-  |                      |                                      |  |                |
|  | <i>Per set</i>   | A<br>\$              | B<br>\$                              | C<br>\$  | D<br>\$        |
| 38208                                    | up to 3.8 kW.....  | 9,102.33             | 72.15                                | 79.39  | 333.01 38208   |
| 38209                                    | 3.8 - 5.8 kW.....  | 9,964.43             | 82.28                                | 89.96  | 369.12 38209   |
| 38210                                    | 5.8 - 9.4 kW.....  | 12,193.32            | 92.91                                | 97.88  | 406.19 38210   |
| 38211                                    | 9.4 - 14.5 kW.....   | 13,765.74            | 97.55                                | 112.45   | 442.75 38211   |
|  | Exposed wall mounted type, cooling and heating (heat pump)   |                      |                                      |  |                |
|  | Cooling and heating capacity :-  |                      |                                      |  |                |
|  | <i>Per set</i>   |                      |                                      |  |                |
| 38212                                    | Up to 2.3 kW.....  | 7,039.22             | 243.09                               | 295.27   | 827.89 38212   |
| 38213                                    | 2.3 - 2.9 kW.....  | 8,681.58             | 261.17                               | 315.96   | 958.44 38213   |
| 38214                                    | 2.9 - 3.7 kW.....  | 11,641.46            | 284.24                               | 337.60   | 1,081.69 38214 |
| 38215                                    | 3.7 - 4.7 kW.....  | 14,602.09            | 307.50                               | 359.67   | 1,130.35 38215 |
| 38216                                    | 4.7 - 5.8 kW.....  | 18,749.79            | 328.40                               | 381.60   | 1,186.30 38216 |
| 38217                                    | 5.8 - 7.3 kW.....  | 22,566.17            | 349.41                               | 401.78   | 1,233.14 38217 |
|  | Room cooler, (refrigerant R22), c/w aluminium supporting frame, drain pan<br>(size of drain pan to match with room cooler)   |                      |                                      |  |                |
|  | Cooling capacity :-  |                      |                                      |  |                |
|  | <i>Each</i>  |                      |                                      |  |                |
| 38218                                    | up to 2.8 kW.....  | -                    | 51.96                                | 65.43  | 264.52 38218   |
| 38219                                    | 2.8 - 3.7 kW.....  | -                    | 65.98                                | 97.11  | 319.77 38219   |
| 38220                                    | 3.7 - 4.6 kW.....  | -                    | 87.99                                | 121.31   | 350.37 38220   |
| 38221                                    | 4.6 - 5.5 kW.....  | -                    | 95.85                                | 143.82   | 465.22 38221   |
| 38222                                    | 5.5 - 6.3 kW.....  | -                    | 135.59                               | 190.92   | 510.49 38222   |

| Item                                     |   |                      |                                      |  | Item        |       |
|--|---|----------------------|--------------------------------------|--|-------------|-------|
| <b>UNITARY AIR CONDITIONERS (CONT'D)</b> |   |                      |                                      |  |             |       |
|  | Room cooler, (refrigerant zero ODP), c/w aluminium supporting frame, drain pan<br>(size of drain pan to match with room cooler)   | Supply<br>and<br>fix | Take<br>down<br>and<br>clear<br>away | Take<br>down<br>and set<br>aside for<br>re-use | Fix<br>only |       |
|  | Cooling capacity :-   |                      |                                      |  |             |       |
|  | <b>Each</b>   | A<br>\$              | B<br>\$                              | C<br>\$  | D<br>\$     |       |
| 38223                                    | up to 2.8 kW.....   | 4,687.53             | 53.08                                | 66.84  | 270.23      | 38223 |
| 38224                                    | 2.8 - 3.7 kW.....   | 5,624.60             | 67.40                                | 99.20  | 326.66      | 38224 |
| 38225                                    | 3.7 - 4.6 kW.....   | 6,411.66             | 89.89                                | 123.94   | 357.92      | 38225 |
| 38226                                    | 4.6 - 5.5 kW.....   | 7,427.79             | 97.93                                | 146.61   | 475.20      | 38226 |
| 38227                                    | 5.5 - 6.3 kW.....   | 9,043.65             | 138.17                               | 195.05   | 521.44      | 38227 |
| 38228                                    | 6.3 - 7.2 kW.....   | 9,803.25             | 152.23                               | 230.54   | 630.12      | 38228 |
|  | GI drain pan c/w insulation for room cooler of size :-  |                      |                                      |  |             |       |
|  | <b>Each</b>   |                      |                                      |  |             |       |
| 38229                                    | Galvanised steel drain pan for room cooler (for renewal).....   | 210.75               | 18.62                                | 24.34  | 36.46       | 38229 |
| 38230                                    | Extra for stainless steel drain pan instead of using original included galvanised steel<br>drain pan for a new installation of room cooler.....   | 157.97               | -                                    | -  | -           | 38230 |
|  | Internal mounted direct expansion fan coil unit for all fresh air intake with copper tube and<br>aluminium fins, connection to VRV outdoor unit, c/w all necessary accessories. Opening<br>outside condition are 33°C DB / 28°C WB for summer and 0°C DB / -2.9°C WB for winter |                      |                                      |  |             |       |
|  | Complete unit with all accessories :-   |                      |                                      |  |             |       |
|  | <b>Each</b>   |                      |                                      |  |             |       |
| 38231                                    | 9 kW / 8 kW cooling/heating capacity, with air flow rate of 150 l/s and<br>190 Pa (max) external static pressure, single phase electrical supply.....   | 22,919.68            | 800.09                               | 1,005.66                                       | 1,434.25    | 38231 |
| 38232                                    | 16 kW / 15 kW cooling/heating capacity, with air flow rate of 300 l/s and<br>190 Pa (max) external static pressure, single phase electrical supply.....   | 30,186.48            | 800.09                               | 1,005.66                                       | 1,434.25    | 38232 |
| 38233                                    | 22 kW / 21 kW cooling/heating capacity, with air flow rate of 460 l/s and<br>200 Pa (max) external static pressure, three phase electrical supply.....  | 41,177.34            | 1,108.38                             | 1,498.68                                       | 2,136.45    | 38233 |
| 38234                                    | 28 kW / 26 kW cooling/heating capacity, with air flow rate of 580 l/s and<br>190 Pa (max) external static pressure, three phase electrical supply.....  | 47,255.58            | 1,108.38                             | 1,498.68                                       | 2,136.45    | 38234 |

| Item                                     |   |                |                          |                                    | Item     |       |
|--|---|----------------|--------------------------|------------------------------------|----------|-------|
| <b>UNITARY AIR CONDITIONERS (CONT'D)</b> |   |                |                          |                                    |          |       |
|  | Cold room air conditioning unit (direct expansion type), indoor and outdoor unit c/w refrigerant (zero ODP), pipework not exceeding manufacturer's maximum permitted length, local control panel c/w 1 set point.   | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only |       |
|  | Cold room of not less than 2.5 m height at 35°C ambient and indoor condition of 0°C - 4°C :-  |                |                          |                                    |          |       |
|  | <b>Each</b>   | A<br>\$        | B<br>\$                  | C<br>\$                            | D<br>\$  |       |
| 38235                                    | Cold room size up to 10 m <sup>2</sup> .....<br>(The actual rate should be : \$265,668.80 for Item 38235A)  | 26,566.88      | 990.47                   | 1,299.30                           | 4,357.70 | 38235 |
| 38236                                    | Cold room size 10 - 20 m <sup>2</sup> .....<br>(The actual rate should be : \$282,458.40 for Item 38236A)   | 28,245.84      | 1,133.06                 | 1,437.56                           | 4,737.23 | 38236 |
| 38237                                    | Cold room size 20 - 30 m <sup>2</sup> .....<br>(The actual rate should be : \$327,185.30 for Item 38237A)   | 32,718.53      | 1,317.23                 | 1,618.90                           | 5,147.12 | 38237 |
| 38238                                    | Cold room size 30 - 40 m <sup>2</sup> .....<br>(The actual rate should be : \$368,862.50 for Item 38238A)   | 36,886.25      | 1,429.62                 | 1,781.85                           | 5,582.24 | 38238 |
| 38239                                    | Cold room size 40 - 50 m <sup>2</sup> .....<br>(The actual rate should be : \$412,185.90 for Item 38239A)   | 41,218.59      | 1,599.84                 | 1,912.49                           | 5,972.02 | 38239 |
| 38240                                    | Cold room size 50 - 60 m <sup>2</sup> .....<br>(The actual rate should be : \$514,898.20 for Item 38240A)   | 51,489.82      | 1,701.36                 | 2,116.60                           | 6,352.46 | 38240 |
|  | Air cooled rooftop unit c/w direct-driven, hermetic, scroll type compressor, centrifugal supply air fans, outdoor fans, motors, copper tube aluminium FC fins coil selection, 25mm throwaway filters, temperature sensors, remote human interface, refrigerant (zero ODP) fully charged, emergency stop button, local control panel. Supply and fix with standard delivery and lifting method, such as using goods lifts of the building. (Remark: extra cost for delivery in case good lifts are not available shall be quoted separately) |                |                          |                                    |          |       |
|  | Nominal air flow rate and (cooling capacity) :-   |                |                          |                                    |          |       |
|  | <b>Each</b>   |                |                          |                                    |          |       |
| 38241                                    | 2.3 m <sup>3</sup> /s (44 kW) to 2.9 m <sup>3</sup> /s (50 kW).....   | 95,371.34      | 833.33                   | 1,833.34                           | 3,349.10 | 38241 |
| 38242                                    | 2.9 m <sup>3</sup> /s (50 kW) to 3.8 m <sup>3</sup> /s (69 kW).....<br>(The actual rate should be : \$111,288.80 for Item 38242A)   | 11,128.88      | 1,038.86                 | 1,987.65                           | 3,549.94 | 38242 |
| 38243                                    | 3.8 m <sup>3</sup> /s (69 kW) to 4.3 m <sup>3</sup> /s (88 kW).....<br>(The actual rate should be : \$145,811.20 for Item 38243A)   | 14,581.12      | 1,246.16                 | 2,150.08                           | 3,760.20 | 38243 |
| 38244                                    | 4.3 m <sup>3</sup> /s (88 kW) to 5.7 m <sup>3</sup> /s (126 kW).....<br>(The actual rate should be : \$180,655.90 for Item 38244A)  | 18,065.59      | 1,447.48                 | 2,316.08                           | 3,962.13 | 38244 |
| 38245                                    | 5.7 m <sup>3</sup> /s (126 kW) to 6.8 m <sup>3</sup> /s (149 kW).....<br>(The actual rate should be : \$227,739.30 for Item 38245A)   | 22,773.93      | 1,653.79                 | 2,480.64                           | 4,987.16 | 38245 |
| 38246                                    | 6.8 m <sup>3</sup> /s (149 kW) to 7.3 m <sup>3</sup> /s (160 kW).....<br>(The actual rate should be : \$249,140.80 for Item 38246A)   | 24,914.08      | 1,747.58                 | 2,555.44                           | 5,453.08 | 38246 |

| Item  |                   |                |                          |                                    | Item     |       |
|---|-------------------|----------------|--------------------------|------------------------------------|----------|-------|
| <b>AIR HANDLING &amp; TREATMENT EQUIPMENT</b>   |                   |                |                          |                                    |          |       |
| Air handling units (chilled/hot water) of copper tube aluminium fin cooling / heating coil, c/w double skin insulated galvanized iron casing, motor, blower, water pipe work, filter chamber, pre-filters and high efficiency filters, starters, thermostat/humidistat, emergency stop button, probe type smoke detector, filter clog indicator, stainless steel drain pan, associated power and control wiring.      |                   |                |                          |                                    |          |       |
| Nominal air supply rate : -   |                   |                |                          |                                    |          |       |
| <i>Each</i>   |                   |                |                          |                                    |          |       |
|   |                   | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only |       |
|   |                   | A<br>\$        | B<br>\$                  | C<br>\$                            | D<br>\$  |       |
| 38247   | up to 1 m³/s..... | 25,729.69      | 197.71                   | 293.16                             | 897.64   | 38247 |
| 38248   | 1 - 2 m³/s.....   | 34,018.53      | 239.46                   | 321.52                             | 968.67   | 38248 |
| 38249   | 2 - 3 m³/s.....   | 44,029.23      | 248.18                   | 370.70                             | 1,076.03 | 38249 |
| 38250   | 3 - 4 m³/s.....   | 56,648.33      | 323.94                   | 410.13                             | 1,159.41 | 38250 |
| 38251   | 4 - 5 m³/s.....   | 65,275.14      | 359.24                   | 446.18                             | 1,229.53 | 38251 |
| 38252   | 5 - 6 m³/s.....   | 74,380.72      | 402.10                   | 485.06                             | 1,303.14 | 38252 |
| Air handling units (chilled/hot water) of copper tube aluminium fin cooling /heating coil, c/w double skin insulated galvanized iron casing, dual motors, blower, water pipe work, filter chamber, pre-filters and high efficiency filters, starters, thermostat/humidistat, emergency stop button, probe type smoke detector, filter clog indicator, stainless steel drain pan, associated power and control wiring. |                   |                |                          |                                    |          |       |
| Nominal air supply rate : -   |                   |                |                          |                                    |          |       |
| <i>Each</i>   |                   |                |                          |                                    |          |       |
| 38253   | up to 1 m³/s..... | 32,542.99      | 197.71                   | 293.16                             | 897.64   | 38253 |
| 38254   | 1 - 2 m³/s.....   | 40,777.95      | 239.46                   | 321.52                             | 968.67   | 38254 |
| 38255   | 2 - 3 m³/s.....   | 50,920.50      | 248.18                   | 370.70                             | 1,076.03 | 38255 |
| 38256   | 3 - 4 m³/s.....   | 64,250.47      | 323.94                   | 410.13                             | 1,159.41 | 38256 |
| 38257   | 4 - 5 m³/s.....   | 72,552.67      | 359.24                   | 446.18                             | 1,229.53 | 38257 |
| 38258   | 5 - 6 m³/s.....   | 80,898.60      | 402.10                   | 485.06                             | 1,303.14 | 38258 |

| Item   |  |                      |                                      |  | Item        |       |
|--|--|----------------------|--------------------------------------|--|-------------|-------|
| <b>AIR HANDLING &amp; TREATMENT EQUIPMENT (CONT'D)</b>   |  |                      |                                      |  |             |       |
| AHU system (multi zone control) of copper tube aluminium fin cooling /heating coil for energy saving (energy saving in design and during operation) and space saving (4 different temperatures of air can be supplied in one machine), c/w PU double skin cold insulated aluminium frame casing, 2-speed motor, centrifugal fans, pre-filter, medium filter, 1-4 zones supply air motorized damper, fresh air motorized damper, return air motorized damper, motorized water valve, fresh air temp. sensor, humidity sensor, room air temp. sensor, supply air temp. sensor, pressure switch, CCMS controller, associated power and control wiring |  |                      |                                      |  |             |       |
| Nominal air supply rate : -  |  |                      |                                      |  |             |       |
| <b>Each</b>  |  |                      |                                      |  |             |       |
|  |  | Supply<br>and<br>fix | Take<br>down<br>and<br>clear<br>away | Take<br>down<br>and set<br>aside for<br>re-use | Fix<br>only |       |
|  |  | A<br>\$              | B<br>\$                              | C<br>\$  | D<br>\$     |       |
| 38259  | up to 2 m <sup>3</sup> /s.....   | 96,236.20            | 329.13                               | 454.68   | 1,581.21    | 38259 |
| 38260  | 2 - 4 m <sup>3</sup> /s.....<br>(The actual rate should be : \$101,005.40 for Item 38260A)   | 10,100.54            | 397.35                               | 551.26   | 1,640.65    | 38260 |
| 38261  | 4 - 6 m <sup>3</sup> /s.....<br>(The actual rate should be : \$118,195.20 for Item 38261A)   | 11,819.52            | 509.43                               | 631.46   | 1,794.95    | 38261 |
| 38262  | 6 - 8 m <sup>3</sup> /s.....<br>(The actual rate should be : \$144,374.90 for Item 38262A)   | 14,437.49            | 538.27                               | 669.27   | 1,913.90    | 38262 |
| 38263  | 8 - 10 m <sup>3</sup> /s.....<br>(The actual rate should be : \$167,666.90 for Item 38263A)  | 16,766.69            | 582.62                               | 702.60   | 2,016.37    | 38263 |
| 38264  | 10 - 14 m <sup>3</sup> /s.....<br>(The actual rate should be : \$198,058.40 for Item 38264A) | 19,805.84            | 605.50                               | 741.14   | 2,156.38    | 38264 |
| Dehumidifier heat pipes of 2 rows copper tube aluminium fin coils, c/w zero ODP refrigerant, galvanised steel frame, G.I. steel casing, coating and condensate pans : -  |  |                      |                                      |  |             |       |
| <b>Each</b>  |  |                      |                                      |  |             |       |
| 38265  | 2.8 - 9.3 m <sup>2</sup> .....   | 24,468.27            | 144.84                               | 215.13   | 673.96      | 38265 |
| 38266  | 9.3 - 16.3 m <sup>2</sup> .....  | 28,169.06            | 175.91                               | 234.46   | 733.99      | 38266 |
| 38267  | 16.3 - 21 m <sup>2</sup> .....   | 31,478.31            | 181.48                               | 268.82   | 814.04      | 38267 |
| 38268  | 21 - 25.6 m <sup>2</sup> .....   | 36,032.71            | 238.30                               | 298.37   | 878.32      | 38268 |
| 38269  | 25.6 - 28 m <sup>2</sup> .....   | 37,354.78            | 264.29                               | 325.68   | 933.60      | 38269 |
| Dehumidifier, wall/ceiling mounted with drainage connection of daily moisture removal capacity : -   |  |                      |                                      |  |             |       |
| <b>Each</b>  |  |                      |                                      |  |             |       |
| 38270  | up to 15 litres.....   | 8,161.20             | 290.16                               | 311.12   | 784.26      | 38270 |
| 38271  | 15 - 30 litres.....  | 34,287.66            | 321.43                               | 348.00   | 974.99      | 38271 |
| 38272  | 30 - 60 litres.....  | 46,213.77            | 350.08                               | 382.36   | 1,093.19    | 38272 |

| Item  |   | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only  | Item  |
|-------|---|----------------|--------------------------|------------------------------------|-----------|-------|
|       | <b>AIR HANDLING &amp; TREATMENT EQUIPMENT (CONT'D)</b>  | <b>A</b>       | <b>B</b>                 | <b>C</b>                           | <b>D</b>  |       |
|       |   | <b>\$</b>      | <b>\$</b>                | <b>\$</b>                          | <b>\$</b> |       |
|       | Dehumidifier, ceiling cassette type with drainage connection of daily moisture removal capacity : -   |                |                          |                                    |           |       |
|       | <i>Each</i>   |                |                          |                                    |           |       |
| 38273 | up to 15 litres.....  | 1,347.96       | 290.16                   | 311.12                             | 784.26    | 38273 |
| 38274 | 15 - 30 litres.....   | 5,663.18       | 321.43                   | 348.00                             | 974.99    | 38274 |
| 38275 | 30 - 60 litres.....   | 7,632.98       | 350.08                   | 382.36                             | 1,093.19  | 38275 |
|       | Computer room air conditioning unit (chilled water type), unit shall consist of copper pipes and aluminium fins, with electrode boiler humidifier, electric reheat, microprocessor control with local alarm and BMS interface provisions, high efficient filter, local control panel. Operating cooling capacity rated at 7°C/12.5°C chilled water in/out temperature and 22°C, 50% RH. |                |                          |                                    |           |       |
|       | Cooling capacity : -  |                |                          |                                    |           |       |
|       | <i>Each</i>   |                |                          |                                    |           |       |
| 38276 | up to 15 kW.....  | 50,607.09      | 835.59                   | 1,048.28                           | 3,591.18  | 38276 |
| 38277 | 15 - 33 kW.....   | 67,850.88      | 1,002.74                 | 1,391.64                           | 4,104.17  | 38277 |
| 38278 | 33 - 64 kW.....   | 89,712.26      | 1,167.51                 | 1,744.12                           | 4,610.20  | 38278 |
| 38279 | 64 - 100 kW.....  | 11,965.16      | 1,334.12                 | 2,086.62                           | 5,103.90  | 38279 |
|       | (The actual rate should be : \$119,651.60 for Item 38279A)  |                |                          |                                    |           |       |



| Item  |   |                |                          |                                    | Item     |       |
|-------|---|----------------|--------------------------|------------------------------------|----------|-------|
|       | <b>AIR HANDLING &amp; TREATMENT EQUIPMENT (CONT'D)</b>  |                |                          |                                    |          |       |
|       | Air purifier unit, corona discharge type, c/w local control panel, removable electrode tubes, painted heavy steel power generator, remote control with regulator, stainless steel casing, fuse, on/off switch, safety door switches, auto-off-manual switch, hour run meter, ampere meter, power electrode assemblies.  | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only |       |
|       | Nominal air supply rate : -   |                |                          |                                    |          |       |
|       | <i>Each</i>   | A \$           | B \$                     | C \$                               | D \$     |       |
| 38280 | up to 0.5 m <sup>3</sup> /s.....  | 10,011.88      | 69.26                    | 116.35                             | 531.92   | 38280 |
| 38281 | 0.5 - 1 m <sup>3</sup> /s.....  | 14,827.15      | 73.94                    | 121.32                             | 558.60   | 38281 |
| 38282 | 1 - 2 m <sup>3</sup> /s.....  | 22,148.90      | 78.40                    | 125.89                             | 605.61   | 38282 |
| 38283 | 2 -3 m <sup>3</sup> /s.....   | 42,614.32      | 83.01                    | 130.47                             | 639.19   | 38283 |
| 38284 | 3 -4 m <sup>3</sup> /s.....   | 57,115.07      | 85.51                    | 133.02                             | 685.25   | 38284 |
| 38285 | 4 - 5 m <sup>3</sup> /s.....  | 70,967.98      | 87.95                    | 135.42                             | 725.04   | 38285 |
| 38286 | 5 - 6 m <sup>3</sup> /s.....  | 84,546.50      | 92.56                    | 140.12                             | 790.28   | 38286 |
|       | Ultra violet sterilizer; factory assembled and tested, capable of killing airborne microbial contaminants with 90% of removal efficiency, UV lamps with control circuit, power generator, lamp support and inspection, access door with safety switch, manual control and CCMS control, local control panel, on/off switch, overload protective device, auto-off-manual switch, hour run meter, ampere meter. |                |                          |                                    |          |       |
|       | Nominal air supply rate : -   |                |                          |                                    |          |       |
|       | <i>Per set</i>  |                |                          |                                    |          |       |
| 38287 | up to 0.5 m <sup>3</sup> /s.....  | 11,537.75      | 53.66                    | 89.47                              | 482.38   | 38287 |
| 38288 | 0.5 - 1 m <sup>3</sup> /s.....  | 14,952.40      | 69.79                    | 98.42                              | 515.07   | 38288 |
| 38289 | 1 - 2 m <sup>3</sup> /s.....  | 19,692.09      | 77.87                    | 126.20                             | 583.33   | 38289 |
| 38290 | 2 -3 m <sup>3</sup> /s.....   | 33,262.62      | 91.21                    | 150.54                             | 618.29   | 38290 |
| 38291 | 3 -4 m <sup>3</sup> /s.....   | 38,819.92      | 103.53                   | 173.41                             | 660.97   | 38291 |
| 38292 | 4 - 5 m <sup>3</sup> /s.....  | 52,668.74      | 115.04                   | 179.97                             | 694.39   | 38292 |
| 38293 | 5 - 6 m <sup>3</sup> /s.....  | 58,272.54      | 129.43                   | 211.84                             | 717.03   | 38293 |

| Item  |               |                      |                                      |  | Item        |       |
|---|---------------|----------------------|--------------------------------------|--|-------------|-------|
| <b>AIR HANDLING &amp; TREATMENT EQUIPMENT (CONT'D)</b>  |               |                      |                                      |  |             |       |
| Air pressure stabilizer / air pressure control valves, imported proprietary manufacture, c/w high speed sealed-for-life ball bearings, adjustable centrally located balance weight mechanism. |               |                      |                                      |  |             |       |
| Blade size 300 - 430 mm for number of :-  |               |                      |                                      |  |             |       |
| <i>Per set</i>  |               |                      |                                      |  |             |       |
|   |               | Supply<br>and<br>fix | Take<br>down<br>and<br>clear<br>away | Take<br>down<br>and set<br>aside for<br>re-use | Fix<br>only |       |
|   |               | A<br>\$              | B<br>\$                              | C<br>\$  | D<br>\$     |       |
| 38294   | 1 blade.....  | 5,765.41             | 94.55                                | 97.80  | 364.05      | 38294 |
| 38295   | 2 blades..... | 9,888.42             | 100.00                               | 104.21   | 419.26      | 38295 |
| 38296   | 3 blades..... | 14,687.68            | 101.91                               | 110.89   | 475.76      | 38296 |
| 38297   | 4 blades..... | 19,466.75            | 113.32                               | 120.83   | 498.88      | 38297 |
| 38298   | 5 blades..... | 25,123.94            | 119.74                               | 132.11   | 531.20      | 38298 |
| Blade size 431 - 610 mm for number of :-  |               |                      |                                      |  |             |       |
| <i>Per set</i>  |               |                      |                                      |  |             |       |
| 38299   | 1 blade.....  | 11,320.42            | 91.99                                | 97.98  | 360.45      | 38299 |
| 38300   | 2 blades..... | 15,991.32            | 98.86                                | 108.00   | 417.24      | 38300 |
| 38301   | 3 blades..... | 21,229.22            | 101.28                               | 110.80   | 503.43      | 38301 |
| 38302   | 4 blades..... | 26,621.09            | 105.62                               | 120.44   | 522.46      | 38302 |
| 38303   | 5 blades..... | 32,180.42            | 109.95                               | 132.04   | 559.77      | 38303 |
| 2-hour fire rated; blade size 300 - 430 mm for number of :-   |               |                      |                                      |  |             |       |
| <i>Per set</i>  |               |                      |                                      |  |             |       |
| 38304   | 1 blade.....  | 9,124.03             | 94.55                                | 97.80  | 364.05      | 38304 |
| 38305   | 2 blades..... | 16,634.84            | 100.00                               | 104.21   | 419.26      | 38305 |
| 38306   | 3 blades..... | 24,346.24            | 101.91                               | 110.89   | 475.76      | 38306 |
| 38307   | 4 blades..... | 30,743.92            | 113.32                               | 120.83   | 498.88      | 38307 |
| 38308   | 5 blades..... | 40,289.09            | 119.74                               | 132.11   | 531.20      | 38308 |
| 2-hour fire rated; blade size 431 - 610 mm for number of :-   |               |                      |                                      |  |             |       |
| <i>Per set</i>  |               |                      |                                      |  |             |       |
| 38309   | 1 blade.....  | 18,560.04            | 91.99                                | 97.98  | 360.45      | 38309 |
| 38310   | 2 blades..... | 25,119.15            | 98.86                                | 108.00   | 417.24      | 38310 |
| 38311   | 3 blades..... | 33,336.29            | 101.28                               | 110.80   | 503.43      | 38311 |
| 38312   | 4 blades..... | 41,319.17            | 105.62                               | 120.44   | 522.46      | 38312 |

| Item   |                                      |                      |                                      |  | Item        |       |
|--|--------------------------------------|----------------------|--------------------------------------|--|-------------|-------|
| <b>AIR HANDLING &amp; TREATMENT EQUIPMENT (CONT'D)</b>   |                                      |                      |                                      |  |             |       |
| Air pressure stabilizer / air pressure control valves, imported proprietary manufacture, c/w high speed sealed-for-life ball bearings, adjustable centrally located balance weight mechanism. (Cont'd)   |                                      |                      |                                      |  |             |       |
| 2-hour fire rated; blade size 431 - 610 mm for number of : - (Cont'd)  |                                      |                      |                                      |  |             |       |
| <i>Per set</i>   |                                      |                      |                                      |  |             |       |
|  |                                      | Supply<br>and<br>fix | Take<br>down<br>and<br>clear<br>away | Take<br>down<br>and set<br>aside for<br>re-use | Fix<br>only |       |
|  |                                      | A<br>\$              | B<br>\$                              | C<br>\$  | D<br>\$     |       |
| 38313  | 5 blades.....                        | 50,318.62            | 109.95                               | 132.04   | 559.77      | 38313 |
| Chilled water fan-coil units of 4 rows copper tube aluminium fin cooling coils, c/w filters, chilled water pipes and condensate pans, thermostat c/w digital temperature and speed control/indicating heating (if required) (main chilled water distribution pipes to be measured separately), a deduction of ten percent (10%) will be made to the rate involving supply of fan-coil units of 3 rows cooling coils. |                                      |                      |                                      |  |             |       |
| Ceiling mounted, surface mounted c/w casing with nominal supply air rate : -   |                                      |                      |                                      |  |             |       |
| <i>Each</i>  |                                      |                      |                                      |  |             |       |
| 38314  | up to 0.095 m <sup>3</sup> /s.....   | 5,015.51             | 105.97                               | 192.71   | 615.93      | 38314 |
| 38315  | 0.095 - 0.142 m <sup>3</sup> /s..... | 5,301.88             | 131.68                               | 220.81   | 654.05      | 38315 |
| 38316  | 0.142 - 0.190 m <sup>3</sup> /s..... | 5,749.64             | 160.91                               | 241.39   | 679.90      | 38316 |
| 38317  | 0.190 - 0.284 m <sup>3</sup> /s..... | 6,718.82             | 181.08                               | 266.97   | 757.38      | 38317 |
| 38318  | 0.284 - 0.378 m <sup>3</sup> /s..... | 7,677.53             | 224.86                               | 285.76   | 794.46      | 38318 |
| 38319  | 0.378 - 0.473 m <sup>3</sup> /s..... | 10,561.52            | 225.88                               | 312.11   | 875.23      | 38319 |
| 38320  | 0.473 - 0.567 m <sup>3</sup> /s..... | 11,539.99            | 253.92                               | 339.22   | 929.01      | 38320 |
| 38321  | 0.567 - 0.659 m <sup>3</sup> /s..... | 12,466.36            | 277.75                               | 366.69   | 966.29      | 38321 |
| Ceiling mounted fan coil unit, concealed type without casing with nominal supply air rate : -  |                                      |                      |                                      |  |             |       |
| <i>Each</i>  |                                      |                      |                                      |  |             |       |
| 38322  | up to 0.095 m <sup>3</sup> /s.....   | 3,515.29             | 121.68                               | 206.56   | 644.18      | 38322 |
| 38323  | 0.095 - 0.142 m <sup>3</sup> /s..... | 3,780.79             | 149.68                               | 237.91   | 677.19      | 38323 |
| 38324  | 0.142 - 0.190 m <sup>3</sup> /s..... | 4,034.22             | 178.69                               | 264.23   | 709.46      | 38324 |
| 38325  | 0.190 - 0.284 m <sup>3</sup> /s..... | 4,666.08             | 222.28                               | 295.48   | 793.34      | 38325 |
| 38326  | 0.284 - 0.378 m <sup>3</sup> /s..... | 5,183.48             | 235.30                               | 316.97   | 827.06      | 38326 |
| 38327  | 0.378 - 0.473 m <sup>3</sup> /s..... | 6,262.38             | 241.18                               | 343.14   | 910.14      | 38327 |
| 38328  | 0.473 - 0.567 m <sup>3</sup> /s..... | 6,793.74             | 269.10                               | 369.62   | 964.85      | 38328 |
| 38329  | 0.567 - 0.659 m <sup>3</sup> /s..... | 7,289.86             | 302.25                               | 395.09   | 1,013.73    | 38329 |

| Item  |                                      |                      |                                      |   | Item        |       |
|---|--------------------------------------|----------------------|--------------------------------------|---|-------------|-------|
| <b>AIR HANDLING &amp; TREATMENT EQUIPMENT (CONT'D)</b>  |                                      |                      |                                      |   |             |       |
| Chilled water fan-coil units of 4 rows copper tube aluminium fin cooling coils, c/w filters, chilled water pipes and condensate pans, thermostat c/w digital temperature and speed control/indicating heating (if required) (main chilled water distribution pipes to be measured separately), a deduction of ten percent (10%) will be made to the rate involving supply of fan-coil units of 3 rows cooling coils. (Cont'd) |                                      |                      |                                      |   |             |       |
| Vertical floor/wall mounted fan coil unit, surface mounting c/w casing with nominal supply air rate :-  |                                      |                      |                                      |   |             |       |
| <i>Each</i>   |                                      |                      |                                      |   |             |       |
|   |                                      | Supply<br>and<br>fix | Take<br>down<br>and<br>clear<br>away | Take<br>down<br>and<br>set<br>aside for<br>re-use | Fix<br>only |       |
|   |                                      | A<br>\$              | B<br>\$                              | C<br>\$   | D<br>\$     |       |
| 38330   | up to 0.095 m <sup>3</sup> /s.....   | 5,091.20             | 67.23                                | 144.77  | 560.64      | 38330 |
| 38331   | 0.095 - 0.142 m <sup>3</sup> /s..... | 5,321.80             | 94.71                                | 170.65  | 594.34      | 38331 |
| 38332   | 0.142 - 0.190 m <sup>3</sup> /s..... | 5,747.48             | 110.07                               | 191.44  | 619.15      | 38332 |
| 38333   | 0.190 - 0.284 m <sup>3</sup> /s..... | 6,585.91             | 130.69                               | 217.70  | 693.91      | 38333 |
| 38334   | 0.284 - 0.378 m <sup>3</sup> /s..... | 7,476.82             | 154.20                               | 236.33  | 732.58      | 38334 |
| 38335   | 0.378 - 0.473 m <sup>3</sup> /s..... | 9,979.84             | 176.43                               | 263.09  | 808.10      | 38335 |
| 38336   | 0.473 - 0.567 m <sup>3</sup> /s..... | 10,771.44            | 205.17                               | 289.83  | 861.22      | 38336 |
| 38337   | 0.567 - 0.659 m <sup>3</sup> /s..... | 11,605.90            | 229.70                               | 317.68  | 896.80      | 38337 |
| Vertical floor/wall mounted fan coil unit, concealed type, without casing with nominal supply air rate :-   |                                      |                      |                                      |   |             |       |
| <i>Each</i>   |                                      |                      |                                      |   |             |       |
| 38338   | up to 0.095 m <sup>3</sup> /s.....   | 4,251.64             | 80.69                                | 168.78  | 587.45      | 38338 |
| 38339   | 0.095 - 0.142 m <sup>3</sup> /s..... | 4,686.76             | 106.73                               | 191.89  | 627.20      | 38339 |
| 38340   | 0.142 - 0.190 m <sup>3</sup> /s..... | 4,961.69             | 136.10                               | 223.66  | 653.95      | 38340 |
| 38341   | 0.190 - 0.284 m <sup>3</sup> /s..... | 5,774.04             | 156.79                               | 244.41  | 730.54      | 38341 |
| 38342   | 0.284 - 0.378 m <sup>3</sup> /s..... | 6,310.05             | 180.27                               | 264.89  | 768.73      | 38342 |
| 38343   | 0.378 - 0.473 m <sup>3</sup> /s..... | 7,992.08             | 202.70                               | 294.42  | 847.70      | 38343 |
| 38344   | 0.473 - 0.567 m <sup>3</sup> /s..... | 8,550.83             | 231.40                               | 317.17  | 901.57      | 38344 |
| 38345   | 0.567 - 0.659 m <sup>3</sup> /s..... | 9,272.61             | 257.96                               | 349.77  | 938.47      | 38345 |

| Item  |                         |                |                          |                                    | Item     |       |
|---|-------------------------|----------------|--------------------------|------------------------------------|----------|-------|
| <b>AIR HANDLING &amp; TREATMENT EQUIPMENT (CONT'D)</b>  |                         |                |                          |                                    |          |       |
| Chiller water fan-coil units of 3 rows copper tube aluminium fin cooling coils, c/w filters, chilled water pipes and condensate pans, thermostat c/w digital temperature and speed control/indicating heating (if required) (main chilled water distribution pipes to be measured separately) |                         |                |                          |                                    |          |       |
| Ceiling mounted, surface mounted c/w casing with supply air rate : -  |                         |                |                          |                                    |          |       |
| <i>Each</i>   |                         |                |                          |                                    |          |       |
|   |                         | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only |       |
|   |                         | A \$           | B \$                     | C \$                               | D \$     |       |
| 38346   | up to 0.095 m³/s.....   | 5,022.91       | 106.80                   | 193.18                             | 653.30   | 38346 |
| 38347   | 0.095 - 0.142 m³/s..... | 5,259.29       | 133.96                   | 221.18                             | 692.15   | 38347 |
| 38348   | 0.142 - 0.190 m³/s..... | 5,673.85       | 164.39                   | 241.70                             | 733.03   | 38348 |
| 38349   | 0.190 - 0.284 m³/s..... | 6,753.74       | 183.39                   | 267.62                             | 799.84   | 38349 |
| 38350   | 0.284 - 0.378 m³/s..... | 7,576.74       | 207.52                   | 286.10                             | 867.91   | 38350 |
| 38351   | 0.378 - 0.473 m³/s..... | 9,645.02       | 228.77                   | 312.02                             | 872.13   | 38351 |
| 38352   | 0.473 - 0.576 m³/s..... | 10,892.94      | 258.53                   | 338.86                             | 904.43   | 38352 |
| 38353   | 0.576 - 0.659 m³/s..... | 12,169.45      | 281.60                   | 366.29                             | 939.69   | 38353 |
| Ceiling mounted fan coil unit, concealed type without casing with nominal supply air rate : -   |                         |                |                          |                                    |          |       |
| <i>Each</i>   |                         |                |                          |                                    |          |       |
| 38354   | up to 0.095 m³/s.....   | 3,273.09       | 120.49                   | 203.75                             | 678.98   | 38354 |
| 38355   | 0.095 - 0.142 m³/s..... | 3,609.45       | 147.73                   | 234.76                             | 719.37   | 38355 |
| 38356   | 0.142 - 0.190 m³/s..... | 3,947.47       | 175.56                   | 260.50                             | 758.56   | 38356 |
| 38357   | 0.190 - 0.284 m³/s..... | 4,416.07       | 199.31                   | 291.62                             | 860.71   | 38357 |
| 38358   | 0.284 - 0.378 m³/s..... | 5,211.98       | 212.03                   | 312.37                             | 902.71   | 38358 |
| 38359   | 0.378 - 0.473 m³/s..... | 6,350.87       | 235.23                   | 338.78                             | 931.49   | 38359 |
| 38360   | 0.473 - 0.576 m³/s..... | 7,196.04       | 265.29                   | 364.27                             | 981.40   | 38360 |
| 38361   | 0.576 - 0.659 m³/s..... | 7,498.93       | 297.01                   | 389.45                             | 1,013.01 | 38361 |

| Item  |  |                |                          |                                    | Item     |       |
|-------|--|----------------|--------------------------|------------------------------------|----------|-------|
|       | <b>AIR HANDLING &amp; TREATMENT EQUIPMENT (CONT'D)</b>   |                |                          |                                    |          |       |
|       | Chiller water fan-coil units of 3 rows copper tube aluminium fin cooling coils, c/w filters, chilled water pipes and condensate pans, thermostat c/w digital temperature and speed control/indicating heating (if required) (main chilled water distribution pipes to be measured separately) (Cont'd) | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only |       |
|       | Vertical floor / wall mounted fan coil unit, surface mounting c/w casing with nominal supply air rate :-   |                |                          |                                    |          |       |
|       | <i>Each</i>  | A \$           | B \$                     | C \$                               | D \$     |       |
| 38362 | up to 0.095 m³/s.....  | 5,191.56       | 66.89                    | 145.44                             | 567.34   | 38362 |
| 38363 | 0.095 - 0.142 m³/s.....  | 5,406.02       | 94.71                    | 172.31                             | 598.82   | 38363 |
| 38364 | 0.142 - 0.190 m³/s.....  | 5,889.48       | 109.70                   | 193.31                             | 635.81   | 38364 |
| 38365 | 0.190 - 0.284 m³/s.....  | 6,681.57       | 128.45                   | 219.43                             | 691.15   | 38365 |
| 38366 | 0.284 - 0.378 m³/s.....  | 7,713.78       | 153.19                   | 238.74                             | 743.44   | 38366 |
| 38367 | 0.378 - 0.473 m³/s.....  | 9,860.19       | 176.69                   | 265.75                             | 789.96   | 38367 |
| 38368 | 0.473 - 0.576 m³/s.....  | 10,956.23      | 203.53                   | 293.75                             | 826.87   | 38368 |
| 38369 | 0.576 - 0.659 m³/s.....  | 12,023.91      | 228.95                   | 320.68                             | 863.23   | 38369 |
|       | Vertical floor / wall mounted fan coil unit, concealed type without casing with nominal supply air rate :-   |                |                          |                                    |          |       |
|       | <i>Each</i>  |                |                          |                                    |          |       |
| 38370 | up to 0.095 m³/s.....  | 4,268.63       | 81.10                    | 166.20                             | 600.25   | 38370 |
| 38371 | 0.095 - 0.142 m³/s.....  | 4,627.41       | 106.73                   | 188.80                             | 648.06   | 38371 |
| 38372 | 0.142 - 0.190 m³/s.....  | 4,814.61       | 133.30                   | 219.82                             | 681.47   | 38372 |
| 38373 | 0.190 - 0.284 m³/s.....  | 5,743.63       | 156.21                   | 240.24                             | 732.58   | 38373 |
| 38374 | 0.284 - 0.378 m³/s.....  | 6,187.03       | 180.95                   | 260.28                             | 790.11   | 38374 |
| 38375 | 0.378 - 0.473 m³/s.....  | 7,533.02       | 202.20                   | 289.75                             | 849.67   | 38375 |
| 38376 | 0.473 - 0.567 m³/s.....  | 8,412.06       | 230.09                   | 311.26                             | 898.32   | 38376 |
| 38377 | 0.567 - 0.659 m³/s.....  | 9,646.83       | 258.02                   | 343.83                             | 920.44   | 38377 |
|       | Fan coil unit controller :-  |                |                          |                                    |          |       |
|       | <i>Each</i>  |                |                          |                                    |          |       |
| 38378 | Fan coil unit controller c/w thermostat, digital temperature and speed control/indicating, and all necessary accessories.....  | 476.99         | 10.58                    | 13.07                              | 61.06    | 38378 |

| Item   |   |                      |                                      |  | Item        |       |
|--|---|----------------------|--------------------------------------|--|-------------|-------|
| <b>AIR HANDLING &amp; TREATMENT EQUIPMENT (CONT'D)</b>   |   |                      |                                      |  |             |       |
| Cassette type, ceiling concealed type, c/w condensate drain pump, overflow indication and alarm, chilled water pipes, condensate pans, coils, filters, face panel with discharge and return air grilles, ceiling mounted with nominal supply air rate :-   |   |                      |                                      |  |             |       |
| <i>Each</i>  |   |                      |                                      |  |             |       |
|  |   | Supply<br>and<br>fix | Take<br>down<br>and<br>clear<br>away | Take<br>down<br>and set<br>aside for<br>re-use | Fix<br>only |       |
|  |   | A<br>\$              | B<br>\$                              | C<br>\$  | D<br>\$     |       |
| 38379  | up to 0.17 m <sup>3</sup> /s.....   | 7,488.26             | 128.82                               | 216.81   | 662.04      | 38379 |
| 38380  | 0.17 - 0.2 m <sup>3</sup> /s.....   | 8,501.48             | 171.60                               | 259.87   | 758.34      | 38380 |
| 38381  | 0.2 - 0.34 m <sup>3</sup> /s.....   | 8,705.89             | 235.06                               | 303.48   | 821.63      | 38381 |
| 38382  | 0.34 - 0.5 m <sup>3</sup> /s.....   | 8,970.68             | 257.53                               | 346.70   | 947.08      | 38382 |
| Cassette type, ceiling concealed type, c/w built-in heater, overheat protection device, condensate drain pump, overflow indication and alarm, face panel with discharge and return air grilles, coils, filters, chilled water pipes and condensate pans, ceiling mounted with nominal supply air rate :-   |   |                      |                                      |  |             |       |
| <i>Each</i>  |   |                      |                                      |  |             |       |
| 38383  | up to 0.17 m <sup>3</sup> /s.....   | 7,830.23             | 132.91                               | 216.81   | 617.31      | 38383 |
| 38384  | 0.17 - 0.2 m <sup>3</sup> /s.....   | 8,665.87             | 171.60                               | 259.87   | 722.36      | 38384 |
| 38385  | 0.2 - 0.34 m <sup>3</sup> /s.....   | 8,990.14             | 214.55                               | 303.48   | 821.63      | 38385 |
| 38386  | 0.34 - 0.5 m <sup>3</sup> /s.....   | 9,437.22             | 257.53                               | 346.70   | 884.22      | 38386 |
| Panel housing contactor and fused spurs :-   |   |                      |                                      |  |             |       |
| <i>Each</i>  |   |                      |                                      |  |             |       |
| 38387  | Panel housing contactor and fused spurs for fan coil units (stainless steel 316, normal or weatherproof)..... | 1,791.34             | 69.85                                | 121.28   | 272.59      | 38387 |
| Chilled water fresh air pretreating unit c/w blower, blower motor, cooling/heating coil of copper tube resin coated aluminium fins, double skin casing, insulated drip pan, thermostats/humidistat, filter chamber and filters, starter, emergency stop button, probe type smoke detector, filter clog indicator, chilled water pipework (main chilled water distribution pipes to be measured separately) |   |                      |                                      |  |             |       |
| Nominal supply air flow rate :-  |   |                      |                                      |  |             |       |
| <i>Each</i>  |   |                      |                                      |  |             |       |
| 38388  | up to 1 m <sup>3</sup> /s.....  | 31,932.41            | 218.01                               | 302.60   | 811.58      | 38388 |
| 38389  | 1 - 2 m <sup>3</sup> /s.....  | 43,293.44            | 297.90                               | 421.22   | 1,133.54    | 38389 |
| 38390  | 2 - 3 m <sup>3</sup> /s.....  | 48,686.53            | 335.68                               | 475.81   | 1,273.55    | 38390 |
| 38391  | 3 - 4 m <sup>3</sup> /s.....  | 64,958.65            | 434.96                               | 622.33   | 1,671.43    | 38391 |
| 38392  | 4 - 5 m <sup>3</sup> /s.....  | 74,879.86            | 498.19                               | 709.02   | 1,908.54    | 38392 |
| 38393  | 5 - 6 m <sup>3</sup> /s.....  | 83,437.12            | 570.66                               | 799.75   | 2,167.15    | 38393 |

| Item  |  |                      |                                      |  | Item        |       |
|---|--|----------------------|--------------------------------------|--|-------------|-------|
| <b>AIR HANDLING &amp; TREATMENT EQUIPMENT (CONT'D)</b>  |  |                      |                                      |  |             |       |
| Variable air volume equipment   |  |                      |                                      |  |             |       |
| VAV linear diffuser with acoustic air boot : -  |  |                      |                                      |  |             |       |
| <i>Each</i>   |  |                      |                                      |  |             |       |
|   |  | Supply<br>and<br>fix | Take<br>down<br>and<br>clear<br>away | Take<br>down<br>and set<br>aside for<br>re-use | Fix<br>only |       |
|   |  | A<br>\$              | B<br>\$                              | C<br>\$  | D<br>\$     |       |
| 38394   | up to 0.1 m <sup>3</sup> /s.....                               | 415.93               | 5.11                                 | 6.26   | 43.02       | 38394 |
| 38395   | 0.1 - 0.2 m <sup>3</sup> /s.....                               | 483.38               | 5.66                                 | 6.71   | 44.04       | 38395 |
| 38396   | 0.2 - 0.3 m <sup>3</sup> /s.....                               | 580.77               | 6.06                                 | 7.12   | 45.85       | 38396 |
| 38397   | 0.3 - 0.4 m <sup>3</sup> /s.....                               | 661.41               | 6.52                                 | 7.72   | 47.73       | 38397 |
| VAV diffuser of all shape c/w thermo actuator, constructed of pressed mild steel sheet<br>with powder coating finish, auto air flow adjustment from 30% to 100% for normal flow<br>rate only of neck size : - |  |                      |                                      |  |             |       |
| <i>Each</i>   |  |                      |                                      |  |             |       |
| 38398   | up to 0.018 m <sup>2</sup> .....                               | 4,687.68             | 56.20                                | 113.16   | 325.51      | 38398 |
| 38399   | 0.018 - 0.032 m <sup>2</sup> .....                             | 4,910.04             | 57.39                                | 114.65   | 329.04      | 38399 |
| 38400   | 0.032 - 0.051 m <sup>2</sup> .....                             | 5,105.02             | 58.56                                | 116.15   | 333.22      | 38400 |
| 38401   | 0.051 - 0.073 m <sup>2</sup> .....                             | 5,311.87             | 59.77                                | 117.73   | 336.54      | 38401 |
| VAV multi-outlet air distribution box (octopus) connected to terminal box and<br>ductwork : -   |  |                      |                                      |  |             |       |
| <i>Each</i>   |  |                      |                                      |  |             |       |
| 38402   | up to 0.3 m <sup>3</sup> /s.....                               | 298.97               | 6.31                                 | 7.48   | 47.63       | 38402 |
| 38403   | 0.3 - 0.4 m <sup>3</sup> /s.....                               | 341.91               | 7.48                                 | 8.54   | 49.46       | 38403 |
| 38404   | 0.4 - 0.5 m <sup>3</sup> /s.....                               | 370.72               | 8.44                                 | 9.65   | 51.36       | 38404 |
| 38405   | 0.5 - 0.6 m <sup>3</sup> /s.....                               | 408.85               | 9.50                                 | 10.69  | 53.26       | 38405 |
| VAV thermostatic controller : -   |  |                      |                                      |  |             |       |
| <i>Each</i>   |  |                      |                                      |  |             |       |
| 38406   | VAV thermostatic controller c/w all necessary accessories..... | 483.58               | 11.25                                | 13.90  | 64.27       | 38406 |



| Item  |   |                |                          |                                    | Item     |
|-------|---|----------------|--------------------------|------------------------------------|----------|
|       | <b>AIR HANDLING &amp; TREATMENT EQUIPMENT (CONT'D)</b>  |                |                          |                                    |          |
|       | Variable air volume equipment (Cont'd)  |                |                          |                                    |          |
|       | VAV/CAV terminal box c/w insulation, acoustical baffles, damper regulating controller and damper actuator : -   |                |                          |                                    |          |
|       | <b>Each</b>   |                |                          |                                    |          |
|       |   | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only |
|       |   | A \$           | B \$                     | C \$                               | D \$     |
| 38407 | up to 0.3 m³/s.....   | 5,104.49       | 53.05                    | 101.42                             | 313.86   |
| 38408 | 0.3 - 0.4 m³/s.....   | 5,459.00       | 53.93                    | 102.75                             | 317.86   |
| 38409 | 0.4 - 0.5 m³/s.....   | 5,845.76       | 54.88                    | 103.69                             | 319.69   |
| 38410 | 0.5 - 0.6 m³/s.....   | 5,913.78       | 55.84                    | 104.66                             | 323.81   |
|       | Dry steam humidifier, steam injection type using electric elements/electrodes, automatic water level control, overflow protection and drain connection. |                |                          |                                    |          |
|       | <b>Each</b>   |                |                          |                                    |          |
| 38411 | up to 15 kg/hr.....   | 32,286.90      | 152.76                   | 154.35                             | 382.98   |
| 38412 | 15 - 30 kg/hr.....  | 40,669.18      | 190.88                   | 192.87                             | 433.22   |
| 38413 | 30 - 60 kg/hr.....  | 56,687.15      | 228.95                   | 231.32                             | 480.32   |

| Item  |   |                |                          |                                    | Item     |       |
|-------|---|----------------|--------------------------|------------------------------------|----------|-------|
|       | <b>AIR HANDLING &amp; TREATMENT EQUIPMENT (CONT'D)</b>  |                |                          |                                    |          |       |
|       | Window / wall mounted paper plate type fresh air pre-conditioner c/w motor and 2 fans, air supply/ exhaust pipes, flanged collars, a fresh air and washable air filters in both fresh and weatherproof covers in exhaust streams, casings and mounting; hinged access openable panel and outdoor-air shutter. | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only |       |
|       | <i>Each</i>   | A \$           | B \$                     | C \$                               | D \$     |       |
| 38414 | 65 m <sup>3</sup> /hr - 105 m <sup>3</sup> /hr.....   | 3,983.91       | 200.26                   | 211.30                             | 827.19   | 38414 |
|       | Desiccant type fresh air pre-conditioner c/w total energy wheel with desiccant coating, an exhaust fan motor, flanged collars, a fresh air and washable air filters in both fresh and exhaust streams, casings and mounting; hinged access openable panel.  |                |                          |                                    |          |       |
|       | Nominal air supply rate : -   |                |                          |                                    |          |       |
|       | <i>Each</i>   |                |                          |                                    |          |       |
| 38415 | up to 0.125 m <sup>3</sup> /s.....  | 28,660.58      | 200.26                   | 211.30                             | 827.19   | 38415 |
| 38416 | 0.125 - 0.25 m <sup>3</sup> /s.....   | 30,383.46      | 254.01                   | 264.39                             | 698.90   | 38416 |
| 38417 | 0.25 - 0.5 m <sup>3</sup> /s.....   | 45,457.63      | 266.94                   | 282.27                             | 729.67   | 38417 |
| 38418 | 0.5 - 0.8 m <sup>3</sup> /s.....  | 62,033.83      | 274.09                   | 296.93                             | 745.38   | 38418 |
| 38419 | 0.8 - 1.4 m <sup>3</sup> /s.....  | 95,864.56      | 281.14                   | 304.23                             | 763.89   | 38419 |
| 38420 | 1.4 - 2 m <sup>3</sup> /s.....<br>(The actual rate should be : \$112,456.40 for Item 38420A)  | 11,245.64      | 288.54                   | 311.31                             | 782.33   | 38420 |
| 38421 | 2 - 2.9 m <sup>3</sup> /s.....<br>(The actual rate should be : \$129,530.40 for Item 38421A)  | 12,953.04      | 295.61                   | 318.79                             | 800.95   | 38421 |
| 38422 | 2.9 - 3.6 m <sup>3</sup> /s.....<br>(The actual rate should be : \$143,310.20 for Item 38422A)  | 14,331.02      | 303.11                   | 326.50                             | 819.43   | 38422 |

| Item  |   |                |                          |                                    | Item     |       |
|-------|---|----------------|--------------------------|------------------------------------|----------|-------|
|       | <b>AIR HANDLING &amp; TREATMENT EQUIPMENT (CONT'D)</b>  |                |                          |                                    |          |       |
|       | Paper plate type fresh air pre-conditioner c/w supply air fan, non-flammable heat exchange element, exhaust air fan and resin set (washable) filter, motor, flanged collars, indoor and outdoor temperature sensors, remote controller. | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only |       |
|       | Nominal air supply rate : -   |                |                          |                                    |          |       |
|       | <b>Each</b>   | A \$           | B \$                     | C \$                               | D \$     |       |
| 38423 | up to 0.05 m³/s.....  | 31,950.19      | 258.66                   | 307.12                             | 1,017.76 | 38423 |
| 38424 | 0.05 - 0.25 m³/s.....   | 47,070.73      | 303.34                   | 358.31                             | 1,158.61 | 38424 |
| 38425 | 0.25 - 0.5 m³/s.....  | 65,971.40      | 359.19                   | 422.30                             | 1,334.67 | 38425 |
| 38426 | 0.5 - 0.8 m³/s.....   | 88,652.21      | 426.21                   | 499.09                             | 1,545.94 | 38426 |
| 38427 | 0.8 - 1.4 m³/s.....<br>(The actual rate should be : \$111,319.90 for Item 38427A)   | 11,131.99      | 488.85                   | 583.61                             | 1,784.87 | 38427 |
| 38428 | 1.4 - 2 m³/s.....<br>(The actual rate should be : \$126,556.20 for Item 38428A)   | 12,655.62      | 569.11                   | 658.98                             | 2,022.89 | 38428 |
| 38429 | 2 - 2.9 m³/s.....<br>(The actual rate should be : \$167,527.50 for Item 38429A)   | 16,752.75      | 631.47                   | 720.79                             | 2,199.73 | 38429 |
| 38430 | 2.9 - 3.6 m³/s.....<br>(The actual rate should be : \$194,386.90 for Item 38430A)   | 19,438.69      | 731.83                   | 809.64                             | 2,427.21 | 38430 |
|       | Thermostat and humidistat : -   |                |                          |                                    |          |       |
|       | <b>Each</b>   |                |                          |                                    |          |       |
| 38431 | Thermostat controller mounted on VAV terminal box c/w all necessary accessories.....  | 382.31         | 6.44                     | 8.01                               | 40.84    | 38431 |
| 38432 | Space thermostat c/w wiring, conduit and necessary accessories.....   | 262.29         | 6.44                     | 8.01                               | 40.84    | 38432 |
| 38433 | Space thermostat with digital setting and monitoring display c/w wiring, conduit and all functional accessories.....  | 1,395.70       | 6.44                     | 8.01                               | 40.84    | 38433 |
| 38434 | Space humidistat c/w wiring, conduit and necessary accessories.....   | 258.24         | 6.44                     | 8.01                               | 40.84    | 38434 |

| Item  |   |                |                          |                                    | Item      |       |
|-------|---|----------------|--------------------------|------------------------------------|-----------|-------|
|       | <b>AIR HANDLING &amp; TREATMENT EQUIPMENT (CONT'D)</b>  |                |                          |                                    |           |       |
|       | Electrostatic precipitator c/w galvanized sheet metal housing, auto clean electrostatic filter c/w ioniser collector section and motorized washer/adhesive applicator section, solenoid valve, manifold drive motor, manifold limit switch, timer control with field adjustable timer and timer bypass switch, access door with indicating light, internal panel with LED lights and digital readout, at least 10 to 15 steps of output voltage adjustment, remote relays, power supply indicating lamps, circuit breaker, manual reset button, time delay safety type door interlock switches :- | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only  |       |
|       | Nominal air supply rate :-  |                |                          |                                    |           |       |
|       | <b>Each</b>   | A \$           | B \$                     | C \$                               | D \$      |       |
| 38435 | up to 1.5 m³/s.....   | 26,701.04      | 972.32                   | 1,483.50                           | 5,198.10  | 38435 |
| 38436 | 1.5 - 3 m³/s.....   | 35,869.43      | 1,177.49                 | 1,744.93                           | 5,859.19  | 38436 |
| 38437 | 3 - 4.5 m³/s.....   | 49,360.65      | 1,425.96                 | 2,052.44                           | 6,604.36  | 38437 |
| 38438 | 4.5 - 6 m³/s.....   | 56,236.94      | 1,726.86                 | 2,414.12                           | 7,444.30  | 38438 |
| 38439 | 6 - 9 m³/s.....   | 78,132.53      | 2,091.25                 | 2,839.55                           | 8,391.06  | 38439 |
| 38440 | 9 - 12 m³/s.....  | 91,121.08      | 2,601.39                 | 3,435.15                           | 9,716.52  | 38440 |
| 38441 | 12 - 15 m³/s.....<br>(The actual rate should be : \$110,221.90 for Item 38441A)   | 11,022.19      | 3,060.61                 | 4,072.59                           | 10,916.92 | 38441 |
|       | Thermo ventilator   |                |                          |                                    |           |       |
|       | Ceiling mounted thermo ventilator c/w PTC heater, fan motors shall have minimum 2-step air flow rate changeover and c/w a remote controller of on/off, 'Hi/Lo' speed operation, adjustable air direction, timer, filters, including all supporting framework and all necessary accessories :-   |                |                          |                                    |           |       |
|       | <b>Each</b>   |                |                          |                                    |           |       |
| 38442 | Minimum air flow rate 175 m³/hr.....  | 1,573.74       | 52.96                    | 66.69                              | 269.61    | 38442 |
|       | Portable type air-conditioner   |                |                          |                                    |           |       |
|       | Portable type air-conditioner using refrigerant R410A, fan motors shall have 'minimum 2-step air flow rate changeover and c/w a remote controller of on/off, 'Hi/Lo' speed operation, timer, filters, casters :-  |                |                          |                                    |           |       |
|       | Cooling capacity :-   |                |                          |                                    |           |       |
|       | <b>Each</b>   |                |                          |                                    |           |       |
| 38443 | up to 3.0 kW.....   | 1,021.21       | 20.95                    | 26.21                              | 76.41     | 38443 |
| 38444 | 3.0 to 4.4 kW.....  | 1,268.06       | 20.95                    | 26.21                              | 76.41     | 38444 |

| Item   |  |                      |                                      |  | Item        |       |
|--|--|----------------------|--------------------------------------|--|-------------|-------|
| <b>WATER TANK AND ACCESSORIES</b>  |  |                      |                                      |  |             |       |
| Water tank   |  |                      |                                      |  |             |       |
| Sheet metal water tank (feed & expansion) c/w ball valve, vent, overflow, drain and mild steel support, anti-rust painting & accessories of effective water capacity : - |  |                      |                                      |  |             |       |
| <i>Each</i>  |  |                      |                                      |  |             |       |
|  |  | Supply<br>and<br>fix | Take<br>down<br>and<br>clear<br>away | Take<br>down<br>and set<br>aside for<br>re-use | Fix<br>only |       |
|  |  | A<br>\$              | B<br>\$                              | C<br>\$  | D<br>\$     |       |
| 38445  | up to 250 litres.....  | 6,936.06             | 95.84                                | 168.01   | 680.46      | 38445 |
| 38446  | 250 litres - 350 litres.....   | 7,639.39             | 119.47                               | 193.16   | 767.19      | 38446 |
| 38447  | 350 litres - 500 litres.....   | 10,060.53            | 143.32                               | 217.07   | 848.46      | 38447 |
| Reinforced fiberglass water tank (feed & expansion) c/w ball valve, vent, overflow, drain and mild steel support, painting & accessories of effective water capacity : - |  |                      |                                      |  |             |       |
| <i>Each</i>  |  |                      |                                      |  |             |       |
| 38448  | up to 250 litres.....  | 4,276.62             | 133.20                               | 215.32   | 763.10      | 38448 |
| Water level controller : -   |  |                      |                                      |  |             |       |
| <i>Each</i>  |  |                      |                                      |  |             |       |
| 38449  | Three water level controller for water tank for pump control and alarm c/w probes, contacts, wiring and electrical connection to pump control panel and accessories..... | 1,280.08             | 53.18                                | 95.66  | 159.30      | 38449 |
| Chilled water differential pressure by-pass valve system   |  |                      |                                      |  |             |       |
| <i>Each</i>  |  |                      |                                      |  |             |       |
| 38450  | Chilled water differential pressure by-pass valve system c/w 80 dia. ball valve comprise of modulating actuator with signal output & pressure controller.....            | 10,232.07            | 136.26                               | 203.43   | 836.85      | 38450 |

| Item  |  | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only | Item  |
|-------|--|----------------|--------------------------|------------------------------------|----------|-------|
|       |  | A \$           | B \$                     | C \$                               | D \$     |       |
|       | <b>PUMP &amp; ACCESSORIES</b>  |                |                          |                                    |          |       |
|       | Centrifugal fresh water pump, horizontal split casing type, c/w motor, strainer, drain and vent, orifice plates, starters and local control panel :- |                |                          |                                    |          |       |
|       | <i>Each</i>  |                |                          |                                    |          |       |
| 38451 | up to 5kW.....   | 20,871.68      | 81.96                    | 109.53                             | 465.82   | 38451 |
| 38452 | 5 - 10 kW.....   | 32,549.63      | 87.51                    | 115.96                             | 684.95   | 38452 |
| 38453 | 10 - 15 kW.....  | 37,551.74      | 92.89                    | 121.51                             | 758.62   | 38453 |
| 38454 | 15 - 20 kW.....  | 42,568.58      | 98.32                    | 126.55                             | 884.00   | 38454 |
| 38455 | 20 - 30 kW.....  | 47,857.90      | 103.84                   | 132.50                             | 970.04   | 38455 |
|       | Centrifugal salt water pump, horizontal split casing type, c/w motor, strainer, drain and vent, orifice plates, starters and local control panel :-  |                |                          |                                    |          |       |
|       | <i>Each</i>  |                |                          |                                    |          |       |
| 38456 | up to 5kW.....   | 31,222.72      | 81.96                    | 109.53                             | 465.82   | 38456 |
| 38457 | 5 - 10 kW.....   | 38,563.02      | 87.51                    | 115.96                             | 684.95   | 38457 |
| 38458 | 10 - 15 kW.....  | 45,213.52      | 92.89                    | 121.51                             | 758.62   | 38458 |
| 38459 | 15 - 20 kW.....  | 50,275.26      | 98.32                    | 126.55                             | 884.00   | 38459 |
| 38460 | 20 - 30 kW.....  | 55,585.47      | 103.84                   | 132.50                             | 970.04   | 38460 |
| 38461 | 30 - 50 kW.....  | 61,604.08      | 109.36                   | 137.69                             | 1,056.79 | 38461 |

| Item  |  |                |                          |                                    | Item     |       |
|-------|--|----------------|--------------------------|------------------------------------|----------|-------|
|       | <b>PUMP &amp; ACCESSORIES (CONT'D)</b>   |                |                          |                                    |          |       |
|       | Water booster pump c/w motor as a composite unit, strainer, drain and vent, starters, local control panel, membrane pressure vessel and sensors :- | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only |       |
|       | <i>Each</i>  | A<br>\$        | B<br>\$                  | C<br>\$                            | D<br>\$  |       |
| 38462 | up to 5kW.....   | 42,903.33      | 298.27                   | 438.25                             | 1,314.03 | 38462 |
| 38463 | 5 - 10 kW.....   | 53,518.05      | 325.02                   | 492.50                             | 1,471.66 | 38463 |
| 38464 | 10 - 15 kW.....  | 60,150.09      | 352.06                   | 546.58                             | 1,707.62 | 38464 |
| 38465 | 15 - 20 kW.....  | 64,319.43      | 377.88                   | 599.41                             | 1,943.83 | 38465 |
|       | Flush water pump c/w motor, strainer, drain and vent, starters and local control panel :-  |                |                          |                                    |          |       |
|       | <i>Each</i>  |                |                          |                                    |          |       |
| 38466 | up to 5kW.....   | 24,753.11      | 81.96                    | 109.53                             | 465.82   | 38466 |
| 38467 | 5 - 10 kW.....   | 38,590.91      | 87.51                    | 115.96                             | 684.95   | 38467 |
| 38468 | 10 - 15 kW.....  | 44,866.34      | 92.89                    | 121.51                             | 758.62   | 38468 |
| 38469 | 15 - 20 kW.....  | 50,885.73      | 98.32                    | 126.55                             | 884.00   | 38469 |
|       | Centrifugal hot water pump, horizontal split casing type, c/w motor, starters and local control panel :-   |                |                          |                                    |          |       |
|       | <i>Each</i>  |                |                          |                                    |          |       |
| 38470 | up to 5kW.....   | 48,315.32      | 81.96                    | 109.53                             | 465.82   | 38470 |
| 38471 | 5 - 10 kW.....   | 75,182.86      | 87.51                    | 115.96                             | 684.95   | 38471 |
| 38472 | 10 - 15 kW.....  | 87,454.21      | 92.89                    | 121.51                             | 758.62   | 38472 |
| 38473 | 15 - 20 kW.....  | 99,402.70      | 98.32                    | 126.55                             | 884.00   | 38473 |

| Item  |   |                |                          |                                    | Item     |       |
|-------|---|----------------|--------------------------|------------------------------------|----------|-------|
|       | <b>PUMP &amp; ACCESSORIES (CONT'D)</b>  |                |                          |                                    |          |       |
|       | Sewage pump c/w motor, starters and local control panel :-  | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only |       |
|       | <i>Each</i>   | A<br>\$        | B<br>\$                  | C<br>\$                            | D<br>\$  |       |
| 38474 | up to 5kW.....  | 28,647.45      | 81.96                    | 109.53                             | 465.82   | 38474 |
| 38475 | 5 - 10 kW.....  | 34,930.69      | 87.51                    | 115.96                             | 684.95   | 38475 |
| 38476 | 10 - 15 kW.....   | 41,305.65      | 92.89                    | 121.51                             | 758.62   | 38476 |
| 38477 | 15 - 20 kW.....   | 46,531.31      | 98.32                    | 126.55                             | 884.00   | 38477 |
|       | Sump pump, vertical centrifugal type, c/w submersible electric motor, pump control & H/L alarm, guide bars, cable supports & lifting chains, factory built-in suspension devices and discharge elbow for wet sump installation and cast iron/steel base for dry sump installation, starter and local control panel :- |                |                          |                                    |          |       |
|       | <i>Each</i>   |                |                          |                                    |          |       |
| 38478 | up to 5kW.....  | 26,805.43      | 81.96                    | 109.53                             | 465.82   | 38478 |
| 38479 | 5 - 10 kW.....  | 31,334.72      | 87.51                    | 115.96                             | 684.95   | 38479 |
| 38480 | 10 - 15 kW.....   | 34,740.97      | 92.89                    | 121.51                             | 758.62   | 38480 |
| 38481 | 15 - 20 kW.....   | 46,188.12      | 98.32                    | 126.55                             | 884.00   | 38481 |
| 38482 | 20 - 30 kW.....   | 60,969.04      | 103.84                   | 132.50                             | 970.04   | 38482 |



| Item  |  |                      |                                      |  | Item        |       |
|---|--|----------------------|--------------------------------------|--|-------------|-------|
| <b>PUMP &amp; ACCESSORIES (CONT'D)</b>  |  |                      |                                      |  |             |       |
| End suction pump c/w anti-vibration mounting, flexible joints , drain, vent, motor, starter and local control panel and local wiring : -  |  |                      |                                      |  |             |       |
| <i>Each</i>   |  |                      |                                      |  |             |       |
|   |  | Supply<br>and<br>fix | Take<br>down<br>and<br>clear<br>away | Take<br>down<br>and set<br>aside for<br>re-use | Fix<br>only |       |
|   |  | A<br>\$              | B<br>\$                              | C<br>\$  | D<br>\$     |       |
| 38483   | up to 5kW.....   | 21,509.49            | 81.96                                | 109.53   | 465.82      | 38483 |
| 38484   | 5 - 10 kW.....   | 31,190.93            | 87.51                                | 115.96   | 684.95      | 38484 |
| 38485   | 10 - 15 kW.....  | 33,978.13            | 92.89                                | 121.51   | 758.62      | 38485 |
| 38486   | 15 - 20 kW.....  | 38,986.34            | 98.32                                | 126.55   | 884.00      | 38486 |
| 38487   | 20 - 30 kW.....  | 41,581.92            | 103.84                               | 132.50   | 970.04      | 38487 |
| Cooling tower c/w induced or forced draught fans, glass reinforced plastics (GRP) casing, open distribution pans or troughs fitted with coarse mesh grids, filled sheets with film-type vacuum-formed PVC c/w louvres and drift eliminators, metal parts with stainless steel to SS316 or the better equivalent, inlet/outlet water gate valve, drain, strainer, starter panel and local control panel, plus all related necessary accessories with nominal heat rejection capacity : - |  |                      |                                      |  |             |       |
| <i>Each</i>   |  |                      |                                      |  |             |       |
| 38488   | 22 - 45 kW.....  | 8,668.03             | 286.61                               | 373.34   | 875.24      | 38488 |
| 38489   | 45 - 69 kW.....  | 9,375.25             | 327.19                               | 412.93   | 980.36      | 38489 |
| 38490   | 69 - 100 kW.....   | 11,044.78            | 367.12                               | 452.94   | 1,065.44    | 38490 |
| 38491   | 100 - 150 kW.....  | 13,373.24            | 408.70                               | 495.17   | 1,190.62    | 38491 |
| 38492   | 150 - 200 kW.....  | 16,497.00            | 449.33                               | 536.10   | 1,291.03    | 38492 |
| 38493   | 200 - 300 kW.....  | 21,072.95            | 493.92                               | 581.36   | 1,396.19    | 38493 |
| 38494   | 300 - 350 kW.....  | 29,532.66            | 535.45                               | 623.96   | 1,483.74    | 38494 |
| 38495   | 350 - 450 kW.....  | 34,008.79            | 575.69                               | 664.33   | 1,599.20    | 38495 |
| Condensate drain sump pump : -  |  |                      |                                      |  |             |       |
| <i>Each</i>   |  |                      |                                      |  |             |       |
| 38496   | Condensate drain sump pump c/w drainage and electrical connection..... | 1,910.82             | 56.56                                | 71.45  | 296.92      | 38496 |

| Item  |   |                      |                                      |  | Item        |       |
|-------|---|----------------------|--------------------------------------|--|-------------|-------|
|       | <b>FANS &amp; VENTILATION SYSTEM</b>  | Supply<br>and<br>fix | Take<br>down<br>and<br>clear<br>away | Take<br>down<br>and set<br>aside for<br>re-use | Fix<br>only |       |
|       |   | A<br>\$              | B<br>\$                              | C<br>\$  | D<br>\$     |       |
|       | Dark room cowl : -  |                      |                                      |  |             |       |
|       | <i>Each</i>   |                      |                                      |  |             |       |
| 38497 | Dark room cowl for 230 mm diameter.....   | 1,229.33             | 14.06                                | 18.70  | 40.40       | 38497 |
|       | S.S. vent washer system c/w pump, exhaust blower, exhaust air duct, inspection door : - |                      |                                      |  |             |       |
|       | <i>Each</i>   |                      |                                      |  |             |       |
| 38498 | 2 m x 1.53 m x 0.683 m.....   | 63,292.86            | 363.31                               | 458.61   | 1,562.90    | 38498 |
|       | Fan chamber c/w access panels for fans of diameter : -                                  |                      |                                      |  |             |       |
|       | <i>Each</i>   |                      |                                      |  |             |       |
| 38499 | up to 300 mm.....   | 1,729.61             | 11.58                                | 15.42  | 30.38       | 38499 |
| 38500 | 300 - 380 mm.....   | 2,084.28             | 12.00                                | 16.37  | 33.28       | 38500 |
| 38501 | 380 - 500 mm.....   | 2,422.72             | 12.53                                | 17.33  | 36.15       | 38501 |
| 38502 | 500 - 610 mm.....   | 3,316.07             | 12.96                                | 18.28  | 39.02       | 38502 |
| 38503 | 610 - 800 mm.....   | 4,342.72             | 13.39                                | 21.51  | 41.90       | 38503 |
|       | Acoustic fan chamber c/w access panels for fans of diameter : -                         |                      |                                      |  |             |       |
|       | <i>Each</i>   |                      |                                      |  |             |       |
| 38504 | up to 300 mm.....   | 2,760.73             | 16.39                                | 20.35  | 45.27       | 38504 |
| 38505 | 300 - 380 mm.....   | 3,418.75             | 16.92                                | 21.32  | 48.26       | 38505 |
| 38506 | 380 - 500 mm.....   | 4,254.82             | 17.36                                | 22.26  | 51.16       | 38506 |
| 38507 | 500 - 610 mm.....   | 5,366.63             | 17.82                                | 23.15  | 54.06       | 38507 |
| 38508 | 610 - 800 mm.....   | 6,674.69             | 18.35                                | 26.49  | 56.96       | 38508 |

| Item  |  |          |        |        | Item   |       |
|-------|--|----------|--------|--------|--------|-------|
|       | <b>FANS &amp; VENTILATION SYSTEM (CONT'D)</b>  |          |        |        |        |       |
|       | Axial-flow fan, aerofoil type c/w local control panel  |          |        |        |        |       |
|       | Motor speed up to 1000 r.p.m., fan diameter : -  |          |        |        |        |       |
|       | <i>Each</i>  |          |        |        |        |       |
| 38509 | up to 300 mm.....  | 3,101.55 | 31.80  | 40.19  | 121.75 | 38509 |
| 38510 | 300 - 380 mm.....  | 3,480.90 | 34.49  | 42.87  | 131.92 | 38510 |
| 38511 | 380 - 500 mm.....  | 4,624.86 | 37.17  | 45.56  | 142.08 | 38511 |
| 38512 | 500 - 610 mm.....  | 5,367.24 | 39.76  | 48.24  | 152.15 | 38512 |
| 38513 | 610 - 800 mm.....  | 7,259.06 | 42.44  | 50.92  | 162.31 | 38513 |
|       | Motor speed up to 1500 r.p.m., fan diameter : -  |          |        |        |        |       |
|       | <i>Each</i>  |          |        |        |        |       |
| 38514 | up to 300 mm.....  | 3,235.55 | 31.80  | 40.19  | 121.75 | 38514 |
| 38515 | 300 - 380 mm.....  | 4,414.86 | 34.49  | 42.87  | 131.92 | 38515 |
| 38516 | 380 - 500 mm.....  | 4,919.81 | 37.17  | 45.56  | 142.08 | 38516 |
| 38517 | 500 - 610 mm.....  | 5,678.55 | 39.76  | 48.24  | 152.15 | 38517 |
| 38518 | 610 - 800 mm.....  | 7,509.55 | 42.44  | 50.92  | 162.31 | 38518 |
|       | Air conducting fan, c/w fan mounting plate, remote controller and all necessary accessories. |          |        |        |        |       |
|       | Nominal air supply rate : -  |          |        |        |        |       |
|       | <i>Each</i>  |          |        |        |        |       |
| 38519 | up to 0.375 m <sup>3</sup> /s.....   | 4,070.92 | 164.80 | 230.71 | 355.95 | 38519 |
| 38520 | 0.375 - 0.583 m <sup>3</sup> /s.....   | 5,712.42 | 197.75 | 296.63 | 428.46 | 38520 |
|       | Air swing fan, c/w fan mounting plate, remote controller and all necessary accessories.      |          |        |        |        |       |
|       | Nominal air supply rate : -  |          |        |        |        |       |
|       | <i>Each</i>  |          |        |        |        |       |
| 38521 | up to 0.0583 m <sup>3</sup> /s.....  | 4,727.52 | 164.80 | 230.71 | 395.50 | 38521 |
| 38522 | 0.0583 - 0.1041 m <sup>3</sup> /s.....   | 5,318.47 | 197.75 | 296.63 | 474.60 | 38522 |
| 38523 | Electric dual jet airflow hand dryer.....  | 5,200.28 | 65.92  | 98.88  | 131.83 | 38523 |

| Item  |  |                      |                                      |  | Item        |       |
|-------|--|----------------------|--------------------------------------|--|-------------|-------|
|       | <b>FANS &amp; VENTILATION SYSTEM (CONT'D)</b>  |                      |                                      |  |             |       |
|       |  | Supply<br>and<br>fix | Take<br>down<br>and<br>clear<br>away | Take<br>down<br>and set<br>aside for<br>re-use | Fix<br>only |       |
|       |  | A<br>\$              | B<br>\$                              | C<br>\$  | D<br>\$     |       |
|       | Bifurcated fan : -   |                      |                                      |  |             |       |
|       | <i>Each</i>  |                      |                                      |  |             |       |
| 38524 | Bifurcated fan type, minimum air volume flow rate at 820 l/s and static pressure at 20 Pa.....   | 4,035.19             | 36.54                                | 44.33  | 139.80      | 38524 |
|       | Centrifugal fan, backward/forward bladed type c/w motor, drive belt and pulley, casing, access panel, metal enclosure, air plenum, starters and local control panel. |                      |                                      |  |             |       |
|       | Fan diameter : -   |                      |                                      |  |             |       |
|       | <i>Each</i>  |                      |                                      |  |             |       |
| 38525 | up to 300 mm.....  | 3,680.86             | 53.54                                | 81.35  | 239.15      | 38525 |
| 38526 | 300 - 380 mm.....  | 5,125.54             | 60.88                                | 84.91  | 259.40      | 38526 |
| 38527 | 380 - 500 mm .....   | 7,649.54             | 65.05                                | 93.83  | 273.25      | 38527 |
| 38528 | 500 - 610 mm .....   | 11,836.31            | 72.22                                | 98.96  | 285.09      | 38528 |
| 38529 | 610 - 800 mm.....  | 19,585.33            | 80.46                                | 104.21   | 296.92      | 38529 |
|       | Roof extraction fan c/w motor, centrifugal/mixed flow blower, casing, cowl, base, back-draught damper, bird entry preventer guard, control switch and starter.       |                      |                                      |  |             |       |
|       | Motor speed up to 900 r.p.m. (50-100 Pa), flow rate : -  |                      |                                      |  |             |       |
|       | <i>Each</i>  |                      |                                      |  |             |       |
| 38530 | up to 0.5 m <sup>3</sup> /s.....   | 2,919.49             | 58.84                                | 87.18  | 249.62      | 38530 |
| 38531 | 0.5 - 1 m <sup>3</sup> /s.....   | 3,476.45             | 66.55                                | 90.91  | 271.52      | 38531 |
| 38532 | 1 - 1.5 m <sup>3</sup> /s.....   | 3,785.79             | 70.77                                | 99.81  | 285.50      | 38532 |
|       | Motor speed up to 1400 r.p.m. (75-125 Pa), flow rate : -   |                      |                                      |  |             |       |
|       | <i>Each</i>  |                      |                                      |  |             |       |
| 38533 | up to 1 m <sup>3</sup> /s.....   | 3,776.28             | 66.55                                | 90.91  | 271.52      | 38533 |
| 38534 | 1 - 1.5 m <sup>3</sup> /s.....   | 4,847.26             | 70.77                                | 99.81  | 285.50      | 38534 |
| 38535 | 1.5 - 2 m <sup>3</sup> /s.....   | 7,461.85             | 78.99                                | 106.09   | 299.93      | 38535 |
| 38536 | 2 - 4 m <sup>3</sup> /s.....   | 11,208.31            | 90.27                                | 118.16   | 324.91      | 38536 |

| Item  |   |                      |                                      |  | Item        |       |
|-------|---|----------------------|--------------------------------------|--|-------------|-------|
|       | <b>FANS &amp; VENTILATION SYSTEM (CONT'D)</b>   |                      |                                      |  |             |       |
|       | In line mixed flow fan c/w stator vanes, motors, drivers, guards, casing, starters<br>and local control panel of fan diameter : - | Supply<br>and<br>fix | Take<br>down<br>and<br>clear<br>away | Take<br>down<br>and set<br>aside for<br>re-use | Fix<br>only |       |
|       | <i>Each</i>   | A<br>\$              | B<br>\$                              | C<br>\$  | D<br>\$     |       |
| 38537 | up to 200 mm diameter 900 r.p.m.....  | 3,261.09             | 35.75                                | 46.08  | 154.78      | 38537 |
| 38538 | 200 - 300 mm diameter 900 r.p.m.....  | 5,539.06             | 37.31                                | 48.72  | 158.58      | 38538 |
| 38539 | 300 - 450 mm diameter 900 r.p.m.....  | 6,672.56             | 38.88                                | 51.35  | 163.55      | 38539 |
| 38540 | up to 200 mm diameter 1400 r.p.m.....   | 3,441.36             | 35.75                                | 46.08  | 154.78      | 38540 |
| 38541 | 200 - 300 mm diameter 1400 r.p.m.....   | 5,920.68             | 37.31                                | 48.72  | 158.58      | 38541 |
| 38542 | 300 - 450 mm diameter 1400 r.p.m.....   | 7,249.01             | 38.88                                | 51.35  | 163.55      | 38542 |
|       | Propeller fan c/w galvanized iron casing with acoustic lining. Air flow rate based on static<br>pressure 50 Pa : -                |                      |                                      |  |             |       |
|       | <i>Each</i>   |                      |                                      |  |             |       |
| 38543 | up to 0.3 m <sup>3</sup> /s.....  | 2,762.59             | 55.55                                | 84.55  | 248.21      | 38543 |
| 38544 | 0.3 - 0.6 m <sup>3</sup> /s.....  | 2,884.53             | 63.26                                | 88.25  | 269.58      | 38544 |
| 38545 | 0.6 - 0.8 m <sup>3</sup> /s.....  | 3,192.98             | 67.62                                | 97.52  | 284.00      | 38545 |
| 38546 | 0.8 - 1 m <sup>3</sup> /s.....  | 3,314.73             | 75.06                                | 102.85   | 296.29      | 38546 |
| 38547 | 1 - 1.2 m <sup>3</sup> /s.....  | 3,742.94             | 83.62                                | 108.30   | 308.57      | 38547 |
| 38548 | 1.2 - 1.8 m <sup>3</sup> /s.....  | 5,027.57             | 109.30                               | 124.65   | 345.41      | 38548 |
| 38549 | 1.8 - 2.4 m <sup>3</sup> /s.....  | 6,312.20             | 134.98                               | 141.00   | 382.25      | 38549 |
| 38550 | 2.4 - 2.6 m <sup>3</sup> /s.....  | 6,740.41             | 143.54                               | 146.45   | 394.53      | 38550 |
| 38551 | 2.6 - 3.2 m <sup>3</sup> /s.....  | 8,025.04             | 162.80                               | 169.22   | 431.37      | 38551 |
| 38552 | 3.2 - 3.8 m <sup>3</sup> /s.....  | 9,309.67             | 179.15                               | 194.91   | 468.21      | 38552 |
| 38553 | 3.8 - 4.4 m <sup>3</sup> /s.....  | 10,594.30            | 195.50                               | 220.59   | 505.06      | 38553 |
| 38554 | 4.4 - 5.0 m <sup>3</sup> /s.....  | 11,878.93            | 211.87                               | 246.26   | 541.91      | 38554 |
| 38555 | 5.0 - 5.6 m <sup>3</sup> /s.....  | 13,163.56            | 228.20                               | 271.95   | 578.76      | 38555 |
| 38556 | 5.6 - 6.2 m <sup>3</sup> /s.....  | 14,448.19            | 244.55                               | 297.62   | 615.61      | 38556 |
| 38557 | 6.2 - 6.8 m <sup>3</sup> /s.....  | 15,732.82            | 260.90                               | 323.30   | 652.46      | 38557 |
| 38558 | 6.8 - 7.0 m <sup>3</sup> /s.....  | 16,161.03            | 266.36                               | 331.86   | 664.75      | 38558 |

| Item  |   |                      |                                      |  | Item         |
|-------|---|----------------------|--------------------------------------|--|--------------|
|       | <b>FANS &amp; VENTILATION SYSTEM (CONT'D)</b>   |                      |                                      |  |              |
|       |   | Supply<br>and<br>fix | Take<br>down<br>and<br>clear<br>away | Take<br>down<br>and set<br>aside for<br>re-use | Fix<br>only  |
|       |   | A<br>\$              | B<br>\$                              | C<br>\$  | D<br>\$      |
|       | Direct-drive inline duct fan c/w acoustic casing and local control panel, fan diameter : -  |                      |                                      |  |              |
|       | <i>Each</i>   |                      |                                      |  |              |
| 38559 | 100 mm.....   | 1,663.27             | 118.01                               | 146.66   | 335.57 38559 |
| 38560 | 200 mm.....   | 4,654.62             | 136.23                               | 165.07   | 358.70 38560 |
| 38561 | 250 mm.....   | 6,813.71             | 145.25                               | 174.18   | 370.26 38561 |
| 38562 | 280 mm.....   | 8,413.52             | 154.34                               | 183.39   | 381.84 38562 |
| 38563 | 315 mm.....   | 9,426.07             | 163.45                               | 192.49   | 404.95 38563 |
| 38564 | 400 mm.....   | 13,672.59            | 172.54                               | 201.71   | 416.52 38564 |
|       | PVC direct-drive inline duct fan c/w acoustic casing and local control panel,<br>fan diameter : -   |                      |                                      |  |              |
|       | <i>Each</i>   |                      |                                      |  |              |
| 38565 | 200 mm.....   | 10,932.40            | 136.23                               | 165.07   | 358.70 38565 |
|       | Flameproof in-line fan : -  |                      |                                      |  |              |
|       | <i>Each</i>   |                      |                                      |  |              |
| 38566 | Flameproof in-line fan, 880 r.p.m., fan diameter up to 330 mm.....  | 6,930.75             | 170.64                               | 199.48   | 411.92 38566 |
|       | Exhaust fan c/w automatic motorized weather-proof louvre, propeller type, fan diameter : -  |                      |                                      |  |              |
|       | <i>Each</i>   |                      |                                      |  |              |
| 38567 | 150 mm.....   | 1,093.09             | 18.36                                | 23.01  | 36.79 38567  |
| 38568 | 230 mm.....   | 1,663.70             | 20.23                                | 24.89  | 41.35 38568  |
| 38569 | 300 mm.....   | 2,078.25             | 22.10                                | 26.64  | 46.00 38569  |
|       | Aluminium acoustic box c/w propeller fan : -  |                      |                                      |  |              |
|       | <i>Each</i>   |                      |                                      |  |              |
| 38570 | Aluminium acoustic box c/w 250 mm diameter propeller fan of duty (0.17 m <sup>3</sup> /s, 40 Pa) and air<br>grilles. Nominal size 450 x 450 x 700 mm..... | 3,097.32             | 153.31                               | 184.77   | 407.11 38570 |

| Item  |                                   |                      |                                      |  | Item        |       |
|---|-----------------------------------|----------------------|--------------------------------------|--|-------------|-------|
| <b>FANS &amp; VENTILATION SYSTEM (CONT'D)</b>                         |                                   |                      |                                      |  |             |       |
| Blower fan, in-line silent centrifugal type, impeller diameter : -    |                                   |                      |                                      |  |             |       |
|   |                                   | Supply<br>and<br>fix | Take<br>down<br>and<br>clear<br>away | Take<br>down<br>and set<br>aside for<br>re-use | Fix<br>only |       |
|   |                                   | A<br>\$              | B<br>\$                              | C<br>\$  | D<br>\$     |       |
| 38571   | <i>Each</i><br>up to 100 mm ..... | 862.09               | 35.75                                | 46.08  | 154.78      | 38571 |
| 38572   | 100 - 200 mm .....                | 1,724.17             | 37.31                                | 48.72  | 158.58      | 38572 |
| 38573   | 200 - 300 mm .....                | 2,586.26             | 38.88                                | 51.35  | 163.55      | 38573 |
| Motor starter c/w push buttons, relays, circuit protective device : - |                                   |                      |                                      |  |             |       |
|   |                                   |                      |                                      |  |             |       |
|   | <i>Each</i>                       |                      |                                      |  |             |       |
| 38574   | up to 2.2 kW rating.....          | 386.44               | 7.42                                 | 10.00  | 37.71       | 38574 |
| 38575   | 2.2 - 5.5 kW rating.....          | 410.45               | 8.44                                 | 12.41  | 42.44       | 38575 |
| 38576   | 5.5 - 11 kW rating.....           | 2,036.93             | 9.92                                 | 14.92  | 47.17       | 38576 |
| 38577   | 11 - 15 kW rating.....            | 3,173.21             | 12.34                                | 17.41  | 54.66       | 38577 |
| Contactor c/w metal enclosure : -                                     |                                   |                      |                                      |  |             |       |
|   |                                   |                      |                                      |  |             |       |
|   | <i>Each</i>                       |                      |                                      |  |             |       |
| 38578   | 30 A SP & N.....                  | 164.52               | 6.42                                 | 8.47   | 25.70       | 38578 |
| 38579   | 60 A SP & N.....                  | 329.18               | 9.96                                 | 12.32  | 44.14       | 38579 |
| 38580   | 100 A SP & N.....                 | 540.51               | 13.87                                | 17.67  | 49.71       | 38580 |
| 38581   | 30 A TP & N.....                  | 188.75               | 7.28                                 | 9.49   | 30.44       | 38581 |
| 38582   | 60 A TP & N.....                  | 600.70               | 11.58                                | 14.98  | 48.12       | 38582 |
| 38583   | 100 A TP & N.....                 | 781.34               | 15.18                                | 19.69  | 61.71       | 38583 |
| Time switch c/w metal enclosure, overriding switch : -                |                                   |                      |                                      |  |             |       |
|   |                                   |                      |                                      |  |             |       |
|   | <i>Each</i>                       |                      |                                      |  |             |       |
| 38584   | 24-hour dial.....                 | 443.48               | 4.17                                 | 6.27   | 15.67       | 38584 |
| 38585   | 7-day clock.....                  | 714.12               | 4.17                                 | 6.27   | 15.67       | 38585 |
| 38586   | with 3-minute delay.....          | 320.17               | 4.17                                 | 6.27   | 15.67       | 38586 |

| Item   | Supply and fix                     | Take down and clear away | Take down and set aside for re-use | Fix only | Item     |       |
|--|------------------------------------|--------------------------|------------------------------------|----------|----------|-------|
| A<br>\$  | B<br>\$                            | C<br>\$                  | D<br>\$                            |          |          |       |
| <b>FANS &amp; VENTILATION SYSTEM (CONT'D)</b>  |                                    |                          |                                    |          |          |       |
| Soft motor starter : -   |                                    |                          |                                    |          |          |       |
| <i>Each</i>  |                                    |                          |                                    |          |          |       |
| 38587  | up to 2.2 kW rating.....           | 7,996.60                 | 19.82                              | 24.87    | 75.75    | 38587 |
| 38588  | 2.2 - 5.5 kW rating.....           | 9,325.90                 | 24.90                              | 30.04    | 85.25    | 38588 |
| 38589  | 5.5 - 12 kW rating.....            | 10,282.06                | 29.67                              | 34.82    | 94.73    | 38589 |
| 38590  | 12 - 22 kW rating.....             | 11,082.20                | 34.85                              | 39.99    | 104.14   | 38590 |
| 38591  | 22 - 37 kW rating.....             | 14,966.16                | 39.63                              | 44.85    | 113.63   | 38591 |
| Grease filter type kitchen exhaust hood  |                                    |                          |                                    |          |          |       |
| Exhaust hood of 316 stainless steel sheet 1.2 mm thick with hair line finish c/w minimum 38 mm stainless steel angle iron frame and supports, 50mm thick grease filters, filter washing facilities, flushed fluorescent lighting with heat resistant wired glass diffusers and accessories with height up to and including 1.2 m, with the hood bottom perimeter to reference dimension. |                                    |                          |                                    |          |          |       |
| Hood undersurface area of : -  |                                    |                          |                                    |          |          |       |
| <i>Each</i>  |                                    |                          |                                    |          |          |       |
| 38592  | up to 3 m <sup>2</sup> .....       | 13,819.37                | 215.62                             | 342.15   | 1,143.10 | 38592 |
| 38593  | 3 - 4 m <sup>2</sup> .....         | 17,319.90                | 325.56                             | 440.45   | 1,422.70 | 38593 |
| 38594  | 4 - 5 m <sup>2</sup> .....         | 21,040.58                | 399.52                             | 524.92   | 1,613.52 | 38594 |
| 38595  | 5 - 6 m <sup>2</sup> .....         | 25,074.13                | 503.51                             | 588.43   | 1,650.44 | 38595 |
| Washable grease filter : -   |                                    |                          |                                    |          |          |       |
| <i>Each</i>  |                                    |                          |                                    |          |          |       |
| 38596  | 500 x 500 x 50 mm thick.....       | 439.13                   | 4.48                               | 7.09     | 13.83    | 38596 |
| Cleaning tank : -  |                                    |                          |                                    |          |          |       |
| <i>Each</i>  |                                    |                          |                                    |          |          |       |
| 38597  | Stainless steel cleaning tank..... | 5,030.27                 | 22.72                              | 28.71    | 88.60    | 38597 |
| <i>Per litre</i>   |                                    |                          |                                    |          |          |       |
| 38598  | Cleaning detergent.....            | 61.68                    | -                                  | -        | -        | 38598 |



| Item  |   |                |                          |                                    | Item     |       |
|---|---|----------------|--------------------------|------------------------------------|----------|-------|
| <b>FANS &amp; VENTILATION SYSTEM (CONT'D)</b> |   |                |                          |                                    |          |       |
|   | Water scrubbing type exhaust hood of 316 stainless steel sheet 1.2 mm thick with hair line finish c/w minimum 38 mm stainless steel angle iron frame and support, grease filters filter washing facilities, rotary baffles, inspection door, water recirculation system, control panel, flushed fluorescent lighting with heat resistant wired glass diffusers and accessories (with height up to and including 1.2 m, with the hood bottom perimeter as reference dimension), jet spray nozzles. | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only |       |
|   | Hood undersurface area of : -   |                |                          |                                    |          |       |
|   | <b>Each</b>   | A<br>\$        | B<br>\$                  | C<br>\$                            | D<br>\$  |       |
| 38599   | up to 4 m <sup>2</sup> .....  | 41,080.44      | 353.22                   | 480.32                             | 1,511.75 | 38599 |
| 38600   | 4 - 5 m <sup>2</sup> .....  | 78,213.95      | 436.58                   | 569.38                             | 1,713.88 | 38600 |
| 38601   | 5 - 6 m <sup>2</sup> .....  | 84,813.87      | 550.60                   | 676.86                             | 1,895.50 | 38601 |
| 38602   | Add to last item for each additional square metre or part thereof.....  | 6,718.32       | 98.69                    | 107.48                             | 191.88   | 38602 |
|   | Vehicle exhaust hose and hose reel : -  |                |                          |                                    |          |       |
|   | <b>Per set</b>  |                |                          |                                    |          |       |
| 38603   | Vehicle exhaust hose reel c/w nozzle, hose clip, 10 m exhaust hose of 50 mm diameter c/w control panel and all necessary accessories .....  | 39,670.81      | 146.59                   | 216.81                             | 532.87   | 38603 |
| 38604   | 50 mm diameter. exhaust hose 10 m long.....   | 5,283.08       | 16.61                    | 28.06                              | 49.01    | 38604 |
|   | Sundries :-   |                |                          |                                    |          |       |
|   | <b>Each</b>   |                |                          |                                    |          |       |
| 38605   | Acoustic enclosure for housing centrifugal fan.....   | 2,875.04       | 54.96                    | 69.34                              | 165.64   | 38605 |
| 38606   | Silencer of 304 stainless steel construction c/w corrosion resistant flanges 300 mm (diameter) x 1200 mm (long) .....   | 5,100.83       | 16.00                    | 29.04                              | 85.76    | 38606 |
|   | Acoustic louver   |                |                          |                                    |          |       |
|   | <b>Per cubic metre</b>  |                |                          |                                    |          |       |
| 38607   | Acoustic insulation silencer, stainless steel 316 c/w corrosion resistant.....  | 907.94         | 12.00                    | 17.67                              | 40.21    | 38607 |
|   | Acoustic enclosure for heat pump : -  |                |                          |                                    |          |       |
|   | <b>Each</b>   |                |                          |                                    |          |       |
| 38608   | 50 - 100 kW.....  | 42,282.71      | 229.19                   | 378.37                             | 1,280.96 | 38608 |
| 38609   | 100 - 150 kW.....   | 58,157.43      | 274.67                   | 466.50                             | 1,394.93 | 38609 |
| 38610   | 150 - 200 kW.....   | 71,929.47      | 325.56                   | 637.78                             | 1,691.13 | 38610 |
| 38611   | 200 - 300 kW.....   | 84,879.16      | 392.46                   | 733.35                             | 1,776.70 | 38611 |

| Item  |  | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only  | Item  |
|---|--|----------------|--------------------------|------------------------------------|-----------|-------|
|   |  | A<br>\$        | B<br>\$                  | C<br>\$                            | D<br>\$   |       |
| <b>FANS &amp; VENTILATION SYSTEM (CONT'D)</b> |  |                |                          |                                    |           |       |
|   | High pressure cleansing unit : -   |                |                          |                                    |           |       |
|   | <i>Per set</i>   |                |                          |                                    |           |       |
| 38612   | Wall mounted unit flow rate 15.7 l/min at 175 bar pressure.....  | 19,454.93      | 80.93                    | 97.88                              | 260.47    | 38612 |
|   | Full package 2 pump unit at 400 kPa working pressure : -   |                |                          |                                    |           |       |
|   | <i>Per set</i>   |                |                          |                                    |           |       |
| 38613   | up to 0.5 kW.....  | 4,885.93       | 44.66                    | 63.11                              | 208.71    | 38613 |
| 38614   | 0.5 - 2 kW.....  | 9,611.95       | 59.35                    | 70.19                              | 237.14    | 38614 |
| 38615   | 2 - 5 kW.....  | 17,753.54      | 64.48                    | 74.35                              | 246.65    | 38615 |
|   | Water scrubber/multi-throat venture scrubber c/w packings, FRP centrifugal fan, mist eliminator, pipework, nozzle, sump, 3 nos. recycling pump c/w pump motor, flow sensor, flow switch, air release valve, chemical metering pump, ORP and pH analyzer transmitter, chemical tank, fully enclosed acoustic panel chamber, local control panel for design flow rate of : - |                |                          |                                    |           |       |
|   | <i>Per set</i>   |                |                          |                                    |           |       |
| 38616   | 4.4 - 5.5 m <sup>3</sup> /s.....<br>(The actual rate should be : \$290,323.50 for Item 38616A)   | 29,032.35      | 1,726.86                 | 2,414.12                           | 7,444.30  | 38616 |
| 38617   | 5.5 - 8 m <sup>3</sup> /s.....<br>(The actual rate should be : \$452,286.50 for Item 38617A)   | 45,228.65      | 2,091.25                 | 2,839.55                           | 8,391.06  | 38617 |
| 38618   | 8 - 11.5 m <sup>3</sup> /s.....<br>(The actual rate should be : \$679,034.70 for Item 38618A)  | 67,903.47      | 2,601.39                 | 3,435.15                           | 9,716.52  | 38618 |
| 38619   | 11.5 - 14.5 m <sup>3</sup> /s.....<br>(The actual rate should be : \$842,706.90 for Item 38619A)   | 84,270.69      | 3,060.61                 | 4,072.59                           | 10,916.92 | 38619 |
|   | Silencer of PVC/PP construction c/w corrosion resistant flanges : -  |                |                          |                                    |           |       |
|   | <i>Each</i>  |                |                          |                                    |           |       |
| 38620   | up to 0.5 m <sup>3</sup> /s.....   | 5,281.73       | 19.27                    | 30.77                              | 105.15    | 38620 |
| 38621   | 0.5 - 1 m <sup>3</sup> /s.....   | 8,629.52       | 26.11                    | 38.32                              | 128.62    | 38621 |
| 38622   | 1 - 1.5 m <sup>3</sup> /s.....   | 9,842.85       | 40.64                    | 48.90                              | 146.99    | 38622 |
| 38623   | 1.5 - 2 m <sup>3</sup> /s.....   | 13,003.23      | 48.90                    | 61.49                              | 165.46    | 38623 |
| 38624   | Add to last item for each additional 0.5 m <sup>3</sup> /s or part thereof.....  | 2,869.99       | 5.32                     | 8.50                               | 20.46     | 38624 |

| Item  |   |                      |                                      |  | Item        |       |
|---|---|----------------------|--------------------------------------|--|-------------|-------|
| <b>FANS &amp; VENTILATION SYSTEM (CONT'D)</b>   |   |                      |                                      |  |             |       |
| Sundries :-   |   |                      |                                      |  |             |       |
| <i>Each</i>   |   |                      |                                      |  |             |       |
|   |   | Supply<br>and<br>fix | Take<br>down<br>and<br>clear<br>away | Take<br>down<br>and set<br>aside for<br>re-use | Fix<br>only |       |
|   |   | A<br>\$              | B<br>\$                              | C<br>\$  | D<br>\$     |       |
| 38625   | Chemical dosing tank c/w accessories, chemical metering pump set.....   | 1,770.05             | 8.09                                 | 16.00  | 33.92       | 38625 |
| 38626   | ORP analyzer c/w sensor, transmitter and accessories.....   | 1,350.21             | 8.42                                 | 10.92  | 25.65       | 38626 |
| 38627   | pH analyzer c/w sensor, transmitter and accessories.....  | 1,346.29             | 8.42                                 | 10.92  | 25.65       | 38627 |
| 38628   | Portable chemical pump for NaOH/NaOCl.....  | 1,508.08             | 13.46                                | 21.73  | 51.38       | 38628 |
| <b>ENERGY SAVING CONTROL SYSTEM</b>   |   |                      |                                      |  |             |       |
| Energy savings control system for mechanical ventilation integrated with natural ventilation :- |   |                      |                                      |  |             |       |
| <i>Each</i>   |   |                      |                                      |  |             |       |
|   |   | Supply<br>and<br>fix | Take<br>down<br>and<br>clear<br>away | Take<br>down<br>and set<br>aside for<br>re-use | Fix<br>only |       |
|   |   | A<br>\$              | B<br>\$                              | C<br>\$  | D<br>\$     |       |
| 38629   | Wind speed sensor.....  | 10,779.97            | 56.28                                | 73.52  | 204.89      | 38629 |
| 38630   | Wind direction sensor.....  | 12,604.96            | 56.54                                | 73.65  | 206.61      | 38630 |
| 38631   | Wind speed and direction controller c/w power cables, control cables, contactors metal enclosure and all necessary accessories..... | 5,545.58             | 162.67                               | 244.33   | 616.64      | 38631 |
| <b>VARIABLE SPEED MOTOR DRIVE</b>   |   |                      |                                      |  |             |       |
| Variable speed motor drive of rating :-   |   |                      |                                      |  |             |       |
| <i>Each</i>   |   |                      |                                      |  |             |       |
|   |   | Supply<br>and<br>fix | Take<br>down<br>and<br>clear<br>away | Take<br>down<br>and set<br>aside for<br>re-use | Fix<br>only |       |
|   |   | A<br>\$              | B<br>\$                              | C<br>\$  | D<br>\$     |       |
| 38632   | up to 5 kW.....   | 10,765.90            | 11.94                                | 15.55  | 45.47       | 38632 |
| 38633   | 5 - 10 kW.....  | 12,783.39            | 16.00                                | 21.37  | 61.31       | 38633 |
| 38634   | 10 - 15 kW.....   | 14,675.55            | 20.07                                | 27.19  | 77.17       | 38634 |
| 38635   | 15 - 20 kW.....   | 16,369.43            | 24.29                                | 32.24  | 91.92       | 38635 |
| 38636   | 20 - 30 kW.....   | 29,962.63            | 26.89                                | 36.50  | 105.82      | 38636 |
| 38637   | 30 - 40 kW.....   | 33,310.87            | 32.43                                | 43.88  | 117.67      | 38637 |
| 38638   | 40 - 50 kW.....   | 38,190.28            | 36.73                                | 47.14  | 128.56      | 38638 |
| 38639   | 50 - 60 kW.....   | 43,762.29            | 40.26                                | 50.09  | 131.47      | 38639 |

| Item  |   | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only  | Item  |
|---|---|----------------|--------------------------|------------------------------------|-----------|-------|
| <b>METAL WORKS IN ASSOCIATED WITH AIR-CONDITIONING INSTALLATION</b>   |   |                |                          |                                    |           |       |
| <i>Per square metre</i>   |   |                |                          |                                    |           |       |
| 38640   | Elevated or overhauling platform for A/C equipment c/w metal work, railing, cat ladder, painting as per Structural Engineer's recommended detail (to be measured on platform surface area)..... | 2,661.91       | 45.37                    | 64.06                              | 153.22    | 38640 |
| <i>Each</i>   |   |                |                          |                                    |           |       |
| 38641   | Surveyor's certificate for steel service platform for maintenance of A/C equipment.....   | 7,133.73       | -                        | -                                  | -         | 38641 |
| <b>STEAM AND HOT WATER SYSTEM</b>   |   |                |                          |                                    |           |       |
| Steam plant and equipment c/w steam boiler, combustion chamber, automatic burner with controls, blow-down valve, all necessary valves, tanks, thermometer, steam pressure gauge, boiler feed pump with controls, water level gauge glass, water level control, local control panel and protection, drip tray, cleaning tools, chemical dosing equipment, draught gauge, meters, quartz clock and condensate/feed tank : - |   |                |                          |                                    |           |       |
| <i>Each</i>   |   |                |                          |                                    |           |       |
| 38642   | Water heating capacity 401 - 500 kg/hr.....<br>(The actual rate should be : \$646,902.50 for Item 38642A)   | 64,690.25      | 4,927.09                 | 5,663.11                           | 12,609.49 | 38642 |
| Air-water heat pump (zero ODP refrigerant) c/w motor, compressor, condenser, evaporator coil, centrifugal blower, automatic safety controls within common cabinet, refrigerant receiver, moisture indicator, sight glass, thermal expansion valve, filter drier, heat exchanger, lockout relay, fan motor, thermal overload protector, time delay, phase monitor, hour meter and control panel : -                        |   |                |                          |                                    |           |       |
| <i>Each</i>   |   |                |                          |                                    |           |       |
| 38643   | Water heating capacity 8 - 14 kW.....   | 43,149.82      | 331.66                   | 398.15                             | 1,691.76  | 38643 |
| 38644   | Water heating capacity 14 - 28 kW.....  | 79,324.55      | 500.40                   | 586.47                             | 2,881.93  | 38644 |
| 38645   | Water heating capacity 28 - 44 kW.....<br>(The actual rate should be : \$175,900.40 for Item 38645A)  | 17,590.04      | 695.06                   | 774.59                             | 4,025.54  | 38645 |
| 38646   | Water heating capacity 44 - 68 kW.....<br>(The actual rate should be : \$217,486.90 for Item 38646A)  | 21,748.69      | 943.06                   | 1,473.79                           | 5,159.94  | 38646 |
| 38647   | Water heating capacity 68 - 100 kW.....<br>(The actual rate should be : \$261,440.10 for Item 38647A)   | 26,144.01      | 1,204.63                 | 2,237.14                           | 6,330.64  | 38647 |
| 38648   | Water heating capacity 100 - 150 kW.....<br>(The actual rate should be : \$320,510.20 for Item 38648A)  | 32,051.02      | 1,901.68                 | 2,837.38                           | 7,634.31  | 38648 |

| Item  |   |                |                          |                                    | Item     |       |
|-------|---|----------------|--------------------------|------------------------------------|----------|-------|
|       | <b>STEAM AND HOT WATER SYSTEM (CONT'D)</b>  |                |                          |                                    |          |       |
|       | Air-cooled packaged heat pump (zero ODP refrigerant) for external mounting c/w evaporators, condensers, fans, compressors, motors, water circulation pumps, pressure relief valves, expansion tanks, starters, refrigerant, expansion tank, buffer tank, noise equipment, copper tube with pre-corrosion resisting treated copper fins, filter driers, water strainer, capacity controller, liquid receivers, starters, weather-proof cabinet, emergency stop button, all necessary safety and operational control and accessories, local control panel connected to electricity supply point, proper mounting and support including I-beams and concrete plinth, flexible pipe connection, chilled water pipework for connection | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only |       |
|       | Heat pump capacity : -  |                |                          |                                    |          |       |
|       | <i>Each</i>   | A \$           | B \$                     | C \$                               | D \$     |       |
| 38649 | 8 - 14 kW.....<br>(The actual rate should be : \$115,104.80 for Item 38650A)  | 82,133.06      | 498.48                   | 637.49                             | 2,240.19 | 38649 |
| 38650 | 14 - 28 kW.....<br>(The actual rate should be : \$163,674.20 for Item 38651A)   | 11,510.48      | 614.60                   | 785.58                             | 2,410.03 | 38650 |
| 38651 | 28 - 44 kW.....<br>(The actual rate should be : \$214,147.40 for Item 38652A)   | 16,367.42      | 843.98                   | 1,024.17                           | 2,574.50 | 38651 |
| 38652 | 44 - 68 kW.....<br>(The actual rate should be : \$329,279.20 for Item 38653A)   | 21,414.74      | 998.45                   | 1,485.39                           | 4,145.15 | 38652 |
| 38653 | 68 - 100 kW.....<br>(The actual rate should be : \$452,642.10 for Item 38654A)  | 32,927.92      | 1,338.75                 | 2,005.19                           | 5,380.70 | 38653 |
| 38654 | 100 - 150 kW.....<br>(The actual rate should be : \$552,585.80 for Item 38655A)   | 45,264.21      | 1,659.89                 | 2,469.54                           | 5,715.90 | 38654 |
| 38655 | 150 - 200 kW.....<br>(The actual rate should be : \$675,313.80 for Item 38656A)   | 55,258.58      | 2,075.04                 | 2,961.96                           | 6,944.04 | 38655 |
| 38656 | 200 - 300 kW.....<br>(The actual rate should be : \$675,313.80 for Item 38656A)   | 67,531.38      | 2,201.42                 | 3,219.90                           | 7,716.38 | 38656 |

| Item  |   |                      |                                      |  | Item        |       |
|-------|---|----------------------|--------------------------------------|--|-------------|-------|
|       | <b>SUNDRIES</b>   | Supply<br>and<br>fix | Take<br>down<br>and<br>clear<br>away | Take<br>down<br>and set<br>aside for<br>re-use | Fix<br>only |       |
|       | Solar hot water storage tank c/w insulation complying BS5500 c/w all necessary accessories :- |                      |                                      |  |             |       |
|       | <i>Each</i>   | A<br>\$              | B<br>\$                              | C<br>\$  | D<br>\$     |       |
| 38657 | up to 100 litres.....   | 2,753.67             | 43.48                                | 84.67  | 193.31      | 38657 |
| 38658 | 100 - 200 litres.....   | 3,003.24             | 46.43                                | 87.37  | 202.95      | 38658 |
| 38659 | 200 - 300 litres.....   | 3,429.27             | 50.37                                | 93.37  | 213.08      | 38659 |
| 38660 | 300 - 400 litres.....   | 6,349.32             | 52.82                                | 97.97  | 223.62      | 38660 |
| 38661 | 400 - 500 litres.....   | 9,149.28             | 54.33                                | 102.80   | 234.86      | 38661 |
|       | Pyranometer :-  |                      |                                      |  |             |       |
|       | <i>Each</i>   |                      |                                      |  |             |       |
| 38662 | Pyranometer complying ISO 9060 c/w all functional accessories.....                            | 1,959.77             | 43.54                                | 82.74  | 167.04      | 38662 |
|       | Stainless steel plate type heat exchanger of heat transfer capacity :-                        |                      |                                      |  |             |       |
|       | <i>Each</i>   |                      |                                      |  |             |       |
| 38663 | up to 25 kW.....  | 10,024.62            | 181.19                               | 243.77   | 906.46      | 38663 |
| 38664 | 25 - 50 kW.....   | 29,519.66            | 198.32                               | 248.19   | 997.10      | 38664 |
| 38665 | 50 - 100 kW.....  | 58,039.30            | 217.55                               | 269.87   | 1,096.84    | 38665 |
| 38666 | 100 - 200 kW.....   | 70,393.14            | 242.28                               | 297.43   | 1,206.60    | 38666 |
| 38667 | 200 - 300 kW.....   | 90,769.66            | 260.10                               | 326.99   | 1,328.77    | 38667 |

| Item  | Item   |                                    |                          |                                    |          |         |         |         |         |
|---|--|------------------------------------|--------------------------|------------------------------------|----------|---------|---------|---------|---------|
| <b>SUNDRIES (CONT'D)</b>  |  |                                    |                          |                                    |          |         |         |         |         |
| Solar collector panel complying BS EN 12975 with minimum efficiency 65% at 30K temperature difference between average fluid temperature and ambient air temperature with solar irradiation = 800W/m <sup>2</sup> :-   |  |                                    |                          |                                    |          |         |         |         |         |
|   | <table border="1"> <thead> <tr> <th style="text-align: center;">Supply and fix</th> <th style="text-align: center;">Take down and clear away</th> <th style="text-align: center;">Take down and set aside for re-use</th> <th style="text-align: center;">Fix only</th> </tr> <tr> <th style="text-align: center;">A<br/>\$</th> <th style="text-align: center;">B<br/>\$</th> <th style="text-align: center;">C<br/>\$</th> <th style="text-align: center;">D<br/>\$</th> </tr> </thead> </table> | Supply and fix                     | Take down and clear away | Take down and set aside for re-use | Fix only | A<br>\$ | B<br>\$ | C<br>\$ | D<br>\$ |
| Supply and fix  | Take down and clear away   | Take down and set aside for re-use | Fix only                 |                                    |          |         |         |         |         |
| A<br>\$   | B<br>\$  | C<br>\$                            | D<br>\$                  |                                    |          |         |         |         |         |
| <i>Per set</i>  |  |                                    |                          |                                    |          |         |         |         |         |
| 38668 up to 1 m <sup>2</sup> .....  | 3,364.07 118.31 171.65 468.29 38668  |                                    |                          |                                    |          |         |         |         |         |
| 38669 1 m <sup>2</sup> - 2 m <sup>2</sup> .....   | 4,900.52 142.66 203.02 558.44 38669  |                                    |                          |                                    |          |         |         |         |         |
| 38670 2 m <sup>2</sup> - 3 m <sup>2</sup> .....   | 7,884.80 158.64 230.76 625.28 38670  |                                    |                          |                                    |          |         |         |         |         |
| 38671 3 m <sup>2</sup> - 4 m <sup>2</sup> .....   | 10,930.83 177.73 258.24 692.80 38671   |                                    |                          |                                    |          |         |         |         |         |
| 38672 4 m <sup>2</sup> - 5 m <sup>2</sup> .....   | 13,810.95 197.00 290.97 779.95 38672   |                                    |                          |                                    |          |         |         |         |         |
| 38673 5 m <sup>2</sup> - 6 m <sup>2</sup> .....   | 16,699.28 222.63 324.49 880.07 38673   |                                    |                          |                                    |          |         |         |         |         |
| 38674 6 m <sup>2</sup> - 7 m <sup>2</sup> .....   | 19,730.42 247.00 360.72 984.41 38674   |                                    |                          |                                    |          |         |         |         |         |
| Labour to disconnect all existing air-conditioning and ventilation installation for an area inside a building, take down and clearing the entire air-conditioning and ventilation installation inside the area (area shall be measured net on the gross floor area of the building covered by the air-conditioning services installation) |  |                                    |                          |                                    |          |         |         |         |         |
| <i>Per square metre</i>   |  |                                    |                          |                                    |          |         |         |         |         |
| 38675 for area up to 100 m <sup>2</sup> .....   | - 26.15 - - 38675  |                                    |                          |                                    |          |         |         |         |         |
| 38676 for area 100 - 500 m <sup>2</sup> .....   | - 25.36 - - 38676  |                                    |                          |                                    |          |         |         |         |         |
| 38677 for area above 500 m <sup>2</sup> .....   | - 23.67 - - 38677  |                                    |                          |                                    |          |         |         |         |         |

| Item  |  |          | Item  |
|-------|--|----------|-------|
|       | <b>MISCELLANEOUS</b>   |          |       |
|       | Buildings Energy Efficiency Ordinance (BEEO) Submission  |          |       |
|       | All heating, ventilation and air-conditioning installations, unless otherwise specified, in a prescribed building should be assessed in accordance with the energy efficient requirements, for the premises in accordance with the requirements as specified in the latest edition of Code of Practice for Energy Efficiency of Building Services Installation (Building Energy Code or BEC in abbreviation), preparation and completion of the installation summaries and worksheets including but not limited to Form EE-AC, AC-G1, AC-G2(1), AC-G2(2), AC-G3(1), AC-G3(2), AC-G3(3), AC-D1 and AC-EQ1 as required by the BEEO and to coordinate with the Registered Energy Assessor for submission. | Rate     |       |
|       | <i>Each</i>  | A<br>\$  |       |
| 38678 | Water cooled/ Air cooled chillers.....   | 3,867.99 | 38678 |
| 38679 | Ventilation fans.....  | 193.40   | 38679 |
| 38680 | Air handling units/ Computer room air conditioning units.....  | 580.20   | 38680 |
| 38681 | Split type air conditioning units.....   | 116.04   | 38681 |
| 38682 | Window-split type air conditioners.....  | 193.40   | 38682 |
| 38683 | Packaged air conditioners.....   | 232.09   | 38683 |
| 38684 | Reheat coil air conditioners.....  | 251.41   | 38684 |
| 38685 | Variable refrigerant volume (VRV) system.....  | 386.80   | 38685 |
| 38686 | Fan coil units.....  | 290.11   | 38686 |
| 38687 | Room coolers.....  | 38.68    | 38687 |
| 38688 | Cold room air conditioning unit.....   | 38.68    | 38688 |
| 38689 | Air cooled roof top units.....   | 386.80   | 38689 |
| 38690 | Fresh air pre-conditioners/ Fresh air pretreating units.....   | 232.09   | 38690 |
| 38691 | Air purifier units/ sterilizers.....   | 38.68    | 38691 |
| 38692 | Air pressure stabilizers.....  | 38.68    | 38692 |
| 38693 | Variable air volume equipment (VAV/ CAV).....  | 38.68    | 38693 |
| 38694 | Dehumidifiers/ humidifiers.....  | 38.68    | 38694 |
| 38695 | Electro-static precipitators.....  | 193.40   | 38695 |
| 38696 | Thermo ventilators.....  | 96.71    | 38696 |
| 38697 | Water pumps.....   | 96.71    | 38697 |
| 38698 | Cooling towers.....  | 290.11   | 38698 |
| 38699 | Grease filter type kitchen exhaust hood/ Water scrubbing type exhaust hood.....  | 386.80   | 38699 |



**Section 39**

**HEATING, VENTILATION AND AIR-CONDITIONING - ELECTRICAL**

**POWER SUPPLY, CONTROL AND MONITORING SYSTEM**

| Item  |  | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only | Item  |
|-------|--|----------------|--------------------------|------------------------------------|----------|-------|
|       |  | A<br>\$        | B<br>\$                  | C<br>\$                            | D<br>\$  |       |
|       | <b>CONTROL PANELS</b>  |                |                          |                                    |          |       |
|       | Interfacing and control panel for pumps :-   |                |                          |                                    |          |       |
|       | <i>Each</i>  |                |                          |                                    |          |       |
| 39001 | Interfacing and control panel for lead-lag pump control; in addition to the local control panels of the pumps (stainless steel 316 for control of 1 to 2 items)..... | 1,954.12       | 71.31                    | 124.01                             | 283.56   | 39001 |
|       | Interfacing and control panel for air handling and treatment equipment :-  |                |                          |                                    |          |       |
|       | <i>Each</i>  |                |                          |                                    |          |       |
| 39002 | Interlocking control panel for an AHU (ON/OFF function for the AHU is treated as one item) (stainless steel 316 for control of 1 to 2 items).....                    | 1,899.63       | 69.34                    | 120.42                             | 273.83   | 39002 |
|       | Interfacing and control panel for unitary air conditioners :-  |                |                          |                                    |          |       |
|       | <i>Each</i>  |                |                          |                                    |          |       |
| 39003 | Interfacing and control panel for VRV system control; for chiller control and for computer room units control (stainless steel 316 for control of 1 to 2 items)..... | 6,512.82       | 86.23                    | 149.38                             | 345.47   | 39003 |
|       | Interlocking control panel for fans and ventilation system: -  |                |                          |                                    |          |       |
|       | <i>Each</i>  |                |                          |                                    |          |       |
| 39004 | Interlocking control panel for a group of fans (ON/OFF function for the group is treated as one item) (stainless steel 316 for control of 1 to 2 items).....         | 1,442.42       | 75.12                    | 130.47                             | 295.33   | 39004 |
|       | Control panel for fans & ventilation system :-   |                |                          |                                    |          |       |
|       | <i>Each</i>  |                |                          |                                    |          |       |
| 39005 | Control panel for fans & ventilation system c/w motor starter, indicators, switches etc.....   | 3,150.30       | 66.00                    | 111.53                             | 121.28   | 39005 |
| 39006 | Weather proof control panel for fans & ventilation system c/w motor starter, indicators, switches etc.....   | 3,228.48       | 66.00                    | 111.53                             | 154.04   | 39006 |
| 39007 | Weather proof control panel for water scrubbing type exhaust hood c/w motor starter, indicators, switches etc.....   | 12,315.70      | 66.00                    | 111.53                             | 196.91   | 39007 |

| Item  |  | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only | Item  |
|-------|--|----------------|--------------------------|------------------------------------|----------|-------|
|       | <b>CONTROL PANELS (CONT'D)</b>   |                |                          |                                    |          |       |
|       | Supervisory/control panel for Air-Conditioning system : -  |                |                          |                                    |          |       |
|       | <i>Each</i>  | A              | B                        | C                                  | D        |       |
|       |  | \$             | \$                       | \$                                 | \$       |       |
| 39008 | Supervisory panel of sheet metal box and stainless steel metal front plate c/w push buttons, indicating lamps, relays (or electrical control), selectors, electrical wiring and all necessary functional and operational component for the complete unit monitoring and controlling of 1 set of equipment..... | 3,000.92       | 125.24                   | 217.61                             | 492.47   | 39008 |
| 39009 | Every additional set of equipment incorporating with supervisory panel as described in item 39008 .....  | 2,499.75       | 13.66                    | 14.17                              | 100.94   | 39009 |
|       | Control panel for B.S. remote monitoring system : -  |                |                          |                                    |          |       |
|       | <i>Each</i>  |                |                          |                                    |          |       |
| 39010 | Interfacing panel for B.S. remote monitoring system for emergency generator, fire alarm system, water detection system, computer units, room condition etc.....  | 8,248.82       | 9.11                     | 10.57                              | 21.39    | 39010 |
|       | Control panel for solar collector control system : -   |                |                          |                                    |          |       |
|       | <i>Each</i>  |                |                          |                                    |          |       |
| 39011 | Solar collector control panel with solar hot water system controller, including the control of circulation pump, solar hot water storage tank, level switch, safety device & all necessary accessories.....  | 1,741.86       | 88.58                    | 164.54                             | 296.97   | 39011 |

| Item                        |  | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only | Item  |
|-----------------------------|--|----------------|--------------------------|------------------------------------|----------|-------|
|                             |  | A \$           | B \$                     | C \$                               | D \$     |       |
| <b>SENSORS &amp; METERS</b> |  |                |                          |                                    |          |       |
| Meters :-                   |  |                |                          |                                    |          |       |
|                             | <i>Each</i>  |                |                          |                                    |          |       |
| 39012                       | Hour run meter (all rating).....   | 605.86         | 4.64                     | 7.89                               | 18.81    | 39012 |
| 39013                       | Energy meter for chilled water.....  | 5,017.91       | 29.97                    | 31.80                              | 60.09    | 39013 |
| 39014                       | Sea water flow counter.....  | 3,099.68       | 19.27                    | 21.59                              | 48.78    | 39014 |
| 39015                       | Sea water direct reading flow meter (all size).....  | 8,676.11       | 29.97                    | 31.80                              | 60.09    | 39015 |
| 39016                       | Thermometers for chilled water.....  | 298.33         | 7.52                     | 11.79                              | 28.74    | 39016 |
| 39017                       | Digital temperature indicator.....   | 2,300.05       | 8.68                     | 12.95                              | 33.85    | 39017 |
| 39018                       | Digital temperature meter c/w interfacing unit suitable for computer download in Excel or CSV format.....  | 6,712.14       | 9.11                     | 10.57                              | 21.39    | 39018 |
| Sensors & Detectors :-      |  |                |                          |                                    |          |       |
|                             | <i>Each</i>  |                |                          |                                    |          |       |
| 39019                       | Movement detector, combined infrared and ultrasonic detection type c/w necessary accessories and connection to the alarm panel.....              | 571.69         | 29.47                    | 30.61                              | 70.90    | 39019 |
| 39020                       | High temperature detector c/w control panel, indicating lights, alarm / buzzer and served with automatic "duty / standby" changeover switch..... | 7,564.67       | 9.11                     | 10.57                              | 21.39    | 39020 |
| 39021                       | Duct type carbon dioxide (CO <sub>2</sub> ) sensor c/w associated DDC controller, control wiring and associated accessories .....                | 4,185.68       | 10.33                    | 11.59                              | 24.08    | 39021 |
| 39022                       | Duct type carbon monoxide (CO) sensor c/w associated DDC controller, control wiring and associated accessories .....                             | 4,185.68       | 10.33                    | 11.59                              | 24.08    | 39022 |
| 39023                       | Room type carbon dioxide (CO <sub>2</sub> ) sensor c/w DDC controller, LCD display, control wiring and associated accessories.....               | 4,185.68       | 10.33                    | 11.59                              | 24.08    | 39023 |
| 39024                       | Room type carbon monoxide (CO) sensor c/w DDC controller, LCD display, control wiring and associated accessories.....                            | 4,185.68       | 10.33                    | 11.59                              | 24.08    | 39024 |
| 39025                       | Temperature sensors.....   | 512.45         | 6.56                     | 8.16                               | 44.10    | 39025 |
| 39026                       | Humidity sensors.....  | 1,492.75       | 6.56                     | 8.16                               | 44.10    | 39026 |
| 39027                       | Absolute humidity (dew point) sensors.....   | 1,527.98       | 6.56                     | 8.16                               | 44.10    | 39027 |
| 39028                       | Combined type humidity and temperature sensors.....  | 1,555.56       | 6.56                     | 8.16                               | 44.10    | 39028 |
| 39029                       | Differential pressure sensors.....   | 1,544.36       | 6.56                     | 8.16                               | 44.10    | 39029 |

| Item  |   |                      |                                      |  | Item        |       |
|-------|---|----------------------|--------------------------------------|--|-------------|-------|
|       | <b>SENSORS &amp; METERS (CONT'D)</b>  |                      |                                      |  |             |       |
|       | Sensors & Detectors : - (Cont'd)  | Supply<br>and<br>fix | Take<br>down<br>and<br>clear<br>away | Take<br>down<br>and set<br>aside for<br>re-use | Fix<br>only |       |
|       | <i>Each</i>   | A<br>\$              | B<br>\$                              | C<br>\$  | D<br>\$     |       |
| 39030 | Probe type duct mounted smoke detector & indicator (tripping power supply is connected to F.S. panel), access panel, including modification of existing duct work and air-conditioner's control panel ..... | 1,321.72             | 56.14                                | 58.81  | 207.40      | 39030 |
| 39031 | Air velocity sensors.....   | 1,895.50             | 6.56                                 | 8.16   | 44.10       | 39031 |
| 39032 | Contamination sensors.....  | 1,892.92             | 6.56                                 | 8.16   | 44.10       | 39032 |
| 39033 | Flow sensors.....   | 469.34               | 6.56                                 | 8.16   | 44.10       | 39033 |
| 39034 | Occupancy sensor.....   | 594.29               | 6.56                                 | 8.16   | 44.10       | 39034 |
| 39035 | Carbon monoxide monitor/alarm sensors.....  | 382.25               | 6.45                                 | 8.12   | 41.05       | 39035 |
| 39036 | Nitrogen dioxide sensors.....   | 1,135.03             | 6.45                                 | 8.12   | 41.05       | 39036 |
| 39037 | Carbon dioxide (CO <sub>2</sub> ) sensor of non dispersive technology with sensing range of 0 to 2000 ppm, accuracy within 5%. Duct / wall mounted.....   | 1,601.11             | 6.45                                 | 8.12   | 41.05       | 39037 |

| Item  |   |                      |                                      |  | Item        |       |
|-------|---|----------------------|--------------------------------------|--|-------------|-------|
|       | <b>CONTROL VALVES AND DAMPERS</b>   |                      |                                      |  |             |       |
|       |   | Supply<br>and<br>fix | Take<br>down<br>and<br>clear<br>away | Take<br>down<br>and set<br>aside for<br>re-use | Fix<br>only |       |
|       |   | A<br>\$              | B<br>\$                              | C<br>\$  | D<br>\$     |       |
|       | <i>Each</i>   |                      |                                      |  |             |       |
| 39038 | Control valves, modulating type with a turn down ratio of at least 50 to 1 and c/w valves actuator. Valve bodies shall be cast gunmetal, brass, cast iron or as otherwise indicated. Valves shall have authority of at least 0.5 (50%)..... | 6,041.28             | 32.20                                | 37.70  | 59.88       | 39038 |
| 39039 | Two-position control dampers, dampers shall be sized for minimum pressure drop at the indicated ductwork size.....  | 801.09               | 4.11                                 | 6.16   | 14.63       | 39039 |
| 39040 | Modulating and proportioning dampers, dampers shall be sized for an effective linear air flow control characteristic within the angle of rotation and maximum pressure drops specified.....   | 792.31               | 4.11                                 | 6.16   | 14.63       | 39040 |
| 39041 | Dampers at louvres, dampers located immediately adjacent to intake and exhaust louvres shall be furnished in sizes as indicated because of reduced free area at louvres.....  | 788.00               | 4.11                                 | 6.16   | 14.63       | 39041 |
| 39042 | Isolation dampers that shall provide tight shut-off with negligible leakage, and shall withstand the applied pressure, velocities and turbulence in the open position.....  | 787.17               | 4.11                                 | 6.16   | 14.63       | 39042 |
| 39043 | Fire and smoke dampers that shall meet all requirements of NFPA 90A and shall where indicated bear the 2-hour UL fire damper label.....   | 883.20               | 4.11                                 | 6.16   | 14.63       | 39043 |
| 39044 | Damper actuator that shall be of the linear or rotary type for either modulating or two-positioning control.....  | 1,173.80             | 12.61                                | 20.37  | 85.47       | 39044 |

| Item  |  | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only | Item  |
|---|--|----------------|--------------------------|------------------------------------|----------|-------|
|   |  | A<br>\$        | B<br>\$                  | C<br>\$                            | D<br>\$  |       |
| <b>CENTRAL CONTROL AND MONITORING SYSTEM (CCMS)</b> |  |                |                          |                                    |          |       |
|   | <i>Each</i>  |                |                          |                                    |          |       |
| 39045   | CCMS central control workstation c/w mouse and keyboard, TFT LCD monitor of viewable size 530mm (21" diagonally), A3 ink/laser printer capable of handling continuous paper, UPS capable of backup for 1 hour of operation for the PC, monitor and printer and 16-bit/full duplex audio system c/w speakers..... | 17,466.83      | 24.29                    | 32.70                              | 102.59   | 39045 |
| 39046   | Uninterrupted power supply capable for 1 hour operation for the PC.....  | 8,719.72       | 12.20                    | 16.40                              | 51.60    | 39046 |
| 39047   | Portable operator terminal hardware c/w weight of less than 2 kg, run on rechargeable battery, capable of retrieving and storing information to and from CCMS server and DDC controllers and Input method can be keyboard, touch screen, track point and/or mouse.....   | 12,877.65      | 4.04                     | 6.63                               | 10.36    | 39047 |
| 39048   | DDC hardware c/w RAM and the clock shall be provided with power backup of 72 hours instant recharged capacitor or 12-hour trickle recharged batteries, universal inputs and universal outputs.....   | 3,408.00       | 24.29                    | 32.70                              | 102.59   | 39048 |
| 39049   | Unitary controller hardware with processor speed at least 10 MHz and minimum of 512 Kbytes RAM.....  | 4,284.38       | 8.22                     | 12.34                              | 20.75    | 39049 |
| 39050   | Gateway/interfacing hardware c/w processor speed at least 16.7 MHz and minimum of 2 Mbytes RAM. The gateway, which also acts as a general purpose controller, shall have the same analog/digital input and output points.....  | 4,856.22       | 8.22                     | 12.34                              | 21.02    | 39050 |
| 39051   | CCMS central database repository shall reside in the CCMS server. The database server shall use client/server technology and comply with Microsoft Open Database Connectivity (ODBC) latest version and support ISO/IEC 9075-9:2003.....   | 853.30         | -                        | -                                  | 20.75    | 39051 |
| 39052   | ACMV sub-system unitary controllers for temperature/humidity/pressure controllers with plug-in proportional type with integrated circuits controllers shall be available with either 0 to 20V DC / 4 to 20 mA proportional output, two-position output, or any combination.....                                  | 7,752.19       | 12.20                    | 16.40                              | 51.60    | 39052 |
| 39053   | Programmable DDC for VAV Box.....  | 873.21         | 4.83                     | 5.94                               | 39.66    | 39053 |

| Item  |   | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only | Item  |
|-------|---|----------------|--------------------------|------------------------------------|----------|-------|
|       | <b>SUNDRIES</b>   |                |                          |                                    |          |       |
|       | IAQ testing/assessment and report as described in Part D of A/C G.S. :- |                |                          |                                    |          |       |
|       | <i>Per point</i>  | A<br>\$        | B<br>\$                  | C<br>\$                            | D<br>\$  |       |
| 39054 | Carbon dioxide.....   | 243.60         | -                        | -                                  | -        | 39054 |
| 39055 | Carbon monoxide.....  | 241.86         | -                        | -                                  | -        | 39055 |
| 39056 | Respirable suspended particulate.....                                   | 359.36         | -                        | -                                  | -        | 39056 |
| 39057 | Nitrogen dioxide.....   | 240.60         | -                        | -                                  | -        | 39057 |
| 39058 | Ozone.....  | 1,221.57       | -                        | -                                  | -        | 39058 |
| 39059 | Formaldehyde.....   | 242.01         | -                        | -                                  | -        | 39059 |
| 39060 | Total volatile organic compound.....                                    | 364.08         | -                        | -                                  | -        | 39060 |
| 39061 | Radon.....  | 238.14         | -                        | -                                  | -        | 39061 |
| 39062 | Airborne bacteria.....  | 357.95         | -                        | -                                  | -        | 39062 |
| 39063 | Room temperature.....   | 120.35         | -                        | -                                  | -        | 39063 |
| 39064 | Relative humidity.....  | 120.04         | -                        | -                                  | -        | 39064 |
| 39065 | Air movement.....   | 122.27         | -                        | -                                  | -        | 39065 |
|       | Cables :-   |                |                          |                                    |          |       |
|       | <i>Per linear metre</i>   |                |                          |                                    |          |       |
| 39066 | Low capacitance cable.....  | 12.81          | 2.28                     | 2.78                               | 7.53     | 39066 |
| 39067 | Shield twist pair cable.....  | 15.98          | 2.28                     | 2.78                               | 7.53     | 39067 |
| 39068 | Multi-mode 62.5/125 fiber optic cable.....                              | 48.83          | 2.28                     | 2.78                               | 7.53     | 39068 |



**Section 40**

**FIRE SERVICES**

## SECTION 40

### FIRE SERVICES

#### SPECIAL CONDITIONS

|   |                |  |
|---|----------------|--|
| <b>Measurement of power supply</b>  | <b>SC40.01</b> | <p>All works of electrical power supply up to power supply points (e.g. switchgear or isolator or spur unit and the like) for the equipment shall be measured separately and paid for at the appropriate rates under Section 27 - Lighting System and Fixtures, Section 28 - Small Power Distribution, Section 29 - Main Distribution Systems and Section 30 - Miscellaneous Electrical Installations or other applicable Work Sections of this Schedule.</p> <p>For the avoidance of doubt, all items for pump sets in this section shall only apply to the works executed for the Fire Services Installation by the Approved Suppliers of Materials and Specialist Contractors for Public Works : Fire Service Installation.</p> |
| <b>Measurement of excavations, ducts, chases, holes and other subsidiary work</b> | <b>SC40.02</b> | <p>All trench excavation shall be measured separately and paid for at the appropriate rates under Section 03 - Excavation of this Schedule. All pipe ducts, concrete thrust blocks and anchor blocks, chases in, and holes through existing walls, ceilings and similar for pipes, etc., (but not mortices or holes for brackets) except specifically stated, shall be measured and paid for at the appropriate rates under Section 04 - Concrete Work, Section 05 - Brickwork and Blockwork, Section 12 - Roadwork and Cable Duct, Section 13 - Plumbing and Drainage or other applicable Work Sections of this Schedule.</p>   |
| <b>Measurement of pipework</b>  | <b>SC40.03</b> | <p>Unless otherwise stated, pipework shall be measured in linear metres over all in-line fittings, short running lengths and branches.</p> <p>Branch pipes of 32 mm diameter from tee-off for and including sprinkler points and dry pendant sprinkler points shall be grouped together and measured in numbers of sprinkler points. The rates for which shall include the associated pipework and sprinkler points and dry pendant sprinkler points.</p>  |
| <b>Measurement of fire alarm indicating/ control panel</b>                        | <b>SC40.04</b> | <p>The interconnecting cables and the cable containment for the fire alarm indicating/ control panel shall be measured separately.</p>   |
| <b>Measurement of heat resistant cables and low smoke zero halogen cables</b>     | <b>SC40.05</b> | <p>Cables for the equipment, control/ indicating panels, fire alarm points, etc. have been allowed in the rates under this Section. No measurement shall be made for cables except for heat resistant cables where specifically ordered by the Maintenance Surveyor in writing.</p> <p>Heat resistant cables and low smoke zero halogen cables shall be measured the net length as fixed in linear metres.</p>   |

### SPECIAL CONDITIONS

**Measurement  
of temporary  
supply**

**SC40.06**

Where a temporary supply is ordered by the Maintenance Surveyor, the provision of all articles, labour and accessory materials (nails, screws, rawplugs and similar) necessary for fixing shall be of temporary nature. For "use and waste" of all materials, such as cables, fittings and accessories, etc., for a period of not exceeding four weeks from the date of certified completion, 50 per cent of the value of the appropriate "supply and fix" items after the adjustment of contract percentages will be paid. For a period exceeding four weeks and not exceeding eight weeks, 55 per cent will be paid and for each subsequent month a further addition of 5 per cent will be made.

For a period of more than six months, the full rates, as for permanent works will be paid, and the materials will become the property of the Employer.

No extra payment will be made for the removal of materials in connection with the temporary supply, but the cost of which shall have been included in the payment as aforementioned in the first paragraph hereof. The date of certified completion of a temporary supply shall be the date when the installation is first brought into service. The date when it ceases to be used shall be the date from which the Maintenance Surveyor instructs the dismantlement of the installation, or the date when the installation is no longer in use, whichever is earlier.

**Rates generally**

**SC40.07**

The rates for all items shall generally include for : -

- (a) Colour band and colour identification work.
- (b) Lettering and engraving for identification, signs, labels in both English and Chinese.
- (c) Identification plates, signs, notice plates, discs and labels in both English and Chinese.
- (d) Priming or painting off site and proprietary finishes or surface treatment applied as part of the production process whether applied before or after fabrication and assembly.
- (e) All protective and finishing painting work, apart from additional painting work specifically ordered by the Maintenance Surveyor in writing which shall be measured separately and paid for at the appropriate rates under Section 15 - Painting of this Schedule.
- (f) Any kind of fixing method including provision of screws, nuts, bolts, shims, washers, clips, hangers, supports, brackets, spring compensated and seismic restraints and isolating components and the like.
- (g) Provision of expansion joints in service runs wherever they coincide with structural expansion joints.
- (h) Submission of catalogues, technical literature, data, calculations, test certificates and approval documentation covering the equipment and materials being supplied.
- (i) Preparing and submitting detail working drawings as required and all shop drawings for the fabrication and installation.

**SPECIAL CONDITIONS**

**Rates generally  
(Cont'd)**

**SC40.07  
(Cont'd)**

- (j) Attendance, as required, of the manufacturers' representative to assist in the installation and subsequent testing and commissioning.
- (k) Testing and commissioning including submission of Testing and Commissioning Certificates and Records of Tests.
- (l) Provision of all necessary power, fuel, labour and testing instrument of approved type for testing and commissioning.
- (m) Submitting all relevant documentation to Fire Services Department and obtaining necessary approval.
- (n) Preparing and submitting operation and maintenance manuals and as-fitted drawings for items of works as required.
- (o) Provision of schematic diagrams covered front and back with plastic sheet including fixing to wall.
- (p) Provision of manufacturer's guarantee.

**Rates for  
pipework**

**SC40.08**

The rates for pipework shall further include for :-

- (a) All short lengths, cutting and waste, and joints in the running length.
- (b) All pipework brackets, supports, hangers, guides, anchors and the like and alternative method of jointing and fixing as specified (if any).
- (c) All pipework fittings (e.g. bends, elbows, branches, reducers, tees, caps and the like) including connections, cutting and jointing pipes to fittings.
- (d) Screwed sockets, tappings, bosses and welding-necks welded to pipes or flanges including perforating the pipework or flanges.
- (e) Connections between pipework of different materials and differing grades of same material.
- (f) Provision of wall plates, ceiling plates, floor plates, high tensile holding down bolts, tapered washers and the like for casting into the reinforced concrete corbels.
- (g) All jointing including provision of flexible connections and/ or necessary adaptors and connectors, welding consumable, jointing tapes, flanges, unions, gasket, bolts and nuts and the like where required.
- (h) Expansion loops and compensators including connections, cutting and jointing to pipes and fittings.
- (i) Provision of all sleeves for casting in or building in where pipes pass through slabs, walls or beams and caulking between pipe and sleeve where required.
- (j) Fixing in any position to floors, walls and ceilings including laying in trenches and fixing in chases, ducts, false ceilings and similar positions, and wrapping with protective tapes where required.

**SPECIAL CONDITIONS**

|   |                |  |
|---|----------------|--|
| <b>Rates for in-line pipework equipment</b>   | <b>SC40.09</b> | <p>The rates for in-line pipework equipment (e.g. valves, mechanical flow meters, gauges, strainers and the like) shall further include for : -</p> <p>(a) Cutting and jointing to pipes and fittings.</p> <p>(b) Stripping down repacking glands and preparing spindles, as appropriate, prior to installation.</p>   |
| <b>Rates for fire alarm call points, fire alarm bell points, smoke detector points and heat detector points</b> | <b>SC40.10</b> | <p>The rates for fire alarm call points, fire alarm bell points, smoke detector points and heat detector points shall further include for fire alarm push buttons, fire alarm bells, smoke detectors, heat detectors, re-programming work of existing addressable fire control/ indication panel and all necessary accessories for connection to the fire alarm control/ indication panel or the fire alarm system. The cables and cable containment shall be measured separately and paid for at appropriate rates under this Section and Sections 28 to 30.</p>  |
| <b>Rates for sprinkler points and dry pendant sprinkler points</b>  | <b>SC40.11</b> | <p>The rates for sprinkler points and dry pendant sprinkler points shall further include for sprinkler heads, arm pipes and all necessary accessories. The range pipes, distribution pipe, draining/ re-fill the sprinkler system and tee-off from existing sprinkler system shall be measured separately and paid for at appropriate rates under this Section.</p>  |
| <b>Rates for control/ indicating panels</b>   | <b>SC40.12</b> | <p>Control/ indicating panel shall be measured on the basis of complete unit monitoring and controlling the number of zones/ points as specified. The rates for control/ indicating panels shall further include for all necessary relays, indicating lamps, push button package and selector switches. The cables and cable containment to external equipment or existing panel shall be measured separately and paid for at appropriate rates under Sections 27 to 30.</p>   |
| <b>Rates for equipment</b>  | <b>SC40.13</b> | <p>The rates for equipment shall further include for : -</p> <p>(a) All necessary assembly, orientation, alignment, levelling and bolting down, together with the provision of shims and packing pieces, the clocking of couplings between drivers and rotating equipment, strainers, instrumentation and the like.</p> <p>(b) Supporting frames.</p> <p>(c) Connections including flexible joints between pipework and equipment.</p> <p>(d) Flexible connections and anti-vibration connections between pipework and equipment.</p> <p>(e) All necessary accessories forming part of the equipment, connection and termination.</p> <p>(f) Final connections and terminations to electrical supply and water supply including cables, wirings, cable containment, protection devices, control cabinets, pipework, pipe fittings, valves, gauges and all necessary accessories required for energizing the equipment to properly operate at specified duties.</p> <p>(e) All necessary accessories forming part of the equipment, connection and termination.</p> |

**SPECIAL CONDITIONS**

|   |                         |   |
|---|-------------------------|---|
| <b>Rates for equipment (Cont'd)</b>   | <b>SC40.13 (Cont'd)</b> | <ul style="list-style-type: none"> <li>(f) Final connections and terminations to electrical supply and water supply including cables, wirings, cable containment, protection devices, control cabinets, pipework, pipe fittings, valves, gauges and all necessary accessories required for energizing the equipment to properly operate at specified duties.</li> <li>(g) Anti-vibration mountings for machinery, equipment and apparatus of all kinds and the like to be supplied and installed by the Contractor.</li> <li>(h) Anti-vibration materials and sound insulating materials in equipment, apparatus of all kinds and machinery bases.</li> <li>(i) Motor starters (if motors in the equipment require motor starters).</li> <li>(j) Earth/ equipotential bonding as specified.</li> </ul>  |
| <b>Rates for heat resistant cables and low smoke zero halogen cables</b>            | <b>SC40.14</b>          | <p>The rates for heat resistant cables and low smoke zero halogen cables shall further include for : -</p> <ul style="list-style-type: none"> <li>(a) Laying or fixing in different locations, such as drawing into underground pipe ducts, laying or drawing into trunkings, drawing into conduits, suspending from insulators or catenaries, wrapping around equipment.</li> <li>(b) In case of cables drawn into existing conduits, existing ducts or existing trunkings, removing and putting back existing covers, existing inspection lids and the like.</li> <li>(c) Making cable-joints.</li> <li>(d) Determining circuits, lacing into circuit groups and provision of draw wires, draw cables and the like as required.</li> <li>(e) All necessary fixings complete with accessories and fittings as required.</li> <li>(f) Provision of all sleeves for casting in or building in where cables pass through slabs, walls or beams and caulking between cable and sleeve where required.</li> </ul> |
| <b>Rates for "Take down and clear away" or "Take down and set aside for re-use"</b> | <b>SC40.15</b>          | <p>The rates for "Take down and clear away" or " Take down and set aside for re-use" existing items in connection with fire services installation shall further include for : -</p> <ul style="list-style-type: none"> <li>(a) All in-line fittings including brackets, supports, hangers and the like.</li> <li>(b) Cutting into existing pipework and the like in position.</li> <li>(c) Plugging off remaining ends with plugs or caps as required.</li> <li>(d) Preparing remaining ends of pipework and building services works (if any) to receive connections with new work if required.</li> <li>(e) In the case of equipment and the like, taking down all associated pipework and/ or building services works.</li> <li>(f) Making good all works disturbed.</li> </ul>   |

**SPECIAL CONDITIONS****Particular  
Specification****SC40.16**

The Particular Specification for fire services installation can be found in the Contract.

| Item  |   |                |                          |                                    | Item     |       |
|-------|---|----------------|--------------------------|------------------------------------|----------|-------|
|       | <b>AUTOMATIC/MANUAL FIRE ALARM SYSTEM</b>   |                |                          |                                    |          |       |
|       | Automatic/manual fire alarm points c/w re-programming work of existing addressable fire control panel, if necessary, and all necessary mounting accessories and connected to the fire alarm control panel | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only |       |
|       | <i>Each</i>   | A \$           | B \$                     | C \$                               | D \$     |       |
| 40001 | Fire alarm call point with break glass type alarm push c/w metal hammer and chains .....  | 316.25         | 13.04                    | 13.97                              | 68.92    | 40001 |
| 40002 | Fire alarm bell point; 150 - 250 mm diameter.....   | 492.49         | 13.04                    | 13.97                              | 68.92    | 40002 |
| 40003 | Weatherproof type fire alarm bell point; 150 - 250 mm diameter.....   | 663.32         | 13.04                    | 13.97                              | 68.92    | 40003 |
| 40004 | Smoke detector point, ionization type.....  | 447.68         | 18.63                    | 20.49                              | 68.92    | 40004 |
| 40005 | Smoke detector point c/w remote indicator, ionization type.....   | 712.90         | 46.58                    | 50.29                              | 202.12   | 40005 |
| 40006 | Smoke detector point; addressable type, ionization type.....  | 933.29         | 26.09                    | 27.01                              | 95.94    | 40006 |
| 40007 | Smoke detector point, optical type.....   | 447.68         | 13.04                    | 13.97                              | 68.92    | 40007 |
| 40008 | Smoke detector point c/w remote indicator, optical type.....  | 712.90         | 46.58                    | 50.29                              | 202.12   | 40008 |
| 40009 | Smoke detector point; addressable type, optical type.....   | 949.87         | 20.95                    | 37.89                              | 95.94    | 40009 |
| 40010 | Heat detector point; fixed temperature type, Class A2.....  | 421.60         | 13.04                    | 13.97                              | 68.92    | 40010 |
| 40011 | Heat detector point; fixed temperature type, Class BR or CR.....  | 421.60         | 13.04                    | 13.97                              | 68.92    | 40011 |
| 40012 | Heat detector point; fixed temperature type, Class CS, DS, ES, FS or GS.....  | 421.60         | 13.04                    | 13.97                              | 68.92    | 40012 |
| 40013 | Heat detector point; fixed temperature type; addressable type, Class A2.....  | 926.58         | 20.95                    | 37.89                              | 95.94    | 40013 |
| 40014 | Heat detector point: fixed temperature type, addressable type, Class BR or CR.....  | 926.58         | 20.95                    | 37.89                              | 95.94    | 40014 |
| 40015 | Heat detector point; fixed temperature type; addressable type, Class CS, DS, ES, FS or GS.....  | 926.58         | 20.95                    | 37.89                              | 95.94    | 40015 |
| 40016 | Heat detector point c/w remote indicator, Class A2.....   | 680.98         | 46.58                    | 50.29                              | 202.12   | 40016 |
| 40017 | Heat detector point c/w remote indicator, Class BR or CR.....   | 680.98         | 46.58                    | 50.29                              | 202.12   | 40017 |
| 40018 | Heat detector point c/w remote indicator, Class CS, DS, ES, FS or GS.....   | 680.98         | 46.58                    | 50.29                              | 202.12   | 40018 |
| 40019 | Heat detector point; rate of rise temperature type, Class A2.....   | 453.34         | 13.04                    | 13.97                              | 68.92    | 40019 |
| 40020 | Heat detector point; rate of rise temperature type, Class BR or CR.....   | 453.34         | 13.04                    | 13.97                              | 68.92    | 40020 |



| Item   |   | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only | Item  |
|--|---|----------------|--------------------------|------------------------------------|----------|-------|
| <b>AUTOMATIC/MANUAL FIRE ALARM SYSTEM (CONT'D)</b>   |   | A              | B                        | C                                  | D        |       |
| Automatic/manual fire alarm points c/w re-programming work of existing addressable fire control panel, if necessary, and all necessary mounting accessories and connected to the fire alarm control panel (cont'd) |   | \$             | \$                       | \$                                 | \$       |       |
| <i>Each</i>  |   |                |                          |                                    |          |       |
| 40021  | Heat detector point; rate of rise temperature type, CS, DS, ES, FS or GS.....   | 453.34         | 13.04                    | 13.97                              | 68.92    | 40021 |
| 40022  | Heat detector point; rate of rise temperature type; addressable type, Class A2.....   | 926.58         | 20.95                    | 37.89                              | 95.94    | 40022 |
| 40023  | Heat detector point; rate of rise temperature type; addressable type, Class BR or CR.....   | 926.58         | 20.95                    | 37.89                              | 95.94    | 40023 |
| 40024  | Heat detector point; rate of rise temperature type; addressable type, CS, DS, ES, FS or GS.....                                     | 926.58         | 20.95                    | 37.89                              | 95.94    | 40024 |
| 40025  | Heat detector point; combined rate of rise and fixed temperature type, Class A2.....  | 600.28         | 13.04                    | 13.97                              | 68.92    | 40025 |
| 40026  | Heat detector point; combined rate of rise and fixed temperature type, Class BR or CR.....  | 600.28         | 13.04                    | 13.97                              | 68.92    | 40026 |
| 40027  | Heat detector point; combined rate of rise and fixed temperature type, CS, DS, ES, FS or GS.....                                    | 600.28         | 13.04                    | 13.97                              | 68.92    | 40027 |
| 40028  | Heat detector point; combined rate of rise and temp. type; addressable type, Class A2.....  | 1,006.33       | 20.95                    | 37.89                              | 95.94    | 40028 |
| 40029  | Heat detector point; combined rate of rise and temp. type; addressable type, Class BR or CR.....                                    | 1,006.33       | 20.95                    | 37.89                              | 95.94    | 40029 |
| 40030  | Heat detector point; combined rate of rise and temp. type; addressable type, Class CS, DS, ES, FS, or GS.....                       | 1,006.33       | 20.95                    | 37.89                              | 95.94    | 40030 |
| 40031  | Intrinsically safe heat detector point, Class A2.....   | 1,179.08       | 18.63                    | 20.49                              | 102.46   | 40031 |
| 40032  | Intrinsically safe heat detector point, Class BR or CR.....   | 1,231.22       | 18.63                    | 20.49                              | 102.46   | 40032 |
| 40033  | Intrinsically safe heat detector point, Class CS, DS, ES, FS, or GS.....  | 1,231.22       | 18.63                    | 20.49                              | 102.46   | 40033 |
| 40034  | Intrinsically safe smoke detector point.....  | 1,445.32       | 18.63                    | 20.49                              | 102.46   | 40034 |
| 40035  | Multi-sensor detector with 2 sensing elements (i.e. optical + heat).....  | 2,078.39       | 13.04                    | 13.97                              | 68.92    | 40035 |
| 40036  | Probe unit.....   | 1,888.55       | 13.04                    | 13.97                              | 68.92    | 40036 |
| 40037  | Interface control point c/w control module, relay and all necessary accessories.....  | 759.12         | 13.04                    | 13.97                              | 68.92    | 40037 |
| 40038  | Remote indicator for smoke/heat detector c/w interconnecting wiring and conduits .....  | 220.72         | 31.66                    | 36.33                              | 129.47   | 40038 |
| 40039  | Weatherproof remote indicator for smoke/heat detector c/w interconnecting wiring and conduits .....                                 | 391.87         | 31.66                    | 36.33                              | 129.47   | 40039 |
| 40040  | End of line tester.....   | 153.55         | 16.76                    | 18.63                              | 76.38    | 40040 |
| 40041  | Visual fire alarm c/w all cables, conduits and necessary accessories and connected to fire alarm control panel .....                | 678.52         | 43.79                    | 51.23                              | 183.49   | 40041 |
| 40042  | Additional contactor/relay/electronic components in the fire alarm panel for shut down air-conditioning/ventilation equipment ..... | 323.82         | 17.70                    | 19.56                              | 76.38    | 40042 |

| Item   |  | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only | Item  |
|--|--|----------------|--------------------------|------------------------------------|----------|-------|
| <b>AUTOMATIC/MANUAL FIRE ALARM SYSTEM (CONT'D)</b>   |  | A              | B                        | C                                  | D        |       |
| Automatic/manual fire alarm points c/w re-programming work of existing addressable fire control panel, if necessary, and all necessary mounting accessories and connected to the fire alarm control panel (cont'd) |  | \$             | \$                       | \$                                 | \$       |       |
|  | <i>Per lot</i>   |                |                          |                                    |          |       |
| 40043  | Provide direct link to the Fire Control Centre of Fire Services Department including all terminating equipment at each end of the link and the first year rental charge.....   | 6,403.32       | -                        | -                                  | -        | 40043 |
|  | Nickel-metal hydride battery c/w charger and metal box housing of the following capacity : -   |                |                          |                                    |          |       |
|  | <i>Each</i>  |                |                          |                                    |          |       |
| 40044  | n.e. 10 ampere hour.....   | 873.18         | 15.84                    | 17.70                              | 105.26   | 40044 |
| 40045  | 10 - 20 ampere hour.....   | 1,164.24       | 15.84                    | 17.70                              | 105.26   | 40045 |
| 40046  | 20 - 30 ampere hour.....   | 1,455.30       | 15.84                    | 17.70                              | 105.26   | 40046 |
| 40047  | 30 - 40 ampere hour.....   | 2,328.48       | 16.76                    | 18.63                              | 112.71   | 40047 |
| 40048  | 40 - 50 ampere hour.....   | 3,492.72       | 16.76                    | 18.63                              | 112.71   | 40048 |
| 40049  | 50 - 60 ampere hour.....   | 4,074.84       | 16.76                    | 18.63                              | 112.71   | 40049 |
|  | Fire alarm control/indicating panel c/w contacts/auxiliary contacts for shut down of A/C & ventilation equipment, connection of fire link/lift homing and all necessary accessories (including design for the fire alarm control system, training & providing all passwords) : - |                |                          |                                    |          |       |
|  | <i>Each</i>  |                |                          |                                    |          |       |
| 40050  | Panel of 4 zones or less.....  | 4,365.90       | 43.79                    | 46.58                              | 249.63   | 40050 |
| 40051  | Ditto 5 - 8 zones.....   | 5,821.20       | 46.58                    | 49.36                              | 262.67   | 40051 |
| 40052  | Ditto 9 - 12 zones.....  | 7,817.86       | 49.36                    | 52.16                              | 279.43   | 40052 |
| 40053  | Ditto 13 - 18 zones.....   | 14,553.00      | 52.16                    | 54.95                              | 291.55   | 40053 |
| 40054  | Add to last item for each additional 4 zones or part thereof.....  | 1,735.36       | 2.96                     | 5.30                               | 13.04    | 40054 |

| Item  |   |                |                          |                                    |          |  |  | Item  |
|-------|---|----------------|--------------------------|------------------------------------|----------|--|--|-------|
|       | <b>AUTOMATIC/MANUAL FIRE ALARM SYSTEM (CONT'D)</b>  |                |                          |                                    |          |  |  |       |
|       | Intelligent addressable type fire alarm control/indicating panel c/w contacts/auxiliary contacts for shut down of A/C & ventilation equipment, connection of fire link/lift homing and all necessary accessories (including design for the fire alarm control system, training & providing all passwords) : - | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only |  |  |       |
|       | <i>Each</i>   | A<br>\$        | B<br>\$                  | C<br>\$                            | D<br>\$  |  |  |       |
| 40055 | Panel of 50 points or less.....   | 14,553.00      | 41.91                    | 44.72                              | 245.90   |  |  | 40055 |
| 40056 | Ditto 51 - 100 points.....  | 17,463.60      | 50.29                    | 56.83                              | 290.61   |  |  | 40056 |
| 40057 | Ditto 101 - 150 points.....   | 20,374.20      | 67.07                    | 73.58                              | 369.78   |  |  | 40057 |
| 40058 | Ditto 151 - 200 points.....   | 23,284.80      | 75.45                    | 82.90                              | 416.35   |  |  | 40058 |
| 40059 | Add to last item for each additional 50 points or part thereof.....   | 6,346.01       | 5.59                     | 6.52                               | 28.87    |  |  | 40059 |
| 40060 | System printer.....   | 1,755.21       | 4.66                     | 5.59                               | 41.91    |  |  | 40060 |

| Item                    |   | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only | Item  |
|-------------------------|---|----------------|--------------------------|------------------------------------|----------|-------|
|                         |   | A<br>\$        | B<br>\$                  | C<br>\$                            | D<br>\$  |       |
| <b>SPRINKLER SYSTEM</b> |   |                |                          |                                    |          |       |
|                         | Sprinkler Point : -   |                |                          |                                    |          |       |
|                         | <i>Each</i>   |                |                          |                                    |          |       |
| 40061                   | Sprinkler head (quartzoid bulb type), 68°C / 93°C c/w cover plate/protective guard (where applicable), arm pipe, modification and connection to the existing distribution pipe/ range pipe if necessary and all necessary accessories .....   | 167.68         | 22.35                    | 25.16                              | 73.58    | 40061 |
| 40062                   | Sprinkler head (quartzoid bulb type), 68°C / 93°C for false ceiling, flush pattern, pendant type, c/w adjustable chromium plated metal ceiling masking plate, arm pipe, modification and connection to the existing distribution pipe/ range pipe if necessary and all necessary accessories .....  | 290.32         | 22.35                    | 25.16                              | 74.52    | 40062 |
| 40063                   | Sprinkler head (fast response type) c/w cover plate/protective guard (where applicable), arm pipe, modification and connection to the existing distribution pipe/ range pipe if necessary and all necessary accessories .....   | 194.51         | 22.35                    | 25.16                              | 73.58    | 40063 |
| 40064                   | Sprinkler head (fast response type) for false ceiling, flush pattern, pendant type, c/w adjustable chromium plated metal ceiling masking plate, arm pipe, modification and connection to the existing distribution pipe/ range pipe if necessary and all necessary accessories .....  | 322.63         | 22.35                    | 25.16                              | 74.52    | 40064 |
| 40065                   | Sprinkler head, dry pendent type (quartzoid bulb type) c/w cover plate, arm pipe, modification and connection to the existing distribution pipe/ range pipe if necessary and all necessary accessories .....  | 585.06         | 21.42                    | 23.28                              | 68.92    | 40065 |
| 40066                   | Sprinkler head (quartzoid bulb type), quick response and vandal type suitable for cell of prison, c/w cover plate, arm pipe, modification and connection to the existing distribution pipe/ range pipe (where applicable) and all necessary accessories (the fusible element assembly consistently breaks away when connected to 18.15 kg weight dropped 0.153 m) ..... | 324.55         | 21.42                    | 23.28                              | 77.31    | 40066 |
| 40067                   | Institutional style quick response flush pendent sprinkler c/w escutcheon plate and lock ring, arm pipe, modification and connection to the existing distribution pipe/ range pipe if necessary and all necessary accessories.....  | 679.23         | 21.42                    | 23.28                              | 77.31    | 40067 |
| 40068                   | Institutional style quick response flush sidewall sprinkler c/w escutcheon plate and lock ring, arm pipe, modification and connection to the existing distribution pipe/ range pipe if necessary and all necessary accessories.....   | 754.11         | 21.42                    | 23.28                              | 77.31    | 40068 |
| 40069                   | Cabinet for spare sprinkler.....  | 873.18         | 5.59                     | 6.52                               | 10.24    | 40069 |
| 40070                   | Sprinkler head guard.....   | 174.64         | 6.52                     | 7.46                               | 11.18    | 40070 |
| 40071                   | Sprinkler cover plate.....  | 15.86          | 6.52                     | 7.46                               | 11.18    | 40071 |
|                         | Draining and refilling the sprinkler system : -   |                |                          |                                    |          |       |
|                         | <i>Each sprinkler system</i>  |                |                          |                                    |          |       |
| 40072                   | Drain and refill the sprinkler system with all necessary accessories for AA&I works controlled by the main control valve set. The formal process in suspension of the FS system shall be included.....  | 2,328.48       | -                        | -                                  | -        | 40072 |
| 40073                   | Drain and refill the sprinkler system with all necessary accessories for AA&I works controlled by the subsidiary control valve set. The formal process in suspension of the FS system shall be included.....  | 2,328.48       | -                        | -                                  | -        | 40073 |

| Item  |   |                      |                                      |  | Item        |       |
|-------|---|----------------------|--------------------------------------|--|-------------|-------|
|       | <b>SPRINKLER SYSTEM (CONT'D)</b>  |                      |                                      |  |             |       |
|       |   | Supply<br>and<br>fix | Take<br>down<br>and<br>clear<br>away | Take<br>down<br>and set<br>aside for<br>re-use | Fix<br>only |       |
|       |   | A<br>\$              | B<br>\$                              | C<br>\$  | D<br>\$     |       |
|       | Sprinkler Point c/w 32 mm diameter sprinkler pipe connected from branch tee to sprinkler head :-  |                      |                                      |  |             |       |
|       | <i>Each</i>   |                      |                                      |  |             |       |
| 40074 | Sprinkler head (quartzoid bulb type), 68°C / 93°C c/w cover plate/protective guard (where applicable), arm pipe, modification and connection to the existing distribution pipe/ range pipe if necessary and all necessary accessories .....   | 531.51               | 32.17                                | 34.79  | 179.54      | 40074 |
| 40075 | Sprinkler head (quartzoid bulb type), 68°C / 93°C for false ceiling, flush pattern, pendant type, c/w adjustable chromium plated metal ceiling masking plate, arm pipe, modification and connection to the existing distribution pipe/ range pipe if necessary and all necessary accessories .....  | 654.15               | 32.17                                | 34.79  | 180.56      | 40075 |
| 40076 | Sprinkler head (fast response type) c/w cover plate/protective guard (where applicable), arm pipe, modification and connection to the existing distribution pipe/ range pipe if necessary and all necessary accessories .....   | 558.34               | 32.17                                | 34.79  | 179.54      | 40076 |
| 40077 | Sprinkler head (fast response type) for false ceiling, flush pattern, pendant type, c/w adjustable chromium plated metal ceiling masking plate, arm pipe, modification and connection to the existing distribution pipe/ range pipe if necessary and all necessary accessories .....  | 686.46               | 32.17                                | 34.79  | 180.56      | 40077 |
| 40078 | Sprinkler head, dry pendent type (quartzoid bulb type) c/w cover plate, arm pipe, modification and connection to the existing distribution pipe/ range pipe if necessary and all necessary accessories .....  | 948.89               | 30.25                                | 33.43  | 174.17      | 40078 |
| 40079 | Sprinkler head (quartzoid bulb type), quick response and vandal type suitable for cell of prison, c/w cover plate, arm pipe, modification and connection to the existing distribution pipe/ range pipe (where applicable) and all necessary accessories (the fusible element assembly consistently breaks away when connected to 18.15 kg weight dropped 0.153 m) ..... | 688.38               | 31.41                                | 33.64  | 182.52      | 40079 |
| 40080 | Institutional style quick response flush pendent sprinkler c/w escutcheon plate and lock ring, arm pipe, modification and connection to the existing distribution pipe/ range pipe if necessary and all necessary accessories.....  | 1,043.06             | 31.41                                | 33.64  | 182.52      | 40080 |
| 40081 | Institutional style quick response flush sidewall sprinkler c/w escutcheon plate and lock ring, arm pipe, modification and connection to the existing distribution pipe/ range pipe if necessary and all necessary accessories.....   | 1,117.94             | 31.41                                | 33.64  | 182.52      | 40081 |

| Item  | Item   |                                    |                          |                                    |          |         |         |         |         |
|---|--|------------------------------------|--------------------------|------------------------------------|----------|---------|---------|---------|---------|
| <b>SPRINKLER SYSTEM (CONT'D)</b>  |  |                                    |                          |                                    |          |         |         |         |         |
| Sprinkler control valve set or subsidiary valve set c/w control wiring, all necessary accessories including valves, alarm valves, pressure gauges, pressure switch, water motor alarm gong retardation chamber, flow switch, security devices with warning labels and serial number, tamper-proof electric switch to indicate valve operational mode including remote indication valve operational on F.S. control panel, etc. :- |  |                                    |                          |                                    |          |         |         |         |         |
|   | <table border="1"> <thead> <tr> <th style="text-align: center;">Supply and fix</th> <th style="text-align: center;">Take down and clear away</th> <th style="text-align: center;">Take down and set aside for re-use</th> <th style="text-align: center;">Fix only</th> </tr> <tr> <th style="text-align: center;">A<br/>\$</th> <th style="text-align: center;">B<br/>\$</th> <th style="text-align: center;">C<br/>\$</th> <th style="text-align: center;">D<br/>\$</th> </tr> </thead> </table> | Supply and fix                     | Take down and clear away | Take down and set aside for re-use | Fix only | A<br>\$ | B<br>\$ | C<br>\$ | D<br>\$ |
| Supply and fix  | Take down and clear away   | Take down and set aside for re-use | Fix only                 |                                    |          |         |         |         |         |
| A<br>\$   | B<br>\$  | C<br>\$                            | D<br>\$                  |                                    |          |         |         |         |         |
| <b>Per set</b>  |  |                                    |                          |                                    |          |         |         |         |         |
| 40082   | 100 mm diameter.....   | 8,731.80                           | 209.58                   | 237.51                             | 700.43   | 40082   |         |         |         |
| 40083   | 150 mm diameter.....   | 11,642.40                          | 224.48                   | 253.35                             | 795.44   | 40083   |         |         |         |
| 40084   | Subsidiary stop valve.....   | 2,910.60                           | 29.81                    | 34.47                              | 56.83    | 40084   |         |         |         |
| Pre-action valve package c/w control wiring, swing check valve, gate valve, proper size drain top, flow control valve, pressure gauges, alarm gong, detection control panel with 72 hrs standby period, and all necessary accessories including remote indication on F.S. control panel :-  |  |                                    |                          |                                    |          |         |         |         |         |
| T1 type   |  |                                    |                          |                                    |          |         |         |         |         |
| <b>Each</b>   |  |                                    |                          |                                    |          |         |         |         |         |
| 40085   | Valve package for pipe of 80 mm diameter.....  | 14,973.65                          | 218.88                   | 245.90                             | 847.53   | 40085   |         |         |         |
| 40086   | Ditto 100 mm diameter.....   | 16,954.65                          | 234.72                   | 261.73                             | 972.73   | 40086   |         |         |         |
| 40087   | Ditto 150 mm diameter.....   | 21,079.13                          | 249.63                   | 275.70                             | 1,100.66 | 40087   |         |         |         |
| T2 type   |  |                                    |                          |                                    |          |         |         |         |         |
| <b>Each</b>   |  |                                    |                          |                                    |          |         |         |         |         |
| 40088   | Valve package for pipe of 80 mm diameter.....  | 14,696.35                          | 218.88                   | 245.90                             | 847.53   | 40088   |         |         |         |
| 40089   | Ditto 100 mm diameter.....   | 17,181.99                          | 234.72                   | 261.73                             | 972.73   | 40089   |         |         |         |
| 40090   | Ditto 150 mm diameter.....   | 20,887.65                          | 249.63                   | 275.70                             | 1,100.66 | 40090   |         |         |         |
| Detection control for pre-action system :-  |  |                                    |                          |                                    |          |         |         |         |         |
| <b>Each</b>   |  |                                    |                          |                                    |          |         |         |         |         |
| 40091   | Detection control panel for pre-action system c/w timer, valve trim box, solenoid valve, pressure switches, charger and nickel cadmium battery, alarm bell and all necessary accessories .....   | 4,656.96                           | 47.50                    | 51.23                              | 290.61   | 40091   |         |         |         |
| 40092   | Manual emergency push button station c/w cables, conduits (surface or concealed type) and all necessary accessories including connection to the detection control panel.....   | 4,656.96                           | 54.95                    | 65.21                              | 197.47   | 40092   |         |         |         |

| Item  |   |                |                          |                                    | Item     |       |
|-------|---|----------------|--------------------------|------------------------------------|----------|-------|
|       | <b>SPRINKLER SYSTEM (CONT'D)</b>  |                |                          |                                    |          |       |
|       | Re-cycling pre-action valve package c/w control wiring, swing check valve, gate valve, proper size drain top flow control valve, pressure gauges, alarm gong and all necessary accessories including remote indication on F.S. control panel :-   | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only |       |
|       | <i>Each</i>   | A \$           | B \$                     | C \$                               | D \$     |       |
| 40093 | Valve package for pipe of 80 mm diameter.....   | 21,282.79      | 257.07                   | 289.68                             | 910.94   | 40093 |
| 40094 | Ditto 100 mm diameter.....  | 24,774.98      | 276.63                   | 308.30                             | 1,015.26 | 40094 |
|       | Detection control for re-cycling pre-action system :-   |                |                          |                                    |          |       |
|       | <i>Each</i>   |                |                          |                                    |          |       |
| 40095 | Detection control panel for re-cycling pre-action c/w timer, valve trim box, solenoid valve, pressure switches, charger and nickel cadmium battery for 72 hrs standby period, alarm bell and all necessary accessories .....  | 11,362.04      | 60.54                    | 64.27                              | 347.43   | 40095 |
| 40096 | Heat detector for re-cycling pre-action system c/w low smoke fire resisting cables and all necessary accessories and connected to re-cycling pre-action detection panel.....  | 4,563.10       | 68.92                    | 80.10                              | 267.32   | 40096 |
| 40097 | Manual emergency push button station c/w cables, conduits (surface or concealed type) and all necessary accessories including connection to the detection control panel.....  | 565.97         | 57.75                    | 68.92                              | 216.09   | 40097 |
|       | Dry pipe system c/w air compressor unit, air maintenance device, air supply copper pipes, pressure relief valve for air supply pipework, dryer or freezer for air supply system, restrictor for air supply system, alarm valve, shut off valves, clush valve mounting brackets, vibration eliminator to maintain system air pressure of 3.5 bar in 3 minutes, and testing facilities including quick-acting test valve :- |                |                          |                                    |          |       |
|       | <i>Each</i>   |                |                          |                                    |          |       |
| 40098 | System for protected area n.e. 50 m <sup>2</sup> .....  | 7,924.58       | 145.30                   | 157.41                             | 551.41   | 40098 |
| 40099 | System for protected area 50 m <sup>2</sup> - 100 m <sup>2</sup> .....  | 12,781.04      | 148.09                   | 156.49                             | 556.06   | 40099 |
|       | Sprinkler inlet :-  |                |                          |                                    |          |       |
|       | <i>Each</i>   |                |                          |                                    |          |       |
| 40100 | Fire services sprinkler inlet.....  | 1,455.30       | 47.50                    | 50.29                              | 105.26   | 40100 |

| Item                           |   | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only | Item  |
|--------------------------------|---|----------------|--------------------------|------------------------------------|----------|-------|
|                                |   | A              | B                        | C                                  | D        |       |
|                                |   | \$             | \$                       | \$                                 | \$       |       |
| <b>HYDRANT/HOSEREEL SYSTEM</b> |   |                |                          |                                    |          |       |
|                                | <i>Each</i>   |                |                          |                                    |          |       |
| 40101                          | 30 m long hosereel c/w all necessary pipework and fittings including connection to the existing hosereel system (pipe within 3 m from existing pipe and up to 32 mm diameter shall be included, extra length measured separately) ..... | 1,455.30       | 61.48                    | 66.14                              | 340.91   | 40101 |
| 40102                          | Metal box for hose reel nozzle c/w glass front panel.....   | 232.85         | 7.26                     | 7.74                               | 13.04    | 40102 |
| 40103                          | Drain and refill the hydrant/hosereel system for execution of work for wet system .....   | 2,328.48       | -                        | -                                  | -        | 40103 |
| 40104                          | Hydrant outlet (single) c/w all necessary fitting including connection to the existing hydrant system (pipe work measured separately) .....   | 1,164.24       | 47.50                    | 49.36                              | 172.31   | 40104 |
| 40105                          | Pedestal type cast iron, round head external street hydrant outlet c/w all necessary fitting including connection to the existing hydrant system (pipe work measured separately) .....  | 291.06         | 98.73                    | 122.95                             | 387.48   | 40105 |
| 40106                          | Fire Services inlet twin type.....  | 1,455.30       | 47.50                    | 49.36                              | 104.33   | 40106 |
| 40107                          | Parity valve (all sizes).....   | 1,746.36       | 32.60                    | 38.19                              | 60.54    | 40107 |
| 40108                          | Street hydrant outlet (single) c/w all necessary fitting including connection to existing hydrant system (pipework measured separately) .....   | 1,101.44       | 59.61                    | 64.27                              | 272.92   | 40108 |
| 40109                          | Ditto (twin outlet).....  | 1,239.99       | 64.27                    | 68.92                              | 329.72   | 40109 |
| 40110                          | Metal identification plate for F.S. inlet leather & lock for F.S. inlet.....  | 64.92          | 6.52                     | 7.46                               | 13.04    | 40110 |
| 40111                          | Direct reading flowmeter.....   | 7,960.59       | 36.33                    | 37.26                              | 71.72    | 40111 |
| 40112                          | Pressure reducing valve set.....  | 1,008.53       | 32.60                    | 38.19                              | 60.54    | 40112 |
| 40113                          | Carry out test on water pressure and flow at pedestal street hydrant installed by others using calibrated equipment. ....   | 2,643.09       | -                        | -                                  | -        | 40113 |



| Item  |   |                      |                                      |  | Item        |       |
|-------|---|----------------------|--------------------------------------|--|-------------|-------|
|       | <b>PIPE WORK AND PUMPS</b>  |                      |                                      |  |             |       |
|       | Galvanized steel pipes c/w all necessary accessories for fire services system : -         | Supply<br>and<br>fix | Take<br>down<br>and<br>clear<br>away | Take<br>down<br>and set<br>aside for<br>re-use | Fix<br>only |       |
|       | <i>Per linear metre</i>   | A<br>\$              | B<br>\$                              | C<br>\$  | D<br>\$     |       |
| 40114 | 25 mm diameter.....   | 116.42               | 2.57                                 | 3.03   | 33.53       | 40114 |
| 40115 | 32 mm diameter.....   | 145.53               | 2.99                                 | 3.30   | 35.41       | 40115 |
| 40116 | 40 mm diameter.....   | 162.99               | 3.14                                 | 3.63   | 38.19       | 40116 |
| 40117 | 50 mm diameter.....   | 203.74               | 3.58                                 | 3.98   | 44.72       | 40117 |
| 40118 | 65 mm diameter.....   | 232.85               | 4.01                                 | 4.57   | 50.29       | 40118 |
| 40119 | 80 mm diameter.....   | 320.17               | 4.66                                 | 5.59   | 56.83       | 40119 |
| 40120 | 100 mm diameter.....  | 378.38               | 5.51                                 | 5.81   | 73.58       | 40120 |
| 40121 | 150 mm diameter.....  | 523.91               | 8.38                                 | 9.31   | 96.87       | 40121 |
| 40122 | 200 mm diameter.....  | 873.18               | 10.24                                | 12.11  | 118.30      | 40122 |
|       | Ductile steel pipe c/w all necessary accessories for fire services system : -             |                      |                                      |  |             |       |
|       | <i>Per linear metre</i>   |                      |                                      |  |             |       |
| 40123 | 150 mm diameter.....  | 739.66               | 6.26                                 | 6.82   | 76.38       | 40123 |
| 40124 | 200 mm diameter.....  | 1,398.31             | 7.46                                 | 8.38   | 95.94       | 40124 |
| 40125 | 250 mm diameter.....  | 2,056.96             | 9.31                                 | 10.24  | 101.52      | 40125 |
|       | Underground ductile steel pipe c/w all necessary accessories for fire services system : - |                      |                                      |  |             |       |
|       | <i>Per linear metre</i>   |                      |                                      |  |             |       |
| 40126 | 150 mm diameter.....  | 1,005.84             | 4.79                                 | 5.10   | 61.48       | 40126 |
| 40127 | 200 mm diameter.....  | 1,346.22             | 5.84                                 | 6.16   | 75.45       | 40127 |
| 40128 | 250 mm diameter.....  | 1,686.61             | 7.00                                 | 7.44   | 90.35       | 40128 |

| Item  |                      |                      |                                      |  | Item        |
|---|----------------------|----------------------|--------------------------------------|--|-------------|
| <b>PIPE WORK AND PUMPS (CONT'D)</b>   |                      |                      |                                      |  |             |
| Tee off from Existing pipework : -  |                      |                      |                                      |  |             |
|   |                      | Supply<br>and<br>fix | Take<br>down<br>and<br>clear<br>away | Take<br>down<br>and set<br>aside for<br>re-use | Fix<br>only |
|   | <i>Each</i>          | A<br>\$              | B<br>\$                              | C<br>\$  | D<br>\$     |
| 40129   | 32 mm diameter.....  | 156.19               | -                                    | -  | 92.22       |
| 40130   | 40 mm diameter.....  | 172.24               | -                                    | -  | 103.40      |
| 40131   | 50 mm diameter.....  | 208.93               | -                                    | -  | 112.71      |
| 40132   | 65 mm diameter.....  | 260.35               | -                                    | -  | 149.97      |
| 40133   | 80 mm diameter.....  | 301.30               | -                                    | -  | 180.70      |
| 40134   | 100 mm diameter..... | 414.09               | -                                    | -  | 254.28      |
| 40135   | 150 mm diameter..... | 664.12               | -                                    | -  | 333.45      |
| 40136   | 200 mm diameter..... | 1,026.74             | -                                    | -  | 582.16      |
| 40137   | 250 mm diameter..... | 1,504.59             | -                                    | -  | 720.00      |
| Gate valve c/w padlock (where applicable) and all necessary accessories : - |                      |                      |                                      |  |             |
|   | <i>Each</i>          |                      |                                      |  |             |
| 40138   | 25 mm diameter.....  | 131.02               | 19.55                                | 23.51  | 31.66       |
| 40139   | 32 mm diameter.....  | 164.99               | 19.93                                | 23.91  | 35.41       |
| 40140   | 40 mm diameter.....  | 198.97               | 20.45                                | 24.32  | 38.19       |
| 40141   | 50 mm diameter.....  | 241.34               | 21.42                                | 25.16  | 40.98       |
| 40142   | 65 mm diameter.....  | 754.47               | 22.35                                | 26.09  | 42.85       |
| 40143   | 80 mm diameter.....  | 868.47               | 24.22                                | 27.94  | 45.64       |
| 40144   | 100 mm diameter..... | 1,178.84             | 26.09                                | 29.81  | 50.29       |
| 40145   | 150 mm diameter..... | 1,837.40             | 34.47                                | 43.79  | 67.99       |
| 40146   | 200 mm diameter..... | 3,161.19             | 42.85                                | 49.36  | 85.70       |
| 40147   | 250 mm diameter..... | 4,764.01             | 50.29                                | 54.95  | 99.66       |

| Item  |  | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only | Item  |
|-------|--|----------------|--------------------------|------------------------------------|----------|-------|
|       | <b>PIPE WORK AND PUMPS (CONT'D)</b>  | A              | B                        | C                                  | D        |       |
|       | Gate valve for sprinkler system c/w tamper-proof electric switch to indicate valve operational mode including remote indication on F.S. control panel :- | \$             | \$                       | \$                                 | \$       |       |
|       | <i>Each</i>  |                |                          |                                    |          |       |
| 40148 | 32 mm diameter.....  | 649.22         | 32.55                    | 37.23                              | 106.19   | 40148 |
| 40149 | 40 mm diameter.....  | 690.65         | 33.04                    | 37.61                              | 108.05   | 40149 |
| 40150 | 50 mm diameter.....  | 754.21         | 33.84                    | 38.44                              | 111.77   | 40150 |
| 40151 | 65 mm diameter.....  | 1,439.83       | 35.41                    | 40.05                              | 114.57   | 40151 |
| 40152 | 80 mm diameter.....  | 1,668.91       | 36.33                    | 40.98                              | 116.43   | 40152 |
| 40153 | 100 mm diameter.....   | 1,958.88       | 38.19                    | 42.85                              | 120.15   | 40153 |
| 40154 | 150 mm diameter.....   | 3,010.99       | 46.58                    | 52.16                              | 138.78   | 40154 |
| 40155 | 200 mm diameter.....   | 4,212.83       | 54.95                    | 61.48                              | 155.55   | 40155 |
|       | Globe valve :-   |                |                          |                                    |          |       |
|       | <i>Each</i>  |                |                          |                                    |          |       |
| 40156 | 25 mm diameter.....  | 135.77         | 18.63                    | 22.35                              | 31.66    | 40156 |
| 40157 | 32 mm diameter.....  | 183.13         | 22.36                    | 26.69                              | 35.41    | 40157 |
| 40158 | 40 mm diameter.....  | 256.08         | 22.86                    | 27.08                              | 38.19    | 40158 |
| 40159 | 50 mm diameter.....  | 364.44         | 23.70                    | 28.00                              | 40.98    | 40159 |
| 40160 | 65 mm diameter.....  | 883.66         | 23.39                    | 28.57                              | 44.72    | 40160 |
| 40161 | 80 mm diameter.....  | 1,125.08       | 24.74                    | 29.11                              | 47.50    | 40161 |
| 40162 | 100 mm diameter.....   | 1,374.08       | 28.75                    | 33.02                              | 59.61    | 40162 |
| 40163 | 150 mm diameter.....   | 2,864.48       | 37.21                    | 42.63                              | 78.23    | 40163 |
| 40164 | 200 mm diameter.....   | 4,842.79       | 45.88                    | 52.51                              | 96.87    | 40164 |
| 40165 | 250 mm diameter.....   | 6,638.87       | 52.62                    | 58.00                              | 112.71   | 40165 |

| Item                                |   | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only | Item  |
|-------------------------------------|---|----------------|--------------------------|------------------------------------|----------|-------|
|                                     |   | A              | B                        | C                                  | D        |       |
|                                     |   | \$             | \$                       | \$                                 | \$       |       |
| <b>PIPE WORK AND PUMPS (CONT'D)</b> |   |                |                          |                                    |          |       |
|                                     | Globe valve for sprinkler system c/w tamper-proof electric switch to indicate valve operational mode including remote indication on F.S. control panel :- |                |                          |                                    |          |       |
|                                     | <i>Each</i>   |                |                          |                                    |          |       |
| 40166                               | 32 mm diameter.....   | 644.40         | 32.55                    | 37.23                              | 106.19   | 40166 |
| 40167                               | 40 mm diameter.....   | 693.56         | 33.04                    | 37.62                              | 108.05   | 40167 |
| 40168                               | 50 mm diameter.....   | 800.06         | 33.84                    | 38.44                              | 111.77   | 40168 |
| 40169                               | 65 mm diameter.....   | 1,555.98       | 35.41                    | 40.05                              | 114.57   | 40169 |
| 40170                               | 80 mm diameter.....   | 1,748.84       | 36.33                    | 40.98                              | 116.43   | 40170 |
| 40171                               | 100 mm diameter.....  | 2,153.79       | 38.19                    | 42.85                              | 120.15   | 40171 |
| 40172                               | 150 mm diameter.....  | 3,530.76       | 46.58                    | 52.16                              | 138.78   | 40172 |
| 40173                               | 200 mm diameter.....  | 5,405.66       | 54.95                    | 61.48                              | 155.55   | 40173 |
| 40174                               | 250 mm diameter.....  | 7,211.15       | 58.68                    | 67.99                              | 171.38   | 40174 |
|                                     | Non return valve :-   |                |                          |                                    |          |       |
|                                     | <i>Each</i>   |                |                          |                                    |          |       |
| 40175                               | 32 mm diameter.....   | 202.51         | 19.93                    | 23.91                              | 35.41    | 40175 |
| 40176                               | 40 mm diameter.....   | 250.59         | 20.45                    | 24.31                              | 38.19    | 40176 |
| 40177                               | 50 mm diameter.....   | 350.68         | 21.42                    | 25.16                              | 40.98    | 40177 |
| 40178                               | 65 mm diameter.....   | 625.30         | 22.35                    | 26.09                              | 42.85    | 40178 |
| 40179                               | 80 mm diameter.....   | 1,005.49       | 24.22                    | 27.94                              | 45.64    | 40179 |
| 40180                               | 100 mm diameter.....  | 1,178.84       | 26.09                    | 29.81                              | 50.29    | 40180 |
| 40181                               | 150 mm diameter.....  | 2,024.19       | 34.47                    | 39.12                              | 67.99    | 40181 |
| 40182                               | 200 mm diameter.....  | 3,421.13       | 43.79                    | 49.36                              | 85.70    | 40182 |
| 40183                               | 250 mm diameter.....  | 5,171.59       | 50.29                    | 54.95                              | 99.66    | 40183 |

| Item                                |  | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only | Item  |
|-------------------------------------|--|----------------|--------------------------|------------------------------------|----------|-------|
|                                     |  | A<br>\$        | B<br>\$                  | C<br>\$                            | D<br>\$  |       |
| <b>PIPE WORK AND PUMPS (CONT'D)</b> |  |                |                          |                                    |          |       |
|                                     | Y-type strainer : -                          |                |                          |                                    |          |       |
|                                     | <i>Each</i>                                  |                |                          |                                    |          |       |
| 40184                               | 32 mm diameter.....                          | 267.60         | 20.18                    | 24.44                              | 35.41    | 40184 |
| 40185                               | 40 mm diameter.....                          | 332.44         | 20.58                    | 24.75                              | 38.19    | 40185 |
| 40186                               | 50 mm diameter.....                          | 500.88         | 21.42                    | 26.09                              | 40.98    | 40186 |
| 40187                               | 65 mm diameter.....                          | 541.46         | 22.35                    | 27.01                              | 42.85    | 40187 |
| 40188                               | 80 mm diameter.....                          | 691.16         | 24.22                    | 28.87                              | 45.64    | 40188 |
| 40189                               | 100 mm diameter.....                         | 942.51         | 26.09                    | 30.73                              | 50.29    | 40189 |
| 40190                               | 150 mm diameter.....                         | 1,963.79       | 34.47                    | 40.98                              | 67.99    | 40190 |
| 40191                               | 200 mm diameter.....                         | 2,985.07       | 43.79                    | 51.23                              | 85.70    | 40191 |
| 40192                               | 250 mm diameter.....                         | 5,031.38       | 50.29                    | 57.75                              | 99.66    | 40192 |
|                                     | Sluice valve, wedge type c/w spindle cap : - |                |                          |                                    |          |       |
|                                     | <i>Each</i>                                  |                |                          |                                    |          |       |
| 40193                               | 150 mm diameter.....                         | 2,065.44       | 35.41                    | 40.98                              | 69.85    | 40193 |
| 40194                               | 200 mm diameter.....                         | 3,247.74       | 43.79                    | 51.23                              | 87.56    | 40194 |
| 40195                               | 250 mm diameter.....                         | 5,023.76       | 51.23                    | 57.75                              | 100.60   | 40195 |
|                                     | Puddle flange tank connector : -             |                |                          |                                    |          |       |
|                                     | <i>Each</i>                                  |                |                          |                                    |          |       |
| 40196                               | 100 mm diameter.....                         | 659.05         | 28.87                    | 33.53                              | 54.03    | 40196 |
| 40197                               | 150 mm diameter.....                         | 757.11         | 38.19                    | 43.79                              | 73.58    | 40197 |
| 40198                               | 200 mm diameter.....                         | 992.62         | 47.50                    | 54.95                              | 93.15    | 40198 |
| 40199                               | 250 mm diameter.....                         | 1,335.53       | 54.95                    | 61.48                              | 108.05   | 40199 |

| Item  |  |                                      |  |             | Item   |       |
|---|--|--------------------------------------|--|-------------|--------|-------|
| <b>PIPE WORK AND PUMPS (CONT'D)</b>   |  |                                      |  |             |        |       |
|   | Supply<br>and<br>fix   | Take<br>down<br>and<br>clear<br>away | Take<br>down<br>and set<br>aside for<br>re-use | Fix<br>only |        |       |
|   | A<br>\$  | B<br>\$                              | C<br>\$  | D<br>\$     |        |       |
| Sundries : -  |  |                                      |  |             |        |       |
| <i>Each</i>   |  |                                      |  |             |        |       |
| 40200   | Vortex inhibitor (all sizes).....  | 4,108.00                             | 28.87  | 33.53       | 54.03  | 40200 |
| 40201   | Non-ferrous filter (all sizes).....  | 1,700.15                             | 27.01  | 31.66       | 47.50  | 40201 |
| 40202   | Air relief valve (all sizes).....  | 122.91                               | 20.49  | 25.16       | 31.66  | 40202 |
| 40203   | Anti-pollution valve (all sizes).....  | 689.47                               | 24.22  | 28.87       | 41.91  | 40203 |
| 40204   | Pressure gauge (all sizes).....  | 228.93                               | 20.49  | 25.16       | 31.66  | 40204 |
| 40205   | Oil dumped gauge for sprinkler system.....   | 386.14                               | 21.42  | 26.09       | 34.47  | 40205 |
| 40206   | Electric alarm pressure switch c/w conduits (surface or concealed type), trunkings, cables for connection to the fire alarm control/indication panel and control equipment and all accessories ..... | 1,326.98                             | 72.66  | 79.17       | 231.93 | 40206 |
| 40207   | Water alarm flow switch c/w conduits (surface or concealed type), trunkings, cables for connection to the fire alarm control/indication panel and control equipment and all accessories .....        | 665.41                               | 77.31  | 85.70       | 261.73 | 40207 |
| 40208   | Subsidiary monitor stop valve set per zone c/w limit switch, conduits (surface or concealed type), trunkings, cables for connection to the fire control indication panel and all accessories .....   | 2,222.19                             | 82.90  | 89.42       | 253.35 | 40208 |
| Centrifugal pump, horizontal split case type c/w gauges, drain and vent, orifice plates, electrical wirings, connected to a power supply switch, control wirings & associated conduit/trunking, connected to and including start/stop control panel in the same room and installed on a concrete plinth : - |  |                                      |  |             |        |       |
| <i>Each</i>   |  |                                      |  |             |        |       |
| 40209   | up to 5 kW.....  | 52,390.80                            | 124.81   | 143.44      | 687.41 | 40209 |
| 40210   | 5 - 10 kW.....   | 75,675.60                            | 131.33   | 149.97      | 715.34 | 40210 |
| 40211   | 10 - 15 kW.....  | 75,675.60                            | 137.86   | 156.49      | 740.48 | 40211 |
| 40212   | 15 - 20 kW.....<br>(The actual rate should be : \$104,781.60 for Item 40212A)  | 10,478.16                            | 143.44   | 162.07      | 760.98 | 40212 |
| 40213   | 20 - 25 kW.....<br>(The actual rate should be : \$116,424.00 for Item 40213A)  | 11,642.40                            | 149.97   | 168.59      | 789.86 | 40213 |
| 40214   | 25 - 30 kW.....<br>(The actual rate should be : \$145,530.00 for Item 40214A)  | 14,553.00                            | 156.49   | 175.11      | 806.62 | 40214 |
| 40215   | Add to last item for each additional 5 kW or part thereof.....   | 29,106.00                            | 6.21   | 6.50        | 24.22  | 40215 |

| Item  |  |                |                          |                                    |          | Item  |
|-------|--|----------------|--------------------------|------------------------------------|----------|-------|
|       | <b>PIPE WORK AND PUMPS (CONT'D)</b>  |                |                          |                                    |          |       |
|       | Centrifugal pump, end-suction type c/w gauges, drain and vent, orifice plates, electrical wirings, connected to a power supply switch, control wirings & associated conduit/trunking, connected to and including start/stop control panel in the same room and installed on a concrete plinth :- | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only |       |
|       | <i>Each</i>  | A \$           | B \$                     | C \$                               | D \$     |       |
| 40216 | up to 5 kW.....  | 46,569.60      | 124.81                   | 143.44                             | 687.41   | 40216 |
| 40217 | 5 - 10 kW.....   | 64,033.20      | 131.33                   | 149.97                             | 715.34   | 40217 |
| 40218 | 10 - 15 kW.....  | 69,854.40      | 137.86                   | 156.49                             | 740.48   | 40218 |
| 40219 | 15 - 20 kW.....  | 87,318.00      | 143.44                   | 162.07                             | 760.98   | 40219 |
| 40220 | 20 - 25 kW.....<br>(The actual rate should be : \$104,781.60 for Item 40220A)  | 10,478.16      | 149.97                   | 168.59                             | 789.86   | 40220 |
| 40221 | 25 - 30 kW.....<br>(The actual rate should be : \$116,424.00 for Item 40221A)  | 11,642.40      | 156.49                   | 175.11                             | 806.62   | 40221 |
| 40222 | Add to last item for each additional 5 kW or part thereof.....   | 23,284.80      | 6.21                     | 6.50                               | 24.22    | 40222 |
|       | Centrifugal Jockey Pump, c/w items as described above :-   |                |                          |                                    |          |       |
|       | <i>Each</i>  |                |                          |                                    |          |       |
| 40223 | up to 5 kW.....  | 52,390.80      | 124.81                   | 143.44                             | 687.41   | 40223 |
| 40224 | 5 - 10 kW.....   | 64,033.20      | 131.33                   | 149.97                             | 715.34   | 40224 |
| 40225 | Add to last item for each additional 5 kW or part thereof.....   | 29,106.00      | 6.21                     | 6.50                               | 24.22    | 40225 |
|       | Sundries :-  |                |                          |                                    |          |       |
|       | <i>Each</i>  |                |                          |                                    |          |       |
| 40226 | Remote supervisory/start stop control panel for pump c/w all necessary accessories .....   | 11,642.40      | 43.79                    | 46.58                              | 266.39   | 40226 |
| 40227 | High/low level switch c/w conduits (surface or concealed type), trunking, sensing device, interconnection wiring and cables from water tank to indication and control panel for indication and control functions and all necessary for proper functioning of fire services system .....          | 3,492.72       | 50.29                    | 57.75                              | 217.02   | 40227 |
| 40228 | Sprinkler proving pipe and all necessary accessories.....  | 4,948.02       | 27.01                    | 29.81                              | 50.29    | 40228 |

| Item  |   |                      |                                      |  |             |       |
|-------|---|----------------------|--------------------------------------|--|-------------|-------|
|       | <b>PIPE WORK AND PUMPS (CONT'D)</b>                                       |                      |                                      |  |             |       |
|       | Expansion joint c/w all necessary accessories for fire services system :- |                      |                                      |  |             |       |
|       | <i>Each</i>   |                      |                                      |  |             |       |
|       |   | Supply<br>and<br>fix | Take<br>down<br>and<br>clear<br>away | Take<br>down<br>and set<br>aside for<br>re-use | Fix<br>only |       |
|       |   | A<br>\$              | B<br>\$                              | C<br>\$  | D<br>\$     |       |
| 40229 | 32 mm diameter.....   | 843.64               | 22.79                                | 28.01  | 39.12       | 40229 |
| 40230 | 40 mm diameter.....   | 1,003.60             | 23.31                                | 28.49  | 41.91       | 40230 |
| 40231 | 50 mm diameter.....   | 1,338.40             | 24.22                                | 29.81  | 45.64       | 40231 |
| 40232 | 65 mm diameter.....   | 1,493.64             | 25.16                                | 30.73  | 47.50       | 40232 |
| 40233 | 80 mm diameter.....   | 1,648.86             | 27.01                                | 32.60  | 51.23       | 40233 |
| 40234 | 100 mm diameter.....  | 2,199.34             | 28.87                                | 33.53  | 54.03       | 40234 |
| 40235 | 150 mm diameter.....  | 3,593.37             | 36.33                                | 41.91  | 66.14       | 40235 |
| 40236 | 200 mm diameter.....  | 4,987.40             | 43.79                                | 49.36  | 75.45       | 40236 |



| Item  |   |                |                          |                                    | Item     |       |
|-------|---|----------------|--------------------------|------------------------------------|----------|-------|
|       | <b>FIRE RESISTANT CABLES</b>  |                |                          |                                    |          |       |
|       | (Note : The following Items 40237 to 40254 inclusive will only be paid for if ordered by the Maintenance Surveyor in writing) |                |                          |                                    |          |       |
|       | BS 6387 Category B heat resistant cables c/w all necessary accessories : -  |                |                          |                                    |          |       |
|       | <i>Per linear metre</i>   |                |                          |                                    |          |       |
|       |   | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only |       |
|       |   | A<br>\$        | B<br>\$                  | C<br>\$                            | D<br>\$  |       |
| 40237 | 1.5 mm <sup>2</sup> 1-core.....   | 16.76          | 0.96                     | 1.25                               | 3.72     | 40237 |
| 40238 | 2.5 mm <sup>2</sup> 1-core.....   | 19.12          | 0.96                     | 1.25                               | 3.72     | 40238 |
| 40239 | 1.5 mm <sup>2</sup> 7-core.....   | 111.13         | 4.66                     | 5.59                               | 17.70    | 40239 |
| 40240 | 2.5 mm <sup>2</sup> 7-core.....   | 130.49         | 5.59                     | 6.52                               | 20.49    | 40240 |
| 40241 | 1.5 mm <sup>2</sup> 12-core.....  | 148.28         | 4.66                     | 5.59                               | 17.70    | 40241 |
| 40242 | 2.5 mm <sup>2</sup> 12-core.....  | 172.24         | 5.59                     | 6.52                               | 20.49    | 40242 |
| 40243 | 1.5 mm <sup>2</sup> 19-core.....  | 202.39         | 5.33                     | 5.54                               | 19.56    | 40243 |
| 40244 | 2.5 mm <sup>2</sup> 19-core.....  | 270.15         | 5.59                     | 6.52                               | 22.35    | 40244 |
| 40245 | 1.5 mm <sup>2</sup> 27-core.....  | 278.34         | 5.59                     | 6.52                               | 22.35    | 40245 |
| 40246 | 2.5 mm <sup>2</sup> 27-core.....  | 328.65         | 6.52                     | 7.46                               | 24.22    | 40246 |
| 40247 | 1.5 mm <sup>2</sup> 7-core PVC/SWA/PVC.....   | 405.46         | 4.66                     | 5.59                               | 17.70    | 40247 |
| 40248 | 2.5 mm <sup>2</sup> 7-core PVC/SWA/PVC.....   | 461.83         | 5.59                     | 6.52                               | 20.49    | 40248 |
| 40249 | 1.5 mm <sup>2</sup> 12-core PVC/SWA/PVC.....  | 545.10         | 4.66                     | 5.59                               | 17.70    | 40249 |
| 40250 | 2.5 mm <sup>2</sup> 12-core PVC/SWA/PVC.....  | 566.93         | 5.59                     | 6.52                               | 21.42    | 40250 |
| 40251 | 1.5 mm <sup>2</sup> 19-core PVC/SWA/PVC.....  | 681.62         | 4.66                     | 5.59                               | 19.56    | 40251 |
| 40252 | 2.5 mm <sup>2</sup> 19-core PVC/SWA/PVC.....  | 750.29         | 5.59                     | 6.52                               | 22.35    | 40252 |
| 40253 | 1.5 mm <sup>2</sup> 27-core PVC/SWA/PVC.....  | 772.38         | 5.59                     | 6.52                               | 22.35    | 40253 |
| 40254 | 2.5 mm <sup>2</sup> 27-core PVC/SWA/PVC.....  | 839.34         | 6.52                     | 7.46                               | 24.22    | 40254 |

| Item  |   |                |                          |                                    | Item     |       |
|-------|---|----------------|--------------------------|------------------------------------|----------|-------|
|       | <b>FIRE RESISTANT CABLES (CONT'D)</b>   |                |                          |                                    |          |       |
|       | (Note : The following Items 40255 to 40270 inclusive will only be paid for if ordered by the Maintenance Surveyor in writing) |                |                          |                                    |          |       |
|       | BS 6387 Category CWZ heat resistant cables c/w all necessary accessories : -  |                |                          |                                    |          |       |
|       | <i>Per linear metre</i>   |                |                          |                                    |          |       |
|       |   | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only |       |
|       |   | A \$           | B \$                     | C \$                               | D \$     |       |
| 40255 | 10 mm <sup>2</sup> 1-core.....  | 53.02          | 1.47                     | 1.76                               | 4.66     | 40255 |
| 40256 | 16 mm <sup>2</sup> 1-core.....  | 70.07          | 1.47                     | 1.76                               | 4.66     | 40256 |
| 40257 | 25 mm <sup>2</sup> 1-core.....  | 87.57          | 1.86                     | 2.25                               | 6.52     | 40257 |
| 40258 | 35 mm <sup>2</sup> 1-core.....  | 202.61         | 1.86                     | 2.25                               | 7.46     | 40258 |
| 40259 | 50 mm <sup>2</sup> 1-core.....  | 234.69         | 2.26                     | 2.75                               | 8.38     | 40259 |
| 40260 | 70 mm <sup>2</sup> 1-core.....  | 280.86         | 2.47                     | 2.95                               | 8.38     | 40260 |
| 40261 | 95 mm <sup>2</sup> 1-core.....  | 335.26         | 2.79                     | 3.72                               | 11.18    | 40261 |
| 40262 | 120 mm <sup>2</sup> 1-core.....   | 396.06         | 3.72                     | 4.66                               | 13.04    | 40262 |
| 40263 | 10 mm <sup>2</sup> 4-core PVC/SWA/PVC.....  | 212.04         | 9.31                     | 11.18                              | 34.47    | 40263 |
| 40264 | 16 mm <sup>2</sup> 4-core PVC/SWA/PVC.....  | 237.00         | 9.31                     | 11.18                              | 35.41    | 40264 |
| 40265 | 25 mm <sup>2</sup> 4-core PVC/SWA/PVC.....  | 346.74         | 10.24                    | 12.11                              | 36.33    | 40265 |
| 40266 | 35 mm <sup>2</sup> 4-core PVC/SWA/PVC.....  | 389.14         | 10.24                    | 12.11                              | 37.26    | 40266 |
| 40267 | 50 mm <sup>2</sup> 4-core PVC/SWA/PVC.....  | 474.08         | 11.18                    | 13.04                              | 38.19    | 40267 |
| 40268 | 70 mm <sup>2</sup> 4-core PVC/SWA/PVC.....  | 601.20         | 11.18                    | 13.04                              | 40.98    | 40268 |
| 40269 | 95 mm <sup>2</sup> 4-core PVC/SWA/PVC.....  | 698.86         | 12.11                    | 14.91                              | 45.64    | 40269 |
| 40270 | 120 mm <sup>2</sup> 4-core PVC/SWA/PVC.....   | 826.39         | 13.04                    | 15.84                              | 51.23    | 40270 |

| Item  |  |                      |                                      |  | Item        |       |
|-------|--|----------------------|--------------------------------------|--|-------------|-------|
|       | <b>FIRE RESISTANT CABLES (CONT'D)</b>  |                      |                                      |  |             |       |
|       | (Note : The following Items 40271 to 40286 inclusive will only be paid for if ordered by the Maintenance Surveyor in writing)  |                      |                                      |  |             |       |
|       | Low smoke zero halogen type fire resistant cable complying with BS6387 CWZ, BS EN 50200, BE EN 61034-1, BE EN 50267-2 and BS 7629-1/ BS 7846 c/w all necessary accessories : - |                      |                                      |  |             |       |
|       | <i>Per linear metre</i>  |                      |                                      |  |             |       |
|       |  | Supply<br>and<br>fix | Take<br>down<br>and<br>clear<br>away | Take<br>down<br>and set<br>aside for<br>re-use | Fix<br>only |       |
|       |  | A<br>\$              | B<br>\$                              | C<br>\$  | D<br>\$     |       |
| 40271 | 10 mm <sup>2</sup> 1-core.....   | 53.51                | 1.47                                 | 1.76   | 4.66        | 40271 |
| 40272 | 16 mm <sup>2</sup> 1-core.....   | 70.35                | 1.47                                 | 1.76   | 4.66        | 40272 |
| 40273 | 25 mm <sup>2</sup> 1-core.....   | 88.15                | 1.86                                 | 2.25   | 6.52        | 40273 |
| 40274 | 35 mm <sup>2</sup> 1-core.....   | 204.23               | 1.86                                 | 2.25   | 7.46        | 40274 |
| 40275 | 50 mm <sup>2</sup> 1-core.....   | 235.90               | 2.26                                 | 2.75   | 8.38        | 40275 |
| 40276 | 70 mm <sup>2</sup> 1-core.....   | 282.22               | 2.47                                 | 2.95   | 8.38        | 40276 |
| 40277 | 95 mm <sup>2</sup> 1-core.....   | 337.45               | 2.79                                 | 3.72   | 11.18       | 40277 |
| 40278 | 120 mm <sup>2</sup> 1-core.....  | 398.99               | 3.72                                 | 4.66   | 13.04       | 40278 |
| 40279 | 10 mm <sup>2</sup> 4-core.....   | 214.30               | 9.31                                 | 11.18  | 34.47       | 40279 |
| 40280 | 16 mm <sup>2</sup> 4-core.....   | 239.65               | 9.31                                 | 11.18  | 35.41       | 40280 |
| 40281 | 25 mm <sup>2</sup> 4-core.....   | 351.29               | 10.24                                | 12.11  | 36.33       | 40281 |
| 40282 | 35 mm <sup>2</sup> 4-core.....   | 393.24               | 10.24                                | 12.11  | 37.26       | 40282 |
| 40283 | 50 mm <sup>2</sup> 4-core.....   | 477.91               | 11.18                                | 13.04  | 38.19       | 40283 |
| 40284 | 70 mm <sup>2</sup> 4-core.....   | 607.81               | 11.18                                | 13.04  | 40.98       | 40284 |
| 40285 | 95 mm <sup>2</sup> 4-core.....   | 706.73               | 12.11                                | 14.91  | 45.64       | 40285 |
| 40286 | 120 mm <sup>2</sup> 4-core.....  | 835.48               | 13.04                                | 15.84  | 51.23       | 40286 |

| Item  | Item   |
|---|--|
| <b>GAS TOTAL FLOODING SYSTEM</b>  |  |
| FM-200 gas cylinder c/w discharge valve with safety device, check valve, manifolds, pressure gauge, low pressure switch, dip tubes, liquid level indicator, mounting brackets, nameplate, signal wiring and all necessary accessories (including design and calculation for the gas total flooding system) :- | Supply and fix<br>Take down and clear away<br>Take down and set aside for re-use<br>Fix only |
| <i>Each</i>   | A<br>\$ B<br>\$ C<br>\$ D<br>\$  |
| 40287 27 - 40 kg.....   | 20,811.99 101.52 112.71 732.10 40287   |
| 40288 40 - 50 kg.....   | 24,528.86 112.71 123.88 820.59 40288   |
| 40289 50 - 70 kg.....   | 32,316.60 123.88 135.06 913.74 40289   |
| 40290 70 - 100 kg.....  | 43,280.57 135.06 146.24 1,003.15 40290   |
| 40291 100 - 140 kg.....   | 57,471.88 146.24 157.41 1,100.03 40291   |
| 40292 140 - 180 kg.....   | 72,443.18 157.41 168.59 1,190.37 40292   |
| 40293 Discharge nozzle.....   | 373.30 11.66 12.24 27.01 40293   |
| FM-200 system control and indicating panel c/w control wiring, signal wiring with main fire alarm control panel, coincidence unit, electronic components, battery/charger and all necessary accessories (including design and calculation for the gas total flooding system) :-                               |  |
| <i>Each</i>   |  |
| 40294 Panel of 2 zones.....   | 5,954.19 40.98 42.85 244.04 40294  |
| 40295 Panel of 4 zones.....   | 9,975.58 41.91 43.79 252.42 40295  |
| 40296 Panel of 8 zones.....   | 13,489.73 43.79 46.58 264.52 40296   |
| 40297 System odouriser.....   | 1,297.66 18.63 23.28 78.23 40297   |
| Heavy galvanized steel pipework to BS EN 10255 but welded and fittings to BS EN 10241 c/w all necessary accessories (including design and calculation for the gas total flooding system) :-   |  |
| <i>Per linear metre</i>   |  |
| 40298 20 mm diameter.....   | 82.26 3.32 3.55 54.95 40298  |
| 40299 25 mm diameter.....   | 99.41 3.81 3.92 59.61 40299  |
| 40300 32 mm diameter.....   | 117.38 4.37 4.49 63.35 40300   |
| 40301 40 mm diameter.....   | 128.21 4.79 4.84 68.92 40301   |

| Item  |  |                |                          |                                    | Item     |       |
|---|--|----------------|--------------------------|------------------------------------|----------|-------|
| <b>GAS TOTAL FLOODING SYSTEM (CONT'D)</b>   |  |                |                          |                                    |          |       |
|   | Mild steel pipework to BS EN 10216-1 and BS EN 10217-1 and fittings to BE EN 10241 c/w all necessary accessories (including design and calculation for the gas total flooding system) :- | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only |       |
|   | <i>Per linear metre</i>  | A<br>\$        | B<br>\$                  | C<br>\$                            | D<br>\$  |       |
| 40302   | 50 mm diameter.....  | 235.15         | 6.30                     | 6.84                               | 94.08    | 40302 |
| 40303   | 65 mm diameter.....  | 285.05         | 7.46                     | 8.38                               | 108.98   | 40303 |
| 40304   | 80 mm diameter.....  | 346.77         | 8.38                     | 9.31                               | 120.15   | 40304 |
| 40305   | 100 mm diameter.....   | 447.41         | 9.31                     | 10.24                              | 152.76   | 40305 |
| Mild steel pipework to BS EN 10216-1 and BS EN 10217-1 and fittings to BS EN 1759-1 c/w all necessary accessories (including design and calculation for the gas total flooding system) :- |  |                |                          |                                    |          |       |
| <i>Per linear metre</i>   |  |                |                          |                                    |          |       |
| 40306   | 150 mm diameter.....   | 635.31         | 16.76                    | 17.70                              | 203.06   | 40306 |
| Equipment/components for FM-200 system c/w all necessary accessories and connected to control/ indication panel :-  |  |                |                          |                                    |          |       |
| <i>Each</i>   |  |                |                          |                                    |          |       |
| 40307   | Gas release actuator.....  | 1,432.35       | 67.07                    | 81.04                              | 280.36   | 40307 |
| 40308   | Lock off/indication panel.....   | 2,157.35       | 40.05                    | 42.85                              | 159.28   | 40308 |
| 40309   | Gas discharge flashing light.....  | 338.38         | 32.60                    | 36.33                              | 133.20   | 40309 |
| 40310   | Manual release pull unit.....  | 455.33         | 43.79                    | 51.23                              | 189.08   | 40310 |
| 40311   | Yodalarm.....  | 769.38         | 43.79                    | 51.23                              | 189.08   | 40311 |
| 40312   | Abort unit.....  | 651.88         | 43.79                    | 51.23                              | 189.08   | 40312 |
| 40313   | Compartment protected by FM-200 system warning notice.....   | 142.92         | 2.66                     | 3.15                               | 16.76    | 40313 |
| 40314   | Smoke detector point compatible with panel.....  | 557.91         | 43.79                    | 51.23                              | 189.08   | 40314 |
| 40315   | Auto/manual key switch unit with housing.....  | 849.89         | 43.79                    | 51.23                              | 196.53   | 40315 |
| 40316   | Warning light for evacuation and gas discharge.....  | 477.56         | 43.79                    | 51.23                              | 189.08   | 40316 |
| 40317   | Agent release module for parallel wiring of agent initiators c/w all necessary accessories .....   | 465.59         | 43.79                    | 51.23                              | 189.08   | 40317 |
| Sundries :-   |  |                |                          |                                    |          |       |
| <i>Per kg</i>   |  |                |                          |                                    |          |       |
| 40318   | Charge/recharge/refilling gas into cylinder including all necessary works and delivery .....   | 404.56         | -                        | -                                  | -        | 40318 |

| Item   |  |                          |                                    |          | Item  |       |
|--|--|--------------------------|------------------------------------|----------|-------|-------|
| <b>PORTABLE EQUIPMENT</b>                            |  |                          |                                    |          |       |       |
| Portable equipment c/w all necessary accessories : - |  |                          |                                    |          |       |       |
| <i>Per linear metre</i>                              |  |                          |                                    |          |       |       |
|  | Supply and fix   | Take down and clear away | Take down and set aside for re-use | Fix only |       |       |
|  | A<br>\$  | B<br>\$                  | C<br>\$                            | D<br>\$  |       |       |
| 40319  | 3 kg dry powder fire extinguisher.....                     | 370.32                   | 10.24                              | 11.18    | 60.54 | 40319 |
| 40320  | 9 kg dry powder fire extinguisher.....                     | 530.53                   | 10.24                              | 11.18    | 63.35 | 40320 |
| 40321  | 4.5 litres water type fire extinguisher.....               | 260.98                   | 10.24                              | 11.18    | 60.54 | 40321 |
| 40322  | 9 litres water type fire extinguisher.....                 | 291.06                   | 10.24                              | 11.18    | 63.35 | 40322 |
| 40323  | 4.5 kg CO <sub>2</sub> type fire extinguisher.....         | 420.04                   | 10.24                              | 11.18    | 60.54 | 40323 |
| 40324  | 9 kg CO <sub>2</sub> type fire extinguisher.....           | 840.99                   | 10.24                              | 11.18    | 63.35 | 40324 |
| 40325  | 4.5 litres foam type fire extinguisher.....                | 283.19                   | 10.24                              | 11.18    | 60.54 | 40325 |
| 40326  | 9 litres foam type fire extinguisher.....                  | 289.41                   | 10.24                              | 11.18    | 63.35 | 40326 |
| 40327  | 9 litres CO <sub>2</sub> type water fire extinguisher..... | 537.76                   | 10.24                              | 11.18    | 63.35 | 40327 |
| Refilling of portable fire extinguisher : -          |  |                          |                                    |          |       |       |
| <i>Per kg</i>  |  |                          |                                    |          |       |       |
| 40328  | CO <sub>2</sub> refill.....                                | 40.16                    | -                                  | -        | -     | 40328 |
| <i>Per litres</i>                                    |  |                          |                                    |          |       |       |
| 40329  | Water refill.....  | 28.78                    | -                                  | -        | -     | 40329 |
| 40330  | Foam refill.....   | 28.78                    | -                                  | -        | -     | 40330 |
| Sundries : -   |  |                          |                                    |          |       |       |
| <i>Each</i>  |  |                          |                                    |          |       |       |
| 40331  | Sand bucket.....   | 169.46                   | 2.57                               | 2.62     | 3.72  | 40331 |
| 40332  | Fire blanket, heavy type.....                              | 267.52                   | 4.66                               | 5.59     | 12.11 | 40332 |

| Item  |              |                      |                                      |  | Item        |       |
|---|--------------|----------------------|--------------------------------------|--|-------------|-------|
| <b>AUTOMATIC FIXED SPRAYER UNITS</b>  |              |                      |                                      |  |             |       |
| HCFC-124 automatic type fixed sprayer unit and all necessary accessories :- |              |                      |                                      |  |             |       |
| <i>Each</i>   |              |                      |                                      |  |             |       |
|   |              | Supply<br>and<br>fix | Take<br>down<br>and<br>clear<br>away | Take<br>down<br>and set<br>aside for<br>re-use | Fix<br>only |       |
|   |              | A<br>\$              | B<br>\$                              | C<br>\$  | D<br>\$     |       |
| 40333   | 5.7 kg.....  | 4,851.90             | 80.10                                | 89.42  | 353.94      | 40333 |
| 40334   | 7.2 kg.....  | 5,556.06             | 82.90                                | 91.27  | 367.91      | 40334 |
| 40335   | 10.7 kg..... | 8,696.52             | 85.70                                | 94.08  | 385.62      | 40335 |
| 40336   | 13.8 kg..... | 9,865.38             | 87.56                                | 96.87  | 400.51      | 40336 |
| 40337   | 15.3 kg..... | 11,633.69            | 90.35                                | 98.73  | 417.29      | 40337 |
| 40338   | 19.5 kg..... | 14,015.16            | 93.15                                | 101.52   | 432.18      | 40338 |
| NAFS-III automatic type fixed sprayer unit and all necessary accessories :- |              |                      |                                      |  |             |       |
| <i>Each</i>   |              |                      |                                      |  |             |       |
| 40339   | 4 kg.....    | 4,668.71             | 81.04                                | 92.22  | 361.40      | 40339 |
| 40340   | 9 kg.....    | 8,200.56             | 86.63                                | 97.80  | 403.31      | 40340 |
| 40341   | 16 kg.....   | 16,340.40            | 122.95                               | 140.64   | 559.79      | 40341 |

| Item  |  |                |                          |                                    | Item     |       |
|-------|--|----------------|--------------------------|------------------------------------|----------|-------|
|       | <b>AUDIO/VISUAL ADVISORY SYSTEM</b>  |                |                          |                                    |          |       |
|       | Design, supply and install audio/ visual fire alarm equipment; electrical and control points c/w cables, conduit (surface or concealed in partitions and ceiling) and all necessary accessories and connected to the audio/visual fire alarm control panel : -   | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only |       |
|       | <i>Each</i>  | A<br>\$        | B<br>\$                  | C<br>\$                            | D<br>\$  |       |
| 40342 | Loudspeakers; surface/concealed mounted c/w metal enclosure.....   | 658.15         | 47.50                    | 55.89                              | 203.98   | 40342 |
| 40343 | Flashing light directional sign boxes; single side; overall size up to 500 mm x 150 mm x 200mm (H); comprising metal sign box, perspex backing and front sheeting, flashing unit, battery and charger, electrical gear and all necessary accessories; ceiling mounted.....                                 | 1,109.98       | 47.50                    | 55.89                              | 203.98   | 40343 |
| 40344 | Ditto but double side.....   | 1,314.61       | 47.50                    | 55.89                              | 203.98   | 40344 |
|       | Audio-visual fire alarm control/indicating panel c/w pre-amplifier and amplifier, automatic long play recorder, cassette tape, repeater, random access message module, master controller, multiplex alarm system, system/auxiliary power supply, connection of fire link and all necessary accessories : - |                |                          |                                    |          |       |
|       | <i>Each</i>  |                |                          |                                    |          |       |
| 40345 | Panel of 4 zones or less.....  | 25,574.27      | 41.91                    | 44.72                              | 325.07   | 40345 |
| 40346 | Ditto 5 - 8 zones.....   | 34,765.28      | 47.50                    | 52.16                              | 353.94   | 40346 |
| 40347 | Ditto 9 - 12 zones.....  | 41,617.39      | 52.16                    | 56.83                              | 381.89   | 40347 |
| 40348 | Ditto 13 - 18 zones.....   | 47,091.48      | 56.83                    | 62.41                              | 404.23   | 40348 |
| 40349 | Add to last item for each additional 4 zones or part thereof.....  | 3,244.56       | 4.66                     | 4.66                               | 24.22    | 40349 |



| Item  |   |   |       |   | Item  |
|-------|---|---|-------|---|-------|
|       | <b>DISCONNECTION OF EXISTING FIRE SERVICES INSTALLATION</b>   |   |       |   |       |
|       | Supply labour to disconnect all existing fire services installation for an area, take down and clear away entire fire services installation inside the area (area shall be measured net on the gross floor area of the building covered by the fire services installation) :- |   |       |   |       |
|       | <i>Per square metre</i>   |   |       |   |       |
| 40350 | Area with sprinkler (up to 100 m²).....   | - | 14.91 | - | 40350 |
| 40351 | Area with sprinkler (100 - 500 m²).....   | - | 13.97 | - | 40351 |
| 40352 | Area with sprinkler (above 500 m²).....   | - | 13.04 | - | 40352 |
| 40353 | Area without sprinkler (up to 100 m²).....  | - | 6.52  | - | 40353 |
| 40354 | Area without sprinkler (100 - 500 m²).....  | - | 5.59  | - | 40354 |
| 40355 | Area without sprinkler (above 500 m²).....  | - | 5.22  | - | 40355 |
|       | Supply labour to disconnect the existing fire services installation, take down and clear away entire fire services installation   |   |       |   |       |
|       | <i>Each</i>   |   |       |   |       |
| 40356 | 9 kg NAFS III type fire extinguisher.....   | - | 10.24 | - | 40356 |

**Section 41**

**LIQUEFIED PETROLEUM GAS**

## SECTION 41

### LIQUEFIED PETROLEUM GAS

#### SPECIAL CONDITIONS

|  |                |  |
|--|----------------|--|
| <b>Measurement of excavations, chases, holes and other subsidiary work</b> | <b>SC41.01</b> | All trench excavation shall be measured separately and paid for at the appropriate rates under Section 03 - Excavation of this Schedule. All chases in, and holes through existing walls, ceilings, etc. for tubing and pipes, (but not mortices or holes for brackets) shall be measured and paid for at the appropriate rates under Section 04 - Concrete Work, Section 05 - Brickwork and Blockwork or other applicable Work Sections of this Schedule.   |
| <b>Measurement of pipework</b>   | <b>SC41.02</b> | Pipework shall be measured in linear metres over all in-line fittings, short running lengths and branches.   |
| <b>Measurement of pressure test of existing pipework</b>                   | <b>SC41.03</b> | Testing and commissioning including submission of Testing and Commissioning Certificates and Records of Tests have been allowed in the rates under this Section. No measurement will be made for testing and commissioning except for pressure test of existing pipework where specifically ordered by the Maintenance Surveyor in writing.  |
| <b>Measurement of temporary supply</b>                                     | <b>SC41.04</b> | <p>Where a temporary supply is ordered by the Maintenance Surveyor, the provision of all articles, labour and accessory materials (nails, screws, rawplugs and similar) necessary for fixing shall be of temporary nature. For "use and waste" of all materials, such as pipework, fittings and accessories, etc., for a period of not exceeding four weeks from the date of certified completion, 50 per cent of the value of the appropriate "supply and fix" items after the adjustment of contract percentages will be paid. For a period exceeding four weeks and not exceeding eight weeks, 55 per cent will be paid and for each subsequent month a further addition of 5 per cent will be made.</p> <p>For a period of more than six months, the full rates, as for permanent works will be paid, and the materials will become the property of the Employer.</p> <p>No extra payment will be made for the removal of materials in connection with the temporary supply, but the cost of which shall have been included in the payment as aforementioned in the first paragraph hereof. The date of certified completion of a temporary supply shall be the date when the installation is first brought into service. The date when it ceases to be used shall be the date from which the Maintenance Surveyor instructs the dismantlement of the installation, or the date when the installation is no longer in use, whichever is earlier.</p> |

**SPECIAL CONDITIONS****Rates generally****SC41.05**

The rates for all items shall generally include for : -

- (a) Colour band and colour identification work.
- (b) Lettering and engraving for identification, signs, labels in both English and Chinese.
- (c) Identification plates, signs, notice plates, discs and labels in both English and Chinese.
- (d) Priming or painting off site and proprietary finishes or surface treatment applied as part of the production process whether applied before or after fabrication and assembly.
- (e) All protective and finishing painting work, apart from additional painting work specifically ordered by the Maintenance Surveyor in writing which shall be measured separately and paid for at the appropriate rates under Section 15 - Painting of this Schedule.
- (f) Any kind of fixing method including provision of screws, nuts, bolts, shims, washers, clips, brackets, hangers, supports and the like.
- (g) Provision of expansion joints in service runs wherever they coincide with structural expansion joints.
- (h) Submission of catalogues, technical literature, data, calculations, test certificates and approval documentation covering the equipment and materials being supplied.
- (i) Preparing and submitting detail working drawings as required and all shop drawings for the fabrication and installation.
- (j) Attendance, as required, of the manufacturers' representative to assist in the installation and subsequent testing and commissioning.
- (k) Testing and commissioning including submission of Testing and Commissioning Certificates and Records of Tests, except pressure test of existing pipework. (Note : - Pressure test of existing pipework shall be measured separately if ordered by the Maintenance Surveyor in writing)
- (l) Provision of all necessary testing instrument of approved type for testing and commissioning.
- (m) Provision of mock-up work as specified.
- (n) Preparing and submitting operation and maintenance manuals and as-fitted drawings for items of works as required.
- (o) Provision of schematic diagrams covered front and back with plastic sheet including fixing to wall.
- (p) Provision of manufacturer's guarantee.

**SPECIAL CONDITIONS**

**Rates for  
pipework**

**SC41.06**

The rates for pipework shall further include for : -

- (a) All short lengths, cutting and waste, and joints in the running length.
- (b) All pipework brackets, supports, hangers, guides, anchors and the like and alternative method of jointing and fixing as specified (if any).
- (c) All pipework fittings (e.g. bends, elbows, branches, reducers, tees, caps and the like) including connections, cutting and jointing pipes to fittings.
- (d) Screwed sockets, tappings, bosses and welding-necks welded to pipes or flanges including perforating the pipework or flanges.
- (e) Connections between pipework of different materials and differing grades of same material.
- (f) Wall, floor and ceiling plates.
- (g) All jointing including provision of flexible connections and/or necessary adaptors and connectors, welding consumable, jointing tapes, flanges, unions, gasket, bolts and nuts and the like where required.
- (h) Expansion loops and compensators including connections, cutting and jointing to pipes and fittings.
- (i) Provision of all sleeves for casting in or building in where pipes pass through slabs, walls or beams and caulking between pipe and sleeve where required.
- (j) Fixing in any position to floors, walls and ceilings including laying in trenches and fixing in chases, ducts, false ceilings and similar positions, and wrapping with protective tape where required.

**Rates for in-line  
pipework equipment**

**SC41.07**

The rates for in-line pipework equipment (e.g. valves, flow meters, gauges and the like) shall further include for : -

- (a) Cutting and jointing to pipes and fittings.
- (b) Stripping down repacking glands and preparing spindles, as appropriate, prior to installation.

**SPECIAL CONDITIONS****Rates for equipment****SC41.08**

The rates for equipment shall further included for : -

- (a) All necessary assembly, orientation, alignment, levelling and bolting down, together with the provision of shims and packing pieces, strainers, instrumentation and the like.
- (b) Provision of all associated components.
- (c) All necessary operational and control accessories forming part of the equipment.
- (d) Final connections and terminations to water supply and gas supply including all necessary pipework, valves, gauges and necessary accessories required for energizing the equipment to properly operate at specified duties.
- (e) Earth/equipotential bonding.

**Rates for pressure test of existing pipework****SC41.09**

The rates for pressure test of existing pipework (including associated in-line pipework fittings and in-line pipework equipment and the like) shall include for : -

- (a) De-gasing and cleaning of pipeline by any means necessary before carrying out any test.
- (b) All preparation work including temporary sealing ends of pipes and connections.
- (c) Provision of all necessary testing instrument of approved type for pressure test.
- (d) Provision of test record.
- (e) Submission of Surveyor Certificate as specified.
- (f) Making good all works disturbed.
- (g) Purging into service.

**SPECIAL CONDITIONS**

**Rates for "Take down and clear away" or "Take down and set aside for re-use"**

**SC41.10**

The rates for "Take down and clear away" or "Take down and set aside for re-use" existing items in connection with liquefied petroleum gas installation shall further include for : -

- (a) Taking down all associated pipework and building services works (if any).
- (b) All in-line fittings including brackets, supports, hangers and the like.
- (c) Cutting into existing pipework in position.
- (d) De-gasing of existing pipework (including associated in-line fittings and the like) as required.
- (e) Plugging off remaining ends with plugs or caps as required.
- (f) Preparing remaining ends of pipework and building services works (if any) to receive connections with new work if required.
- (g) Making good all works disturbed.

**Particular Specification**

**SC41.11**

The Particular Specification for liquefied petroleum gas installation can be found in the Contract.

| Item   |   |                      |                                      |  | Item        |       |
|--|---|----------------------|--------------------------------------|--|-------------|-------|
| <b>LIQUEFIED PETROLEUM GAS (LPG) INSTALLATION</b>  |   |                      |                                      |  |             |       |
| <b>Cylinder storage system including the initial supply of 50 kg LPG cylinder of LP gas, changeover valve c/w indicator, flexible hose c/w adaptor, pigtails, pressure gauge, manifold valve with or without check valve, safety devices and necessary pipeworks inside LP gas store : -</b> |   |                      |                                      |  |             |       |
| <i>Per set</i>   |   |                      |                                      |  |             |       |
|  |   | Supply<br>and<br>fix | Take<br>down<br>and<br>clear<br>away | Take<br>down<br>and set<br>aside for<br>re-use | Fix<br>only |       |
|  |   | A<br>\$              | B<br>\$                              | C<br>\$  | D<br>\$     |       |
| 41001  | 1 - 4 cylinders.....  | 10,478.16            | 73.58                                | 81.96  | 1,050.65    | 41001 |
| 41002  | 5 - 8 cylinders.....  | 11,598.74            | 83.83                                | 94.08  | 1,172.68    | 41002 |
| 41003  | 9 - 12 cylinders.....   | 12,335.12            | 95.94                                | 106.19   | 1,275.13    | 41003 |
| 41004  | 13 - 16 cylinders.....  | 16,008.30            | 107.12                               | 119.21   | 1,381.32    | 41004 |
| 41005  | 17 - 20 cylinders.....  | 25,467.75            | 117.36                               | 129.46   | 1,486.56    | 41005 |
| <b>Above ground bulk LPG storage vessel c/w saddle, pressure relief valve, shut off valve, emergency valve, liquid level device, contents and pressure gauges, manhole, vent pipes, filling and drain connections, and other associated accessories, for water capacity : -</b>              |   |                      |                                      |  |             |       |
| <i>Each</i>  |   |                      |                                      |  |             |       |
| 41006  | Up to 2000 litres.....  | 34,243.94            | 4,740.99                             | 5,131.26                                       | 15,071.50   | 41006 |
| 41007  | 2000 - 4000 litres.....<br>(The actual rate should be : \$120,357.00 for Item 41007A) | 12,035.70            | 4,977.57                             | 5,416.27                                       | 30,958.01   | 41007 |
| 41008  | 4000 - 5000 litres.....<br>(The actual rate should be : \$199,776.30 for Item 41008A) | 19,977.63            | 5,057.68                             | 5,546.68                                       | 31,772.08   | 41008 |
| 41009  | 5000 - 7000 litres.....<br>(The actual rate should be : \$286,232.10 for Item 41009A) | 28,623.21            | 5,156.41                             | 5,691.98                                       | 33,402.09   | 41009 |
| 41010  | 7000 - 9000 litres.....<br>(The actual rate should be : \$502,340.50 for Item 41010A) | 50,234.05            | 5,524.32                             | 6,108.33                                       | 34,216.16   | 41010 |



| Item  |   |                       |                                 |   | Item            |       |
|-------|---|-----------------------|---------------------------------|---|-----------------|-------|
|       | <b>LIQUEFIED PETROLEUM GAS (LPG) INSTALLATION (CONT'D)</b>  |                       |                                 |   |                 |       |
|       | <b>Underground bulk LPG storage vessel c/w saddle, pressure relief valve, shut off valve, emergency valve, liquid level device, contents and pressure gauges, manhole, vent pipes, securing facilities against flotation, fittings made accessible above ground level, coating, cathodic protection if necessary, filling and drain connections, and other associated accessories, for water capacity : -</b> | <b>Supply and fix</b> | <b>Take down and clear away</b> | <b>Take down and set aside for re-use</b> | <b>Fix only</b> |       |
|       | <i>Each</i>   | <b>A</b>              | <b>B</b>                        | <b>C</b>                                  | <b>D</b>        |       |
|       |   | <b>\$</b>             | <b>\$</b>                       | <b>\$</b>                                 | <b>\$</b>       |       |
| 41011 | Up to 2000 litres.....  | 32,744.25             | 4,903.06                        | 5,294.26                                  | 15,478.54       | 41011 |
| 41012 | 2000 - 4000 litres.....<br>(The actual rate should be : \$109,147.50 for Item 41012A)   | 10,914.75             | 5,140.57                        | 5,579.27                                  | 31,772.08       | 41012 |
| 41013 | 4000 - 5000 litres.....<br>(The actual rate should be : \$181,912.50 for Item 41013A)   | 18,191.25             | 5,220.68                        | 5,708.74                                  | 32,587.08       | 41013 |
| 41014 | 5000 - 7000 litres.....<br>(The actual rate should be : \$254,677.50 for Item 41014A)   | 25,467.75             | 5,319.40                        | 5,854.97                                  | 34,216.16       | 41014 |
| 41015 | 7000 - 9000 litres.....<br>(The actual rate should be : \$436,590.00 for Item 41015A)   | 43,659.00             | 5,687.32                        | 6,271.33                                  | 35,031.16       | 41015 |
|       | <b>Excess flow valve</b>  |                       |                                 |   |                 |       |
|       | <i>Per set</i>  |                       |                                 |   |                 |       |
| 41016 | Excess flow valve for cylinder liquid take-off line.....  | 727.65                | 18.63                           | 19.56                                     | 163.00          | 41016 |
|       | <b>Vaporizer, indirect heated type, flameproof/explosion proof c/w necessary accessories, valves, rubber hose, etc. for vaporizing capacity : -</b>   |                       |                                 |   |                 |       |
|       | <i>Each</i>   |                       |                                 |   |                 |       |
| 41017 | 25 kg/hr.....   | 32,744.25             | 106.19                          | 111.77                                    | 4,888.16        | 41017 |
| 41018 | 50 kg/hr.....   | 40,748.40             | 106.19                          | 111.77                                    | 4,888.16        | 41018 |

| Item  |  |                       |                                 |   | Item            |
|-------|--|-----------------------|---------------------------------|---|-----------------|
|       | <b>LIQUEFIED PETROLEUM GAS (LPG) INSTALLATION (CONT'D)</b>   |                       |                                 |   |                 |
|       | <b>Vaporizer, indirect heated type, flameproof/explosion proof c/w necessary accessories, valves, rubber hose, etc. for vaporizing capacity : - (Cont'd)</b> | <b>Supply and fix</b> | <b>Take down and clear away</b> | <b>Take down and set aside for re-use</b> | <b>Fix only</b> |
|       | <i>Each</i>  | <b>A</b>              | <b>B</b>                        | <b>C</b>                                  | <b>D</b>        |
|       |  | <b>\$</b>             | <b>\$</b>                       | <b>\$</b>                                 | <b>\$</b>       |
| 41019 | Changeover device for liquid withdrawal LPG.....   | 14,553.00             | 11.98                           | 12.24                                     | 815.01 41019    |
| 41020 | Changeover device for vapour withdrawal LPG.....   | 7,276.50              | 11.98                           | 12.24                                     | 407.04 41020    |
| 41021 | Medium/low pressure regulator, fail shut off type (all size) c/w necessary accessories, valves, pressure gauge, etc.....                                     | 10,914.75             | 11.98                           | 12.24                                     | 978.01 41021    |
| 41022 | High/medium pressure regulator c/w active & monitor regulator (all size) and necessary accessories, valves, pressure gauge, etc.....                         | 10,914.75             | 11.98                           | 12.24                                     | 978.01 41022    |
|       | <b>Galvanized mild steel gas pipe to BS EN 10255:2004 or ISO 65:1981, c/w all necessary accessories : -</b>  |                       |                                 |   |                 |
|       | <i>Per linear metre</i>  |                       |                                 |   |                 |
| 41023 | 15 mm diameter.....  | 346.39                | 5.54                            | 6.60                                      | 76.38 41023     |
| 41024 | 20 mm diameter.....  | 381.02                | 6.09                            | 7.17                                      | 90.35 41024     |
| 41025 | 25 mm diameter.....  | 415.66                | 6.26                            | 7.24                                      | 99.66 41025     |
| 41026 | 32 mm diameter.....  | 450.31                | 7.65                            | 8.30                                      | 118.30 41026    |
| 41027 | 40 mm diameter.....  | 481.09                | 8.80                            | 9.52                                      | 137.86 41027    |
| 41028 | 50 mm diameter.....  | 519.59                | 10.18                           | 10.90                                     | 162.07 41028    |
| 41029 | 65 mm diameter.....  | 617.03                | 12.01                           | 13.10                                     | 191.87 41029    |
| 41030 | 80 mm diameter.....  | 755.59                | 14.93                           | 15.71                                     | 233.79 41030    |
| 41031 | 100 mm diameter.....   | 921.78                | 17.82                           | 18.64                                     | 289.68 41031    |
| 41032 | 150 mm diameter.....   | 1,435.90              | 32.80                           | 35.16                                     | 458.27 41032    |

| Item   |                                    |                      |                                      |  | Item        |       |
|--|------------------------------------|----------------------|--------------------------------------|--|-------------|-------|
| <b>LIQUEFIED PETROLEUM GAS (LPG) INSTALLATION (CONT'D)</b>   |                                    |                      |                                      |  |             |       |
| <b>Underground galvanized mild steel gas pipe to BS EN 10216-1:2002, BS EN 10217-1:2002 or ANSI/API Spec 5L:2007 or ASTM A53/A53M-10:2010, c/w all necessary accessories : -</b> |                                    |                      |                                      |  |             |       |
| <i>Per linear metre</i>  |                                    |                      |                                      |  |             |       |
|  |                                    | Supply<br>and<br>fix | Take<br>down<br>and<br>clear<br>away | Take<br>down<br>and set<br>aside for<br>re-use | Fix<br>only |       |
|  |                                    | A<br>\$              | B<br>\$                              | C<br>\$  | D<br>\$     |       |
| 41033  | 20 mm diameter.....                | 406.43               | 6.60                                 | 7.00   | 108.98      | 41033 |
| 41034  | 25 mm diameter.....                | 443.38               | 6.76                                 | 7.24   | 121.08      | 41034 |
| 41035  | 32 mm diameter.....                | 480.33               | 7.65                                 | 8.56   | 138.78      | 41035 |
| 41036  | 40 mm diameter.....                | 513.17               | 8.95                                 | 9.92   | 163.00      | 41036 |
| 41037  | 50 mm diameter.....                | 554.23               | 10.18                                | 11.15  | 199.33      | 41037 |
| 41038  | 65 mm diameter.....                | 658.16               | 12.61                                | 13.59  | 232.86      | 41038 |
| 41039  | 80 mm diameter.....                | 805.97               | 15.21                                | 16.19  | 260.80      | 41039 |
| 41040  | 100 mm diameter.....               | 983.23               | 17.09                                | 18.72  | 344.63      | 41040 |
| 41041  | 150 mm diameter.....               | 1,531.62             | 28.25                                | 30.44  | 483.42      | 41041 |
| <b>Third stage governor regulator : -</b>  |                                    |                      |                                      |  |             |       |
| <i>Each</i>  |                                    |                      |                                      |  |             |       |
| 41042  | 15 mm diameter.....                | 363.82               | 23.69                                | 28.65  | 81.04       | 41042 |
| 41043  | 20 mm diameter.....                | 472.97               | 24.17                                | 29.23  | 122.02      | 41043 |
| 41044  | 25 mm diameter.....                | 618.50               | 24.74                                | 29.80  | 163.00      | 41044 |
| <b>Copper gas pipe c/w all necessary accessories : -</b>   |                                    |                      |                                      |  |             |       |
| <i>Per linear metre</i>  |                                    |                      |                                      |  |             |       |
| 41045  | 12 mm diameter.....                | 363.82               | 1.58                                 | 1.76   | 113.64      | 41045 |
| <b>LPG meter c/w all necessary accessories : -</b>   |                                    |                      |                                      |  |             |       |
| <i>Each</i>  |                                    |                      |                                      |  |             |       |
| 41046  | Up to 2.5 m <sup>3</sup> /hr.....  | 2,182.95             | 20.97                                | 25.71  | 122.02      | 41046 |
| 41047  | 2.5 - 6.5 m <sup>3</sup> /hr.....  | 5,093.55             | 26.18                                | 30.84  | 122.02      | 41047 |
| 41048  | 6.5 - 10.5 m <sup>3</sup> /hr..... | 14,553.00            | 31.37                                | 36.04  | 489.00      | 41048 |

| Item  |   |                       |                                 |   | Item            |
|-------|---|-----------------------|---------------------------------|---|-----------------|
|       | <b>LIQUEFIED PETROLEUM GAS (LPG) INSTALLATION (CONT'D)</b>  |                       |                                 |   |                 |
|       | <b>LPG isolating valve, globe type or ball type or gate type, including adaptors and flange as required : -</b>                                 | <b>Supply and fix</b> | <b>Take down and clear away</b> | <b>Take down and set aside for re-use</b> | <b>Fix only</b> |
|       | <i>Each</i>   | <b>A</b>              | <b>B</b>                        | <b>C</b>                                  | <b>D</b>        |
|       |   | <b>\$</b>             | <b>\$</b>                       | <b>\$</b>                                 | <b>\$</b>       |
| 41049 | 15 mm diameter.....   | 203.20                | 23.69                           | 28.65                                     | 81.04 41049     |
| 41050 | 20 mm diameter.....   | 246.68                | 24.17                           | 29.23                                     | 122.02 41050    |
| 41051 | 25 mm diameter.....   | 290.14                | 24.74                           | 29.80                                     | 163.00 41051    |
| 41052 | 32 mm diameter.....   | 351.00                | 25.31                           | 30.28                                     | 203.98 41052    |
| 41053 | 40 mm diameter.....   | 420.55                | 25.89                           | 30.85                                     | 228.20 41053    |
| 41054 | 50 mm diameter.....   | 507.48                | 26.94                           | 31.99                                     | 244.04 41054    |
| 41055 | 80 mm diameter.....   | 768.30                | 30.28                           | 33.50                                     | 489.00 41055    |
|       | <b>LPG cast steel isolating valve, globe type or ball type or gate type, stainless steel stem including adaptors and flange as required : -</b> |                       |                                 |   |                 |
|       | <i>Each</i>   |                       |                                 |   |                 |
| 41056 | 65 mm diameter.....   | 1,103.25              | 28.44                           | 33.50                                     | 407.04 41056    |
| 41057 | 80 mm diameter.....   | 1,509.73              | 30.21                           | 35.07                                     | 489.00 41057    |
| 41058 | 100 mm diameter.....  | 2,909.06              | 32.39                           | 37.10                                     | 570.04 41058    |
| 41059 | 150 mm diameter.....  | 7,421.41              | 43.14                           | 49.25                                     | 652.00 41059    |

| Item  |   |                      |                                      |  | Item        |       |
|---|---|----------------------|--------------------------------------|--|-------------|-------|
| <b>LIQUEFIED PETROLEUM GAS (LPG) INSTALLATION (CONT'D)</b>  |   |                      |                                      |  |             |       |
| <b>LPG cast steel quick-action shut-off valve, fail safe, lever operated globe type or ball type, stainless stem including adaptors and flange as required :-</b> |   |                      |                                      |  |             |       |
| <i>Each</i>   |   |                      |                                      |  |             |       |
|   |   | Supply<br>and<br>fix | Take<br>down<br>and<br>clear<br>away | Take<br>down<br>and set<br>aside for<br>re-use | Fix<br>only |       |
|   |   | A<br>\$              | B<br>\$                              | C<br>\$  | D<br>\$     |       |
| 41060   | 15 mm diameter.....   | 619.52               | 24.58                                | 29.89  | 81.04       | 41060 |
| 41061   | 20 mm diameter.....   | 707.94               | 25.06                                | 30.50  | 122.02      | 41061 |
| 41062   | 25 mm diameter.....   | 796.47               | 25.64                                | 31.08  | 163.00      | 41062 |
| 41063   | 32 mm diameter.....   | 1,106.24             | 26.25                                | 31.57  | 203.98      | 41063 |
| 41064   | 40 mm diameter.....   | 1,309.77             | 26.83                                | 32.15  | 228.20      | 41064 |
| 41065   | 50 mm diameter.....   | 1,592.94             | 27.91                                | 33.33  | 244.04      | 41065 |
| 41066   | 65 mm diameter.....   | 3,362.97             | 29.50                                | 34.95  | 407.04      | 41066 |
| 41067   | 80 mm diameter.....   | 4,002.07             | 31.30                                | 36.57  | 489.00      | 41067 |
| 41068   | 100 mm diameter.....  | 5,836.23             | 33.55                                | 38.75  | 570.04      | 41068 |
| 41069   | 150 mm diameter.....  | 12,339.60            | 44.65                                | 51.45  | 652.00      | 41069 |
| <b>LPG solenoid valve c/w all necessary accessories :-</b>  |   |                      |                                      |  |             |       |
| <i>Each</i>   |   |                      |                                      |  |             |       |
| 41070   | Up to 12 mm diameter.....   | 2,910.60             | 20.53                                | 25.03  | 652.00      | 41070 |
| 41071   | 12 - 20 mm diameter.....  | 5,821.20             | 20.94                                | 25.66  | 978.01      | 41071 |
| <b>LPG equipment, with GU mark, c/w all necessary accessories :-</b>  |   |                      |                                      |  |             |       |
| <i>Each</i>   |   |                      |                                      |  |             |       |
| 41072   | LPG water heater with or without wall case 5 - 10 litres/min..... | 4,365.90             | 64.39                                | 74.36  | 396.79      | 41072 |
| 41073   | Build-in stove/ring burner 1 ring.....                            | 5,821.20             | 14.01                                | 15.18  | 152.76      | 41073 |
| 41074   | Build-in stove/ring burner 2 rings.....                           | 18,191.25            | 14.23                                | 15.42  | 165.80      | 41074 |
| 41075   | LPG rice cooker 5 - 10 litres.....                                | 29,106.00            | 14.79                                | 16.02  | 188.15      | 41075 |

| Item  |  |                |                          |                                    |          |       |
|-------|--|----------------|--------------------------|------------------------------------|----------|-------|
|       | <b>LIQUEFIED PETROLEUM GAS (LPG) INSTALLATION (CONT'D)</b>   |                |                          |                                    |          |       |
|       | <b>Gas cooker c/w open ring burners, oven, hot plates, a grill, standard baking tray, a roasting tin and a ring type wok adaptor suitable for 300 mm diameter nominal size Chinese wok.</b>  | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only |       |
|       | <b>Cooking range power : -</b>   |                |                          |                                    |          |       |
|       | <i>Each</i>  | A \$           | B \$                     | C \$                               | D \$     |       |
| 41076 | up to 11.5 kW.....   | 18,191.25      | 307.37                   | 323.21                             | 604.50   | 41076 |
| 41077 | 11.5 - 16.7 kW.....  | 32,744.25      | 406.11                   | 427.54                             | 645.49   | 41077 |
|       | <b>LPG Chinese cooking steamer c/w burners, air blowers, gas cock, 3 steam trays per steamer unit, rice pans, operational and safety controls, water faucet, flame failure device, automatic gas controller with solenoid valves, flue pipe, dim sum plates, dim sum tray stand, steamer funnel and all necessary accessories : -</b>                                |                |                          |                                    |          |       |
|       | <i>Each</i>  |                |                          |                                    |          |       |
| 41078 | Single unit.....   | 36,382.50      | 193.74                   | 267.32                             | 1,580.64 | 41078 |
| 41079 | Double unit.....   | 58,212.00      | 231.93                   | 305.51                             | 1,671.91 | 41079 |
|       | <b>LPG Chinese cooking range c/w burners, air blowers, gas cock, operational and safety controls, splash plate, water faucet, water pot, flame failure device, automatic gas controller with solenoid valves, refractory brick lined combustion chamber, removable stainless steel plate for spice pots, flue pipes, tail pots and all necessary accessories : -</b> |                |                          |                                    |          |       |
|       | <i>Each</i>  |                |                          |                                    |          |       |
| 41080 | 1 x 300 to 600 mm diameter wok.....  | 58,212.00      | 201.20                   | 270.12                             | 1,477.25 | 41080 |
| 41081 | 2 x 300 to 600 mm diameter wok.....<br>(The actual rate should be : \$130,977.00 for Item 41081A)  | 13,097.70      | 225.41                   | 375.37                             | 2,422.65 | 41081 |
| 41082 | 1 x 800 mm diameter build-in wok.....  | 87,318.00      | 226.34                   | 281.29                             | 1,491.23 | 41082 |
| 41083 | 2 x 800 mm diameter build-in wok.....<br>(The actual rate should be : \$203,742.00 for Item 41083A)  | 20,374.20      | 260.80                   | 417.29                             | 2,549.33 | 41083 |

| Item   |   | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only | Item  |
|--|---|----------------|--------------------------|------------------------------------|----------|-------|
| <b>LIQUEFIED PETROLEUM GAS (LPG) INSTALLATION (CONT'D)</b>   |   |                |                          |                                    |          |       |
| <b>Pressure test of existing LPG pipework : -</b><br>(Note : The following four items will only be paid for if ordered by the Maintenance Surveyor in writing) |   |                |                          |                                    |          |       |
| <i>Per pipeline</i>  |   | A<br>\$        | B<br>\$                  | C<br>\$                            | D<br>\$  |       |
| 41084  | 15 - 25 mm.....   | 3,030.88       | -                        | -                                  | -        | 41084 |
| 41085  | 25 - 50 mm.....   | 3,281.43       | -                        | -                                  | -        | 41085 |
| 41086  | 50 - 80 mm.....   | 3,806.76       | -                        | -                                  | -        | 41086 |
| 41087  | 80 - 200 mm.....  | 4,573.33       | -                        | -                                  | -        | 41087 |
| <b>Sundries : -</b>  |   |                |                          |                                    |          |       |
| <i>Each</i>  |   |                |                          |                                    |          |       |
| 41088  | Stainless steel box 1.5 mm thick, glass-fronted; size 230 mm x 250 mm x 250 mm.....   | 727.65         | 9.61                     | 9.92                               | 40.05    | 41088 |
| 41089  | LPG vaporizer, indirect heated type, flameproof/explosion proof c/w necessary accessories, valves, rubber hose, etc. for vaporizing capacity 100 kg/hr..... | 43,659.00      | 158.34                   | 162.07                             | 6,517.22 | 41089 |
| <b>LPG water heater c/w internal water tank, operational controls, safety features, control panel, flame failure device and all necessary accessories : -</b>  |   |                |                          |                                    |          |       |
| <b>Capacity : -</b>  |   |                |                          |                                    |          |       |
| <i>Each</i>  |   |                |                          |                                    |          |       |
| 41090  | 200 to 300 Litres.....<br>(The actual rate should be : \$254,677.50 for Item 41090A)  | 25,467.75      | 179.77                   | 209.58                             | 3,461.21 | 41090 |
| 41091  | 300 to 450 Litres.....<br>(The actual rate should be : \$327,442.50 for Item 41091A)  | 32,744.25      | 179.77                   | 209.58                             | 4,973.84 | 41091 |

**Section 42**

**TOWN GAS**



## SECTION 42

### TOWN GAS

#### SPECIAL CONDITIONS

|  |                |  |
|--|----------------|--|
| <b>Measurement of excavations, chases, holes and other subsidiary work</b> | <b>SC42.01</b> | All trench excavation shall be measured separately and paid for at the appropriate rates under Section 03 - Excavation of this Schedule. All chases in, and holes through existing walls, ceilings, etc. for tubing and pipes, (but not mortices or holes for brackets) shall be measured and paid for at the appropriate rates under Section 04 - Concrete Work, Section 05 - Brickwork and Blockwork or other applicable Work Sections of this Schedule.   |
| <b>Measurement of pipework</b>   | <b>SC42.02</b> | Pipework shall be measured in linear metres over all in-line fittings, short running lengths and branches.   |
| <b>Measurement of pressure test of existing pipework</b>                   | <b>SC42.03</b> | Testing and commissioning including submission of Testing and Commissioning Certificates and Records of Tests have been allowed in the rates under this Section. No measurement will be made for testing and commissioning except for pressure test of existing pipework where specifically ordered by the Maintenance Surveyor in writing.  |
| <b>Measurement of temporary supply</b>                                     | <b>SC42.04</b> | <p>Where a temporary supply is ordered by the Maintenance Surveyor, the provision of all articles, labour and accessory materials (nails, screws, rawplugs and similar) necessary for fixing shall be of temporary nature. For "use and waste" of all materials, such as pipework, fittings and accessories, etc., for a period of not exceeding four weeks from the date of certified completion, 50 per cent of the value of the appropriate "supply and fix" items after the adjustment of contract percentages will be paid. For a period exceeding four weeks and not exceeding eight weeks, 55 per cent will be paid and for each subsequent month a further addition of 5 per cent will be made.</p> <p>For a period of more than six months, the full rates, as for permanent works will be paid, and the materials will become the property of the Employer.</p> <p>No extra payment will be made for the removal of materials in connection with the temporary supply, but the cost of which shall have been included in the payment as aforementioned in the first paragraph hereof. The date of certified completion of a temporary supply shall be the date when the installation is first brought into service. The date when it ceases to be used shall be the date from which the Maintenance Surveyor instructs the dismantlement of the installation, or the date when the installation is no longer in use, whichever is earlier.</p> |

### SPECIAL CONDITIONS

|                        |                |  |
|------------------------|----------------|--|
| <b>Rates generally</b> | <b>SC42.05</b> | <p>The rates for all items shall generally include for : -</p> <ul style="list-style-type: none"> <li>(a) Colour band and colour identification work.</li> <li>(b) Lettering and engraving for identification, signs, labels in both English and Chinese.</li> <li>(c) Identification plates, signs, notice plates, discs and labels in both English and Chinese.</li> <li>(d) Priming or painting off site and proprietary finishes or surface treatment applied as part of the production process whether applied before or after fabrication and assembly.</li> <li>(e) All protective and finishing painting work, apart from additional painting work specifically ordered by the Maintenance Surveyor in writing which shall be measured separately and paid for at the appropriate rates under Section 15 - Painting of this Schedule.</li> <li>(f) Any kind of fixing method including provision of screws, nuts, bolts, shims, washers, clips, brackets, hangers, supports and the like.</li> <li>(g) Provision of expansion joints in service runs wherever they coincide with structural expansion joints.</li> <li>(h) Submission of catalogues, technical literature, data, calculations, test certificates and approval documentation covering the equipment and materials being supplied.</li> <li>(i) Preparing and submitting detail working drawings as required and all shop drawings for the fabrication and installation.</li> <li>(j) Attendance, as required, of the manufacturers' representative to assist in the installation and subsequent testing and commissioning.</li> <li>(k) Testing and commissioning including submission of Testing and Commissioning Certificates and Records of Tests, except pressure test of existing pipework. (Note : - Pressure test of existing pipework shall be measured separately if ordered by the Maintenance Surveyor in writing)</li> <li>(l) Provision of all necessary testing instrument of approved type for testing and commissioning.</li> <li>(m) Provision of mock-up work as specified.</li> <li>(n) Preparing and submitting operation and maintenance manuals and as-fitted drawings for items of works as required.</li> <li>(o) Provision of schematic diagrams covered front and back with plastic sheet including fixing to wall.</li> <li>(p) Provision of manufacturer's guarantee.</li> </ul> |
|------------------------|----------------|--|

**SPECIAL CONDITIONS**

**Rates for  
pipework**

**SC42.06**

The rates for pipework shall further include for : -

- (a) All short lengths, cutting and waste, and joints in the running length.
- (b) All pipework brackets, supports, hangers, guides, anchors and the like and alternative method of jointing and fixing as specified (if any).
- (c) All pipework fittings (e.g. bends, elbows, branches, reducers, tees, caps and the like) including connections, cutting and jointing pipes to fittings.
- (d) Screwed sockets, tappings, bosses and welding-necks welded to pipes or flanges including perforating the pipework or flanges.
- (e) Connections between pipework of different materials and differing grades of same material.
- (f) Wall, floor and ceiling plates.
- (g) All jointing including provision of flexible connections and/or necessary adaptors and connectors, welding consumable, jointing tapes, flanges, unions, gasket, bolts and nuts and the like where required.
- (h) Expansion loops and compensators including connections, cutting and jointing to pipes and fittings.
- (i) Provision of all sleeves for casting in or building in where pipes pass through slabs, walls or beams and caulking between pipe and sleeve where required.
- (j) Fixing in any position to floors, walls and ceilings including laying in trenches and fixing in chases, ducts, false ceilings and similar positions, and wrapping with protective tape where required.

**Rates for  
in-line  
pipework  
equipment**

**SC42.07**

The rates for in-line pipework equipment (e.g. valves, flow meters, gauges and the like) shall further include for : -

- (a) Cutting and jointing to pipes and fittings.
- (b) Stripping down repacking glands and preparing spindles, as appropriate, prior to installation.

**SPECIAL CONDITIONS**

**Rates for pressure test of existing pipework**

**SC42.08**

The rates for pressure test of existing pipework (including associated in-line fittings and in-line pipework equipment and the like) shall include for : -

- (a) De-gasing and cleaning of pipeline by any means necessary before carrying out any test.
- (b) All preparation work including temporary sealing ends of pipes and connections.
- (c) Provision of all necessary testing instrument of approved type for pressure test.
- (d) Provision of test record.
- (e) Submission of Surveyor Certificate as specified.
- (f) Making good all works disturbed.
- (g) Purging into service.

**Rates for "Take down and clear away" or "Take down and set aside for re-use"**

**SC42.09**

The rates for "Take down and clear away" or "Take down and set aside for re-use" existing items in connection with town gas installation shall further include for : -

- (a) Taking down all associated pipeworks and building services works (if any).
- (b) All in-line fittings including brackets, supports, hangers and the like.
- (c) Cutting into existing pipework in position.
- (d) De-gasing of existing pipework (including associated in-line fittings and the like) as required.
- (e) Plugging off remaining ends with plugs or caps as required.
- (f) Preparing remaining ends of pipeworks and building services works (if any) to receive connections with new work if required.
- (g) Making good all works disturbed.

**Particular Specification**

**SC42.10**

The Particular Specification for town gas installation can be found in the Contract.

| Item   |                      |                      |                                      |  | Item        |       |
|--|----------------------|----------------------|--------------------------------------|--|-------------|-------|
| <b>TOWN GAS INSTALLATION</b>   |                      |                      |                                      |  |             |       |
| <b>Galvanized mild steel gas pipe to BS EN 10255:2004 or ISO 65:1981, c/w all necessary accessories : -</b>  |                      |                      |                                      |  |             |       |
| <i>Per linear metre</i>  |                      |                      |                                      |  |             |       |
|  |                      | Supply<br>and<br>fix | Take<br>down<br>and<br>clear<br>away | Take<br>down<br>and set<br>aside for<br>re-use | Fix<br>only |       |
|  |                      | A<br>\$              | B<br>\$                              | C<br>\$  | D<br>\$     |       |
| 42001  | 15 mm diameter.....  | 346.39               | 5.54                                 | 6.60   | 76.38       | 42001 |
| 42002  | 20 mm diameter.....  | 381.02               | 6.10                                 | 7.17   | 90.35       | 42002 |
| 42003  | 25 mm diameter.....  | 415.66               | 6.26                                 | 7.24   | 99.66       | 42003 |
| 42004  | 32 mm diameter.....  | 450.31               | 7.65                                 | 8.30   | 118.30      | 42004 |
| 42005  | 40 mm diameter.....  | 481.09               | 8.80                                 | 9.52   | 137.86      | 42005 |
| 42006  | 50 mm diameter ..... | 519.59               | 10.18                                | 10.90  | 162.07      | 42006 |
| 42007  | 65 mm diameter.....  | 617.03               | 11.98                                | 13.10  | 191.87      | 42007 |
| 42008  | 80 mm diameter.....  | 755.59               | 14.91                                | 15.71  | 233.79      | 42008 |
| 42009  | 100 mm diameter..... | 921.78               | 17.82                                | 18.64  | 289.68      | 42009 |
| 42010  | 150 mm diameter..... | 1,435.91             | 32.80                                | 35.16  | 458.27      | 42010 |
| <b>Underground galvanized mild steel gas pipe to BS EN 10216-1:2002, BS EN 10217-1:2002 or ANSI/API Spec 5L:2007 or ASTM A53/A53M-10:2010, c/w all necessary accessories : -</b> |                      |                      |                                      |  |             |       |
| <i>Per linear metre</i>  |                      |                      |                                      |  |             |       |
| 42011  | 20 mm diameter.....  | 406.43               | 6.60                                 | 7.00   | 108.98      | 42011 |
| 42012  | 25 mm diameter.....  | 443.38               | 6.76                                 | 7.24   | 121.08      | 42012 |
| 42013  | 32 mm diameter.....  | 480.33               | 7.65                                 | 8.56   | 138.78      | 42013 |
| 42014  | 40 mm diameter.....  | 513.17               | 8.95                                 | 9.92   | 163.00      | 42014 |
| 42015  | 50 mm diameter ..... | 554.23               | 10.18                                | 11.15  | 199.33      | 42015 |
| 42016  | 65 mm diameter.....  | 658.16               | 12.61                                | 13.59  | 232.86      | 42016 |
| 42017  | 80 mm diameter.....  | 805.97               | 15.21                                | 16.19  | 260.80      | 42017 |
| 42018  | 100 mm diameter..... | 983.23               | 17.09                                | 18.72  | 344.63      | 42018 |
| 42019  | 150 mm diameter..... | 1,531.62             | 28.25                                | 30.44  | 483.42      | 42019 |

| Item  |  |                      |                                      |  | Item        |
|-------|--|----------------------|--------------------------------------|--|-------------|
|       | <b>TOWN GAS INSTALLATION (CONT'D)</b>  |                      |                                      |  |             |
|       |  | Supply<br>and<br>fix | Take<br>down<br>and<br>clear<br>away | Take<br>down<br>and set<br>aside for<br>re-use | Fix<br>only |
|       |  | A<br>\$              | B<br>\$                              | C<br>\$  | D<br>\$     |
|       | <b>Bronze isolating valve, globe type or gate type or ball type, including adaptors and flanges as required : -</b>                          |                      |                                      |  |             |
|       | <i>Each</i>  |                      |                                      |  |             |
| 42020 | 15 mm diameter.....  | 203.20               | 23.69                                | 28.65  | 81.04       |
| 42021 | 20 mm diameter.....  | 246.68               | 24.17                                | 29.23  | 122.02      |
| 42022 | 25 mm diameter.....  | 290.14               | 24.74                                | 29.80  | 163.00      |
| 42023 | 32 mm diameter.....  | 351.00               | 25.31                                | 30.28  | 203.98      |
| 42024 | 40 mm diameter.....  | 420.55               | 25.89                                | 30.85  | 228.20      |
| 42025 | 50 mm diameter .....   | 507.48               | 26.94                                | 31.99  | 244.04      |
| 42026 | 80 mm diameter.....  | 768.30               | 30.28                                | 34.93  | 489.00      |
|       | <b>Cast steel isolating valve, globe type or gate type or ball type, stainless steel stem including adaptors and flanges as required : -</b> |                      |                                      |  |             |
|       | <i>Each</i>  |                      |                                      |  |             |
| 42027 | 65 mm diameter.....  | 2,353.62             | 28.44                                | 33.50  | 407.04      |
| 42028 | 80 mm diameter.....  | 2,864.19             | 30.21                                | 35.07  | 489.00      |
| 42029 | 100 mm diameter.....   | 3,920.28             | 32.39                                | 37.10  | 570.04      |
| 42030 | 150 mm diameter.....   | 9,188.42             | 43.14                                | 49.25  | 652.00      |
|       | <b>Bronze quick action shut-off valves, lever-operated ball type or globe type, including adaptors and flanges as required : -</b>           |                      |                                      |  |             |
|       | <i>Each</i>  |                      |                                      |  |             |
| 42031 | 20 mm diameter.....  | 204.60               | 24.17                                | 29.23  | 122.02      |
| 42032 | 25 mm diameter.....  | 290.14               | 24.74                                | 29.80  | 163.00      |
| 42033 | 32 mm diameter.....  | 363.61               | 25.31                                | 30.28  | 203.98      |
| 42034 | 40 mm diameter.....  | 461.76               | 25.89                                | 30.85  | 228.20      |
| 42035 | 50 mm diameter .....   | 620.08               | 26.94                                | 31.99  | 244.04      |

| Item   | Item   |                                    |                          |                                    |          |         |         |         |         |
|--|--|------------------------------------|--------------------------|------------------------------------|----------|---------|---------|---------|---------|
| <b>TOWN GAS INSTALLATION (CONT'D)</b>  |  |                                    |                          |                                    |          |         |         |         |         |
| <b>Cast steel quick action shut-off valves, lever-operated ball type or globe type, stainless steel stem including adaptors and flanges as required : -</b>          |  |                                    |                          |                                    |          |         |         |         |         |
|  | <table border="1"> <thead> <tr> <th style="text-align: center;">Supply and fix</th> <th style="text-align: center;">Take down and clear away</th> <th style="text-align: center;">Take down and set aside for re-use</th> <th style="text-align: center;">Fix only</th> </tr> <tr> <th style="text-align: center;">A<br/>\$</th> <th style="text-align: center;">B<br/>\$</th> <th style="text-align: center;">C<br/>\$</th> <th style="text-align: center;">D<br/>\$</th> </tr> </thead> </table> | Supply and fix                     | Take down and clear away | Take down and set aside for re-use | Fix only | A<br>\$ | B<br>\$ | C<br>\$ | D<br>\$ |
| Supply and fix   | Take down and clear away   | Take down and set aside for re-use | Fix only                 |                                    |          |         |         |         |         |
| A<br>\$  | B<br>\$  | C<br>\$                            | D<br>\$                  |                                    |          |         |         |         |         |
| <i>Each</i>  |  |                                    |                          |                                    |          |         |         |         |         |
| 42036 65 mm diameter.....  | 3,022.24 28.44 33.50 407.04 42036  |                                    |                          |                                    |          |         |         |         |         |
| 42037 80 mm diameter.....  | 3,280.07 30.21 35.07 489.00 42037  |                                    |                          |                                    |          |         |         |         |         |
| 42038 100 mm diameter.....   | 4,603.23 32.39 37.10 570.04 42038  |                                    |                          |                                    |          |         |         |         |         |
| 42039 150 mm diameter.....   | 11,256.17 43.14 49.25 652.00 42039   |                                    |                          |                                    |          |         |         |         |         |
| <b>Town gas outlet point c/w cocks, including adaptors and flanges as required : -</b>   |  |                                    |                          |                                    |          |         |         |         |         |
| <i>Each</i>  |  |                                    |                          |                                    |          |         |         |         |         |
| 42040 20 mm diameter.....  | 313.78 24.99 31.91 39.12 42040   |                                    |                          |                                    |          |         |         |         |         |
| 42041 25 mm diameter.....  | 320.70 25.55 32.48 40.98 42041   |                                    |                          |                                    |          |         |         |         |         |
| <b>Gas cock : -</b>  |  |                                    |                          |                                    |          |         |         |         |         |
| <i>Each</i>  |  |                                    |                          |                                    |          |         |         |         |         |
| 42042 2-way flexible tube cock.....  | 518.70 31.83 38.99 49.36 42042   |                                    |                          |                                    |          |         |         |         |         |
| 42043 2-way bench cock, laboratory type 15 mm diameter.....  | 539.99 31.83 38.99 49.36 42043   |                                    |                          |                                    |          |         |         |         |         |
| <b>Sundries : -</b>  |  |                                    |                          |                                    |          |         |         |         |         |
| <i>Each</i>  |  |                                    |                          |                                    |          |         |         |         |         |
| 42044 Stainless steel box 1.5 mm thick, glass-fronted; size 230 mm x 250 mm x 250 mm.....  | 531.75 9.61 9.92 40.05 42044   |                                    |                          |                                    |          |         |         |         |         |
| <b>Pressure test of existing town gas pipeworks : -</b><br>(Note : The following four items will only be paid for if ordered by the Maintenance Surveyor in writing) |  |                                    |                          |                                    |          |         |         |         |         |
| <i>Per pipeline</i>  |  |                                    |                          |                                    |          |         |         |         |         |
| 42045 15 - 25 mm.....  | 3,030.88 - - - 42045   |                                    |                          |                                    |          |         |         |         |         |
| 42046 25 - 50 mm.....  | 3,281.43 - - - 42046   |                                    |                          |                                    |          |         |         |         |         |
| 42047 50 - 80 mm.....  | 3,806.76 - - - 42047   |                                    |                          |                                    |          |         |         |         |         |
| 42048 80 - 200 mm.....   | 4,573.33 - - - 42048   |                                    |                          |                                    |          |         |         |         |         |

**Section 43**

**MEDICAL GASES**



## SECTION 43

### MEDICAL GASES

#### SPECIAL CONDITIONS

|  |                |  |
|--|----------------|--|
| <b>Measurement of excavations, chases, holes and other subsidiary work</b> | <b>SC43.01</b> | All trench excavation shall be measured separately and paid for at the appropriate rates under Section 03 - Excavation of this Schedule. All chases in, and holes through existing walls, ceilings, etc. for tubing and pipes, (but not mortices or holes for brackets) shall be measured and paid for at the appropriate rates under Section 04 - Concrete Work, Section 05 - Brickwork and Blockwork or other applicable Work Sections of this Schedule.   |
| <b>Measurement of power supply</b>   | <b>SC43.02</b> | All works of electrical power supply up to power supply points (e.g. switchgear or isolator or spur unit and the like) for the equipment shall be measured separately and paid for at the appropriate rates under Section 27 - Lighting Systems and Fixtures, Section 28 - Small Power Distribution, Section 29 - Main Distribution Systems and Section 30 - Miscellaneous Electrical Installations or other applicable Work Sections of this Schedule.  |
| <b>Measurement of pipework</b>   | <b>SC43.03</b> | Pipework shall be measured in linear metres over all in-line fittings, short running lengths and branches.   |
| <b>Measurement of indicating/control panel</b>                             | <b>SC43.04</b> | The indicating/control panel shall be assumed to be located on the same floor as the medical gas pipeline installation. When this panel is located on other floor, the interconnecting cables and the conduit facilities shall be measured separately from the control panel to the junction box on that floor for which the gas points of that floor are grouped for connection to the control panel. In such case, the junction box shall be assumed to be located as near as possible to the control panel. |
| <b>Measurement of tests on existing medical gases system</b>               | <b>SC43.05</b> | Testing and commissioning including submission of Testing and Commissioning Certificates and Records of Tests have been allowed in the rates under this Section. No measurement will be made for testing and commissioning except for tests on existing medical gases system where specifically ordered by the Maintenance Surveyor in writing.  |

**SPECIAL CONDITIONS**

**Measurement  
of temporary  
supply**

**SC43.06**

Where a temporary supply is ordered by the Maintenance Surveyor, the provision of all articles, labour and accessory materials (nails, screws, rawplugs and similar) necessary for fixing shall be of temporary nature. For "use and waste" of all materials, such as pipework, fittings and accessories, etc., for a period of not exceeding four weeks from the date of certified completion, 50 per cent of the value of the appropriate "supply and fix" items after the adjustment of contract percentages will be paid. For a period exceeding four weeks and not exceeding eight weeks, 55 per cent will be paid and for each subsequent month a further addition of 5 per cent will be made.

For a period of more than six months, the full rates, as for permanent works will be paid, and the materials will become the property of the Employer.

No extra payment will be made for the removal of materials in connection with the temporary supply, but the cost of which shall have been included in the payment as aforementioned in the first paragraph hereof. The date of certified completion of a temporary supply shall be the date when the installation is first brought into service. The date when it ceases to be used shall be the date from which the Maintenance Surveyor instructs the dismantlement of the installation, or the date when the installation is no longer in use, whichever is earlier.

**Rates generally**

**SC43.07**

The rates for all items shall generally include for : -

- (a) Colour band and colour identification work.
- (b) Lettering and engraving for identification, signs, labels in both English and Chinese.
- (c) Identification plates, signs, notice plates, discs and labels in both English and Chinese.
- (d) Priming or painting off site and proprietary finishes or surface treatment applied as part of the production process whether applied before or after fabrication and assembly.
- (e) All protective and finishing painting work, apart from additional painting work specifically ordered by the Maintenance Surveyor in writing which shall be measured separately and paid for at the appropriate rates under Section 15 - Painting of this Schedule.
- (f) Any kind of fixing method including provision of screws, nuts, bolts, shims, washers, clips, brackets, hangers, supports and the like.
- (g) Provision of expansion joints in service runs wherever they coincide with structural expansion joints.
- (h) Submission of catalogues, technical literature, data, calculations, test certificates and approval documentation covering the equipment and materials being supplied.

**SPECIAL CONDITIONS**

**Rates generally  
(Cont'd)**

**SC43.07  
(Cont'd)**

- (i) Preparing and submitting detail working drawings as required and all shop drawings for the fabrication and installation.
- (j) Attendance, as required, of the manufacturers' representative to assist in the installation and subsequent testing and commissioning.
- (k) Testing and commissioning including submission of Testing and Commissioning Certificates and Records of Tests, except tests on existing medical gases system. (Note : - Tests on existing medical gases system shall be measured separately if ordered by the Maintenance Surveyor in writing)
- (l) Provision of all necessary power, labour and testing instrument of approved type for testing and commissioning.
- (m) Provision of mock-up work as specified.
- (n) Preparing and submitting operation and maintenance manuals and as-fitted drawings for items of works as required.
- (o) Provision of schematic diagrams covered front and back with plastic sheet including fixing to wall.
- (p) Provision of manufacturer's guarantee.

**Rates for  
pipework**

**SC43.08**

The rates for pipework shall further include for : -

- (a) All short lengths, cutting and waste, and joints in the running length.
- (b) All pipework brackets, supports, hangers, guides, anchors and the like and alternative method of jointing and fixing as specified (if any).
- (c) All pipework fittings (e.g. bends, elbows, branches, reducers, tees, caps and the like) including connections, cutting and jointing pipes to fittings.
- (d) Screwed sockets, tappings, bosses and welding-necks welded to pipes or flanges including perforating the pipework or flanges.
- (e) Connections between pipework of different materials and differing grades of same material.
- (f) Wall, floor and ceiling plates.
- (g) All jointing including provision of flexible connections and/or necessary adaptors and connectors, welding consumable, jointing tapes, flanges, unions, gasket, bolts and nuts and the like where required.

**SPECIAL CONDITIONS**

|   |                         |   |
|---|-------------------------|---|
| <b>Rates for pipework (Cont'd)</b>          | <b>SC43.08 (Cont'd)</b> | <ul style="list-style-type: none"> <li>(h) Expansion loops and compensators including connections, cutting and jointing to pipes and fittings.</li> <li>(i) Provision of all sleeves for casting in or building in where pipes pass through slabs, walls or beams and caulking between pipe and sleeve where required.</li> <li>(j) Fixing in any position to floors, walls and ceilings including laying in trenches and fixing in chases, ducts, false ceilings and similar positions, and wrapping with protective tape where required.</li> </ul>   |
| <b>Rates for in-line pipework equipment</b> | <b>SC43.09</b>          | <p>The rates for in-line pipework equipment (e.g. valves, flow meters, gauges and the like) shall further include for : -</p> <ul style="list-style-type: none"> <li>(a) Cutting and jointing to pipes and fittings.</li> <li>(b) Stripping down repacking glands and preparing spindles, as appropriate, prior to installation.</li> </ul>   |
| <b>Rates for indicating/control panels</b>  | <b>SC43.10</b>          | <p>Indicating/control panel shall be measured on the basis of complete unit monitoring and controlling the number of zones as specified. Rates for indicating/control panels shall further include for all necessary control wiring, electronic components, relays, contacts, indicating lamp, push button package, selector switches, interconnecting cable and associated conduit/trunking between the equipment and the indicating/control panel and/or for connecting to existing indicating/control panel as required.</p>   |
| <b>Rates for equipment</b>                  | <b>SC43.11</b>          | <p>The rate for equipment shall further include for : -</p> <ul style="list-style-type: none"> <li>(a) All necessary assembly, orientation, alignment, levelling and bolting down, together with the provision of shims and packing pieces, strainers, instrumentation and the like.</li> <li>(b) Provision of all associated components.</li> <li>(c) Final connection and terminations to gas supply including all necessary pipework, valves, gauges and necessary accessories required for energizing the equipment to properly operate at specified duties.</li> <li>(d) Earth/equipotential bonding.</li> </ul> |

**SPECIAL CONDITIONS**

**Rates for tests on existing medical gases system**

**SC43.12**

The rates for tests on existing medical gases system shall include for : -

- (a) Cleaning of pipeline by any means necessary before carrying out any tests.
- (b) All preparation work including temporary sealing ends of pipes and connections.
- (c) Provision of all necessary testing instrument and material of approved type for the tests.
- (d) Provision of test record.
- (e) Making good all works disturbed.

**Rates for "Take down and clear away" or "Take down and set aside for re-use"**

**SC43.13**

The rates for "Take down and clear away" or "Take down and set aside for re-use" existing items in connection with medical gases installation shall further include for : -

- (a) Taking down all associated pipework and building services works (if any).
- (b) All in-line fittings including brackets, supports, hangers and the like.
- (c) Cutting into existing pipework in position.
- (d) De-gasing of existing pipework (including associated in-line fittings and the like) as required.
- (e) Plugging off remaining ends with plugs or caps as required.
- (f) Preparing remaining ends of pipework and building services works (if any) to receive connections with new work if required.
- (g) Making good all works disturbed.

**SPECIAL CONDITIONS**

**Rates for rental charges for gas regulators, cylinders and other accessories**

**SC43.14**

The rates for rental charges for gas regulators, cylinders and other accessories shall include for : -

- (a) Mobilization and demobilization of gas regulators, cylinders and other accessories.
- (b) Maintenance and repair.
- (c) Installation in position including all necessary connection to the system.
- (d) Contractor's profit, establishment and overheads.
- (e) Licence fees, patent rights and royalties where applicable.

**Rates for charges for gas filling**

**SC43.15**

The rates for charges for gas filling shall include for : -

- (a) Filling up empty cylinders with gas by any means necessary.
- (b) Disconnecting before filling of gas and reconnecting to the system after completion of gas filling.

**Particular Specification**

**SC43.16**

The Particular Specification for medical gases installation can be found in the Contract.

| Item  |   |                |                          |                                    | Item     |       |
|-------|---|----------------|--------------------------|------------------------------------|----------|-------|
|       | <b>MEDICAL GASES INSTALLATION</b>   |                |                          |                                    |          |       |
|       | <b>Medical gas pipework c/w all necessary accessories</b>   | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only |       |
|       | <b>Degreased pipework of phosphorous de-oxidized non-arsenical copper to BS EN 1976:1998, BS EN 1057 and BS EN 13348 c/w lock to suit HTM2022's requirement : -</b> |                |                          |                                    |          |       |
|       | <i>Per linear metre</i>   | A \$           | B \$                     | C \$                               | D \$     |       |
| 43001 | 12 mm diameter.....   | 249.48         | 8.59                     | 9.39                               | 156.49   | 43001 |
| 43002 | 15 mm diameter.....   | 271.76         | 9.39                     | 10.45                              | 163.96   | 43002 |
| 43003 | 22 mm diameter.....   | 307.44         | 11.13                    | 11.85                              | 176.69   | 43003 |
| 43004 | 28 mm diameter.....   | 350.07         | 12.20                    | 13.24                              | 190.30   | 43004 |
| 43005 | 35 mm diameter.....   | 434.71         | 13.24                    | 14.26                              | 200.33   | 43005 |
| 43006 | 42 mm diameter.....   | 529.43         | 14.50                    | 15.55                              | 232.05   | 43006 |
| 43007 | 54 mm diameter.....   | 623.91         | 15.55                    | 16.81                              | 263.00   | 43007 |
| 43008 | 76 mm diameter.....   | 921.10         | 19.73                    | 21.00                              | 310.12   | 43008 |
| 43009 | 108 mm diameter.....  | 1,210.76       | 23.91                    | 26.23                              | 387.85   | 43009 |
| 43010 | 159 mm diameter.....  | 1,835.07       | 32.13                    | 34.42                              | 511.52   | 43010 |
|       | <b>Underground medical gas pipework c/w galvanized iron pipe of suitable size enclosing the underground medical gas pipe and all necessary accessories</b>          |                |                          |                                    |          |       |
|       | <b>Degreased pipework of phosphorous de-oxidized non-arsenical copper to BS EN 1976:1998, BS EN 1057 and BS EN 13348 c/w lock to suit HTM2022's requirement : -</b> |                |                          |                                    |          |       |
|       | <i>Per linear metre</i>   |                |                          |                                    |          |       |
| 43011 | 12 mm diameter.....   | 362.36         | 16.94                    | 18.20                              | 196.50   | 43011 |
| 43012 | 15 mm diameter.....   | 375.87         | 17.99                    | 19.26                              | 206.60   | 43012 |
| 43013 | 22 mm diameter.....   | 453.75         | 20.76                    | 21.82                              | 261.85   | 43013 |
| 43014 | 28 mm diameter.....   | 511.80         | 22.75                    | 24.24                              | 293.67   | 43014 |

| Item   |                      |          |       |        | Item   |       |
|--|----------------------|----------|-------|--------|--------|-------|
| <b>MEDICAL GASES INSTALLATION (CONT'D)</b>   |                      |          |       |        |        |       |
| <b>Underground medical gas pipework c/w galvanized iron pipe of suitable size enclosing the underground medical gas pipe and all necessary accessories (Cont'd)</b>          |                      |          |       |        |        |       |
| <b>Degreased pipework of phosphorous de-oxidized non-arsenical copper to BS EN 1976:1998, BS EN 1057 and BS EN 13348 c/w lock to suit HTM2022's requirement : - (Cont'd)</b> |                      |          |       |        |        |       |
| <i>Per linear metre</i>  |                      |          |       |        |        |       |
|  |                      | A        | B     | C      | D      |       |
|  |                      | \$       | \$    | \$     | \$     |       |
| 43015  | 35 mm diameter.....  | 643.77   | 25.08 | 26.23  | 321.82 | 43015 |
| 43016  | 42 mm diameter.....  | 728.95   | 27.37 | 29.11  | 338.24 | 43016 |
| 43017  | 54 mm diameter.....  | 842.73   | 30.39 | 32.13  | 389.26 | 43017 |
| 43018  | 76 mm diameter.....  | 1,276.87 | 39.48 | 41.79  | 477.23 | 43018 |
| 43019  | 108 mm diameter..... | 1,624.52 | 56.76 | 59.45  | 598.03 | 43019 |
| 43020  | 159 mm diameter..... | 2,251.87 | 72.00 | 75.67  | 801.91 | 43020 |
| <b>Lever operated ball type full way double seat valves c/w chained labels : -</b>   |                      |          |       |        |        |       |
| <i>Each</i>  |                      |          |       |        |        |       |
| 43021  | 12 mm diameter.....  | 413.05   | 53.80 | 64.55  | 74.05  | 43021 |
| 43022  | 15 mm diameter.....  | 537.79   | 54.60 | 65.51  | 78.46  | 43022 |
| 43023  | 22 mm diameter.....  | 769.98   | 55.45 | 67.04  | 90.04  | 43023 |
| 43024  | 28 mm diameter.....  | 999.58   | 56.47 | 68.57  | 98.46  | 43024 |
| 43025  | 35 mm diameter.....  | 1,301.08 | 57.36 | 70.15  | 103.24 | 43025 |
| 43026  | 42 mm diameter.....  | 1,608.71 | 58.87 | 72.74  | 110.39 | 43026 |
| 43027  | 54 mm diameter.....  | 2,689.56 | 61.93 | 73.45  | 119.21 | 43027 |
| 43028  | 76 mm diameter.....  | 4,336.38 | 66.80 | 78.60  | 128.94 | 43028 |
| 43029  | 108 mm diameter..... | 5,916.36 | 72.76 | 84.75  | 147.92 | 43029 |
| 43030  | 159 mm diameter..... | 8,584.72 | 96.72 | 112.16 | 214.75 | 43030 |



| Item  |  |                      |                                      |  | Item        |       |
|-------|--|----------------------|--------------------------------------|--|-------------|-------|
|       | <b>MEDICAL GASES INSTALLATION (CONT'D)</b>   | Supply<br>and<br>fix | Take<br>down<br>and<br>clear<br>away | Take<br>down<br>and set<br>aside for<br>re-use | Fix<br>only |       |
|       |  | A<br>\$              | B<br>\$                              | C<br>\$  | D<br>\$     |       |
|       | <b>Test point :-</b>   |                      |                                      |  |             |       |
|       | <i>Each</i>  |                      |                                      |  |             |       |
| 43031 | Test point.....  | 419.87               | 53.62                                | 63.25  | 76.34       | 43031 |
|       | <b>Oxygen terminal unit to HTM 2022 and BS EN ISO 9170-1 accepting probes to BS 5682 :-</b>        |                      |                                      |  |             |       |
|       | <i>Each</i>  |                      |                                      |  |             |       |
| 43032 | Wall mounted type.....   | 1,563.28             | 35.57                                | 36.95  | 252.11      | 43032 |
| 43033 | Bedhead rail type.....   | 1,594.42             | 35.57                                | 36.95  | 252.11      | 43033 |
| 43034 | Bench top type.....  | 1,563.28             | 35.57                                | 36.95  | 252.11      | 43034 |
|       | <b>Nitrous oxide terminal unit to HTM 2022 and BS EN ISO 9170-1 accepting probes to BS 5682 :-</b> |                      |                                      |  |             |       |
|       | <i>Each</i>  |                      |                                      |  |             |       |
| 43035 | Wall mounted type.....   | 1,566.27             | 35.57                                | 36.95  | 252.11      | 43035 |
| 43036 | Bedhead rail type.....   | 1,597.49             | 35.57                                | 36.95  | 252.11      | 43036 |
| 43037 | Bench top type.....  | 1,566.27             | 35.57                                | 36.95  | 252.11      | 43037 |
|       | <b>Medical vacuum terminal unit to HTM 2022 and BS EN ISO 9170-1 accepting probes to BS5682 :-</b> |                      |                                      |  |             |       |
|       | <i>Each</i>  |                      |                                      |  |             |       |
| 43038 | Wall mounted type.....   | 1,569.45             | 35.57                                | 36.95  | 252.11      | 43038 |
| 43039 | Bedhead rail type.....   | 1,600.77             | 35.57                                | 36.95  | 252.11      | 43039 |
| 43040 | Bench top type.....  | 1,569.45             | 35.57                                | 36.95  | 252.11      | 43040 |
| 43041 | V-shape mounting bracket for medical vacuum pot .....  | 303.59               | 21.60                                | 25.33  | 40.06       | 43041 |

| Item  |   |                      |                                      |  | Item        |       |
|-------|---|----------------------|--------------------------------------|--|-------------|-------|
|       | <b>MEDICAL GASES INSTALLATION (CONT'D)</b>  |                      |                                      |  |             |       |
|       | <b>Medical air terminal unit to HTM 2022 and BS EN ISO 9170-1 accepting probes to BS 5682 :-</b>  | Supply<br>and<br>fix | Take<br>down<br>and<br>clear<br>away | Take<br>down<br>and set<br>aside for<br>re-use | Fix<br>only |       |
|       | <i>Each</i>   | A<br>\$              | B<br>\$                              | C<br>\$  | D<br>\$     |       |
| 43042 | Wall mounted type.....  | 1,571.93             | 35.57                                | 36.95  | 252.11      | 43042 |
| 43043 | Bedhead rail type.....  | 1,602.70             | 35.57                                | 36.95  | 252.11      | 43043 |
| 43044 | Bench top type.....   | 1,571.93             | 35.57                                | 36.95  | 252.11      | 43044 |
|       | <b>Surgical air terminal unit to HTM 2022 and BS EN ISO 9170-1 accepting probes to BS 5682 :-</b> |                      |                                      |  |             |       |
|       | <i>Each</i>   |                      |                                      |  |             |       |
| 43045 | Wall mounted type.....  | 1,571.93             | 35.57                                | 36.95  | 252.11      | 43045 |
| 43046 | Bedhead rail type.....  | 1,600.77             | 35.57                                | 36.95  | 252.11      | 43046 |
| 43047 | Bench top type.....   | 1,571.93             | 35.57                                | 36.95  | 252.11      | 43047 |
|       | <b>Emergency valve cabinet :-</b>   |                      |                                      |  |             |       |
|       | <i>Each</i>   |                      |                                      |  |             |       |
| 43048 | Wall mounted type.....  | 15,023.34            | 241.71                               | 369.02   | 1,571.42    | 43048 |
| 43049 | Bedhead rail type.....  | 37,785.29            | 369.02                               | 469.70   | 1,906.56    | 43049 |
| 43050 | Bench top type.....   | 15,472.93            | 241.71                               | 369.02   | 1,604.38    | 43050 |
|       | <b>Medical gas plug-off unit for oxygen :-</b>  |                      |                                      |  |             |       |
|       | <i>Each</i>   |                      |                                      |  |             |       |
| 43051 | Restrictor valve type.....  | 2,711.10             | 57.27                                | 58.53  | 261.37      | 43051 |
| 43052 | Air flow switch type.....   | 2,474.22             | 57.27                                | 58.53  | 112.19      | 43052 |
| 43053 | Solenoid valve type.....  | 2,186.28             | 57.27                                | 58.53  | 221.77      | 43053 |

| Item                                       |   |                      |                                      |  | Item         |
|--|---|----------------------|--------------------------------------|--|--------------|
| <b>MEDICAL GASES INSTALLATION (CONT'D)</b> |   |                      |                                      |  |              |
|  |   | Supply<br>and<br>fix | Take<br>down<br>and<br>clear<br>away | Take<br>down<br>and set<br>aside for<br>re-use | Fix<br>only  |
|  |   | A<br>\$              | B<br>\$                              | C<br>\$  | D<br>\$      |
|  | <b>Medical gas plug-off unit for medical vacuum : -</b> |                      |                                      |  |              |
|  | <i>Each</i>   |                      |                                      |  |              |
| 43054                                      | Restrictor valve type.....                              | 2,730.01             | 57.27                                | 58.53  | 261.37 43054 |
| 43055                                      | Air flow switch type.....                               | 2,489.56             | 57.27                                | 58.53  | 112.19 43055 |
| 43056                                      | Solenoid valve type.....                                | 1,981.76             | 57.27                                | 58.53  | 221.77 43056 |
|  | <b>Medical gas plug-off unit for nitrous oxide : -</b>  |                      |                                      |  |              |
|  | <i>Each</i>   |                      |                                      |  |              |
| 43057                                      | Restrictor valve type.....                              | 2,730.01             | 57.27                                | 58.53  | 261.37 43057 |
| 43058                                      | Air flow switch type.....                               | 2,489.56             | 57.27                                | 58.53  | 112.19 43058 |
| 43059                                      | Solenoid valve type.....                                | 1,981.76             | 57.27                                | 58.53  | 221.77 43059 |
|  | <b>Medical gas plug-off unit for medical air : -</b>    |                      |                                      |  |              |
|  | <i>Each</i>   |                      |                                      |  |              |
| 43060                                      | Restrictor valve type.....                              | 2,730.01             | 57.27                                | 58.53  | 261.37 43060 |
| 43061                                      | Air flow switch type.....                               | 2,489.56             | 57.27                                | 58.53  | 112.19 43061 |
| 43062                                      | Solenoid valve type.....                                | 1,981.76             | 57.27                                | 58.53  | 221.77 43062 |
|  | <b>Medical gas plug-off unit for surgical air : -</b>   |                      |                                      |  |              |
|  | <i>Each</i>   |                      |                                      |  |              |
| 43063                                      | Restrictor valve type.....                              | 2,730.01             | 57.27                                | 58.53  | 261.37 43063 |
| 43064                                      | Air flow switch type.....                               | 2,489.56             | 57.27                                | 58.53  | 112.19 43064 |
| 43065                                      | Solenoid valve type.....                                | 1,981.76             | 57.27                                | 58.53  | 221.77 43065 |

| Item  |   |                |                          |                                    | Item     |       |
|-------|---|----------------|--------------------------|------------------------------------|----------|-------|
|       | <b>MEDICAL GASES INSTALLATION (CONT'D)</b>  |                |                          |                                    |          |       |
|       | <b>Complete manifold control system comprising monitoring panel, pressure control assembly and relief valve assembly, indicator panel, high pressure and discharge pressure gauges, warning, control wirings and alarm pressure switches, signs and notices, automatic changeover control to provide a continuous supply of gas from two banks of cylinders : -</b> | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only |       |
|       | <i>Each</i>   | A \$           | B \$                     | C \$                               | D \$     |       |
| 43066 | Oxygen.....<br>(The actual rate should be : \$115,778.80 for Item 43066A)   | 11,577.88      | 648.89                   | 793.02                             | 5,750.31 | 43066 |
| 43067 | Nitrous oxide.....<br>(The actual rate should be : \$115,778.80 for Item 43067A)  | 11,577.88      | 648.89                   | 793.02                             | 5,750.31 | 43067 |
| 43068 | Medical air.....<br>(The actual rate should be : \$115,778.80 for Item 43068A)  | 11,577.88      | 648.89                   | 793.02                             | 5,750.31 | 43068 |
| 43069 | Surgical air.....<br>(The actual rate should be : \$115,778.80 for Item 43069A)   | 11,577.88      | 648.89                   | 793.02                             | 5,750.31 | 43069 |
|       | <b>Pipework header with copper pig tails for connections to cylinders at manifold : -</b>   |                |                          |                                    |          |       |
|       | <i>Each</i>   |                |                          |                                    |          |       |
| 43070 | Medical oxygen.....   | 14,507.46      | 162.47                   | 173.00                             | 872.89   | 43070 |
| 43071 | Medical nitrous oxide.....  | 14,507.46      | 162.47                   | 173.00                             | 872.89   | 43071 |
| 43072 | Medical compressed air.....   | 14,507.46      | 162.47                   | 173.00                             | 872.89   | 43072 |
| 43073 | Surgical air.....   | 14,507.46      | 162.47                   | 173.00                             | 872.89   | 43073 |
|       | <b>Sundries : -</b>   |                |                          |                                    |          |       |
|       | <i>Each</i>   |                |                          |                                    |          |       |
| 43074 | Mild steel contoured brackets for cylinders with retaining brass chains .....   | 4,415.40       | 35.57                    | 39.80                              | 255.61   | 43074 |
| 43075 | Area alarm panel constantly monitoring local gas pressure for medical oxygen, nitrous oxide, medical vacuum, medical air, surgical air, c/w all necessary accessories.....  | 16,697.03      | 137.49                   | 154.53                             | 1,159.16 | 43075 |
| 43076 | Central alarm panel constantly monitoring the complete medical gas services installed via fully integrated multiplexed system and capable to be linked with repeated panels, c/w all necessary accessories.....   | 56,187.41      | 287.12                   | 356.36                             | 2,021.81 | 43076 |
| 43077 | Repeated panel linked to central alarm panel, c/w all necessary accessories.....  | 47,970.12      | 221.62                   | 286.84                             | 1,554.39 | 43077 |
| 43078 | Glass panel for emergency valve cabinet.....  | 568.64         | 28.05                    | 30.62                              | 173.12   | 43078 |

| Item  |                     |                      |                                      |  | Item        |       |
|---|---------------------|----------------------|--------------------------------------|--|-------------|-------|
| <b>MEDICAL GASES INSTALLATION (CONT'D)</b>          |                     |                      |                                      |  |             |       |
| <b>Pressure relief valve c/w chained labels : -</b> |                     |                      |                                      |  |             |       |
| <i>Each</i>   |                     |                      |                                      |  |             |       |
|   |                     | Supply<br>and<br>fix | Take<br>down<br>and<br>clear<br>away | Take<br>down<br>and set<br>aside for<br>re-use | Fix<br>only |       |
|   |                     | A<br>\$              | B<br>\$                              | C<br>\$  | D<br>\$     |       |
| 43079   | 12 mm diameter..... | 1,218.33             | 53.51                                | 63.84  | 74.05       | 43079 |
| 43080   | 15 mm diameter..... | 1,734.95             | 54.30                                | 64.86  | 90.29       | 43080 |
| 43081   | 22 mm diameter..... | 2,072.84             | 55.19                                | 66.57  | 96.18       | 43081 |
| 43082   | 28 mm diameter..... | 2,569.94             | 56.20                                | 68.13  | 103.19      | 43082 |
| 43083   | 35 mm diameter..... | 2,875.00             | 56.96                                | 69.90  | 103.78      | 43083 |
| 43084   | 42 mm diameter..... | 4,030.12             | 58.65                                | 72.61  | 110.33      | 43084 |
| 43085   | 54 mm diameter..... | 5,760.86             | 61.70                                | 75.04  | 118.88      | 43085 |
| 43086   | 76 mm diameter..... | 9,290.41             | 66.62                                | 78.60  | 129.05      | 43086 |
| <b>Three way valves c/w chained labels : -</b>      |                     |                      |                                      |  |             |       |
| <i>Each</i>   |                     |                      |                                      |  |             |       |
| 43087   | 12 mm diameter..... | 689.36               | 53.51                                | 63.84  | 74.05       | 43087 |
| 43088   | 15 mm diameter..... | 930.16               | 54.30                                | 64.86  | 90.29       | 43088 |
| 43089   | 22 mm diameter..... | 1,232.11             | 55.19                                | 66.57  | 96.18       | 43089 |
| 43090   | 28 mm diameter..... | 1,568.90             | 56.20                                | 68.13  | 103.19      | 43090 |
| 43091   | 35 mm diameter..... | 1,944.45             | 56.96                                | 69.90  | 103.78      | 43091 |
| 43092   | 42 mm diameter..... | 2,850.95             | 58.65                                | 72.61  | 110.33      | 43092 |
| 43093   | 54 mm diameter..... | 4,558.77             | 61.70                                | 75.04  | 118.88      | 43093 |
| 43094   | 76 mm diameter..... | 6,377.79             | 66.62                                | 78.60  | 129.05      | 43094 |

| Item   |                      |                      |                                      |  | Item        |       |
|--|----------------------|----------------------|--------------------------------------|--|-------------|-------|
| <b>MEDICAL GASES INSTALLATION (CONT'D)</b>   |                      |                      |                                      |  |             |       |
| <b>Bacterial filter c/w differential pressure gauge with penetration n.e. 0.05% to BS 3928</b> |                      |                      |                                      |  |             |       |
| <b>Connecting pipe diameter : -</b>  |                      |                      |                                      |  |             |       |
| <i>Each</i>  |                      |                      |                                      |  |             |       |
|  |                      | Supply<br>and<br>fix | Take<br>down<br>and<br>clear<br>away | Take<br>down<br>and set<br>aside for<br>re-use | Fix<br>only |       |
|  |                      | A<br>\$              | B<br>\$                              | C<br>\$  | D<br>\$     |       |
| 43095  | 28 mm diameter.....  | 18,544.76            | 37.92                                | 39.38  | 90.90       | 43095 |
| 43096  | 35 mm diameter.....  | 20,956.92            | 43.76                                | 45.05  | 98.70       | 43096 |
| 43097  | 42 mm diameter.....  | 23,287.07            | 46.62                                | 48.15  | 106.18      | 43097 |
| 43098  | 54 mm diameter.....  | 25,807.55            | 52.53                                | 54.22  | 122.84      | 43098 |
| 43099  | 76 mm diameter.....  | 31,059.54            | 65.76                                | 67.64  | 150.17      | 43099 |
| 43100  | 108 mm diameter..... | 36,416.04            | 87.05                                | 88.58  | 191.87      | 43100 |
| 43101  | 159 mm diameter..... | 44,640.11            | 120.45                               | 121.97   | 255.83      | 43101 |
| <b>Non-return valve c/w chained labels : -</b>   |                      |                      |                                      |  |             |       |
| <i>Each</i>  |                      |                      |                                      |  |             |       |
| 43102  | 12 mm diameter.....  | 481.82               | 53.51                                | 64.39  | 72.41       | 43102 |
| 43103  | 15 mm diameter.....  | 529.12               | 54.30                                | 66.28  | 86.81       | 43103 |
| 43104  | 22 mm diameter.....  | 735.46               | 55.19                                | 69.84  | 93.05       | 43104 |
| 43105  | 28 mm diameter.....  | 967.09               | 56.20                                | 73.80  | 100.14      | 43105 |
| 43106  | 35 mm diameter.....  | 1,116.01             | 56.96                                | 77.18  | 101.93      | 43106 |
| 43107  | 42 mm diameter.....  | 1,345.11             | 58.65                                | 79.89  | 108.73      | 43107 |
| 43108  | 54 mm diameter.....  | 2,123.98             | 61.70                                | 85.05  | 119.27      | 43108 |
| 43109  | 76 mm diameter.....  | 2,374.69             | 66.62                                | 113.52   | 135.35      | 43109 |
| 43110  | 108 mm diameter..... | 3,580.84             | 72.70                                | 135.22   | 157.03      | 43110 |
| 43111  | 159 mm diameter..... | 4,478.63             | 96.62                                | 163.71   | 210.19      | 43111 |

| Item  |   |                      |                                      |  | Item        |       |
|---|---|----------------------|--------------------------------------|--|-------------|-------|
| <b>MEDICAL GASES INSTALLATION (CONT'D)</b>                              |   |                      |                                      |  |             |       |
|   |   | Supply<br>and<br>fix | Take<br>down<br>and<br>clear<br>away | Take<br>down<br>and set<br>aside for<br>re-use | Fix<br>only |       |
|   |   | A<br>\$              | B<br>\$                              | C<br>\$  | D<br>\$     |       |
| <b>Valve, terminal unit, pressure gauge and vacuum gauge : -</b>        |   |                      |                                      |  |             |       |
| <i>Each</i>   |   |                      |                                      |  |             |       |
| 43112   | Tee-piece and isolation valve for pressure switch c/w chained labels..... | 804.19               | 54.48                                | 81.87  | 105.83      | 43112 |
| 43113   | Pendent type terminal unit.....   | 2,354.91             | 29.29                                | 31.91  | 196.09      | 43113 |
| 43114   | Pressure gauge c/w isolating ball valve & pipe fittings.....              | 1,152.76             | 45.88                                | 57.21  | 219.51      | 43114 |
| 43115   | Vacuum gauge c/w isolating ball valve & pipe fittings.....                | 1,170.96             | 45.88                                | 57.21  | 219.51      | 43115 |
| <b>Flexible hose : -</b>  |   |                      |                                      |  |             |       |
| <i>Per linear metre</i>   |   |                      |                                      |  |             |       |
| 43116   | Flexible hose for O.T. pendent terminal unit.....                         | 2,185.87             | 28.52                                | 38.15  | 151.75      | 43116 |
| <b>Pressure transducer : -</b>  |   |                      |                                      |  |             |       |
| <i>Each</i>   |   |                      |                                      |  |             |       |
| 43117   | Pressure transducer c/w pressure switch.....                              | 2,744.14             | 51.95                                | 52.65  | 123.95      | 43117 |
| <b>Earthing system : -</b>  |   |                      |                                      |  |             |       |
| <i>Per item</i>   |   |                      |                                      |  |             |       |
| 43118   | Earthing system for medical gases pipeline.....                           | 4,307.33             | -                                    | -  | -           | 43118 |
| <b>Pressure regulating valve (O<sub>2</sub>) c/w chained labels : -</b> |   |                      |                                      |  |             |       |
| <i>Each</i>   |   |                      |                                      |  |             |       |
| 43119   | 15 mm diameter.....   | 4,162.46             | 53.02                                | 53.93  | 102.94      | 43119 |
| 43120   | 22 mm diameter.....   | 5,319.61             | 60.52                                | 65.60  | 113.89      | 43120 |
| 43121   | 28 mm diameter.....   | 6,303.29             | 66.47                                | 74.09  | 124.36      | 43121 |
| 43122   | 35 mm diameter.....   | 7,650.21             | 82.89                                | 83.78  | 146.63      | 43122 |
| 43123   | 42 mm diameter.....   | 8,671.23             | 88.67                                | 91.16  | 160.42      | 43123 |

| Item  |   | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only | Item  |
|---|---|----------------|--------------------------|------------------------------------|----------|-------|
|   |   | A              | B                        | C                                  | D        |       |
|   |   | \$             | \$                       | \$                                 | \$       |       |
| <b>MEDICAL GASES INSTALLATION (CONT'D)</b>  |   |                |                          |                                    |          |       |
| <b>Pressure regulating valve (N:O) c/w chained labels : -</b>                       |   |                |                          |                                    |          |       |
| <i>Each</i>   |   |                |                          |                                    |          |       |
| 43124   | 15 mm diameter.....   | 4,155.60       | 53.02                    | 53.93                              | 102.94   | 43124 |
| 43125   | 22 mm diameter.....   | 5,319.07       | 60.52                    | 65.60                              | 113.89   | 43125 |
| 43126   | 28 mm diameter.....   | 6,307.53       | 66.47                    | 74.09                              | 124.36   | 43126 |
| 43127   | 35 mm diameter.....   | 7,657.56       | 82.89                    | 85.65                              | 146.63   | 43127 |
| <b>Pressure regulating valve (medical air, surgical air) c/w chained labels : -</b> |   |                |                          |                                    |          |       |
| <i>Each</i>   |   |                |                          |                                    |          |       |
| 43128   | 15 mm diameter.....   | 4,162.46       | 53.02                    | 53.93                              | 102.94   | 43128 |
| 43129   | 22 mm diameter.....   | 5,319.61       | 60.52                    | 65.60                              | 113.89   | 43129 |
| 43130   | 28 mm diameter.....   | 6,303.29       | 66.47                    | 74.09                              | 124.36   | 43130 |
| 43131   | 35 mm diameter.....   | 7,650.21       | 82.89                    | 85.65                              | 146.63   | 43131 |
| 43132   | 42 mm diameter.....   | 8,671.23       | 88.67                    | 91.16                              | 160.42   | 43132 |
| <b>Pressure reducing valve</b>  |   |                |                          |                                    |          |       |
| <i>Each</i>   |   |                |                          |                                    |          |       |
| 43133   | Duplex medical gas pressure reducing valve set.....   | 19,508.30      | 164.54                   | 170.26                             | 305.30   | 43133 |
| <b>Oxygen concentration monitoring system</b>                                       |   |                |                          |                                    |          |       |
| <i>Per item</i>   |   |                |                          |                                    |          |       |
| 43134   | Oxygen concentration monitoring system c/w monitoring alarm panel, built-in integral pump with minimum oxygen flow rate at 0.05 l/min., facilities for DDC/CCMS and continuous digital reading of oxygen concentration (0.1% - 99%) to unit HTM 2022.....<br>(The actual rate should be : \$150,330.40 for Item 43134A) | 15,033.04      | 289.03                   | 361.36                             | 1,771.53 | 43134 |



| Item   |   |                      |                                      |  | Item        |       |
|--|---|----------------------|--------------------------------------|--|-------------|-------|
| <b>MEDICAL VACUUM SYSTEM</b>   |   |                      |                                      |  |             |       |
| <b>Packaged duplex medical vacuum set, F.A. aspired at 500 mm Hg c/w air-cooled rotary sliding/low speed reciprocating vacuum pump and vibration isolators, plant capacity : -</b> |   |                      |                                      |  |             |       |
| <i>Each</i>  |   |                      |                                      |  |             |       |
|  |   | Supply<br>and<br>fix | Take<br>down<br>and<br>clear<br>away | Take<br>down<br>and set<br>aside for<br>re-use | Fix<br>only |       |
|  |   | A<br>\$              | B<br>\$                              | C<br>\$  | D<br>\$     |       |
| 43135  | Up to 150 litres/min.....<br>(The actual rate should be : \$105,303.20 for Item 43135A)   | 10,530.32            | 284.77                               | 353.45   | 1,512.70    | 43135 |
| 43136  | 150 - 300 litres/min.....<br>(The actual rate should be : \$150,224.70 for Item 43136A)   | 15,022.47            | 293.35                               | 364.69   | 1,546.49    | 43136 |
| 43137  | 300 - 500 litres/min.....<br>(The actual rate should be : \$195,101.60 for Item 43137A)   | 19,510.16            | 300.37                               | 372.00   | 1,623.66    | 43137 |
| 43138  | 500 - 750 litres/min.....<br>(The actual rate should be : \$285,720.50 for Item 43138A)   | 28,572.05            | 314.68                               | 384.63   | 1,747.13    | 43138 |
| 43139  | 750 - 1000 litres/min.....<br>(The actual rate should be : \$360,361.80 for Item 43139A)  | 36,036.18            | 330.26                               | 401.57   | 1,871.22    | 43139 |
| 43140  | 1000 - 1250 litres/min.....<br>(The actual rate should be : \$410,880.50 for Item 43140A)   | 41,088.05            | 344.60                               | 416.20   | 1,997.01    | 43140 |
| 43141  | 1250 - 1500 litres/min.....<br>(The actual rate should be : \$469,827.80 for Item 43141A)   | 46,982.78            | 359.06                               | 428.96   | 2,120.63    | 43141 |
| 43142  | 1500 - 1750 litres/min.....<br>(The actual rate should be : \$522,980.70 for Item 43142A)   | 52,298.07            | 373.45                               | 445.09   | 2,245.52    | 43142 |
| 43143  | 1750 - 2000 litres/min.....<br>(The actual rate should be : \$581,152.30 for Item 43143A)   | 58,115.23            | 387.61                               | 459.60   | 2,371.40    | 43143 |
| <b>Vacuum discharge system : -</b>   |   |                      |                                      |  |             |       |
| <i>Each</i>  |   |                      |                                      |  |             |       |
| 43144  | Vacuum discharge system with exhaust pipe and silencer assembly for each pump, design to meet noise criteria better than 76 NC..... | 8,972.77             | 131.58                               | 146.22   | 573.15      | 43144 |
| <b>Sanitary trap : -</b>   |   |                      |                                      |  |             |       |
| <i>Each</i>  |   |                      |                                      |  |             |       |
| 43145  | Sanitary trap assembly with transparent bowl fitted with sight level tube for each pump.....  | 4,953.70             | 42.65                                | 49.74  | 174.40      | 43145 |

| Item  |  |                      |                                      |  | Item        |       |
|---|--|----------------------|--------------------------------------|--|-------------|-------|
| <b>MEDICAL VACUUM SYSTEM (CONT'D)</b>   |  |                      |                                      |  |             |       |
| <b>Horizontal vacuum reservoir to BS EN 286-1:1998 + A2:2005 c/w vacuum gauge with petcock, drainage trap, inlet isolating and non-return valve, water capacity : -</b> |  |                      |                                      |  |             |       |
| <i>Each</i>   |  |                      |                                      |  |             |       |
|   |  | Supply<br>and<br>fix | Take<br>down<br>and<br>clear<br>away | Take<br>down<br>and set<br>aside for<br>re-use | Fix<br>only |       |
|   |  | A<br>\$              | B<br>\$                              | C<br>\$  | D<br>\$     |       |
| 43146   | Up to 1500 litres.....   | 60,407.60            | 565.37                               | 638.74   | 2,855.43    | 43146 |
| 43147   | 1500 - 2000 litres.....  | 78,123.50            | 638.74                               | 707.41   | 3,059.78    | 43147 |
| 43148   | 2000 - 2500 litres.....  | 95,269.10            | 707.41                               | 844.69   | 3,336.28    | 43148 |
| 43149   | 2500 - 3000 litres.....<br>(The actual rate should be : \$112,159.60 for Item 43149A)  | 11,215.96            | 780.64                               | 919.84   | 3,564.87    | 43149 |
| 43150   | 3000 - 3500 litres.....<br>(The actual rate should be : \$127,250.30 for Item 43150A)  | 12,725.03            | 844.69                               | 985.47   | 3,810.79    | 43150 |
| 43151   | 3500 - 4000 litres.....<br>(The actual rate should be : \$142,142.50 for Item 43151A)  | 14,214.25            | 919.84                               | 1,060.70                                       | 4,040.78    | 43151 |
| 43152   | 4000 - 4500 litres.....<br>(The actual rate should be : \$158,366.10 for Item 43152A)  | 15,836.61            | 985.47                               | 1,126.60                                       | 4,271.57    | 43152 |
| 43153   | 4500 - 5000 litres.....<br>(The actual rate should be : \$173,242.40 for Item 43153A)  | 17,324.24            | 1,060.70                             | 1,205.76                                       | 4,501.30    | 43153 |
| 43154   | 5000 - 5500 litres.....<br>(The actual rate should be : \$188,371.50 for Item 43154A)  | 18,837.15            | 1,126.60                             | 1,268.20                                       | 4,731.44    | 43154 |
| 43155   | 5500 - 6000 litres.....<br>(The actual rate should be : \$204,656.90 for Item 43155A)  | 20,465.69            | 1,205.76                             | 1,348.41                                       | 4,964.54    | 43155 |
| <b>Duplex medical vacuum set c/w the following : -</b>  |  |                      |                                      |  |             |       |
| <i>Each</i>   |  |                      |                                      |  |             |       |
| 43156   | Vacuum drain tanks; including all associated accessories.....  | 4,777.04             | 170.57                               | 183.68   | 788.33      | 43156 |
| 43157   | Pipeline vacuum gauges including isolating valves.....   | 1,371.82             | 52.48                                | 62.72  | 110.99      | 43157 |
| 43158   | Vacuum pressure switches including isolating valves.....   | 1,593.31             | 52.48                                | 62.72  | 110.99      | 43158 |
| 43159   | Medical vacuum plant control panel; c/w all associated accessories and power cables and conduits connections to adjacent isolating switch..... | 46,829.46            | 360.54                               | 475.83   | 3,575.00    | 43159 |

| Item  |   | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only | Item  |
|---|---|----------------|--------------------------|------------------------------------|----------|-------|
|   |   | A              | B                        | C                                  | D        |       |
|   |   | \$             | \$                       | \$                                 | \$       |       |
| <b>MEDICAL AIR SYSTEM</b>   |   |                |                          |                                    |          |       |
| <b>Triplex medical compressed air plant c/w the following : -</b> |   |                |                          |                                    |          |       |
| <i>Each</i>   |   |                |                          |                                    |          |       |
| 43160   | Air intake filters (3 sets).....  | 18,458.24      | 133.60                   | 144.72                             | 338.69   | 43160 |
| 43161   | Air intake silencers (3 sets).....  | 15,883.66      | 133.60                   | 144.72                             | 355.55   | 43161 |
| 43162   | Air compressors; up to 250 litres/min. (3 sets).....  | 85,900.18      | 713.34                   | 937.31                             | 3,388.28 | 43162 |
| 43163   | Ditto; 250 to 500 litres/min. (3 sets).....<br>(The actual rate should be : \$110,971.60 for Item 43163A)   | 11,097.16      | 792.15                   | 982.25                             | 3,709.39 | 43163 |
| 43164   | Ditto; 500 - 750 litres/min. (3 sets).....<br>(The actual rate should be : \$141,756.20 for Item 43164A)  | 14,175.62      | 828.48                   | 1,019.31                           | 4,013.91 | 43164 |
| 43165   | Ditto; 750 - 1000 litres/min. (3 sets).....<br>(The actual rate should be : \$169,023.30 for Item 43165A)   | 16,902.33      | 864.66                   | 1,063.88                           | 4,287.91 | 43165 |
| 43166   | Ditto; 1000 - 1250 litres/min. (3 sets).....<br>(The actual rate should be : \$199,767.40 for Item 43166A)  | 19,976.74      | 897.88                   | 1,104.60                           | 4,609.36 | 43166 |
| 43167   | Ditto; 1250 - 1500 litres/min. (3 sets).....<br>(The actual rate should be : \$235,009.00 for Item 43167A)  | 23,500.90      | 933.96                   | 1,140.78                           | 4,861.71 | 43167 |
| 43168   | Air-cooled after coolers (3 sets).....  | 36,651.92      | 713.34                   | 937.31                             | 3,494.65 | 43168 |
| 43169   | Air receiver; c/w all associated accessories; up to 250 litres/min. (2 sets).....   | 63,232.31      | 470.70                   | 583.92                             | 2,045.60 | 43169 |
| 43170   | Ditto; 250 to 500 litres/min. (2 sets).....   | 81,306.84      | 496.56                   | 614.09                             | 2,313.75 | 43170 |
| 43171   | Ditto; 500 - 750 litres/min. (2 sets).....  | 98,141.15      | 519.80                   | 641.62                             | 2,525.26 | 43171 |
| 43172   | Ditto; 750 - 1000 litres/min. (2 sets).....<br>(The actual rate should be : \$115,979.40 for Item 43172A)   | 11,597.94      | 542.43                   | 667.53                             | 2,736.53 | 43172 |
| 43173   | Ditto; 1000 - 1250 litres/min. (2 sets).....<br>(The actual rate should be : \$136,592.00 for Item 43173A)  | 13,659.20      | 562.99                   | 692.28                             | 3,035.15 | 43173 |
| 43174   | Ditto; 1250 - 1500 litres/min. (2 sets).....<br>(The actual rate should be : \$158,508.30 for Item 43174A)  | 15,850.83      | 587.20                   | 716.01                             | 3,333.82 | 43174 |
| 43175   | Water separators (2 sets).....  | 9,357.40       | 91.80                    | 97.93                              | 202.66   | 43175 |
| 43176   | Oil filter (2 sets).....  | 15,444.24      | 91.80                    | 97.93                              | 202.66   | 43176 |
| 43177   | Twin column desiccant air dryers; heatless reactivated including all associated accessories (2 Sets).....<br>(The actual rate should be : \$195,778.10 for Item 43177A) | 19,577.81      | 470.70                   | 583.92                             | 2,175.36 | 43177 |

| Item   |  |                      |                                      |  | Item        |       |
|--|--|----------------------|--------------------------------------|--|-------------|-------|
| <b>MEDICAL AIR SYSTEM (CONT'D)</b>   |  |                      |                                      |  |             |       |
| <b>Triplex medical compressed air plant c/w the following : - (Cont'd)</b> |  |                      |                                      |  |             |       |
| <i>Each</i>  |  |                      |                                      |  |             |       |
|  |  | Supply<br>and<br>fix | Take<br>down<br>and<br>clear<br>away | Take<br>down<br>and set<br>aside for<br>re-use | Fix<br>only |       |
|  |  | A<br>\$              | B<br>\$                              | C<br>\$  | D<br>\$     |       |
| 43178  | Dust filter (2 sets).....  | 18,878.92            | 91.80                                | 97.93  | 196.74      | 43178 |
| 43179  | Header c/w dew point alarm probe.....  | 22,807.25            | 216.06                               | 251.46   | 799.70      | 43179 |
| 43180  | Duplex regulating stations.....  | 7,817.56             | 229.91                               | 249.37   | 696.92      | 43180 |
| 43181  | Active carbon filter (2 sets).....   | 15,724.81            | 91.80                                | 97.93  | 202.66      | 43181 |
| 43182  | Bacteria filter c/w sterilizable glass trap and stop valves (2 sets).....  | 44,005.58            | 116.47                               | 127.48   | 235.02      | 43182 |
| 43183  | Pressure switch.....   | 375.76               | 35.85                                | 36.50  | 62.57       | 43183 |
| 43184  | Emergency compressed air manifold; including all associated accessories.....   | 18,412.16            | 176.32                               | 218.02   | 1,920.61    | 43184 |
| 43185  | Medical compressed air plant control panel; c/w all associated accessories, and power cables and conduits connections to adjacent isolating switch (isolating switch measured separately)..... | 65,535.11            | 357.51                               | 471.69   | 3,430.78    | 43185 |
| <b>SURGICAL AIR SYSTEM</b>   |  |                      |                                      |  |             |       |
| <b>Duplex surgical compressed air plant c/w the following : -</b>          |  |                      |                                      |  |             |       |
| <i>Each</i>  |  |                      |                                      |  |             |       |
|  |  | Supply<br>and<br>fix | Take<br>down<br>and<br>clear<br>away | Take<br>down<br>and set<br>aside for<br>re-use | Fix<br>only |       |
|  |  | A<br>\$              | B<br>\$                              | C<br>\$  | D<br>\$     |       |
| 43186  | Air intake filters (2 sets).....   | 12,267.62            | 91.80                                | 97.93  | 202.66      | 43186 |
| 43187  | Air intake silencers (2 sets).....   | 10,687.23            | 91.80                                | 97.93  | 237.34      | 43187 |
| 43188  | Air compressors; up to 250 litres/min. (2 sets).....   | 57,580.78            | 470.70                               | 583.92   | 2,222.51    | 43188 |
| 43189  | Ditto; 250 - 500 litres/min. (2 sets).....   | 74,436.86            | 496.56                               | 614.09   | 2,430.08    | 43189 |
| 43190  | Ditto; 500 - 750 litres/min. (2 sets).....   | 93,831.51            | 519.80                               | 641.62   | 2,618.20    | 43190 |
| 43191  | Ditto; 750 - 1000 litres/min. (2 sets).....<br>(The actual rate should be : \$112,667.20 for Item 43191A)  | 11,266.72            | 542.43                               | 667.53   | 2,736.53    | 43191 |
| 43192  | Ditto; 1000 - 1250 litres/min. (2 sets).....<br>(The actual rate should be : \$132,926.40 for Item 43192A)   | 13,292.64            | 562.99                               | 692.28   | 2,993.73    | 43192 |
| 43193  | Ditto; 1250 - 1500 litres/min. (2 sets).....<br>(The actual rate should be : \$159,085.00 for Item 43193A)   | 15,908.50            | 587.20                               | 716.01   | 3,181.62    | 43193 |

| Item   |   | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only | Item  |
|--|---|----------------|--------------------------|------------------------------------|----------|-------|
|  |   | A              | B                        | C                                  | D        |       |
|  |   | \$             | \$                       | \$                                 | \$       |       |
| <b>SURGICAL AIR SYSTEM (CONT'D)</b>  |   |                |                          |                                    |          |       |
| <b>Duplex surgical compressed air plant c/w the following : - (Cont'd)</b> |   |                |                          |                                    |          |       |
| <i>Each</i>  |   |                |                          |                                    |          |       |
| 43194  | Air-cooled after coolers.....   | 12,159.26      | 239.73                   | 297.59                             | 1,102.75 | 43194 |
| 43195  | Air receiver; c/w all associated accessories; up to 250 litres/min. (2 sets).....   | 63,232.31      | 470.70                   | 583.92                             | 2,045.60 | 43195 |
| 43196  | Ditto; 250 - 500 litres/min. (2 sets).....  | 81,306.84      | 496.56                   | 614.09                             | 2,313.02 | 43196 |
| 43197  | Ditto; 500 - 750 litres/min. (2 sets).....  | 98,141.15      | 519.80                   | 641.62                             | 2,525.26 | 43197 |
| 43198  | Ditto; 750 - 1000 litres/min. (2 sets).....<br>(The actual rate should be : \$115,979.40 for Item 43198A)   | 11,597.94      | 542.43                   | 667.53                             | 2,736.53 | 43198 |
| 43199  | Ditto; 1000 - 1250 litres/min. (2 sets).....<br>(The actual rate should be : \$136,592.00 for Item 43199A)  | 13,659.20      | 562.99                   | 692.28                             | 3,035.15 | 43199 |
| 43200  | Ditto; 1250 - 1500 litres/min. (2 sets).....<br>(The actual rate should be : \$158,508.30 for Item 43200A)  | 15,850.83      | 587.20                   | 716.01                             | 3,333.82 | 43200 |
| 43201  | Water separators.....   | 5,649.16       | 44.18                    | 48.65                              | 112.72   | 43201 |
| 43202  | Oil filter.....   | 9,015.85       | 44.18                    | 48.65                              | 112.72   | 43202 |
| 43203  | Twin column desiccant air dryers; heatless reactivated including all associated accessories (2 Sets) .....<br>(The actual rate should be : \$175,743.70 for Item 43203A)              | 17,574.37      | 470.70                   | 583.92                             | 2,174.63 | 43203 |
| 43204  | Dust filter.....  | 9,525.57       | 44.18                    | 48.65                              | 112.72   | 43204 |
| 43205  | Header c/w dew point alarm probe.....   | 22,697.09      | 216.06                   | 251.46                             | 799.70   | 43205 |
| 43206  | Duplex regulating stations.....   | 8,404.77       | 201.28                   | 222.21                             | 696.92   | 43206 |
| 43207  | Active carbon filter.....   | 9,840.71       | 44.18                    | 48.65                              | 112.72   | 43207 |
| 43208  | Bacteria filter c/w sterilizable glass trap and stop valves.....  | 21,776.21      | 57.77                    | 61.47                              | 117.95   | 43208 |
| 43209  | Pressure switch.....  | 399.70         | 31.24                    | 35.10                              | 62.57    | 43209 |
| 43210  | Emergency surgical air manifold; including all associated accessories.....  | 18,324.18      | 176.32                   | 218.02                             | 1,920.61 | 43210 |
| 43211  | Surgical air plant control panel; c/w all associated accessories, and power cables and conduits connections to adjacent isolating switch (isolating switch measured separately) ..... | 62,842.27      | 361.54                   | 472.29                             | 3,368.70 | 43211 |

| Item  |  |                      |                                      |  | Item        |       |
|-------|--|----------------------|--------------------------------------|--|-------------|-------|
|       | <b>ACTIVE ANAESTHETIC GAS SCAVENGING SYSTEM</b>  |                      |                                      |  |             |       |
|       | <b>Solid drawn seamless, phosphorous de-oxidized, non-arsenical half- hard copper pipes and fitting to BS EN 1976 and BS EN 1978 in straight random lengths, best quality to BS EN 1057, in addition to the requirements of HTM 2022 : -</b> |                      |                                      |  |             |       |
|       |  | Supply<br>and<br>fix | Take<br>down<br>and<br>clear<br>away | Take<br>down<br>and set<br>aside for<br>re-use | Fix<br>only |       |
|       |  | A<br>\$              | B<br>\$                              | C<br>\$  | D<br>\$     |       |
| 43212 | 28 mm diameter (SP).....   | 369.40               | 12.22                                | 13.14  | 211.47      | 43212 |
| 43213 | 32 mm diameter (SP).....   | 418.74               | 13.14                                | 14.17  | 226.65      | 43213 |
|       | <b>Per linear metre</b>  |                      |                                      |  |             |       |
|       | <b>Supply and installation of the following Active Anaesthetic Gas Scavenging System, c/w all associated accessories to form on operable systems to BS EN ISO 7396-2, BS EN ISO 9170-2, BS EN 60601-2-13, BS EN ISO 8835-2, 4 and 5 : -</b>  |                      |                                      |  |             |       |
|       | <b>Approved Active Anaesthetic Gas Scavenging System complete with the following : -</b>   |                      |                                      |  |             |       |
|       | <b>Each</b>  |                      |                                      |  |             |       |
| 43214 | AGSS terminal outlets .....  | 2,474.48             | 36.38                                | 38.04  | 257.76      | 43214 |
| 43215 | Duplex exhaustor units (power device) (1350 litres/min.).....  | 80,391.65            | 587.20                               | 716.01   | 2,947.04    | 43215 |
| 43216 | Plant isolator and control panel.....  | 26,235.56            | 357.58                               | 471.86   | 3,254.53    | 43216 |
| 43217 | Remote on-off flow failure starter unit.....   | 13,243.97            | 188.09                               | 194.81   | 799.26      | 43217 |
| 43218 | Flow failure switching unit.....   | 8,893.33             | 137.26                               | 144.51   | 645.07      | 43218 |
| 43219 | Excess vacuum relief regulating valve assembly .....   | 6,525.98             | 86.38                                | 92.16  | 325.47      | 43219 |
| 43220 | Receiver with air break device and connecting hoses.....   | 20,388.51            | 496.92                               | 556.28   | 1,074.98    | 43220 |

| Item  |   | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only | Item  |
|---|---|----------------|--------------------------|------------------------------------|----------|-------|
|   |   | A              | B                        | C                                  | D        |       |
|   |   | \$             | \$                       | \$                                 | \$       |       |
| <b>TESTS ON EXISTING MEDICAL GASES SYSTEM</b>   |   |                |                          |                                    |          |       |
| (Note : The following Items 43221 to 43249 inclusive will only be paid for if ordered by the Maintenance Surveyor in writing) |   |                |                          |                                    |          |       |
| <b>Test on existing Active Anaesthetic Gas Scavenging System : -</b>  |   |                |                          |                                    |          |       |
| <i>Each</i>   |   |                |                          |                                    |          |       |
| 43221   | Power device and warning system test..... | 2,056.05       | -                        | -                                  | -        | 43221 |
| 43222   | Receiving system test.....                | 2,056.05       | -                        | -                                  | -        | 43222 |
| 43223   | Performance test.....                     | 4,041.71       | -                        | -                                  | -        | 43223 |
| <b>On-site functional test of existing terminal units and nist connector : -</b>  |   |                |                          |                                    |          |       |
| <i>Each</i>   |   |                |                          |                                    |          |       |
| 43224   | Oxygen gas terminal unit.....             | 3,676.27       | -                        | -                                  | -        | 43224 |
| 43225   | Medical air terminal unit.....            | 3,676.27       | -                        | -                                  | -        | 43225 |
| 43226   | Nitrous oxide terminal unit.....          | 3,676.27       | -                        | -                                  | -        | 43226 |
| 43227   | Surgical air terminal unit.....           | 3,676.27       | -                        | -                                  | -        | 43227 |
| <b>On-site identification tests on existing piped medical gas samples : -</b>   |   |                |                          |                                    |          |       |
| <i>Each</i>   |   |                |                          |                                    |          |       |
| 43228   | Oxygen gas sample.....                    | 3,922.30       | -                        | -                                  | -        | 43228 |
| 43229   | Medical air gas sample.....               | 3,922.30       | -                        | -                                  | -        | 43229 |
| 43230   | Nitrous oxide gas sample.....             | 3,922.30       | -                        | -                                  | -        | 43230 |
| 43231   | Surgical air gas sample.....              | 3,922.30       | -                        | -                                  | -        | 43231 |

| Item  |   | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only | Item  |
|-------|---|----------------|--------------------------|------------------------------------|----------|-------|
|       | <b>TESTS ON EXISTING MEDICAL GASES SYSTEM (CONT'D)</b>  |                |                          |                                    |          |       |
|       | <b>On-site purity/quality tests on existing piped medical gas samples : -</b>   |                |                          |                                    |          |       |
|       | <i>Each</i>   | A<br>\$        | B<br>\$                  | C<br>\$                            | D<br>\$  |       |
| 43232 | Oxygen gas sample :<br>Dragger tube tests on contents of O <sub>2</sub> , H <sub>2</sub> O (moisture), CO, CO <sub>2</sub> , oil.....                             | 4,192.70       | -                        | -                                  | -        | 43232 |
| 43233 | Medical air gas sample :<br>Dragger tube tests on contents of O <sub>2</sub> , H <sub>2</sub> O (moisture), CO, CO <sub>2</sub> , oil.....                        | 4,192.70       | -                        | -                                  | -        | 43233 |
| 43234 | Nitrous oxide gas sample :<br>Dragger tube tests on contents of O <sub>2</sub> , H <sub>2</sub> O (moisture), CO, CO <sub>2</sub> , oil,<br>N <sub>2</sub> O..... | 4,192.70       | -                        | -                                  | -        | 43234 |
| 43235 | Surgical air gas sample :<br>Dragger tube tests on contents of O <sub>2</sub> , H <sub>2</sub> O (moisture), CO, CO <sub>2</sub> , oil.....                       | 4,192.70       | -                        | -                                  | -        | 43235 |
|       | <b>On-site particulate tests on existing piped medical gas samples : -</b>  |                |                          |                                    |          |       |
|       | <i>Each</i>   |                |                          |                                    |          |       |
| 43236 | Oxygen gas sample.....  | 4,160.00       | -                        | -                                  | -        | 43236 |
| 43237 | Medical air gas sample.....   | 4,160.00       | -                        | -                                  | -        | 43237 |
| 43238 | Nitrous oxide gas sample.....   | 4,160.00       | -                        | -                                  | -        | 43238 |
| 43239 | Surgical air gas sample.....  | 4,160.00       | -                        | -                                  | -        | 43239 |
|       | <b>On-site cross connection tests on existing piped medical gas pipeline systems : -</b>  |                |                          |                                    |          |       |
|       | <i>Per lot</i>  |                |                          |                                    |          |       |
| 43240 | Oxygen gas system.....  | 3,763.27       | -                        | -                                  | -        | 43240 |
| 43241 | Medical air system.....   | 3,763.27       | -                        | -                                  | -        | 43241 |
| 43242 | Nitrous oxide system.....   | 3,763.27       | -                        | -                                  | -        | 43242 |
| 43243 | Surgical air system.....  | 3,763.27       | -                        | -                                  | -        | 43243 |
| 43244 | Vacuum system.....  | 3,763.27       | -                        | -                                  | -        | 43244 |



| Item  |                           |                      |                                      |  | Item        |
|---|---------------------------|----------------------|--------------------------------------|--|-------------|
| <b>TESTS ON EXISTING MEDICAL GASES SYSTEM (CONT'D)</b>  |                           |                      |                                      |  |             |
| <b>On-site performance tests on existing piped medical gas pipeline systems : -</b>   |                           |                      |                                      |  |             |
|   |                           | Supply<br>and<br>fix | Take<br>down<br>and<br>clear<br>away | Take<br>down<br>and set<br>aside for<br>re-use | Fix<br>only |
|   |                           | A<br>\$              | B<br>\$                              | C<br>\$  | D<br>\$     |
| 43245   | Oxygen gas system.....    | 4,309.00             | -                                    | -  | -           |
| 43246   | Medical air system.....   | 4,309.00             | -                                    | -  | -           |
| 43247   | Nitrous oxide system..... | 4,309.00             | -                                    | -  | -           |
| 43248   | Surgical air system.....  | 4,309.00             | -                                    | -  | -           |
| 43249   | Vacuum system.....        | 4,309.00             | -                                    | -  | -           |
| <b>MISCELLANEOUS</b>  |                           |                      |                                      |  |             |
| <b>Provision of medical gas regulators, medical cylinders and other accessories in anticipation of Medical Gas Interruption</b> |                           |                      |                                      |  |             |
| <b>Rental charges for gas regulators, cylinders and other accessories for : -</b>   |                           |                      |                                      |  |             |
|   |                           | Supply<br>and<br>fix | Take<br>down<br>and<br>clear<br>away | Take<br>down<br>and set<br>aside for<br>re-use | Fix<br>only |
|   |                           | A<br>\$              | B<br>\$                              | C<br>\$  | D<br>\$     |
| 43250   | Oxygen.....               | 2,650.99             | -                                    | -  | -           |
| 43251   | Nitrous oxide.....        | 2,650.99             | -                                    | -  | -           |
| 43252   | Medical air.....          | 2,650.99             | -                                    | -  | -           |
| 43253   | Surgical air.....         | 2,650.99             | -                                    | -  | -           |

| Item   |   | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only | Item  |
|--|---|----------------|--------------------------|------------------------------------|----------|-------|
| <b>MISCELLANEOUS (CONT'D)</b>                                    |   | A              | B                        | C                                  | D        |       |
| <b>Charges for gas filling for R-size cylinder supply in : -</b> |   | \$             | \$                       | \$                                 | \$       |       |
|  | <i>Each</i>   |                |                          |                                    |          |       |
| 43254  | Oxygen.....   | 1,084.32       | -                        | -                                  | -        | 43254 |
| 43255  | Nitrous oxide.....  | 8,958.71       | -                        | -                                  | -        | 43255 |
| 43256  | Medical compressed air.....   | 859.94         | -                        | -                                  | -        | 43256 |
| 43257  | Surgical air.....   | 8,958.71       | -                        | -                                  | -        | 43257 |
|  | <b>Sundries : -</b>   |                |                          |                                    |          |       |
|  | <i>Each</i>   |                |                          |                                    |          |       |
| 43258  | Portable suction unit and accessories for backing up type piped medical vacuum..... | 39,407.75      | -                        | -                                  | -        | 43258 |
| 43259  | Baseplate for mounting terminal unit on bedhead trunking.....                       | 192.98         | 23.08                    | 27.40                              | 40.99    | 43259 |

**Section 44**

**CATERING EQUIPMENT**

## SECTION 44

### CATERING EQUIPMENT

#### SPECIAL CONDITIONS

|   |                |  |
|---|----------------|--|
| <b>Measurement of power supply</b>                                | <b>SC44.01</b> | <p>All works of electrical power supply up to power supply points (e.g. switchgear or isolator or spur unit and the like) for the equipment shall be measured separately and paid for at the appropriate rates under Section 27 - Lighting Systems and Fixtures, Section 28 - Small Power Distribution, Section 29 - Main Distribution Systems and Section 30 - Miscellaneous Electrical Installations or other applicable Work Sections of this Schedule.</p> <p>For the avoidance of doubt, all items for kitchen furniture in this Section shall only apply to the works executed by the Approved Suppliers of materials and Specialist Contractors for Public Works : Catering Equipment Installation.</p>   |
| <b>Measurement of water supply, waste disposal and gas supply</b> | <b>SC44.02</b> | <p>All works of water supply, waste disposal and gas supply up to the respective termination points for the equipment shall be measured separately and paid for at the appropriate rates under applicable Work Sections of this Schedule.</p>  |
| <b>Measurement of temporary supply</b>                            | <b>SC44.03</b> | <p>Where a temporary supply is ordered by the Maintenance Surveyor, the provision of all articles, labour and accessory materials (nails, screws, rawplugs and similar) necessary for fixing shall be of temporary nature. For "use and waste" of all materials, such as pipework, fittings and accessories, etc., for a period of not exceeding four weeks from the date of certified completion, 50 per cent of the value of the appropriate "supply and fix" items after the adjustment of contract percentages will be paid. For a period exceeding four weeks and not exceeding eight weeks, 55 per cent will be paid and for each subsequent month a further addition of 5 per cent will be made.</p> <p>For a period of more than six months, the full rates, as for permanent works will be paid, and the materials will become the property of the Employer.</p> <p>No extra payment will be made for the removal of materials in connection with the temporary supply, but the cost of which shall have been included in the payment as aforementioned in the first paragraph hereof. The date of certified completion of a temporary supply shall be the date when the installation is first brought into service. The date when it ceases to be used shall be the date from which the Maintenance Surveyor instructs the dismantlement of the installation, or the date when the installation is no longer in use, whichever is earlier.</p> |

**SPECIAL CONDITIONS****Rates generally****SC44.04**

The rates for all items shall generally include for : -

- (a) Colour band and colour identification work.
- (b) Lettering and engraving for identification, signs, labels in both English and Chinese.
- (c) Identification plates, signs, notice plates, discs and labels in both English and Chinese.
- (d) Priming or painting off site and proprietary finishes or surface treatment applied as part of the production process whether applied before or after fabrication and assembly.
- (e) All protective and finishing painting work, apart from additional painting work specifically ordered by the Maintenance Surveyor in writing which shall be measured separately and paid for at the appropriate rates under Section 15 - Painting of this Schedule.
- (f) Any kind of fixing method including drilling of the background and provision of all fixings, nails, bolts, nuts, washers, holes, screws, plugs, shotfired pins and the like.
- (g) Assembling and jointing together with the component parts of composite units and providing any necessary jointing materials.
- (h) All brackets and methods of supports.
- (i) Provision of expansion joints in service runs wherever they coincide with structural expansion joints.
- (j) Submission of catalogues, technical literature, data, calculations, test certificates and approval documentation covering the equipment and materials being supplied.
- (k) Preparing and submitting detail working drawings as required and all shop drawings for the fabrication and installation.
- (l) Attendance, as required, of the manufacturers' representative to assist in the installation and subsequent testing and commissioning.
- (m) Testing and commissioning including submission of Testing and Commissioning Certificates and Records of Tests.

**SPECIAL CONDITIONS**

**Rates generally  
(Cont'd)**

**SC44.04  
(Cont'd)**

- (n) Provision of all necessary power, fuel, labour and testing instrument of approved type for testing and commissioning.
- (o) Preparing and submitting operation and maintenance manuals and as-fitted drawings for items of works as required.
- (p) Provision of schematic diagrams covered front and back with plastic sheet including including fixing to wall.
- (q) Provision of manufacturer's guarantee.

**Rates for kitchen  
equipment**

**SC44.05**

The rates for kitchen equipment shall further include for : -

- (a) All necessary assembly, orientation, alignment, levelling and bolting down, together with the provision of shims and packing pieces, the clocking of couplings between drivers and rotating equipment, strainers, instrumentation and the like.
- (b) Provision of all associated components.
- (c) All necessary operational and control accessories forming part of the equipment.
- (d) Final connections and terminations to electrical supply, water supply, waste disposal and gas supply including all necessary cables, wirings, conduits, trunkings, cable trays, pipework, traps, grease traps, valves, gauges and necessary accessories required for energizing the equipment to properly operate at specified duties.
- (e) Motor starters (if motors in the equipment require motor starters).
- (f) Earth/equipotential bonding.

**SPECIAL CONDITIONS****Rates for kitchen furniture****SC44.06**

The rates for kitchen furniture shall further include for : -

- (a) All framing and components to ensure the rigidity and stability of the finished work.
- (b) All accessories necessary for the work.
- (c) Forming holes for pipes, water taps, building services installations, sink and the like if required.
- (d) All necessary ironmongery including door hinges, pull handles and the like.

**Rates for "Take down and clear away" or "Take down and set aside for re-use"****SC44.07**

The rates for "Take down and clear away" or "Take down and set aside for re-use" existing kitchen equipment shall further include for : -

- (a) Taking down all associated plumbing works and building services works.
- (b) Plugging off remaining ends with plugs or caps as required.
- (c) Preparing remaining ends of plumbing works and building services works to receive connections with new work if required.
- (d) Making good all works disturbed.

**Particular Specification****SC44.08**

The Particular Specification for catering equipment can be found in the Contract.

| Item  |                   |                      |                                      |  | Item        |       |
|---|-------------------|----------------------|--------------------------------------|--|-------------|-------|
| <b>CATERING EQUIPMENT</b>   |                   |                      |                                      |  |             |       |
| <b>Kitchen equipment</b>  |                   |                      |                                      |  |             |       |
| Chinese cooking range suitable for 300 to 600mm Chinese wok c/w burners, air blowers, gas cock, operational and safety controls, splash plate, water faucet, water pot, flame failure device, automatic gas controller with solenoid valves, refractory brick lined combustion chamber, removable stainless steel plate for spice pots, flue pipes, tail pots and all necessary accessories : - |                   |                      |                                      |  |             |       |
| <i>Each</i>   |                   |                      |                                      |  |             |       |
|   |                   | Supply<br>and<br>fix | Take<br>down<br>and<br>clear<br>away | Take<br>down<br>and set<br>aside for<br>re-use | Fix<br>only |       |
|   |                   | A<br>\$              | B<br>\$                              | C<br>\$  | D<br>\$     |       |
| 44001   | Single stove..... | 17,713.42            | 201.20                               | 270.12   | 1,477.25    | 44001 |
| 44002   | Double stove..... | 29,084.17            | 225.41                               | 375.37   | 2,422.65    | 44002 |
| Induction type Chinese cooking range suitable for 300 to 600mm Chinese wok c/w induction device, operational and safety control, splash plate, water faucet, water pot, removable stainless steel plate for spice pots, tail pots and all necessary accessories : -   |                   |                      |                                      |  |             |       |
| <i>Each</i>   |                   |                      |                                      |  |             |       |
| 44003   | Single stove..... | 43,565.44            | 164.28                               | 220.55   | 1,206.18    | 44003 |
| 44004   | Double stove..... | 84,375.21            | 184.04                               | 306.49   | 1,978.11    | 44004 |
| Chinese cooking steamer c/w burners, air blowers, gas cock, 3 steam trays per steamer unit, rice pans, operational and safety controls, water faucet, flame failure device, automatic gas controller with solenoid valves, flue pipe, dim sum plates, dim sum tray stand, steamer funnel and all necessary accessories : -  |                   |                      |                                      |  |             |       |
| <i>Each</i>   |                   |                      |                                      |  |             |       |
| 44005   | Single unit.....  | 18,855.36            | 193.74                               | 267.32   | 1,580.64    | 44005 |
| 44006   | Double unit.....  | 30,628.24            | 231.93                               | 305.51   | 1,671.91    | 44006 |



| Item  |   |                       |                                 |   | Item            |
|-------|---|-----------------------|---------------------------------|---|-----------------|
|       | <b>CATERING EQUIPMENT (CONT'D)</b>  |                       |                                 |   |                 |
|       | <b>Kitchen equipment (Cont'd)</b>   |                       |                                 |   |                 |
|       | <b>Gas fire range c/w oven fitted with cooking shelves, hangers and base plate, rings, griddle top, burners, flame failure device, control taps, splash back, thermostat, thermal insulation, adjustable legs and all necessary accessories : -</b> | <b>Supply and fix</b> | <b>Take down and clear away</b> | <b>Take down and set aside for re-use</b> | <b>Fix only</b> |
|       | <i>Each</i>   | <b>A</b>              | <b>B</b>                        | <b>C</b>                                  | <b>D</b>        |
|       |   | <b>\$</b>             | <b>\$</b>                       | <b>\$</b>                                 | <b>\$</b>       |
| 44007 | Heavy duty type.....  | 27,784.96             | 169.52                          | 201.20                                    | 660.39 44007    |
|       | <b>Gas burners c/w griddle top, burners, flame failure device and all necessary accessories : -</b>   |                       |                                 |   |                 |
|       | <i>Each</i>   |                       |                                 |   |                 |
| 44008 | Single burner town gas hot plate.....   | 9,386.68              | 17.70                           | 26.08                                     | 70.79 44008     |
| 44009 | Double burner town gas hot plate.....   | 12,515.58             | 22.35                           | 30.73                                     | 81.04 44009     |
|       | <b>Gas stock pot stoves c/w burners, gas cock, flame failure device, automatic gas controller with solenoid valves, gratings, drip tray, oil pan and all necessary accessories : -</b>  |                       |                                 |   |                 |
|       | <i>Each</i>   |                       |                                 |   |                 |
| 44010 | Single burner.....  | 5,256.30              | 90.35                           | 108.98                                    | 354.87 44010    |
| 44011 | Double burner.....  | 7,536.27              | 107.12                          | 134.13                                    | 476.90 44011    |
|       | <b>Induction type stock pot stoves c/w induction device, gratings, drip tray, oil pan and all necessary accessories : -</b>   |                       |                                 |   |                 |
|       | <i>Each</i>   |                       |                                 |   |                 |
| 44012 | Single stove.....   | 20,240.69             | 73.77                           | 88.98                                     | 289.76 44012    |
| 44013 | Double stove.....   | 58,124.57             | 87.46                           | 109.52                                    | 389.38 44013    |

| Item   |                         |                      |                                      |  | Item        |       |
|--|-------------------------|----------------------|--------------------------------------|--|-------------|-------|
| <b>CATERING EQUIPMENT (CONT'D)</b>   |                         |                      |                                      |  |             |       |
| <b>Kitchen equipment (Cont'd)</b>  |                         |                      |                                      |  |             |       |
| <b>Town gas rice cooker c/w extra rice cooker bowl and cover, rubber hose connection and automatic flame keeping : -</b>   |                         |                      |                                      |  |             |       |
| <b>Capacity : -</b>  |                         |                      |                                      |  |             |       |
| <i>Each</i>  |                         |                      |                                      |  |             |       |
|  |                         | Supply<br>and<br>fix | Take<br>down<br>and<br>clear<br>away | Take<br>down<br>and set<br>aside for<br>re-use | Fix<br>only |       |
|  |                         | A<br>\$              | B<br>\$                              | C<br>\$  | D<br>\$     |       |
| 44014  | 2 to 5 litres.....      | 2,401.24             | 17.70                                | 27.01  | 73.58       | 44014 |
| 44015  | 5 to 9 litres.....      | 2,692.30             | 27.01                                | 31.66  | 98.73       | 44015 |
| <b>Upright refrigerator with doors, control panel, compressors cabinet, condensing unit, door hardware and latches, thermal insulation, thermometer, internal lighting and all necessary accessories : -</b>         |                         |                      |                                      |  |             |       |
| <i>Each</i>  |                         |                      |                                      |  |             |       |
| 44016  | Up to 550 litres.....   | 12,521.95            | 69.97                                | 89.74  | 139.94      | 44016 |
| 44017  | 550 to 1200 litres..... | 17,041.56            | 114.08                               | 131.56   | 152.86      | 44017 |
| <b>Upright freezer with doors, control panel, compressors cabinet, condensing unit, door hardware and latches, thermal insulation, thermometer, internal lighting and all necessary accessories : -</b>              |                         |                      |                                      |  |             |       |
| <i>Each</i>  |                         |                      |                                      |  |             |       |
| 44018  | Up to 550 litres.....   | 13,868.10            | 70.73                                | 89.74  | 140.70      | 44018 |
| 44019  | 550 to 1200 litres..... | 18,534.16            | 111.79                               | 131.56   | 152.10      | 44019 |
| <b>Upright refrigerator/freezer with doors, control panel, compressors cabinet, condensing unit, door hardware and latches, thermal insulation, thermometer, internal lighting and all necessary accessories : -</b> |                         |                      |                                      |  |             |       |
| <i>Each</i>  |                         |                      |                                      |  |             |       |
| 44020  | Up to 550 litres.....   | 17,075.53            | 69.21                                | 87.46  | 139.94      | 44020 |
| 44021  | 550 to 1200 litres..... | 17,463.60            | 112.56                               | 128.52   | 152.10      | 44021 |

| Item  |  |                      |                                      |  | Item        |       |
|---|--|----------------------|--------------------------------------|--|-------------|-------|
| <b>CATERING EQUIPMENT (CONT'D)</b>  |  |                      |                                      |  |             |       |
| <b>Kitchen equipment (Cont'd)</b>   |  |                      |                                      |  |             |       |
| <b>Dish washer c/w door, adjustable legs, built-in rinse booster, automatic fill, safety cut-out switch, liquid detergent dispenser, rinse line injector, booster pumps, signal lamps, instrument panel, drain pump, dish racks, cup racks and associated side tables : -</b> |  |                      |                                      |  |             |       |
| <i>Each</i>   |  |                      |                                      |  |             |       |
|   |  | Supply<br>and<br>fix | Take<br>down<br>and<br>clear<br>away | Take<br>down<br>and set<br>aside for<br>re-use | Fix<br>only |       |
|   |  | A<br>\$              | B<br>\$                              | C<br>\$  | D<br>\$     |       |
| 44022   | Dish washer, capacity up to 28 litres.....                     | 22,557.15            | 143.73                               | 170.36   | 488.26      | 44022 |
| <b>Sterilizing sink for milk bottles free standing, with sink cover and internal basket complete with all accessories : -</b>   |  |                      |                                      |  |             |       |
| <i>Each</i>   |  |                      |                                      |  |             |       |
| 44023   | Sterilizing sink, up to 8 litres heating capacity.....         | 5,642.93             | 43.36                                | 47.15  | 89.74       | 44023 |
| <b>Electric water boiler, continuous supply type c/w internal water tank, heater, thermostat, water level indicator, ball valve, access to maintenance door, indicating light, switch and faucet : -</b>  |  |                      |                                      |  |             |       |
| <i>Each</i>   |  |                      |                                      |  |             |       |
| 44024   | Up to 32 litres, 3 kW.....                                     | 4,759.32             | 107.24                               | 125.49   | 326.26      | 44024 |
| 44025   | 32 to 65 litres, 9 kW.....                                     | 7,704.36             | 136.14                               | 154.39   | 352.88      | 44025 |
| <b>Electric insect killer; wall mounted type : -</b>  |  |                      |                                      |  |             |       |
| <i>Each</i>   |  |                      |                                      |  |             |       |
| 44026   | 100 W.....   | 1,782.74             | 34.22                                | 38.79  | 94.30       | 44026 |
| 44027   | 200 W.....   | 2,001.04             | 38.79                                | 43.36  | 132.33      | 44027 |
| <b>Fan-assisted balance flue, instantaneous gas water heater c/w temperature selector and flames failure device; with capacity of : -</b>   |  |                      |                                      |  |             |       |
| <i>Each</i>   |  |                      |                                      |  |             |       |
| 44028   | 8.8 litres/min. at 25°C temperature rise.....                  | 18,700.60            | 110.84                               | 128.55   | 446.16      | 44028 |
| 44029   | 32 litres/min. at 25°C temperature rise.....                   | 37,401.21            | 143.44                               | 167.66   | 577.48      | 44029 |
| 44030   | 32 litres/min. at 25°C temperature rise (Condensing Type)..... | 77,931.31            | 165.80                               | 193.74   | 666.91      | 44030 |

| Item  |  |                |                          |                                    | Item     |       |
|-------|--|----------------|--------------------------|------------------------------------|----------|-------|
|       | <b>CATERING EQUIPMENT (CONT'D)</b>   |                |                          |                                    |          |       |
|       | <b>Kitchen equipment (Cont'd)</b>  | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only |       |
|       | <b>Open flue, instantaneous gas water heater c/w temperature selector and flames failure devices; with capacity of : -</b>   |                |                          |                                    |          |       |
|       | <i>Each</i>  | A \$           | B \$                     | C \$                               | D \$     |       |
| 44031 | 10 litres/min. at 25°C temperature rise.....   | 18,700.60      | 110.84                   | 129.46                             | 409.83   | 44031 |
| 44032 | 16 litres/min. at 25°C temperature rise.....   | 37,401.21      | 110.84                   | 129.46                             | 439.64   | 44032 |
| 44033 | 32 litres/min. at 25°C temperature rise.....   | 56,101.81      | 143.44                   | 167.66                             | 491.79   | 44033 |
| 44034 | 32 litres/min. at 25°C temperature rise (Condensing Type).....   | 77,931.31      | 165.80                   | 193.74                             | 565.37   | 44034 |
|       | <b>Steam cabinet c/w burner, gas cock, steaming cabinet with removable wire shelves, flame failure device, automatic gas controller with solenoid valves, flue pipe, valves, lighting touch, inspection door, drain trough, flue pipe, sight glass and all necessary accessories : -</b> |                |                          |                                    |          |       |
|       | <i>Each</i>  |                |                          |                                    |          |       |
| 44035 | Gas steaming, three decks oven, approximate size 1200mm x 1000mm x 1500 mm high.....   | 36,164.20      | 174.18                   | 201.20                             | 750.73   | 44035 |
| 44036 | Single door type steam cabinet, approximate size 850 mm (H) x 1100 mm (W) x 1870 mm (D).....   | 23,017.99      | 160.21                   | 183.49                             | 691.12   | 44036 |
| 44037 | 3-door type steam cabinet, approximate size 1900 mm (H) x 950 mm (W) x 1100 mm (D).....  | 29,930.66      | 174.18                   | 201.20                             | 750.73   | 44037 |
|       | <b>Electrical steam cabinet c/w heater, steaming cabinet with removable wire shelves, valves, lighting touch, inspection door, drain trough, sight glass and all necessary accessories : -</b>   |                |                          |                                    |          |       |
|       | <i>Each</i>  |                |                          |                                    |          |       |
| 44038 | Electrical steaming, three decks oven, approximate size 1200mm x 1000mm x 1500 mm high.....  | 30,343.00      | 142.22                   | 164.28                             | 612.97   | 44038 |
| 44039 | Single door type steam cabinet, approximate size 850 mm (H) x 1100 mm (W) x 1870 mm (D).....   | 21,515.10      | 130.81                   | 149.81                             | 564.30   | 44039 |
| 44040 | 3-door type steam cabinet, approximate size 1900 mm (H) x 950 mm (W) x 1100 mm (D).....  | 25,112.86      | 142.22                   | 164.28                             | 612.97   | 44040 |

| Item  |  |                |                          |                                    | Item     |       |
|-------|--|----------------|--------------------------|------------------------------------|----------|-------|
|       | <b>CATERING EQUIPMENT (CONT'D)</b>   |                |                          |                                    |          |       |
|       | <b>Kitchen equipment (Cont'd)</b>  | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only |       |
|       | <b>Gas kettle c/w burner : -</b>   |                |                          |                                    |          |       |
|       | <i>Each</i>  | A \$           | B \$                     | C \$                               | D \$     |       |
| 44041 | Gas single steaming kettle range, 60 kW burner rating, approximate size 1000 x 1200 x 800 mm (H), c/w burner, gas cock, 3 trays with pans and covers, water faucet, flame failure devices, automatic gas controller with solenoid valves, flue pipe and all necessary accessories..... | 22,993.74      | 154.62                   | 176.97                             | 665.97   | 44041 |
| 44042 | Gas titling kettle, 150 litres, c/w burner, gas cock, operational controls, safety features, control panel, flame failure device and all necessary accessories .....<br>(The actual rate should be : \$157,790.90 for Item 44042A)   | 15,779.09      | 187.22                   | 193.74                             | 810.35   | 44042 |
|       | <b>Bain Marie with hot cabinet c/w drainage tap to well, thermostat, push handle, rubber corner bumpers, castors, protective panel with temperature control, switch and power light, flexible coiled cable and all necessary accessories : -</b>                                       |                |                          |                                    |          |       |
|       | <i>Each</i>  |                |                          |                                    |          |       |
| 44043 | Approximate size 1200 x 650 x 900 mm high, 1.6 kW.....   | 10,077.95      | 163.00                   | 186.28                             | 636.17   | 44043 |
|       | <b>Gas salamander broiler; range mounted, c/w broiling grid with grates, grid lock, valve controls and automatic lighting : -</b>  |                |                          |                                    |          |       |
|       | <i>Each</i>  |                |                          |                                    |          |       |
| 44044 | 12kW, 1200 x 500 x 950 mm approximate.....   | 15,753.62      | 126.68                   | 148.09                             | 551.41   | 44044 |

| Item  |   |                      |                                      |   | Item        |       |
|---|---|----------------------|--------------------------------------|---|-------------|-------|
| <b>CATERING EQUIPMENT (CONT'D)</b>  |   |                      |                                      |   |             |       |
| <b>Kitchen equipment (Cont'd)</b>   |   |                      |                                      |   |             |       |
| <b>Electric beverage bottle cooler; c/w cabinet, lids with hardware and locking device, thermal insulation, refrigeration system, evaporator coils, condenser, controls and all necessary accessories : -</b> |   |                      |                                      |   |             |       |
| <i>Each</i>   |   |                      |                                      |   |             |       |
|   |   | Supply<br>and<br>fix | Take<br>down<br>and<br>clear<br>away | Take<br>down<br>and<br>set<br>aside for<br>re-use | Fix<br>only |       |
|   |   | A<br>\$              | B<br>\$                              | C<br>\$   | D<br>\$     |       |
| 44045   | 120 bottles of 200 ml size in vertical storage .....            | 14,116.41            | 76.82                                | 90.50   | 161.99      | 44045 |
| <b>Electric sterilizer c/w heating element fitted with safety device, water container with covered handle, dipping trays, grab-handle with hooks and stands : -</b>   |   |                      |                                      |   |             |       |
| <i>Each</i>   |   |                      |                                      |   |             |       |
| 44046   | 2 kW approx.; up to 22.5 litres.....                            | 6,480.45             | 53.99                                | 63.13   | 181.77      | 44046 |
| <b>Sundries : -</b>   |   |                      |                                      |   |             |       |
| <i>Each</i>   |   |                      |                                      |   |             |       |
| 44047   | Cooker and oven with grille top.....                            | 22,520.77            | 106.19                               | 119.21  | 354.87      | 44047 |
| 44048   | Deep fat fryer, 20 kW.....                                      | 18,882.52            | 104.95                               | 120.92  | 348.31      | 44048 |
| 44049   | Deep fat fryer c/w cooker.....                                  | 83,170.39            | 107.24                               | 122.45  | 357.44      | 44049 |
| 44050   | Grill, 7.5 kW/hr.....   | 22,993.74            | 130.04                               | 146.78  | 537.69      | 44050 |
| 44051   | Pastry oven, 10 kW.....   | 19,501.02            | 138.41                               | 152.10  | 684.47      | 44051 |
| 44052   | Commercial mincer, 430 x 210 x 380 mm high approx.....          | 6,096.98             | 48.64                                | 53.35   | 145.23      | 44052 |
| 44053   | Flour mixer, 20 litres.....                                     | 8,480.76             | 96.60                                | 112.80  | 293.16      | 44053 |
| 44054   | Flour bin trolley.....  | 3,397.89             | 19.59                                | 24.32   | 51.34       | 44054 |
| 44055   | Potato peeler, 300 kg/hr.....                                   | 14,771.29            | 81.06                                | 99.97   | 201.28      | 44055 |
| 44056   | Slicer, 615 x 480 x 450 mm high approx.....                     | 8,990.84             | 54.72                                | 60.11   | 152.66      | 44056 |
| 44057   | Automatic coffee machine c/w 2 litres removable water tank..... | 4,948.02             | 3.72                                 | 4.66  | 13.97       | 44057 |
| 44058   | Ice maker, 800 x 600 x 530 mm high approx., 1.1 kW.....         | 28,196.44            | 72.25                                | 89.74   | 234.24      | 44058 |
| 44059   | Micro-wave oven, 1000W.....                                     | 1,680.87             | 3.38                                 | 5.40  | 14.86       | 44059 |
| 44060   | Tea boiler, 45 litres.....                                      | 4,438.66             | 92.02                                | 107.24  | 239.56      | 44060 |

| Item   |  |                                      |  |             | Item   |       |
|--|--|--------------------------------------|--|-------------|--------|-------|
| <b>CATERING EQUIPMENT (CONT'D)</b>                       |  |                                      |  |             |        |       |
| <b>Kitchen equipment (Cont'd)</b>                        |  |                                      |  |             |        |       |
| <b>Sundries : - (Cont'd)</b>                             |  |                                      |  |             |        |       |
| <i>Each</i>  |  |                                      |  |             |        |       |
|  | Supply<br>and<br>fix   | Take<br>down<br>and<br>clear<br>away | Take<br>down<br>and set<br>aside for<br>re-use | Fix<br>only |        |       |
|  | A<br>\$  | B<br>\$                              | C<br>\$  | D<br>\$     |        |       |
| 44061  | Mobile rice warmer, 650 x 650 x 850 mm high approx.....                        | 5,314.26                             | 21.61  | 27.01       | 57.42  | 44061 |
| 44062  | Mobile soup warmer, 650 x 650 x 850 mm high approx.....                        | 5,314.26                             | 21.61  | 27.01       | 57.42  | 44062 |
| 44063  | Mobile table, 1400 x 760 x 860 mm high approx. with two undershelves.....      | 4,187.33                             | 19.59  | 24.32       | 51.34  | 44063 |
| 44064  | Service counter c/w under-counter boiler, 1850 x 850 x 700 mm high approx..... | 12,006.22                            | 113.32   | 130.04      | 396.99 | 44064 |
| 44065  | Rubbish bin with lid, 30 to 40 litres.....                                     | 534.83                               | 10.13  | 11.48       | 19.59  | 44065 |
| 44066  | Wooden top table 1900 x 750 x 850mm high.....                                  | 5,311.84                             | 76.33  | 93.89       | 248.58 | 44066 |
| <b>Kitchen furniture</b>                                 |  |                                      |  |             |        |       |
| <b>Stainless steel worktop tables, 850mm high : -</b>    |  |                                      |  |             |        |       |
| <i>Each</i>  |  |                                      |  |             |        |       |
| 44067  | 1500 x 750 mm.....   | 2,894.10                             | 59.44  | 73.63       | 216.83 | 44067 |
| 44068  | 2000 x 750 mm.....   | 3,201.66                             | 79.03  | 97.94       | 274.92 | 44068 |
| 44069  | 1500 x 900 mm.....   | 3,184.69                             | 61.47  | 81.74       | 228.32 | 44069 |
| <b>Stainless steel worktop with undershelf : -</b>       |  |                                      |  |             |        |       |
| <i>Per linear metre</i>                                  |  |                                      |  |             |        |       |
| 44070  | 600 mm (W) x 850 mm (H) with 1-tier undershelf.....                            | 2,947.35                             | 48.64  | 68.22       | 190.49 | 44070 |
| 44071  | 600 mm (W) x 850 mm (H) with 2-tier undershelf.....                            | 3,465.92                             | 59.44  | 79.70       | 218.18 | 44071 |
| 44072  | 750 mm (W) x 850 mm (H) with 1-tier undershelf.....                            | 3,105.25                             | 48.64  | 68.22       | 185.76 | 44072 |
| 44073  | 750 mm (W) x 850 mm (H) with 2-tier undershelf.....                            | 3,687.49                             | 57.42  | 76.33       | 227.64 | 44073 |
| <b>Stainless steel worktop with sink, 850mm high : -</b> |  |                                      |  |             |        |       |
| <i>Each</i>  |  |                                      |  |             |        |       |
| 44074  | 1800 x 750 mm with single sink 500 x 500 x 400 mm deep .....                   | 6,658.00                             | 102.67   | 108.76      | 410.69 | 44074 |
| 44075  | 1800 x 750 mm with double sinks each 500 x 500 x 400 mm deep .....             | 8,840.95                             | 112.80   | 119.56      | 444.47 | 44075 |

| Item  |  |                      |                                      |  | Item        |       |
|---|--|----------------------|--------------------------------------|--|-------------|-------|
| <b>CATERING EQUIPMENT (CONT'D)</b>                                  |  |                      |                                      |  |             |       |
| <b>Kitchen furniture (Cont'd)</b>                                   |  |                      |                                      |  |             |       |
| <b>Stainless steel chopping tables with undershelf : -</b>          |  |                      |                                      |  |             |       |
| <i>Per linear metre</i>   |  |                      |                                      |  |             |       |
|   |  | Supply<br>and<br>fix | Take<br>down<br>and<br>clear<br>away | Take<br>down<br>and set<br>aside for<br>re-use | Fix<br>only |       |
|   |  | A<br>\$              | B<br>\$                              | C<br>\$  | D<br>\$     |       |
| 44076   | 600 mm (W) x 850 mm (H) with 1-tier undershelf.....  | 3,346.47             | 53.35                                | 73.63  | 193.86      | 44076 |
| 44077   | 600 mm (W) x 850 mm (H) with 2-tier undershelf.....  | 4,325.88             | 64.17                                | 83.76  | 220.89      | 44077 |
| 44078   | 750 mm (W) x 850 mm (H) with 1-tier undershelf.....  | 3,534.92             | 53.35                                | 73.63  | 199.94      | 44078 |
| 44079   | 750 mm (W) x 850 mm (H) with 2-tier undershelf.....  | 4,578.01             | 68.22                                | 83.76  | 228.32      | 44079 |
| <b>Open shelves : -</b>   |  |                      |                                      |  |             |       |
| <i>Per linear metre</i>   |  |                      |                                      |  |             |       |
| 44080   | Open shelves, 3-tiers, 500 mm (D) x 1800 mm (H).....   | 3,923.13             | 50.66                                | 70.93  | 153.33      | 44080 |
| <b>Stainless steel worktop cabinet, 600 mm (D) x 850 mm (H) : -</b> |  |                      |                                      |  |             |       |
| <i>Per linear metre</i>   |  |                      |                                      |  |             |       |
| 44081   | Worktop cabinet with 1-tier intermediate adjustable shelf, hinged doors.....                         | 5,301.17             | 79.70                                | 98.61  | 254.66      | 44081 |
| 44082   | Worktop cabinet with 1-tier intermediate adjustable shelf, hinged doors<br>and 1-layer drawers ..... | 6,515.50             | 87.14                                | 107.40   | 260.06      | 44082 |
| 44083   | Worktop cabinet with stack of 3 drawers.....   | 7,385.04             | 92.55                                | 111.45   | 278.30      | 44083 |
| <b>Stainless steel choptop cabinet, 600 mm (D) x 850 mm (H) : -</b> |  |                      |                                      |  |             |       |
| <i>Per linear metre</i>   |  |                      |                                      |  |             |       |
| 44084   | Choptop cabinet with 1-tier intermediate adjustable shelf, hinged doors.....                         | 5,527.83             | 77.68                                | 93.22  | 248.58      | 44084 |
| 44085   | Choptop cabinet with 1-tier intermediate adjustable shelf, hinged doors<br>and 1-layer drawers ..... | 6,497.68             | 83.76                                | 97.94  | 264.79      | 44085 |



| Item   |   |                      |                                      |  | Item        |       |
|--|---|----------------------|--------------------------------------|--|-------------|-------|
| <b>CATERING EQUIPMENT (CONT'D)</b>   |   |                      |                                      |  |             |       |
| <b>Kitchen furniture (Cont'd)</b>  |   |                      |                                      |  |             |       |
| <b>Stainless steel sink cabinet c/w hinged doors, sinks and grease traps : -</b> |   |                      |                                      |  |             |       |
| <i>Each</i>  |   |                      |                                      |  |             |       |
|  |   | Supply<br>and<br>fix | Take<br>down<br>and<br>clear<br>away | Take<br>down<br>and set<br>aside for<br>re-use | Fix<br>only |       |
|  |   | A<br>\$              | B<br>\$                              | C<br>\$  | D<br>\$     |       |
| 44086  | Single sink cabinet, 600 mm (D) x 850 mm (H) x 1300 mm (L) approx.....  | 5,038.98             | 89.42                                | 111.77   | 363.26      | 44086 |
| 44087  | Twin sink cabinet, 600 mm (D) x 850 mm (H) x 2000 mm (L) approx.....  | 6,748.96             | 138.78                               | 173.25   | 500.18      | 44087 |
| <b>Stainless steel grease trap : -</b>   |   |                      |                                      |  |             |       |
| <i>Each</i>  |   |                      |                                      |  |             |       |
| 44088  | Stainless steel grade 316 grease trap 300 x 300 x 500 mm (L), with<br>moveable baffles to facilitate cleaning ..... | 1,018.71             | 9.31                                 | 10.24  | 37.26       | 44088 |
| <b>Hanging cabinet : -</b>   |   |                      |                                      |  |             |       |
| <i>Per linear metre</i>  |   |                      |                                      |  |             |       |
| 44089  | Hanging cabinet with 1-tier intermediate adjustable shelf, 400 mm (D) x 700 mm (H)<br>with hinged doors .....       | 4,278.58             | 81.74                                | 101.33   | 215.48      | 44089 |
| <b>Cooking bench with 1-tier undershelf, 600 mm (D) x 600 mm (H) : -</b>         |   |                      |                                      |  |             |       |
| <i>Per linear metre</i>  |   |                      |                                      |  |             |       |
| 44090  | Cooking bench with splash back 400 mm high.....   | 1,841.69             | 50.66                                | 70.93  | 169.55      | 44090 |
| 44091  | Cooking bench with splash back 660 mm high.....   | 1,897.45             | 54.72                                | 74.99  | 176.31      | 44091 |
| <b>Stainless steel wall-mounted rack shelves : -</b>                             |   |                      |                                      |  |             |       |
| <i>Each</i>  |   |                      |                                      |  |             |       |
| 44092  | 2000 x 350 x 1200 mm high.....  | 2,004.68             | 80.39                                | 99.30  | 294.51      | 44092 |
| 44093  | Ordinary sink.....  | 2,514.03             | 74.30                                | 91.87  | 249.93      | 44093 |
| 44094  | Hand basin.....   | 1,786.38             | 74.30                                | 91.87  | 182.39      | 44094 |
| <i>Per linear metre</i>  |   |                      |                                      |  |             |       |
| 44095  | Enclosed base 800 x 600 mm high.....  | 2,728.69             | 74.30                                | 91.87  | 201.28      | 44095 |

## **Section 45**

### **SWIMMING POOL WATER TREATMENT INSTALLATION**

## SECTION 45

### SWIMMING POOL WATER TREATMENT INSTALLATION

#### SPECIAL CONDITIONS

|   |                |  |
|---|----------------|--|
| <b>Measurement of power supply</b>  | <b>SC45.01</b> | All works of electrical power supply up to power supply points (e.g. switchgear or isolator or spur unit and the like) for the equipment shall be measured separately and paid for at the appropriate rates under Section 27 - Lighting System and Fixtures, Section 28 - Small Power Distribution, Section 29 - Main Distribution System and Section 30 - Miscellaneous Electrical Installations or other applicable Work Sections of this Schedule.  |
| <b>Measurement of water supply</b>  | <b>SC45.02</b> | All works of water supply up to the respective termination points for the equipment shall be measured separately and paid for at the appropriate rates under the applicable Work Sections of this Schedule.  |
| <b>Measurement of excavations, ducts, chases, holes and other subsidiary work</b> | <b>SC45.03</b> | All trench excavation shall be measured separately and paid for at the appropriate rates under Section 03 - Excavation of this Schedule. All pipe ducts, concrete thrust blocks and anchor blocks, chases in, and holes through existing walls, ceilings and similar for pipes, etc., (but not mortices or holes for brackets) except specifically stated, shall be measured and paid for at the appropriate rates under Section 04 - Concrete Work, Section 05 - Brickwork and Blockwork, Section 12 - Roadwork and Cable Duct and Section 13 - Plumbing and Drainage or other applicable Work Sections of this Schedule. |
| <b>Measurement of pipework</b>  | <b>SC45.04</b> | Pipework shall be measured in linear metres over all in-line fittings, short running lengths and branches.   |
| <b>Measurement of insulation to pipework</b>                                      | <b>SC45.05</b> | Insulation to pipework shall be measured in linear metres for the diameter of the pipes to be insulated.   |
| <b>Measurement of heat resistant cables and low smoke zero halogen cables</b>     | <b>SC45.06</b> | <p>Cables for the equipment, control/indicating panels, fire alarm points, etc. have been allowed in the rates under this Section. No measurement shall be made for cables except for heat resistant cables where specifically ordered by the Maintenance Surveyor in writing.</p> <p>Heat resistant cables and low smoke zero halogen cables shall be measured the net length as fixed in linear metres.</p>  |

**SPECIAL CONDITIONS**

**Measurement  
of temporary  
supply**

**SC45.07**

Where a temporary supply is ordered by the Maintenance Surveyor, the provision of all articles, labour and accessory materials (nails, screws, rawplugs and similar) necessary for fixing shall be of temporary nature. For "use and waste" of all materials, such as cables, fittings and accessories, etc., for a period of not exceeding four weeks from the date of certified completion, 50 per cent of the value of the appropriate "supply and fix" items after the adjustment of contract percentages will be paid. For a period exceeding four weeks and not exceeding eight weeks, 55 per cent will be paid and for each subsequent month a further addition of 5 per cent will be made.

For a period of more than six months, the full rates, as for permanent works will be paid, and the materials will become the property of the Employer.

No extra payment will be made for the removal of materials in connection with the temporary supply, but the cost of which shall have been included in the payment as aforementioned in the first paragraph hereof. The date of certified completion of a temporary supply shall be the date when the installation is first brought into service. The date when it ceases to be used shall be the date from which the Maintenance Surveyor instructs the dismantlement of the installation, or the date when the installation is no longer in use, whichever is earlier.

**Rates generally**

**SC45.08**

The rates for all items shall generally include for :-

- (a) Colour band and colour identification work.
- (b) Lettering and engraving for identification, signs, labels in both English and Chinese.
- (c) Identification plates, signs, notice plates, discs and labels in both English and Chinese.
- (d) Priming or painting off site and proprietary finishes or surface treatment applied as part of the production process whether applied before or after fabrication and assembly.
- (e) All protective and finishing painting work, apart from additional painting work specifically ordered by the Maintenance Surveyor in writing which shall be measured separately and paid for at the appropriate rates under Section 15 - Painting of this Schedule.
- (f) Any kind of fixing method including provision of screws, nuts, bolts, shims, washers, clips, hangers, supports, brackets, spring compensated and seismic restraints and isolating components and the like.
- (g) Provision of expansion joints in service runs wherever they coincide with structural expansion joints.
- (h) Submission of catalogues, technical literature, data, calculations, test certificates and approval documentation covering the equipment and materials being supplied.
- (i) Preparing and submitting detail working drawings as required and all shop drawings for the fabrication and installation.
- (j) Attendance, as required, of the manufacturers' representative to assist in the installation and subsequent testing and commissioning.

**SPECIAL CONDITIONS**

**Rates generally  
(Cont'd)**

**SC45.08  
(Cont'd)**

- (k) Testing and commissioning including submission of Testing and Commissioning Certificates and Records of Tests.
- (l) Provision of all necessary power, fuel, labour and testing instrument of approved type for testing and commissioning.
- (m) Submitting all relevant documentation to Fire Services Department and Environmental Protection Department for obtaining necessary approval.
- (n) Preparing and submitting operation and maintenance manuals and as-fitted drawings for items of works as required.
- (o) Provision of schematic diagrams covered front and back with plastic sheet including fixing to wall.
- (p) Provision of manufacturer's guarantee.
- (q) Attending fault and complaint during the Maintenance Period.
- (r) Meeting statutory requirements for disposal of waste materials.

**Rates for  
pipework**

**SC45.09**

The rates for pipework shall further include for : -

- (a) All short lengths, cutting and waste, and joints in the running length.
- (b) All pipework brackets, supports, hangers, guides, anchors and the like and alternative method of jointing and fixing as specified (if any).
- (c) All pipework fittings (e.g. bends, elbows, branches, reducers, tees, caps and the like) including connections, cutting and jointing pipes to fittings.
- (d) Screwed sockets, tappings, bosses and welding-necks welded to pipes or flanges including perforating the pipework or flanges.
- (e) Connections between pipework of different materials and differing grades of same material.
- (f) Provision of wall plates, ceiling plates, floor plates, high tensile holding down bolts, tapered washers and the like for casting into the reinforced concrete corbels.
- (g) All jointing including provision of flexible connections and/ or necessary adaptors and connectors, welding consumable, jointing tapes, flanges, unions, gasket, bolts and nuts and the like where required.
- (h) Expansion loops and compensators including connections, cutting and jointing to pipes and fittings.

**SPECIAL CONDITIONS**

|   |                         |  |
|---|-------------------------|--|
| <b>Rates for pipework (Cont'd)</b>          | <b>SC45.09 (Cont'd)</b> | <ul style="list-style-type: none"> <li>(i) Provision of all sleeves for casting in or building in where pipes pass through slabs, walls or beams and caulking between pipe and sleeve where required.</li> <li>(j) Fixing in any position to floors, walls and ceilings including laying in trenches and fixing in chases, ducts, false ceilings and similar positions, and wrapping with protective tapes where required.</li> </ul>  |
| <b>Rates for in-line pipework equipment</b> | <b>SC45.10</b>          | <p>The rates for in-line pipework equipment (e.g. valves, flow meters, gauges, strainers and the like) shall further include for : -</p> <ul style="list-style-type: none"> <li>(a) Cutting and jointing to pipes and fittings.</li> <li>(b) Stripping down repacking glands and preparing spindles, as appropriate, prior to installation.</li> </ul>   |
| <b>Rates for equipment</b>                  | <b>SC45.11</b>          | <p>The rates for equipment shall further include for : -</p> <ul style="list-style-type: none"> <li>(a) All necessary assembly, orientation, alignment, levelling and bolting down, together with the provision of shims and packing pieces, the clocking of couplings between drivers and rotating equipment, strainers, instrumentation and the like.</li> <li>(b) Supporting frames.</li> <li>(c) Connections including flexible joints between pipework and equipment.</li> <li>(d) Flexible connections and anti-vibration connections between pipework and equipment.</li> <li>(e) All necessary operational and control accessories (e.g. valves, gauges, flow meters, indicating lamps and the like) forming part of the equipment, connection and termination.</li> <li>(f) Final connections and terminations to electrical supply and water supply including cables, wirings, conduits, trunkings, cable trays, fuses, control boxes, pipework, valves, gauges and necessary accessories required for energizing the equipment to properly operate at specified duties.</li> <li>(g) Anti-vibration mountings for plant, machinery and the like.</li> <li>(h) Anti-vibration materials and sound insulating materials in plant and machinery bases.</li> <li>(i) Motor starters (if motors in the equipment require motor starters).</li> <li>(j) Earth/ equipotential bonding as specified.</li> </ul> |

**SPECIAL CONDITIONS**

**Rates for heat resistant cables and low smoke zero halogen cables**

**SC45.12**

The rates for heat resistant cables and low smoke zero halogen cables shall further include for : -

- (a) Laying or fixing in different locations, such as drawing into underground pipe ducts, laying or drawing into trunkings, drawing into conduits, suspending from insulators or catenaries, wrapping around equipment.
- (b) In case of cables drawn into existing conduits, existing ducts or existing trunkings, removing and putting back existing covers, existing inspection lids and the like.
- (c) Making cable-joints.
- (d) Determining circuits, lacing into circuit groups and provision of draw wires, draw cables and the like as required.
- (e) All necessary fixings complete with accessories and fittings as required.
- (f) Provision of all sleeves for casting in or building in where cables pass through slabs, walls or beams and caulking between cable and sleeve where required.

**Rates for "Take down and clear away" or "Take down and set aside for re-use"**

**SC45.13**

The rates for "Take down and clear away" or " Take down and set aside for re-use" existing items in connection with swimming pool water treatment installation shall further include for : -

- (a) All in-line fittings including brackets, supports, hangers and the like.
- (b) Cutting into existing pipework and the like in position.
- (c) Plugging off remaining ends with plugs or caps as required.
- (d) Preparing remaining ends of pipework and building services works (if any) to receive connections with new work if required.
- (e) In the case of equipment and the like, taking down all associated pipework and/or building services works.
- (f) Making good all works disturbed.

**Particular Specification**

**SC45.14**

The Particular Specification for swimming pool water treatment installation can be found in the Contract.

| Item   |             |                      |                                   |  | Item        |       |
|--|-------------|----------------------|-----------------------------------|--|-------------|-------|
| <b>VALVES, PIPE WORKS AND ACCESSORIES</b>                    |             |                      |                                   |  |             |       |
| Gate valves for sea water application 316 stainless steel :- |             |                      |                                   |  |             |       |
| <i>Each</i>  |             |                      |                                   |  |             |       |
|  |             | Supply<br>and<br>fix | Take<br>down<br>and clear<br>away | Take<br>down<br>and set<br>aside for<br>re-use | Fix<br>only |       |
|  |             | A<br>\$              | B<br>\$                           | C<br>\$  | D<br>\$     |       |
| 45001  | 25 mm ..... | 285.24               | 18.65                             | 22.92  | 31.65       | 45001 |
| 45002  | 32 mm ..... | 366.74               | 19.11                             | 23.50  | 35.43       | 45002 |
| 45003  | 40 mm.....  | 471.52               | 19.56                             | 23.86  | 37.26       | 45003 |
| 45004  | 50 mm.....  | 640.33               | 20.37                             | 24.65  | 40.05       | 45004 |
| 45005  | 65 mm.....  | 3,958.42             | 20.78                             | 25.43  | 41.91       | 45005 |
| 45006  | 80 mm.....  | 5,355.50             | 22.78                             | 27.06  | 45.64       | 45006 |
| 45007  | 100 mm..... | 7,683.98             | 23.96                             | 28.29  | 47.50       | 45007 |
| 45008  | 150 mm..... | 13,738.03            | 30.51                             | 34.93  | 58.68       | 45008 |
| 45009  | 200 mm..... | 22,411.62            | 36.54                             | 41.01  | 67.07       | 45009 |
| Gate valves for sea water application PVC :-                 |             |                      |                                   |  |             |       |
| <i>Each</i>  |             |                      |                                   |  |             |       |
| 45010  | 25 mm ..... | 663.62               | 18.65                             | 22.92  | 31.65       | 45010 |
| 45011  | 32 mm ..... | 761.41               | 19.11                             | 23.50  | 35.43       | 45011 |
| 45012  | 40 mm.....  | 873.18               | 19.56                             | 23.86  | 37.26       | 45012 |
| 45013  | 50 mm.....  | 931.39               | 20.37                             | 24.65  | 40.05       | 45013 |
| 45014  | 65 mm.....  | 1,222.45             | 20.78                             | 25.43  | 41.91       | 45014 |
| 45015  | 80 mm.....  | 1,397.09             | 22.78                             | 27.06  | 45.64       | 45015 |
| 45016  | 100 mm..... | 2,037.42             | 23.96                             | 28.29  | 47.50       | 45016 |
| 45017  | 150 mm..... | 3,783.78             | 30.51                             | 34.93  | 58.68       | 45017 |
| 45018  | 200 mm..... | 5,239.08             | 36.54                             | 41.01  | 67.07       | 45018 |



| Item  |             |                      |                                   |  | Item        |       |
|---|-------------|----------------------|-----------------------------------|--|-------------|-------|
| <b>VALVES, PIPE WORKS AND ACCESSORIES (CONT'D)</b>                |             |                      |                                   |  |             |       |
| Globe valves for sea water application 316 stainless steel :-     |             |                      |                                   |  |             |       |
| <i>Each</i>   |             |                      |                                   |  |             |       |
|   |             | Supply<br>and<br>fix | Take<br>down<br>and clear<br>away | Take<br>down<br>and set<br>aside for<br>re-use | Fix<br>only |       |
|   |             | A<br>\$              | B<br>\$                           | C<br>\$  | D<br>\$     |       |
| 45019   | 25 mm ..... | 267.78               | 18.65                             | 22.92  | 31.65       | 45019 |
| 45020   | 32 mm ..... | 366.74               | 19.11                             | 23.50  | 35.43       | 45020 |
| 45021   | 40 mm.....  | 454.05               | 19.56                             | 23.86  | 37.26       | 45021 |
| 45022   | 50 mm.....  | 564.66               | 20.37                             | 24.65  | 40.05       | 45022 |
| 45023   | 65 mm.....  | 3,783.78             | 20.78                             | 25.43  | 41.91       | 45023 |
| 45024   | 80 mm.....  | 5,122.66             | 22.78                             | 27.06  | 45.64       | 45024 |
| 45025   | 100 mm..... | 7,975.04             | 23.96                             | 28.29  | 47.50       | 45025 |
| 45026   | 150 mm..... | 16,008.30            | 30.51                             | 34.93  | 58.68       | 45026 |
| 45027   | 200 mm..... | 25,613.28            | 36.54                             | 41.01  | 67.07       | 45027 |
| Motorized valves for sea water application 316 stainless steel :- |             |                      |                                   |  |             |       |
| <i>Each</i>   |             |                      |                                   |  |             |       |
| 45028   | 40 mm.....  | 2,910.60             | 27.51                             | 33.52  | 53.09       | 45028 |
| 45029   | 65 mm.....  | 5,821.20             | 29.31                             | 35.81  | 57.75       | 45029 |
| 45030   | 80 mm.....  | 6,112.26             | 32.07                             | 38.02  | 62.41       | 45030 |
| 45031   | 100 mm..... | 6,403.32             | 33.61                             | 39.72  | 65.20       | 45031 |
| 45032   | 150 mm..... | 7,567.56             | 40.06                             | 47.27  | 78.23       | 45032 |
| 45033   | 200 mm..... | 10,478.16            | 42.29                             | 48.62  | 81.96       | 45033 |

| Item  |             |                |                          |                                    | Item     |       |
|---|-------------|----------------|--------------------------|------------------------------------|----------|-------|
| <b>VALVES, PIPE WORKS AND ACCESSORIES (CONT'D)</b>                          |             |                |                          |                                    |          |       |
| Butterfly valves : ductile iron body ; 316 stainless steel disc & shaft : - |             |                |                          |                                    |          |       |
| <i>Each</i>   |             |                |                          |                                    |          |       |
|   |             | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only |       |
|   |             | A<br>\$        | B<br>\$                  | C<br>\$                            | D<br>\$  |       |
| 45034   | 25 mm.....  | 426.89         | 17.22                    | 21.17                              | 29.81    | 45034 |
| 45035   | 32 mm.....  | 454.05         | 17.61                    | 21.68                              | 32.59    | 45035 |
| 45036   | 40 mm.....  | 485.10         | 18.04                    | 22.04                              | 34.50    | 45036 |
| 45037   | 50 mm.....  | 523.91         | 18.81                    | 22.77                              | 37.26    | 45037 |
| 45038   | 65 mm.....  | 582.12         | 19.20                    | 23.51                              | 38.20    | 45038 |
| 45039   | 80 mm.....  | 698.54         | 21.04                    | 25.02                              | 41.91    | 45039 |
| 45040   | 100 mm..... | 989.60         | 22.12                    | 26.10                              | 43.80    | 45040 |
| 45041   | 150 mm..... | 1,455.30       | 28.15                    | 32.24                              | 53.09    | 45041 |
| 45042   | 200 mm..... | 3,027.02       | 34.90                    | 39.27                              | 55.89    | 45042 |
| Check valves for sea water application 316 stainless steel : -              |             |                |                          |                                    |          |       |
| <i>Each</i>   |             |                |                          |                                    |          |       |
| 45043   | 25 mm.....  | 244.49         | 18.65                    | 22.92                              | 31.65    | 45043 |
| 45044   | 32 mm.....  | 355.09         | 19.11                    | 23.51                              | 35.43    | 45044 |
| 45045   | 40 mm.....  | 465.70         | 19.56                    | 23.86                              | 37.26    | 45045 |
| 45046   | 50 mm.....  | 611.23         | 20.37                    | 24.65                              | 40.05    | 45046 |
| 45047   | 65 mm.....  | 1,862.78       | 20.78                    | 25.43                              | 41.91    | 45047 |
| 45048   | 80 mm.....  | 2,095.63       | 22.78                    | 27.06                              | 45.64    | 45048 |
| 45049   | 100 mm..... | 2,677.75       | 23.96                    | 28.29                              | 47.50    | 45049 |
| 45050   | 150 mm..... | 4,598.75       | 30.51                    | 34.93                              | 58.68    | 45050 |
| 45051   | 200 mm..... | 8,731.80       | 36.54                    | 41.01                              | 67.07    | 45051 |

| Item  |                        |                      |                                   |  | Item        |       |
|---|------------------------|----------------------|-----------------------------------|--|-------------|-------|
| <b>VALVES, PIPE WORKS AND ACCESSORIES (CONT'D)</b>  |                        |                      |                                   |  |             |       |
| UPVC pipes and fittings : BS EN 1452 ; solvent or flanged joints, and c/w all accessories |                        |                      |                                   |  |             |       |
| Pipework and fittings : -   |                        |                      |                                   |  |             |       |
| <i>Per linear metre</i>   |                        |                      |                                   |  |             |       |
|   |                        | Supply<br>and<br>fix | Take<br>down<br>and clear<br>away | Take<br>down<br>and set<br>aside for<br>re-use | Fix<br>only |       |
|   |                        | A<br>\$              | B<br>\$                           | C<br>\$  | D<br>\$     |       |
| 45052   | 25 mm diameter.....    | 67.78                | 19.85                             | 22.89  | 42.85       | 45052 |
| 45053   | 32 mm diameter.....    | 87.32                | 23.28                             | 25.38  | 45.64       | 45053 |
| 45054   | 40 mm diameter.....    | 145.53               | 25.31                             | 27.49  | 49.36       | 45054 |
| 45055   | 50 mm diameter.....    | 221.21               | 28.54                             | 33.09  | 55.89       | 45055 |
| 45056   | 65 mm diameter.....    | 244.49               | 33.62                             | 34.66  | 69.85       | 45056 |
| 45057   | 80 mm diameter.....    | 320.17               | 35.58                             | 38.65  | 75.68       | 45057 |
| 45058   | 100 mm diameter.....   | 349.27               | 38.70                             | 45.69  | 87.32       | 45058 |
| 45059   | 150 mm diameter.....   | 436.59               | 54.21                             | 58.49  | 116.42      | 45059 |
| 45060   | 200 mm diameter.....   | 523.91               | 62.77                             | 67.79  | 174.64      | 45060 |
| 45061   | 250 mm diameter.....   | 1,164.24             | 74.25                             | 79.37  | 291.06      | 45061 |
| 45062   | 300 mm diameter.....   | 2,212.06             | 82.15                             | 86.10  | 378.38      | 45062 |
| Bucket-type strainer c/w all accessories : -  |                        |                      |                                   |  |             |       |
| <i>Each</i>   |                        |                      |                                   |  |             |       |
| 45063   | 40 mm, bronze.....     | 1,184.60             | 17.75                             | 21.52  | 34.47       | 45063 |
| 45064   | 50 mm, bronze.....     | 1,455.30             | 18.09                             | 21.88  | 35.41       | 45064 |
| 45065   | 65 mm, cast iron.....  | 1,862.78             | 18.91                             | 22.65  | 37.26       | 45065 |
| 45066   | 80 mm, cast iron.....  | 2,503.12             | 20.22                             | 24.00  | 40.05       | 45066 |
| 45067   | 100 mm, cast iron..... | 3,725.57             | 21.26                             | 25.11  | 41.91       | 45067 |
| 45068   | 150 mm, cast iron..... | 8,033.26             | 27.06                             | 30.99  | 51.23       | 45068 |
| 45069   | 200 mm, cast iron..... | 11,642.40            | 34.32                             | 37.95  | 60.54       | 45069 |

| Item  |  |                |                          |                                    | Item     |       |
|-------|--|----------------|--------------------------|------------------------------------|----------|-------|
|       | <b>VALVES, PIPE WORKS AND ACCESSORIES (CONT'D)</b>   |                |                          |                                    |          |       |
|       | Sundries : -   | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only |       |
|       | <i>Each</i>  | A<br>\$        | B<br>\$                  | C<br>\$                            | D<br>\$  |       |
| 45070 | Pressure gauge with cock, c/w all accessories.....   | 232.85         | 3.71                     | 5.59                               | 10.24    | 45070 |
| 45071 | Direct reading water flow meters c/w all accessories.....  | 6,836.89       | 31.65                    | 34.50                              | 64.27    | 45071 |
|       | <b>PUMPS</b>   |                |                          |                                    |          |       |
|       | Centrifugal end suction type pumps   |                |                          |                                    |          |       |
|       | Pumps sets ; bronze/ cast iron casings and bronze impellers ; direct driven by motors ; water seal connection ; vents ; drain ; priming plug ; associated pipeworks and anti-vibration mountings ; adjacent emergency stops ; all necessary components and accessories : - |                |                          |                                    |          |       |
|       | <i>Per set</i>   |                |                          |                                    |          |       |
| 45072 | up to 5 kW.....  | 9,604.98       | 87.56                    | 117.36                             | 498.32   | 45072 |
| 45073 | 5 - 10 kW.....   | 11,642.40      | 94.08                    | 123.88                             | 733.04   | 45073 |
| 45074 | 10 - 15 kW.....  | 14,553.00      | 99.66                    | 130.40                             | 812.21   | 45074 |
| 45075 | 15 - 20 kW.....  | 16,299.36      | 105.28                   | 135.06                             | 946.34   | 45075 |
| 45076 | 20 - 30 kW.....  | 19,792.08      | 110.84                   | 141.59                             | 1,037.62 | 45076 |
| 45077 | 30 - 50 kW.....  | 24,449.04      | 117.36                   | 148.08                             | 1,130.76 | 45077 |

| Item  |   |                |                          |                                    | Item      |       |
|-------|---|----------------|--------------------------|------------------------------------|-----------|-------|
|       | <b>SAND FILTER TANKS</b>  |                |                          |                                    |           |       |
|       | Sand filters : mild steel electrically welded shell with epoxy coating ; c/w supported nozzles, balance tanks ; nozzle plates and filtering media supports ; internal distribution and draw-off trough ; flanged inlets and outlets ; wash-in ; drain and air connections ; manholes ; necessary filtering media ; filter supporting feet ; backwash facilities and all necessary accessories : - | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only  |       |
|       | Equipment flow rate, capacity : -   |                |                          |                                    |           |       |
|       | <i>Each</i>   | A<br>\$        | B<br>\$                  | C<br>\$                            | D<br>\$   |       |
| 45078 | up to 30 m <sup>3</sup> /hr.....  | 8,731.80       | 482.77                   | 605.22                             | 1,164.24  | 45078 |
| 45079 | 30 - 60 m <sup>3</sup> /hr.....   | 23,284.80      | 1,206.91                 | 1,513.02                           | 2,910.60  | 45079 |
| 45080 | 60 - 90 m <sup>3</sup> /hr.....   | 37,837.80      | 1,931.05                 | 2,420.82                           | 4,656.96  | 45080 |
| 45081 | 90 - 120 m <sup>3</sup> /hr.....  | 64,033.20      | 2,399.08                 | 3,213.66                           | 5,821.20  | 45081 |
| 45082 | 120 - 150 m <sup>3</sup> /hr.....   | 87,318.00      | 3,598.60                 | 4,820.47                           | 8,731.80  | 45082 |
| 45083 | 150 - 180 m <sup>3</sup> /hr.....<br>(The actual rate should be : \$116,424.00 for Item 45083A)   | 11,642.40      | 6,717.43                 | 8,998.21                           | 16,299.36 | 45083 |
|       | <i>Per cubic metre per hour</i>   |                |                          |                                    |           |       |
| 45084 | Extra over Item 45083 for each additional flow rate in m <sup>3</sup> /hr of sand filter.....   | 1,930.03       | 15.86                    | 21.42                              | 65.20     | 45084 |

| Item  |  |                |                          |                                    | Item      |       |
|-------|--|----------------|--------------------------|------------------------------------|-----------|-------|
|       | <b>CARBON FILTER TANKS</b>   |                |                          |                                    |           |       |
|       | Carbon filter tanks : mild steel electrically welded with epoxy coating c/w supported nozzles, nozzle plates : and filtering media supports ; internal distribution and draw-off trough ; flanged inlets and outlets ; wash-in ; drain and air connections ; manholes ; necessary filtering media ; maintenance platform; supports and all necessary accessories : - | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only  |       |
|       | Equipment volume : -   |                |                          |                                    |           |       |
|       | <i>Each</i>  | A \$           | B \$                     | C \$                               | D \$      |       |
| 45085 | Up to 2 m³.....  | 34,927.20      | 1,288.17                 | 1,462.35                           | 3,948.35  | 45085 |
| 45086 | 2 - 5 m³.....  | 58,212.00      | 1,886.15                 | 2,549.31                           | 7,788.63  | 45086 |
| 45087 | 5 - 10 m³.....<br>(The actual rate should be : \$116,424.00 for Item 45087A)   | 11,642.40      | 2,991.76                 | 3,633.52                           | 12,634.87 | 45087 |
| 45088 | 10 - 15 m³.....<br>(The actual rate should be : \$203,742.00 for Item 45088A)  | 20,374.20      | 3,717.35                 | 4,723.29                           | 16,505.91 | 45088 |
| 45089 | 15 - 20 m³.....<br>(The actual rate should be : \$302,702.40 for Item 45089A)  | 30,270.24      | 4,728.88                 | 5,745.08                           | 18,775.81 | 45089 |
| 45090 | 20 - 25 m³.....<br>(The actual rate should be : \$407,484.00 for Item 45090A)  | 40,748.40      | 5,049.32                 | 6,014.26                           | 21,068.07 | 45090 |

| Item  |   |                      |                                   |  | Item        |       |
|-------|---|----------------------|-----------------------------------|--|-------------|-------|
|       | <b>OZONATORS</b>  |                      |                                   |  |             |       |
|       | Ozonator : Vacuum operated type: full vacuum unit ; Duty and standby air dryers ;<br>Ozone generator ; High tension transformers ; Cartridge filters ; Softeners ;<br>Water trap pots ; Control panels (control panels measured separately); associated pipings;<br>wirings and control ; maintenance platform ; supports ; compact construction cabinet;<br>lockable doors and all necessary accessories : - | Supply<br>and<br>fix | Take<br>down<br>and clear<br>away | Take<br>down<br>and set<br>aside for<br>re-use | Fix<br>only |       |
|       | Capacity : -  |                      |                                   |  |             |       |
|       | <i>Per set</i>  | A<br>\$              | B<br>\$                           | C<br>\$  | D<br>\$     |       |
| 45091 | Up to 50 g/hr.....<br>(The actual rate should be : \$145,530.00 for Item 45091A)  | 14,553.00            | 1,762.27                          | 2,334.16                                       | 6,693.27    | 45091 |
| 45092 | 50 - 100 g/hr.....<br>(The actual rate should be : \$221,205.60 for Item 45092A)  | 22,120.56            | 2,381.67                          | 2,749.58                                       | 9,085.20    | 45092 |
| 45093 | 100 - 150 g/hr.....<br>(The actual rate should be : \$232,848.00 for Item 45093A)   | 23,284.80            | 2,565.16                          | 3,178.07                                       | 9,750.23    | 45093 |
| 45094 | 150 - 200 g/hr.....<br>(The actual rate should be : \$279,417.60 for Item 45094A)   | 27,941.76            | 2,786.85                          | 3,521.74                                       | 11,495.73   | 45094 |
| 45095 | 200 - 250 g/hr.....<br>(The actual rate should be : \$305,613.00 for Item 45095A)   | 30,561.30            | 3,383.88                          | 4,129.04                                       | 13,654.80   | 45095 |
| 45096 | 250 - 300 g/hr.....<br>(The actual rate should be : \$395,841.60 for Item 45096A)   | 39,584.16            | 3,880.35                          | 4,622.69                                       | 14,478.17   | 45096 |

| Item  |  |                      |                                   |  | Item        |       |
|-------|--|----------------------|-----------------------------------|--|-------------|-------|
|       | <b>OZONATED WATER REACTION TANKS</b>   |                      |                                   |  |             |       |
|       | Ozonated water reaction tank : mild steel electrically welded shell with epoxy coating ;<br>c/w automatic air vents ; drains ; valves ; flow meters ; maintenance platform ; supports ;<br>accessories and connections : - | Supply<br>and<br>fix | Take<br>down<br>and clear<br>away | Take<br>down<br>and set<br>aside for<br>re-use | Fix<br>only |       |
|       | Equipment volume : -   |                      |                                   |  |             |       |
|       | <i>Per cubic metre</i>   | A<br>\$              | B<br>\$                           | C<br>\$  | D<br>\$     |       |
| 45097 | Up to 2 m³.....  | 29,106.00            | 1,110.27                          | 1,595.54                                       | 4,627.34    | 45097 |
| 45098 | 2 - 5 m³.....  | 49,480.20            | 1,914.09                          | 2,461.78                                       | 7,799.83    | 45098 |
| 45099 | 5 - 10 m³.....   | 98,960.40            | 2,879.07                          | 3,559.00                                       | 11,750.97   | 45099 |
| 45100 | 10 - 15 m³.....<br>(The actual rate should be : \$174,636.00 for Item 45100A)  | 17,463.60            | 3,698.72                          | 4,607.77                                       | 15,613.61   | 45100 |
| 45101 | 15 - 20 m³.....<br>(The actual rate should be : \$282,328.20 for Item 45101A)  | 28,232.82            | 4,668.34                          | 5,616.53                                       | 19,122.30   | 45101 |
| 45102 | 20 - 25 m³.....<br>(The actual rate should be : \$378,378.00 for Item 45102A)  | 37,837.80            | 5,061.40                          | 6,071.07                                       | 20,955.38   | 45102 |



| Item  |  |                |                          |                                    | Item     |       |
|-------|--|----------------|--------------------------|------------------------------------|----------|-------|
|       | <b>COMPRESSED AIR SUPPLY FOR BACKWASH SYSTEM</b>   |                |                          |                                    |          |       |
|       | Compressed air supply for backwash system : air compressors ; ancillary control accessories ; acoustic enclosure ; pipeworks and fittings ; all type of valves ; switches ; pressure gauges ; connections ; controls and interlocks ; control panel (control panel measured separately) ; supports ; all necessary accessories : - | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only |       |
|       | Displacement rate : -  |                |                          |                                    |          |       |
|       | <i>Per system</i>  | A \$           | B \$                     | C \$                               | D \$     |       |
| 45103 | Up to 50 m³/hr.....  | 29,106.00      | 388.41                   | 462.92                             | 1,555.50 | 45103 |
| 45104 | 50 - 100 m³/hr.....  | 32,016.60      | 461.99                   | 555.13                             | 1,922.47 | 45104 |
| 45105 | 100 - 150 m³/hr.....   | 43,659.00      | 499.25                   | 599.86                             | 2,163.74 | 45105 |
| 45106 | 150 - 200 m³/hr.....   | 46,569.60      | 556.06                   | 666.91                             | 2,277.39 | 45106 |
| 45107 | 200 - 250 m³/hr.....   | 47,151.72      | 566.32                   | 687.42                             | 2,386.33 | 45107 |
| 45108 | 250 - 300 m³/hr.....   | 52,390.80      | 585.87                   | 708.83                             | 2,459.89 | 45108 |
| 45109 | 300 - 350 m³/hr.....   | 53,555.04      | 648.26                   | 784.26                             | 2,640.61 | 45109 |
| 45110 | 350 - 400 m³/hr.....   | 55,301.40      | 672.49                   | 814.07                             | 2,738.43 | 45110 |

**Section 46**

**CRANE AND HOIST INSTALLATION**

## SECTION 46

### CRANE AND HOIST INSTALLATION

#### SPECIAL CONDITIONS

|  |                |  |
|--|----------------|--|
| <b>Measurement of power supply</b>     | <b>SC46.01</b> | <p>All works of electrical power supply up to power supply points (e.g. switchgear or isolator or spur unit and the like) for the equipment shall be measured separately and paid for at the appropriate rates under Section 27 - Lighting System and Fixtures, Section 28 - Small Power Distribution, Section 29 - Main Distribution Systems and Section 30 - Miscellaneous Electrical Installations or other applicable Work Sections of this Schedule.</p>  |
| <b>Measurement of temporary supply</b> | <b>SC46.02</b> | <p>Where a temporary supply is ordered by the Maintenance Surveyor, the provision of all articles, labour and accessory materials (nails, screws, rawplugs and similar) necessary for fixing shall be of temporary nature. For "use and waste" of all materials and accessories, etc., for a period of not exceeding four weeks from the date of certified completion, 50 per cent of the value of the appropriate "supply and fix" items after the adjustment of contract percentages will be paid. For a period exceeding four weeks and not exceeding eight weeks, 55 per cent will be paid and for each subsequent month a further addition of 5 per cent will be made.</p> <p>For a period of more than six months, the full rates, as for permanent works will be paid, and the materials will become the property of the Employer.</p> <p>No extra payment will be made for the removal of materials in connection with the temporary supply, but the cost of which shall have been included in the payment as aforementioned in the first paragraph hereof. The date of certified completion of a temporary supply shall be the date when the installation is first brought into service. The date when it ceases to be used shall be the date from which the Maintenance Surveyor instructs the dismantlement of the installation, or the date when the installation is no longer in use, whichever is earlier.</p> |
| <b>Rates generally</b>                 | <b>SC46.03</b> | <p>The rates for all items shall generally include for : -</p> <ol style="list-style-type: none"> <li>(a) Submission of catalogues, technical literature, data, calculations, test certificates and approval documentation covering the equipment and materials being supplied.</li> <li>(b) Preparing and submitting detail working drawings as required and all shop drawings for the fabrication and installation.</li> <li>(c) Attendance, as required, of the manufacturers' representative to assist in the installation and subsequent testing and commissioning.</li> <li>(d) Testing and commissioning including submission of Testing and Commissioning Certificates and Records of Tests.</li> <li>(e) Provision of all necessary power, fuel, labour and testing instrument of approved type for testing and commissioning.</li> </ol>   |

**SPECIAL CONDITIONS**

|                                     |                             |   |
|-------------------------------------|-----------------------------|---|
| <b>Rates generally<br/>(Cont'd)</b> | <b>SC46.03<br/>(Cont'd)</b> | <ul style="list-style-type: none"> <li>(f) Submitting all relevant documentation to Electrical and Mechanical Services Department and Labour Department for obtaining necessary approval.</li> <li>(g) Preparing and submitting operation and maintenance manuals and as-fitted drawings for items of works as required.</li> <li>(h) Provision of manufacturer's guarantee.</li> <li>(i) Attending fault and complaint during the Maintenance Period.</li> </ul>   |
| <b>Rates for<br/>equipment</b>      | <b>SC46.04</b>              | <p>The rates for equipment shall further include for : -</p> <ul style="list-style-type: none"> <li>(a) All necessary assembly, erection, orientation, alignment, levelling and bolting down, together with the provision of shims and packing pieces, the clocking of couplings between drivers and rotating equipment, instrumentation and the like.</li> <li>(b) Supporting frames.</li> <li>(c) Provision of wall plates, ceiling plates, floor plates, high tensile holding down bolts, tapered washers and the like for casting into the reinforced concrete corbels.</li> <li>(d) All necessary operational and control accessories (e.g. gearboxes, brakes, safety facilities, indicating lamps, pendant control units and the like) forming part of the equipment, connection and termination.</li> <li>(e) Testing and examination of the equipment and associated lifting facilities by an approved independent surveyor.</li> <li>(f) Final connections and terminations to electrical supply and water supply including cables, wirings, conduits, trunkings, cable trays, fuses, control boxes, pipework, valves, gauges and necessary accessories required for energizing the equipment to properly operate at specified duties.</li> <li>(g) Anti-vibration materials and sound insulating materials in plant and machinery bases.</li> <li>(h) Motor starters (if motors in the equipment require motor starters).</li> <li>(i) Earth/ equipotential bonding as specified.</li> <li>(j) All necessary statutory submission to all relevant Authorities including employing competent examiners for testing and inspection of the equipment to satisfy the requirements of Labour Department.</li> <li>(k) Structural design and associated drawings for approval prior to manufacturing. The design shall be attested by a professional structural engineer licensed to practices in Hong Kong.</li> </ul> |
| <b>Particular<br/>Specification</b> | <b>SC46.05</b>              | <p>The Particular Specification for crane and hoist can be found in the Contract.</p>   |

| Item  |   |                |                          |                                    | Item      |       |
|-------|---|----------------|--------------------------|------------------------------------|-----------|-------|
|       | <b>CRANE AND HOIST INSTALLATION</b>   |                |                          |                                    |           |       |
|       | Jib crane   |                |                          |                                    |           |       |
|       | Free standing, electrically rotated high grade steel jib crane, minimum rotating speed of 0.5rpm, up to 4m in height, 270 deg maximum slewing ark, and pre-lubricated, c/w round base plate reinforced with six knee braces, and c/w motor, gearbox, 2 limit switches, electric connection with crane; c/w electric motorized trolley, minimum moving speed of 5m/min, motor, gearbox, 2 limit switches, electric connection with trolley; c/w electrically operated hoist, minimum lifting speed of 2m/min, motor, gearbox, 2 limit switches, electric connection with hoist; and in span radius : - | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only  |       |
|       | <i>Per crane</i>  | A<br>\$        | B<br>\$                  | C<br>\$                            | D<br>\$   |       |
| 46001 | up to 3 m x 1 ton.....<br>(The actual rate should be : \$155,878.60 for Item 46001A)  | 15,587.86      | 7,290.00                 | 7,513.22                           | 26,544.50 | 46001 |
| 46002 | ditto x 1 - 2 ton.....<br>(The actual rate should be : \$164,104.40 for Item 46002A)  | 16,410.44      | 7,474.50                 | 7,707.91                           | 27,030.71 | 46002 |
| 46003 | ditto x 3 - 5 ton.....<br>(The actual rate should be : \$188,781.70 for Item 46003A)  | 18,878.17      | 7,975.99                 | 8,236.92                           | 28,319.10 | 46003 |
| 46004 | 4 m x 1 ton.....<br>(The actual rate should be : \$171,096.30 for Item 46004A)  | 17,109.63      | 8,159.46                 | 8,388.80                           | 29,893.90 | 46004 |
| 46005 | 4m x 1 - 2 ton.....<br>(The actual rate should be : \$171,096.30 for Item 46005A)   | 17,109.63      | 8,159.46                 | 8,388.80                           | 29,893.90 | 46005 |
| 46006 | 4m x 3 - 5 ton.....<br>(The actual rate should be : \$220,451.00 for Item 46006A)   | 22,045.10      | 9,196.08                 | 9,475.37                           | 32,584.85 | 46006 |
|       | Free standing, manually rotated high grade steel jib crane, up to 4m in height, 270 deg maximum slewing ark, and pre-lubricated, c/w round base plate reinforced with six knee braces; c/w electric motorized trolley, minimum moving speed of 5m/min, motor, gearbox, 2 limit switches, electric connection with trolley; c/w electrically operated hoist, minimum lifting speed of 2m/min, motor, gearbox, 2 limit switches, electric connection with hoist; and in span radius : -   |                |                          |                                    |           |       |
|       | <i>Per crane</i>  |                |                          |                                    |           |       |
| 46007 | up to 3 m x 1 ton.....<br>(The actual rate should be : \$132,435.10 for Item 46007A)  | 13,243.51      | 6,223.81                 | 6,414.43                           | 22,693.60 | 46007 |
| 46008 | ditto x 1 - 2 ton.....<br>(The actual rate should be : \$132,435.10 for Item 46008A)  | 13,243.51      | 6,223.81                 | 6,414.43                           | 22,693.60 | 46008 |
| 46009 | ditto x 3 - 5 ton.....<br>(The actual rate should be : \$164,104.40 for Item 46009A)  | 16,410.44      | 7,474.50                 | 7,716.08                           | 27,024.58 | 46009 |

| Item  |  |                |                          |                                    | Item      |       |
|---|--|----------------|--------------------------|------------------------------------|-----------|-------|
| <b>CRANE AND HOIST INSTALLATION (CONT'D)</b>  |  |                |                          |                                    |           |       |
|   | Wall-mounted, manually rotated high grade steel jib crane, up to 6m in height, 180 deg maximum slewing ark, c/w steel top and bottom brackets, two bronze bushings, bronze thrust washers, and pre-lubricated; c/w electric motorized trolley, minimum moving speed of 5m/min, motor, gearbox, 2 limit switches, electric connection with trolley; c/w electrically operated hoist, minimum lifting speed of 2m/min, motor, gearbox, 2 limit switches, electric connection with hoist; and in span radius :- | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only  |       |
|   | <i>Per crane</i>   | A<br>\$        | B<br>\$                  | C<br>\$                            | D<br>\$   |       |
| 46010   | up to 3 m x 1 ton.....<br>(The actual rate should be : \$145,185.10 for Item 46010A)   | 14,518.51      | 7,879.15                 | 8,074.87                           | 30,030.49 | 46010 |
| 46011   | ditto x 2 ton.....<br>(The actual rate should be : \$149,298.00 for Item 46011A)   | 14,929.80      | 8,005.55                 | 8,206.35                           | 30,396.42 | 46011 |
| 46012   | 4 m x 1 ton.....<br>(The actual rate should be : \$161,636.70 for Item 46012A)   | 16,163.67      | 8,367.40                 | 8,582.47                           | 31,427.95 | 46012 |
| 46013   | ditto x 2 ton.....<br>(The actual rate should be : \$169,862.40 for Item 46013A)   | 16,986.24      | 8,594.71                 | 8,819.97                           | 32,065.01 | 46013 |
| Fixed chain hoist   |  |                |                          |                                    |           |       |
| Electrically operated hoist with electric motorized trolley, minimum lifting speed of 2m/min, up to 6m in height; c/w motor, gearbox, 2 limit swiches, electric connection with hoist, and in lifting capacity :- |  |                |                          |                                    |           |       |
| <i>Per hoist</i>  |  |                |                          |                                    |           |       |
| 46014   | up to 1 ton .....  | 33,684.59      | 2,029.42                 | 2,083.45                           | 7,327.71  | 46014 |
| 46015   | 1 - 2 ton .....  | 33,684.59      | 2,029.42                 | 2,083.45                           | 7,327.71  | 46015 |
| 46016   | 2 - 3 ton .....  | 41,170.04      | 2,489.12                 | 2,552.32                           | 8,958.59  | 46016 |
| 46017   | 3 - 4 ton .....  | 41,170.04      | 2,489.12                 | 2,552.32                           | 8,958.59  | 46017 |
| 46018   | 4 - 5 ton .....  | 48,655.51      | 2,929.46                 | 2,995.71                           | 10,571.12 | 46018 |
| Manually operated hoist with manual trolley, up to 6m in height; c/w gearbox, and in lifting capacity :-  |  |                |                          |                                    |           |       |
| <i>Per hoist</i>  |  |                |                          |                                    |           |       |
| 46019   | up to 1 ton .....  | 4,203.93       | 192.65                   | 198.77                             | 644.19    | 46019 |
| 46020   | 1 - 2 ton .....  | 5,413.71       | 231.38                   | 238.52                             | 774.67    | 46020 |
| 46021   | 2 - 3 ton .....  | 7,061.40       | 307.84                   | 318.02                             | 1,041.72  | 46021 |
| 46022   | 3 - 4 ton .....  | 9,330.89       | 387.34                   | 400.59                             | 1,303.68  | 46022 |

Item

Item

**CRANE AND HOIST INSTALLATION (CONT'D)**

Fixed winch

Electrically operated wire winch, minimum lifting speed of 10m/min, up to 6m in height, in lifting capacity : -

*Per winch*

| Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only |
|----------------|--------------------------|------------------------------------|----------|
| A \$           | B \$                     | C \$                               | D \$     |
| 9,101.54       | 2,029.42                 | 2,084.47                           | 7,321.60 |
| 15,476.52      | 2,029.42                 | 2,084.47                           | 7,321.60 |
| 21,645.86      | 2,029.42                 | 2,084.47                           | 7,321.60 |

|       |                      |           |          |          |          |       |
|-------|----------------------|-----------|----------|----------|----------|-------|
| 46023 | up to 300 kg .....   | 9,101.54  | 2,029.42 | 2,084.47 | 7,321.60 | 46023 |
| 46024 | 300 - 500 kg .....   | 15,476.52 | 2,029.42 | 2,084.47 | 7,321.60 | 46024 |
| 46025 | 500 kg - 1 ton ..... | 21,645.86 | 2,029.42 | 2,084.47 | 7,321.60 | 46025 |

**Section 47**

**FUEL SUPPLY SYSTEM**



## SECTION 47

### FUEL SUPPLY SYSTEM

#### SPECIAL CONDITIONS

|   |                |   |
|---|----------------|---|
| <b>Measurement of power supply</b>  | <b>SC47.01</b> | All works of electrical power supply up to power supply points (e.g. switchgear or isolator or spur unit and the like) for the equipment shall be measured separately and paid for at the appropriate rates under Section 27 - Lighting System and Fixtures, Section 28 - Small Power Distribution, Section 29 - Main Distribution Systems and Section 30 - Miscellaneous Electrical Installations or other applicable Work Sections of this Schedule.  |
| <b>Measurement of fuel supply</b>   | <b>SC47.02</b> | All works of fuel supply up to the respective termination points for the equipment shall be measured separately and paid for at the appropriate rates under the applicable Work Sections of this Schedule.  |
| <b>Measurement of excavations, ducts, chases, holes and other subsidiary work</b> | <b>SC47.03</b> | All trench excavation shall be measured separately and paid for at the appropriate rates under Section 03 - Excavation of this Schedule. All pipe ducts, concrete thrust blocks and anchor blocks, chases in, and holes through existing walls, ceilings and similar for pipes, etc., (but not mortices or holes for brackets) except specifically stated, shall be measured and paid for at the appropriate rates under Section 04 - Concrete Work, Section 05 - Brickwork and Blockwork, Section 12 - Roadwork and Cable Duct and Section 13 - Plumbing and Drainage or other applicable Work Sections of this Schedule.  |
| <b>Measurement of pipework</b>  | <b>SC47.04</b> | Pipework shall be measured in linear metres over all in-line fittings, short running lengths and branches.  |
| <b>Measurement of heat resistant cables and low smoke zero halogen cables</b>     | <b>SC47.05</b> | <p>Cables for the equipment, control/indicating panels, fire alarm points, etc. have been allowed in the rates under this Section. No measurement shall be made for cables except for heat resistant cables where specifically ordered by the Maintenance Surveyor in writing.</p> <p>Heat resistant cables and low smoke zero halogen cables shall be measured the net length as fixed in linear metres.</p>   |
| <b>Measurement of temporary supply</b>  | <b>SC47.06</b> | <p>Where a temporary supply is ordered by the Maintenance Surveyor, the provision of all articles, labour and accessory materials (nails, screws, rawplugs and similar) necessary for fixing shall be of temporary nature. For "use and waste" of all materials and accessories, etc., for a period of not exceeding four weeks from the date of certified completion, 50 per cent of the value of the appropriate "supply and fix" items after the adjustment of contract percentages will be paid. For a period exceeding four weeks and not exceeding eight weeks, 55 per cent will be paid and for each subsequent month a further addition of 5 per cent will be made.</p> <p>For a period of more than six months, the full rates, as for permanent works will be paid, and the materials will become the property of the Employer.</p> |

### SPECIAL CONDITIONS

|   |                         |   |
|---|-------------------------|---|
| <b>Measurement of temporary supply (Cont'd)</b> | <b>SC47.06 (Cont'd)</b> | No extra payment will be made for the removal of materials in connection with the temporary supply, but the cost of which shall have been included in the payment as aforementioned in the first paragraph hereof. The date of certified completion of a temporary supply shall be the date when the installation is first brought into service. The date when it ceases to be used shall be the date from which the Maintenance Surveyor instructs the dismantlement of the installation, or the date when the installation is no longer in use, whichever is earlier.   |
| <b>Rates generally</b>                          | <b>SC47.07</b>          | <p>The rates for all items shall generally include for : -</p> <ul style="list-style-type: none"> <li>(a) Colour band and colour identification work.</li> <li>(b) Lettering and engraving for identification, signs, labels in both English and Chinese.</li> <li>(c) Identification plates, signs, notice plates, discs and labels in both English and Chinese.</li> <li>(d) Priming or painting off site and proprietary finishes or surface treatment applied as part of the production process whether applied before or after fabrication and assembly.</li> <li>(e) All protective and finishing painting work, apart from additional painting work specifically ordered by the Maintenance Surveyor in writing which shall be measured separately and paid for at the appropriate rates under Section 15 - Painting of this Schedule.</li> <li>(f) Any kind of fixing method including provision of screws, nuts, bolts, shims, washers, clips, hangers, supports, brackets, spring compensated and seismic restraints and isolating components and the like.</li> <li>(g) Provision of expansion joints in service runs wherever they coincide with structural expansion joints.</li> <li>(h) Submission of catalogues, technical literature, data, calculations, test certificates and approval documentation covering the equipment and materials being supplied.</li> <li>(i) Preparing and submitting detail working drawings as required and all shop drawings for the fabrication and installation.</li> <li>(j) Attendance, as required, of the manufacturers' representative to assist in the installation and subsequent testing and commissioning.</li> <li>(k) Testing and commissioning including submission of Testing and Commissioning Certificates and Records of Tests.</li> <li>(l) Provision of all necessary power, fuel, labour and testing instrument of approved type for testing and commissioning.</li> </ul> |

**SPECIAL CONDITIONS**

**Rates generally  
(Cont'd)**

**SC47.07  
(Cont'd)**

- (m) Submitting all relevant documentation to Electrical and Mechanical Services Department and Fire Services Department for obtaining necessary approval.
- (n) Obtaining necessary approval from Environment Protection Department including submission of all relevant documentation.
- (o) Approved type test certificate issued by Fire Services Department for all equipment.
- (p) Preparing and submitting operation and maintenance manuals and as-fitted drawings for items of works as required.
- (q) Provision of schematic diagrams covered front and back with plastic sheet including fixing to wall.
- (r) Provision of manufacturer's guarantee.
- (s) Attending fault and complaint during the Maintenance Period.
- (t) Meeting statutory requirements for disposal of waste materials.
- (u) All necessary statutory submissions to all relevant Authorities in respect of the complete fuel supply system.

**Rates for  
pipework**

**SC47.08**

The rates for pipework shall further include for : -

- (a) All short lengths, cutting and waste, and joints in the running length.
- (b) All pipework brackets, supports, hangers, guides, anchors and the like and alternative method of jointing and fixing as specified (if any).
- (c) All pipework fittings (e.g. bends, elbows, branches, reducers, tees, caps and the like) including connections, cutting and jointing pipes to fittings.
- (d) Screwed sockets, tappings, bosses and welding-necks welded to pipes or flanges including perforating the pipework or flanges.
- (e) Connections between pipework of different materials and differing grades of same material.
- (f) Provision of wall plates, ceiling plates, floor plates, high tensile holding down bolts, tapered washers and the like for casting into the reinforced concrete corbels.
- (g) All jointing including provision of flexible connections and/ or necessary adaptors and connectors, welding consumable, jointing tapes, flanges, unions, gasket, bolts and nuts and the like where required.
- (h) Expansion loops and compensators including connections, cutting and jointing to pipes and fittings.

**SPECIAL CONDITIONS**

|   |                         |   |
|---|-------------------------|---|
| <b>Rates for pipework (Cont'd)</b>          | <b>SC47.08 (Cont'd)</b> | <ul style="list-style-type: none"> <li>(i) Provision of all sleeves for casting in or building in where pipes pass through slabs, walls or beams and caulking between pipe and sleeve where required.</li> <li>(j) Fixing in any position to floors, walls and ceilings including laying in trenches and fixing in chases, ducts, false ceilings and similar positions, and wrapping with protective tapes where required.</li> </ul>   |
| <b>Rates for in-line pipework equipment</b> | <b>SC47.09</b>          | <p>The rates for in-line pipework equipment (e.g. valves, flow meters, gauges, strainers and the like) shall further include for : -</p> <ul style="list-style-type: none"> <li>(a) Cutting and jointing to pipes and fittings.</li> <li>(b) Stripping down repacking glands and preparing spindles, as appropriate, prior to installation.</li> </ul>  |
| <b>Rates for equipment</b>                  | <b>SC47.10</b>          | <p>The rates for equipment shall further include for : -</p> <ul style="list-style-type: none"> <li>(a) All necessary assembly, orientation, alignment, levelling and bolting down, together with the provision of shims and packing pieces, the clocking of couplings between drivers and rotating equipment, strainers, instrumentation and the like.</li> <li>(b) Daily services fuel tank complete with socket connections for filling, overflow, outlet, drain, return and vent including all necessary fittings, union couplings, strainers, valves and the like, content gauge units, oil drip trays and all necessary accessories.</li> <li>(c) Supporting frames.</li> <li>(d) Connections including flexible joints between pipework and equipment.</li> <li>(e) Flexible connections and anti-vibration connections between pipework and equipment.</li> <li>(f) All necessary operational and control accessories (e.g. valves, gauges, flow meters, indicating lamps and the like) forming part of the equipment, connection and termination.</li> <li>(g) Final connections and terminations to electrical supply and water supply including cables, wirings, conduits, trunkings, cable trays, fuses, control boxes, pipework, valves, gauges and necessary accessories required for energizing the equipment to properly operate at specified duties.</li> <li>(h) Anti-vibration mountings for plant, machinery and the like.</li> <li>(i) Anti-vibration materials and sound insulating materials in plant and machinery bases.</li> <li>(j) Pump starters.</li> <li>(k) Earth/equipotential bonding as specified.</li> </ul> |

**SPECIAL CONDITIONS**

|   |                |   |
|---|----------------|---|
| <b>Rates for heat resistant cables and low smoke zero halogen cables</b>            | <b>SC47.11</b> | <p>The rates for heat resistant cables and low smoke zero halogen cables shall further include for : -</p> <ul style="list-style-type: none"> <li>(a) Laying or fixing in different locations, such as drawing into underground pipe ducts, laying or drawing into trunkings, drawing into conduits, suspending from insulators or catenaries, wrapping around equipment.</li> <li>(b) In case of cables drawn into existing conduits, existing ducts or existing trunkings, removing and putting back existing covers, existing inspection lids and the like.</li> <li>(c) Making cable-joints.</li> <li>(d) Determining circuits, lacing into circuit groups and provision of draw wires, draw cables and the like as required.</li> <li>(e) All necessary fixings complete with accessories and fittings as required.</li> <li>(f) Provision of all sleeves for casting in or building in where cables pass through slabs, walls or beams and caulking between cable and sleeve where required.</li> </ul> |
| <b>Rates for fuel supply system</b>   | <b>SC47.12</b> | <p>The rates of fuel supply system to plant and appliances shall consist of fuel storage facilities, fuel transfer facilities, associated pipework, electrical power, controls and accessories. The rates shall further include the bulk fuel storage tanks, fuel transfer pumps, fuel dispensers and vapour recovery system, if required.</p>  |
| <b>Rates for "Take down and clear away" or "Take down and set aside for re-use"</b> | <b>SC47.13</b> | <p>The rates for "Take down and clear away" or " Take down and set aside for re-use" existing items in connection with fuel supply system shall further include for : -</p> <ul style="list-style-type: none"> <li>(a) All in-line fittings including brackets, supports, hangers and the like.</li> <li>(b) Cutting into existing pipework and the like in position.</li> <li>(c) Plugging off remaining ends with plugs or caps as required.</li> <li>(d) Preparing remaining ends of pipework and building services works (if any) to receive connections with new work if required.</li> <li>(e) In the case of equipment and the like, taking down all associated pipework and/ or building services works.</li> <li>(f) Making good all works disturbed.</li> </ul>   |
| <b>Particular Specification</b>   | <b>SC47.14</b> | <p>The Particular Specification for fuel supply system can be found in the Contract.</p>  |

| Item  |  |                |                          |                                    | Item     |       |
|-------|--|----------------|--------------------------|------------------------------------|----------|-------|
|       | <b>FUEL SUPPLY SYSTEM EQUIPMENT</b>  |                |                          |                                    |          |       |
|       | Daily services fuel tank in mild steel welded construction c/w stiffeners and support frames, with tapped socket connections on tank (c/w all necessary fittings and union couplings or plugged with brass screw cap if not in size) for filling pipe, overflow pipe, delivery pipe (with a quick closing valve), drain pipe (with a 20mm gate valve), return pipe, vent pipe, and with a content gauge unit. oil drip tray, all accessories and for fuel capacity : - | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only |       |
|       | <i>Per tank</i>  | A<br>\$        | B<br>\$                  | C<br>\$                            | D<br>\$  |       |
| 47001 | Up to 250 litres.....  | 31,177.41      | 1,584.37                 | 1,821.88                           | 2,622.92 | 47001 |
| 47002 | 250 - 450 litres.....  | 32,736.28      | 1,584.37                 | 1,821.88                           | 2,622.92 | 47002 |
| 47003 | 450 - 500 litres.....  | 32,736.28      | 1,584.37                 | 1,821.88                           | 2,622.92 | 47003 |
| 47004 | 500 - 1000 litres.....   | 34,295.15      | 1,584.37                 | 1,821.88                           | 2,622.92 | 47004 |
| 47005 | 1000 - 2000 litres.....  | 38,971.77      | 1,584.37                 | 1,821.88                           | 2,622.92 | 47005 |
|       | Level switch capable of controlling on/off operation of remote system to IEC 60079-0 Group II A, Temperature Class T1, suitable for Zone 1 hazardous area and installed inside fuel tank c/w a level sensor and a switch unit, controller, casing and all necessary electrical components and control wirings to BASEEFA certification : -   |                |                          |                                    |          |       |
|       | <i>Per switch</i>  |                |                          |                                    |          |       |
| 47006 | Level switch .....   | 38,971.77      | 1,098.17                 | 1,306.80                           | 1,849.82 | 47006 |
|       | Fuel transfer pump, rotary and positive displacement type in high quality cast iron construction c/w high tensile steel shafts, flame proof coupling motors, valves, strainers, switches, composite pump control cubicles (measured separately), alarm, wiring works, overload protection and all necessary accessories : -  |                |                          |                                    |          |       |
|       | <i>Per set</i>   |                |                          |                                    |          |       |
| 47007 | 0.75 - 1 kW.....   | 38,971.77      | 1,335.68                 | 1,497.74                           | 2,210.29 | 47007 |
| 47008 | 1 - 2 kW.....  | 46,766.12      | 1,335.68                 | 1,497.74                           | 2,210.29 | 47008 |
| 47009 | 2 - 4 kW.....  | 54,560.47      | 1,335.68                 | 1,497.74                           | 2,210.29 | 47009 |
| 47010 | 4 - 6 kW.....  | 62,354.82      | 1,335.68                 | 1,497.74                           | 2,210.29 | 47010 |
| 47011 | 6 - 10 kW.....   | 70,149.18      | 1,335.68                 | 1,497.74                           | 2,210.29 | 47011 |
| 47012 | Hand pump, semi-rotary double acting type c/w 25mm diameter inlet and outlet pipes and 25mm diameter flexible oil resistant pipe.....  | 1,169.15       | 190.95                   | 220.76                             | 321.34   | 47012 |

| Item  |   |                |                          |                                    | Item     |       |
|-------|---|----------------|--------------------------|------------------------------------|----------|-------|
|       | <b>FUEL SUPPLY SYSTEM EQUIPMENT (CONT'D)</b>  |                |                          |                                    |          |       |
|       | Pipeworks   | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only |       |
|       | Carbon steel pipes and fittings in heavy quality to ISO 65 c/w all necessary accessories :- |                |                          |                                    |          |       |
|       | <i>Per linear metre</i>   | A<br>\$        | B<br>\$                  | C<br>\$                            | D<br>\$  |       |
| 47013 | 20 mm diameter.....   | 477.19         | 7.03                     | 7.59                               | 84.77    | 47013 |
| 47014 | 25 mm diameter.....   | 556.72         | 7.72                     | 8.33                               | 92.21    | 47014 |
| 47015 | 32 mm diameter.....   | 636.25         | 8.33                     | 9.37                               | 99.66    | 47015 |
| 47016 | 40 mm diameter.....   | 715.78         | 9.08                     | 9.95                               | 111.77   | 47016 |
| 47017 | 50 mm diameter.....   | 795.31         | 9.66                     | 10.41                              | 131.33   | 47017 |
|       | Bronze gate valve, full way type c/w all necessary accessories :-                           |                |                          |                                    |          |       |
|       | <i>Per valve</i>  |                |                          |                                    |          |       |
| 47018 | 20 mm diameter.....   | 153.08         | 24.17                    | 29.23                              | 122.02   | 47018 |
| 47019 | 25 mm diameter.....   | 235.11         | 24.74                    | 29.80                              | 163.00   | 47019 |
| 47020 | 32 mm diameter.....   | 294.79         | 25.31                    | 30.28                              | 203.98   | 47020 |
| 47021 | 40 mm diameter.....   | 371.60         | 25.89                    | 30.85                              | 228.20   | 47021 |
| 47022 | 50 mm diameter.....   | 457.66         | 26.94                    | 31.99                              | 244.04   | 47022 |
|       | Bronze globe valve, full way type c/w all necessary accessories :-                          |                |                          |                                    |          |       |
|       | <i>Per valve</i>  |                |                          |                                    |          |       |
| 47023 | 20 mm diameter.....   | 153.08         | 24.17                    | 29.23                              | 122.02   | 47023 |
| 47024 | 25 mm diameter.....   | 235.11         | 24.74                    | 29.80                              | 163.00   | 47024 |
| 47025 | 32 mm diameter.....   | 294.79         | 25.31                    | 30.28                              | 203.98   | 47025 |
| 47026 | 40 mm diameter.....   | 371.60         | 25.89                    | 30.85                              | 228.20   | 47026 |
| 47027 | 50 mm diameter.....   | 457.66         | 26.94                    | 31.99                              | 244.04   | 47027 |

| Item   |                     |          |       |       | Item   |
|--|---------------------|----------|-------|-------|--------|
| <b>FUEL SUPPLY SYSTEM EQUIPMENT (CONT'D)</b>                                     |                     |          |       |       |        |
| Pipeworks (Cont'd)   |                     |          |       |       |        |
| Bronze T-port valve, full way type c/w handles and all necessary accessories : - |                     |          |       |       |        |
| <i>Per valve</i>   |                     |          |       |       |        |
|  |                     | A        | B     | C     | D      |
|  |                     | \$       | \$    | \$    | \$     |
| 47028  | 20 mm diameter..... | 406.57   | 24.17 | 29.23 | 122.02 |
| 47029  | 25 mm diameter..... | 691.17   | 24.74 | 29.80 | 163.00 |
| 47030  | 32 mm diameter..... | 926.98   | 25.31 | 30.28 | 203.98 |
| 47031  | 40 mm diameter..... | 1,366.08 | 25.89 | 30.85 | 228.20 |
| 47032  | 50 mm diameter..... | 2,040.99 | 26.94 | 31.99 | 244.04 |
| Bronze ball valve, full way type c/w all necessary accessories : -               |                     |          |       |       |        |
| <i>Per valve</i>   |                     |          |       |       |        |
| 47033  | 20 mm diameter..... | 153.08   | 24.17 | 29.23 | 122.02 |
| 47034  | 25 mm diameter..... | 235.11   | 24.74 | 29.80 | 163.00 |
| 47035  | 32 mm diameter..... | 294.79   | 25.31 | 30.28 | 203.98 |
| 47036  | 40 mm diameter..... | 371.60   | 25.89 | 30.85 | 228.20 |
| 47037  | 50 mm diameter..... | 457.66   | 26.94 | 31.99 | 244.04 |
| Bronze non-return drain valve, full way type c/w all necessary accessories : -   |                     |          |       |       |        |
| <i>Per valve</i>   |                     |          |       |       |        |
| 47038  | 20 mm diameter..... | 206.13   | 24.17 | 29.23 | 122.02 |
| 47039  | 25 mm diameter..... | 285.02   | 24.74 | 29.80 | 163.00 |
| 47040  | 32 mm diameter..... | 374.05   | 25.31 | 30.28 | 203.98 |
| 47041  | 40 mm diameter..... | 443.17   | 25.89 | 30.85 | 228.20 |
| 47042  | 50 mm diameter..... | 557.01   | 26.94 | 31.99 | 244.04 |



| Item  |  |           |        |        | Item     |       |
|-------|--|-----------|--------|--------|----------|-------|
|       | <b>FUEL SUPPLY SYSTEM EQUIPMENT (CONT'D)</b>   |           |        |        |          |       |
|       | Pipeworks (Cont'd)   |           |        |        |          |       |
|       | Bronze strainer, double type c/w all necessary accessories :-  |           |        |        |          |       |
|       | <i>Per strainer</i>  |           |        |        |          |       |
|       |  | A         | B      | C      | D        |       |
|       |  | \$        | \$     | \$     | \$       |       |
| 47043 | 20 mm diameter.....  | 200.36    | 24.17  | 29.23  | 122.02   | 47043 |
| 47044 | 25 mm diameter.....  | 273.38    | 24.74  | 29.80  | 163.00   | 47044 |
| 47045 | 32 mm diameter.....  | 366.41    | 25.31  | 30.28  | 203.98   | 47045 |
| 47046 | 40 mm diameter.....  | 436.01    | 25.89  | 30.85  | 228.20   | 47046 |
| 47047 | 50 mm diameter.....  | 595.87    | 26.94  | 31.99  | 244.04   | 47047 |
|       | Control :-   |           |        |        |          |       |
|       | <i>Per set</i>   |           |        |        |          |       |
| 47048 | Fuel supply control system c/w flameproof fuel transfer pump control panel and flameproof level monitoring control panel with certificate issued by BASEEFA, with IPMCSP and IP 65 enclosure to IEC 60529, protection type EEx d flameproof.....<br>(The actual rate should be : \$109,120.90 for Item 47048A) | 10,912.09 | 463.86 | 531.85 | 1,009.68 | 47048 |
| 47049 | Flameproof control panel for high level visible and audible alarm.....   | 23,383.07 | 463.86 | 531.85 | 1,009.68 | 47049 |
| 47050 | Remote on/off control panel for fuel transfer pump c/w all necessary accessories.....  | 15,588.71 | 463.86 | 531.85 | 1,009.68 | 47050 |

**Section 48**

**CHIMNEY**

## SECTION 48

### CHIMNEY

#### SPECIAL CONDITIONS

|   |                |  |
|---|----------------|--|
| <b>Measurement of flue pipe/ aluminium cladding</b> | <b>SC48.01</b> | Flue pipe/ aluminium cladding shall be measured in linear metres.  |
| <b>Measurement of insulation to flue pipe</b>       | <b>SC48.02</b> | Insulation to flue pipe/ aluminium cladding shall be measured the diameter of the pipe in linear metres.   |
| <b>Measurement of temporary supply</b>              | <b>SC48.03</b> | <p>Where a temporary supply is ordered by the Maintenance Surveyor, the provision of all articles, labour and accessory materials (nails, screws, rawplugs and similar) necessary for fixing shall be of temporary nature. For "use and waste" of all materials and accessories, etc., for a period of not exceeding four weeks from the date of certified completion, 50 per cent of the value of the appropriate "supply and fix" items after the adjustment of contract percentages will be paid. For a period exceeding four weeks and not exceeding eight weeks, 55 per cent will be paid and for each subsequent month a further addition of 5 per cent will be made.</p> <p>For a period of more than six months, the full rates, as for permanent works will be paid, and the materials will become the property of the Employer.</p> <p>No extra payment will be made for the removal of materials in connection with the temporary supply, but the cost of which shall have been included in the payment as aforementioned in the first paragraph hereof. The date of certified completion of a temporary supply shall be the date when the installation is first brought into service. The date when it ceases to be used shall be the date from which the Maintenance Surveyor instructs the dismantlement of the installation, or the date when the installation is no longer in use, whichever is earlier.</p> |
| <b>Rates generally</b>                              | <b>SC48.04</b> | <p>The rate for all items shall generally include for : -</p> <ul style="list-style-type: none"> <li>(a) Priming or painting off site and proprietary finishes or surface treatment applied as part of the production process whether applied before or after fabrication and assembly.</li> <li>(b) All mild steel supports in outdoor environment.</li> <li>(c) All protective and finishing painting work, apart from additional painting work specifically ordered by the Maintenance Surveyor in writing which shall be measured separately and paid for at the appropriate rates under Section 15 - Painting of this Schedule.</li> </ul>  |

**SPECIAL CONDITIONS**

**Rates generally  
(Cont'd)**

**SC48.04  
(Cont'd)**

- (d) Any kind of fixing method including provision of screws, nuts, bolts, shims, washers, clips, hangers, supports, brackets, spring compensated and seismic restraints and isolating components, expansion bellows, compensators and the like.
- (e) Submission of catalogues, technical literature, data, calculations, test certificates and approval documentation covering the equipment and materials being supplied.
- (f) Testing and commissioning including submission of Testing and Commissioning Certificates and Records of Tests.
- (g) Provision of all necessary power, fuel, labour and testing instrument of approved type for testing and commissioning.
- (h) Attending fault and complaint during the Maintenance Period.
- (i) Meeting statutory requirements for disposal of waste materials.

**Rates for  
equipment**

**SC48.05**

The rates for equipment shall further include for : -

- (a) Submission of wind load and structural design calculations.
- (b) Submission of calculations, shop drawings and other relevant information to Environmental Protection Department for approval in accordance with the Air Pollution Control Regulations.
- (c) Preparing and submitting detail working drawings as required and all shop drawings for the fabrication and installation.
- (d) Attendance, as required, of the manufacturers' representative to assist in the installation and subsequent testing and commissioning.
- (e) All necessary statutory submission to all relevant Authorities including employing competent examiners for testing and inspection of the equipment to satisfy the requirements of Labour Department.
- (f) Structural design and associated drawings for approval prior to manufacturing. The design shall be attested by a professional structural engineer licensed to practices in Hong Kong.
- (g) Welds examined by means of non-destructive tests (NDT).
- (h) Meeting the design life of the chimney stack and supporting structures for at least 20 years.
- (i) Lightning protection facilities.
- (j) All welding carried out only by experienced welders with recognised certificates of proficiency.
- (k) Checking of verticality by optical tooling method using the alignment telescope or jig alignment telescope, jig transit and precise level.

**SPECIAL CONDITIONS**

**Particular  
Specification**

**SC48.06**

The Particular Specification for chimney installation can be found in the Contract.

| Item  |  | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only | Item  |
|-------|--|----------------|--------------------------|------------------------------------|----------|-------|
|       | <b>CHIMNEY EQUIPMENT</b>   |                |                          |                                    |          |       |
|       | Mild steel vertical flue pipe c/w mounting brackets; c/w 25mm thick mineral wool insulation and 1.6mm thick aluminium cladding to maintain flue gas at 150°C minimum; c/w protector against lightning to BS EN 62305; painted with two layers of dry films each of 2mm thick pure silicon resin and heat resistant aluminium coating on the interior and exterior surfaces of chimney to EN 1993-3-2:2006 :- |                |                          |                                    |          |       |
|       | Up to 3m in height, and chimney size at :-   |                |                          |                                    |          |       |
|       | <i>Per chimney</i>   | A<br>\$        | B<br>\$                  | C<br>\$                            | D<br>\$  |       |
| 48001 | 50 mm diameter.....  | 561.33         | 207.90                   | -                                  | -        | 48001 |
| 48002 | 80 mm diameter.....  | 727.65         | 277.20                   | -                                  | -        | 48002 |
| 48003 | 100 mm diameter.....   | 796.95         | 277.20                   | -                                  | -        | 48003 |
| 48004 | 125 mm diameter.....   | 900.90         | 277.20                   | -                                  | -        | 48004 |
| 48005 | 150 mm diameter.....   | 1,108.80       | 277.20                   | -                                  | -        | 48005 |
| 48006 | 200 mm diameter.....   | 1,732.50       | 346.50                   | -                                  | -        | 48006 |
| 48007 | 250 mm diameter.....   | 1,940.40       | 346.50                   | -                                  | -        | 48007 |
| 48008 | 300 mm diameter.....   | 2,148.30       | 554.40                   | -                                  | -        | 48008 |
| 48009 | 350 mm diameter.....   | 2,772.00       | 554.40                   | -                                  | -        | 48009 |
| 48010 | 400 mm diameter.....   | 4,158.00       | 727.65                   | -                                  | -        | 48010 |
| 48011 | 450 mm diameter.....   | 4,504.50       | 727.65                   | -                                  | -        | 48011 |
|       | Add height of above items (with 25mm thick mineral wool insulation) for each additional linear metre or part thereof :-  |                |                          |                                    |          |       |
|       | <i>Per linear metre</i>  |                |                          |                                    |          |       |
| 48012 | 50 mm diameter.....  | 187.11         | 69.30                    | -                                  | -        | 48012 |
| 48013 | 80 mm diameter.....  | 242.55         | 92.40                    | -                                  | -        | 48013 |
| 48014 | 100 mm diameter.....   | 266.11         | 92.40                    | -                                  | -        | 48014 |
| 48015 | 125 mm diameter.....   | 300.30         | 92.40                    | -                                  | -        | 48015 |
| 48016 | 150 mm diameter.....   | 369.60         | 92.40                    | -                                  | -        | 48016 |

| Item   | Item   |                                    |                          |                                    |          |         |         |         |         |
|--|--|------------------------------------|--------------------------|------------------------------------|----------|---------|---------|---------|---------|
| <b>CHIMNEY EQUIPMENT (CONT'D)</b>  |  |                                    |                          |                                    |          |         |         |         |         |
| Add height of above items (with 25mm thick mineral wool insulation) for each additional linear metre or part thereof : - (Cont'd)  |  |                                    |                          |                                    |          |         |         |         |         |
| <i>Per linear metre</i>  |  |                                    |                          |                                    |          |         |         |         |         |
|  | <table border="1"> <thead> <tr> <th style="text-align: center;">Supply and fix</th> <th style="text-align: center;">Take down and clear away</th> <th style="text-align: center;">Take down and set aside for re-use</th> <th style="text-align: center;">Fix only</th> </tr> <tr> <th style="text-align: center;">A<br/>\$</th> <th style="text-align: center;">B<br/>\$</th> <th style="text-align: center;">C<br/>\$</th> <th style="text-align: center;">D<br/>\$</th> </tr> </thead> </table> | Supply and fix                     | Take down and clear away | Take down and set aside for re-use | Fix only | A<br>\$ | B<br>\$ | C<br>\$ | D<br>\$ |
| Supply and fix   | Take down and clear away   | Take down and set aside for re-use | Fix only                 |                                    |          |         |         |         |         |
| A<br>\$  | B<br>\$  | C<br>\$                            | D<br>\$                  |                                    |          |         |         |         |         |
| 48017 200 mm diameter.....   | 48017  |                                    |                          |                                    |          |         |         |         |         |
| 48018 250 mm diameter.....   | 48018  |                                    |                          |                                    |          |         |         |         |         |
| 48019 300 mm diameter.....   | 48019  |                                    |                          |                                    |          |         |         |         |         |
| 48020 350 mm diameter.....   | 48020  |                                    |                          |                                    |          |         |         |         |         |
| 48021 400 mm diameter.....   | 48021  |                                    |                          |                                    |          |         |         |         |         |
| 48022 450 mm diameter.....   | 48022  |                                    |                          |                                    |          |         |         |         |         |
| Mild steel vertical flue pipe c/w mounting brackets; c/w 50mm thick mineral wool insulation and 1.6mm thick aluminium cladding to maintain flue gas at 150°C minimum; c/w protector against lightning to BS EN 62305; painted with two layers of dry films each of 2mm thick pure silicon resin and heat resistant aluminium coating on the interior and exterior surfaces of chimney to EN 1993-3-2:2006 :- |  |                                    |                          |                                    |          |         |         |         |         |
| Up to 3m in height, and chimney size at :-   |  |                                    |                          |                                    |          |         |         |         |         |
| <i>Per chimney</i>   |  |                                    |                          |                                    |          |         |         |         |         |
| 48023 50 mm diameter.....  | 48023  |                                    |                          |                                    |          |         |         |         |         |
| 48024 80 mm diameter.....  | 48024  |                                    |                          |                                    |          |         |         |         |         |
| 48025 100 mm diameter.....   | 48025  |                                    |                          |                                    |          |         |         |         |         |
| 48026 125 mm diameter.....   | 48026  |                                    |                          |                                    |          |         |         |         |         |
| 48027 150 mm diameter.....   | 48027  |                                    |                          |                                    |          |         |         |         |         |
| 48028 200 mm diameter.....   | 48028  |                                    |                          |                                    |          |         |         |         |         |
| 48029 250 mm diameter.....   | 48029  |                                    |                          |                                    |          |         |         |         |         |
| 48030 300 mm diameter.....   | 48030  |                                    |                          |                                    |          |         |         |         |         |
| 48031 350 mm diameter.....   | 48031  |                                    |                          |                                    |          |         |         |         |         |
| 48032 400 mm diameter.....   | 48032  |                                    |                          |                                    |          |         |         |         |         |
| 48033 450 mm diameter.....   | 48033  |                                    |                          |                                    |          |         |         |         |         |

| Item   |                      | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only | Item  |
|--|----------------------|----------------|--------------------------|------------------------------------|----------|-------|
| <b>CHIMNEY EQUIPMENT (CONT'D)</b>  |                      | A              | B                        | C                                  | D        |       |
| Add height of above items (with 50mm thick mineral wool insulation) for each additional linear metre or part thereof : - |                      | \$             | \$                       | \$                                 | \$       |       |
| <i>Per linear metre</i>  |                      |                |                          |                                    |          |       |
| 48034  | 50 mm diameter.....  | 197.50         | 69.30                    | -                                  | -        | 48034 |
| 48035  | 80 mm diameter.....  | 277.20         | 92.40                    | -                                  | -        | 48035 |
| 48036  | 100 mm diameter..... | 297.99         | 92.40                    | -                                  | -        | 48036 |
| 48037  | 125 mm diameter..... | 325.71         | 92.40                    | -                                  | -        | 48037 |
| 48038  | 150 mm diameter..... | 390.39         | 92.40                    | -                                  | -        | 48038 |
| 48039  | 200 mm diameter..... | 623.70         | 115.73                   | -                                  | -        | 48039 |
| 48040  | 250 mm diameter..... | 716.10         | 115.73                   | -                                  | -        | 48040 |
| 48041  | 300 mm diameter..... | 762.30         | 184.80                   | -                                  | -        | 48041 |
| 48042  | 350 mm diameter..... | 993.30         | 184.80                   | -                                  | -        | 48042 |
| 48043  | 400 mm diameter..... | 1,455.30       | 242.55                   | -                                  | -        | 48043 |
| 48044  | 450 mm diameter..... | 1,593.90       | 242.55                   | -                                  | -        | 48044 |
| Aluminium cladding 1.6mm thick for chimney insulation c/w 50mm insulation for chimney internal diameter at : -           |                      |                |                          |                                    |          |       |
| <i>Per linear metre</i>  |                      |                |                          |                                    |          |       |
| 48045  | 100 mm diameter..... | 106.74         | 7.51                     | 8.03                               | 19.90    | 48045 |
| 48046  | 125 mm diameter..... | 119.23         | 10.61                    | 11.62                              | 22.62    | 48046 |
| 48047  | 150 mm diameter..... | 134.99         | 12.87                    | 13.98                              | 25.34    | 48047 |
| 48048  | 200 mm diameter..... | 156.24         | 14.50                    | 15.43                              | 28.96    | 48048 |
| 48049  | 250 mm diameter..... | 190.19         | 17.78                    | 19.24                              | 36.19    | 48049 |
| 48050  | 300 mm diameter..... | 228.98         | 21.65                    | 23.77                              | 44.33    | 48050 |
| 48051  | 350 mm diameter..... | 253.41         | 24.11                    | 26.46                              | 49.77    | 48051 |
| 48052  | 400 mm diameter..... | 277.85         | 26.08                    | 28.66                              | 54.29    | 48052 |
| 48053  | 450 mm diameter..... | 307.91         | 29.62                    | 32.27                              | 60.62    | 48053 |



Item

Item

**CHIMNEY EQUIPMENT (CONT'D)**

Stainless steel flue pipes and fitting c/w stainless steel of Grade 316 inner wall of minimum 0.6mm thick and stainless steel of grade 304 outer wall of minimum 0.5mm thick; c/w 30mm thick mineral wool insulation between the walls; S.S. tubes and the insulation shall be factory fabricated in sections to ensure structured integrity and strength; c/w water/gas tight flue section joints and drain points : -

Up to 3m in height, and chimney size at : -

*Per chimney*

|       |                      | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only |       |
|-------|----------------------|----------------|--------------------------|------------------------------------|----------|-------|
|       |                      | A \$           | B \$                     | C \$                               | D \$     |       |
| 48054 | 80 mm diameter.....  | 970.20         | 207.90                   | -                                  | -        | 48054 |
| 48055 | 100 mm diameter..... | 1,039.50       | 277.20                   | -                                  | -        | 48055 |
| 48056 | 125 mm diameter..... | 1,137.98       | 277.20                   | -                                  | -        | 48056 |
| 48057 | 150 mm diameter..... | 1,375.06       | 277.20                   | -                                  | -        | 48057 |
| 48058 | 200 mm diameter..... | 1,754.38       | 277.20                   | -                                  | -        | 48058 |
| 48059 | 250 mm diameter..... | 2,418.21       | 346.50                   | -                                  | -        | 48059 |
| 48060 | 300 mm diameter..... | 2,702.70       | 346.50                   | -                                  | -        | 48060 |
| 48061 | 350 mm diameter..... | 3,603.60       | 554.40                   | -                                  | -        | 48061 |
| 48062 | 400 mm diameter..... | 5,026.07       | 554.40                   | -                                  | -        | 48062 |
| 48063 | 500 mm diameter..... | 5,452.82       | 727.65                   | -                                  | -        | 48063 |
| 48064 | 600 mm diameter..... | 6,258.88       | 727.65                   | -                                  | -        | 48064 |

| Item  |  | Supply and fix | Take down and clear away | Take down and set aside for re-use | Fix only | Item  |
|-------|--|----------------|--------------------------|------------------------------------|----------|-------|
|       | <b>CHIMNEY EQUIPMENT (CONT'D)</b>  |                |                          |                                    |          |       |
|       | Add height of above items (with 30mm thick mineral wool insulation) for each additional linear metre or part thereof : - |                |                          |                                    |          |       |
|       | <i>Per linear metre</i>  |                |                          |                                    |          |       |
|       |  | A<br>\$        | B<br>\$                  | C<br>\$                            | D<br>\$  |       |
| 48065 | 80 mm diameter.....  | 322.25         | 69.30                    | -                                  | -        | 48065 |
| 48066 | 100 mm diameter.....   | 346.50         | 92.40                    | -                                  | -        | 48066 |
| 48067 | 125 mm diameter.....   | 379.33         | 92.40                    | -                                  | -        | 48067 |
| 48068 | 150 mm diameter.....   | 458.35         | 92.40                    | -                                  | -        | 48068 |
| 48069 | 200 mm diameter.....   | 584.79         | 92.40                    | -                                  | -        | 48069 |
| 48070 | 250 mm diameter.....   | 806.07         | 115.73                   | -                                  | -        | 48070 |
| 48071 | 300 mm diameter.....   | 900.90         | 115.73                   | -                                  | -        | 48071 |
| 48072 | 350 mm diameter.....   | 1,201.20       | 185.03                   | -                                  | -        | 48072 |
| 48073 | 400 mm diameter.....   | 1,675.36       | 185.03                   | -                                  | -        | 48073 |
| 48074 | 500 mm diameter.....   | 1,817.61       | 242.55                   | -                                  | -        | 48074 |
| 48075 | 600 mm diameter.....   | 2,086.29       | 242.55                   | -                                  | -        | 48075 |

**Section 49**

**SEWAGE TREATMENT INSTALLATION**

## SECTION 49

### SEWAGE TREATMENT INSTALLATION

#### SPECIAL CONDITIONS

|   |                |  |
|---|----------------|--|
| <b>Measurement of power supply</b>  | <b>SC49.01</b> | All works of electrical power supply up to power supply points (e.g. switchgear or isolator or spur unit and the like) for the equipment shall be measured separately and paid for at the appropriate rates under Section 27 - Lighting System and Fixtures, Section 28 - Small Power Distribution, Section 29 - Main Distribution Systems and Section 30 - Miscellaneous Electrical Installations or other applicable Work Sections of this Schedule.   |
| <b>Measurement of excavations, ducts, chases, holes and other subsidiary work</b> | <b>SC49.02</b> | All trench excavation shall be measured separately and paid for at the appropriate rates under Section 03 - Excavation of this Schedule. All pipe ducts, concrete thrust blocks and anchor blocks, chases in, and holes through existing walls, ceilings and similar for pipes, etc., (but not mortices or holes for brackets) except specifically stated, shall be measured and paid for at the appropriate rates under Section 04 - Concrete Work, Section 05 - Brickwork and Blockwork, Section 12 - Roadwork and Cable Duct and Section 13 - Plumbing and Drainage or other applicable Work Sections of this Schedule.   |
| <b>Measurement of pipework</b>  | <b>SC49.03</b> | Pipework shall be measured in linear metres over all in-line fittings, short running lengths and branches.   |
| <b>Measurement of heat resistant cables and low smoke zero halogen cables</b>     | <b>SC49.04</b> | <p>Cables for the equipment, control/indicating panels, fire alarm points, etc. have been allowed in the rates under this Section. No measurement shall be made for cables except for heat resistant cables where specifically ordered by the Maintenance Surveyor in writing.</p> <p>Heat resistant cables and low smoke zero halogen cables shall be measured the net length as fixed in linear metres.</p>  |
| <b>Measurement of temporary supply</b>  | <b>SC49.05</b> | <p>Where a temporary supply is ordered by the Maintenance Surveyor, the provision of all articles, labour and accessory materials (nails, screws, rawplugs and similar) necessary for fixing shall be of temporary nature. For "use and waste" of all materials and accessories, etc., for a period of not exceeding four weeks from the date of certified completion, 50 per cent of the value of the appropriate "supply and fix" items after the adjustment of contract percentages will be paid. For a period exceeding four weeks and not exceeding eight weeks, 55 per cent will be paid and for each subsequent month a further addition of 5 per cent will be made.</p> <p>For a period of more than six months, the full rates, as for permanent works will be paid, and the materials will become the property of the Employer.</p> <p>No extra payment will be made for the removal of materials in connection with the temporary supply, but the cost of which shall have been included in the payment as aforementioned in the first paragraph hereof. The date of certified completion of a temporary supply shall be the date when the installation is first brought into service. The date when it ceases to be used shall be the date from which the Maintenance Surveyor instructs the dismantlement of the installation, or the date when the installation is no longer in use, whichever is earlier.</p> |

### SPECIAL CONDITIONS

**Rates generally**
**SC49.06**

The rates for all items shall generally include for : -

- (a) Colour band and colour identification work.
- (b) Lettering and engraving for identification, signs, labels in both English and Chinese.
- (c) Identification plates, signs, notice plates, discs and labels in both English and Chinese.
- (d) Priming or painting off site and proprietary finishes or surface treatment applied as part of the production process whether applied before or after fabrication and assembly.
- (e) All protective and finishing painting work, apart from additional painting work specifically ordered by the Maintenance Surveyor in writing which shall be measured separately and paid for at the appropriate rates under Section 15 - Painting of this Schedule.
- (f) Any kind of fixing method including provision of screws, nuts, bolts, shims, washers, clips, hangers, supports, brackets, spring compensated and seismic restraints and isolating components and the like.
- (g) Provision of expansion joints in service runs wherever they coincide with structural expansion joints.
- (h) Submission of catalogues, technical literature, data, calculations, test certificates and approval documentation covering the equipment and materials being supplied.
- (i) Preparing and submitting detail working drawings as required and all shop drawings for the fabrication and installation.
- (j) Attendance, as required, of the manufacturers' representative to assist in the installation and subsequent testing and commissioning.
- (k) Testing and commissioning including submission of Testing and Commissioning Certificates and Records of Tests.
- (l) Provision of all necessary power, fuel, labour and testing instrument of approved type for testing and commissioning.
- (m) Submitting all relevant documentation to Electrical and Mechanical Services Department and Environmental Protection Department for obtaining necessary approval.
- (n) Preparing and submitting operation and maintenance manuals and as-fitted drawings for items of works as required.
- (o) Provision of schematic diagrams covered front and back with plastic sheet including fixing to wall.
- (p) Provision of manufacturer's guarantee.
- (q) Attending fault and complaint during the Maintenance Period.
- (r) Meeting statutory requirements for disposal of waste materials.

### SPECIAL CONDITIONS

|   |                |   |
|---|----------------|---|
| <b>Rates for pipework</b>                   | <b>SC49.07</b> | <p>The rates for pipework shall further include for : -</p> <ul style="list-style-type: none"> <li>(a) All short lengths, cutting and waste, and joints in the running length.</li> <li>(b) All pipework brackets, supports, hangers, guides, anchors and the like and alternative method of jointing and fixing as specified (if any).</li> <li>(c) All pipework fittings (e.g. bends, elbows, branches, reducers, tees, caps and the like) including connections, cutting and jointing pipes to fittings.</li> <li>(d) Screwed sockets, tappings, bosses and welding-necks welded to pipes or flanges including perforating the pipework or flanges.</li> <li>(e) Connections between pipework of different materials and differing grades of same material.</li> <li>(f) Provision of wall plates, ceiling plates, floor plates, high tensile holding down bolts, tapered washers and the like for casting into the reinforced concrete corbels.</li> <li>(g) All jointing including provision of flexible connections and / or necessary adaptors and connectors, welding consumable, jointing tapes, flanges, unions, gasket, bolts and nuts and the like where required.</li> <li>(h) Expansion loops and compensators including connections, cutting and jointing to pipes and fittings.</li> <li>(i) Provision of all sleeves for casting in or building in where pipes pass through slabs, walls or beams and caulking between pipe and sleeve where required.</li> <li>(j) Fixing in any position to floors, walls and ceilings including laying in trenches and fixing in chases, ducts, false ceilings and similar positions, and wrapping with protective tapes where required.</li> </ul> |
| <b>Rates for in-line pipework equipment</b> | <b>SC49.08</b> | <p>The rates for in-line pipework equipment (e.g. valves, flow meters, gauges, strainers and the like) shall further include for : -</p> <ul style="list-style-type: none"> <li>(a) Cutting and jointing to pipes and fittings.</li> <li>(b) Stripping down repacking glands and preparing spindles, as appropriate, prior to installation.</li> </ul>  |
| <b>Rates for equipment</b>                  | <b>SC49.09</b> | <p>The rates for equipment shall further include for : -</p> <ul style="list-style-type: none"> <li>(a) All necessary assembly, orientation, alignment, levelling and bolting down, together with the provision of shims and packing pieces, the clocking of couplings between drivers and rotating equipment, strainers, instrumentation and the like.</li> <li>(b) Conduction of all tests, adjustments and commissioning of the installed equipment.</li> <li>(c) Supporting frames.</li> <li>(d) Connections including flexible joints between pipework and equipment.</li> </ul>   |

### SPECIAL CONDITIONS

|   |                         |  |
|---|-------------------------|--|
| <b>Rates for equipment (Cont'd)</b>                       | <b>SC49.09 (Cont'd)</b> | <ul style="list-style-type: none"> <li>(e) Flexible connections and anti-vibration connections between pipework and equipment.</li> <li>(f) All necessary operational and control accessories (e.g. valves, gauges, flow meters, indicating lamps and the like) forming part of the equipment, connection and termination.</li> <li>(g) Final connections and terminations to electrical supply and water supply including cables, wirings, conduits, trunkings, cable trays, fuses, control boxes, pipework, valves, gauges and necessary accessories required for energizing the equipment to properly operate at specified duties.</li> <li>(h) Anti-vibration mountings for plant, machinery and the like.</li> <li>(i) Anti-vibration materials and sound insulating materials in plant and machinery bases.</li> <li>(j) Motor starters (if motors in the equipment require motor starters).</li> <li>(k) Earth/ equipotential bonding as specified.</li> <li>(l) Acoustic enclosure.</li> <li>(m) Training to the employer's staff and maintenance parties.</li> </ul>  |
| <b>Rates for package type membrane bio-reactor system</b> | <b>SC49.10</b>          | <p>The rates for package type membrane bio-reactor system shall further include for : -</p> <ul style="list-style-type: none"> <li>(a) The design, supply and installation of a package sewage treatment system with applying the membrane bio-reactor (MBR) technology.</li> <li>(b) Seeded process start-up for the establishment of the sewage treatment process.</li> <li>(c) Demonstrating that the standard of effluent complies with the requirements as specified in the discharge license. Sample analysis shall be carried out by a HOKLAS laboratory.</li> <li>(d) Field-test kit for the sewerage treatment package including portable pH meter, TDS meter, corrosion inhibitor ppm test kit and the like recommended by the specialist.</li> <li>(e) Collecting samples to carry out analysis of stabilization monitoring for 21 days.</li> <li>(f) Cat ladder, working and inspection platforms.</li> <li>(g) Submission of system design principle.</li> <li>(h) Tanking away service for waste sludge generated from the system during the Maintenance Period.</li> <li>(i) Odour control equipment.</li> <li>(j) All necessary sensing devices for on-line control/ monitoring to satisfy the requirement set out for obtaining the discharge licence and all necessary chemicals and consumables during the Maintenance Period.</li> </ul> |

**SPECIAL CONDITIONS**

|   |                         |   |
|---|-------------------------|---|
| <b>Rates for package type membrane bio-reactor system (Cont'd)</b>                  | <b>SC49.10 (Cont'd)</b> | <ul style="list-style-type: none"> <li>(k) Operation and maintenance service including sample tests, laboratory reports of influent and effluent water on monthly basis during the Maintenance Period.</li> <li>(l) All submission to relevant Authorities, including all payments for obtaining of relevant certificates/licences.</li> <li>(m) Carrying out factory acceptance tests in the facilities of the specialist contractor prior to delivery of all equipment to site. The rate shall further include the transportation cost of the Employer's representative for witnessing the tests.</li> </ul>  |
| <b>Rates for heat resistant cables and low smoke zero halogen cables</b>            | <b>SC49.11</b>          | <p>The rates for heat resistant cables and low smoke zero halogen cables shall further include for : -</p> <ul style="list-style-type: none"> <li>(a) Laying or fixing in different locations, such as drawing into underground pipe ducts, laying or drawing into trunkings, drawing into conduits, suspending from insulators or catenaries, wrapping around equipment.</li> <li>(b) In case of cables drawn into existing conduits, existing ducts or existing trunkings, removing and putting back existing covers, existing inspection lids and the like.</li> <li>(c) Making cable-joints.</li> <li>(d) Determining circuits, lacing into circuit groups and provision of draw wires, draw cables and the like as required.</li> <li>(e) All necessary fixings complete with accessories and fittings as required.</li> <li>(f) Provision of all sleeves for casting in or building in where cables pass through slabs, walls or beams and caulking between cable and sleeve where required.</li> </ul> |
| <b>Rates for "Take down and clear away" or "Take down and set aside for re-use"</b> | <b>SC49.12</b>          | <p>The rates for "Take down and clear away" or " Take down and set aside for re-use" existing items in connection with sewage treatment installation shall further include for : -</p> <ul style="list-style-type: none"> <li>(a) All in-line fittings including brackets, supports, hangers and the like.</li> <li>(b) Cutting into existing pipework and the like in position.</li> <li>(c) Plugging off remaining ends with plugs or caps as required.</li> <li>(d) Preparing remaining ends of pipework and building services works (if any) to receive connections with new work if required.</li> <li>(e) In the case of equipment and the like, taking down all associated pipework and/ or building services works.</li> <li>(f) Making good all works disturbed.</li> </ul>  |
| <b>Particular Specification</b>   | <b>SC49.13</b>          | <p>The Particular Specification for sewage treatment installation can be found in the Contract.</p>   |



| Item  |                 |                      |                                   |  | Item        |       |
|---|-----------------|----------------------|-----------------------------------|--|-------------|-------|
| <b>SEWAGE PUMPING</b>   |                 |                      |                                   |  |             |       |
| Submersible type sewage pump (max. 10m discharge head) up to 5m water depth, handling sewage containing solid particles up to 50mm diameter; non-cocking, cast iron pump casing; cast iron impeller; c/w electric motor, guide pole, starters and local control panel :-  |                 |                      |                                   |  |             |       |
| <i>Each</i>   |                 |                      |                                   |  |             |       |
|   |                 | Supply<br>and<br>fix | Take<br>down<br>and clear<br>away | Take<br>down<br>and set<br>aside for<br>re-use | Fix<br>only |       |
|   |                 | A<br>\$              | B<br>\$                           | C<br>\$  | D<br>\$     |       |
| 49001   | up to 1 kW..... | 11,027.43            | 103.95                            | 138.92   | 589.74      | 49001 |
| 49002   | 1 - 2 kW.....   | 12,902.97            | 103.95                            | 138.92   | 589.74      | 49002 |
| 49003   | 2 - 3 kW.....   | 17,161.55            | 103.95                            | 138.92   | 589.74      | 49003 |
| 49004   | 3 - 4 kW.....   | 17,274.31            | 103.95                            | 138.92   | 589.74      | 49004 |
| 49005   | 4 - 5 kW.....   | 27,866.03            | 103.95                            | 138.92   | 589.74      | 49005 |
| Sewage transfer pump sets (max. 10m discharge head); cast iron casings and impellers; handling sewage containing solid particles up to 50mm diameter; direct driven by motors; water seal connection; vents; drain; priming plug; associated pipeworks and associated pipeworks and anti-vibration mountings; adjacent emergency stops; all necessary components and accessories :- |                 |                      |                                   |  |             |       |
| <i>Each</i>   |                 |                      |                                   |  |             |       |
| 49006   | up to 1 kW..... | 25,586.45            | 103.95                            | 138.92   | 589.74      | 49006 |
| 49007   | 1 - 2 kW.....   | 26,910.45            | 103.95                            | 138.92   | 589.74      | 49007 |
| 49008   | 2 - 3 kW.....   | 33,856.16            | 103.95                            | 138.92   | 589.74      | 49008 |
| 49009   | 3 - 4 kW.....   | 35,222.15            | 103.95                            | 138.92   | 589.74      | 49009 |
| 49010   | 4 - 5 kW.....   | 35,338.06            | 103.95                            | 138.92   | 589.74      | 49010 |
| Centrifugal fresh water pump, horizontal split casing type, c/w motor, strainer, drain and vent, orifice plates, starters and local control panel :-<br>(Effluent pump)   |                 |                      |                                   |  |             |       |
| <i>Each</i>   |                 |                      |                                   |  |             |       |
| 49011   | up to 5 kW..... | 11,896.92            | 103.95                            | 138.92   | 589.74      | 49011 |
| 49012   | 5 - 10 kW.....  | 18,550.32            | 111.02                            | 147.12   | 867.60      | 49012 |
| 49013   | 10 - 15 kW..... | 21,400.98            | 117.83                            | 154.14   | 960.95      | 49013 |
| 49014   | 15 - 20 kW..... | 24,260.16            | 124.71                            | 160.51   | 1,119.12    | 49014 |

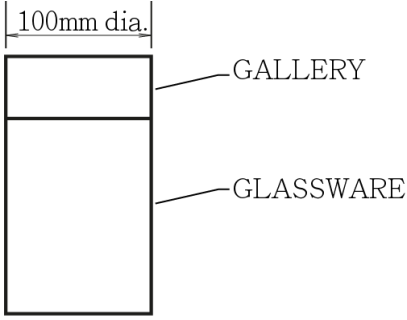
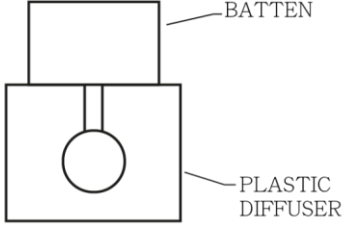
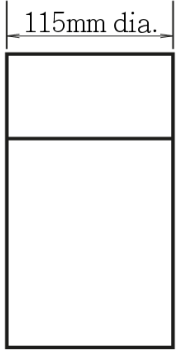
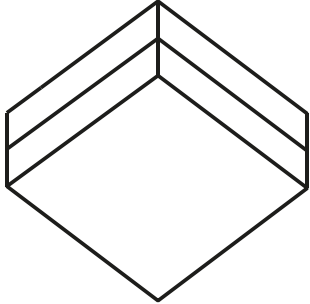
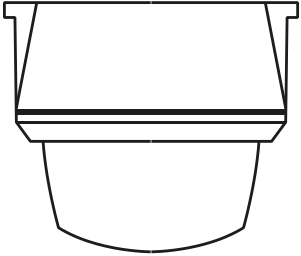
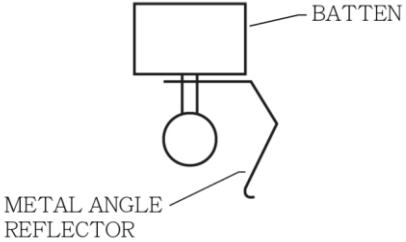
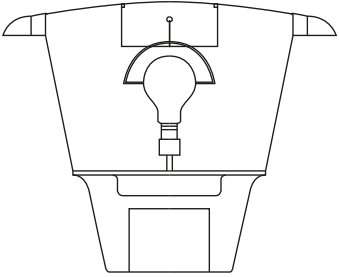
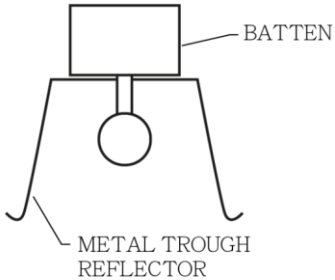
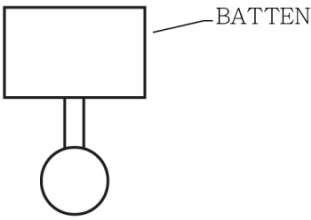
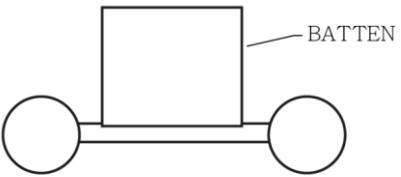
| Item  |                                    |                      |                                   |  | Item        |       |
|---|------------------------------------|----------------------|-----------------------------------|--|-------------|-------|
| <b>VALVES, PIPE WORKS AND ACCESSORIES</b>   |                                    |                      |                                   |  |             |       |
| Ultra violet sterilizer, close type c/w stainless steel 304 cabinet, chamber assembly, metallic wetted components, hour meter, all necessary controls/monitoring systems and ultraviolet lamps rated at 7500 hours. |                                    |                      |                                   |  |             |       |
| Ultra-violet dosage >60,000 uW second, flow rate : -  |                                    |                      |                                   |  |             |       |
| <i>Each</i>   |                                    |                      |                                   |  |             |       |
|   |                                    | Supply<br>and<br>fix | Take<br>down<br>and clear<br>away | Take<br>down<br>and set<br>aside for<br>re-use | Fix<br>only |       |
|   |                                    | A<br>\$              | B<br>\$                           | C<br>\$  | D<br>\$     |       |
| 49015   | up to 3.6 m <sup>3</sup> /hr.....  | 7,672.62             | 81.79                             | 109.23   | 4,820.09    | 49015 |
| 49016   | 3.6 - 7.2 m <sup>3</sup> /hr.....  | 15,345.22            | 81.79                             | 109.23   | 4,820.09    | 49016 |
| 49017   | 7.2 - 10.8 m <sup>3</sup> /hr..... | 23,017.84            | 81.79                             | 109.23   | 4,820.09    | 49017 |
| Air Blower : -  |                                    |                      |                                   |  |             |       |
| Max. 10m discharge head, airflow rate : -   |                                    |                      |                                   |  |             |       |
| <i>Each</i>   |                                    |                      |                                   |  |             |       |
| 49018   | up to 20 m <sup>3</sup> /hr.....   | 46,035.68            | 82.97                             | 88.13  | 9,640.19    | 49018 |
| 49019   | 20 - 40 m <sup>3</sup> /hr.....    | 61,380.92            | 82.97                             | 88.13  | 9,640.19    | 49019 |
| 49020   | 40 - 60 m <sup>3</sup> /hr.....    | 76,726.15            | 94.08                             | 99.38  | 14,460.27   | 49020 |
| Package type membrane module for membrane bio-reactor sewage treatment system : -   |                                    |                      |                                   |  |             |       |
| <i>Per square metre</i>   |                                    |                      |                                   |  |             |       |
| 49021   | Membrane module.....               | 6,226.63             | 35.64                             | 49.18  | 3,855.88    | 49021 |

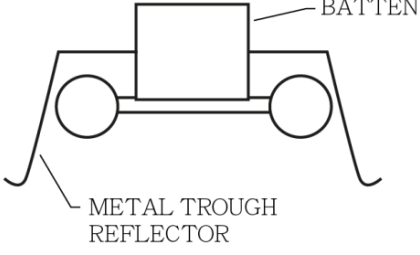
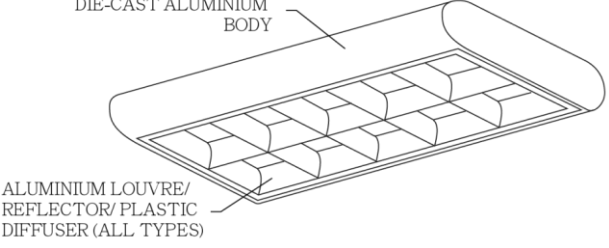
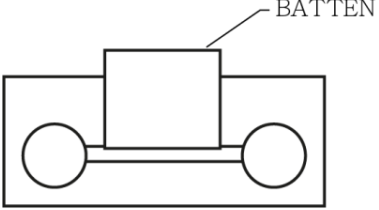
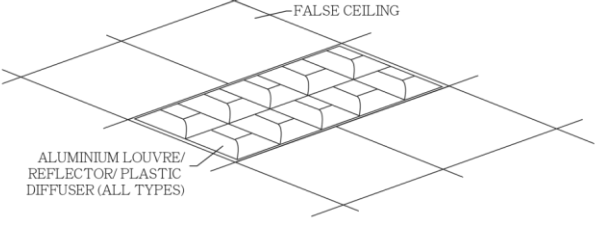
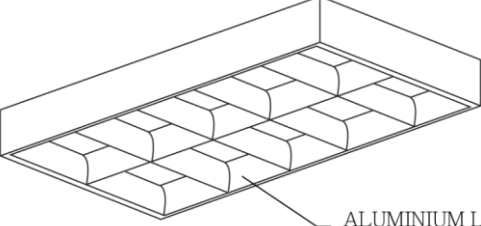
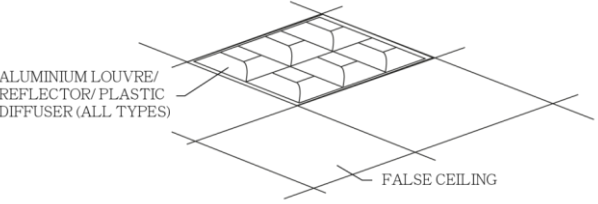
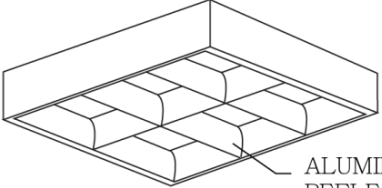
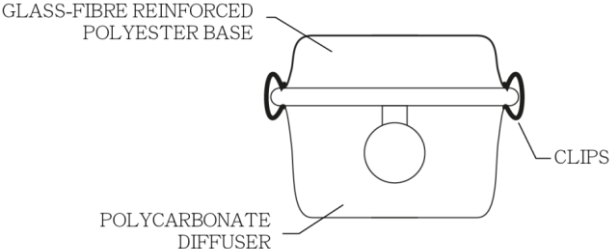
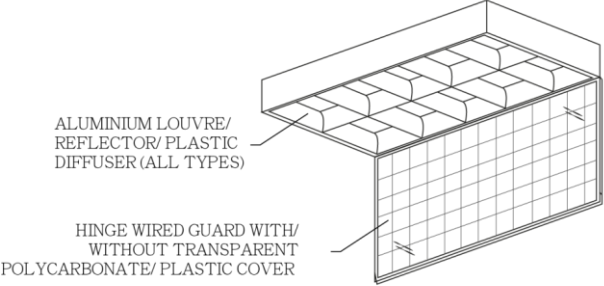
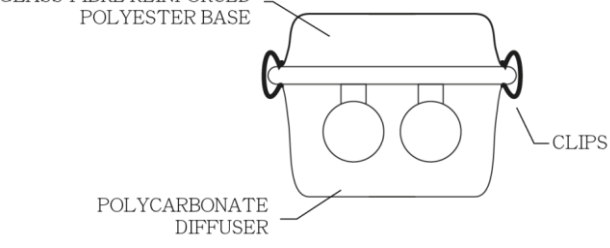
| Item  |   |                      |                                   |  | Item        |       |
|-------|---|----------------------|-----------------------------------|--|-------------|-------|
|       | <b>VALVES, PIPE WORKS AND ACCESSORIES<br/>(CONT'D)</b>  |                      |                                   |  |             |       |
|       |   | Supply<br>and<br>fix | Take<br>down<br>and clear<br>away | Take<br>down<br>and set<br>aside for<br>re-use | Fix<br>only |       |
|       |   | A<br>\$              | B<br>\$                           | C<br>\$  | D<br>\$     |       |
|       | Motorized control valve :-  |                      |                                   |  |             |       |
|       | <i>Each</i>   |                      |                                   |  |             |       |
| 49022 | Motorized wafer type control valve c/w protective coating, stainless steel disc and shaft<br>EPDM seat, electric actuator.....  | 5,822.86             | 40.84                             | 47.82  | 75.80       | 49022 |
|       | Cast iron gate valve c/w full bore clearway pattern to EN 1171:2002, solid wedge gates<br>with minimum normal pressure rating of PN10; c/w stainless steel stem of Grade 316 :- |                      |                                   |  |             |       |
|       | <i>Each</i>   |                      |                                   |  |             |       |
| 49023 | 50 mm diameter.....   | 868.45               | 24.39                             | 29.86  | 46.13       | 49023 |
| 49024 | 65 mm diameter.....   | 992.36               | 25.69                             | 31.22  | 48.31       | 49024 |
| 49025 | 80 mm diameter.....   | 1,170.70             | 27.08                             | 32.96  | 51.63       | 49025 |
| 49026 | 100 mm diameter.....  | 1,596.48             | 31.17                             | 37.28  | 57.12       | 49026 |
| 49027 | 150 mm diameter.....  | 2,872.59             | 41.28                             | 48.63  | 74.67       | 49027 |
|       | Cast iron non-return valve to EN 12334:2001, in single door swing check pattern, c/w<br>cast iron housing and gunmetal seat; c/w stainless steel stem of Grade 316 :-           |                      |                                   |  |             |       |
|       | <i>Each</i>   |                      |                                   |  |             |       |
| 49028 | 50 mm diameter.....   | 897.77               | 24.39                             | 29.86  | 46.13       | 49028 |
| 49029 | 65 mm diameter.....   | 1,098.47             | 25.69                             | 31.22  | 48.31       | 49029 |
| 49030 | 80 mm diameter.....   | 1,238.46             | 27.08                             | 32.96  | 51.63       | 49030 |
| 49031 | 100 mm diameter.....  | 1,732.57             | 31.17                             | 37.28  | 57.12       | 49031 |
| 49032 | 150 mm diameter.....  | 3,121.48             | 41.28                             | 48.63  | 74.67       | 49032 |

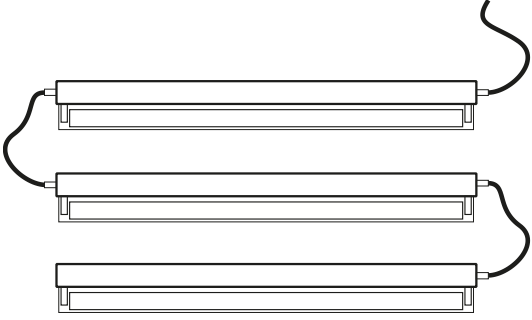
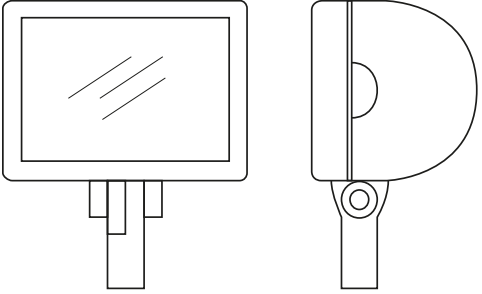
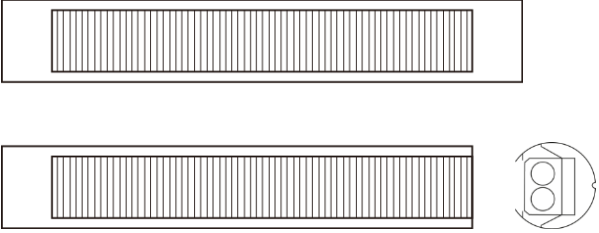
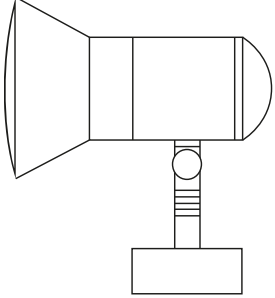
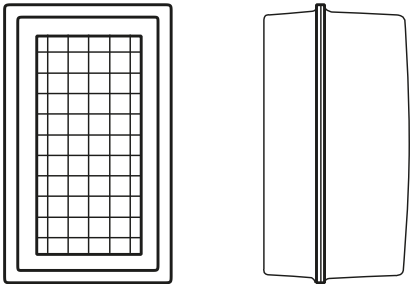
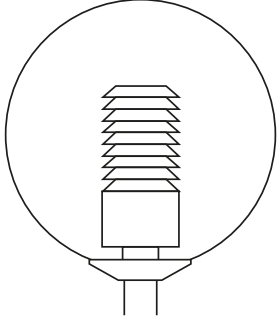
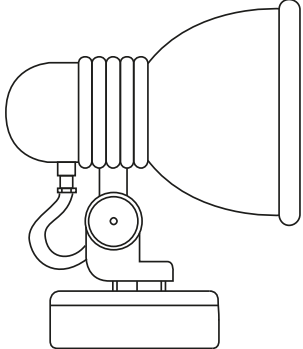
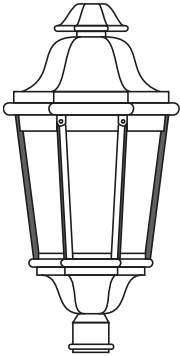
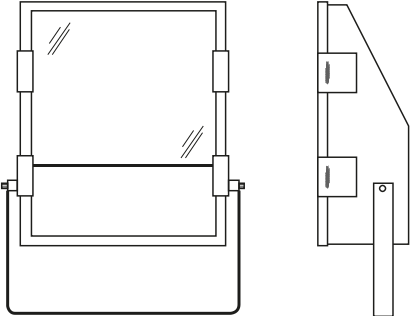
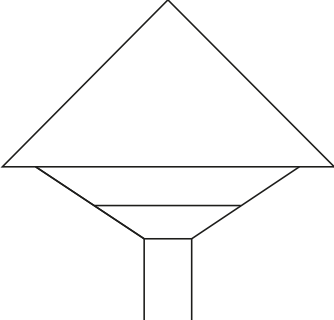
| Item  |                      |                      |                                   |  | Item        |       |
|---|----------------------|----------------------|-----------------------------------|--|-------------|-------|
| <b>VALVES, PIPE WORKS AND ACCESSORIES<br/>(CONT'D)</b>  |                      |                      |                                   |  |             |       |
| Ductile iron pipe, Class I to BS EN 598:2007+A1:2009 c/w ductile iron fittings to BS EN 598:2007+A1:2009 with all necessary accessories : - |                      |                      |                                   |  |             |       |
| <i>Per linear metre</i>   |                      |                      |                                   |  |             |       |
|   |                      | Supply<br>and<br>fix | Take<br>down<br>and clear<br>away | Take<br>down<br>and set<br>aside for<br>re-use | Fix<br>only |       |
|   |                      | A<br>\$              | B<br>\$                           | C<br>\$  | D<br>\$     |       |
| 49033   | 100 mm diameter..... | 247.49               | 45.93                             | 54.25  | 94.45       | 49033 |
| 49034   | 150 mm diameter..... | 326.62               | 64.32                             | 69.41  | 125.19      | 49034 |
| 49035   | 200 mm diameter..... | 428.01               | 74.48                             | 80.44  | 152.66      | 49035 |
| UPVC pipes and fittings : BS EN 1452 ; solvent or flanged joints, and c/w all accessories : -   |                      |                      |                                   |  |             |       |
| <i>Per linear metre</i>   |                      |                      |                                   |  |             |       |
| 49036   | 80 mm diameter.....  | 149.47               | 42.21                             | 45.86  | 84.56       | 49036 |
| 49037   | 100 mm diameter..... | 180.04               | 45.92                             | 54.24  | 94.45       | 49037 |
| 49038   | 150 mm diameter..... | 298.27               | 64.32                             | 69.41  | 125.19      | 49038 |
| 49039   | 200 mm diameter..... | 468.49               | 74.48                             | 80.44  | 152.66      | 49039 |

**ANNEX 'A' -**

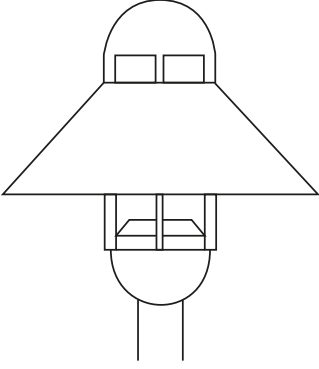
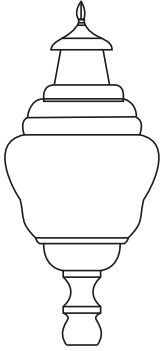
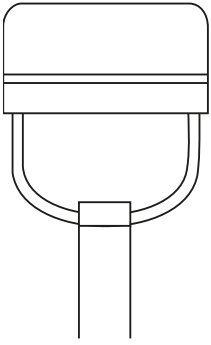
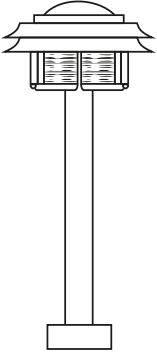
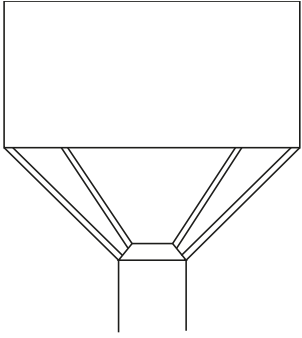
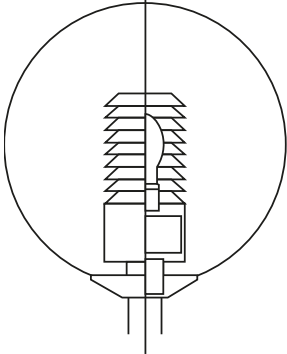
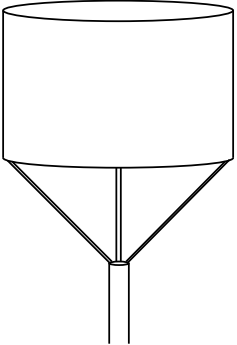
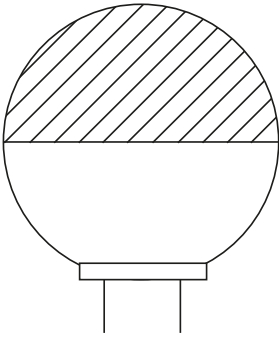
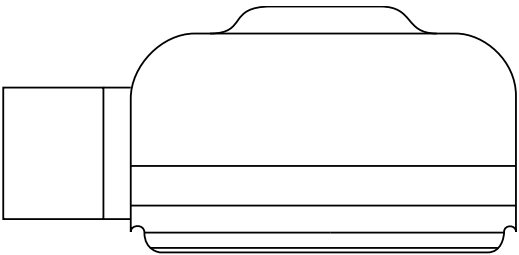
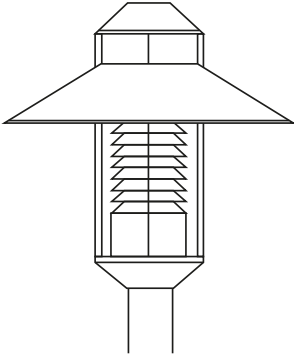
**DRAWINGS FOR BUILDING SERVICES WORKS**

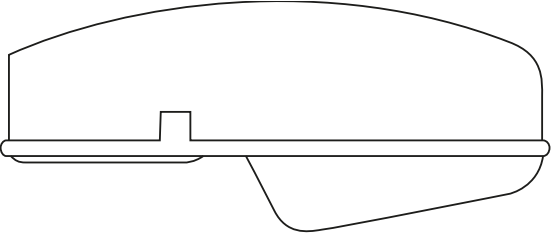
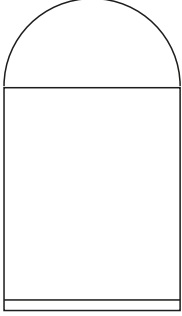
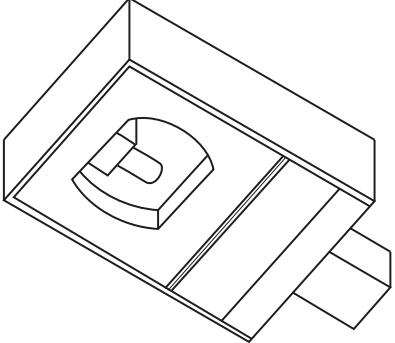
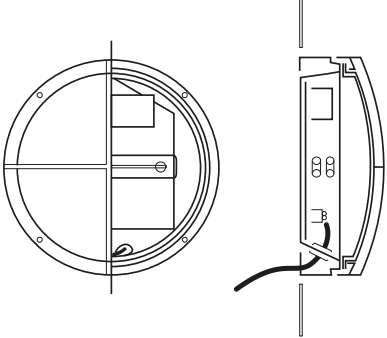
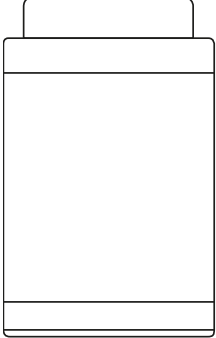
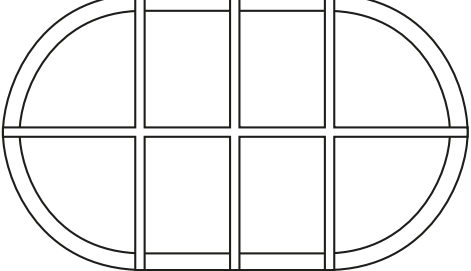
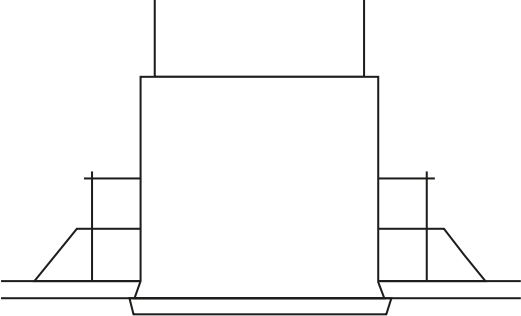
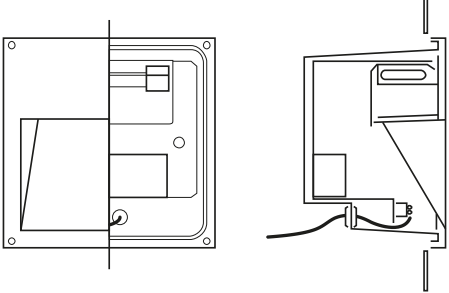
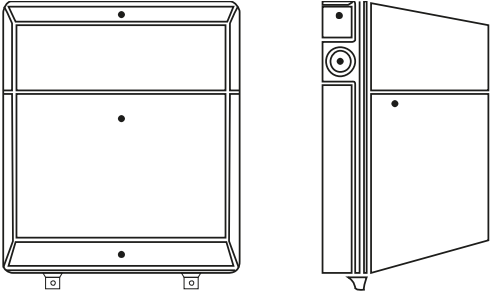
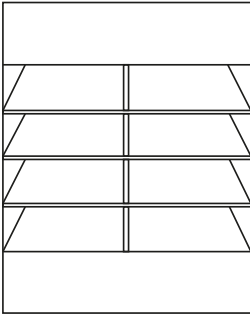
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|---------|---|---------|---|
| 6       |  <p>100mm dia.</p> <p>GALLERY</p> <p>GLASSWARE</p> | 51      |  <p>BATTEN</p> <p>PLASTIC DIFFUSER</p>         |
| 7       |  <p>115mm dia.</p>                                 | 52      |    |
| 35      |    | 56      |  <p>BATTEN</p> <p>METAL ANGLE REFLECTOR</p>  |
| 46      |    | 58      |  <p>BATTEN</p> <p>METAL TROUGH REFLECTOR</p> |
| 50      |  <p>BATTEN</p>                                   | 69      |  <p>BATTEN</p>                               |

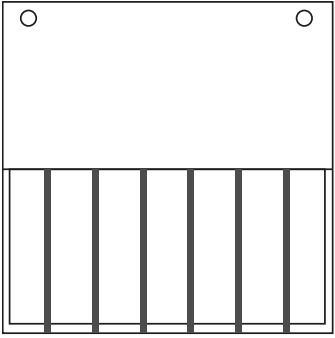

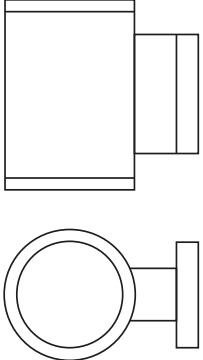
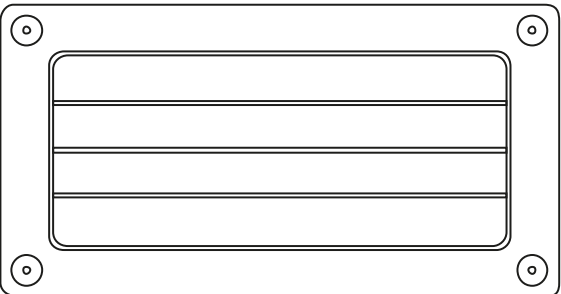
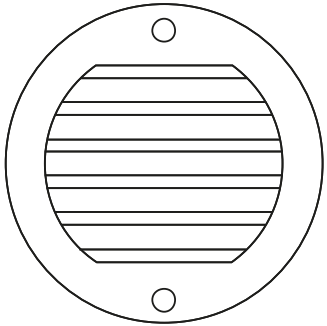
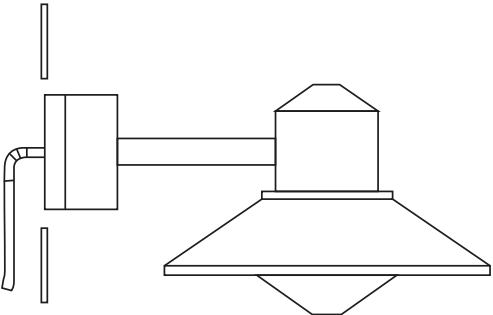
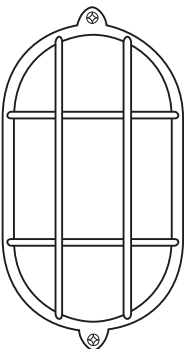
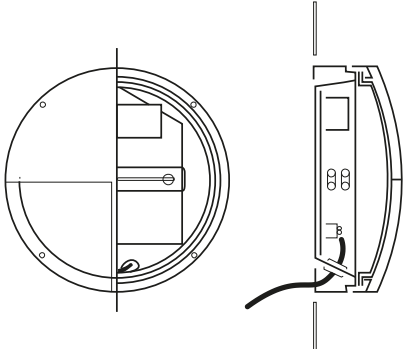
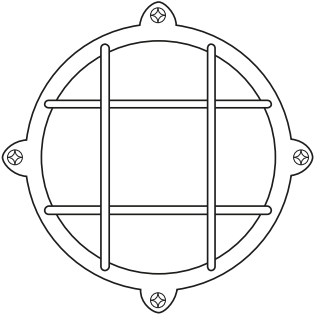
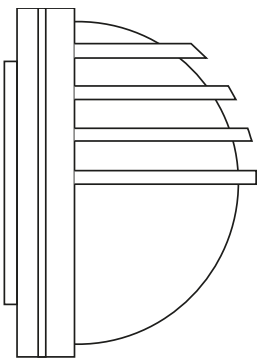
| SFA No. | SHAPE  | SFA No. | SHAPE  |
|---------|--|---------|--|
| 72      |  <p>BATTEN</p> <p>METAL TROUGH REFLECTOR</p>  | 113     |  <p>DIE-CAST ALUMINIUM BODY</p> <p>ALUMINIUM LOUVRE/ REFLECTOR/ PLASTIC DIFFUSER (ALL TYPES)</p> |
| 74      |  <p>BATTEN</p> <p>PLASTIC DIFFUSER</p>  | 114     |  <p>FALSE CEILING</p> <p>ALUMINIUM LOUVRE/ REFLECTOR/ PLASTIC DIFFUSER (ALL TYPES)</p>           |
| 110     |  <p>ALUMINIUM LOUVRE/ REFLECTOR/ PLASTIC DIFFUSER (ALL TYPES)</p>   | 115     |  <p>ALUMINIUM LOUVRE/ REFLECTOR/ PLASTIC DIFFUSER (ALL TYPES)</p> <p>FALSE CEILING</p>         |
| 111     |  <p>ALUMINIUM LOUVRE/ REFLECTOR/ PLASTIC DIFFUSER (ALL TYPES)</p>   | 116     |  <p>GLASS-FIBRE REINFORCED POLYESTER BASE</p> <p>POLYCARBONATE DIFFUSER</p> <p>CLIPS</p>       |
| 112     |  <p>ALUMINIUM LOUVRE/ REFLECTOR/ PLASTIC DIFFUSER (ALL TYPES)</p> <p>HINGE WIRED GUARD WITH/ WITHOUT TRANSPARENT POLYCARBONATE/ PLASTIC COVER</p> | 117     |  <p>GLASS-FIBRE REINFORCED POLYESTER BASE</p> <p>POLYCARBONATE DIFFUSER</p> <p>CLIPS</p>       |

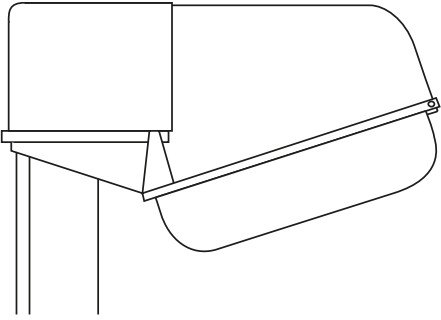
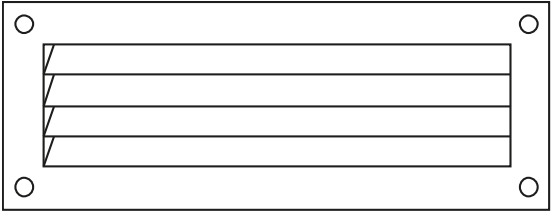
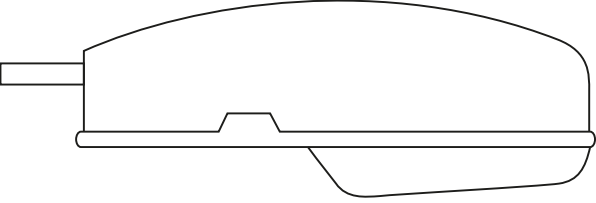
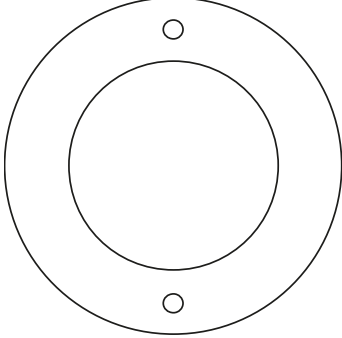
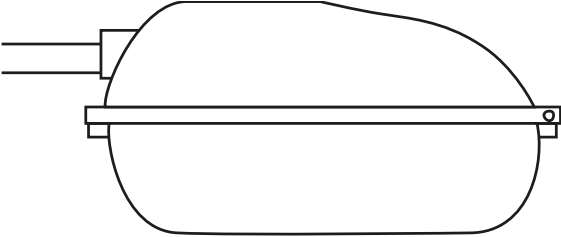
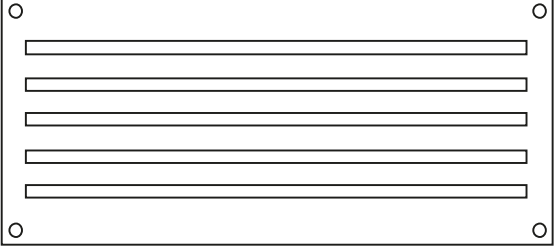
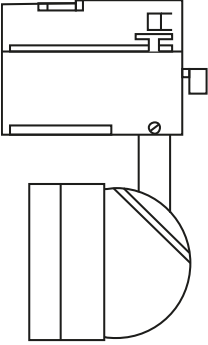
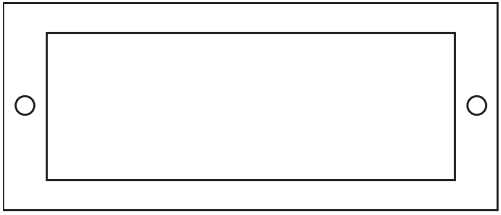
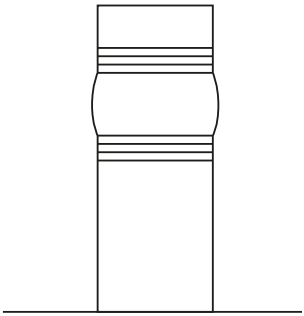
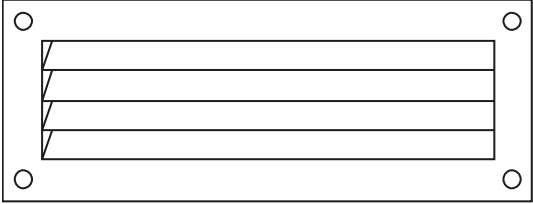
| SFA No. | SHAPE   | SFA No. | SHAPE   |
|---------|---|---------|---|
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| 201     |    | 207     |    |
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| 204     |  | 209     |  |
| 205     |  | 210     |  |

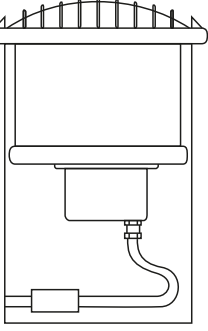
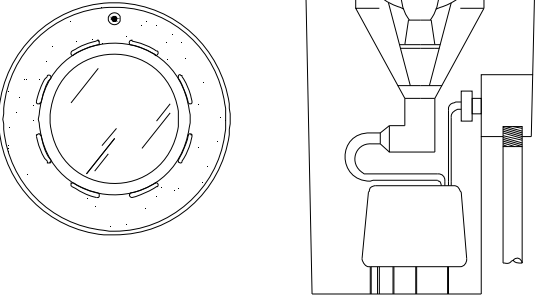
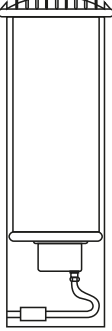
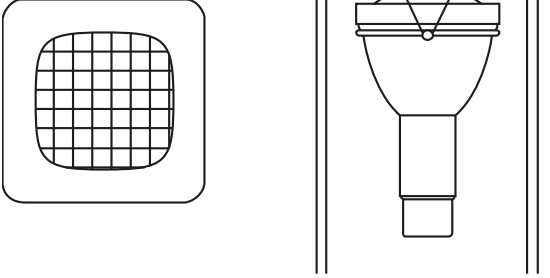
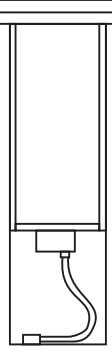
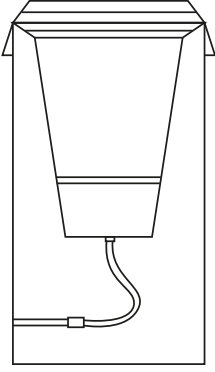
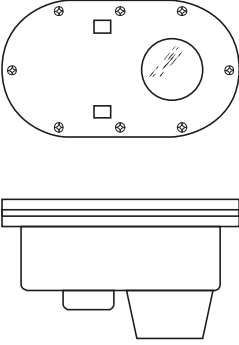
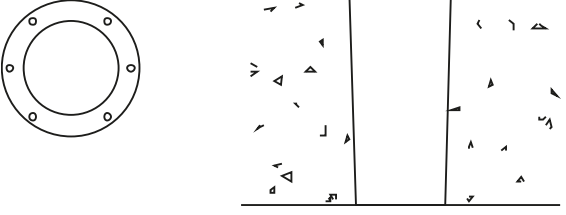
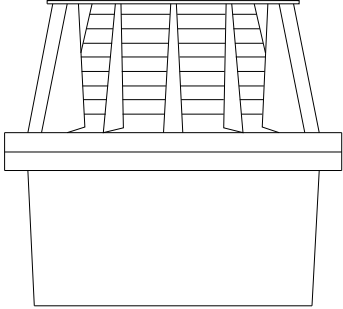



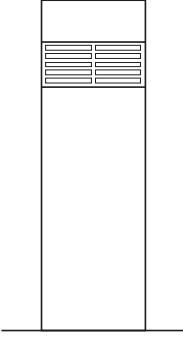
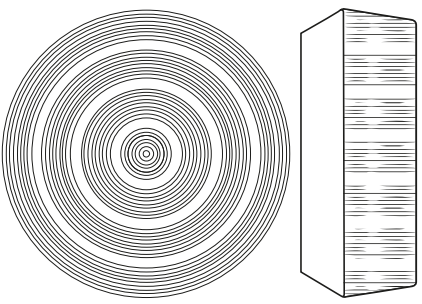
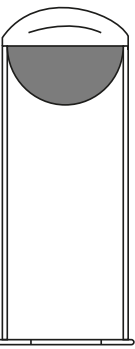
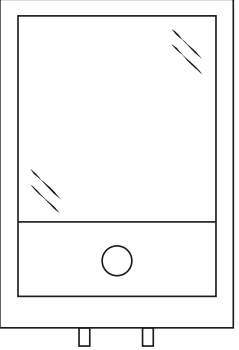
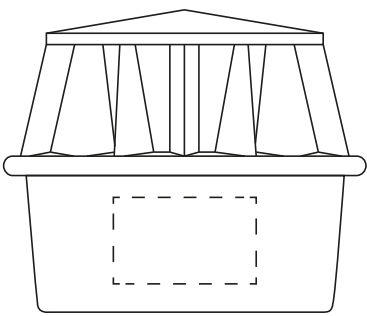


| SFA No. | SHAPE   | SFA No. | SHAPE   |
|---------|---|---------|---|
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| 212     |    | 217     |    |
| 213     |   | 218     |   |
| 214     |  | 219     |  |
| 215     |  | 220     |  |

| SFA No. | SHAPE   | SFA No. | SHAPE   |
|---------|---|---------|---|
| 221     |    | 226     |    |
| 222     |    | 227     |     |
| 223     |   | 228     |   |
| 224     |  | 229     |   |
| 225     |  | 230     |  |

| SFA No. | SHAPE   | SFA No. | SHAPE   |
|---------|---|---------|---|
| 231     |    | 236     |     |
| 232     |    | 237     |     |
| 233     |   | 238     |    |
| 234     |  | 239     |  |
| 235     |  | 240     |  |

| SFA No. | SHAPE   | SFA No. | SHAPE  |
|---------|---|---------|--|
| 241     |    | 246     |    |
| 242     |    | 247     |   |
| 243     |  | 248     |  |
| 244     |  | 249     |  |
| 245     |  | 250     |  |

| SFA No. | SHAPE   | SFA No. | SHAPE   |
|---------|---|---------|---|
| 251     |    | 256     |     |
| 252     |    | 257     |     |
| 253     |   | 258     |   |
| 254     |  | 259     |   |
| 255     |  | 260     |  |

| SFA No. | SHAPE   | SFA No. | SHAPE   |
|---------|---|---------|---|
| 261     |    | 266     |   |
| 262     |    | 267     |  |
| 263     |   |         |   |
| 264     |  |         |   |
| 265     |  |         |   |