

ARCHITECTURAL SERVICES DEPARTMENT

**MODEL BILLS
OF
QUANTITIES
FOR
BUILDING WORKS**

The Government of
The Hong Kong Special Administrative Region
Architectural Services Department
Quantity Surveying Branch

Queensway Government Offices
66 Queensway
Hong Kong

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Bill Nr. MODBQ.1
DEMOLITIONS AND ALTERATIONS

Item	Description	Qty	Unit	Rate	HK\$
	<u>DEMOLITIONS</u>				
	<u>Demolishing or taking down to ground level</u>				
	Individual structures				
A	* x * x * high to parapet ; * storeys ; reinforced concrete framed building ; as delineated on drawing nr. * ; shoring and scaffolding	-	item	-	[Blue bar]
B	* x * x * high to ridge ; * storeys ; steel framed building ; located at * ; materials remaining the property of Employer ; setting aside and storing materials on site ; shoring and scaffolding	-	item	-	[Blue bar]
	All structures				
C	* x * x * high ; * storeys ; reinforced concrete framed building ; shoring and scaffolding	-	item	-	[Blue bar]
	<u>REMOVAL OF ASBESTOS-CONTAINING MATERIALS</u>				
	<u>Design, provision, installation, inspection, testing, supervision, monitoring, sampling, maintenance, cleaning up and subsequent removal of the special precautionary measures ; as specified in Appendix * for the controlled removal and disposal of asbestos-containing materials ; as identified in drawing nr. *</u>				
	Decontamination facilities including three-chamber air lock, negative air pressure ventilation and air filtration system, air monitoring and sampling and complete sealing of floor, wall and ceiling				
D	*/F	-	item	-	[Blue bar]
	MODEL BILL OF DESCRIPTION				
	ASD STANDARD BILLS MODBQ.1/1				
			To Collection	\$	[Blue bar]

		<u>DEMOLITIONS AND ALTERATIONS</u>			
Item	Description	Qty	Unit	Rate	HK\$
<u>REMOVAL OF ASBESTOS-CONTAINING MATERIALS</u>					
<u>(Cont'd)</u>					
	Temporary barriers and hoardings completed with warning signs				
A	*/F	-	item	-	
	Waste disposal facilities including temporary containment barriers				
B	*/F	-	item	-	
	Respirators and protective clothing				
C	*/F	-	item	-	
	<u>Removal and disposal of</u> <u>asbestos-containing materials ; as</u> <u>identified in drawing nr. *</u>				
	Corrugated cement sheets				
D	*/F ; * m2	-	item	-	
	Hollow cement pipes				
E	*/F ; * m2	-	item	-	
<u>ALTERATIONS</u>					
	<u>Alteration works to existing first floor</u> <u>office areas ; as delineated on drawing</u> <u>nr. *</u>				
	Cutting or enlarging openings through reinforced concrete walls * thick ; quoining up jambs ; extending finishings and making good ; shoring and scaffolding				
F	* wide x * high	-	item	-	
	Cutting or enlarging openings through brick walls * thick ; cutting and pinning * x * precast concrete grade 20/20 lintol over reinforced with two 16 diameter plain steel reinforcing bars ; quoining up jambs ; extending finishings and making good ; shoring and scaffolding				
G	* wide x * high	-	item	-	
MODEL BILL OF DESCRIPTION		To Collection \$			
ASD STANDARD BILLS MODBQ.1/2					

		<u>DEMOLITIONS AND ALTERATIONS</u>			
Item	Description	Qty	Unit	Rate	HK\$
<u>ALTERATIONS (Cont'd)</u>					
	Blocking up or partially blocking up openings through walls ; reinforced concrete grade */* * thick ; formwork ; cutting, tooting and bonding to existing each alternate course ; extra material ; extending finishings and making good				
A	* wide x * high	-	item	-	
	Pulling down brick walls ; approximately *m x *m ; shoring and scaffolding				
B	one brick thick	-	item	-	
	Taking down fittings and fixtures ; setting aside materials for re-use ; protecting ; extending and making good *				
C	* x * x * hardwood doors ; * nr.	-	item	-	
D	* x * x * hardwood cupboards ; * nr.	-	item	-	
E	* x * x * vitreous china wash hand basins ; * nr.	-	item	-	
	Taking down existing windows and replacing with new ; setting aside and storing the materials on site ; protecting ; extending and making good *				
F	* x * aluminium windows including frames, glass and ironmongery ; replacing with * ; * nr.	-	item	-	
	Hacking off finishings and removing from site ; preparing background to receive new finishings ; approximately * m2				
G	plastering ; * thick overall ; walls and columns	-	item	-	
H	plastering ; * thick overall ; ceilings and beams	-	item	-	
J	glazed wall tiling and backing ; * thick overall ; walls and columns	-	item	-	
MODEL BILL OF DESCRIPTION		To Collection \$			
ASD STANDARD BILLS MODBQ.1/3					

		<u>DEMOLITIONS AND ALTERATIONS</u>			
Item	Description	Qty	Unit	Rate	HK\$
	<u>ALTERATIONS (Cont'd)</u>				
	Repairing, adapting and refixing existing fittings and fixtures				
A	* x * x * hardwood doors ; hanging ; * nr.	-	item	-	
B	* x * x * hardwood cupboards ; plugging ; * nr.	-	item	-	
C	* x * vitreous china wash hand basins ; cutting and pinning brackets ; connections to service pipes ; * nr.	-	item	-	
D	vitreous china w.c. suites ; plugging ; connections to service pipes ; * nr.	-	item	-	
	Stripping out plumbing and engineering services ; located at * ; protecting ; temporarily diverting, maintaining or sealing off existing services				
E	* installation	-	item	-	
	<u>SUNDRIES</u>				
	<u>Temporary screens</u>				
	Dustproof screens ; temporary doors size * x * ; * nr.				
F	providing ; erecting ; maintaining ; altering and adapting as necessary during the Contract ; removing on completion ; making good all work disturbed		m2		
G	* x * ; providing ; erecting ; maintaining ; altering and adapting as necessary during the Contract ; removing on completion ; making good all work disturbed		nr		
	MODEL BILL OF DESCRIPTION				
	ASD STANDARD BILLS MODBQ.1/4				
			To Collection	\$	

C O L L E C T I O N

Item

Description

HK\$

Page No.	MODBQ.1/1	
Page No.	MODBQ.1/2	
Page No.	MODBQ.1/3	
Page No.	MODBQ.1/4	
Page No.	MODBQ.1/5	

Bill Nr. MODBQ.1 - DEMOLITIONS AND ALTERATIONS

To Summary

\$

Bill Nr. MODBQ.2
PILING AND CAISSONS

Item	Description	Qty	Unit	Rate	HK\$
	<u>STEEL SHEET PILING</u>				
	<u>Plant</u>				
A	Providing and assembling on site ; subsequently dismantling and removing piling equipment	-	item	-	
	<u>Pre-boring pile holes</u>				
B	Pre-boring for units * x * overall piles ; vertical ; filling voids between sides of piles and bores with * ; depth of individual bores not exceeding 10.00m (In Nr. 0)		m		
	<u>Supplying, handling, transporting and pitching sheet piles</u>				
C	Units * x * overall ; * thick weldable structural steel to BS EN 10248-1 grade S270GP ; Frodingham Section 1B design length *m ; vertical		m2		
D	Extra over units * x * overall ; Frodingham Section 1B for corner piles		m		
E	junction piles		m		
F	non standard make up piles with interlocked width of *		m		
G	Units * x * overall ; * thick weldable structural steel to BS EN 10248-1 grade S270GP ; section modulus * cm3/m design length *m ; vertical		m2		
MODEL BILL OF DESCRIPTION		To Collection \$			
ASD STANDARD BILLS MODBQ.2/1					

PILING AND CAISSONS

Item	Description	Qty	Unit	Rate	HK\$
	<u>STEEL SHEET PILING (Cont'd)</u>				
	Extra over units * x * overall ; section modulus * cm ³ /m for				
A	corner piles		m		
B	junction piles		m		
C	non standard make up piles with interlocked width of *		m		
	<u>Driving sheet piles</u>				
	Units * x * overall ; Frodingham Section 1B				
D	vertical		m ²		
E	raking ; * degrees off the vertical		m ²		
	Extra over units * x * overall ; Frodingham Section 1B for				
F	corner piles ; vertical		m		
G	corner piles ; raking ; * degrees off the vertical		m		
H	junction piles ; vertical		m		
J	junction piles ; raking ; * degrees off the vertical		m		
K	non standard make up piles with interlocked width of * ; vertical		m		
L	non standard make up piles with interlocked width of * ; on rake		m		
	Units * x * overall ; section modulus * cm ³ /m				
M	vertical		m ²		
N	raking ; * degrees off the vertical		m ²		
	Extra over units * x * overall ; section modulus * cm ³ /m for				
P	corner piles ; vertical		m		
	MODEL BILL OF DESCRIPTION				
	ASD STANDARD BILLS MODBQ.2/2				
		To Collection	\$		

PILING AND CAISSONS

Item	Description	Qty	Unit	Rate	HK\$
<u>STEEL SHEET PILING (Cont'd)</u>					
A	corner piles ; raking ; * degrees off the vertical		m		
B	junction piles ; vertical		m		
C	junction piles ; raking ; * degrees off the vertical		m		
D	non standard make up piles with interlocked width of * ; vertical		m		
E	non standard make up piles with interlocked width of * ; raking ; * degrees off the vertical		m		
<u>Underground obstructions</u>					
F	Excavating, breaking up and removing underground obstructions ; backfilling ; removing surplus material from site	-	item	-	
<u>Withdrawing sheet piles</u>					
G	Withdrawn units becoming Contractor's property ; (allowing for credit value measured separately) ; removing from site units * x * overall ; Frodingham Section 1B		m2		
H	units * x * overall ; section modulus * cm3/m		m2		
<u>Sundries</u>					
J	Cutting or burning through sheet piling ; cutoffs becoming Contractor's property ; (allowing for credit value measured separately) units * x * overall ; Frodingham Section 1B		m		
K	units * x * overall ; section modulus * cm3/m		m		
MODEL BILL OF DESCRIPTION				To Collection \$	
ASD STANDARD BILLS MODBQ.2/3					

PILING AND CAISSONS

Item	Description	Qty	Unit	Rate	HK\$
	<u>STEEL SHEET PILING (Cont'd)</u>				
	Cutting or burning holes through sheet piling				
A	units * x * overall ; Frodingham Section 1B ; * diameter		nr		
B	units * x * overall ; section modulus * cm ³ /m ; * diameter		nr		
	<u>Temporary strutting and shoring ; lateral support ; designed by a Registered Structural Engineer</u>				
	Providing, erecting, maintaining, altering and adapting as necessary ; dismantling ; removing from site				
C	piling face *m long x *m high	-	item	-	
	<u>Temporary strutting and shoring ; lateral support ; hot-rolled steel to BS EN 10025 grade * ; welded fabrication ; altering and adapting as necessary ; dismantling ; removing from site</u>				
	Walings and strutting				
D	* x * x * kg universal columns		kg		
E	* x * x * kg joists		kg		
	Connections, caps and bases				
F	* x * x * kg angles ; in cleats, brackets, plates, packing pieces, etc.		kg		
G	* thick plates ; in *		kg		
	<u>Temporary pedestals and anchor blocks for temporary strutting and shoring ; breaking up after use ; removing from site ; making good the permanent structure</u>				
	Reinforced concrete ; grade */*				
H	pedestal (In Nr. 0)		m ³		
	MODEL BILL OF DESCRIPTION				
	ASD STANDARD BILLS				
	MODBQ.2/4				
		To Collection	\$		

PILING AND CAISSONS

Item	Description	Qty	Unit	Rate	HK\$
<u>STEEL SHEET PILING (Cont'd)</u>					
	Reinforcement ; plain steel reinforcing bars ; links, stirrups and binders ; PROVISIONAL				
A	round bars ; * diameter		kg		
	Reinforcement ; ribbed steel reinforcing bars ; general reinforcement ; PROVISIONAL				
B	round bars ; * diameter		kg		
	Sawn formwork				
C	vertical surfaces of pedestal		m2		
<u>Credit value</u>					
	Allowing for the credit value of materials				
D	arising from offcuts of Frodingham Section 1B sheet piles ; becoming Contractor's property ; removing from site	-	item	-	
E	arising from withdrawn units of Frodingham Section 1B sheet piles ; becoming Contractor's property ; removing from site	-	item	-	
<u>PRECAST CONCRETE PILES</u>					
<u>Plant</u>					
	Providing and assembling on site ; subsequently dismantling and removing				
F	piling equipment	-	item	-	
<u>Supplying piles ; sulphate resisting ; grade */*</u>					
	Piles				
G	* diameter (In Nr. 0)		m		
H	heads ; weighing * kg ; to suit * diameter piles		nr		
J	shoes ; weighing * kg ; to suit * diameter piles		nr		
MODEL BILL OF DESCRIPTION					To Collection \$
ASD STANDARD BILLS					MODBQ.2/5

PILING AND CAISSONS

Item	Description	Qty	Unit	Rate	HK\$
<u>PRECAST CONCRETE PILES (Cont'd)</u>					
<u>Driving piles</u>					
Piles					
A	* diameter ; vertical		m		
B	* diameter ; raking ; * degrees off the vertical		m		
Trial piles					
C	* diameter ; vertical		m		
D	* diameter ; raking ; * degrees off the vertical		m		
<u>Underground obstructions</u>					
Excavating, breaking up and removing					
E	underground obstructions ; backfilling ; removing surplus material from site	-	item	-	
<u>PILE HEAD TREATMENTS</u>					
Cutting off heads of piles ; straightening or bending and cleaning projecting reinforcement ; removing debris from site					
F	* diameter		nr		
Wire brushing, preparing and applying a thick protective coat of approved cement grout on exposed surfaces of all reinforcing bars and dowels projecting from pile heads					
G	generally	-	item	-	
<u>Testing</u>					
Compaction tests to determine					
H	the maximum dry density and optimum moisture content in accordance with Geospec 3 ; PROVISIONAL		nr		
MODEL BILL OF DESCRIPTION				To Collection \$	
ASD STANDARD BILLS MODBQ.2/7					

PILING AND CAISSONS

Item	Description	Qty	Unit	Rate	HK\$
<u>PRECAST CONCRETE PILES (Cont'd)</u>					
A	the in-situ field density and moisture content in accordance with Geospec 3 ; PROVISIONAL		nr		
Loading tests					
B	initial		nr		
C	subsequent ; PROVISIONAL		nr		
D	subsequent ; providing new loading platform and kentledge ; PROVISIONAL		nr		
Non-destructive integrity test of piles ; preparing ; executed by an approved Testing Firm					
E	dynamic test ; PROVISIONAL		nr		
Point load tests to determine					
F	the uniaxial compressive strength (UCS) of rock core samples ; PROVISIONAL		nr		
<u>CAST IN-SITU CONCRETE PILES IN DRIVEN CASINGS</u>					
<u>Plant</u>					
Providing and assembling on site ; subsequently dismantling and removing					
G	piling equipment	-	item	-	
<u>Supplying, handling, transporting, pitching, driving and withdrawing steel casings ; boring or excavation ; removal of bored or excavated materials</u>					
Pile casings ; * wall thickness					
H	* diameter internally ; vertical (In Nr. 0)		m		
J	* diameter internally ; raking ; * degrees off the vertical (In Nr. 0)		m		
MODEL BILL OF DESCRIPTION				To Collection \$	
ASD STANDARD BILLS				MODBQ.2/8	

PILING AND CAISSONS

Item	Description	Qty	Unit	Rate	HK\$
<u>CAST IN-SITU CONCRETE PILES IN DRIVEN CASINGS (Cont'd)</u>					
A	shoes ; weighing * kg ; to suit * diameter casings		nr		
B	Trial pile casings ; * wall thickness * diameter internally ; vertical (In Nr.0)		m		
C	shoes ; weighing * kg ; to suit * diameter casings		nr		
D	Extra over for excavation and special casings for enlarged bases ; * ; to suit * diameter piles internally		nr		
E	excavation for and removal of surface and underground obstructions ; backfilling to excavation ; removing surplus material from site	-	item	-	
<u>Reinforced concrete ; grade */*</u>					
Piles					
F	* diameter (In Nr. 0)		m		
G	Trial piles * diameter (In Nr. 0)		m		
H	Extra over * diameter piles for enlarged bases ; * diameter		nr		
J	Extra over * diameter trial piles for enlarged bases ; * diameter		nr		
<u>Reinforcement</u>					
K	Plain steel reinforcing bars ; links, stirrups and binders ; PROVISIONAL round bars ; * diameter		kg		
MODEL BILL OF DESCRIPTION					To Collection \$
ASD STANDARD BILLS					MODBQ.2/9

PILING AND CAISSONS

Item	Description	Qty	Unit	Rate	HK\$
	<u>CAST IN-SITU CONCRETE PILES IN DRIVEN CASINGS (Cont'd)</u>				
	Ribbed steel reinforcing bars ; general reinforcement ; PROVISIONAL				
A	round bars ; * diameter		kg		
	Ribbed steel reinforcing bars ; helical reinforcement ; PROVISIONAL				
B	round bars ; * diameter		kg		
	<u>Pile head treatments</u>				
	Cutting off heads of piles ; straightening or bending and cleaning projecting reinforcement ; removing debris from site				
C	* diameter ; in length 1.00 - 2.50m		nr		
	Wire brushing, preparing and applying a thick protective coat of approved cement grout on exposed surfaces of all reinforcing bars and dowels projecting from pile heads				
D	generally	-	item	-	
	<u>Testing</u>				
	Compaction tests to determine				
E	the maximum dry density and optimum moisture content in accordance with Geospec 3 ; PROVISIONAL		nr		
F	the in-situ field density and moisture content in accordance with Geospec 3 ; PROVISIONAL		nr		
	Loading tests				
G	initial		nr		
H	subsequent ; PROVISIONAL		nr		
J	subsequent ; providing new loading platform and kentledge ; PROVISIONAL		nr		
	MODEL BILL OF DESCRIPTION				
	ASD STANDARD BILLS MODBQ.2/10				
		To Collection	\$		

PILING AND CAISSONS

Item	Description	Qty	Unit	Rate	HK\$
<u>CAST IN-SITU CONCRETE PILES IN DRIVEN CASINGS (Cont'd)</u>					
	Non-destructive integrity test of piles ; preparing ; executed by an approved Testing Firm				
A	pile integrity test ; PROVISIONAL		nr		
	Point load tests to determine				
B	the uniaxial compressive strength (UCS) of rock core samples ; PROVISIONAL		nr		
<u>BORED PILES</u>					
<u>Plant</u>					
	Providing and assembling on site ; subsequently dismantling and removing				
C	drilling equipment	-	item	-	
D	piling equipment	-	item	-	
<u>Pre-drilling</u>					
	Pre-drilling ; * diameter bores as required by the Specification and Drawings for determining the bedrock profile ; commencing from existing ground level ; including supplying water to drill holes, obtaining samples, making records, providing final reports, backfilling drill holes with * ; ALL PROVISIONAL				
E	drilling depth not exceeding 15.00m (In Nr. 0)		m		
F	drilling depth 15.00m - 30.00m (In Nr. 0)		m		
<u>Boring</u>					
	Pile holes ; removing surplus excavated material from site				
G	* diameter ; for piles ; vertical ; depth not exceeding 10.00m (In Nr. 0)		m		
MODEL BILL OF DESCRIPTION				To Collection	\$
ASD STANDARD BILLS MODBQ.2/11					

PILING AND CAISSONS

Item	Description	Qty	Unit	Rate	HK\$
<u>BORED PILES (Cont'd)</u>					
A	* diameter ; for trial piles ; vertical ; depth 10.00 - 15.00m (In Nr. 0)		m		
B	Extra over pile holes for enlarged bases ; * diameter		nr		
C	toeing into bedrock ; 0.50 - 1.00m length (In Nr. 0)		m		
<u>Post construction proof drilling</u>					
Proof drilling ; * diameter bores as required by the Specification and Drawings for determining the length of rock socket ; commencing from * level ; including supplying water to drill holes, obtaining samples, making records, providing final reports, backfilling drill holes with * ; ALL PROVISIONAL					
D	drilling depth not exceeding 15.00m (In Nr. 0)		m		
E	drilling depth 15.00m - 30.00m (In Nr. 0)		m		
<u>Underground obstructions</u>					
F	Excavating, breaking up and removing underground obstructions ; backfilling ; removing surplus material from site	-	item	-	
<u>Reinforced concrete ; sulphate resisting ; grade */*</u>					
G	Filling to pile holes * diameter (In Nr. 0)		m		
H	Filling to trial pile holes * diameter (In Nr. 0)		m		
J	Extra over filling to pile holes for enlarged bases ; * diameter		nr		
MODEL BILL OF DESCRIPTION					To Collection \$
ASD STANDARD BILLS MODBQ.2/12					

PILING AND CAISSONS

Item	Description	Qty	Unit	Rate	HK\$
	<u>BORED PILES (Cont'd)</u>				
A	Extra over filling to trial pile holes for enlarged bases ; * diameter		nr		
	<u>Reinforcement</u>				
B	Plain steel reinforcing bars ; links, stirrups and binders ; PROVISIONAL round bars ; * diameter		kg		
C	Ribbed steel reinforcing bars ; general reinforcement ; PROVISIONAL round bars ; * diameter		kg		
D	Ribbed steel reinforcing bars ; helical reinforcement ; PROVISIONAL round bars ; * diameter		kg		
	<u>File head treatments</u>				
E	Cutting off heads of piles ; straightening or bending and cleaning projecting reinforcement * diameter pile		nr		
F	Wire brushing, preparing and applying a thick protective coat of approved cement grout on exposed surfaces of all reinforcing bars and dowels projecting from pile heads generally	-	item	-	
	<u>Testing</u>				
G	Compaction tests to determine the maximum dry density and optimum moisture content in accordance with Geospec 3 ; PROVISIONAL		nr		
H	the in-situ field density and moisture content in accordance with Geospec 3 ; PROVISIONAL		nr		
	MODEL BILL OF DESCRIPTION		To Collection	\$	
	ASD STANDARD BILLS MODBQ.2/13				

PILING AND CAISSONS

Item	Description	Qty	Unit	Rate	HK\$
<u>BORED PILES (Cont'd)</u>					
Loading tests					
A	initial		nr		
B	subsequent ; PROVISIONAL		nr		
C	subsequent ; providing new loading platform and kentledge ; PROVISIONAL		nr		
Koden tests					
D	vertically and bell-out ; PROVISIONAL		nr		
Concrete coring test ; commencing from * level					
E	* diameter core to * diameter pile ; subsequently pressure grouting with cement and sand (1:3) (In Nr. 0)		m		
Non-destructive integrity test of piles ; preparing ; executed by an approved Testing Firm					
F	* diameter * sonic tubes ; subsequently pressure grouting with cement and sand (1:3) ; PROVISIONAL		m		
G	sonic tests ; PROVISIONAL		nr		
Point load tests to determine					
H	the uniaxial compressive strength (UCS) of rock core samples ; PROVISIONAL		nr		
<u>STEEL PILES</u>					
<u>Plant</u>					
Providing and assembling on site ; subsequently dismantling and removing					
J	drilling equipment	-	item	-	
K	piling quipment	-	item	-	
MODEL BILL OF DESCRIPTION					To Collection \$
ASD STANDARD BILLS					MODBQ.2/14

PILING AND CAISSONS

Item	Description	Qty	Unit	Rate	HK\$
	<u>STEEL PILES (Cont'd)</u>				
	<u>Pre-drilling</u>				
	Pre-drilling ; * diameter bores as required by the Specification and Drawings for determining the bedrock profile ; commencing from existing ground level ; including supplying water to drill holes, obtaining samples, making records, providing final reports, backfilling drill holes with * ; ALL PROVISIONAL				
A	drilling depth not exceeding 15.00m (In Nr. 0)		m		
B	drilling depth 15.00m - 30.00m (In Nr. 0)		m		
	<u>Pre-boring pile holes</u>				
	Pre-boring				
C	for * diameter piles ; vertical ; filling voids between sides of piles and bores with * ; depth of individual bores not exceeding 10.00m (In Nr. 0)		m		
	<u>Post construction proof drilling</u>				
	Proof drilling ; * diameter bores as required by the Specification and Drawings for determining the length of rock socket ; commencing from * level ; including supplying water to drill holes, obtaining samples, making records, providing final reports, backfilling drill holes with * ; ALL PROVISIONAL				
D	drilling depth not exceeding 15.00m (In Nr. 0)		m		
E	drilling depth 15.00m - 30.00m (In Nr. 0)		m		
	<u>Supplying piles</u>				
	"H" section piles ; steel to BS EN 10025 grade * ; * thick ; weighing * kg/m ; section modulus * cm ³ /m				
F	* x * (In Nr. 0)		m		
	MODEL BILL OF DESCRIPTION				
	ASD STANDARD BILLS				
	MODBQ.2/15				
				To Collection \$	

PILING AND CAISSONS

Item	Description	Qty	Unit	Rate	HK\$
	<u>STEEL PILES (Cont'd)</u>				
	<u>Handling, transporting and pitching piles</u>				
	Piles				
A	* x * "H" Section piles ; vertical (In Nr. 0)		m		
	<u>Driving piles</u>				
	Piles				
B	* x * "H" Section piles ; vertical (In Nr. 0)		m		
C	* x * "H" Section piles ; raking ; * degrees off the vertical (In Nr. 0)		m		
	Dollying piles below ground				
D	* x * "H" Section piles ; vertical (In Nr. 0)		m		
	<u>Underground obstructions</u>				
	Excavating, breaking up and removing				
E	underground obstructions ; backfilling ; removing surplus material from site	-	item	-	
	<u>File head treatments</u>				
	Cutting off heads of piles ; removing debris from site				
F	* x * "H" Section piles		nr		
	<u>Testing</u>				
	Compaction tests to determine				
G	the maximum dry density and optimum moisture content in accordance with Geospec 3 ; PROVISIONAL		nr		
H	the in-situ field density and moisture content in accordance with Geospec 3 ; PROVISIONAL		nr		
	MODEL BILL OF DESCRIPTION		To Collection	\$	
	ASD STANDARD BILLS MODBQ.2/16				

PILING AND CAISSONS

Item	Description	Qty	Unit	Rate	HK\$
<u>STEEL PILES (Cont'd)</u>					
Loading tests					
A	initial		nr		
B	subsequent ; PROVISIONAL		nr		
C	subsequent ; providing new loading platform and kentledge ; PROVISIONAL		nr		
Point load tests to determine					
D	the uniaxial compressive strength (UCS) of rock core samples ; PROVISIONAL		nr		
<u>ROCK-SOCKETED STEEL H-PILES</u>					
<u>Plant</u>					
Providing and assembling on site ; subsequently dismantling and removing for site					
E	drilling equipment	-	item	-	
F	piling equipment	-	item	-	
<u>Pre-drilling</u>					
Pre-drilling ; * diameter bores as required by the Specification and Drawings for determining the bedrock profile ; commencing from existing ground level ; including supplying water to drill holes, obtaining samples, making records, providing final reports, backfilling drill holes with * ; ALL PROVISIONAL					
G	drilling depth not exceeding 15.00m (In Nr. 0)		m		
H	drilling depth 15.00 - 30.00m (In Nr. 0)		m		
To Collection \$					

PILING AND CAISSONS

Item	Description	Qty	Unit	Rate	HK\$
	<u>ROCK-SOCKETED STEEL H-PILES (Cont'd)</u>				
	<u>Pre-boring pile holes</u>				
	Pre-boring ; removing surplus excavated material from site ; commencing from existing ground level / * level				
A	* diameter ; for piles ; vertical ; depth of individual bores not exceeding 10.00m (In Nr. 0)		m		
B	* diameter ; for piles ; vertical ; depth of individual bores 10.00 - 15.00m (In Nr. 0)		m		
C	* diameter ; for piles ; raking ; * degrees off the vertical ; depth of individual bores not exceeding 10.00m (In Nr. 0)		m		
D	* diameter ; for piles ; raking ; * degrees off the vertical ; depth of individual bores 10.00 - 15.00m (In Nr. 0)		m		
E	* diameter ; for trial piles ; vertical ; depth of individual bores not exceeding 10.00m (In Nr. 0)		m		
F	* diameter ; for trial piles ; vertical ; depth of individual bores 10.00 - 15.00m (In Nr. 0)		m		
	<u>Post construction proof drilling</u>				
	Proof drilling ; * diameter bores as required by the Specification and Drawings for determining the length of rock socket ; commencing from * level ; including supplying water to drill holes, obtaining samples, making records, providing final reports, backfilling drill holes with * ; ALL PROVISIONAL				
G	drilling depth not exceeding 15.00m (In Nr. 0)		m		
H	drilling depth 15.00 - 30.00m (In Nr. 0)		m		
	MODEL BILL OF DESCRIPTION				
	ASD STANDARD BILLS MODBQ.2/18				
				To Collection \$	

PILING AND CAISSONS

Item	Description	Qty	Unit	Rate	HK\$
	<u>ROCK-SOCKETED STEEL H-PILES (Cont'd)</u>				
	<u>Underground obstructions</u>				
A	Excavating, breaking up and removing underground obstructions ; backfilling voids ; removing surplus material from site	-	item	-	
	<u>Permanent linings</u>				
B	Steel casings of approved quality ; for piles ; * thick casings ; * internal diameter ; vertical ; depth of individual bores not exceeding 10.00m (In Nr. 0)		m		
C	casings ; * internal diameter ; vertical ; depth of individual bores 10.00 - 15.00m (In Nr. 0)		m		
D	casings ; * internal diameter ; raking ; * degrees off the vertical ; depth of individual bores not exceeding 10.00m (In Nr. 0)		m		
E	casings ; * internal diameter ; raking ; * degrees off the vertical ; depth of individual bores 10.00 - 15.00m (In Nr. 0)		m		
	<u>"H" section piles</u>				
F	Supplying, handling, transporting, pitching and installing 'H" section piles in pile holes ; steel to BS EN 10025-1 & BS EN 10025-2 ; Grade * ; * x * x * kg/m ; * web thickness ; * flange thickness ; welded ; with one 150 diameter mild steel tube for core testing on hardened grout vertical ; depth of individual bores not exceeding 10.00m (In Nr. 0)		m		
G	vertical ; depth of individual bores 10.00 - 15.00m (In Nr. 0)		m		
	MODEL BILL OF DESCRIPTION		To Collection	\$	
	ASD STANDARD BILLS MODBQ.2/19				

PILING AND CAISSONS

Item	Description	Qty	Unit	Rate	HK\$
	<u>ROCK-SOCKETED STEEL H-PILES (Cont'd)</u>				
A	raking ; * degrees off the vertical ; depth of individual bores not exceeding 10.00m (In Nr. 0)		m		
B	raking ; * degrees off the vertical ; depth of individual bores 10.00 - 15.00m (In Nr. 0)		m		
	<u>Grout filling ; ordinary Portland cement and water with an approved non-shrinkage additive ; 30MPa minimum cube strength</u>				
	Filling to pile holes ; * diameter				
C	depth of individual bores not exceeding 10.00m (In Nr. 0)		m		
D	depth of individual bores 10.00 - 15.00m (In Nr. 0)		m		
	<u>Reinforcement</u>				
	Plain steel shear bars ; welded to "H" section piles				
E	round bars ; * diameter ; * long ; PROVISIONAL		kg		
	<u>Pile head treatment</u>				
	Cutting off heads of piles ; breaking up grout ; all necessary excavation, backfilling and removing debris from site				
F	* x * "H" section piles ; length not exceeding 1.00m		nr		
	Capping plates ; mild steel grade * ; with * nr. * diameter vent holes ; * nr. * diameter hole for plug weld ; welded to "H" section piles				
G	* x * x * thick		nr		
	Plain steel U bars ; * diameter ; welded to capping plate				
H	* wide x * long		nr		
	MODEL BILL OF DESCRIPTION				
	ASD STANDARD BILLS MODBQ.2/20				
		To Collection	\$		

PILING AND CAISSONS

Item	Description	Qty	Unit	Rate	HK\$
	<u>ROCK-SOCKETED STEEL H-PILES (Cont'd)</u>				
	<u>Testing ; all as described in the</u> <u>Specification and Drawings</u>				
	Testing of grout ; ALL PROVISIONAL				
A	tests for bleeding and free expansion		nr		
B	flow cone efflux tests		nr		
C	tests for crushing strength		nr		
	Coring tests on hardened grout ; subsequently pressure grouting				
D	* diameter core from pile ; PROVISIONAL		nr		
	Preparing and providing attendance on Testing Firm carrying out loading tests				
E	initial		nr		
F	subsequent ; PROVISIONAL		nr		
G	subsequent ; providing new loading platform and kentlege ; PROVISIONAL		nr		
	Tests of "H" section pile segments ; preparing and delivering samples to the Public Works Laboratories				
H	"H" section piles	-	item	-	
	Tests, examinations and inspections of welded joints ; employing an approved independent testing firm to carry out and interpret the inspection and testing ; providing any necessary labour and attendance				
J	"H" section piles	-	item	-	
	MODEL BILL OF DESCRIPTION				
	ASD STANDARD BILLS				
	MODBQ.2/21				
			To Collection	\$	

PILING AND CAISSONS

Item	Description	Qty	Unit	Rate	HK\$
<u>MINIPILES</u>					
<u>Plant</u>					
	Providing and assembling on site ; subsequently dismantling and removing from site				
A	drilling equipment	-	item	-	
B	piling equipment	-	item	-	
<u>Pre-drilling</u>					
	Pre-drilling ; * diameter bores as required by the Specification and Drawings for determining the bedrock profile ; commencing from existing ground level ; including supplying water to drill holes, obtaining samples, making records, providing final reports, backfilling drill holes with * ; ALL PROVISIONAL				
C	drilling depth not exceeding 15.00m (In Nr. 0)		m		
D	drilling depth 15.00 - 30.00m (In Nr. 0)		m		
<u>Boring</u>					
	Pile holes ; removing surplus excavated material from site ; commencing from existing ground level / * level				
E	* diameter ; for piles ; vertical ; depth of individual bores not exceeding 10.00m (In Nr. 0)		m		
F	* diameter ; for piles ; raking ; * degrees off the vertical ; depth of individual bores not exceeding 10.00m (In Nr. 0)		m		
G	* diameter ; for trial piles ; vertical ; depth of individual bores 10.00 - 15.00m (In Nr. 0)		m		
MODEL BILL OF DESCRIPTION				To Collection	\$
ASD STANDARD BILLS					
MODBQ.2/22					

PILING AND CAISSONS

Item	Description	Qty	Unit	Rate	HK\$
	<u>MINIPILES (Cont'd)</u>				
	<u>Post construction proof drilling</u>				
	Proof-drilling ; * diameter bores as required by the Specification and Drawings for determining the length of rock socket ; commencing from * level ; including supplying water to drill holes, obtaining samples, making records, providing final reports, backfilling drill holes with * ; ALL PROVISIONAL				
A	drilling depth not exceeding 15.00m (In Nr. 0)		m		
B	drilling depth 15.00 - 30.00m (In Nr. 0)		m		
	<u>Underground obstructions</u>				
	Excavating, breaking up and removing				
C	underground obstructions ; backfilling voids ; removing surplus material from site	-	item	-	
	<u>Permanent casings</u>				
	Permanent casings ; Grade S275J0H / S275J2H structural steel ; 5 (minimum) thick				
D	casings ; * internal diameter ; vertical (In Nr. 0)		m		
E	casings ; * internal diameter ; raking ; * degrees off the vertical (In Nr. 0)		m		
	<u>Grout filling ; ordinary Portland cement and water with an approved non-shrinkage additive ; 30MPa minimum cube strength</u>				
	Filling to pile holes				
F	* diameter (In Nr. 0)		m		
	Filling to trial pile holes				
G	* diameter (In Nr. 0)		m		
	MODEL BILL OF DESCRIPTION				
	ASD STANDARD BILLS				
	MODBQ.2/23				
				To Collection \$	

PILING AND CAISSONS

Item	Description	Qty	Unit	Rate	HK\$
	<u>MINIPILES (Cont'd)</u>				
	<u>Reinforcement</u>				
	Plain steel reinforcing bars ; links, stirrups and binders ; PROVISIONAL				
A	round bars ; * diameter		kg		
	Ribbed steel reinforcing bars ; general reinforcement ; PROVISIONAL				
B	round bars ; * diameter		kg		
	Ribbed steel reinforcing bars ; helical reinforcement ; PROVISIONAL				
C	round bars ; * diameter		kg		
	<u> <u> </u></u>				
	<u> <u> </u></u>				
	Cutting off heads of piles ; straightening or bending and cleaning projecting reinforcement				
D	* diameter pile ; length not exceeding 1.00m		nr		
E	* diameter pile ; length 1.00 - 2.50m		nr		
	Wire brushing, preparing and applying a thick protective coat of approved cement grout on exposed surfaces of all reinforcing bars and dowels projecting from pile heads				
F	generally	-	item	-	
	<u>Testing</u>				
	Preparing and providing attendance on Testing Firm carrying out loading tests				
G	initial		nr		
H	subsequent ; PROVISIONAL		nr		
J	subsequent ; providing new loading platform and kentledge ; PROVISIONAL		nr		
	MODEL BILL OF DESCRIPTION				
	ASD STANDARD BILLS				
	MODBQ.2/24				
		To Collection	\$		

PILING AND CAISSONS

Item	Description	Qty	Unit	Rate	HK\$
<u>MINIPILES (Cont'd)</u>					
	Testing of grout ; all as described in the Specification and Drawings ; ALL PROVISIONAL				
A	tests for bleeding and free expansion		nr		
B	flow core efflux tests		nr		
C	tests for crushing strength		nr		
<u>ROCK ANCHORS</u>					
<u>Plant</u>					
	Providing and assembling on site ; subsequently dismantling and removing				
D	drilling equipment	-	item	-	
E	tendon platform	-	item	-	
<u>Setting up</u>					
Anchors					
F	type *		nr		
Trial anchors					
G	type *		nr		
<u>Supplying ; drilling ground and installing rock anchors as drawing nr. *</u>					
	Free length of anchors ; *degrees from horizontal				
H	type * ; *m total length		nr		
	Free length of trial anchors ; * degrees from horizontal				
J	type * ; *m total length		nr		
	Fixed length of anchors ; * degrees from horizontal				
K	type * ; *m total length		nr		
MODEL BILL OF DESCRIPTION					To Collection \$
ASD STANDARD BILLS MODBQ.2/25					

PILING AND CAISSONS

Item	Description	Qty	Unit	Rate	HK\$
	<u>ROCK ANCHORS (Cont'd)</u>				
	Fixed length of trial anchors ; * degrees from horizontal				
A	type * ; *m total length		nr		
	<u>Supplying and installing anchor heads as drawing nr. *</u>				
	Anchor heads for				
B	type * anchors		nr		
C	type * trial anchors		nr		
	<u>Destressing anchors</u>				
	Trial anchors				
D	type *		nr		
	<u>Testing</u>				
	Water testing				
E	fixed lengths of anchor holes		nr		
F	pressure grouting *m lengths of anchor holes after water test failure ; re-drilling holes		nr		
	Load testing				
G	simple stressing tests on type * anchors ; * times design load		nr		
H	simple stressing tests on type * trial anchors ; * times design load		nr		
J	comprehensive stressing tests on type * anchors ; * times design load		nr		
K	comprehensive stressing tests on type * trial anchors ; * times design load		nr		
	Blast testing				
L	on trial anchors ; explosion of test charges in earthworks		nr		
	MODEL BILL OF DESCRIPTION		To Collection	\$	
	ASD STANDARD BILLS				
	MODBQ.2/26				

PILING AND CAISSONS

Item	Description	Qty	Unit	Rate	HK\$
<u>ROCK ANCHORS (Cont'd)</u>					
A	on trial anchors ; explosion of test charges in caissons		nr		
	Sample testing				
B	allowing for testing one sample of each material used in the rock anchor system	-	item	-	
<u>Load monitoring</u>					
	Lift off tests ; initial ; * hours after lock off				
C	to type * anchors		nr		
D	to type * trial anchors		nr		
	Lift off tests ; subsequent				
E	to type * anchors		nr		
	Lift off tests ; subsequent ; executing in Maintenance Period				
F	to type * anchors		nr		
	Load cells ; supplying ; installing				
G	to type * anchors		nr		
H	to type * trial anchors		nr		
<u>PRESSURE GROUTING</u>					
<u>Plant</u>					
	Providing and assembling on site ; subsequently dismantling and removing				
J	pressure grouting equipment	-	item	-	
<u>Drilling</u>					
	Grout holes ; commencing from * level				
K	* diameter ; vertically downwards ; drilling depth not exceeding 15.00m (In Nr. 0)		m		
MODEL BILL OF DESCRIPTION					To Collection \$
ASD STANDARD BILLS MODBQ.2/27					

PILING AND CAISSONS

Item	Description	Qty	Unit	Rate	HK\$
<u>PRESSURE GROUTING (Cont'd)</u>					
A	* diameter ; downwards at an angle 0 - 45 degrees to the vertical ; drilling depth not exceeding 15.00m (In Nr. 0)		m		
B	* diameter ; horizontally or downwards at an angle less than 45 degrees to the horizontal ; drilling depth not exceeding 15.00m (In Nr. 0)		m		
C	* diameter ; upwards at an angle 0 - 45 degrees to the horizontal ; drilling depth not exceeding 15.00m (In Nr. 0)		m		
D	* diameter ; upwards at an angle less than 45 degrees to the vertical ; drilling depth not exceeding 15.00m (In Nr. 0)		m		
<u>Grouting with cement</u>					
Filling and injection to grout holes					
E	generally		kg		
F	approximate grouting area in elevation * m2	-	item	-	
To Collection \$					

C O L L E C T I O N

Item

Description

HK\$

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C. fwd \$

C O L L E C T I O N

B.fwd

\$

Item

Description

HK\$

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Bill Nr. MODBQ.2 - PILING AND CAISSONS

To Summary

\$

Bill Nr. MODBQ.3
DIAPHRAGM WALLING

Item	Description	Qty	Unit	Rate	HK\$
	<u>DIAPHRAGM WALLING</u>				
	<u>The following in diaphragm walls ; *m long</u> <u>x *m deep overall ; as drawing nr. * ;</u> <u>adjacent to existing structure</u>				
	Providing and assembling plant on site ; subsequently dismantling and removing				
A	diaphragm walling equipment	-	item	-	
	Excavating trenches * wide for * thick diaphragm walls ; commencing at reduced level				
B	maximum depth *m ; removing surplus excavated materials from site		m3		
	Extra over excavation and disposal at any depth for breaking up and removing				
C	bedrock		m3		
	Concrete ; grade */*				
D	temporary guide walls ; one side ; * wide x * deep ; excavating and disposal ; formwork ; breaking up and removing on completion of diaphragm walls		m		
	Reinforced concrete ; grade */* ; placing by tremie pipe				
E	diaphragm walls ; * thick		m3		
	Plain steel reinforcing bars ; links, stirrups and binders				
F	round bars ; * diameter ; PROVISIONAL		kg		
	MODEL BILL OF DESCRIPTION				
	ASD STANDARD BILLS				
	MODBQ.3/1				
		To Collection	\$		

DIAPHRAGM WALLING

Item	Description	Qty	Unit	Rate	HK\$
<u>DIAPHRAGM WALLING (Cont'd)</u>					
	Ribbed steel reinforcing bars ; general reinforcement				
A	round bars ; * diameter ; PROVISIONAL		kg		
	Sawn formwork ; vertical surfaces				
B	diaphragm walls		m2		
	Trimming and cleaning faces of diaphragm walls				
C	* finish		m2		
	Preparing tops of diaphragm walls ; to receive * ; straightening or bending and cleaning projecting reinforcement				
D	* thick		m		
	Waterproof joints				
E	in walls ; as drawing nr.		m		
	Guide walls ; one side				
F	*		m		
	Ancillary works				
G	preparing cast-in pockets ; * x * x * deep ; formwork ; filling and making good all works disturbed		nr		
	Testing				
H	*		nr		

C O L L E C T I O N

Item

Description

HK\$

Page No. MODBQ.3/1

Page No. MODBQ.3/2

Bill Nr. MODBQ.3 - DIAPHRAGM WALLING

To Summary

\$

Bill Nr. MODBQ.4

EXCAVATION

Item	Description	Qty	Unit	Rate	HK\$
	<u>SITE PREPARATION</u>				
	<u>Site clearance</u>				
	Clearing the site				
A	removing off site or burning all rubbish, tall grass, shrubs, bushes and the like and trees not exceeding 600 girth, including grubbing up roots	-	item	-	
	Disposal of existing spoil heaps or rubbish dumps left by previous contractors				
B	removing off site ; to a dumping area provided by Employer ; average *m from excavation	-	item	-	
	Cutting down trees				
C	* to * girth ; providing and maintaining temporary identity labels or markings ; grubbing up roots and removing off site or burning ; filling voids with *		nr		
	Cutting down trees ; not in open area				
D	0.60 - 0.90m girth		nr		
	Removing existing tree stumps (tree cut by others)				
E	* ; filling voids with *		nr		
	Cutting turf to be preserved				
F	average * thick ; stacking on site ; for future use		m2		
	Stripping top soil for preservation				
G	average * deep ; depositing in separate spoil heaps ; on site		m2		
	MODEL BILL OF DESCRIPTION				
	ASD STANDARD BILLS				
	MODBQ.4/1				
		To Collection	\$		

Item	Description	Qty	Unit	Rate	EXCAVATION HK\$
	<u>SITE PREPARATION (Cont'd)</u>				
	Preserving trees				
A	* to * girth ; providing and maintaining temporary identity labels or markings ; including all temporary works		nr		
	<u>EXCAVATION</u>				
	<u>Excavating</u>				
	Over site to reduce levels				
B	not exceeding 0.20m deep ; average * deep		m3		
C	generally		m3		
	Into sides of banks				
D	generally		m3		
	Basements and similar ; commencing at site formation level				
E	not exceeding 1.50m deep		m3		
F	1.50 - 3.00m deep		m3		
G	3.00 - 4.50m deep		m3		
	Surface trenches ; commencing at site formation level				
H	not exceeding 1.50m deep		m3		
J	1.50 - 3.00m deep		m3		
K	3.00 - 4.50m deep		m3		
	Pits for pile caps ; commencing at site formation level				
L	not exceeding 1.50m deep		m3		
M	1.50 - 3.00m deep		m3		
N	3.00 - 4.50m deep		m3		
	MODEL BILL OF DESCRIPTION				
	ASD STANDARD BILLS MODBQ.4/2				
			To Collection	\$	

Item	Description	Qty	Unit	Rate	EXCAVATION HK\$
<u>EXCAVATION (Cont'd)</u>					
	Trenches for curbs * x * ; with beds ; commencing at site formation level ; not exceeding 1.50m deep				
A	0.25m average depth		m		
	Trenches for pipes or cables not exceeding 55 diameter ; with beds ; commencing at site formation level ; not exceeding 1.50m deep				
B	0.75m average depth		m		
	Trenches for pipes or cables exceeding 55 - 110 diameter, without beds ; commencing at site formation level ; not exceeding 1.50m deep				
C	1.00m average depth		m		
	Post holes ; commencing at site formation level				
D	not exceeding 0.30m3		nr		
<u>Extra over excavation and disposal at any depth for</u>					
	Breaking up and removing materials met with in excavation				
E	concrete pavings * thick		m2		
F	concrete pavings * thick ; with hardcore under		m2		
G	brickwork		m3		
H	blockwork		m3		
J	slab foundations		m3		
K	reinforced concrete		m3		
MODEL BILL OF DESCRIPTION					To Collection \$
ASD STANDARD BILLS MODBQ.4/3					

Item	Description	Qty	Unit	Rate	HK\$
<u>FILLING AND DISPOSAL</u>					
<u>Filling</u>					
	Excavated material				
A	backfilling to excavation ; depositing in * layers ; compacting		m3		
B	filling in making up levels ; depositing in * layers ; compacting by vibratory roller		m3		
C	filling for forming embankments or terraces ; depositing in * layers ; compacting by vibratory roller		m3		
D	filling to planters ; depositing ; compacting		m3		
	Obtained from specified off site area				
E	filling in making up levels ; depositing ; compacting		m3		
<u>Disposal</u>					
	Surplus excavated material				
F	removing from site ; depositing to dumping area provided by Employer		m3		
G	depositing on site in permanent spoil heaps ; average *m from excavation		m3		
<u>TREATMENT OF SURFACES</u>					
<u>Surface treatments</u>					
	Sides of cuttings				
H	trimming and compacting to slope		m2		
	Sides of embankments				
J	trimming and compacting to slope		m2		
MODEL BILL OF DESCRIPTION					
ASD STANDARD BILLS MODBQ.4/4					
				To Collection \$	

Item	Description	Qty	Unit	Rate	EXCAVATION HK\$
	<u>TREATMENT OF SURFACES (Cont'd)</u>				
	Surfaces of rock				
A	trimming to produce fair face ; within the tolerance specified in General Specification for Building clause 3.11 ; *		m2		
	<u>TEMPORARY SHORING AND SUPPORTS</u>				
	<u>Allowing for temporary shoring and supports</u>				
	To vertical face of excavation into banks ; exceeding 1.50m high ; for construction of retaining wall and similar				
B	minimum face height *m ; maximum face height *m ; approximate overall length *m	-	item	-	
	<u>EXCAVATION AND LATERAL SUPPORT WORKS</u>				
	<u>Allow for designing, erecting, maintaining, altering and adapting as necessary excavation and lateral support works including removal of the same on completion ; as drawing nr. *</u>				
	To vertical face of excavation ; for the construction of basement and the like				
C	approximate length *m x width *m ; overall height *m	-	item	-	
	<u>SPRAYED CONCRETE SURFACING</u>				
	<u>Concrete surfacing mix * ; applied by spraying</u>				
	Generally				
D	to slope ; * thick		m2		
	<u>HARDCORE OR GRANULAR FILLING</u>				
	<u>Hardcore</u>				
	Filling				
E	in making up levels ; depositing and compacting in layers		m3		
	MODEL BILL OF DESCRIPTION				
	ASD STANDARD BILLS MODBQ.4/5				
		To Collection		\$	

Item	Description	Qty	Unit	Rate	EXCAVATION HK\$
	<u>HARDCORE OR GRANULAR FILLING (Cont'd)</u>				
A	in making up levels average * thick		m2		
	Surfaces of hardcore				
B	blinding surface with fine filling material		m2		
	<u>Recycled rock filling material (Grade 200)</u>				
	Filling				
C	in making up levels ; depositing and compacting in layers		m3		
D	in making up levels average * thick		m2		
	Surfaces of recycled rock filling material (Grade 200)				
E	blinding surface with fine filling material		m2		
	<u>SUNDRIES</u>				
	<u>Treatments to sheet piling</u>				
	Cutting or burning through steel sheet piling				
F	unit * x * overall		m		
	<u>Treatments to diaphragm wall</u>				
	Cutting off top of diaphragm wall				
G	* thick		m		
	<u>Pile head treatments</u>				
	Cutting off heads of piles ; bored piles ; straightening or bending and cleaning projecting reinforcement ; removing debris from site				
H	* diameter ; not exceeding 1.00m length		nr		
	MODEL BILL OF DESCRIPTION				
	ASD STANDARD BILLS MODBQ.4/6				
		To Collection	\$		

Item	Description	Qty	Unit	Rate	EXCAVATION HK\$
	<u>SUNDRIES (Cont'd)</u>				
	<u>Caisson head treatments</u>				
	Breaking up the lining above finished casting level of the concrete core ; associated excavation ; removing material from site				
A	* minimum internal diameter		m		
	<u>Compaction tests</u>				
	Tests to determine				
B	the maximum dry density and optimum moisture content in accordance with Geospec 3 ; PROVISIONAL		nr		
C	the in-situ field density and moisture content in accordance with Geospec 3 ; PROVISIONAL		nr		
	<u>Record survey</u>				
	Oversite topographical survey				
D	by an approved independent firm ; before any work carried out under the Contract ; including preparing record drawings	-	item	-	
	MODEL BILL OF DESCRIPTION ASD STANDARD BILLS MODBQ.4/7		To Collection	\$	

C O L L E C T I O N

Item

Description

HK\$

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Bill Nr. MODBQ.4 - EXCAVATION

To Summary

\$

Bill Nr. MODBQ.5

UNDERPINNING

Item	Description	Qty	Unit	Rate	HK\$
	<u>UNDERPINNING</u>				
	<u>Underpinning ; reinforced concrete walls ; to East elevation of Transformer Room ; * long ; *m deep below base of existing foundation ; maximum *m lengths in one operation</u>				
	Temporary supports				
A	to work to be underpinned	-	item	-	
	Excavating preliminary trenches from both sides ; commencing at natural ground level				
B	not exceeding 1.50m deep		m3		
C	1.50 - 3.00m deep		m3		
	Excavating trenches below level of base of existing foundation from one side only ; commencing at *m below natural ground level				
D	not exceeding 1.50m deep		m3		
E	1.50 - 3.00m deep		m3		
	Extra over excavation and disposal at any depth for breaking up and removing				
F	unreinforced concrete		m3		
G	surface concrete * thick ; with hardcore under		m2		
	Excavated material				
H	backfilling to excavation ; depositing in * layers ; compacting		m3		
	Surplus excavated material				
J	removing from site		m3		
	MODEL BILL OF DESCRIPTION				
	ASD STANDARD BILLS				
	MODBQ.5/1				
		To Collection	\$		

Item	Description	Qty	Unit	Rate	HK\$
	<u>UNDERPINNING (Cont'd)</u>				
A	Concrete ; grade */* blinding under foundations and beams ; * thick		m3		
B	Concrete ; no-fines ; grade */* ; placing by pumping filling behind walls		m3		
C	Reinforced concrete ; grade */* foundations		m3		
D	ground beams		m3		
E	walls ; * thick		m3		
F	Plain steel reinforcing bars ; links, stirrups and binders ; PROVISIONAL * diameter		kg		
G	Ribbed steel reinforcing bars ; general reinforcement ; PROVISIONAL * diameter		kg		
H	Sawn formwork ; vertical surfaces foundations, pile caps, ground beams and the like		m2		
J	walls		m2		
K	foundations, pile caps, ground beams and the like ; not exceeding 300 wide		m		
L	Sawn formwork left in ; vertical surfaces foundations, pile caps, ground beams and the like		m2		
M	walls		m2		
N	foundations, pile caps, ground beams and the like ; not exceeding 300 wide		m		
	MODEL BILL OF DESCRIPTION ASD STANDARD BILLS MODBQ.5/2	To Collection	\$		

Item	Description	Qty	Unit	Rate	HK\$
<u>UNDERPINNING (Cont'd)</u>					
	Loadbearing bricks ; LD units ; cement mortar (1:3)				
A	walls ; one brick walls ; * thick		m2		
B	walls ; one and a half brick walls ; * thick		m2		
C	walls ; reduced brickwork ; * thick		m2		
	Cutting, tothing and bonding ends of				
D	wall to existing one brick thick wall each alternate course ; extra material ; * thick loadbearing brickwork		m		
	Expanded metal reinforcement ; galvanised ; weighing not less than 1.6 kg/m2 ; in walls				
E	* wide		m		
	Steel bonding rods ; bituminous coated ; cutting and pinning one end to concrete ; building one end into joint of brickwork				
F	6 diameter x 350 long		nr		
	Mastic asphalt to BS 6925 type T1097 ; damp-proofing and tanking				
G	* thick three coat coverings ; on concrete ; vertical		m2		
H	* thick three coat coverings ; on concrete ; horizontal		m2		
J	* thick three coat coverings ; on concrete ; to soffits		m2		
K	cutting back ; jointing new to old asphalt		m		
L	internal angle fillets ; in two coats		m		
MODEL BILL OF DESCRIPTION					
ASD STANDARD BILLS MODBQ.5/3					
To Collection \$					

UNDERPINNING

Item Description Qty Unit Rate HK\$

UNDERPINNING (Cont'd)

Cutting away projections of foundations

A concrete foundations ; maximum
width of * and * deep

m

C O L L E C T I O N

Item

Description

HK\$

Page No. MODBQ.5/1

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Bill Nr. MODBQ.5 - UNDERPINNING

To Summary

\$

Item	Description	Qty	Unit	CONCRETE WORKS	
				Rate	HK\$
	<u>IN-SITU CONCRETE (Cont'd)</u>				
	Benching under fitments				
A	* thick		m3		
	<u>Reinforced concrete ; grade */*</u>				
	Foundations				
B	generally		m3		
	Isolated stanchion or column bases				
C	generally		m3		
	Pile caps				
D	generally		m3		
	Ground beams				
E	generally		m3		
	Transfer beams				
F	generally		m3		
	Beds				
G	200 thick		m3		
H	150 thick		m3		
J	average 175 thick		m3		
	Machine bases				
K	150 thick		m3		
	Suspended slabs ; horizontal				
L	200 thick		m3		
M	150 thick		m3		
N	average * thick		m3		
	Suspended slabs ; sloping not exceeding 15 degrees from horizontal				
P	* thick		m3		
	MODEL BILL OF DESCRIPTION				
	ASD STANDARD BILLS				
	MODBQ.6/2				
		To Collection	\$		

Item	Description	Qty	Unit	CONCRETE WORKS	
				Rate	HK\$
<u>IN-SITU CONCRETE (Cont'd)</u>					
A	Suspended slabs ; sloping exceeding 15 degrees from horizontal * thick		m3		
B	Filling and topping in suspended coffered slabs ; horizontal generally		m3		
C	Filling and topping in suspended troughed slabs ; horizontal generally		m3		
D	Transfer plates * thick		m3		
E	Walls 300 thick		m3		
F	250 thick		m3		
G	150 thick		m3		
H	average * thick		m3		
J	Retaining walls * thick		m3		
K	average * thick		m3		
L	Columns generally		m3		
M	Beams generally		m3		
N	Stairs generally		m3		
P	Casings to steel beams generally		m3		
MODEL BILL OF DESCRIPTION				To Collection	\$
ASD STANDARD BILLS					
MODBQ.6/3					

Item	Description	Qty	Unit	CONCRETE WORKS	
				Rate	HK\$
	<u>IN-SITU CONCRETE (Cont'd)</u>				
A	Casings to steel stanchions generally		m3		
B	Curbs generally		m3		
C	Copings generally		m3		
D	Projecting cills generally		m3		
E	Strings generally		m3		
F	Cornices generally		m3		
G	Thickenings to beds ; under walls, partitions and the like * (average) wide x * thick		m		
H	Surface water channels in level ground ; half round * wide x * (average) deep waterway		m		
	<u>Reinforced concrete ; grade */* ; water repellant containing an approved water-reducing admixture</u>				
J	Beds * thick		m3		
K	Suspended slabs ; horizontal * thick		m3		
L	Walls * thick		m3		
	MODEL BILL OF DESCRIPTION	To Collection	\$		
	ASD STANDARD BILLS MODBQ.6/4				

		<u>CONCRETE WORKS</u>			
Item	Description	Qty	Unit	Rate	HK\$
	<u>IN-SITU CONCRETE (Cont'd)</u>				
	Columns				
A	generally		m3		
	Beams				
B	generally		m3		
	<u>Reinforced lightweight concrete ; cement and 5 vermiculite aggregate (1:6 by volume)</u>				
	Benching under fitments				
C	* thick		m3		
	Filling around Asiatic W.C. pan ; volume of pan not deducted				
D	generally		m3		
	<u>REINFORCEMENT</u>				
	<u>Plain steel reinforcing bars ; ALL PROVISIONAL</u>				
	General reinforcement				
E	round bars ; 32 diameter		kg		
F	round bars ; 25 diameter		kg		
G	round bars ; 20 diameter		kg		
H	round bars ; * diameter		kg		
J	round bars ; * diameter ; 12.00 - 15.00m long		kg		
	Links, stirrups and binders				
K	round bars ; * diameter		kg		
	<u>Ribbed steel reinforcing bars ; ALL PROVISIONAL</u>				
	General reinforcement				
L	round bars ; 32 diameter		kg		
M	round bars ; 25 diameter		kg		
	MODEL BILL OF DESCRIPTION				
	ASD STANDARD BILLS MODBQ.6/5				
		To Collection	\$		

		CONCRETE WORKS			
Item	Description	Qty	Unit	Rate	HK\$
<u>REINFORCEMENT (Cont'd)</u>					
A	round bars ; 20 diameter		kg		
B	round bars ; * diameter		kg		
C	round bars ; * diameter ; 12.00 - 15.00m long		kg		
<u>Plain steel reinforcing bars ; epoxy coated ; ALL PROVISIONAL</u>					
General reinforcement					
D	round bars ; 32 diameter		kg		
E	round bars ; 25 diameter		kg		
F	round bars ; 20 diameter		kg		
G	round bars ; * diameter		kg		
H	round bars ; * diameter ; 12.00 - 15.00m long		kg		
Links, stirrups and binders					
J	round bars ; * diameter		kg		
<u>Ribbed steel reinforcing bars ; epoxy coated ; ALL PROVISIONAL</u>					
General reinforcement					
K	round bars ; 32 diameter		kg		
L	round bars ; 25 diameter		kg		
M	round bars ; 20 diameter		kg		
N	round bars ; * diameter		kg		
P	round bars ; * diameter ; 12.00 - 15.00m long		kg		
<u>Fabric reinforcement ; BS 4483</u>					
Square mesh ; ref. A193 ; weighing 3.02 kg/m2 ; 200 minimum side and end laps ; measured net - allow for laps					
Q	in concrete		m2		
MODEL BILL OF DESCRIPTION				To Collection \$	
ASD STANDARD BILLS MODBQ.6/6					

		<u>CONCRETE WORKS</u>			
Item	Description	Qty	Unit	Rate	HK\$
	<u>REINFORCEMENT (Cont'd)</u>				
	<u>Couplers</u>				
	* couplers				
A	for 32 diameter * bars		nr		
B	for 40 diameter * bars		nr		
	<u>Threading ends of bars</u>				
	For couplers (measured separately)				
C	40 diameter ribbed steel reinforcing bars		kg		
	<u>FORMWORK</u>				
	<u>Sawn formwork</u>				
	Vertical surfaces				
D	foundations, pile caps, ground beams and the like		m2		
E	piers, columns and stanchions		m2		
F	piers, columns and stanchions ; curved ; * radius		m2		
G	walls		m2		
H	walls ; curved		m2		
J	edges and breaks in walls exceeding 300 wide		m2		
K	edges and breaks in suspended slabs exceeding 300 wide		m2		
L	edges and breaks in slabs exceeding 300 wide		m2		
M	curbs or upstands exceeding 300 wide		m2		
	Flat surfaces				
N	soffits of suspended slabs		m2		
P	soffits of suspended slabs ; 200 - 300 thick		m2		
	MODEL BILL OF DESCRIPTION				
	ASD STANDARD BILLS				
	MODBQ.6/7				
		To Collection	\$		

Item	Description	Qty	Unit	CONCRETE WORKS	
				Rate	HK\$
<u>FORMWORK (Cont'd)</u>					
A	soffits of suspended slabs ; strutting 3.50 - 5.00m high		m2		
B	soffits of suspended slabs ; 300 - 400 thick ; strutting 3.50 - 5.00m high		m2		
C	soffits of suspended coffered slabs * overall thick ; measured flat overall ; * x * x * mould size ; * profile at * centres both ways		m2		
D	soffits of suspended troughed slabs * overall thick ; measured flat overall ; * x * x * mould size ; * profile at * centres both ways		m2		
E	soffits of transfer plates ; strutting 3.50 - 5.00m high		m2		
F	sides and soffits of beams		m2		
G	sides and soffits of beams ; exceeding 1.00m deep		m2		
H	sides and soffits of beams ; strutting 3.50 - 5.00m high		m2		
J	sides and soffits of beams ; exceeding 1.00m deep ; strutting 3.50 - 5.00m high		m2		
K	sides and soffits of transfer beams ; strutting 3.50 - 5.00m high		m2		
L	sides and soffits of transfer beams ; exceeding 1.00m deep ; strutting 3.50 - 5.00m high		m2		
M	soffits of openings in walls exceeding 300 wide		m2		
	Sloping surfaces				
N	soffits of suspended slabs		m2		
P	soffits of suspended slabs ; strutting 3.50 - 5.00m high		m2		
MODEL BILL OF DESCRIPTION				To Collection	\$
ASD STANDARD BILLS MODBQ.6/8					

Item	Description	Qty	Unit	CONCRETE WORKS	
				Rate	HK\$
<u>FORMWORK (Cont'd)</u>					
A	sides and soffits of beams		m2		
B	sides and soffits of beams ; strutting 3.50 - 5.00m high		m2		
C	soffits of staircases		m2		
D	soffits of staircases ; strutting 3.50 - 5.00m high		m2		
E	upper surfaces exceeding 15 degrees from horizontal		m2		
Vertical surfaces ; not exceeding 300 wide					
F	edges and breaks in walls		m		
G	edges and breaks in suspended slabs		m		
H	edges and breaks in slabs		m		
J	curbs or upstands		m		
K	undercut risers		m		
L	open strings		m		
Flat surfaces ; edges and soffits of copings, cills, strings, cornices, eaves, overhangs and the like					
M	exceeding 500 girth		m2		
N	not exceeding 300 girth		m		
P	300 - 500 girth		m		
Extra over formwork to walls for formwork to projecting surfaces of copings, cills, strings, cornices, eaves, overhangs and the like					
Q	exceeding 500 girth		m2		
R	not exceeding 300 girth		m		
S	300 - 500 girth		m		
MODEL BILL OF DESCRIPTION				To Collection	\$
ASD STANDARD BILLS					
MODBQ.6/9					

		CONCRETE WORKS			
Item	Description	Qty	Unit	Rate	HK\$
	<u>FORMWORK (Cont'd)</u>				
	Filletts on formwork ; planted on to form grooves				
A	* x * ; straight		m		
	Surfaces of cantilever ends or brackets and the like				
B	* x * x *		nr		
	<u>Formwork to produce fair faced finish ; lining with plywood</u>				
	Vertical surfaces				
C	piers, columns and stanchions		m2		
D	walls		m2		
	Flat surfaces				
E	soffits of suspended slabs		m2		
F	soffits of suspended slabs ; strutting 3.50 - 5.00m high		m2		
G	sides and soffits of beams		m2		
H	sides and soffits of beams ; strutting 3.50 - 5.00m high		m2		
	Sloping surfaces				
J	soffits of suspended slabs		m2		
K	soffits of staircases		m2		
	<u>Sawn formwork left in</u>				
	Vertical surfaces				
L	piers, columns and stanchions		m2		
M	walls		m2		
	Flat surfaces				
N	soffits of suspended slabs		m2		
P	sides and soffits of beams		m2		
	MODEL BILL OF DESCRIPTION				
	ASD STANDARD BILLS				
	MODBQ.6/10				
		To Collection	\$		

		CONCRETE WORKS			
Item	Description	Qty	Unit	Rate	HK\$
	<u>FORMWORK (Cont'd)</u>				
	<u>Sawn boxings to form the following</u>				
	Holes for pipes, cables and the like ; exceeding 150 diameter				
A	generally	-	item	-	
	Openings				
B	0.50 - 0.60m2 ; through * thick concrete		nr		
C	0.60 - 0.70m2 ; through * thick concrete		nr		
	<u>PRECAST CONCRETE</u>				
	<u>Precast concrete ; grade 20/20</u>				
	Copings ; bedding in cement mortar (1:3)				
D	* x * ; weathered ; reinforced ; fair faced finish * girth and pointing with a flush joint all round (In Nr. 0)		m		
E	angle stones ; to copings ; * x *		nr		
	Cills ; bedding in cement mortar (1:3)				
F	* x * ; sunk weathered ; reinforced ; fair faced finish * girth and pointing with a flush joint all round (In Nr. 0)		m		
G	stoolings ; to cills ; * x *		nr		
	Lintols ; bedding in cement mortar (1:3)				
H	100 x 150 ; reinforced (In Nr. 0)		m		
J	* x * ; reinforced ; units exceeding 2.00m long (In Nr. 0)		m		
	Louvres ; bedding in cement mortar (1:3)				
K	* x * ; twice splayed ; reinforced ; fair faced finish * girth and pointing with a flush joint all round ; units exceeding 2.00m long (In Nr. 0)		m		
	MODEL BILL OF DESCRIPTION		To Collection	\$	
	ASD STANDARD BILLS				
	MODBQ.6/11				

Item	Description	Qty	Unit	CONCRETE WORKS	
				Rate	HK\$
	<u>PRECAST CONCRETE (Cont'd)</u>				
	Duct covers				
A	* x * x * ; reinforced ; two 6 diameter plain steel lifting lugs ; fair faced finish to top and edges		nr		
	<u>IN-SITU PRESTRESSED CONCRETE ;</u> <u>POST-TENSIONED WORK TO BEAMS AND SLABS ;</u> <u>AS DRAWING NR. *</u>				
	<u>Reinforced concrete ; grade */*</u>				
	Suspended slabs ; horizontal				
B	* thick		m3		
	Beams				
C	generally		m3		
	<u>Plain steel reinforcing bars ; ALL</u> <u>PROVISIONAL</u>				
	Links, stirrups and binders				
D	round bars ; * diameter		kg		
	<u>Ribbed steel reinforcing bars ; ALL</u> <u>PROVISIONAL</u>				
	General reinforcement				
E	round bars ; * diameter		kg		
	<u>Plain steel reinforcing bars ; epoxy</u> <u>coated ; ALL PROVISIONAL</u>				
	Links, stirrups and binders				
F	round bars ; * diameter		kg		
	<u>Ribbed steel reinforcing bars ; epoxy</u> <u>coated ; ALL PROVISIONAL</u>				
	General reinforcement				
G	round bars ; * diameter		kg		
	MODEL BILL OF DESCRIPTION		To Collection	\$	
	ASD STANDARD BILLS				
	MOBQ.6/12				

		CONCRETE WORKS			
Item	Description	Qty	Unit	Rate	HK\$
	<u>IN-SITU PRESTRESSED CONCRETE ;</u> <u>POST-TENSIONED WORK TO BEAMS AND SLABS ;</u> <u>AS DRAWING NR. * (Cont'd)</u>				
	<u>Sawn formwork</u>				
	Flat surfaces				
A	soffits of suspended slabs		m2		
B	sides and soffits of beams		m2		
	<u>Ducts ; permanent sheathing of suitable</u> <u>diameter to enclose tendons ; in</u> <u>reinforced concrete beams and slabs ;</u> <u>pressure grouting after tensioning</u>				
	Curved ducts				
C	for tendon formed of twelve strands, each 15.2 diameter ; in lengths * - *m (In Nr. 0)		m		
	<u>SUPPLYING ONLY tendons comprising the</u> <u>following prestressing strands ; measured</u> <u>net lengths between outer faces of</u> <u>anchorage - allow for extra lengths for</u> <u>tensioning</u>				
	Seven wire strands				
D	of 15.2 diameter ; UTS * KN		kg		
	<u>FIXING ONLY the following tendons in</u> <u>straight or curved sheathing (measured</u> <u>separately)</u>				
	Tendons				
E	formed of twelve strands, each 15.2 diameter ; * long between outer faces of anchorages		nr		
	<u>Tensioning the following tendons</u>				
	Tendons				
F	formed of twelve strands, each 15.2 diameter ; jacking force of * KN ; applied from one end		nr		
MODEL BILL OF DESCRIPTION		To Collection \$			
ASD STANDARD BILLS MODBQ.6/13					

CONCRETE WORKS

Item	Description	Qty	Unit	Rate	HK\$
	<u>IN-SITU PRESTRESSED CONCRETE ;</u> <u>POST-TENSIONED WORK TO BEAMS AND SLABS ;</u> <u>AS DRAWING NR. * (Cont'd)</u>				
	<u>Anchorage ; complete assemblies</u> <u>comprising anchor plates, guides, cones,</u> <u>wedges and the like ; fixing in position ;</u> <u>formwork to form recesses ; filling</u> <u>recesses with epoxy mortar after</u> <u>completion of stressing</u>				
	Live anchorages ; fixed to beams and slabs				
A	for tendon formed of twelve strands, each 15.2 diameter		nr		
	Dead anchorages ; fixed to beams and slabs				
B	for tendon formed of twelve strands, each 15.2 diameter		nr		
	<u>Testing</u>				
	Allow for submitting to the Architect a sample of each type of anchorage to be used together with two test pieces from each coil of strand				
C	paying all fees and charges in connection with testing each of these items by an authority specified by the Architect	-	item	-	
	<u>MOVEMENT JOINTS</u>				
	<u>Joints in concrete</u>				
	Forming movement joints ; formwork ; temporary fillets ; * surface coatings and formation of rebates or other labour				
D	between two wall faces ; 200 wide ; filling with inorganic joint fillers ; cutting joint filler ; * dowels at * centres		m2		
E	in beds ; * wide x * deep ; filling with inorganic joint fillers ; * wide ; cutting joint filler ; * dowels at * centres		m		
	MODEL BILL OF DESCRIPTION		To Collection	\$	
	ASD STANDARD BILLS MODBQ.6/14				

Item	Description	Qty	Unit	CONCRETE WORKS	
				Rate	HK\$
<u>MOVEMENT JOINTS (Cont'd)</u>					
A	Pointing to movement joints with two part polysulphide-based sealant ; both sides * x * ; including backing rod		m		
B	Aluminium cover strips to structural movement joints ; * * x * flats ; straight		m		
C	Waterstops ; PVC ; centre bulb section ; * * wide ; casting into concrete ; temporary fixing to formwork		m		
D	* wide ; casting into concrete ; temporary fixing to formwork ; PROVISIONAL		m		
E	prefabricated angles ; on * wide waterstop ; welded joints		nr		
F	prefabricated flat mitres ; on * wide waterstop ; welded joints		nr		
G	prefabricated tees ; on * wide waterstop ; welded joints		nr		
H	prefabricated flat tees ; on * wide waterstop ; welded joints		nr		
J	prefabricated flat intersections ; on * wide waterstop ; welded joints		nr		
K	Waterstops ; PVC ; externally placed section ; * * wide ; casting into concrete ; temporary fixing to formwork		m		
L	* wide ; casting into concrete ; temporary fixing to formwork ; PROVISIONAL		m		
M	prefabricated angles ; on * wide waterstop ; welded joints		nr		
N	prefabricated flat mitres ; on * wide waterstop ; welded joints		nr		
MODEL BILL OF DESCRIPTION				To Collection	\$
ASD STANDARD BILLS					
MODBQ.6/15					

		<u>CONCRETE WORKS</u>			
Item	Description	Qty	Unit	Rate	HK\$
<u>MOVEMENT JOINTS (Cont'd)</u>					
A	prefabricated tees ; on * wide waterstop ; welded joints		nr		
B	prefabricated flat tees ; on * wide waterstop ; welded joints		nr		
C	prefabricated flat intersections ; on * wide waterstop ; welded joints		nr		
<u>SUNDRIES</u>					
<u>Sundry items</u>					
Accessories cast into in-situ concrete ; steel ; bonding ties					
D	* diameter x * long rods		nr		
Accessories cast into in-situ concrete ; plastic ; spout or weep pipes					
E	75 diameter x 100 long		nr		
Accessories cast into in-situ concrete ; stainless steel ; step irons					
F	* diameter x * girth rods ; four times bent		nr		
Bridge bearing pads for concrete bridges ; top and bottom plates, reinforcement, bolts, holding down bolts, bedding, wedging and grouting ; as drawing nr. *					
G	* x * x * thick ; type *		nr		
Surfaces of existing concrete					
H	hacking to form key		m2		
Surfaces of concrete					
J	finishing with a wood float		m2		
K	finishing with a steel trowel or power float		m2		
L	finishing with a stiff brush		m2		
M	finishing with a board edge		m2		
MODEL BILL OF DESCRIPTION				To Collection	\$
ASD STANDARD BILLS					
MODBQ.6/16					

		<u>CONCRETE WORKS</u>			
Item	Description	Qty	Unit	Rate	HK\$
	<u>SUNDRIES (Cont'd)</u>				
A	Treating surfaces with an approved liquid hardener ; in accordance with the manufacturer's instructions to concrete floors		m2		
B	Treating surfaces with carborundum grains ; sprinkling on and lightly trowelling in before setting at the rate of 2 kg/m2 to concrete floors		m2		
C	Applying one coat of bituminous paint on concrete surfaces		m2		
D	Forming channels in concrete beds ; half round ; formwork * wide x * (average) deep ; curved		m		
	<u>Testing</u>				
E	Core tests to plain or reinforced concrete ; thicknesses and locations as directed by the Architect or his representative ; making good core hole with similar concrete and all works disturbed * diameter x * deep ; PROVISIONAL		nr		
F	Watertightness test for water tanks tank size ; approximately * x * x * deep internally	-	item	-	
		To Collection \$			

C O L L E C T I O N

Item

Description

HK\$

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Bill Nr. MODBQ.6 - CONCRETE WORKS

To Summary

\$

Bill Nr. MODBQ.7
BRICKWORK AND BLOCKWORK

Item	Description	Qty	Unit	Rate	HK\$
	<u>BRICKWORK</u>				
	<u>Common bricks ; cement mortar (1:3)</u>				
	Vertical walls				
A	half brick walls ; * thick		m2		
B	one brick walls ; * thick		m2		
C	one and a half brick walls ; * thick		m2		
D	reduced brickwork ; * thick		m2		
E	* thick		m2		
	Vertical walls ; circular on plan ; cutting and templates				
F	half brick walls ; * thick		m2		
	Hollow walls				
G	* thick inner skin ; * thick outer skin ; 50 thick cavity ; wall ties at 900 centres horizontally and 320 centres vertically staggered		m2		
	Filling in openings				
H	half brick walls ; * thick		m2		
	Isolated piers and chimney stacks				
J	one brick walls ; * thick		m2		
K	one and a half brick walls ; * thick		m2		
L	reduced brickwork ; * thick		m2		
	Dwarf walls				
M	half brick walls ; * thick		m2		
	MODEL BILL OF DESCRIPTION				
	ASD STANDARD BILLS MODBQ.7/1				
		To Collection	\$		

		BRICKWORK AND BLOCKWORK			
Item	Description	Qty	Unit	Rate	HK\$
<u>BRICKWORK (Cont'd)</u>					
<u>Common bricks ; cement/lime mortar (1:2:9)</u>					
Vertical walls					
A	half brick walls ; * thick		m2		
B	one brick walls ; * thick		m2		
C	reduced brickwork ; * thick		m2		
Filling in openings					
D	one brick walls ; * thick		m2		
Isolated piers and chimney stacks					
E	one brick walls ; * thick		m2		
F	one and a half brick walls ; * thick		m2		
G	reduced brickwork ; * thick		m2		
Dwarf walls					
H	one brick walls ; * thick		m2		
<u>Concrete bricks ; cement mortar (1:3)</u>					
Vertical walls					
J	half brick walls ; * thick		m2		
K	one brick walls ; * thick		m2		
Filling in openings					
L	one brick walls ; * thick		m2		
Isolated piers and chimney stacks					
M	one brick walls ; * thick		m2		
N	one and a half brick walls ; * thick		m2		
P	reduced brickwork ; * thick		m2		
Dwarf walls					
Q	one brick walls ; * thick		m2		
MODEL BILL OF DESCRIPTION					
ASD STANDARD BILLS MODBQ.7/2					
To Collection \$					

		<u>BRICKWORK AND BLOCKWORK</u>			
Item	Description	Qty	Unit	Rate	HK\$
<u>BRICKWORK (Cont'd)</u>					
A	Extra over brickwork for bedding and pointing in sealant compound		m2		
<u>BLOCKWORK</u>					
<u>Hollow concrete blocks * long x * high ; cement mortar (1:3)</u>					
B	Walls or partitions 100 thick		m2		
C	150 thick		m2		
D	Walls or partitions ; finished smooth and pointing with a flush joint one side * thick		m2		
E	Walls or partitions ; finished smooth and pointing with a flush joint both sides * thick		m2		
F	Cutting, toothing and bonding end of wall to brick wall each alternate course ; extra material * thick		m		
<u>Solid concrete blocks * long x * high ; cement mortar (1:3)</u>					
G	Walls or partitions 100 thick		m2		
H	150 thick		m2		
J	Walls or partitions ; finished smooth and pointing with a flush joint one side * thick		m2		
K	Walls or partitions ; finished smooth and pointing with a flush joint both sides * thick		m2		
To Collection				\$	

		BRICKWORK AND BLOCKWORK			
Item	Description	Qty	Unit	Rate	HK\$
	<u>BLOCKWORK (Cont'd)</u>				
	Cutting, toothing and bonding end of wall to brick wall each alternate course ; extra material				
A	* thick		m		
	Extra over blockwork for				
B	bedding and pointing in sealant compound		m2		
	<u>BRICK FACEWORK</u>				
	<u>Extra over common bricks in any mortar for</u>				
	Fair face ; pointing				
C	walls and the like		m2		
	* facing bricks ; pointing				
D	walls and the like		m2		
	<u>Extra over concrete bricks in any mortar for</u>				
	Fair face ; pointing				
E	walls and the like		m2		
	<u>GLASS BLOCKS</u>				
	<u>Hollow glass blocks ; transparent ; bedding in cement/lime mortar (1:2:9) ; pointing both sides</u>				
	Type * ; * x * x *				
F	walls or panels		m2		
	Forming movement joints				
G	* wide inorganic joint filler ; sealing with * both sides		m		
	Expanded metal reinforcement ; galvanised ; weighing not less than 1.6 kg/m2 ; in hollow glass block walls or panels				
H	* wide		m		
	MODEL BILL OF DESCRIPTION				
	ASD STANDARD BILLS				
	MODBQ.7/4				
		To Collection	\$		

		BRICKWORK AND BLOCKWORK			
Item	Description	Qty	Unit	Rate	HK\$
<u>DAMP PROOF COURSES</u>					
<u>Two layers of fibre based bitumen to BS 6398 Class B ; levelling mortar bed ; measured net - allow for laps</u>					
Horizontal					
A	over 225 wide		m2		
B	100 wide		m		
C	215 wide		m		
<u>SUNDRIES</u>					
<u>Sundry items</u>					
Closing cavities of hollow walls					
D	at ends with 100 blockwork set on edge		m		
Expanded metal reinforcement ; galvanised ; weighing not less than 1.6 kg/m2 ; in walls					
E	* wide		m		
Steel bonding rods ; bituminous coated ; cutting and pinning one end to concrete ; building one end into joint of brickwork					
F	6 diameter x 350 long		nr		
Steel bonding ties ; galvanised ; fanged at both ends ; cutting and pinning one end to concrete ; building one end into joint of brickwork					
G	3 x 20 x 150 long		nr		
<u>BRICK PAVINGS AND STEPS OR BLOCK</u>					
<u>Common bricks ; bedding, jointing and pointing in cement mortar (1:3)</u>					
Pavings ; bricks laid on face ; herringbone pattern					
H	* thick		m2		
MODEL BILL OF DESCRIPTION		To Collection \$			
ASD STANDARD BILLS MODBQ.7/5					

C O L L E C T I O N

Item

Description

HK\$

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Bill Nr. MODBQ.7 - BRICKWORK AND BLOCKWORK

To Summary

\$

Bill Nr. MODBQ.8
DRAINAGE

Item	Description	Qty	Unit	Rate	HK\$
	<u>SOIL AND SURFACE WATER DRAINAGE</u>				
	<u>Excavating trenches for drain pipes ;</u> <u>commencing at natural ground level</u>				
	Not exceeding 200 internal diameter				
A	0.75m average depth		m		
B	1.00m average depth		m		
	* internal diameter				
C	0.75m average depth		m		
D	1.00m average depth		m		
	<u>Extra over excavation and disposal at any</u> <u>depth for</u>				
	Breaking up and removing materials met with in excavation				
E	surface concrete * thick ; with hardcore under		m2		
F	slab foundations		m3		
	<u>Granular bedding ; recycled material</u>				
	Beds				
G	* x * under * diameter pipes		m		
	Beds and backfilling				
H	* x * to * diameter pipes		m		
	<u>Granular bedding ; non-recycled material</u>				
	Beds				
J	* x * under * diameter pipes		m		
	MODEL BILL OF DESCRIPTION				
	ASD STANDARD BILLS MODBQ.8/1				
		To Collection	\$		

Item	Description	Qty	Unit	Rate	HK\$
	<u>SOIL AND SURFACE WATER DRAINAGE (Cont'd)</u>				
A	Beds and backfilling * x * to * diameter pipes <u>Concrete ; grade */*</u>		m		
B	Beds ; formwork * x * under * diameter pipes		m		
C	Beds and haunches ; formwork * x * under * diameter pipes		m		
D	Beds and surrounds ; formwork * x * under * diameter pipes ; surrounds minimum * thick		m		
E	Surrounds to vertical pipes ; formwork * x * to * diameter pipes		m		
F	<u>Reinforcement ; plain steel reinforcing bars</u> General reinforcement 10 diameter		kg		
G	<u>Concrete pipes and fittings ; class * ; reinforced ; spigot and socket joints</u> Pipes ; vertical * internal diameter		m		
H	Extra over pipes for * bends		nr		
J	* x * x * single branch junctions		nr		
K	* flexible joints		nr		
L	<u>Vitrified clay pipes and fittings ; flexible sleeve joints</u> Pipes ; on bed ; in trench * internal diameter		m		
	MODEL BILL OF DESCRIPTION ASD STANDARD BILLS MODBQ.8/2	To Collection	\$		

Item	Description	Qty	Unit	Rate	HK\$
<u>SOIL AND SURFACE WATER DRAINAGE (Cont'd)</u>					
	Extra over pipes for				
A	* bends		nr		
B	* x * x * single branch junctions		nr		
<u>Cast iron pipes and fittings ; spigot and socket joints</u>					
	Pipes ; on bed ; in trench				
C	* internal diameter		m		
	Extra over pipes for				
D	* bends		nr		
E	* x * x * single branch junctions		nr		
F	* flexible joints		nr		
<u>Cast iron pipes and fittings ; flanged and bolted joints</u>					
	Pipes ; vertical				
G	* internal diameter		m		
	Pipes ; suspended				
H	* internal diameter		m		
	Extra over pipes for				
J	* bends		nr		
K	* bends with bolted access door		nr		
L	* x * x * single branch junctions		nr		
M	* blank caps		nr		
N	* socket plugs		nr		
P	* flexible joints		nr		
MODEL BILL OF DESCRIPTION					To Collection \$
ASD STANDARD BILLS MODBQ.8/3					

DRAINAGE

Item	Description	Qty	Unit	Rate	HK\$
<u>SOIL AND SURFACE WATER DRAINAGE (Cont'd)</u>					
<u>Perforated plastic pipes and fittings ;</u> <u>open joints</u>					
	Pipes ; on bed ; in trench				
A	* internal diameter		m		
	Extra over pipes for				
B	* bends		nr		
C	* x * x * single branch junctions		nr		
<u>Cast iron traps, gullies, gratings and the</u> <u>like</u>					
	Gullies ; bedding and surrounding with concrete grade */* 150 thick ; formwork ; excavation and disposal ; jointing to pipes				
D	* trapped outlet ; * x * rebated tops ; * x * cast iron hinged gratings and frames		nr		
E	* trapped outlet ; * diameter rebated tops ; * diameter cast iron hinged gratings and frames		nr		
	Grease interceptors ; bedding and surrounding with concrete grade */* 150 thick ; formwork ; excavation and disposal ; jointing to pipes				
F	* outlet ; * x * rebated tops ; * x * cast iron hinged gratings and frames ; removable galvanised steel strainers with handles		nr		
	Raising surrounds ; 100 concrete grade */* sides to gullies in forming hoppers ; 150 reinforced concrete grade */* cover slab ; four 12 diameter plain steel reinforcing bars ; openings for gratings (gratings measured separately) ; dishing to outlets and inlets ; excavation ; disposal and formwork				
G	hoppers * x * x * deep internally		nr		
MODEL BILL OF DESCRIPTION					To Collection \$
ASD STANDARD BILLS					MODBQ.8/4

Item	Description	Qty	Unit	Rate	HK\$
<u>SOIL AND SURFACE WATER DRAINAGE (Cont'd)</u>					
A	Fresh air inlets ; brass front ; mica flap ; jointing to pipes 100 x 150		nr		
B	Road gulley gratings and frames ; bedding and haunching frames in cement mortar * x * ; weighing approximately * kg		nr		
<u>Flexible waterproof membrane</u>					
C	Plastic sheeting laying under drain bedding		m2		
<u>Surface channels, road margins</u>					
D	Concrete ; grade */* ; road margins ; rectangular ; * wide x * thick * wide x * extreme deep splayed waterway		m		
E	Concrete ; grade */* ; channels ; half round ; * thick sides ; * thick bottoms ; excavation, disposal and formwork ; movement joints at * maximum centres ; rendering surfaces with 12 thick cement and sand (1:3) trowelled smooth * wide x * (average) deep waterway		m		
F	* wide x * (average) deep waterway ; 350 girth x 80 thick apron one side		m		
G	* wide x * (average) deep waterway ; stepping to faces of embankments ; * x * x * anchor blocks under at * maximum centres		m		
H	extra over waterways for forming sump below channel invert ; * x * x * deep internally ; * sides ; * bottom ; cast iron grating		nr		
MODEL BILL OF DESCRIPTION					To Collection \$
ASD STANDARD BILLS MODBQ.8/5					

Item	Description	Qty	Unit	Rate	HK\$
<u>SOIL AND SURFACE WATER DRAINAGE (Cont'd)</u>					
	Precast concrete ; grade */* ; channel covers ; in 600 lengths ; 6 diameter plain steel reinforcing bars, * nr. longitudinal and * nr. transverse ; notching 25 x 150 at each end ; fair faced finish to top and edges				
A	* thick x * wide		m		
	Cast iron channel gratings ; in 600 lengths ; * x * slots at * centres				
B	* thick x * wide		m		
<u>Piers, thrust blocks and the like</u>					
	Concrete ; grade */* ; formwork ; blinding under beds ; excavation and disposal				
C	piers ; * x * x * high ; top surfaces sloping * degrees from horizontal		nr		
<u>Applying two coats of black bitumastic paint ; on coated cast iron</u>					
Pipes					
D	not exceeding 50 diameter		m		
E	50 - 100 diameter		m		
F	* diameter		m		
<u>MANHOLES, INSPECTION CHAMBERS AND THE LIKE</u>					
<u>Manholes ; * nr.</u>					
	Excavating pits ; commencing at reduced level				
G	not exceeding 1.50m deep		m3		
H	1.50 - 3.00m deep		m3		
J	3.00 - 4.50m deep		m3		
	Excavated material				
K	backfilling ; depositing ; compacting		m3		
MODEL BILL OF DESCRIPTION					
ASD STANDARD BILLS MODBQ.8/6					
				To Collection \$	

Item	Description	Qty	Unit	Rate	HK\$
<u>MANHOLES, INSPECTION CHAMBERS AND THE LIKE</u>					
<u>(Cont'd)</u>					
	Surplus excavated material				
A	removing from site		m3		
	Concrete ; grade */*				
B	beds ; horizontal ; * thick		m3		
C	walls ; * thick		m3		
D	walls ; * average thick		m3		
E	benching ; formwork ; forming half-round main channels and three-quarter branch channels ; finishing to steep falls from sides ; rendering surfaces with 15 cement and sand (1:3) trowelled smooth ; average * thick		m2		
	Reinforced concrete ; grade */*				
F	suspended slabs ; horizontal ; * thick		m3		
	Reinforcement ; plain steel reinforcing bars				
G	general reinforcement ; round bars ; * diameter		kg		
	Sawn formwork ; vertical surfaces				
H	walls		m2		
	Sawn formwork ; flat surfaces				
J	soffits of suspended slabs		m2		
	Sawn formwork ; sloping surfaces				
K	walls		m2		
	Sawn boxings to form openings				
L	* - *m2 ; through * thick concrete		nr		
MODEL BILL OF DESCRIPTION					To Collection \$
ASD STANDARD BILLS MODBQ.8/7					

Item	Description	Qty	Unit	Rate	HK\$
<u>MANHOLES, INSPECTION CHAMBERS AND THE LIKE</u>					
<u>(Cont'd)</u>					
	Hot-rolled steel to BS EN 10025 ; grade S275 ; bolted fabrication				
A	127 x 76 x 13.36 kg joists		kg		
B	connections ; * x * x * frames ; in cleats		kg		
	Collecting from Government Logistics Department and FIXING ONLY manhole covers and frames ; bedding and haunching frame in cement mortar ; sealing cover in grease				
C	* x * clear opening ; weighing approximately * kg		nr		
	Cast iron pipes and fittings ; lead run joints				
D	* internal diameter ; fixed to walls and columns		m		
E	extra over pipes for ; * shoes		nr		
F	extra over pipes for ; * x * x * swept branch junctions		nr		
G	extra over pipes for ; * blank caps		nr		
	Cast iron manhole covers and frames to BS EN 1561:2011 Grade EN-GJL-150 ; class A15 ref. * ; recessed ; bedding and haunching frame in cement mortar				
H	* x * clear opening ; weighing approximately * kg		nr		
	Step irons ; malleable iron				
J	general purpose pattern ; casting into concrete		nr		
	Fresh air inlets ; brass front				
K	100 x 150		nr		
	Copper wire balloon gratings				
L	to suit * internal diameter pipes		nr		
MODEL BILL OF DESCRIPTION					
ASD STANDARD BILLS MODBQ.8/8					
				To Collection \$	

Item	Description	Qty	Unit	Rate	HK\$
<u>MANHOLES, INSPECTION CHAMBERS AND THE LIKE</u>					
<u>(Cont'd)</u>					
	Spatterdash				
A	all internal surfaces of concrete		m2		
	Cement and sand (1:3) rendering ; internal surfaces ; trowelled finish				
B	walls ; * thick ; two coats		m2		
C	soffits ; * thick ; one coat		m2		
	Applying two coats of black bitumastic paint ; on cast iron				
D	pipes ; 50 - 100 diameter		m		
E	pipes ; * diameter		m		
	<u>Catchpits ; * nr.</u>				
	Excavating pits ; commencing at reduced level				
F	not exceeding 1.50m deep		m3		
G	1.50 - 3.00m deep		m3		
	Excavated material				
H	backfilling ; depositing ; compacting		m3		
	Surplus excavated material				
J	removing from site		m3		
	Concrete ; grade */*				
K	beds ; horizontal ; * thick		m3		
L	walls ; * thick		m3		
	Sawn formwork ; vertical surfaces				
M	walls		m2		
MODEL BILL OF DESCRIPTION					
ASD STANDARD BILLS MODBQ.8/9					
To Collection \$					

Item Description Qty Unit Rate HK\$

MANHOLES, INSPECTION CHAMBERS AND THE LIKE
(Cont'd)

Precast concrete ; grade */* ; cover slabs

A * x * x * thick ; reinforcing with
* diameter plain steel reinforcing
bars at * centres both ways ; two
* diameter x * long steel lifting
lugs ; fair faced finish to top
and edges

nr

Step irons ; malleable iron

B general purpose pattern ; casting
into concrete

nr

Inspection chambers

Concrete grade * ; * thick bases ; * thick
walls and * thick cover slabs ; coated
cast iron * duty standard triangular
access covers and frames for * x * clear
opening ; bedding and haunching frames in
cement mortar ; sealing cover in grease
and fine sand

C * x * x * deep internal size

nr

SUNDRIES

Connections

Connection to Government sewers ; flexible
joints

D * pipes ; * diameter

nr

Work to existing manholes and the like

Joints of pipes to existing walls ;
temporary diversion of or plugging up
drains, as required ; forming holes
trimmed with steel reinforcement ;
building in end of new drain pipes,
cutting concrete benching for new main or
branch channels, making good concrete
walls, cement and sand rendering and all
other works disturbed to match existing ;
removing debris

E connection of * diameter pipes
through * thick walls

nr

DRAINAGE

Item Description Qty Unit Rate HK\$

SUNDRIES (Cont'd)

Alterations to concrete channels and benchings ; temporary diversion of or plugging up drains, as required ; cutting concrete benchings for forming main or branch channels ; cement and sand rendering and all other works disturbed to match existing ; removing debris

A * x *

nr

Testing

Testing the whole of the works in accordance with the General Specification for Drainage Installation, Testing and Commissioning Procedure for Drainage Installation ; remedying any defects ; re-testing as necessary ; leaving in sound order

B soil and surface water drainage systems including granular bedding material

- item -

C O L L E C T I O N

Item

Description

HK\$

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Bill Nr. MODBQ.8 - DRAINAGE

To Summary \$

Bill Nr. MODBQ.9

WATERPROOFING

Item	Description	Qty	Unit	Rate	HK\$
	<u>ASPHALT</u>				
	<u>Mastic asphalt ; to BS 6925 type T1097 ; tanking and damp-proofing</u>				
A	One coat coverings ; on brickwork or blockwork * thick ; horizontal		m2		
B	Two coat coverings ; expanded metal lathing reinforcement ; on concrete * thick ; sloping		m2		
C	Two coat coverings ; felt isolating membrane ; expanded metal lathing reinforcement ; on concrete * thick ; vertical ; executing overhand		m2		
D	Three coat coverings ; on concrete * thick ; horizontal		m2		
E	dressings to outlet pipes		nr		
F	Three coat coverings ; felt isolating membrane ; on concrete * thick ; horizontal		m2		
G	dishing to gullies		nr		
H	Internal angle fillets in two coats		m		
J	Cutting back existing and jointing new * thick		m		
K	Three coat linings to sumps ; on concrete * thick ; * x * x * deep		nr		
	MODEL BILL OF DESCRIPTION		To Collection	\$	
	ASD STANDARD BILLS MODBQ.9/1				

WATERPROOFING

Item	Description	Qty	Unit	Rate	HK\$
	<u>ASPHALT (Cont'd)</u>				
	<u>Mastic asphalt ; to BS 6925 type R988 ; manufactured with asphaltic cement specified under Table 1 column B (100 % Bitumen) ; roof coverings</u>				
	Two coat coverings ; felt isolating membrane ; on screeds				
A	* thick ; horizontal		m2		
B	dressing to outlet pipes		nr		
C	dishing to gullies		nr		
	Two coat coverings ; expanded metal lathing reinforcement ; on screeds				
D	* thick ; sloping		m2		
	Two coat coverings ; felt isolating membrane ; expanded metal lathing reinforcement ; on screeds				
E	* thick ; sloping		m2		
	Two coat skirtings ; on concrete				
F	* thick ; not exceeding 300 girth ; angle fillet at bottom ; turn in at top ; curved		m		
	Two coat linings to gutters ; on concrete				
G	* thick ; * girth ; angle fillet at bottom ; arris at top		m		
H	outlets to gutters		nr		
	Two coat coverings to curbs ; on concrete				
J	* thick ; * girth ; angle fillet at bottom ; turn in at top		m		
	Solar protection				
K	white stone chippings in size * at a rate of * ; bedding in bitumen compound ; application rate at *		m2		
L	reflective paint ; two coats application		m2		
	MODEL BILL OF DESCRIPTION		To Collection	\$	
	ASD STANDARD BILLS MODBQ.9/2				

Item	Description	Qty	Unit	Rate	HK\$
	<u>ASPHALT (Cont'd)</u>				
	<u>Testing</u>				
	Non-destructive test of waterproofing system ; preparing ; executed by an independent specialist contractor				
A	infrared thermography scanning	-	item	-	
	<u>LIQUID MEMBRANE WATERPROOFING</u>				
	<u>Liquid applied waterproofing material Type</u>				
	<u>BI ; designing by, obtaining from and fixing by a specialist contractor ; laying in accordance with the manufacturer's instructions ; tanking and damp-proofing</u>				
	* coats ; on concrete				
B	* thick ; horizontal		m2		
C	* thick ; sloping		m2		
D	* thick ; vertical		m2		
E	dressing to outlet pipes		nr		
	* coats ; on *				
F	* thick ; horizontal		m2		
G	* thick ; sloping		m2		
H	* thick ; vertical		m2		
J	dressing to gullies		nr		
K	* coat collar * high around pipes, railing standards and the like ; expanded metal lathing reinforcement		nr		
	* coat skirtings ; on concrete				
L	* thick ; not exceeding 300 girth ; sloping		m		
	* coat linings to gutters ; on screeds				
M	* thick ; * girth ; curved ; executing in sections		m		
	MODEL BILL OF DESCRIPTION				
	ASD STANDARD BILLS				
	MODBQ.9/3				
		To Collection	\$		

Item	Description	Qty	Unit	Rate	HK\$
	<u>LIQUID MEMBRANE WATERPROOFING (Cont'd)</u>				
A	* coat coverings to curbs ; on screeds * thick ; * girth		m		
	<u>Liquid applied waterproofing material Type BII ; designing by, obtaining from and fixing by a specialist contractor ; laying in accordance with the manufacturer's instructions ; roof coverings</u>				
B	* coat ; on concrete * thick ; horizontal		m2		
C	* thick ; sloping		m2		
D	* thick ; vertical		m2		
E	* coats ; on * * thick ; horizontal		m2		
F	* thick ; sloping		m2		
G	* thick ; vertical		m2		
H	dressing to outlet pipes		nr		
J	* coat skirtings ; on concrete * thick ; not exceeding 300 girth ; raking		m		
K	* coat linings to gutters ; on screeds * thick ; * girth ; horizontal ; executing in sections		m		
L	outlets to gutters		nr		
M	* coat coverings to curbs ; on concrete * thick ; * girth		m		
	<u>Testing</u>				
N	Non-destructive test of waterproofing system ; preparing ; executed by an independent specialist contractor infrared thermography scanning	-	item	-	
	MODEL BILL OF DESCRIPTION				
	ASD STANDARD BILLS				
	MODBQ.9/4				
		To Collection		\$	

WATERPROOFING

Item	Description	Qty	Unit	Rate	HK\$
<u>LIQUID MEMBRANE WATERPROOFING (Cont'd)</u>					
<u>Bituminous emulsion roofing ; wash coat, priming coat and one coat of approved bitumen emulsion at 0.7 litre/m2 per coat ; glass fibre membrane ; two coats of approved bitumen emulsion at 0.5 litre/m2 per coat ; finishing surfaces with sand dressing</u>					
Roof coverings ; on screeds					
A	horizontal		m2		
B	vertical		m2		
C	on soffits		m2		
D	dressing to outlet pipes		nr		
Fascias ; on concrete					
E	not exceeding 300 girth ; sloping		m		
Skirtings ; on concrete					
F	not exceeding 300 girth ; raking		m		
Linings to gutters ; on concrete					
G	* girth ; horizontal ; executing in sections		m		
H	outlets to gutters		nr		
Dishings to channels ; on concrete					
J	* girth ; curved ; executing in sections		m		
K	outlets to channels		nr		
Coverings to curbs ; on concrete					
L	* girth ; curved		m		
Linings to sumps ; on concrete					
M	* x * x * deep		nr		
MODEL BILL OF DESCRIPTION					To Collection \$
ASD STANDARD BILLS					MODBQ.9/5

Item	Description	Qty	Unit	Rate	HK\$
	<u>LIQUID MEMBRANE WATERPROOFING (Cont'd)</u>				
	<u>Bituminous emulsion roofing ; wash coat, priming coat ; filling cracks with compound consisting of approved bitumen emulsion and sand (1:3 by volume) ; one coat of approved cover coating at the rate of 0.2 litre/m2 ; two coats of approved bitumen emulsion at the rate of 0.7 litres/m2 per coat ; finishing surfaces with sand dressing</u>				
	On felt ; existing				
A	horizontal		m2		
B	sloping		m2		
C	on soffits		m2		
D	vertical ; executing overhand in confined situations		m2		
	<u>Testing</u>				
	Non-destructive test of roofing system ; preparing ; executed by an independent specialist contractor				
E	infrared thermography scanning	-	item	-	
	<u>SHEET MEMBRANE WATERPROOFING</u>				
	<u>Proprietary sheet waterproofing material Type AI ; designing by, obtaining from and fixing by a specialist contractor approved by the manufacturer / agents ; laying in accordance with the manufacturer's instructions ; flexible sheet tanking and damp-proofing</u>				
	* coat sheet coverings ; on concrete				
F	horizontal		m2		
G	sloping		m2		
	* thick ; on concrete				
H	horizontal		m2		
J	sloping		m2		
	MODEL BILL OF DESCRIPTION		To Collection	\$	
	ASD STANDARD BILLS MODBQ.9/6				

WATERPROOFING

Item	Description	Qty	Unit	Rate	HK\$
<u>SHEET MEMBRANE WATERPROOFING (Cont'd)</u>					
A	cutting back and jointing new to existing		m		
	Aprons and turn-downs ; at eaves ; on screeds				
B	* average exposed face height ; vertical		m		
	Skirtings and turn-ups ; at abutments ; on screeds				
C	* average exposed face height ; vertical		m		
	Linings to gutters ; on concrete				
D	* average exposed face ; curved		m		
	Dishings to channels ; on concrete				
E	* average exposed face		m		
	Coverings to curbs ; on concrete				
F	* average exposed face ; curved		m		
	Linings to cesspools ; on concrete				
G	* x * x * deep		nr		
	Cutting, fitting and dressing ; forming collars around				
H	to outlet pipes		nr		
J	around pipes or railing standards and the like		nr		
	Solar protection				
K	reflective paint ; * coat application		m2		
MODEL BILL OF DESCRIPTION					To Collection \$
ASD STANDARD BILLS					MODBQ.9/7

Item	Description	Qty	Unit	Rate	HK\$
	<u>BITUMEN FELT BUILT-UP ROOFING</u>				
	<u>Three layers felt roofing ; first two layers of felt ; top layer of approved mineral surfaced felt, including bonding compound in accordance with manufacturer's recommendations</u>				
	Roof coverings ; on screeds				
A	horizontal		m2		
B	vertical		m2		
C	cutting back and jointing new to existing ; preparing surfaces to receive new		m		
	Aprons and turn-downs ; at eaves ; on screeds				
D	* average exposed face height ; vertical		m		
	Skirtings and turn-ups ; at abutments ; on screeds				
E	* average exposed face height ; vertical		m		
	Linings to gutters ; on concrete				
F	* average exposed face ; curved		m		
	Dishings to channels ; on concrete				
G	* average exposed face		m		
	Coverings to curbs ; on concrete				
H	* average exposed face ; curved		m		
	Linings to sumps ; on concrete				
J	* x * x * deep		nr		
	Cutting, fitting and dressing ; forming collars around				
K	to outlet pipes		nr		
	MODEL BILL OF DESCRIPTION				
	ASD STANDARD BILLS				
	MODBQ.9/8				
		To Collection	\$		

WATERPROOFING

Item Description Qty Unit Rate HK\$

BITUMEN FELT BUILT-UP ROOFING (Cont'd)

Solar protection

A granite chippings in size * at a rate of * ; bedding in bitumen compound ; application rate *

m2

Aluminium edge trim ; fixing with screws

B * x * x * ; on concrete

m

Testing

Non-destructive test of waterproofing system ; preparing ; executed by an independent specialist contractor

C infrared thermography scanning

-

item

-

C O L L E C T I O N

Item

Description

HK\$

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Bill Nr. MODBQ.9 - WATERPROOFING

To Summary

\$

Bill Nr. MODBQ.10

STONE WORKS

Item	Description	Qty	Unit	Rate	HK\$
	<u>STONE CONSTRUCTION</u>				
	<u>* granite ; random rubble work ; brought upto courses * maximum high ; cement mortar joints ; roughly squared surface finish ; flush pointing</u>				
	Walling				
A	* thick ; faced one side		m2		
B	* thick ; faced both sides		m2		
C	* thick ; faced both sides ; curved ; all cutting ; templates		m2		
	Walling built against concrete or brickwork ; projecting bonding stones ; flushing up solid at back with mortar				
D	* thick ; faced one side		m2		
	Extra over walling for				
E	attached columns ; * wide x * projection		m		
F	attached piers ; *		m		
	<u>* granite ; squared uncoursed rubble work ; courses varying from 150 to 250 high ; dry joints ; * surface finish ; flush pointing</u>				
	In beds and sides of watercourses ; * minimum thickness of stones ; on and including * thick gravel bed				
G	sloping works at * degrees from horizontal		m2		
	Cutting, toothing and bonding new walls to existing * thick * wall each alternative course ; extra material				
H	* thick		m		
	MODEL BILL OF DESCRIPTION				
	ASD STANDARD BILLS				
	MODBQ.10/1				
				To Collection \$	

STONE WORKS

Item	Description	Qty	Unit	Rate	HK\$
<u>STONE CONSTRUCTION (Cont'd)</u>					
A	Preparing existing * wall for raising * thick		m		
	<u>* granite ; squared rubble work ; cement mortar joints ; finely squared dressed surface finish ; flush pointing</u>				
B	Plinth cappings ; fixing with stainless steel dowels ; * x * ; * long ; at * centres * x * ; sunk		m		
C	Mullions ; fixing with bronze dowels ; * x * ; * girth ; at * centres * x * ; splayed		m		
D	Curbs, fenders and the like ; fixing with * ; * x * ; * long ; at * centres * x *		m		
E	Steps straight ; * x * (In Nr. 0)		m		
F	extra over straight steps for fair ends		nr		
G	Bollards * diameter x * ; * ; moulded		nr		
H	Arches ; semi circular in * course ; * course width ; templates and centering ; as drawing nr. * * x * overall ; to * thick stone wall ; bonding to walls with *		nr		
J	Moon gates ; * course width ; templates and centering ; as drawing nr. * * x * x * overall ; to * thick stone wall ; bonding to walls with *		nr		
MODEL BILL OF DESCRIPTION					To Collection \$
ASD STANDARD BILLS MODBQ.10/2					

STONE WORKS

Item	Description	Qty	Unit	Rate	HK\$
	<u>STONE CONSTRUCTION (Cont'd)</u>				
	<u>Weep holes and weep pipes</u>				
	Plastic weep pipes				
A	* diameter x * long ; through * thick walls		nr		
	<u>STONE FACINGS TO STRUCTURAL BACKGROUNDS ; INTERNALLY</u>				
	<u>Marble ; * origin ; * thick ; * colour ; polished finish ; bedding and jointing in cement and sand (1:3) bedding to the stated thickness ; pointing in coloured cement</u>				
	Floors				
B	level, to falls, to falls and crossfalls and to slopes not exceeding 15 degrees from horizontal ; on * bedding		m2		
	All surfaces of fitments and the like				
C	generally		m2		
	Treads				
D	* wide ; * edges ; on * bedding		m		
	Risers				
E	* high ; undercut ; on * bedding		m		
	Strings				
F	* girth on face ; * high ; on * bedding		m		
	Skirtings				
G	* high ; following profile of treads and risers ; on * bedding		m		
	Kerbs				
H	* wide x * high ; raking ; on * bedding		m		
	MODEL BILL OF DESCRIPTION				
	ASD STANDARD BILLS				
	MODBQ.10/3				
		To Collection	\$		

STONE WORKS

Item	Description	Qty	Unit	Rate	HK\$
	<u>STONE FACINGS TO STRUCTURAL BACKGROUNDS ;</u> <u>INTERNALLY (Cont'd)</u>				
	Linings to channels				
A	* wide x * (average) deep ; to falls ; on * bedding		m		
	Counter tops				
B	* wide ; as drawing nr. * ; on * bedding		m		
	Fascias ; to counters				
C	* x * high ; as drawing nr. * ; on * bedding		m		
	<u>Marble ; * origin ; * thick ; * colour ;</u> <u>polished finish ; fixing to counter top</u> <u>framing with * ; pointing in coloured</u> <u>cement</u>				
	Bathroom and toilet vanitory slabs				
D	* x * x * high overall ; in one piece ; * profiled edges ; * high upstands ; * wide aprons ; cutting openings for one basin and tap		nr		
	<u>Granite ; * origin ; * x * x * ; * colour</u> <u>; flamed finish ; fixing with plaster</u> <u>dabs, copper cramps and copper hooks ;</u> <u>pointing in coloured cement</u>				
	Walls and columns				
E	generally		m2		
	Ceilings including sides and soffits of beams				
F	generally		m2		
G	generally ; 3.50 - 5.00m above floor level		m2		
	Soffits of staircases				
H	generally		m2		
J	generally ; 3.50 - 5.00m above floor level		m2		
	MODEL BILL OF DESCRIPTION				
	ASD STANDARD BILLS MODBQ.10/4				
		To Collection	\$		

STONE WORKS

Item	Description	Qty	Unit	Rate	HK\$
	<u>STONE FACINGS TO STRUCTURAL BACKGROUNDS ; INTERNALLY (Cont'd)</u>				
A	Decorative bands in walls * wide ; as drawing nr. *		m		
B	Projecting bands in walls * wide x * projection ; as drawing nr. *		m		
C	Corner pieces * x *		nr		
D	Engraved English letters * x * overall ; as drawing nr. *		nr		
E	Raised numerals * high ; as drawing nr. *		nr		
	<u>Accessories</u>				
F	Movement joints ; filling with compressible joint filling material ; pointing with * x * mastic sealant * wide x * deep ; horizontal		m		
G	* wide x * deep ; vertical		m		
H	Brass dividing strips ; bedding in screed 3 x 50		m		
	<u>STONE FACINGS TO STRUCTURAL BACKGROUNDS ; EXTERNALLY</u>				
	<u>Granite ; * origin ; * thick ; * colour ; polished finish ; fixing with * x * copper wall ties * girth ; pointing in coloured cement</u>				
J	Walls and columns generally		m2		
	MODEL BILL OF DESCRIPTION ASD STANDARD BILLS MODBQ.10/5		To Collection	\$	

		<u>STONE WORKS</u>			
Item	Description	Qty	Unit	Rate	HK\$
<u>STONE FACINGS TO STRUCTURAL BACKGROUNDS ;</u>					
<u>EXTERNALLY (Cont'd)</u>					
	Ceilings including sides and soffits of beams				
A	generally		m2		
B	generally ; 3.50 - 5.00m above floor level		m2		
	Cills, copings, horizontal louvres, horizontal sunbreakers and the like				
C	generally		m2		
	Vertical fins, vertical sunbreakers and the like				
D	generally		m2		
	Recessed bands in walls				
E	* wide x * deep ; as drawing nr. *		m		
	Decorative panels in walls				
F	* x * overall ; as drawing nr. *		nr		
<u>Accessories</u>					
	Polythene vapour barrier ; lapped at joints, measured net - allow for laps				
G	* thick ; laid under screed ; vertical		m2		
	Movement joints ; filling with hot bitumen ; pointing with * x * proprietary colour epoxy sealant				
H	* wide x * deep ; horizontal		m		
J	* wide x * deep ; vertical		m		
	Grade 316 stainless steel cover strips ; *				
K	* x *		m		
MODEL BILL OF DESCRIPTION					To Collection \$
ASD STANDARD BILLS MODBQ.10/6					

C O L L E C T I O N

Item

Description

HK\$

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Bill Nr. MODBQ.10 - STONE WORKS

To Summary \$

Bill Nr. MODBQ.11

ROOF TILING

Item Description Qty Unit Rate HK\$

CHINESE ROOF TILING

Clay tiles ; 225 x 225 plain tiles ; 165
long tapered roll tiles ; single course,
single layer ; 50 laps ; bedding and
pointing in cement/lime mortar

Horizontal work

A on concrete m2

Sloping work

B on concrete m2

C on timber m2

Vertical work

D on timber m2

Curved work

E on concrete m2

Extra over tiling for

F eaves courses m

G ridges m

H hips m

J valleys m

K verges m

PROPRIETARY ROOF TILING

* tiles ; * x * tiles ; * degree pitch ; *
laps ; bedding and pointing in *

Horizontal work

L on concrete m2

ROOF TILING

Item	Description	Qty	Unit	Rate	HK\$
<u>PROPRIETARY ROOF TILING (Cont'd)</u>					
A	Sloping work on concrete		m2		
B	Abutments special tiles ; ref. *		m		
C	Eaves special tiles ; ref. *		m		
D	Verges special tiles ; ref. *		m		
E	Ridges special tiles ; ref. *		m		
F	Hips special tiles ; ref. *		m		
G	Vertical angles special tiles ; ref. *		m		
H	Valleys special tiles ; ref. *		m		
J	Fittings special tiles ; ref. *		nr		

C O L L E C T I O N

Item

Description

HK\$

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Bill Nr. MODBQ.11 - ROOF TILING

To Summary

\$



Bill Nr. MODBQ.12

WOOD WORKS

Item	Description	Qty	Unit	Rate	HK\$
<u>STRUCTURAL TIMBER</u>					
<u>Sawn hardwood</u>					
	Floor joists				
A	* x *		m		
	Roof joists				
B	* x *		m		
	Ceiling joists				
C	* x *		m		
	Floor beams				
D	* x *		m		
	Roof beams				
E	* x *		m		
	Ceiling beams				
F	* x *		m		
	Purlins				
G	* x * ; *m in one length		m		
	Rafters				
H	* x * ; *m in one length		m		
	Struts				
J	* x *		m		
	Nogging				
K	* x * ; between * deep partition studs		m		
MODEL BILL OF DESCRIPTION				To Collection	\$
ASD STANDARD BILLS MODBQ.12/1					

Item	Description	Qty	Unit	Rate	HK\$
<u>STRUCTURAL TIMBER (Cont'd)</u>					
<u>Carpentry metal work</u>					
	Galvanised steel cleats ; bolted with * bolts to concrete				
A	* x * x *		nr		
	Stainless steel pins ; built into brickwork or blockwork ; *				
B	* diameter x * long		nr		
<u>FLOORING</u>					
<u>Hardwood</u>					
	Block flooring ; butt joints ; basket pattern ; bedding in cold bitumen/rubber emulsion adhesive ; finishing for * polishing				
C	* thick ; * x * blocks		m2		
D	extra over * thick block flooring for straight two block borders		m		
E	* x * access traps ; in * thick block flooring		nr		
<u>Teak</u>					
	Parquet flooring ; tongued and grooved joints ; secret nailing ; finishing for * polishing				
F	* thick ; * x * blocks		m2		
G	* thick x * wide nosings ; tongued to flooring		m		
H	* x * mat wells ; in * thick parquet flooring		nr		
	Parquet flooring in preformed panels ; butt joints ; * pattern ; bedding in cold bitumen/rubber emulsion adhesive ; finishing for * polishing				
J	* thick ; * x * blocks ; in * x * preformed panels		m2		
MODEL BILL OF DESCRIPTION				To Collection \$	
ASD STANDARD BILLS					
MODBQ.12/2					

Item	Description	Qty	Unit	Rate	HK\$
	<u>FLOORING (Cont'd)</u>				
	Strip flooring ; tongued and grooved joints ; secret nailing ; on and including * x * sawn hardwood battens at * centres both ways ; finishing for * polishing				
A	* thick ; * wide boards		m2		
B	* thick x * wide nosings ; tongued to flooring		m		
	<u>Accessories</u>				
	Brass dividing strips				
C	3 x 50 ; setting between finishes		m		
	Movement joints ; *				
D	* x * deep ; setting between finishes		m		
	<u>RAISED ACCESS FLOORS</u>				
	<u>Designing, supplying and fixing raised access floor system ; * ; * supporting system and frames ; including pedestals, bearing pads, fixings, trims and all necessary accessories to complete installation ; all in accordance with the manufacturer's instructions ; as drawing nr. *</u>				
	Floors ; * high cavity ; * patterned				
E	* thick ; * x * panels		m2		
	Skirtings ; * ; fixing with *				
F	* x * high		m		
	Ramps ; rising from * to * high				
G	* thick ; * x * panels ; ramp size * x * overall		nr		
	Extra over * thick panels for * panels to floors				
H	* x * ; ref. *		nr		
	MODEL BILL OF DESCRIPTION				
	ASD STANDARD BILLS				
	MOBQ.12/3				
		To Collection	\$		

Item	Description	Qty	Unit	Rate	HK\$
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DOORS, HATCHES, VENTILATORS AND THE LIKE
AND FRAMES AND LININGS

Hardwood

Framed, ledged and braced doors and frames ; swinging ; * ; * x * door frames ; as drawing nr. * (ironmongery measured separately)

A door size * x * x * thick ; * thick boarding ; * wide boards ; tongued and grooved joints, V jointed one side ; * x * stiles ; * x * top rails ; * x * middle and bottom rails ; * x * braces

sets

Framed, ledged and braced doors and frames ; sliding ; shaped heads ; * x * door frames ; as drawing nr. * (ironmongery measured separately)

B door size * x * x * thick ; * thick boarding ; * wide boards ; tongued and grooved joints, V jointed one side ; * x * stiles ; * x * top rails ; * x * middle and bottom rails ; * x * braces ; * meeting stiles

sets

Flush doors and frames ; single leaf ; swinging ; hollow core ; faced both sides with Grade 1 veneer bonded plywood ; hardwood lipping to all edges ; * x * door frames (ironmongery measured separately)

C door size * x * x * thick ; * nr. * x * high glazed panels with * thick * glass ; hardwood lipping to all edges of opening

sets

Item	Description	Qty	Unit	Rate	HK\$
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DOORS, HATCHES, VENTILATORS AND THE LIKE
AND FRAMES AND LININGS (Cont'd)

Flush doors and frames ; single leaf ;
 swinging ; hollow core ; faced both sides
 with teak veneered Grade 1 veneer bonded
 plywood ; teak lipping to all edges ; * x
 * door frames (ironmongery measured
 separately)

A door size * x * x * thick ; * nr.
 * x * high teak louvred panels
 with * x * x * thick horizontal
 louvre blades at * centres ; teak
 lipping to all edges of opening

sets

Flush doors and frames ; single leaf ;
 swinging ; solid core ; faced both sides
 with Grade 2 veneer bonded plywood ; teak
 lipping to all edges ; * x * door frames
 (ironmongery measured separately)

B door size * x * x * thick ; * x *
 beads ; * nr. * x * high glazed
 panels with * thick glass ; teak
 lipping to all edges of opening

sets

Flush doors and frames ; single leaf ;
 swinging ; solid core ; faced both sides
 with teak veneered Grade 2 veneer bonded
 plywood ; teak lipping to all edges ; * x
 * door frames (ironmongery measured
 separately)

C door size * x * x * thick ; * x *
 mouldings ; * nr. * x * high teak
 louvred panels with * thick
 horizontal louvre blades at *
 centres ; teak lipping to all
 edges of opening

sets

Flush doors and frames ; double leaves ;
 swinging ; shaped heads ; hollow core ;
 faced both sides with teak veneered Grade
 2 veneer bonded plywood ; teak lipping to
 all edges ; * x * door frames (ironmongery
 measured separately)

D door size * x * x * thick ; *
 meeting stiles ; * nr. * x * high
 glazed panels with * thick * glass
 ; teak lipping to all edges of
 opening

sets

Item	Description	Qty	Unit	Rate	HK\$
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DOORS, HATCHES, VENTILATORS AND THE LIKE
AND FRAMES AND LININGS (Cont'd)

Flush doors and frames ; double leaves ;
 swinging ; solid core ; faced both sides
 with laminated plastic class HG * thick ;
 type I adhesive bonded to Grade 2 veneer
 bonded plywood ; teak lipping to all edges
 ; * x * door frames (ironmongery measured
 separately)

A door size * x * x * thick ; *
 meeting stiles ; * nr. * x * high
 teak louvred panels with * thick
 horizontal louvre blades at *
 centres ; teak lipping to all
 edges of opening

sets

Casements and frames ; in one pane ; as
 drawing nr. *

B size * x * x * thick ; * x *
 frames ; * x * edgings ; * x *
 beads

nr

Trims ; fixing with stainless steel screws
 ; plugging

C * x *

m

Architraves ; fixing with stainless steel
 screws ; plugging

D * x *

m

Teak

Panelled doors and frames ; swinging ; in
 one panel ; open for glass ; * x * door
 frames (ironmongery measured separately)

E door size * x * x * thick ; * x *
 stiles and top rails ; * x *
 middle and bottom rails ; *
 rounded stiles ; * nr. * x *
 glazed panels with * thick * glass
 ; * x * beads

sets

Item	Description	Qty	Unit	Rate	HK\$
	<u>DOORS, HATCHES, VENTILATORS AND THE LIKE</u>				
	<u>AND FRAMES AND LININGS (Cont'd)</u>				
	Panelled doors and frames ; sliding ; in * panels ; open for louvres ; * x * door frames (ironmongery measured separately)				
A	door size * x * x * thick ; * x * stiles and top rails ; * x * middle and bottom rails ; * nr. * x * louvred panels with * x * x * thick horizontal louvre blades at * centres ; *		sets		
	Louvres and frames infilling with * x * horizontal louvre blades with one labour at * centres				
B	* x * x * thick ; * x * frames		nr		
	Architraves ; fixing with stainless steel screws				
C	* x *		m		
	<u>Plywood ; Grade 1 veneer bonded ; faced</u> <u>both sides with laminated plastic ; class</u> <u>VG * thick ; type I adhesive bonded</u>				
	Duct access doors and frames ; single leaf				
D	door size * x * x * thick with * x * hardwood door frames ; * x * hardwood edgings		nr		
	Trap doors and frames ; single leaf				
E	door size * x * x * thick with * x * hardwood door frames		nr		
				To Collection \$	

Item	Description	Qty	Unit	Rate	HK\$
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DOORS, HATCHES, VENTILATORS AND THE LIKE
AND FRAMES AND LININGS (Cont'd)

Designing, supplying and fixing
proprietary fire rated doors ; *
(ironmongery measured separately)

Fire rated doors and frames ; single leaf
 ; swinging ; solid core ; * hour fire
 resistance rating ; * x * door frames ;
 associated packings, grounds, smoke seals
 and intumescent strips ; fixing cramps,
 dowels and other accessories ; faced both
 sides with teak veneered Grade 1 veneer
 bonded plywood ; teak lipping to all edges
 ; tested to BS 476 Part 20-23

A door size * x * x * thick

sets

Fire rated doors and frames ; single leaf
 ; swinging ; solid core ; * hour fire
 resistance rating ; * x * door frames ;
 associated packings, grounds, smoke seals
 and intumescent strips ; fixing cramps,
 dowels and other accessories ; faced both
 sides with laminated plastic class HG *
 thick ; type I adhesive bonded to Grade 1
 veneer bonded plywood ; hardwood lipping
 to all edges ; tested to BS 476 Part 20-23

B door size * x * x * thick

sets

Fire rated doors and frames ; single leaf
 ; swinging ; solid core ; * hour fire
 resistance rating ; * x * door frames ;
 associated packings, grounds, smoke seals
 and intumescent strips ; fixing cramps,
 dowels and other accessories ; faced both
 sides with teak veneered Grade 1 veneer
 bonded plywood ; teak lipping to all edges
 ; tested to BS 476 Part 20-23

C door size * x * x * thick

sets

Item	Description	Qty	Unit	Rate	HK\$
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DOORS, HATCHES, VENTILATORS AND THE LIKE
AND FRAMES AND LININGS (Cont'd)

Fire rated doors and frames ; double leaves ; swinging ; solid core ; * hour fire resistance rating ; * x * door frames ; associated packings, grounds, smoke seals and intumescent strips ; fixing cramps, dowels and other accessories ; faced both sides with teak veneered Grade 1 veneer bonded plywood ; teak lipping to all edges ; tested to BS 476 Part 20-23

A door size * x * x * thick ; * meeting stiles ; * nr. * x * high glass panels in * thick * glass

sets

Fire rated doors and frames ; double leaves ; swinging ; shaped heads ; solid core ; * hour fire resistance rating ; * x * door frames ; associated packings, grounds, smoke seals and intumescent strips ; fixing cramps, dowels and other accessories ; faced both sides with teak veneered Grade 1 veneer bonded plywood ; teak lipping to all edges ; tested to BS 476 Part 20-23

B door size * x * x * thick ; * meeting stiles

sets

Fire rated doors and frames ; double leaves ; swinging ; solid core ; * hour fire-resisting ; * x * door frames ; associated packings, grounds, smoke seals and intumescent strips ; fixing cramps, dowels and other accessories ; faced both sides with laminated plastic class HG * thick ; type I adhesive bonded to Grade 1 veneer bonded plywood ; hardwood lipping to all edges ; tested to BS 476 Part 20-23

C door size * x * x * thick ; * meeting stiles ; * nr. * x * high glass panels in * thick * glass

sets

Item	Description	Qty	Unit	Rate	HK\$
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DOORS, HATCHES, VENTILATORS AND THE LIKE
AND FRAMES AND LININGS (Cont'd)

Fire rated doors and frames ; double leaves ; sliding ; solid core ; * hour fire-resisting ; * x * door frames ; associated packings, grounds, smoke seals and intumescent strips ; fixing cramps, dowels and other accessories ; faced both sides with teak veneered Grade 1 veneer bonded plywood ; teak lipping to all edges ; tested to BS 476 Part 20-23

A door size * x * x * thick ; * meeting stiles

sets

LININGS AND CLADDINGS ; INTERNALLY

Hardwood ; boarding ; sanded

To walls ; fixing with * bolts at * centres both ways ; pelleting

B * thick

m2

Plywood ; Grade 1 veneer bonded

To ceilings and sides and soffits of beams ; fixing with screws ; plugging

C * thick

m2

Laminated plastic * thick ; class HG ; type I adhesive bonded

To *

D * thick ; * thick * backing

m2

Fabric lining

* thick * ; * thick * foam rubber ; * thick * backing ; fixing with screws

E * thick (overall)

m2

Item	Description	Qty	Unit	Rate	HK\$
<u>PROFILED SHEET ROOF COVERINGS AND WALL CLADDINGS</u>					
<u>Fibre cement profiled sheets ; * side laps ; * end laps ; fixing with * bolts at * centres both ways ; bedding laps with an approved sealant</u>					
To roofs ; * degrees pitch ; fixing at 300 centres to sheeting rails spaced at * centres					
A	* thick ; on metal		m2		
Extra over roof coverings for roof light units					
B	* x * ; *		nr		
Extra over roof coverings for ventilators					
C	* x * ; *		nr		
<u>Thermoplastic sheet claddings ; * side laps ; * end laps ; fixing with * bolts at * centres both ways ; bedding laps with an approved sealant</u>					
To walls ; fixing at 300 centres to framing rails spaced at * centres					
D	* thick ; on metal		m2		
Extra over wall claddings for ventilators					
E	* x * ; *		nr		
Accessories ; fixing at 300 centres ; on metal					
F	skirtings ; * x *		m		
G	aprons and sills ; * x *		m		
H	sleeves ; to holes for pipes ; * x *		nr		
Fire stops ; * ; * hour resistance rating					
J	* x *		m		
MODEL BILL OF DESCRIPTION					To Collection \$
ASD STANDARD BILLS MODBQ.12/11					

Item	Description	Qty	Unit	Rate	HK\$
	<u>TIMBER SUSPENDED CEILINGS ; INTERNALLY</u>				
	<u>Hardwood</u>				
	Supports for suspended ceilings ; suspended from concrete soffits ; * hanger at * centres ; fixing with * bolts				
A	skeleton grounds ; * ; at * centres one way ; at * centres other way ; depth of suspension not exceeding 1.50m		m2		
	<u>Acoustic tiles ; organic fibre insulating board ; * x * x * thick ; plain surfaces</u>				
	Fixing to wood supports (measured separately) with *				
B	generally		m2		
	<u>INSULATION, PROOFING WORKS AND FIRE STOPS</u>				
	<u>Acoustic linings ; insulation board ; * ; * decibel reduction rating</u>				
	To plain areas ; horizontal ; fixing with screws ; plugging				
C	* thick		m2		
	<u>Insulation linings ; glass fibre insulation quilt ; * ; * hour fire rating</u>				
	To plain areas ; vertical ; fixing with adhesive				
D	* thick		m2		
	<u>UNFRAMED TRIMS</u>				
	<u>Hardwood</u>				
	Skirtings				
E	* x *		m		
	Architraves				
F	* x *		m		
	MODEL BILL OF DESCRIPTION				
	ASD STANDARD BILLS				
	MODBQ.12/12				
		To Collection	\$		

Item	Description	Qty	Unit	Rate	HK\$
<u>UNFRAMED TRIMS (Cont'd)</u>					
A	Picture rails * x *		m		
B	Dado rails * x *		m		
C	Chair rails ; fixing with brass screws and cups * x *		m		
D	Cornices ; fixing with stainless steel screws and cups * x *		m		
E	Cappings ; fixing with stainless steel screws and cups * x *		m		
F	Built-up skirtings * x * ; comprising * ; * x * sawn hardwood grounds		m		
<u>Teak</u>					
G	Skirtings * x *		m		
H	Architraves * x *		m		
J	Picture rails * x *		m		
K	Dado rails * x *		m		
To Collection \$					

Item	Description	Qty	Unit	Rate	HK\$
	<u>PARTITIONS</u>				
	<u>Designing, supplying and fixing fixed partitions ; * ; all framing, insulation, sealants, vapour barriers, isolating membranes, moisture resistant treatment and lining ; all necessary fittings, fixing accessories, screws, bolts and painting ; assembling and jointing all in strict accordance with the manufacturer's instructions ; as drawing nr. *</u>				
	Partitions ; * thick overall ; * thick * coverings on both sides				
A	* high ; open framing above ceiling ; * girth		m		
	Partitions ; * thick overall ; * thick * coverings on both sides ; semi-glazed ; * high glazing * above ground				
B	* high ; with sloping cills and heads ; unfinished framing above ceiling ; * girth		m		
	* trims as cover piece to edges ; fixing with *				
C	* x * x *		m		
	Extra over * thick partitions for				
D	openings ; overall sizes * x *		nr		
E	windows in * lights ; overall sizes * x * ; * thick * glass ; fixing glass with *		nr		
F	doors ; * ; overall sizes * x * ; ironmongery comprising *		nr		
	Fixing for heavy fittings ; including all brackets, additional supports and fixing accessories				
G	sinks ; approximately * kg each		nr		
H	cupboards ; approximately * kg each		nr		
	MODEL BILL OF DESCRIPTION				
	ASD STANDARD BILLS				
	MODBQ.12/14				
			To Collection	\$	

Item	Description	Qty	Unit	Rate	HK\$
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PARTITIONS (Cont'd)

Designing, supplying and fixing toilet cubicle partitions ; * ; all framing, insulation, sealants, vapour barriers, isolating membranes, moisture resistant treatment and lining ; all necessary fittings, fixing accessories, screws, bolts and painting ; assembling and jointing all in strict accordance with the manufacturer's instructions ; as drawing nr. *

Partitions ; * thick overall with smooth edges ; * framing ; * thick * board lining on both sides

A * x * high ; * nr. cubicles ; * nr. doors ; * x * ; * nr. longitudinal panels ; * x * ; complete with ironmongery comprising * for each door

sets

Shelves

B * x * wide

nr

Trays

C * x * x * high

nr

Designing, supplying and fixing demountable office partitions ; * ; all framing, insulation, sealants, vapour barriers, isolating membranes, moisture resistant treatment and lining ; all necessary fittings, fixing accessories, screws, bolts and painting ; assembling and jointing all in strict accordance with the manufacturer's instructions ; as drawing nr. *

Partitions ; * thick overall with smooth edges ; * framing ; * thick * board lining on both sides

D * x * high ; * nr. glazed panels ; * x * ; * thick * glass ; fixing glass with *

nr

Shelves

E * x * wide

nr

MODEL BILL OF DESCRIPTION

To Collection \$

Item	Description	Qty	Unit	Rate	HK\$
<u>PARTITIONS (Cont'd)</u>					
Trays					
A	* x * x * high		nr		
	* trims ; fixed at junctions with adjoining constructions				
B	* x * x *		m		
<u>SLIDING AND FOLDING PARTITIONS</u>					
<u>Hardwood</u>					
Partitions in * panels ; hollow core ; * arrangement ; faced both sides with teak veneered Grade 1 veneer bonded plywood ; * x * teak lipping to all edges					
C	size * x * x * (overall) thick ; * rebated stiles		nr		
D	extra over * for forming openings * x * for glass ; teak lipping to all edges of opening		nr		
E	extra over * for forming openings * x * for teak louvres ; * x * horizontal louvres at * centres ; teak lipping to all edges of opening		nr		
Partitions in * panels ; solid core ; * arrangement ; faced one side with teak veneered Grade 1 veneer bonded plywood ; faced other side with laminated plastic class HG * thick ; type I adhesive bonded to Grade 1 veneer bonded plywood					
F	size * x * x * (overall) thick ; * rounded stiles ; * x * mouldings		nr		
G	extra over * for forming openings * x * for glass ; teak lipping to all edges of opening		nr		
H	extra over * for forming openings * x * for teak louvres ; * x * horizontal louvres at * centres ; teak lipping to all edges of opening		nr		
MODEL BILL OF DESCRIPTION				To Collection	\$
ASD STANDARD BILLS					
MODBQ.12/16					

Item	Description	Qty	Unit	Rate	HK\$
<u>SLIDING AND FOLDING PARTITIONS (Cont'd)</u>					
	Partition frames ; fixing with * bolts ; pelleting				
A	* x * ; rebated head and jambs ; to suit sliding and folding partition * x * high overall ; * x * sawn hardwood grounds		nr		
	Trims ; fixing with brass screws				
B	* x *		m		
	Architraves ; fixing with stainless steel screws				
C	* x *		m		
<u>Teak</u>					
	Architraves ; fixing with stainless steel screws				
D	* x *		m		
<u>FURNITURE, FITTINGS, SHELVING AND RACKS</u>					
	<u>Supplying and fixing cupboards ; fixing to</u> <u>* ; all necessary fixing screws, bolts,</u> <u>ironmongery and fittings, silicone sealant</u> <u>pointing and all painting ; as drawing nr.</u> <u>*</u>				
	Consisting of * thick Grade 1 veneer bonded plywood backs and bottoms ; * thick Grade 1 veneer bonded plywood fronts, sides or divisions ; covered with * thick laminated plastic ; class HG type I adhesive bonded ; * x * x * thick marine plywood tops ; covered with * thick laminated plastic ; class HG type I adhesive bonded ; * x * hardwood frames ; * x * teak edgings				
E	* x * x * high ; * nr. doors, * ; * nr. drawers, * ; ironmongery comprising *		nr		
MODEL BILL OF DESCRIPTION					To Collection \$
ASD STANDARD BILLS					MODBQ.12/17

Item	Description	Qty	Unit	Rate	HK\$
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FURNITURE, FITTINGS, SHELVING AND RACKS
(Cont'd)

Supplying and fixing kitchen cupboards ;
fixing to * ; all necessary fixing screws,
bolts, ironmongery and fittings, silicone
sealant pointing and all painting ; as
drawing nr. *

Consisting of * thick Grade 1 veneer
 bonded plywood backs and bottoms ; * thick
 Grade 1 veneer bonded plywood fronts,
 sides or divisions ; covered with * thick
 laminated plastic ; class HG type I
 adhesive bonded ; * x * x * thick
 blockboard tops ; covered with * thick
 laminated plastic ; class HG type I
 adhesive bonded ; * x * hardwood frames ;
 * x * teak edgings

A * x * x * high ; * nr. doors, * ;
 * nr. drawers, * ; ironmongery
 comprising *

nr

Supplying and fixing kitchen wall
cupboards ; fixing to * ; all necessary
fixing screws, bolts, ironmongery and
fittings, silicone sealant pointing and
all painting ; as drawing nr. *

Consisting of * thick Grade 1 veneer
 bonded plywood backs ; * thick Grade 1
 veneer bonded plywood top, bottoms, sides
 or divisions ; covered with * thick
 laminated plastic ; class HG type I
 adhesive bonded ; * x * hardwood frames ;
 * x * hardwood edgings

B * x * x * high ; * nr. glass
 panels, * ; ironmongery comprising
 *

nr

Item	Description	Qty	Unit	Rate	HK\$
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FURNITURE, FITTINGS, SHELVING AND RACKS
(Cont'd)

Supplying and fixing bookcases ; fixing to
* ; all necessary fixing screws, bolts,
ironmongery and fittings, silicone sealant
pointing and all painting ; as drawing nr.
*

Consisting of * thick Grade 1 veneer
 bonded plywood fronts, backs, tops,
 bottoms, shelves, sides or divisions ;
 covered with * thick laminated plastic ;
 class HG type I adhesive bonded ; * x *
 hardwood frames ; * x * beech edgings

A * x * x * high ; ironmongery
 comprising *

nr

Supplying and fixing notice boards ;
fixing to * ; all necessary fixing screws,
bolts, ironmongery and fittings, silicone
sealant pointing and all painting ; as
drawing nr. *

Consisting of * thick Grade 1 veneer
 bonded plywood backs ; * thick * notice
 boards ; * x * hardwood frames and
 stiffeners ; * x * teak edgings

B * x * high ; ironmongery
 comprising *

nr

Supplying and fixing chalk boards ; fixing
to * ; all necessary fixing screws, bolts,
ironmongery and fittings, silicone sealant
pointing and all painting ; as drawing nr.
*

Consisting of * thick Grade 1 veneer
 bonded plywood backs ; * thick *
 chalkboards ; * x * hardwood frames and
 stiffeners ; * x * hardwood edgings ; * x
 * hardwood chalk rails

C * x * high

nr

Item	Description	Qty	Unit	Rate	HK\$
<u>FURNITURE, FITTINGS, SHELVING AND RACKS</u>					
<u>(Cont'd)</u>					
<u>Supplying and fixing sinks and draining boards ; fixing to * ; all necessary fixing screws, bolts, ironmongery and fittings, silicone sealant pointing and all painting ; as drawing nr. *</u>					
Consisting of * thick marine plywood tops ; covered with * thick laminated plastic ; class HG type I adhesive bonded					
A	* x * wide ; * nr. openings for sinks and taps		nr		
<u>Supplying and fixing shelving ; fixing to * ; all necessary fixing screws, bolts, ironmongery and fittings, silicone sealant pointing and all painting ; as drawing nr. *</u>					
Consisting of * thick Grade 1 veneer bonded plywood fronts, backs, tops, bottoms, shelves, sides or divisions ; * x * hardwood frames ; * x * beech edgings					
B	* x * x * high ; ironmongery comprising *		nr		
<u>Supplying and fixing sign boards and signage ; fixing to * ; all necessary fixing screws, bolts, ironmongery and fittings, silicone sealant pointing and all painting ; as drawing nr. *</u>					
Sign boards ; consisting of * x * hardwood frames ; * x * hardwood edgings ; * thick Grade 1 veneer bonded plywood fronts, backs and sides					
C	* x * ; * nr. * high painted Chinese characters ; * nr. * high painted letters ; ref. *		nr		
D	* x * ; * nr. * high painted letter ; * nr. * high painted numerals ; ref. *		nr		

Item	Description	Qty	Unit	Rate	HK\$
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FURNITURE, FITTINGS, SHELVING AND RACKS
(Cont'd)

Sign boards ; consisting of * x * hardwood frames ; * x * hardwood edgings ; * thick Grade 1 veneer bonded plywood backs and sides ; * thick acrylic front panels

A	* x * ; * nr. * high cut out Chinese characters ; * nr. * high cut out letters ; ref. *		nr		
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B	* x * ; * nr. * high cut out letters ; * nr. * high symbols ; ref. *		nr		
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Signage ; consisting of * x * hardwood frames ; * x * hardwood edgings ; * thick Grade 1 veneer bonded plywood backs

C	* x * ; * nr. * high painted Chinese characters ; * nr. * high painted letters ; ref. *		nr		
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D	* x * ; * nr. * high silkscreened letters ; ref. *		nr		
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Signage ; consisting of * x * hardwood frames ; * x * hardwood edgings ; * thick Grade 1 veneer bonded plywood backs ; * thick acrylic front panels

E	* x * ; * nr. * high cut out Chinese characters ; * nr. * high cut out letters ; ref. *		nr		
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F	* x * ; * nr. * high cut out letters ; * nr. * high numerals ; ref. *		nr		
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C O L L E C T I O N

Item

Description

HK\$

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To Summary			\$

Bill Nr. MODBQ.13

IRONMONGERY

Item	Description	Qty	Unit	Rate	HK\$
<u>IRONMONGERY</u>					
<u>Collecting from Government Logistics</u>					
<u>Department and FIXING ONLY</u>					
Hinges					
A	butt hinges ; 63 x 35		nr		
B	butt hinges ; 76 x 41		nr		
C	butt hinges ; 76 x 48		nr		
D	butt hinges ; 102 x 76		nr		
E	parliament hinges ; 102 x 152		nr		
F	spring hinges ; single action		nr		
Bolts					
G	barrel bolts ; 75		nr		
H	barrel bolts ; 100		nr		
J	barrel bolts ; 150		nr		
K	barrel bolts ; 250		nr		
L	flush bolts ; lever type ; 150		nr		
M	flush bolts ; lever type ; 250		nr		
N	lavatory indicating bolts		nr		
Door and drawer handles					
P	pull handles ; 200		nr		
Q	pull handles ; 300		nr		
R	bow handles ; 150		nr		
S	wardrobe handles ; 150		nr		
T	drawer pulls ; 100		nr		

Item	Description	Qty	Unit	Rate	IRONMONGERY HK\$
<u>IRONMONGERY (Cont'd)</u>					
A	flush pulls ; 100 x 52		nr		
B	combined cylinder ring and door pulls ; 75 x 45		nr		
Locks and latches					
C	mortice locks ; horizontal		nr		
D	mortice locks ; upright		nr		
E	mortice locks ; upright ; dead		nr		
F	mortice locks ; upright ; dead ; rebated forend		nr		
G	mortice locks ; upright ; with thumb-turn		nr		
H	mortice latches ; horizontal		nr		
J	mortice latches ; upright ; cylinder		nr		
K	cylinder rim night latches		nr		
L	cylinder mortice night latches		nr		
M	drawer locks		nr		
Lock and latch furniture					
N	single knob furniture		nr		
P	set of knob furniture		nr		
Q	set of lever handles		nr		
R	keyhole escutcheons		nr		
Door fittings					
S	finger plates ; 330 x 82		nr		
T	cabin hooks ; 150		nr		
U	cabin hooks ; 250		nr		
V	cabin hooks ; double hinged ; 150		nr		
W	door chains and keeps		nr		
MODEL BILL OF DESCRIPTION				To Collection \$	
ASD STANDARD BILLS MODBQ.13/2					

Item	Description	Qty	Unit	Rate	HK\$
<u>IRONMONGERY (Cont'd)</u>					
A	ball catches		nr		
B	inspection lenses ; wide angle		nr		
C	rubber door stops		nr		
D	rubber door stops ; for concrete		nr		
Cupboard fittings					
E	cupboard catches		nr		
F	ball catches		nr		
G	magnetic door catches ; small		nr		
H	magnetic door catches ; large		nr		
Door closers					
J	overhead door closers		nr		
K	floor springs ; single action ; setting boxes in floor ; filling with hydraulic fluid		nr		
L	floor springs ; double action ; setting boxes in floor ; filling with hydraulic fluidn		nr		
Hat and coat hooks					
M	coat hooks		nr		
N	coat hooks ; with rubber buffer		nr		
P	hat and coat hooks		nr		
<u>SUPPLYING AND FIXING ironmongery ; *</u>					
Hinges					
Q	butt hinges ; BS EN 1935 Grade * ; satin finish stainless steel ; * x * ; class *		nr		
R	parliament hinges ; BS EN 1935 Grade * ; satin finish stainless steel ; * x * ; class *		nr		
MODEL BILL OF DESCRIPTION					To Collection \$
ASD STANDARD BILLS					MODBQ.13/3

Item	Description	Qty	Unit	Rate	HK\$
<u>IRONMONGERY (Cont'd)</u>					
Bolts					
A	barrel bolts ; brass ; * long ; BS EN 12051 class * ; ref. *		nr		
B	flush bolts ; lever type ; chromium plated brass ; * long ; ref. *		nr		
C	lavatory indicating bolts ; satin anodised aluminium ; ref. *		nr		
Door and drawer handles					
D	pull handles ; chromium plated brass ; * x * projection ; ref. *		nr		
E	drawer pulls ; satin finish stainless steel ; ref. *		nr		
Locks and latches					
F	mortice locks ; horizontal ; ref. * ; in master-keying suites		nr		
G	mortice locks ; with thumb-turn ; ref. *		nr		
H	mortice latches ; horizontal ; ref. *		nr		
J	cylinder rim night latches ; horizontal ; lock cylinder to BS EN 1303 Grade 5 ; ref. *		nr		
K	drawer locks ; ref. *		nr		
Lock and latch furniture					
L	single knob furniture ; for locks ; class * ; satin finish stainless steel		nr		
M	set of knob furniture ; for locks ; class * ; ref. *		nr		
N	set of lever handles ; for * locks ; class * ; ref. *		nr		
P	keyhole escutcheons ; for * locks ; class * ; ref. *		nr		
MODEL BILL OF DESCRIPTION					
ASD STANDARD BILLS MODBQ.13/4					
				To Collection \$	

Item	Description	Qty	Unit	Rate	HK\$
<u>IRONMONGERY (Cont'd)</u>					
Door fittings					
A	kick plates ; satin finish stainless steel ; * x * x * thick		nr		
B	cabin hooks ; satin anodised aluminium ; ref. *		nr		
Cupboard fittings					
C	ball catches ; ref. *		nr		
D	magnetic door catches ; ref. *		nr		
Door closers					
E	overhead door closers ; BS EN 1154 class * ; universal arm ; * construction ; ref. *		nr		
F	floor springs ; single action ; setting boxes in floor ; filling with hydraulic fluid ; BS EN 1154 class * ; power adjustable ; * construction ; ref. *		nr		
Panic exit devices					
G	horizontal bar operated panic exit device ; BS EN 1125 Grade * ; with vertical shoots ; for single door * wide ; * ; ref. *		nr		
Hat and coat hooks					
H	coat hooks ; satin anodised aluminium ; ref. *		nr		
Shelf fittings					
J	slotted channels ; satin finish stainless steel ; * x *		m		
K	shelf brackets ; satin anodised aluminium ; * x *		nr		
MODEL BILL OF DESCRIPTION				To Collection	\$
ASD STANDARD BILLS					
MODBQ.13/5					

Item	Description	Qty	Unit	Rate	HK\$
<u>IRONMONGERY (Cont'd)</u>					
Curtain tracks					
A	curtain tracks ; regular duty ; enamelled steel C section ; * length (overall) ; brackets at * (maximum) centres ; end stops ; centre overlap sets ; * nylon runners per metre ; cord operating ; ref. *		nr		
Sliding door gear ; BS EN 1527 ; to door size * x * high					
B	gear set comprising * top tracks * section ref. * ; * channels * ref. * ; * brackets * ref. * ; * hangers * ref. * ; * sliders * ref. * ; * flush pulls * ref. * ; * door lock * ref. *		sets		
Toilet fittings					
C	chromium plated toilet roll holders ; ref. *		nr		
Signs and lettering					
D	signs ; plastic ; * x *		nr		
E	letters or numerals ; plastic ; * high		nr		
F	Chinese characters ; plastic ; * high		nr		
<u>SUNDRIES</u>					
<u>Sundry items</u>					
Mosquito gauze					
G	plastic covered glass fibre 7 x 7 mesh per 10 square millimetres ; fixing with wood beads (measured separately)		m2		
MODEL BILL OF DESCRIPTION					To Collection \$
ASD STANDARD BILLS					MODBQ.13/6

Item	Description	Qty	Unit	Rate	HK\$
<u>SUNDRIES (Cont'd)</u>					
A	Plastic handrails ; as * fixing over * x * steel core rail (measured separately) ; including welding joints, ends, bends, ramps, wreaths and quadrants		m		
B	Shower curtain rails ; tubular ; stainless steel heavy duty ; plugging and screwing with stainless steel screws * diameter x * thick ; * length (overall)		nr		
C	Hanging rails ; tubular ; stainless steel heavy duty ; plugging and screwing with stainless steel screws * diameter x * thick ; * length (overall)		nr		
D	Water bars ; galvanised steel ; bedding in waterproofing cement mortar * x *		m		
E	Dowels ; galvanised steel ; bedding in cement mortar * diameter x * long		nr		
F	Fixing cramps ; galvanised steel * x * x * girth ; once bent; twice holed ; fanged end		nr		
G	Metal trims ; stainless steel ; flat strips ; fixing by bolts (measured separately) * x *		m		
H	Door seals ; ref. * ; fixing with stainless steel screws * x * wide		m		
MODEL BILL OF DESCRIPTION					To Collection \$
ASD STANDARD BILLS					MODBQ.13/7

C O L L E C T I O N

Item

Description

HK\$

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Bill Nr. MODBQ.13 - IRONMONGERY

To Summary

\$

Bill Nr. MODBQ.14
STEEL AND METAL WORKS

Item	Description	Qty	Unit	Rate	HK\$
<u>STRUCTURAL STEEL WORK</u>					
<u>Steel structure ; hot-rolled steel to BS</u> <u>EN 10025 ; grade * ; galvanised ; welded</u> <u>and bolted fabrication</u>					
Columns					
A	* x * x * kg universal columns		kg		
Beams					
B	* x * x * kg universal beams		kg		
Bracing					
C	* x * x * kg universal beams		kg		
D	* x * x * kg angles		kg		
Purlins and cladding rails					
E	* x * x * kg universal beams		kg		
F	* x * x * kg tees		kg		
G	* x * x * kg angles		kg		
Grillages					
H	* x * x * kg universal columns		kg		
J	* x * x * kg universal beams		kg		
K	* x * x * kg channels		kg		
L	* thick plates		kg		
Built-up columns, trestles and towers ; In nr. *					
M	* x * x * kg universal beams		kg		
N	* x * x * kg universal columns		kg		
P	* x * x * kg channels		kg		
MODEL BILL OF DESCRIPTION					To Collection \$
ASD STANDARD BILLS MODBQ.14/1					

		<u>STEEL AND METAL WORKS</u>			
Item	Description	Qty	Unit	Rate	HK\$
<u>STRUCTURAL STEEL WORK (Cont'd)</u>					
A	* x * x * kg tees		kg		
B	* x * x * kg angles		kg		
C	* thick plates		kg		
Connections					
D	* x * x * kg joists		kg		
E	* x * x * kg channels		kg		
F	* x * x * kg angles		kg		
G	* x * x * kg tees		kg		
Turned bolts ; nuts and washers					
H	* diameter x * long		nr		
High strength friction grip bolts ; nuts and washers					
J	* diameter x * long		nr		
Space frames ; *					
K	* x * x * high overall		nr		
Surface treatment ; protective coating ; applying painting system Type A as General Specification for Building Table 15.7 ; on structural steel ; * of coats in * thick ; before fixing					
L	general surfaces		m2		
Fire protection to structural steel ; sprayed mineral coating ; * hour fire rating ; * of coats in * thick					
M	general surfaces		m2		
				To Collection \$	

				<u>STEEL AND METAL WORKS</u>	
Item	Description	Qty	Unit	Rate	HK\$
<u>LININGS, COVERINGS AND CLADDINGS</u>					
<u>Linings ; hot-rolled steel to BS EN 10025 ; grade * ; galvanised</u>					
Sheet linings ; fixed to concrete ; * thick plywood backings ; * x * hardwood grounds at * centres both ways ; all necessary * frames, angles, cleats, fixing lugs, screws and anchor bolts, etc. ; in * x * maximum panels ; pointing joints with polysulphide sealant ; as drawing nr. *					
A	* thick to walls and columns		m2		
B	* thick to ceilings, and sides and soffits of beams		m2		
<u>Claddings ; stainless steel to BS * grade * ; * finish</u>					
Sheet linings ; fixed to concrete ; * thick plywood backings ; * x * hardwood grounds at * centres both ways ; all necessary * frames, angles, cleats, fixing lugs, screws and anchor bolts etc. ; in * x * maximum panels ; pointing joints with polysulphide sealant ; as drawing nr. *					
C	* thick to walls and columns		m2		
D	* thick to ceilings, and sides and soffits of beams		m2		
<u>ROOFING AND FLASHINGS</u>					
<u>Sheet lead ; BS EN 12588</u>					
Roofing ; copper clips ; * weltd laps ; measured net - allow for laps ; copper nailing					
E	* thick roof coverings ; flat		m2		
F	* thick gutters, valleys and coverings to hips and ridges		m2		
Slates ; 475 x 475 ; perforated for and with collar ; 75 high soldered on					
G	to suit side roof outlet not exceeding 50 diameter		nr		
MODEL BILL OF DESCRIPTION				To Collection \$	
ASD STANDARD BILLS MODBQ.14/3					

STEEL AND METAL WORKS

Item	Description	Qty	Unit	Rate	HK\$
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DOORS, GATES, SHUTTERS, GRILLES AND HATCHES (Cont'd)

Single leaf ; * thick sheet door linings ; * x * x * angle stiles and rails ; * x * x * angle door frames ; * hour fire resistance rating ; test certificate submitted for approval

A door size * x * high overall ; type *

nr

Doors ; stainless steel grade * ; * finish ; welded connections ; all necessary screw fixings, fixing lugs, ironmongery, fittings, etc. ; assembling, jointing, cutting and pinning lugs ; bedding frames in cement mortar ; pointing joints with silicone sealant ; as drawing nr. *

Double leaves ; * thick sheet door linings ; * x * x * angle stiles and rails ; * x * x * angle door frames

B door size * x * high overall ; type *

nr

Sliding folding partitions ; hot-rolled steel to BS EN 10025 ; grade * ; galvanised ; welded connections ; all necessary screw fixings, fixing lugs, ironmongery, fittings, etc. ; assembling, jointing, cutting and pinning lugs ; bedding frames in cement mortar ; pointing joints with silicone sealant ; as drawing nr. *

In * equal leaves * folded width ; * thick sheet linings ; * x * x * angle stiles and rails ; * x * x * angle door frames ; * x * tracks ; * x * rails ; * shutter hoods ; * hour fire resistance rating ; test certificate submitted for approval

C partition size * x * high overall

nr

STEEL AND METAL WORKS

Item	Description	Qty	Unit	Rate	HK\$
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DOORS, GATES, SHUTTERS, GRILLES AND HATCHES (Cont'd)

Hatches ; aluminium ; colour anodised ; tap screwed connections ; all necessary screw fixings, fixing lugs, ironmongery, fittings, etc. ; assembling, jointing, cutting and pinning lugs ; painting back of frames with one coat bituminous paint before fixing ; bedding frames in water-proof cement mortar ; pointing joints with silicone sealant ; as drawing nr. *

Single leaf ; * thick sheet door linings ; * x * x * angle stiles and rails ; * x * x * angle door frames

A door size * x * high overall

nr

Grilles, screens and louvres ; stainless steel grade * ; * finish ; welded connections ; all necessary screw fixings, fixing lugs, ironmongery, fittings, etc. ; assembling, jointing, cutting and pinning lugs ; bedding frames in cement mortar ; pointing joints with silicone sealant ; as drawing nr. *

Single panels ; * x * x * frames ; * x * x * sub-frames ; * x * flat horizontal louvre blades at * vertical centres

B * x * overall in * units ; type *

nr

Gates ; hot-rolled steel to BS EN 10025 ; grade * ; galvanised ; welded connections ; all necessary screw fixings, fixing lugs, ironmongery, fittings, etc. ; assembling, jointing, cutting and pinning lugs ; bedding frames in cement mortar ; pointing joints with silicone sealant ; as drawing nr. *

Single leaf ; * x * x * frames ; * x * x * sub-frames ; * diameter grille bars at * centres

C gate size * x * high overall ; type *

nr

STEEL AND METAL WORKS

Item	Description	Qty	Unit	Rate	HK\$
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DOORS, GATES, SHUTTERS, GRILLES AND HATCHES (Cont'd)

Designing, supplying and fixing roller shutters ; hot-rolled steel to BS EN 10025 ; grade * ; galvanised ; * ; channel guides, fixing lugs, brackets, hood casings, operating and locking devices and ironmongery ; assembling, jointing, cutting and pinning lugs ; bedding guide channels in cement mortar ; all in accordance with the manufacturer's instructions ; as drawing nr. *

Roller shutters ; manually operating by chain

A * x * clear opening size ; type *

nr

Roller shutters ; electrically operating

B * x * clear opening size ; type *

nr

Designing, supplying and fixing folding shutters ; aluminium ; clear anodised ; * ; channel guides, fixing lugs, brackets, hood casings, operating and locking devices and ironmongery ; assembling, jointing, cutting and pinning lugs ; bedding guide channels in cement mortar ; all in accordance with the manufacturer's instructions ; as drawing nr. *

Folding shutters ; in * equal leaves ; * folded width ; manually operating

C door size * x * overall ; type *

nr

STEEL AND METAL WORKS

Item	Description	Qty	Unit	Rate	HK\$
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DOORS, GATES, SHUTTERS, GRILLES AND HATCHES (Cont'd)

Designing, supplying and fixing collapsible gates ; hot-rolled steel to BS EN 10025 ; grade * ; galvanised ; diamond pattern ; welded and riveted connections ; as drawing nr. *

Collapsible gates ; 6 x 50 flat framing to head ; 6 x 50 flat framing to jambs ; * 12 diameter fixing lugs 50 long, one end welded other end fanged ; 15 x 50 flat framing in top and bottom guides ; * 15 x 50 flat fixing blocks 100 long at jambs ; pair of 6 x 50 flat vertical end pickets to both edges of gate ; pair of 6 x 25 flat vertical running pickets at 112 centres maximum ; 5 x 20 flat diagonal folding tie bars ; 6 diameter riveted pivot points with brass washers and spacers to 200 centres vertically to tie bars and 400 centres vertically to running pickets ; * 50 diameter x 15 wide ball bearing rollers ; three retaining catches ; catch hooks ; two brass pull handles ; locks

A

* x * overall

nr

Trap doors ; hinged ; hot-rolled steel to BS EN 10025 ; grade * ; galvanised ; welded and bolted connections ; all necessary screw fixings, fixing lugs, tracks, counter balances, balance weights, restraining chains, rollers, ironmongery, fittings, etc. ; assembling, jointing, cutting and pinning lugs ; bedding frames in cement mortar ; pointing joints with silicone sealant ; as drawing nr. *

Comprising ; * thick sheet coverings ; * x * x * door frames ; * x * x * frames

B

* x * clear opening size

nr

		STEEL AND METAL WORKS		
Item	Description	Qty	Unit	Rate HK\$
	<u>DOORS, GATES, SHUTTERS, GRILLES AND HATCHES (Cont'd)</u>			
	<u>Hose reel doors ; stainless steel grade * ; * finish ; welded and bolted connections ; all necessary screw fixings, fixing lugs, ironmongery, fittings, etc. ; assembling, jointing, cutting and pinning lugs ; bedding frames in cement mortar ; pointing joints with silicone sealant ; as drawing nr. *</u>			
	Single leaf ; comprising ; * thick sheet linings ; * x * x * door frames ; * x * x * frames			
A	door size * x * overall		nr	
	<u>FRAMED WORK, STAIRS, HANDRAILS AND BALUSTRADES ; HOT-ROLLED STEEL TO BS EN 10025 ; GRADE * ; GALVANISED</u>			
	<u>Framed ventilators ; overall size * x * ; welded connections ; In nr. *</u>			
	Framing			
B	flats ; * x *		m	
C	angles ; * x * x *		m	
	Louvre blades ; twice cranked			
D	flats ; * x *		m	
	Fixing lugs			
E	bars ; * diameter ; * long		nr	
F	flats ; * x * ; * long		nr	
	Wire mesh ; welding			
G	mesh ; galvanised ; * x * mesh per 10 square millimeters		m2	
	<u>Framed cat ladders ; bolted and riveted connections ; In nr. *</u>			
	Stringers			
H	flats ; * x *		m	
	MODEL BILL OF DESCRIPTION		To Collection	\$
	ASD STANDARD BILLS MODBQ.14/9			

		<u>STEEL AND METAL WORKS</u>			
Item	Description	Qty	Unit	Rate	HK\$
	<u>FRAMED WORK, STAIRS, HANDRAILS AND</u> <u>BALUSTRADES ; HOT-ROLLED STEEL TO BS EN</u> <u>10025 ; GRADE * ; GALVANISED (Cont'd)</u>				
	Rungs				
A	rods ; * diameter (In Nr. 0)		m		
	Fixing brackets				
B	flats ; * x * ; * long		nr		
C	angles ; * x * ; * long		nr		
	<u>Framed wall mounted handrails ; welded</u> <u>connections ; to nr. * staircases</u>				
	Handrails				
D	flats ; * x * ; * long ; with wall brackets		m		
	<u>Framed balustrades ; welded connections ;</u> <u>to nr. * staircases</u>				
	Balustrades				
E	comprising * x * flat handrails, top rails and bottom rails ; * diameter bar balusters at * centres ; * diameter rods		m		
	<u>Mat frames ; welded connections</u>				
	Framing ; * x * x * angles ; * x * x * fixing lugs with fanged end at * centres				
F	overall size * x *		nr		
	<u>FRAMED WORK, STAIRS, HANDRAILS AND</u> <u>BALUSTRADES ; STAINLESS STEEL GRADE * ;</u> <u>POLISHED FINISH</u>				
	<u>Framed tubular handrails ; welded joints ;</u> <u>to *</u>				
	Handrails				
G	* nominal bore tubing handrails and balusters		m		
MODEL BILL OF DESCRIPTION		To Collection \$			
ASD STANDARD BILLS MODBQ.14/10					

		<u>STEEL AND METAL WORKS</u>			
Item	Description	Qty	Unit	Rate	HK\$
<u>FENCING AND GATES</u>					
<u>Gates ; hot-rolled steel to BS EN 10025 ; grade * ; galvanised ; welded connections</u>					
Single leaf ; * x * x * angle framing ; * nr. * x * panels infill with high tensile steel fabric ; spot welding ; 75 x 25 oblong hole mesh ; BS * ; * diameter wire ; spot welding ; including gate stops, gate catches and gate stays ; as drawing nr. *					
A	gate size * x * high overall		nr		
Ironmongery					
B	pivot hinges ; 15 x 40 x 300 girth plate once bent and once rounded ; 25 diameter hardened steel rod 40 long with washer ; 50 x 50 x 16 plate twice rounded and once holed for 25 diameter pivot		nr		
C	sliding bolts ; 20 diameter shoot 500 girth once bent ; 50 x 50 x 10 holed guide twice rounded ; 25 diameter x 100 long tubing set in concrete		nr		
D	sliding bolts ; 20 diameter shoot 975 long ; * 50 x 50 x 10 holed guide twice rounded ; * 50 x 50 x 10 holed guide twice rounded with 25 stop ; * x * x * slotted hasp three times bent ; * x * x * staple holed and twice rounded ; 25 diameter x 100 long tubing set in concrete		nr		
E	brass padlocks ; *		nr		
<u>SUNDRIES</u>					
<u>Gratings and frames</u>					
Gratings to floor channels ; cast iron ; in * lengths ; * x * slots at * centres					
F	* thick x * wide		m		
MODEL BILL OF DESCRIPTION				To Collection \$	
ASD STANDARD BILLS		MODBQ.14/11			

STEEL AND METAL WORKS

Item	Description	Qty	Unit	Rate	HK\$
<u>SUNDRIES (Cont'd)</u>					
A	Frames to gratings for floor channels ; hot-rolled steel to BS EN 10025 ; grade * ; galvanised angles * x * x * ; * x * x * lugs at * centres ; casting in		m		
B	Gratings or grilles to openings, ventilators and the like ; hot-rolled steel to BS EN 10025 ; grade * ; galvanised ; * x * x * angle frames ; * x * flat grille bars at * centres * x *		nr		
<u>Pressed, folded or extruded metal sections</u>					
C	Pressed sections ; stainless steel grade * ; polished finish ; skirtings * girth * times bent ; fixing with screws		m		
<u>Slotted steel angles ; self-finished ; framed and bolted connections</u>					
D	Angle framing ; bolts, nuts and washers * x * x *		m		
E	Rubber shoes to end of * x * x * angle		nr		
<u>Hinged covers and frames to water tank</u>					
F	Covers and frames ; hot-rolled steel to BS EN 10025 ; grade * ; galvanised ; * thick sheet covers ; * thick base plates ; * x * x * angle frames ; * x * lock plate and * padlock ; including all fittings, fixing screws and bolts ; sealing cover in grease ; as drawing nr. * * x * clear opening		nr		
MODEL BILL OF DESCRIPTION					To Collection \$
ASD STANDARD BILLS					MODBQ.14/12

		STEEL AND METAL WORKS			
Item	Description	Qty	Unit	Rate	HK\$
	<u>SUNDRIES (Cont'd)</u>				
	<u>Step irons</u>				
	Step irons ; stainless steel grade *				
A	general purpose pattern ; 100 tail ; casting into concrete		nr		
	<u>Tactile indicators ; stainless steel ; grade * ; * finish ; * shaped type ; fixed by * on * ; in accordance with the manufacturer's instructions</u>				
	Warning / stop tactiles ; * diameter x * thick studs ; * nrs. studs per * x * standard module				
B	floors		m2		
C	bands ; * wide		m		
D	* x *		nr		
	Directional / go tactiles ; * long strips x * wide x * thick studs ; * nrs. studs per * x * standard module				
E	floors		m2		
F	bands ; * wide		m		
G	* x *		nr		
	Turning / positional tactiles ; * diameter x * thick studs ; * nrs. studs per * x * standard module				
H	floors		m2		
J	bands ; * wide		m		
K	* x *		nr		
				To Collection \$	

		<u>STEEL AND METAL WORKS</u>			
Item	Description	Qty	Unit	Rate	HK\$
	<u>RAISED ACCESS FLOORS</u>				
	<u>Designing, supplying and fixing raised access floor system ; * ; * supporting system and frames ; including pedestals, bearing pads, fixing trims and all necessary accessories to complete installation ; all in accordance with manufacturer's instructions ; as drawing nr. *</u>				
	Floors ; * high cavity				
A	* thick ; * x * panels		m2		
	Skirtings ; * ; fixing with *				
B	* x * high		m		
	Ramps ; rising from * to * high				
C	* thick ; * x * panels ; ramp size * x * overall		nr		
	Extra over * thick panels for * panels to floors				
D	* x * ; ref. *		nr		
	<u>PROFILED SHEET ROOF COVERINGS AND WALL CLADDINGS</u>				
	<u>Galvanised steel corrugated sheets ; side laps of one and a half corrugations ; * end laps ; fixing with galvanised steel hook bolts and nuts, drive screws, large washers, self-tapping screws, roofing bolts, nuts and clips, roofing screws and sheeting clips ; bedding laps with an approved lap sealant ; * high above ground ; as drawing nr. *</u>				
	To roofs ; * degree pitch ; fixing at 300 centres to sheeting rails spaced at * centres				
E	* thick ; on metal		m2		
	Extra over * for translucent sheets				
F	* x * ; *		nr		
	MODEL BILL OF DESCRIPTION		To Collection	\$	
	ASD STANDARD BILLS				
	MOBQ.14/14				

STEEL AND METAL WORKS

Item	Description	Qty	Unit	Rate	HK\$
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PARTITIONS (Cont'd)

Designing, supplying and fixing toilet cubicle partitions ; * ; all necessary fittings, fixing accessories, screws, bolts and painting ; assembling and jointing all in strict accordance with the manufacturer's instructions ; as drawing nr. *

Partitions ; * thick overall with smooth edges ; * framing ; * thick board linings on both sides

A * x * on plan ; * high ; * nr. cubicles ; * nr. doors ; * x * ; * nr. longitudinal panels ; * x * high ; complete with ironmongery comprising * for each door

nr

Designing, supplying and fixing office partitions ; * ; all necessary fittings, fixing accessories, screws, bolts and painting ; assembling and jointing all in strict accordance with the manufacturer's instructions ; as drawing nr. *

Partitions ; * thick overall with smooth edges ; * framing ; * thick board linings on both sides; *

B * x * high ; * nr. windows ; * x * ; * thick * glass ; fixing glass with *

nr

* trims ; fixed at junctions with adjoining walls

C * x * x *

m

				<u>STEEL AND METAL WORKS</u>	
Item	Description	Qty	Unit	Rate	HK\$
	<u>SUSPENDED CEILINGS</u>				
	<u>Tiled or panelled ceilings ; * x * x * tiles ; * ; fully complying with the particular specification * ; laid in and including metal support framing comprising exposed grid of anodised aluminium T-section framing, metal hangers, brackets, ties, clips and fasteners, etc. ; *</u>				
	Ceilings				
A	fixing to concrete soffits ; suspension depth not exceeding 1.50m ; 3.50 - 5.00m above floor level		m2		
	Upstands and bulkheads				
B	fixing vertically ; not exceeding 600 high		m		
	Extra over tiled ceilings for				
C	access panels ; * x *		nr		
	<u>WINDOWS AND GLAZED DOORS</u>				
	<u>Designing, supplying and fixing windows ; hot-rolled steel to BS EN 10025 ; grade * ; galvanised ; glazed with * thick * glass in panes ; all necessary framing, water bars, fittings, fixing lugs, brackets, bolts and ironmongery ; PVC weatherstrip ; assembling, jointing, cutting and pinning lugs ; bedding in water-proof cement mortar ; as drawing nr. *</u>				
	Windows				
D	* x * overall ; * fixed lights		nr		
E	* x * overall ; * fixed lights ; * side hung opening lights		nr		
F	* x * overall ; * fixed lights ; * top hung opening lights		nr		
	MODEL BILL OF DESCRIPTION		To Collection	\$	
	ASD STANDARD BILLS MODBQ.14/17				

STEEL AND METAL WORKS

Item	Description	Qty	Unit	Rate	HK\$
<u>WINDOWS AND GLAZED DOORS (Cont'd)</u>					
	Composite windows				
A	* x * overall ; in nr. * individual units ; * fixed lights ; * side hung opening lights ; * coupling mullions		nr		
	Composite windows and doors				
B	* x * overall ; in nr. * individual units ; * fixed lights ; * top hung opening lights ; * side hung doors ; * coupling mullions ; * coupling transoms ; including ironmongery comprising *		nr		
	<u>Designing, supplying and fixing windows ; aluminium ; colour anodised ; glazed with * thick * glass in panes ; all necessary framing, water bars, fittings, fixing lugs, brackets, bolts and ironmongery ; PVC weatherstrip ; assembling, jointing, cutting and pinning lugs ; painting back of frames with one coat of bituminous paint before fixing ; bedding frames in water-proof cement mortar ; as drawing nr. *</u>				
	Windows				
C	* x * overall ; * fixed lights		nr		
D	* x * overall ; * fixed lights ; * side hung opening lights		nr		
E	* x * overall ; * fixed lights ; * top hung opening lights		nr		
	Composite windows and doors				
F	* x * overall ; in nr. * individual units ; * fixed lights ; * top hung opening lights ; * side hung doors ; * coupling mullions ; * coupling transoms ; including ironmongery comprising *		nr		
MODEL BILL OF DESCRIPTION				To Collection \$	
ASD STANDARD BILLS MODBQ.14/18					

STEEL AND METAL WORKS

Item	Description	Qty	Unit	Rate	HK\$
<u>SHOP FRONTS</u>					
<u>Designing, supplying and fixing shop fronts ; aluminium ; organic coating ; painted PVDF finish ; all necessary coping, flashing, glazing beads, fixing, ironmongery, gasket and sealant, painting, connections and provision of anchorages ; assembling, jointing, cutting and pinning lugs ; as outlined on drawing nr. * and Particular Specification *</u>					
A	Shop fronts comprising * x * x * framing at * centres ; * thick * glass panels ; * cill board * high		m		
B	* trims ; to edges and joints * x * x *		m		
C	Extra over * high shop front for door openings with door ; * ; * x * high		nr		
<u>CURTAIN WALLING</u>					
<u>Designing, supplying and fixing curtain walling system ; aluminium ; organic coating ; painted PVDF finish ; comprising framing, glazing, coping, sill, closure panel, flashing, fittings, insulation and fire resistance material ; all necessary fixings, gasket and sealant, connections and provision of anchorages ; assembling, jointing, cutting and pinning lugs ; as outlined on drawing nr. * and Particular Specification *</u>					
Glazing panels and framing system including associated infill panels					
D	flat ; clear tempered glass ; type *		m2		
E	curved ; * radius ; * glass ; type *		m2		
MODEL BILL OF DESCRIPTION				To Collection \$	
ASD STANDARD BILLS				MODBQ.14/19	

STEEL AND METAL WORKS

Item	Description	Qty	Unit	Rate	HK\$
<u>CURTAIN WALLING (Cont'd)</u>					
	Extra over flat / curved * glazing panels and framing system for				
A	opening lights ; size * x * high ; top hung ; glazing with * glass ; *		nr		
B	opening lights ; size * x * high ; side hung ; glazing with * glass ; *		nr		
C	doors ; overall size * x * high ; single leaf ; * finishes ; * frames and ironmongery comprising *		nr		
<u>Sundries</u>					
	Provision of samples				
D	material samples and prototypes	-	item	-	
<u>Testing</u>					
	Laboratory test				
E	laboratory tests on mock-ups ; as General Specification for Building clause 16.73 ; re-test as required to achieve satisfactory results	-	item	-	
	Field test				
F	field test on actual building ; as General Specification for Building clause 16.74 ; re-test as required to achieve satisfactory results	-	item	-	
G	structural silicone test ; as General Specification for Building clause 16.75 ; re-test as required to achieve satisfactory results	-	item	-	
				To Collection \$	

STEEL AND METAL WORKS

Item	Description	Qty	Unit	Rate	HK\$
	<u>FURNITURE, FITTINGS, SHELVING, RACKS,</u> <u>PLAYGROUND EQUIPMENT, ETC.</u> <u>Supplying and fixing furniture, fittings,</u> <u>shelving, racks and the like ; hot-rolled</u> <u>steel to BS EN 10025 ; grade * ;</u> <u>galvanised ; including framing, fittings,</u> <u>fixing bolts, screws and ironmongery;</u> <u>pointing around edges with silicone</u> <u>sealant ; all necessary painting and</u> <u>coating ; as drawing nr. *</u>				
	Cupboards				
A	* x * x * high overall ; * nr. cupboard doors ; * ; * nr. drawers ; * ; ironmongery comprising * ; fixed to floors		nr		
	Cabinets				
B	* x * x * high overall ; * nr. cupboard doors ; * ; ironmongery comprising * ; fixed to walls		nr		
	<u>Supplying and fixing external furniture</u> <u>and equipment ; hot-rolled steel to BS EN</u> <u>10025 ; grade * ; galvanised ; including</u> <u>framing, fittings, fixing bolts, screws</u> <u>and ironmongery ; all necessary painting</u> <u>and coating ; as drawing nr. *</u>				
	Sitting benches				
C	* x * x * high overall ; fixed to floors		nr		
	Litter bins				
D	* x * x * high overall ; fixed to floors		nr		
	MODEL BILL OF DESCRIPTION		To Collection	\$	
	ASD STANDARD BILLS MODBQ.14/21				

STEEL AND METAL WORKS

Item	Description	Qty	Unit	Rate	HK\$
	<u>FURNITURE, FITTINGS, SHELVING, RACKS, PLAYGROUND EQUIPMENT, ETC. (Cont'd)</u>				
	<u>Supplying and fixing sign boards and signage ; aluminium ; colour anodised ; all necessary fixing screws, bolts, etc. ; as drawing nr. *</u>				
	Directional signs ; * thick aluminium plates				
A	* x * ; * nr. * high painted letters ; * nr. * high painted symbols ; fixing to walls		nr		
	Message signs ; comprising * ; * supporting frames or stands				
B	* x * ; * nr. * high painted letters ; * nr. * high painted Chinese characters ; fixed to steel posts		nr		
	<u>Designing, supplying and fixing playground equipment ; * ; including framing, fittings, fixing bolts, screws and ironmongery ; all necessary painting and coating ; all in accordance with the manufacturer's instructions ; as drawing nr. *</u>				
	Table tennis tables				
C	* x * x * high overall ; fixed to floors ; ref. *		nr		
	Basketball stands				
D	* x * x * high overall ; fixed to floors ; ref. *		nr		

C O L L E C T I O N

Item

Description

HK\$

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Bill Nr.	MODBQ.14 - STEEL AND METAL WORKS		
To Summary			\$

Bill Nr. MODBQ.15
PLASTERING AND PAVING

Item	Description	Qty	Unit	Rate	HK\$
	<u>INTERNALLY</u>				
	<u>Spatterdash</u>				
	All surfaces of concrete				
A	generally		m2		
	<u>Lathing</u>				
	Wire netting to BS EN 10233-2 ; galvanised ; 50 minimum side and end laps ; measured net - allow for laps				
B	walls and columns		m2		
	Plain expanded steel lathing ; galvanised ; 50 minimum side and end laps ; measured net - allow for laps				
C	walls and columns		m2		
D	ceilings including sides and soffits of beams		m2		
E	flush junctions between dissimilar solid backgrounds ; 300 wide		m		
	<u>Plasterboard</u>				
	Lath or board * thick ; scrimmed and plastered joints ; finishing with * thick plaster skim coat				
F	walls and columns		m2		
G	ceilings including sides and soffits of beams		m2		
H	sloping soffits of staircases		m2		
J	flewing soffits of staircases ; 3.50 - 5.00m above floor level		m2		
	MODEL BILL OF DESCRIPTION		To Collection	\$	
	ASD STANDARD BILLS MODBQ.15/1				

		<u>PLASTERING AND PAVING</u>			
Item	Description	Qty	Unit	Rate	HK\$
	<u>INTERNALLY (Cont'd)</u>				
	<u>Fire rated enclosure</u>				
	Fire rated promat board ; * hour fire resisting period ; * thick ; including approved framings, fittings, fixing bolts and screws ; pointing around edges with approved sealant ; all necessary painting and coating				
A	walls and columns		m2		
B	ceilings and sides and soffits of beams ; fixing to concrete soffits ; suspension depth not exceeding 1.50m ; 3.50 - 5.00m above floor level		m2		
C	sides of ducts ; size * x * ; at walls		m2		
D	sides and soffits of ducts ; size * x * ; at ceilings		m2		
	<u>Screeds ; one coat ; cement and sand (1:3) ; wood floated finish</u>				
	Walls and columns				
E	* thick ; to receive ceramic tiling		m2		
F	* thick ; to receive glazed tiling		m2		
	Ceilings including sides and soffits of beams				
G	* thick ; to receive glazed tiling		m2		
H	* thick ; to receive glazed tiling ; 3.50 - 5.00m above floor level		m2		
	Floors				
J	* thick ; to receive ceramic tiling		m2		
K	* thick ; to receive quarry tiling		m2		
L	* thick ; to receive terrazzo		m2		
M	* thick ; to receive wood blocks		m2		
	MODEL BILL OF DESCRIPTION		To Collection	\$	
	ASD STANDARD BILLS MODBQ.15/2				

		<u>PLASTERING AND PAVING</u>			
Item	Description	Qty	Unit	Rate	HK\$
<u>INTERNALLY (Cont'd)</u>					
	Treads and risers				
A	* thick ; to receive terrazzo		m2		
	All surfaces of fitments and the like				
B	* thick ; to receive glazed tiling		m2		
	Skirtings				
C	* thick x * high ; to receive ceramic tiling		m		
D	* thick x * high ; to receive quarry tiling		m		
	Wall strings				
E	* thick x * (average) high ; to receive mosaic tiling		m		
	Curbs				
F	* thick x * girth ; to receive ceramic tiling		m		
	Angle fillets				
G	* wide x * deep		m		
	Extra over * floor screed * thick for				
H	channels in floors or roofs ; rectangular ; * wide x * average deep ; to receive quarry tiling		m		
J	filling to recessed duct covers and the like * x * wide x * deep ; to receive terrazzo		m		
K	filling to recessed manhole covers and the like * x * x * deep ; to receive terrazzo		nr		
				To Collection \$	

		<u>PLASTERING AND PAVING</u>			
Item	Description	Qty	Unit	Rate	HK\$
	<u>INTERNALLY (Cont'd)</u>				
	<u>Screeds ; one coat ; cement and sand (1:3) ; waterproof containing an approved waterproofing admixture mixed under the manufacturer's supervision in strict accordance with their instructions ; wood floated finish</u>				
	Walls and columns				
A	* thick ; to receive glazed tiling		m2		
	Floors				
B	* thick ; to receive glazed tiling		m2		
	Angle fillets				
C	* wide x * deep		m		
	<u>Screeds ; one coat ; cement and sand (1:3) ; water repellant containing an approved water-reducing admixture and with a water/cement ratio of 0.45 ; wood floated finish</u>				
	Walls and columns				
D	* thick ; to receive glazed tiling		m2		
	Floors				
E	* thick ; to receive glazed tiling		m2		
	Angle fillets				
F	* wide x * deep		m		
	<u>Screeds ; cement and granite fines (1:3) ; wood floated finish</u>				
	Walls and columns				
G	* thick ; to receive mosaic tiling		m2		
	Ceilings including sides and soffits of beams				
H	* thick ; to receive mosaic tiling		m2		
J	* thick ; to receive mosaic tiling ; 3.50 - 5.00m above floor level		m2		
	MODEL BILL OF DESCRIPTION		To Collection	\$	
	ASD STANDARD BILLS MODBQ.15/4				

		<u>PLASTERING AND PAVING</u>			
Item	Description	Qty	Unit	Rate	HK\$
	<u>INTERNALLY (Cont'd)</u>				
	<u>Cement rendering ; wood floated finish</u>				
	Walls and columns				
A	* thick		m2		
	Floors				
B	* thick		m2		
	<u>Cement rendering ; steel trowelled finish</u>				
	Walls and columns				
C	* thick		m2		
	Ceilings including sides and soffits of beams				
D	* thick		m2		
E	* thick ; 3.50 - 5.00m above floor level		m2		
	Sloping soffits of staircases				
F	* thick		m2		
G	* thick ; 3.50 - 5.00m above floor level		m2		
	<u>Cement rendering ; waterproof containing an approved waterproofing admixture mixed under the manufacturer's supervision in strict accordance with their instructions ; steel trowelled finish</u>				
	Walls and columns				
H	* thick		m2		
	Floors				
J	* thick		m2		
MODEL BILL OF DESCRIPTION		To Collection \$			
ASD STANDARD BILLS MODBQ.15/6					

		<u>PLASTERING AND PAVING</u>			
Item	Description	Qty	Unit	Rate	HK\$
	<u>INTERNALLY (Cont'd)</u>				
	<u>Cement rendering ; water repellent</u> <u>containing an approved water-reducing</u> <u>admixture and with a water/cement ratio of</u> <u>0.45 ; steel trowelled finish</u>				
	Walls and columns				
A	* thick		m2		
	Floors				
B	* thick		m2		
	<u>Internal lime plastering ; steel trowelled</u> <u>finish</u>				
	Walls and columns				
C	* thick		m2		
D	* thick ; curved		m2		
	Walls and columns ; on lathing				
E	* thick		m2		
F	* thick ; curved		m2		
	Ceilings including sides and soffits of beams				
G	* thick		m2		
H	* thick ; 3.50 - 5.00m above floor level		m2		
J	* thick ; 5.00 - 6.50m above floor level		m2		
	Sloping ceilings including sides and soffits of beams				
K	* thick		m2		
L	* thick ; 3.50 - 5.00m above floor level		m2		
M	* thick ; 5.00 - 6.50m above floor level		m2		
	MODEL BILL OF DESCRIPTION				
	ASD STANDARD BILLS				
	MODBQ.15/7				
		To Collection	\$		

		<u>PLASTERING AND PAVING</u>				
Item	Description	Qty	Unit	Rate	HK\$	
<u>INTERNALLY (Cont'd)</u>						
Sloping soffits of staircases						
A	* thick		m2			
B	* thick ; 3.50 - 5.00m above floor level		m2			
<u>Gypsum plastering ; steel trowelled finish</u>						
Walls and columns						
C	* thick		m2			
D	* thick ; curved		m2			
Walls and columns ; on lathing						
E	* thick		m2			
F	* thick ; curved		m2			
Walls and columns ; on plasterboard						
G	* thick		m2			
Ceilings including sides and soffits of beams						
H	* thick		m2			
J	* thick ; 3.50 - 5.00m above floor level		m2			
K	* thick ; 5.00 - 6.50m above floor level		m2			
Sloping ceilings including sides and soffits of beams						
L	* thick		m2			
M	* thick ; 3.50 - 5.00m above floor level		m2			
N	* thick ; 5.00 - 6.50m above floor level		m2			
Sloping soffits of staircases						
P	* thick		m2			
MODEL BILL OF DESCRIPTION				To Collection	\$	
ASD STANDARD BILLS MODBQ.15/8						

		<u>PLASTERING AND PAVING</u>			
Item	Description	Qty	Unit	Rate	HK\$
	<u>INTERNALLY (Cont'd)</u>				
A	* thick ; 3.50 - 5.00m above floor level <u>Shanghai plastering ; steel trowelled finish</u> Walls and columns		m2		
B	* thick		m2		
C	* thick ; curved Walls and columns ; on lathing		m2		
D	* thick		m2		
E	* thick ; curved Walls and columns ; on plasterboard		m2		
F	* thick Ceilings including sides and soffits of beams		m2		
G	* thick		m2		
H	* thick ; 3.50 - 5.00m above floor level		m2		
J	* thick ; 5.00 - 6.50m above floor level Sloping ceilings including sides and soffits of beams		m2		
K	* thick		m2		
L	* thick ; 3.50 - 5.00m above floor level		m2		
M	* thick ; 5.00 - 6.50m above floor level Sloping soffits of staircases		m2		
N	* thick		m2		
P	* thick ; 3.50 - 5.00m above floor level		m2		
	MODEL BILL OF DESCRIPTION	To Collection	\$		
	ASD STANDARD BILLS MODBQ.15/9				

		<u>PLASTERING AND PAVING</u>			
Item	Description	Qty	Unit	Rate	HK\$
	<u>INTERNALLY (Cont'd)</u>				
	<u>Granolithic Mix Type "A" ; steel trowelled finish</u>				
	Walls and columns				
A	* thick		m2		
	Floors				
B	* thick		m2		
	Treads and risers				
C	* thick		m2		
	All surfaces of fitments and the like				
D	* thick		m2		
	Skirtings				
E	* thick x * high ; rounded top edge ; coved bottom edge at junction with paving		m		
	Wall strings				
F	* thick x * (average) high ; rounded top edge ; coved bottom edge at junction with paving ; stepped following profile of treads and risers		m		
	Open strings				
G	* thick x * (average) high ; rounded top edge ; 15 x 20 return to soffit ; stepped following profile of treads and risers		m		
	Aprons				
H	* x * to vertical edge of floor or landing ; 15 x 20 return to soffit		m		
	Combined curbs and margins				
J	50 x 130 wide curb ; 25 x 50 wide margin		m		
MODEL BILL OF DESCRIPTION		To Collection \$			
ASD STANDARD BILLS MODBQ.15/10					

		<u>PLASTERING AND PAVING</u>			
Item	Description	Qty	Unit	Rate	HK\$
<u>INTERNALLY (Cont'd)</u>					
A	50 x 130 wide curb ; to profile of treads and risers ; 25 x 50 wide margin to treads ; 20 x 50 wide margin to risers		m		
	Lining to channels				
B	* thick ; * wide x * deep		m		
	Extra over * thick granolithic to floors for				
C	channels ; rectangular ; * wide x * deep		m		
D	filling to recessed duct covers and the like * x * wide x * deep		m		
E	filling to recessed manhole covers and the like * x * x * deep		nr		
<u>Granolithic Mix Type "B" ; rubbed finish</u>					
	Walls and columns				
F	* thick		m2		
	Floors				
G	* thick		m2		
	Treads and risers				
H	* thick		m2		
	All surfaces of fitments and the like				
J	* thick		m2		
	Skirtings				
K	* thick x * high ; rounded top edge ; coved bottom edge at junction with paving		m		
				To Collection \$	

		<u>PLASTERING AND PAVING</u>			
Item	Description	Qty	Unit	Rate	HK\$
<u>INTERNALLY (Cont'd)</u>					
	Wall strings				
A	* thick x * (average) high ; rounded top edge ; coved bottom edge at junction with paving ; stepped following profile of treads and risers		m		
	Open strings				
B	* thick x * (average) high ; rounded top edge ; 15 x 20 return to soffit ; stepped following profile of treads and risers		m		
	Aprons				
C	* x * to vertical edge of floor or landing ; 15 x 20 return to soffit		m		
	Combined curbs and margins				
D	50 x 130 wide curb ; 25 x 50 wide margin		m		
E	50 x 130 wide curb ; to profile of treads and risers ; 25 x 50 wide margin to treads ; 20 x 50 wide margin to risers		m		
	Lining to channels				
F	* thick ; * wide x * deep		m		
	Extra over * thick granolithic to floors for				
G	channels ; rectangular ; * wide x * deep		m		
H	filling to recessed duct covers and the like * x * wide x * deep		m		
J	filling to recessed manhole covers and the like * x * x * deep		nr		
<u>Granolithic Mix Type "C" ; rubbed finish</u>					
	Walls and columns				
K	* thick		m2		
MODEL BILL OF DESCRIPTION		To Collection \$			
ASD STANDARD BILLS MODBQ.15/12					

		<u>PLASTERING AND PAVING</u>			
Item	Description	Qty	Unit	Rate	HK\$
	<u>INTERNALLY (Cont'd)</u>				
	Floors				
A	* thick		m2		
	Treads and risers				
B	* thick		m2		
	All surfaces of fitments and the like				
C	* thick		m2		
	Skirtings				
D	* thick x * high ; rounded top edge ; coved bottom edge at junction with paving		m		
	Wall strings				
E	* thick x * (average) high ; rounded top edge ; coved bottom edge at junction with paving ; stepped following profile of treads and risers		m		
	Open strings				
F	* thick x * (average) high ; rounded top edge ; 15 x 20 return to soffit ; stepped following profile of treads and risers		m		
	Aprons				
G	* x * to vertical edge of floor or landing ; 15 x 20 return to soffit		m		
	Combined curbs and margins				
H	50 x 130 wide curb ; 25 x 50 wide margin		m		
J	50 x 130 wide curb ; to profile of treads and risers ; 25 x 50 wide margin to treads ; 20 x 50 wide margin to risers		m		
	Lining to channels				
K	* thick ; * wide x * deep		m		
	MODEL BILL OF DESCRIPTION				
	ASD STANDARD BILLS				
	MODBQ.15/13				
		To Collection	\$		

		<u>PLASTERING AND PAVING</u>			
Item	Description	Qty	Unit	Rate	HK\$
<u>INTERNALLY (Cont'd)</u>					
	Extra over * thick granolithic to floors for				
A	channels ; rectangular ; * wide x * deep		m		
B	filling to recessed duct covers and the like * x * wide x * deep		m		
C	filling to recessed manhole covers and the like * x * x * deep		nr		
<u>Terrazzo Mix Type "A" ; * colour ; ground smooth finish</u>					
	Floors				
D	* thick		m2		
	Treads and risers				
E	* thick		m2		
	Skirtings				
F	* thick x * high ; rounded top edge ; coved bottom edge at junction with paving		m		
	Wall strings				
G	* thick x * (average) high ; rounded top edge ; coved bottom edge at junction with paving ; stepped following profile of treads and risers		m		
	Open strings				
H	* thick x * (average) high ; rounded top edge ; 15 x 20 return to soffit ; stepped following profile of treads and risers		m		
	Aprons				
J	* x * to vertical edge of floor or landing ; 15 x 20 return to soffit		m		
MODEL BILL OF DESCRIPTION		To Collection \$			
ASD STANDARD BILLS MODBQ.15/14					

		<u>PLASTERING AND PAVING</u>			
Item	Description	Qty	Unit	Rate	HK\$
<u>INTERNALLY (Cont'd)</u>					
Combined curbs and margins					
A	50 x 130 wide curb ; 25 x 50 wide margin		m		
B	50 x 130 wide curb ; to profile of treads and risers ; 25 x 50 wide margin to treads ; 20 x 50 wide margin to risers		m		
Lining to channels					
C	* thick ; * wide x * deep		m		
Extra over * thick terrazzo to floors for					
D	channels ; rectangular ; * wide x * deep		m		
E	filling to recessed duct covers and the like * x * wide x * deep		m		
F	filling to recessed manhole covers and the like * x * x * deep		nr		
<u>Terrazzo Mix Type "A" ; * colour ; wax polished finish</u>					
Walls and columns					
G	* thick		m2		
All surfaces of fitments and the like					
H	* thick		m2		
<u>Terrazzo Mix Type "B" ; * colour ; ground smooth finish</u>					
Floors					
J	* thick		m2		
Treads and risers					
K	* thick		m2		
MODEL BILL OF DESCRIPTION				To Collection	\$
ASD STANDARD BILLS		MODBQ.15/15			

		<u>PLASTERING AND PAVING</u>			
Item	Description	Qty	Unit	Rate	HK\$
<u>INTERNALLY (Cont'd)</u>					
Skirtings					
A	* thick x * high ; rounded top edge ; coved bottom edge at junction with paving		m		
Wall strings					
B	* thick x * (average) high ; rounded top edge ; coved bottom edge at junction with paving ; stepped following profile of treads and risers		m		
Open strings					
C	* thick x * (average) high ; rounded top edge ; 15 x 20 return to soffit ; stepped following profile of treads and risers		m		
Aprons					
D	* x * to vertical edge of floor or landing ; 15 x 20 return to soffit		m		
Combined curbs and margins					
E	50 x 130 wide curb ; 25 x 50 wide margin		m		
F	50 x 130 wide curb ; to profile of treads and risers ; 25 x 50 wide margin to treads ; 20 x 50 wide margin to risers		m		
Lining to channels					
G	* thick ; * wide x * deep		m		
Extra over * thick terrazzo to floors for					
H	channels ; rectangular ; * wide x * deep		m		
J	filling to recessed duct covers and the like * x * wide x * deep		m		
K	filling to recessed manhole covers and the like * x * x * deep		nr		
MODEL BILL OF DESCRIPTION				To Collection	\$
ASD STANDARD BILLS					
MODBQ.15/16					

		<u>PLASTERING AND PAVING</u>			
Item	Description	Qty	Unit	Rate	HK\$
	<u>INTERNALLY (Cont'd)</u>				
	<u>Terrazzo Mix Type "B" ; * colour ; wax polished finish</u>				
	Walls and columns				
A	* thick		m2		
	All surfaces of fitments and the like				
B	* thick		m2		
	<u>Vitrified ceramic floor tiles ; * x * x * ; Messrs. * ; * series ; anti-slip ; * colour range</u>				
	Tiles ; bedding and jointing in cement and sand (1:3) bedding to the stated thickness ; pointing in coloured cement				
C	floors and pavings ; on * bedding		m2		
D	treads ; on * bedding		m2		
E	risers ; on * bedding		m2		
F	extra over tiles for rounded edge tiles		m		
G	extra over tiles for tiles rounded on two edges		nr		
H	extra over tiles for special tiles ; ref. *		nr		
J	skirtings * high ; rounded top edge ; coved bottom edge at junction with paving ; on * bedding		m		
K	sides and bottom of channels * wide x * deep ; on * bedding		m		
L	filling to trench covers * x * wide ; joints to line with adjoining work		m		
M	filling to recessed manhole covers and the like * x * ; joints to line with adjoining work		nr		
	MODEL BILL OF DESCRIPTION		To Collection	\$	
	ASD STANDARD BILLS				
	MODBQ.15/17				

		<u>PLASTERING AND PAVING</u>			
Item	Description	Qty	Unit	Rate	HK\$
	<u>INTERNALLY (Cont'd)</u>				
A	Extra over ceramic tiles to floor for margins in contrasting colour ; * wide		m		
	<u>Clay floor quarry tiles ; * x * x * ; anti-slip ; * colour</u>				
B	Tiles ; bedding and jointing in cement and sand (1:3) bedding to the stated thickness ; pointing in coloured cement floors and pavings ; on * bedding		m2		
C	treads ; on * bedding		m2		
D	risers ; on * bedding		m2		
E	extra over tiles for rounded edge tiles		m		
F	extra over tiles for tiles rounded on two edges		nr		
G	extra over tiles for special tiles ; ref. *		nr		
H	skirting * high ; rounded top edge ; coved bottom edge at junction with paving ; on * bedding		m		
J	sides and bottom of channels * wide x * deep ; on * bedding		m		
K	filling to trench covers * x * wide ; joints to line with adjoining work		m		
L	filling to recessed manhole covers and the like * x * ; joints to line with adjoining work		nr		
M	Extra over quarry tiles to floors for sunk bands in contrasting colour ; * wide x * deep		m		
MODEL BILL OF DESCRIPTION		To Collection \$			
ASD STANDARD BILLS MODBQ.15/18					

		<u>PLASTERING AND PAVING</u>				
Item	Description	Qty	Unit	Rate	HK\$	
<u>INTERNALLY (Cont'd)</u>						
<u>Internal glazed ceramic wall tiles ; * x * x * ; cushion edged ; * colour</u>						
Tiles ; bedding and jointing in cement and sand (1:3) bedding to the stated thickness ; pointing in coloured cement						
A	walls and columns ; on * bedding		m2			
B	ceilings including sides and soffits of beams ; on * bedding		m2			
C	ceilings including sides and soffits of beams ; on * bedding ; 3.50 - 5.00m above floor level		m2			
D	all surfaces of fitments and the like ; on * bedding		m2			
E	extra over tiles for rounded edge tiles		m			
F	extra over tiles for tiles rounded on two edges		nr			
<u>Unglazed vitreous mosaic tiles ; * x * x * ; Messrs. * ; * series ; * colour range</u>						
Tiles ; bedding and jointing in cement and granite fines (1:3) bedding to the stated thickness ; pointing in coloured cement						
G	floors and pavings ; on * bedding		m2			
H	treads ; on * bedding		m2			
J	risers ; on * bedding		m2			
K	walls and columns ; on * bedding		m2			
L	ceilings including sides and soffits of beams ; on * bedding		m2			
M	all surfaces of fitments and the like ; on * bedding		m2			
N	extra over tiles for rounded edge tiles		m			
P	extra over tiles for external corner tiles		m			
MODEL BILL OF DESCRIPTION				To Collection	\$	
ASD STANDARD BILLS MODBQ.15/19						

		<u>PLASTERING AND PAVING</u>			
Item	Description	Qty	Unit	Rate	HK\$
<u>INTERNALLY (Cont'd)</u>					
A	extra over tiles for setting one row of tiles on splay at angles		m		
B	skirtings * high ; square top edge ; coved bottom edge at junction with paving ; on * bedding		m		
C	skirtings * high ; square top edge ; splayed bottom edge at junction with paving ; on * bedding		m		
D	wall strings * (average) high ; square top edge ; coved bottom edge ; stepped following profile of treads and risers ; on * bedding		m		
E	wall strings * (average) high ; square top edge ; splayed bottom edge ; stepped following profile of treads and risers ; on * bedding		m		
F	sides and bottom of channels * wide x * deep ; on * bedding		m		
G	filling to trench covers * x * wide ; joints to line with adjoining work		m		
H	filling to recessed manhole covers and the like * x * ; joints to line with adjoining work		nr		
	Extra over mosaic tiles to walls and columns for				
J	margins in contrasting colour ; * wide		m		
	Extra over mosaic tiles to floors for				
K	margins in contrasting colour ; * wide		m		
				To Collection \$	

				<u>PLASTERING AND PAVING</u>	
Item	Description	Qty	Unit	Rate	HK\$
	<u>INTERNALLY (Cont'd)</u>				
	<u>Vinyl floor tiles ; * x * x * ; Messrs. * ; * series ; * colour range ; emulsion polished finish ; laying and fixing in accordance with the manufacturer's instructions</u>				
	Sheets ; fixing with adhesive				
A	floors and pavings		m2		
B	treads		m2		
C	risers		m2		
D	skirtings * high		m		
E	filling to pipe trench covers * wide ; joints to line with adjoining work		m		
F	filling to manhole covers and the like * x * ; joints to line with adjoining work		nr		
	<u>Artificial turfing ; * x * x * ; laying and fixing in accordance with the manufacturer's instructions</u>				
	Sheets ; fixing with adhesive				
G	floors and pavings		m2		
	<u>Line marking on sports pavings ; * proprietary marking systems ; * colour</u>				
	Lines				
H	* wide		m		
	Broken lines				
J	* wide		m		
	<u>Letters or figures on sports pavings ; * proprietary marking systems ; * colour</u>				
	Letters				
K	* high		nr		
MODEL BILL OF DESCRIPTION				To Collection	\$
ASD STANDARD BILLS MODBQ.15/21					

		<u>PLASTERING AND PAVING</u>			
Item	Description	Qty	Unit	Rate	HK\$
	<u>INTERNALLY (Cont'd)</u>				
A	Chinese characters * high		nr		
B	<u>Vitreous clay ; * x * x * non-slip nosing tiles</u> Tiles ; bedding and jointing in cement and sand (1:3) bedding to the stated thickness ; pointing in plain cement to treads ; on * bedding		m		
C	Tiles ; bedding and jointing in cement and granite fines (1:3) bedding to the stated thickness ; pointing in coloured cement to treads ; on * bedding		m		
D	<u>Ceramic tactile tiles ; * x * x * ; anti-slip ; * colour range ; bedding and jointing in cement and sand (1:3) bedding to the stated thickness ; pointing in coloured cement ; on screeds (measured separately)</u> Warning / stop tactiles ; * diameter x * thick studs ; * nrs. studs per * x * standard module floors		m2		
E	bands ; * wide		m		
F	floors ; * x * Directional / go tactiles ; * long strips x * wide x * thick studs ; * nrs. studs per * x * standard moudle		nr		
G	floors		m2		
H	bands ; * wide		m		
J	floors ; * x * Turning / positional tactiles ; * diameter x * thick studs ; * nrs. studs per * x * standard module		nr		
K	floors		m2		
	MODEL BILL OF DESCRIPTION	To Collection	\$		
	ASD STANDARD BILLS MODBQ.15/22				

		<u>PLASTERING AND PAVING</u>			
Item	Description	Qty	Unit	Rate	HK\$
<u>INTERNALLY (Cont'd)</u>					
A	bands ; * wide		m		
B	floors ; * x *		nr		
<u>Sundries</u>					
Treating surfaces of * with an approved liquid dust proofer ; in accordance with the manufacturer's instructions					
C	walls and columns		m2		
Treating surfaces of * with an approved liquid hardener ; in accordance with the manufacturer's instructions					
D	floors		m2		
Treating surfaces of * with carborundum grains ; sprinkling on and lightly trowelling in before setting at the rate of 2 kg/m2					
E	treads and risers		m2		
Brass dividing strips ; bedding in screed					
F	3 x 50		m		
Brass dividing strips ; bedding in screed ; stepped to profile of treads and risers					
G	* x *		m		
Brass dividing strips ; bedding in wall finish					
H	* x *		m		
Non-slip inserts to treads ; rounded top edge ; bedding in groove					
J	15 x 25		m		
<u>EXTERNALLY</u>					
<u>Spatterdash</u>					
All surfaces of concrete					
K	generally		m2		
MODEL BILL OF DESCRIPTION		To Collection		\$	
ASD STANDARD BILLS		MODBQ.15/23			

		<u>PLASTERING AND PAVING</u>			
Item	Description	Qty	Unit	Rate	HK\$
	<u>EXTERNALLY (Cont'd)</u>				
	<u>Screeds ; one coat ; cement and granite fines (1:3) ; wood floated finish</u>				
	Walls and columns				
A	* thick ; to receive mosaic tiling		m2		
	Ceilings including sides and soffits of beams				
B	* thick ; to receive mosaic tiling		m2		
C	* thick ; to receive mosaic tiling ; 3.50 - 5.00m above floor level		m2		
	Floors				
D	* thick ; to receive mosaic tiling		m2		
	Treads and risers				
E	* thick ; to receive mosaic tiling		m2		
	Cills, copings, horizontal louvres, horizontal sunbreakers and the like				
F	* thick ; to receive mosaic tiling		m2		
	Vertical fins, vertical sunbreakers and the like				
G	* thick ; to receive mosaic tiling		m2		
	Small features and the like				
H	* thick ; to receive mosaic tiling		m2		
	<u>Topping screeds ; on coat ; cement and sand (1:4) ; laid monolithically ; steel trowelled finish</u>				
	Roofs				
J	* thick ; to receive asphalt		m2		
	Extra over * floor screed * thick for				
K	channels in floors or roofs ; segmental ; * wide x * (average) deep ; to receive asphalt		m		
	MODEL BILL OF DESCRIPTION		To Collection	\$	
	ASD STANDARD BILLS MODBQ.15/24				

		<u>PLASTERING AND PAVING</u>			
Item	Description	Qty	Unit	Rate	HK\$
	<u>EXTERNALLY (Cont'd)</u>				
	<u>Lightweight screeds ; one coat ; cement and lightweight aggregate (1:8) ; wood floated finish</u>				
	Roofs				
A	* (average) thick ; to receive screed		m2		
	Extra over * floor screed * thick for				
B	channels in floors or roofs ; rectangular ; * wide x * (average) deep ; to receive screed		m		
	<u>External rendering ; steel trowelled finish</u>				
	Walls and columns				
C	* thick		m2		
	Ceilings including sides and soffits of beams				
D	* thick		m2		
E	* thick ; 3.50 - 5.00m above floor level		m2		
	Sloping soffits of staircases				
F	* thick		m2		
G	* thick ; 3.50 - 5.00m above floor level		m2		
	Cills, copings, horizontal louvres, horizontal sunbreakers and the like				
H	* thick		m2		
	Vertical fins, vertical sunbreakers and the like				
J	* thick		m2		
	Small features and the like				
K	* thick		m2		
	MODEL BILL OF DESCRIPTION				
	ASD STANDARD BILLS				
	MODBQ.15/25				
		To Collection	\$		

				<u>PLASTERING AND PAVING</u>		
Item	Description	Qty	Unit	Rate	HK\$	
<u>EXTERNALLY (Cont'd)</u>						
<u>Cement based premixed plastering ; all in accordance with the manufacturer's instructions</u>						
Floors						
A	* thick		m2			
Treads and risers						
B	* thick		m2			
Skirtings						
C	* thick x * high ; rounded top edge ; coved bottom edge at junction with paving		m			
<u>Granolithic Mix Type "A" ; steel trowelled finish</u>						
Walls and columns						
D	* thick		m2			
Floors						
E	* thick		m2			
Treads and risers						
F	* thick		m2			
Skirtings						
G	* thick x * high ; rounded top edge ; coved bottom edge at junction with paving		m			
<u>Granolithic Mix Type "B" ; rubbed finish</u>						
Walls and columns						
H	* thick		m2			
Floors						
J	* thick		m2			
MODEL BILL OF DESCRIPTION				To Collection	\$	
ASD STANDARD BILLS						
MODBQ.15/26						

		<u>PLASTERING AND PAVING</u>			
Item	Description	Qty	Unit	Rate	HK\$
	<u>EXTERNALLY (Cont'd)</u>				
A	Treads and risers * thick		m2		
B	Skirtings * thick x * high ; rounded top edge ; coved bottom edge at junction with paving		m		
	<u>Granolithic Mix Type "C" ; washed finish</u>				
C	Walls and columns * thick		m2		
D	Floors * thick		m2		
E	Treads and risers * thick		m2		
F	Skirtings * thick x * high ; rounded top edge ; coved bottom edge at junction with paving		m		
	<u>Terrazzo Mix Type "A" ; * colour ; ground smooth finish</u>				
G	Floors * thick		m2		
H	Treads and risers * thick		m2		
J	Skirtings * thick x * high ; rounded top edge ; coved bottom edge at junction with paving		m		
MODEL BILL OF DESCRIPTION		To Collection \$			
ASD STANDARD BILLS MODBQ.15/27					

		<u>PLASTERING AND PAVING</u>			
Item	Description	Qty	Unit	Rate	HK\$
	<u>EXTERNALLY (Cont'd)</u>				
	<u>Terrazzo Mix Type "B" ; * colour ; ground smooth finish</u>				
	Floors				
A	* thick		m2		
	Treads and risers				
B	* thick		m2		
	Skirtings				
C	* thick x * high ; rounded top edge ; coved bottom edge at junction with paving		m		
	<u>Clay floor quarry tiles ; * x * x * ; anti-slip ; * colour</u>				
	Tiles ; bedding and jointing in cement and sand (1:3) bedding to the stated thickness ; pointing in coloured cement				
D	floors and pavings ; on * bedding		m2		
E	treads ; on * bedding		m2		
F	risers ; on * bedding		m2		
G	extra over tiles for rounded edge tiles		m		
H	extra over tiles for tiles rounded on two edges		nr		
J	extra over tiles for special tiles ; ref. *		nr		
K	skirtings * high ; rounded top edge ; coved bottom edge at junction with paving ; on * bedding		m		
				To Collection \$	

		<u>PLASTERING AND PAVING</u>			
Item	Description	Qty	Unit	Rate	HK\$
	<u>EXTERNALLY (Cont'd)</u>				
	<u>Glazed ceramic mosaic tiles ; * x * x * ;</u> <u>Messrs. * ; * series ; * colour range</u>				
	Tiles ; bedding and jointing in cement and granite fines (1:3) bedding to the stated thickness ; pointing in coloured cement				
A	floors and pavings ; on * bedding		m2		
B	treads ; on * bedding		m2		
C	risers ; on * bedding		m2		
D	walls and columns ; on * bedding		m2		
E	ceilings including sides and soffits of beams ; on * bedding		m2		
F	ceilings including sides and soffits of beams ; on * bedding ; 3.50 - 5.00m above floor level		m2		
G	cills, copings, horizontal louvres, horizontal sunbreakers and the like ; on * bedding		m2		
H	vertical fins, vertical sunbreakers and the like ; on * bedding		m2		
J	small features and the like ; on * bedding		m2		
K	extra over tiles for rounded edge tiles		m		
L	extra over tiles for setting one row of tiles on splay at angles		m		
M	extra over tiles for external corner tiles		m		
	Extra over tiles to walls and columns for				
N	margins in contrasting colour ; * wide		m		
	MODEL BILL OF DESCRIPTION		To Collection	\$	
	ASD STANDARD BILLS MODBQ.15/29				

		<u>PLASTERING AND PAVING</u>			
Item	Description	Qty	Unit	Rate	HK\$
	<u>EXTERNALLY (Cont'd)</u>				
	Allow for testing of external wall tiling, remedying any defects and re-testing				
A	infra-red thermographic scanning as General Specification for Building clause 18.108 ; by an approved specialist	-	item	-	
	<u>Movement joints</u>				
	Forming joints in * finishes ; priming surfaces of joints ; pointing with polysulphide liquid polymer sealant				
B	* x * ; horizontal		m		
C	* x * ; vertical		m		
	Forming joints in concrete roofing tiles ; pointing with cold bitumen				
D	* x * ; horizontal		m		
	<u>Sundries</u>				
	Treating surfaces of * with an approved liquid hardener ; in accordance with the manufacturer's instructions				
E	floors		m2		
	Treating surfaces of * with carborundum grains ; sprinkling on and lightly trowelling in before setting at the rate of 2 kg/m2				
F	treads and risers		m2		
	Polythene vapour barrier				
G	on concrete beneath roof screed ; lap 150 at joints ; measured net - allow for laps		m2		
	Brass dividing strips ; bedding in wall finish				
H	* x *		m		
	MODEL BILL OF DESCRIPTION				
	ASD STANDARD BILLS				
	MODBQ.15/30				
		To Collection	\$		

		<u>PLASTERING AND PAVING</u>			
Item	Description	Qty	Unit	Rate	HK\$
	<u>EXTERNALLY (Cont'd)</u>				
	Non-slip inserts to treads ; rounded top edge ; bedding in groove				
A	15 x 25		m		
	Cement and sand (1:3) ; surround to pipes above roof level				
B	150 x 150 x 150		nr		
	<u>Testing</u>				
	On site delivery checks ; provide all necessary calibrated equipment and carry out tests as General Specification for Building clause * on				
C	non-slip homogeneous floor tiles	-	item	-	
		To Collection \$			

C O L L E C T I O N

Item

Description

HK\$

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C. fwd \$

C O L L E C T I O N

B.fwd

\$

Item

Description

HK\$

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Bill Nr. MODBQ.15 - PLASTERING AND PAVING

To Summary

\$

Bill Nr. MODBQ.16
PLUMBING INSTALLATION

Item	Description	Qty	Unit	Rate	HK\$
	<u>NOTE :</u>				
A	This Bill is to be read in conjunction with the relevant Preambles clauses under Mechanical Installation. In particular, the Contractor shall note that all painting on pipework and colour identification are deemed to be included in the rates of pipework.				
	<u>COLD WATER ; INTERNALLY</u>				
	<u>Copper pipes ; half hard temper ; BS EN 1057:2006+A1:2010 ; fittings ; BS EN 1254-1 to 5:1998 and BS EN 1254-6,8:2012 ; compression joints ; fixing with pipe brackets</u>				
	Pipes and fittings ; fixed to walls and columns				
B	* outside diameter		m		
	Pipes and fittings ; fixed to soffits				
C	* outside diameter		m		
	Pipes and fittings ; laid in chases				
D	* outside diameter		m		
	Pipes and fittings ; embedded in screeds				
E	* outside diameter		m		
	Extra over pipes for				
F	* bends		nr		
G	* reducing bends		nr		
H	* tees		nr		
J	* reducing tees		nr		
	MODEL BILL OF DESCRIPTION				
	ASD STANDARD BILLS MODBQ.16/1				
			To Collection	\$	

		<u>PLUMBING INSTALLATION</u>			
Item	Description	Qty	Unit	Rate	HK\$
	<u>COLD WATER ; INTERNALLY (Cont'd)</u>				
A	* caps		nr		
B	* plugs		nr		
	<u>Stainless steel pipes ; BS EN</u> <u>10312:2002+A1:2005 ; fittings ; AS</u> <u>3688:2016 ; joints in accordance with the</u> <u>manufacturer's instructions ; fixing with</u> <u>pipe brackets</u>				
	Pipes and fittings ; fixed to walls and columns				
C	* diameter		m		
	Pipes and fittings ; fixed to soffits				
D	* diameter		m		
	Pipes and fittings ; laid in chases				
E	* diameter		m		
	Pipes and fittings ; embedded in screeds				
F	* diameter		m		
	Extra over pipes for				
G	* bends		nr		
H	* reducing bends		nr		
J	* tees		nr		
K	* reducing tees		nr		
L	* caps		nr		
M	* plugs		nr		
	<u>High pressure brass valves ; joints to</u> <u>copper pipes</u>				
	Drain valves				
N	* diameter		nr		
	Stop valves				
P	* diameter		nr		
	MODEL BILL OF DESCRIPTION				
	ASD STANDARD BILLS				
	MODBQ.16/2				
		To Collection	\$		

		<u>PLUMBING INSTALLATION</u>			
Item	Description	Qty	Unit	Rate	HK\$
	<u>COLD WATER ; INTERNALLY (Cont'd)</u>				
	<u>High pressure bronze valves ; joints to</u> <u>copper pipes</u>				
	Gate valves				
A	* diameter		nr		
	Check valves				
B	* diameter		nr		
	Ball float valves ; copper floats				
C	* diameter		nr		
	<u>High pressure cast iron valves ; joints to</u> <u>copper pipes</u>				
	Gate valves				
D	* diameter		nr		
	Check valves				
E	* diameter		nr		
	Ball float valves ; copper floats				
F	* diameter		nr		
	<u>Fibre-glass water tanks ; complete with</u> <u>valves, drains, vents, overflows, covers,</u> <u>supports, accessories and connections</u>				
	Water tanks ; stainless steel internal and external cat ladders				
G	* litres capacity		nr		
MODEL BILL OF DESCRIPTION		To Collection \$			
ASD STANDARD BILLS MODBQ.16/3					

				<u>PLUMBING INSTALLATION</u>	
Item	Description	Qty	Unit	Rate	HK\$
	<u>COLD WATER ; INTERNALLY (Cont'd)</u>				
	<u>Cold water pump sets ; direct driven by electric motors ; type-tested ; complete with cast iron / stainless steel Grade 316 / bronze# split casings ; stuffing boxes ; drain piping and all accessories ; centrifugal type ; volute casing ; as described in the Particular Specification and drawing nr. *</u>				
	Cold water pump sets				
A	water flow rate * l/s ; differential static pressure * kPa (ref. *)		nr		
	<u>Supplying and fixing ; *</u>				
	Ancillaries				
B	Chromium plated pillar taps as * ref. * ; screw down ; 13 diamter		nr		
C	Chromium plated bib taps as * ref. * ; screw down ; 13 diameter		nr		
D	Chromium plated mixer taps as * ref. * ; screw down ; 13 diameter		nr		
	<u>HOT WATER ; INTERNALLY</u>				
	<u>Copper pipes ; half hard temper ; BS EN 1057:2006+A1:2010 ; fittings ; BS EN 1254-1 to 5:1998 and BS EN 1254-6,8:2012 ; compression joints ; fixing with pipe brackets</u>				
	Pipes and fittings ; fixed to walls and columns				
E	* outside diameter		m		
	Pipes and fittings ; fixed to soffits				
F	* outside diameter		m		
	Pipes and fittings ; laid in chases				
G	* outside diameter		m		
MODEL BILL OF DESCRIPTION				To Collection	\$
ASD STANDARD BILLS MODBQ.16/4					

		<u>PLUMBING INSTALLATION</u>			
Item	Description	Qty	Unit	Rate	HK\$
	<u>HOT WATER ; INTERNALLY (Cont'd)</u>				
	Pipes and fittings ; embedded in in-situ concrete				
A	* outside diameter		m		
	Pipes and fittings ; embedded in screeds				
B	* outside diameter		m		
	Extra over pipes for				
C	* bends		nr		
D	* reducing bends		nr		
E	* tees		nr		
F	* reducing tees		nr		
G	* caps		nr		
H	* plugs		nr		
	<u>Medium pressure brass valves ; joints to copper pipes</u>				
	Drain valves				
J	* diameter		nr		
	Stop valves				
K	* diameter		nr		
	<u>Medium pressure bronze valves ; joints to copper pipes</u>				
	Gate valves				
L	* diameter		nr		
	<u>Insulation ; * ; * thick ; fixing with bands ; externally to</u>				
	Pipes and fittings ; copper				
M	* diameter		m		
MODEL BILL OF DESCRIPTION		To Collection \$			
ASD STANDARD BILLS MODBQ.16/5					

		<u>PLUMBING INSTALLATION</u>			
Item	Description	Qty	Unit	Rate	HK\$
	<u>HOT WATER ; INTERNALLY (Cont'd)</u>				
	<u>Insulation ; * x * ; fixing with bands ;</u> <u>externally to</u>				
	Extra over pipes for				
A	* bends		nr		
B	* reducing bends		nr		
C	* tees		nr		
D	* reducing tees		nr		
	Gate valves				
E	* diameter		nr		
	<u>Fibre-glass water tanks ; complete with</u> <u>valves, drains, vents, overflows, covers,</u> <u>supports, accessories and connections</u>				
	Water tanks ; stainless steel internal and external cat ladders				
F	* litres capacity		nr		
	<u>Hot water pump sets ; direct driven by</u> <u>electric motors ; type-tested ; complete</u> <u>with cast iron / stainless steel Grade 316</u> <u>/ bronze# split casings ; stuffing boxes ;</u> <u>drain piping and all accessories ;</u> <u>centrifugal type ; volute casing ; as</u> <u>described in the Particular Specification</u> <u>and drawing nr. *</u>				
	Hot water pump sets				
G	water flow rate * l/s ; differential static pressure * kPa (ref. *)		nr		
	<u>Supplying and fixing ; *</u>				
	Ancillaries				
H	Chromium plated pillar taps as * ref. * ; screw down ; 13 diameter		nr		
J	Chromium plated bib taps as * ref. * ; screw down ; 13 diameter		nr		
	MODEL BILL OF DESCRIPTION		To Collection	\$	
	ASD STANDARD BILLS MODBQ.16/6				

Item	Description	Qty	Unit	PLUMBING INSTALLATION	
				Rate	HK\$
	<u>HOT WATER ; INTERNALLY (Cont'd)</u>				
A	Chromium plated mixer taps as * ref. * ; screw down ; 13 diameter		nr		
	<u>FLUSHING WATER ; INTERNALLY</u>				
	<u>UPVC pipes ; BS 3505:1986 Class E ; fittings ; BS 4346-1:1969 ; solvent welded joints ; fixing with holderbats brackets or pipe clips</u>				
	Pipes and fittings ; fixed to walls and columns				
B	* diameter		m		
	Pipes and fittings ; fixed to soffits				
C	* diameter		m		
	Pipes and fittings ; laid in chases				
D	* diameter		m		
	Extra over pipes for				
E	* bends		nr		
F	* reducing bends		nr		
G	* tees		nr		
H	* reducing tees		nr		
	<u>High pressure PVC valves ; joints to plastic pipes</u>				
	Diaphragm or ball type drain valves				
J	* diameter		nr		
	Diaphragm or ball type stop valves				
K	* diameter		nr		
	<u>High pressure bronze valves ; joints to plastic pipes</u>				
	Gate valves				
L	* diameter		nr		
	MODEL BILL OF DESCRIPTION		To Collection	\$	
	ASD STANDARD BILLS MODBQ.16/7				

		<u>PLUMBING INSTALLATION</u>		
Item	Description	Qty	Unit	Rate HK\$
	<u>FLUSHING WATER ; INTERNALLY (Cont'd)</u>			
A	Check valves * diameter		nr	
B	Ball valves ; plastic floats * diameter		nr	
	<u>High pressure cast iron valves ; joints to plastic pipes</u>			
C	Ball valves ; epoxy coated copper floats * diameter		nr	
	<u>Fibre-glass water tanks ; complete with valves, drains, vents, overflows, covers, supports, accessories and connections</u>			
	Water tanks ; stainless steel internal and external cat ladders * litres capacity		nr	
	<u>Flushing water pump sets ; direct driven by electric motors ; type-tested ; complete with cast iron / stainless steel Grade 316 / bronze# split casings ; stuffing boxes ; drain piping and all accessories ; centrifugal type ; volute casing ; as described in the Particular Specification and drawing nr. *</u>			
E	Flushing water pump sets water flow rate * l/s ; differential static pressure * kPa (ref. *)		nr	
	<u>COLD WATER FOR FIRE SERVICES ; INTERNALLY</u>			
	<u>Galvanised mild steel pipes ; medium grade (minimum) ; BS EN 10255:2004, ISO 65:1981 / BS EN 10217-1:2002 ; fittings ; screwed joints ; fixing with holderbats brackets or pipe clips</u>			
F	Pipes and fittings ; fixed to walls and columns * diameter		m	
MODEL BILL OF DESCRIPTION		To Collection \$		
ASD STANDARD BILLS MODBQ.16/8				

		<u>PLUMBING INSTALLATION</u>			
Item	Description	Qty	Unit	Rate	HK\$
	<u>COLD WATER FOR FIRE SERVICES ; INTERNALLY</u> <u>(Cont'd)</u>				
	Pipes and fittings ; fixed to soffits				
A	* diameter		m		
	Extra over pipes for				
B	* bends		nr		
C	* reducing bends		nr		
D	* tees		nr		
E	* reducing tees		nr		
	<u>High pressure cast iron valves ; joints to</u> <u>galvanised steel</u>				
	Gate valves				
F	* diameter		nr		
	Check valves				
G	* diameter		nr		
	Ball float valves ; copper floats				
H	* diameter		nr		
	<u>Fibre-glass water tanks ; complete with</u> <u>valves, drains, vents, overflows, covers,</u> <u>supports, accessories and connections</u>				
	Water tanks ; stainless steel internal and external cat ladders				
J	* litres capacity		nr		
		To Collection \$			

		<u>PLUMBING INSTALLATION</u>			
Item	Description	Qty	Unit	Rate	HK\$
	<u>COLD WATER FOR FIRE SERVICES ; INTERNALLY</u> <u>(Cont'd)</u>				
	<u>Cold water pump sets ; direct driven by</u> <u>electric motors ; type-tested ; complete</u> <u>with cast iron / stainless steel Grade 316</u> <u>/ bronze# split casings ; stuffing boxes ;</u> <u>drain piping and all accessories ;</u> <u>centrifugal type ; volute casing ; as</u> <u>described in the Particular Specification</u> <u>and drawing nr. *</u>				
	Cold water pump sets				
A	water flow rate * l/s ; differential static pressure * kPa (ref. *)		nr		
	<u>ELECTRICITY SUPPLY ; INTERNALLY, IN PLANT</u> <u>ROOM AND EXTERNALLY</u>				
	<u>Moulded case circuit breaker (MCCB)</u> <u>distribution boards ; rust proofed sheet</u> <u>metal construction ; IEC 61439-1:2011, IEC</u> <u>61439-2:2011 ; ingress protection IP41 ;</u> <u>spare ways provision ; Type A ; busbars ;</u> <u>integral main isolating switches (MCCBs</u> <u>measured separately)</u>				
	MCCB distribution boards ; triple-pole ; rated short circuit withstand current not less than * kA ; fixed to walls and columns				
B	* way ; * A		nr		
C	blanking plates for spare ways		nr		
	<u>Moulded case circuit breakers (MCCBs)</u>				
	MCCBs ; * pole ; IEC 60947-2:2013, IP30 protection ; rated short circuit breaking capacity not less than * kA ; facility for padlocking ; fixed in distribution boards				
D	* A		nr		
	MCCBs ; * pole ; IEC 60947-2, :2013, IP30 protection ; rated short circuit breaking capacity not less than * kA ; facility for padlocking ; fixed to walls and columns				
E	* A		nr		
	MODEL BILL OF DESCRIPTION		To Collection	\$	
	ASD STANDARD BILLS MODBQ.16/10				

		<u>PLUMBING INSTALLATION</u>			
Item	Description	Qty	Unit	Rate	HK\$
	<u>ELECTRICITY SUPPLY ; INTERNALLY, IN PLANT ROOM AND EXTERNALLY (Cont'd)</u>				
	<u>Variable speed drives (VSDs), IEC 60068-2-6:2007, IEC 60068-2-27:2008, IEC 61000-4-2:2008, IEC 61000-4-3:2010, IEC 61000-4-4:2012, IEC 61000-4-5:2014 and ISO 9001:2015 ; housed in integrated enclosure, single front-access</u>				
	For pumps				
A	* kW		nr		
	<u>Switches, switchfuses, fuseswitches ; IEC 60947-3:2015 ; air-break type contracts</u>				
	Switches ; TPN ; for MCCB boards ; fixed to walls and columns				
B	* A		nr		
	Fuseswitches ; TPN ; for equipment ; fixed to walls and columns				
C	* A		nr		
	<u>Motor starters ; air-break triple-pole electro-magnetic type, IEC 60947-4-1:2009 or IEC 62271-106:2011/CORR 1:2014</u>				
	Direct on line (DOL) starters				
D	* A ; to suit cold water / hot water / flushing water / cleansing water / rainwater harvesting, etc. pumps (ref. *)		nr		
	Star-delta starters				
E	* A ; to suit cold water / hot water / flushing water / cleansing water / rainwater harvesting, etc. pumps (ref. *)		nr		
				To Collection \$	

PLUMBING INSTALLATION

Item	Description	Qty	Unit	Rate	HK\$
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ELECTRICITY SUPPLY ; INTERNALLY, IN PLANT ROOM AND EXTERNALLY (Cont'd)

Final circuits ; approved power supply cables ; drawn into and including conduit / trunking ; all necessary cabling facilities ; fixing and earth continuity

From fused spur units / isolators (ref. *)

A * x * mm2 ; * core cables ; to cold water / hot water / flushing water / cleansing water / rainwater harvesting, etc. local control panel (ref. *)

nr

From cold water / hot water / flushing water / cleansing water / rainwater harvesting, etc. local control panel (ref. *)

B * x * mm2 ; * core cables ; to cold water / hot water / flushing water / cleansing water / rainwater harvesting, etc. pumps (ref. *)

nr

PLUMBING INSTALLATION

Item

Description

Qty

Unit

Rate

HK\$

CONTROL SYSTEM - AUTOMATIC CONTROL SYSTEM
(ACS) ; INTERNALLY, IN PLANT ROOM AND
EXTERNALLY

Control panels, hairline finished
stainless steel construction ; complete
with indicating lights, ammeters, gauges,
control switches, motor starters,
contactors (motor starters and contactors
measured separately), push buttons, alarm
chimes, alarm indicating lights ; alarm
mute buttons, control wiring ; flush
galvanised iron supports and accessories
and other necessary equipment to enable
remote operation and monitoring of all
plumbing equipment ; connection to power
source ; all other necessary instrument
and accessories ; as described in the
Particular Specification and drawing nr. *

* thick local control panel ; floor
 mounted type

A located in * room ; cold water /
 hot water / flushing water /
 cleansing water / rainwater
 harvesting, etc. pumps control
 panel (ref. *)

nr

PLUMBING INSTALLATION

Item	Description	Qty	Unit	Rate	HK\$
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CONTROL SYSTEM - AUTOMATIC CONTROL SYSTEM (ACS) ; INTERNALLY, IN PLANT ROOM AND EXTERNALLY (Cont'd)

Steel control panels, factory built assemblies, self supporting and framing, IP41 protection ; to BS EN 61439-1:2011 and BS EN 61439-2:2011 ; complete with LED indicating lamps, digital multifunction power meter, relays, timers, selectors, control switches, motor starters, contactors (motor starters and contactors measured separately), control wiring and other necessary equipment to enable remote operation and monitoring of all plumbing equipment ; connection to power source ; all other necessary instrument and accessories ; as described in the Particular Specification and drawing nr. *

* thick local control panel ; wall mounted type

A located in * room ; cold water / hot water / flushing water / cleansing water / rainwater harvesting, etc. pumps control panel (ref. *)

nr

Steel control panels, type tested cubicle ; to BS EN 61439-1:2011 and BS EN 61439-2:2011 ; complete with indicating lamps, ammeters, voltmeters, relays, timers, selectors, control switches, motor starters, contactors (motor starters and contactors measured separately), fire resistant cables, control wiring and other necessary equipment to enable remote operation and monitoring of all plumbing equipment ; all other necessary instrument and accessories ; as described in the Particular Specification and drawing nr. *

* thick control panels ; wall mounted type






B located in * room ; cold water / hot water / flushing water / cleansing water / rainwater harvesting, etc. pumps control panel (ref. *)

nr

				<u>PLUMBING INSTALLATION</u>	
Item	Description	Qty	Unit	Rate	HK\$
	<u>CONTROL SYSTEM - AUTOMATIC CONTROL SYSTEM</u> <u>(ACS) ; INTERNALLY, IN PLANT ROOM AND</u> <u>EXTERNALLY (Cont'd)</u> <u>Electrical control circuits ; associated</u> <u>with plumbing equipment ; connections to</u> <u>control panels (control panels measured</u> <u>separately) ; interconnecting wiring,</u> <u>cables, conduits, cabling facilities ;</u> <u>relays, contactors, sensors and control</u> <u>devices ; all necessary instrument and</u> <u>accessories</u> From cold water / hot water / flushing water / cleansing water / rainwater harvesting, etc. pump local control panel (ref. *)				
A	to cold water / hot water / flushing water / cleansing water / rainwater harvesting, etc. pumps (ref. *)		nr		
	<u>EXTERNAL SERVICES</u>				
	<u>Note :</u>				
B	Excavation works for the same have been measured in Bill Nr. xx - External Works				
	<u>Cold water</u>				
	UPVC pipes ; BS EN ISO 1452-2:2009 series S8 (SDR 17) PN 12.5 ; fittings ; BS 4346-1:1969 ; solvent welded joints ; laying in trenches				
C	* diameter		m		
D	extra over pipes for * bends		nr		
	Galvanised steel pipes and fittings ; screwed joints ; laying in trenches				
E	* diameter		m		
F	extra over pipes for * bends		nr		
	MODEL BILL OF DESCRIPTION				
	ASD STANDARD BILLS MODBQ.16/15				
				To Collection \$	

		<u>PLUMBING INSTALLATION</u>			
Item	Description	Qty	Unit	Rate	HK\$
<u>EXTERNAL SERVICES (Cont'd)</u>					
A	High pressure PVC valves ; joints to plastic pipes diaphragm or ball type stop valves ; * diameter		nr		
B	High pressure cast iron valves ; joints to galvanised steel pipes gate valves ; * diameter		nr		
C	Pipe protection ; protective petroleum based tape ; wrapping around galvanised steel pipes and fittings * diameter		m		
D	Pipe protection ; protective petroleum based tape ; wrapping around plastic pipes and fittings * diameter		m		
<u>PLUMBING INSTALLATION SUNDRIES ;</u> <u>INTERNALLY, IN PLANT ROOM AND EXTERNALLY</u>					
<u>The following items are in respect of the whole of Plumbing Installation</u>					
Allow for					
E	marking the positions of holes, mortices, chases and the like in the structure	-	item	-	
F	inspection, testing and commissioning of the complete Plumbing Installation ; with and including cleansing and disinfection of plumbing installation for potable use for commissioning, testing of quality of water, and re-disinfection as necessary ; remedying any defects ; re-testing as necessary ; all as described in the Particular Specification and Part D of the General Specification for Plumbing Installation	-	item	-	
MODEL BILL OF DESCRIPTION				To Collection	\$
ASD STANDARD BILLS				MODBQ.16/16	

				<u>PLUMBING INSTALLATION</u>	
Item	Description	Qty	Unit	Rate	HK\$
<u>PLUMBING INSTALLATION SUNDRIES ;</u>					
<u>INTERNALLY, IN PLANT ROOM AND EXTERNALLY</u>					
<u>(Cont'd)</u>					
A	inspection, attendance, operation and maintenance of the complete Plumbing Installation during Maintenance Period ; all as described in the Particular Specification, Section E1 and E3 of the General Specification for Plumbing Installation	-	item	-	-
B	providing all necessary power and water, diesel, gas and fuels in connection with testing, commissioning and maintenance	-	item	-	-
C	providing installation drawings ; all as described in the Particular Specification and Section A4.2 of the General Specification for Plumbing Installation	-	item	-	-
D	providing as-built drawings ; all as described in the Particular Specification and Section A4.3 of the General Specification for Plumbing Installation	-	item	-	-
E	providing Operation and Maintenance (O&M) Manuals and User Manuals ; all as described in the Particular Specification and Section A4.4 of the General Specification for Plumbing Installation	-	item	-	-
F	providing training to Employer's staff as described in the Particular Specification, Section E1 and E2 of the General Specification for Plumbing Installation	-	item	-	-
G	providing sample boards ; all as described in Section A3.8 of the General Specification for Plumbing Installation	-	item	-	-
MODEL BILL OF DESCRIPTION				To Collection	\$
ASD STANDARD BILLS				MODBQ.16/17	

				<u>PLUMBING INSTALLATION</u>	
Item	Description	Qty	Unit	Rate	HK\$
<u>PLUMBING INSTALLATION SUNDRIES ;</u>					
<u>INTERNALLY, IN PLANT ROOM AND EXTERNALLY</u>					
<u>(Cont'd)</u>					
A	supplying pipe sleeves (sleeves fixing by others) and filling holes so formed in walls, floors and ceilings with approved packing materials as described	-	item	-	
B	supplying conduit sleeves (sleeves fixing by others) and filling holes so formed in walls, floors and ceilings with approved packing materials as described	-	item	-	
C	supplying cable sleeves (sleeves fixing by others) and filling holes so formed in walls, floors and ceilings with approved packing materials as described	-	item	-	
D	supplying and fixing fire stopping to walls and floors	-	item	-	
				To Collection	\$ 

C O L L E C T I O N

Item

Description

HK\$

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Bill Nr. MODBQ.16 - PLUMBING INSTALLATION

To Summary

\$

Bill Nr. MODBQ.17

SANITARY FITTINGS AND ABOVE GROUND DRAINAGE SYSTEMS

Item	Description	Qty	Unit	Rate	HK\$
	<u>NOTE :</u>				
A	This Bill is to be read in conjunction with the relevant Preambles clauses under Mechanical Installation. In particular, the Contractor shall note that all painting on pipework and colour identification are deemed to be included in the rates of pipework.				
	<u>SOIL, WASTE, VENTILATION AND RAINWATER PIPES ; INTERNALLY</u>				
	<u>UPVC rainwater pipes and fittings ; BS 5255:1989 ; push-fit joints with rubber or neoprene seals ; fixing with pipe brackets</u>				
	Pipes and fittings ; fixed to walls and columns				
B	* diameter		m		
	Pipes and fittings ; fixed to soffits				
C	* diameter		m		
	Extra over pipes for				
D	* shoes		nr		
E	* bends		nr		
F	* single branch junctions		nr		
G	* double branch junctions		nr		
H	socket adaptors on * pipes		nr		
J	* drain adaptors		nr		
K	cleaning eyes on * pipes		nr		

SANITARY FITTINGS AND ABOVE GROUND DRAINAGE SYSTEMS

Item	Description	Qty	Unit	Rate	HK\$
	<u>SOIL, WASTE, VENTILATION AND RAINWATER</u> <u>PIPES ; INTERNALLY (Cont'd)</u>				
	<u>UPVC soil and ventilating pipes and</u> <u>fittings ; BS 5255:1989 ; solvent welded</u> <u>joints ; fixing with pipe brackets</u>				
	Pipes and fittings ; fixed to walls and columns				
A	* diameter		m		
	Pipes and fittings ; fixed to soffits				
B	* diameter		m		
	Extra over pipes for				
C	* bends		nr		
D	* bends with access door		nr		
E	* single branch junctions		nr		
F	* double branch junctions		nr		
G	* boss connectors		nr		
H	access doors on * pipes		nr		
J	socket adaptors on * pipes		nr		
K	* drain adaptors		nr		
	Roof and floor outlets and the like				
L	* ; flat gratings ; chromium plated ; vertical spigots		nr		
	Traps				
M	plastic traps as * ref. * ; "P" trap ; * seal ; * diameter		nr		
				To Collection \$	

SANITARY FITTINGS AND ABOVE GROUND DRAINAGE SYSTEMS

Item	Description	Qty	Unit	Rate	HK\$
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SOIL, WASTE, VENTILATION AND RAINWATER PIPES ; IN PLANT ROOM

UPVC rainwater pipes and fittings ; BS 5255:1989 ; push-fit joints with rubber or neoprene seals ; fixing with pipe brackets

Pipes and fittings ; fixed to walls and columns

A	* diameter		m		
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Pipes and fittings ; fixed to soffits

B	* diameter		m		
---	------------	--	---	--	--

Extra over pipes for

C	* shoes		nr		
---	---------	--	----	--	--

D	* bends		nr		
---	---------	--	----	--	--

E	* single branch junctions		nr		
---	---------------------------	--	----	--	--

F	* double branch junctions		nr		
---	---------------------------	--	----	--	--

G	socket adaptors on * pipes		nr		
---	----------------------------	--	----	--	--

H	* drain adaptors		nr		
---	------------------	--	----	--	--

J	cleaning eyes on * pipes		nr		
---	--------------------------	--	----	--	--

Flush device

First flush device

K	to suit * diameter pipes		nr		
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Filters

Vortex filters

L	to suit * diameter pipes		nr		
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SANITARY FITTINGS AND ABOVE GROUND DRAINAGE SYSTEMS

Item	Description	Qty	Unit	Rate	HK\$
	<u>SOIL, WASTE, VENTILATION AND RAINWATER</u> <u>PIPES ; EXTERNALLY</u>				
	<u>UPVC rainwater pipes and fittings ; BS</u> <u>5255:1989 ; push-fit joints with rubber or</u> <u>neoprene seals ; fixing with pipe brackets</u>				
	Pipes and fittings ; fixed to walls and columns				
A	* diameter		m		
	Pipes and fittings ; fixed to soffits				
B	* diameter		m		
	Extra over pipes for				
C	* shoes		nr		
D	* bends		nr		
E	* single branch junctions		nr		
F	* double branch junctions		nr		
G	access doors on * pipes		nr		
H	socket adaptors on * pipes		nr		
J	* drain adaptors		nr		
	Rainwater heads ; fixed to walls and columns				
K	* x * x *		nr		
L	* diameter x *		nr		
	Aprons and cowls				
M	* weathering aprons for asphalt roof		nr		
	Roof and floor outlets and the like				
N	* flat roof outlets ; domical gratings ; chromium plated ; vertical spigots		nr		
	MODEL BILL OF DESCRIPTION		To Collection	\$	
	ASD STANDARD BILLS MODBQ.17/4				

SANITARY FITTINGS AND ABOVE GROUND DRAINAGE SYSTEMS

Item	Description	Qty	Unit	Rate	HK\$	
<u>SOIL, WASTE, VENTILATION AND RAINWATER</u>						
<u>PIPES ; EXTERNALLY (Cont'd)</u>						
A	* flat roof side outlets ; flat gratings ; chromium plated ; horizontal spigots		nr			
B	* balcony outlets ; flat gratings ; chromium plated ; vertical spigots		nr			
Gratings to outlets and rainwater heads and the like						
C	wire balloon gratings for * pipes ; copper		nr			
Traps						
D	plastic traps as * ref. * ; "P" trap ; * seal ; * diameter		nr			
<u>UPVC soil and ventilating pipes and fittings ; BS 5255:1989 ; solvent welded joints ; fixing with pipe brackets</u>						
Pipes and fittings ; fixed to walls and columns						
E	* diameter		m			
Pipes and fittings ; fixed to soffits						
F	* diameter		m			
Extra over pipes for						
G	* bends		nr			
H	* bends with access door		nr			
J	* single branch junctions		nr			
K	* double branch junctions		nr			
L	* boss connectors		nr			
M	access doors on * pipes		nr			
N	socket adaptors on * pipes		nr			
P	* drain adaptors		nr			
MODEL BILL OF DESCRIPTION					To Collection \$	
ASD STANDARD BILLS MODBQ.17/5						

SANITARY FITTINGS AND ABOVE GROUND DRAINAGE SYSTEMS

Item	Description	Qty	Unit	Rate	HK\$
<u>SOIL, WASTE, VENTILATION AND RAINWATER</u>					
<u>PIPES ; EXTERNALLY (Cont'd)</u>					
	Heads ; fixed to walls and columns				
A	* x * x *		nr		
B	* diameter x *		nr		
	Aprons and cowls				
C	* weathering aprons for asphalt roof		nr		
D	* vent cowls		nr		
	Gratings to outlets, heads, end of pipes and the like				
E	wire balloon gratings for * pipes ; copper		nr		
<u>GUTTERS ; EXTERNALLY</u>					
<u>Plastic eaves gutters and fittings ; BS 5255:1989 ; push-fit joints with rubber or neoprene seals ; fixing with pipe brackets</u>					
	Half round gutters ; fixed to walls and columns				
F	* diameter ; straight		m		
	Extra over gutters for				
G	* angles		nr		
H	* stopped ends		nr		
J	* outlets		nr		
K	* stopped end outlets		nr		
<u>SANITARY FITTINGS ; INTERNALLY</u>					
<u>Collecting from Government Logistics Department and FIXING ONLY</u>					
	Vitreous china wash basins				
L	560 x 405 ; taps ; waste fittings, plug and chain ; traps ; centre bracket and hangers ; painting		nr		
MODEL BILL OF DESCRIPTION				To Collection \$	
ASD STANDARD BILLS		MODBQ.17/6			

SANITARY FITTINGS AND ABOVE GROUND DRAINAGE SYSTEMS

Item	Description	Qty	Unit	Rate	HK\$
<u>SANITARY FITTINGS ; INTERNALLY (Cont'd)</u>					
	Fireclay sinks				
A	610 x 455 x 255 ; taps ; waste fittings, plug and chain ; traps ; cantilever brackets ; painting		nr		
	Vitreous enamelled steel baths				
B	1700 x 700 x 380 ; taps ; waste fittings, plug and chain ; traps		nr		
	Glazed ceramic shower tray				
C	* x * ; waste fittings ; traps		nr		
	W.C. suites				
D	vitreous china W.C. pans ; European ; horizontal outlets ; * litres vitreous china low level cisterns and fittings ; traps ; plastic W.C. seats and covers		nr		
	Urinals				
E	vitreous china urinal bowls ; concealed hangers ; spreaders ; outlets gratings ; waste fittings		nr		
F	vitreous china divisions ; concealed hangers		nr		
G	cisterns ; syphons ; brackets ; petcocks ; * litres		nr		
	Shower suites				
H	chromium plated shower fittings ; type "*" ; exposed riser pipes		nr		
J	chromium plated shower fittings ; type "*" ; concealed riser pipes		nr		
	Macerators				
K	* x * x *		nr		
MODEL BILL OF DESCRIPTION					To Collection \$
ASD STANDARD BILLS					MODBQ.17/7

SANITARY FITTINGS AND ABOVE GROUND DRAINAGE SYSTEMS

Item	Description	Qty	Unit	Rate	HK\$
<u>SANITARY FITTINGS ; INTERNALLY (Cont'd)</u>					
Ancillaries					
A	chromium plated combined waste and overflow fittings ; plug, chain and stay ; * diameter		nr		
B	chromium plated pillar taps ; self closing ; cold ; * diameter		nr		
C	chromium plated bib taps ; screw down ; cold ; * diameter		nr		
D	plastic bottle traps ; "S" trap ; * diameter		nr		
Toilet fittings					
E	chromium plated toilet roll holders		nr		
F	chromium plated towel rails ; * diameter ; * long		nr		
G	chromium plated washing cream dispensers		nr		
H	chromium plated shelf guard rails ; 535 x 125		nr		
J	chromium plated robe hooks ; single		nr		
Cisterns and tanks					
K	galvanised steel cisterns ; * x * x * ; capacity * litres		nr		
L	covers and frames ; * x * clear opening ; weighing approximately * kg ; bedding and haunching frame in cement mortar ; sealing covers in grease		nr		
<u>Supplying and fixing ; *</u>					
Vitreous china wash basins as * ; self rimming					
M	* x * ; ref. * ; *		nr		
MODEL BILL OF DESCRIPTION				To Collection \$	
ASD STANDARD BILLS MODBQ.17/8					

SANITARY FITTINGS AND ABOVE GROUND DRAINAGE SYSTEMS

Item	Description	Qty	Unit	Rate	HK\$
<u>SANITARY FITTINGS ; INTERNALLY (Cont'd)</u>					
A	<p> painted concealed brackets ; ref. *</p> <p>Fireclay sinks as * ; bucket grating</p>		nr		
B	<p> * x * x * ; *</p> <p>Vitreous enamelled steel baths as * ; side panel ; slip resistant pad</p>		nr		
C	<p> * x * x * ; *</p> <p>W.C. suites</p>		nr		
D	<p> vitreous china W.C. pans as * ref. * ; European ; pedestal type ; vertical outlets</p>		nr		
E	<p> vitreous china W.C. pans as * ref. * ; Asiatic ; squatting treads ; vertical outlets</p>		nr		
F	<p> vitreous china cisterns and fittings as * ref. * ; low level ; * litres ; valveless syphonic fittings ; overflow ; brackets ; plastic flush pipes</p>		nr		
G	<p> plastic W.C. seats with cover ; black ; gap front</p> <p>Urinals</p>		nr		
H	<p> vitreous china wall type urinal bowls as * ref. * ; concealed hangers ; spreaders ; outlet gratings ; waste fittings</p>		nr		
J	<p> vitreous china urinal stalls as * ref. * ; L-shaped on plan ; in single range ; spreaders ; outlet gratings ; waste fittings ; * long x * high</p>		nr		
K	<p> vitreous china divisions as * ref. * ; * x * ; concealed hangers</p>		nr		
L	<p> vitreous china automatic flushing cisterns ; syphons ; chromium plated petcocks as * ref. * ; * litres</p>		nr		
MODEL BILL OF DESCRIPTION				To Collection \$	
ASD STANDARD BILLS MODBQ.17/9					

SANITARY FITTINGS AND ABOVE GROUND DRAINAGE SYSTEMS

Item	Description	Qty	Unit	Rate	HK\$
<u>SANITARY FITTINGS ; INTERNALLY (Cont'd)</u>					
A	chromium plated flush pipes ; exposed ; to suit range of * urinals		nr		
B	enamelled fireclay raised floor treads ; * wide x * high ; black vitreous non-slip tiles		m		
Chromium plated shower fittings					
C	shower suites as * ref. * ; swivel heads with adjustable spray ; hot and cold mixer taps ; concealed riser pipes		nr		
Stainless steel sinks ; satin finish ; single bowl ; single drainer ; back skirting ; overflow ; plug, chain and stay ; brackets					
D	* x *		nr		
Ancillaries					
E	chromium plated waste fittings as * ref. * ; plug and chain ; 32 diameter		nr		
F	chromium plated pop up waste fittings as * ref. * ; plug and chain ; 32 diameter		nr		
G	chromium plated pillar taps as * ref. * ; screw down ; 13 diameter		nr		
H	chromium plated bib taps as * ref. * ; screw down ; 13 diameter		nr		
J	chromium plated mixer taps as * ref. * ; screw down ; 13 diameter		nr		
K	plastic bottle traps as * ref. * ; "P" trap ; * seal ; * diameter		nr		
L	plastic traps as * ref. * ; "S" trap ; * seal ; * diameter		nr		
M	plastic bath traps with combined flexible overflow as * ref. * ; "P" trap ; * seal ; * diameter		nr		
MODEL BILL OF DESCRIPTION				To Collection \$	
ASD STANDARD BILLS MODBQ.17/10					

SANITARY FITTINGS AND ABOVE GROUND DRAINAGE SYSTEMS

Item	Description	Qty	Unit	Rate	HK\$
<u>SANITARY FITTINGS ; INTERNALLY (Cont'd)</u>					
Toilet fittings					
A	chromium plated toilet roll holders as * ref. *		nr		
B	enamelled soap dishes as * ref. *		nr		
C	chromium plated tumbler and toothpaste holders as * ref. *		nr		
D	chromium plated washing cream dispensers as * ref. *		nr		
Cisterns and cylinders					
E	galvanised steel cisterns and covers ; * x * x * ; capacity * litres ; hand holes		nr		
F	galvanised steel cylinders ; * diameter x * high ; capacity * litres ; side entry immersion heater		nr		
G	insulation ; * ; * thick ; externally to cylinders ; * diameter x * ; hot face temperature * degrees		nr		
<u>SUNDRIES - INTERNALLY, IN PLANT ROOM AND EXTERNALLY</u>					
<u>The following items in respect of the whole of Sanitary Fittings and Above Ground Drainage Systems</u>					
Allow for					
H	marking the positions of holes, mortices, chases and the like in the structure	-	item	-	
MODEL BILL OF DESCRIPTION				To Collection	\$
ASD STANDARD BILLS				MODBQ.17/11	

SANITARY FITTINGS AND ABOVE GROUND DRAINAGE SYSTEMS

Item	Description	Qty	Unit	Rate	HK\$	
<u>SUNDRIES - INTERNALLY, IN PLANT ROOM AND EXTERNALLY (Cont'd)</u>						
A	testing and commissioning of the complete Sanitary Fittings and Above Ground Drainage Systems ; remedying any defects ; re-testing as necessary ; all in accordance with General Specification for Plumbing Installation, General Specification for Drainage Installation, Particular Specification, Testing and Commissioning Procedure for Plumbing Installation, Testing and Commissioning Procedure for Drainage Installation	-	item	-		
B	providing * copies of as-built drawings of all Installations ; marking on pipe sizes, valve positions, draw off points, pressure valve positions and settings and any other relevant information	-	item	-		
C	supplying and fixing pipes sleeves and packing for pipes passing through walls or floors in accordance with General Specification for Plumbing Installation clause B1.6.1 and General Specification for Drainage Installation clause B1.6.1	-	item	-		
D	supplying and fixing pipes sleeves and packing for pipes passing through fire rated walls or floors in accordance with General Specification for Plumbing Installation clause B1.6.2 and General Specification for Drainage Installation clause B1.6.2	-	item	-		
E	supplying and fixing pipes sleeves and packing for pipes passing through external basement walls in accordance with General Specification for Plumbing Installation clauses B1.6.3 and B1.6.4, and General Specification for Drainage Installation clauses B1.6.3 and B1.6.4	-	item	-		
MODEL BILL OF DESCRIPTION		To Collection \$				
ASD STANDARD BILLS MODBQ.17/12						

SANITARY FITTINGS AND ABOVE GROUND DRAINAGE SYSTEMS

Item	Description	Qty	Unit	Rate	HK\$
<u>SUNDRIES - INTERNALLY, IN PLANT ROOM AND EXTERNALLY (Cont'd)</u>					
A	supplying and fixing pipes sleeves and packing for pipes passing through flat roofs in accordance with General Specification for Plumbing Installation clause B1.6.5 and General Specification for Drainage Installation clause B1.6.5	-	item	-	
B	supplying and fixing fire stopping or fire collars ; as * for plastic pipes passing through fire rated walls and floors to achieve * hour fire resistance rating	-	item	-	
C	supplying and fixing fire stopping or fire collars ; as * for plastic pipes passing through fire rated walls and floors *	-	item	-	
MODEL BILL OF DESCRIPTION				To Collection \$	
ASD STANDARD BILLS MODBQ.17/13					

SANITARY FITTINGS AND ABOVE GROUND DRAINAGE SYSTEMS

C O L L E C T I O N

Item

Description

HK\$

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Bill Nr.	MODBQ.17 - SANITARY FITTINGS AND ABOVE GROUND DRAINAGE SYSTEMS		
To Summary			\$

Bill Nr. MODBQ.18

GLAZING

Item	Description	Qty	Unit	Rate	HK\$
	<u>GENERAL GLAZING (INCLUDING ACRYLIC AND POLYCARBONATE SHEETS)</u>				
	<u>Clear sheet glass</u>				
	* thick ; to wood with sprigs and linseed oil putty ; front and back bedded				
A	panes not exceeding 0.15 m2		m2		
B	panes 0.15 - 4.00 m2		m2		
C	panes exceeding 4.00 m2		m2		
	* thick ; to wood with wood beads or mouldings and plastic glazing strips or the like				
D	panes not exceeding 0.15 m2		m2		
E	panes 0.15 - 4.00 m2		m2		
F	panes exceeding 4.00 m2		m2		
	* thick ; to metal with metal beads or mouldings and approved proprietary brand non-setting compound				
G	panes not exceeding 0.15 m2		m2		
H	panes 0.15 - 4.00 m2		m2		
J	panes exceeding 4.00 m2		m2		
	<u>Clear float glass</u>				
	* thick ; to wood with wood beads or mouldings and plastic glazing strips or the like				
K	panes not exceeding 0.15 m2		m2		
L	panes 0.15 - 4.00 m2		m2		
M	panes exceeding 4.00 m2		m2		

<u>GLAZING</u>					
Item	Description	Qty	Unit	Rate	HK\$
<u>GENERAL GLAZING (INCLUDING ACRYLIC AND POLYCARBONATE SHEETS) (Cont'd)</u>					
* thick ; to metal with metal beads or mouldings and approved proprietary brand non-setting compound					
A	panes not exceeding 0.15 m2		m2		
B	panes 0.15 - 4.00 m2		m2		
C	panes exceeding 4.00 m2		m2		
* thick ; to *					
D	louvres * wide ; * finish to edges (In Nr. O)		m		
<u>Cast glass</u>					
* thick ; to wood with wood beads or mouldings and plastic glazing strips or the like					
E	panes not exceeding 0.15 m2		m2		
F	panes 0.15 - 4.00 m2		m2		
G	panes exceeding 4.00 m2		m2		
* thick ; to metal with wood beads or mouldings and approved proprietary brand non-setting compound					
H	panes not exceeding 0.15 m2		m2		
J	panes 0.15 - 4.00 m2		m2		
K	panes exceeding 4.00 m2		m2		
L	grinding ; surfaces of glass, partly obscured		m2		
M	sandblasting ; surfaces of bent glass		m2		
N	embossing ; surfaces of glass ; * x * ; symbols ; as drawing nr. *		nr		
P	engraving ; surfaces of glass ; * x * ; Chinese characters ; as drawing nr. *		nr		
MODEL BILL OF DESCRIPTION					To Collection \$
ASD STANDARD BILLS MODBQ.18/2					

Item	Description	Qty	Unit	Rate	GLAZING HK\$
<u>GENERAL GLAZING (INCLUDING ACRYLIC AND POLYCARBONATE SHEETS) (Cont'd)</u>					
A	polishing ; plain edges of glass <u>Wired polished glass</u> * thick ; to metal with metal beads or mouldings and approved proprietary brand non-setting compound		m		
B	panes not exceeding 0.15 m2		m2		
C	panes 0.15 - 4.00 m2		m2		
D	panes exceeding 4.00 m2		m2		
<u>GLASS WALL LININGS, FLOORS, BALUSTRADES AND RAILINGS</u>					
<u>Clear float glass ; fully tempered</u>					
Squash court armoured glass wall system ; * thick ; including all necessary mullions, fixings, framings, neoprene strips, sealant pointing, cement and sand packing and ironmongery to doors ; fixing strictly in accordance with the manufacturer's instructions ; as drawing nr. *					
E	approximate overall size * x * high ; with * nr. doors ; * x * high	-	item	-	
Mirror wall linings ; * thick ; mitres at corners ; plugging and screwing to walls ; sealing joints with approved sealant					
F	in panels ; * girth x * high (overall)		m2		
Glass balustrades ; * thick ; galvanised steel to BS EN 10025 grade * fixing trough at bottom, all supporting metalwork, structural sealant joints and rounded edges at exposed edges					
G	* (overall) high		m		
MODEL BILL OF DESCRIPTION					To Collection \$
ASD STANDARD BILLS MODBQ.18/3					

Item

Description

Qty

Unit

Rate

HK\$

MIRRORS, GLASS SHELVES AND SUNDRY GLAZING WORKS

Clear float glass

* thick ; placing on and including shelf brackets and supports ; with * chromium plated brass dome headed screws and rubber washers

A shelves ; 150 x 600 ; bevelling edges

nr

Selected clear float glass ; silvering and protecting with undercoat paint

* thick ; to walls ; with * chromium plated brass dome headed screws and rubber washers

B mirrors ; 450 x 450 ; bevelling edges

nr

C mirrors ; 600 x 600 ; square edges

nr

Domelights ; ref. *

Type * ; * shape ; * thick wired cast glass

D overall size ; * x * ; fixing with * ; to concrete curbs

nr

C O L L E C T I O N

Item

Description

HK\$

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Bill Nr. MODBQ.18 - GLAZING

To Summary

\$



Bill Nr. MODBQ.19

PAINTING

Item Description Qty Unit Rate HK\$

PAINTING

Applying two coats of cement paint ; on

Concrete walls and columns

A over 300 girth m2

Fair faced concrete walls and columns

B over 300 girth m2

Rendered walls and columns

C over 300 girth m2

Concrete ceilings and beams

D over 300 girth m2

E over 300 girth ; 3.50 - 5.00m
above floor level m2

Fair faced concrete ceilings and beams

F over 300 girth m2

G over 300 girth ; 3.50 - 5.00m
above floor level m2

Rendered ceilings and beams

H over 300 girth m2

J over 300 girth ; 3.50 - 5.00m
above floor level m2

Applying one coat water based lime
resistant primer and two full coats of
emulsion paint ; on

Fair faced concrete walls and columns

K over 300 girth m2

Item	Description	Qty	Unit	Rate	PAINTING HK\$
<u>PAINTING (Cont'd)</u>					
A	Plastered walls and columns over 300 girth		m2		
B	Fair faced concrete ceilings and beams over 300 girth		m2		
C	over 300 girth ; 3.50 - 5.00m above floor level		m2		
D	Plastered ceilings and beams over 300 girth		m2		
E	over 300 girth ; 3.50 - 5.00m above floor level		m2		
<u>Applying painting system Type A as General Specification for Building Table 15.7 ; on structural steel</u>					
F	General surfaces over 300 girth		m2		
G	not exceeding 300 girth		m		
Members of roof trusses and lattice steelwork					
H	over 300 girth		m2		
J	not exceeding 300 girth		m		
<u>Applying rust inhibitor, one coat primer only ; on metal ; before fixing</u>					
K	General surfaces over 300 girth		m2		
L	not exceeding 300 girth		m		
Individual members of balustrades, fencing, railings and the like					
M	over 300 girth		m2		
N	not exceeding 300 girth		m		
MODEL BILL OF DESCRIPTION					To Collection \$
ASD STANDARD BILLS MODBQ.19/2					

Item	Description	Qty	Unit	Rate	HK\$
	<u>PAINTING (Cont'd)</u>				
	<u>Applying rust inhibitor, one coat primer, two undercoats and one finishing coat of synthetic paint ; on metal</u>				
	General surfaces				
A	over 300 girth		m2		
B	not exceeding 300 girth		m		
	Windows, glazed screens and glazed doors ; both sides measured flat overall				
C	over 300 girth		m2		
	Individual members of balustrades, fencing, railings and the like				
D	over 300 girth		m2		
E	not exceeding 300 girth		m		
	Pipes and conduits				
F	over 300 girth		m2		
G	not exceeding 300 girth		m		
H	isolated surfaces ; not exceeding 0.50 m2		nr		
	<u>Applying one coat primer, two undercoats and one finishing coat of synthetic paint ; on galvanised metal</u>				
	General surfaces				
J	over 300 girth		m2		
K	not exceeding 300 girth		m		
	Windows, glazed screens and glazed doors ; both sides measured flat overall				
L	over 300 girth		m2		
	Individual members of balustrades, fencing, railings and the like				
M	over 300 girth		m2		
	MODEL BILL OF DESCRIPTION				
	ASD STANDARD BILLS				
	MODBQ.19/3				
		To Collection	\$		

Item	Description	Qty	Unit	Rate	HK\$
	<u>PAINTING (Cont'd)</u>				
A	not exceeding 300 girth Pipes and conduits		m		
B	over 300 girth		m2		
C	not exceeding 300 girth		m		
D	isolated surfaces ; not exceeding 0.50 m2		nr		
	<u>Applying rust inhibitor, two coats of black bitumastic paint ; on metal ; before fixing</u>				
	Eaves gutters ; inside and out				
E	over 300 girth		m2		
F	not exceeding 300 girth		m		
G	isolated surfaces ; not exceeding 0.50 m2		nr		
	<u>Applying one coat solution of acetone/benzole, one coat primer, two undercoats and one finishing coat of synthetic paint ; on copper</u>				
	Pipes and conduits				
H	over 300 girth		m2		
J	not exceeding 300 girth		m		
K	isolated surfaces ; not exceeding 0.50 m2		nr		
	<u>Applying one coat primer, two undercoats and one finishing coat of synthetic paint ; on plastic</u>				
	Pipes and conduits				
L	over 300 girth		m2		
M	not exceeding 300 girth		m		
N	isolated surfaces ; not exceeding 0.50 m2		nr		
	MODEL BILL OF DESCRIPTION				
	ASD STANDARD BILLS				
	MODBQ.19/4				
		To Collection	\$		

Item	Description	Qty	Unit	Rate	HK\$
	<u>PAINTING (Cont'd)</u>				
	<u>Applying knotting, two coats of black bitumastic paint ; on coated cast iron</u>				
	Pipes and conduits				
A	over 300 girth		m2		
B	not exceeding 300 girth		m		
C	isolated surfaces ; not exceeding 0.50 m2		nr		
	<u>Applying two coats wood preservative ; on wood ; before fixing</u>				
	General surfaces				
D	over 300 girth		m2		
E	not exceeding 300 girth		m		
	<u>Knotting ; applying one coat primer, stopping, painting one undercoat and one finishing coat of synthetic paint ; on wood</u>				
	General surfaces				
F	over 300 girth		m2		
G	not exceeding 300 girth		m		
	Windows, glazed screens and glazed doors ; both sides measured flat overall				
H	over 300 girth		m2		
	<u>Knotting ; applying one coat primer, stopping, painting two undercoats and one finishing coat of synthetic paint ; on wood</u>				
	General surfaces				
J	over 300 girth		m2		
K	not exceeding 300 girth		m		
	MODEL BILL OF DESCRIPTION				
	ASD STANDARD BILLS				
	MOBQ.19/5				
		To Collection	\$		

Item	Description	Qty	Unit	Rate	PAINTING HK\$
	<u>PAINTING (Cont'd)</u>				
A	Windows, glazed screens and glazed doors ; both sides measured flat overall over 300 girth		m2		
	<u>Applying two coats of varnish ; on wood</u>				
B	General surfaces over 300 girth		m2		
C	not exceeding 300 girth		m		
D	Windows, glazed screens and glazed doors ; both sides measured flat overall over 300 girth		m2		
	<u>Staining to approval ; applying two coats of varnish ; on wood</u>				
E	General surfaces over 300 girth		m2		
F	not exceeding 300 girth		m		
G	Windows, glazed screens and glazed doors ; both sides measured flat overall over 300 girth		m2		
	<u>PAINTING ; EXTERNALLY</u>				
	<u>Applying two coats of external textured paint ; on</u>				
H	Concrete walls and columns over 300 girth		m2		
J	Fair faced concrete walls and columns over 300 girth		m2		
K	Rendered walls and columns over 300 girth		m2		
	MODEL BILL OF DESCRIPTION				
	ASD STANDARD BILLS				
	MODBQ.19/6				
		To Collection	\$		

Item	Description	Qty	Unit	Rate	<u>PAINTING</u> HK\$
<u>PAINTING ; EXTERNALLY (Cont'd)</u>					
	Concrete ceilings and beams				
A	over 300 girth		m2		
B	over 300 girth ; 3.50 - 5.00m above floor level		m2		
	Fair faced concrete ceilings and beams				
C	over 300 girth		m2		
D	over 300 girth ; 3.50 - 5.00m above floor level		m2		
	Rendered ceilings and beams				
E	over 300 girth		m2		
F	over 300 girth ; 3.50 - 5.00m above floor level		m2		
<u>Applying one coat water based lime resistant primer and two full coats of emulsion paint ; on</u>					
	Fair faced concrete walls and columns				
G	over 300 girth		m2		
	Plastered walls and columns				
H	over 300 girth		m2		
	Fair faced concrete ceilings and beams				
J	over 300 girth		m2		
K	over 300 girth ; 3.50 - 5.00m above floor level		m2		
	Plastered ceilings and beams				
L	over 300 girth		m2		
M	over 300 girth ; 3.50 - 5.00m above floor level		m2		
MODEL BILL OF DESCRIPTION					To Collection \$
ASD STANDARD BILLS MODBQ.19/7					

PAINTING

Item	Description	Qty	Unit	Rate	HK\$
<u>POLISHING OR CLEAR FINISHING</u>					
<u>Twice wax polishing ; on wood</u>					
Floors					
A	over 300 girth		m2		
<u>Three times wax polishing ; on wood</u>					
General surfaces					
B	over 300 girth		m2		
C	isolated surfaces not exceeding 300 girth		m		
Windows, glazed screens and glazed doors ; both sides measured flat overall					
D	over 300 girth		m2		
<u>POLISHING OR CLEAR FINISHING ; EXTERNALLY</u>					
<u>Bodying in and french polishing</u>					
General surfaces					
E	over 300 girth		m2		
F	isolated surfaces not exceeding 300 girth		m		
<u>SIGNWRITING ; EXTERNALLY</u>					
<u>Marking out ; applying thick coat</u> <u>synthetic paint ; on concrete</u>					
Lines					
G	* wide ; straight		m		
<u>Marking out ; applying thick coat</u> <u>synthetic paint ; on plaster</u>					
Letters ; plain					
H	* high		nr		
Numerals ; plain					
J	* high		nr		
MODEL BILL OF DESCRIPTION					To Collection \$
ASD STANDARD BILLS MODBQ.19/8					

Item	Description	Qty	Unit	Rate	PAINTING HK\$
	<u>SIGNWRITING ; EXTERNALLY (Cont'd)</u>				
A	Chinese characters ; plain * high		nr		
B	Stops and punctuation marks ; plain * high		nr		
	<u>PAPER HANGING</u>				
	<u>Wall paper ; Messrs. * ; Pattern ref. * ; fixing with adhesive recommended by the wall paper manufacturer</u>				
C	Papering plastered walls and columns		m2		
D	Border strips Pattern ref. *		m		
	<u>WORK TO EXISTING SURFACES ; EXTERNALLY</u>				
	<u>Cleaning with proprietary chemical solution ; in accordance with the manufacturer's instructions</u>				
E	Stonework walls and columns		m2		
	<u>Scrubbing with scouring powder ; rubbing down ; rinsing</u>				
F	Rubbed granolithic floors		m2		
	<u>Cleaning with solution of detergent and disinfectant</u>				
G	Synthetic paint general surfaces		m2		
	MODEL BILL OF DESCRIPTION ASD STANDARD BILLS MODBQ.19/9		To Collection	\$	

PAINTING

Item Description Qty Unit Rate HK\$

WORK TO EXISTING SURFACES ; EXTERNALLY
(Cont'd)

Scraping ; brooming down ; stopping ;
bringing forward bare spots with new
material ; applying *

Concrete walls and columns

A over 300 girth

m2

Washing down ; scraping ; wire brushing ;
rubbing down ; bringing forward bare spots
with rust inhibitor, primer and undercoat
; applying *

General surfaces

B over 300 girth

m2

TESTING

On site delivery checks

Carry out tests as General Specification
for Building clause * on

C emulsion paint

-

item

-

C O L L E C T I O N

Item

Description

HK\$

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Bill Nr. MODBQ.19 - PAINTING

To Summary

\$

Bill Nr. MODBQ.20
LANDSCAPING

Item	Description	Qty	Unit	Rate	HK\$
	<u>TURFING AND GRASS SEEDING</u>				
	<u>Soiling, turfing and seeding</u>				
	Topsoil ; imported				
A	* average thick ; in general areas ; spreading and levelling		m2		
	Lightweight Soil Mix ; imported				
B	* average thick ; in general areas ; spreading and levelling		m2		
	Spot turfing ; * ; applying pre-turfing fertilizer at the rate of * g/m2 ; top dressing with Topsoil or Fabricated Soil Mix ; cutting and rolling				
C	in general areas		m2		
	Close turfing ; laying turves previously cut and stored on site ; applying pre-turfing fertilizer at the rate of * g/m2 ; fixing with pegs at * centres both ways ; top dressing with Topsoil or Fabricated Soil Mix ; cutting and rolling				
D	on level or to slopes not exceeding 1 in 7		m2		
	Raking surfaces to a fine tilth ; applying pre-seeding fertilizer at the rate of * g/m2 ; broadcast * at the rate of * g/m2 ; mulching ; covering seeds by lightly working into surface				
E	in general areas		m2		
	Sundries				
F	* edging to grassed areas ; * x *		m		
	MODEL BILL OF DESCRIPTION				
	ASD STANDARD BILLS				
	MODBQ.20/1				
				To Collection \$	

LANDSCAPING

Item	Description	Qty	Unit	Rate	HK\$
	<u>TURFING AND GRASS SEEDING (Cont'd)</u>				
	<u>Hydroseeding ; carried out by Specialist sub-contractor on the "List of Approved Suppliers of Materials and Specialist Contractors" under the category of "Landscaping - Hydroseeding (Class II)"</u>				
	Scarifying surfaces to a rough textured finish ; hydroseeding a blend of mulch at the rate of 200 g/m2, seed mix at the rate of 35 g/m2, pre-seeding fertilizer at the rate of 100 g/m2, soil binding agent at the rate of 25 g/m2 and dye at the rate of 0.5 - 0.05 g/m2 ; applying post-seeding fertilizer at the rate of * g/m2 ; protecting sprayed hydroseeded surfaces with protective layer ; spiking or stapling in position				
A	in general areas		m2		
	<u>PLANTING</u>				
	<u>Cultivating</u>				
	Weeding *				
B	in general areas		m2		
	Scarifying surfaces				
C	in general areas		m2		
	<u>Surfaces applications</u>				
	Applying herbicide at the rate of * kg/m2				
D	in general areas		m2		
	Applying selected weedkillers at the rate of * kg/m2				
E	in general areas		m2		
	Applying soil conditioner at the rate of * m3/m2				
F	in general areas		m2		
	MODEL BILL OF DESCRIPTION				
	ASD STANDARD BILLS				
	MODBQ.20/2				
			To Collection	\$	

LANDSCAPING

Item	Description	Qty	Unit	Rate	HK\$
	<u>PLANTING (Cont'd)</u>				
	<u>Supplying only ; plant specimens ;</u> <u>planting measured separately</u>				
	Seedling trees				
A	* ; 150 - 900 high		nr		
	Light standard trees				
B	* ; 900 - 2000 high		nr		
	Heavy standard trees				
C	* ; over 6000 high ; * stem diameter at * m above root collar		nr		
	Small shrubs				
D	* ; 150 - 300 high		nr		
	Large shrubs				
E	* ; 300 - 450 high		nr		
	Bamboos				
F	* ; * - * high ; * nr. shoots		nr		
	Small palms				
G	* ; 450 - 600 high		nr		
	Conifers				
H	* ; * - * high ; root ball not less than * diameter and * in depth		nr		
	Aquatic plants				
J	* ; *		nr		
	Decorative cut trees in pots or containers ; * ; as drawing nr. *				
K	* ; *		nr		
	MODEL BILL OF DESCRIPTION				
	ASD STANDARD BILLS				
	MODBQ.20/3				
		To Collection	\$		

LANDSCAPING

Item	Description	Qty	Unit	Rate	HK\$
	<u>PLANTING (Cont'd)</u>				
	<u>Planting only ; plant specimens ; in existing cultivated or grassed areas ; supplying measured separately</u>				
	Preparing ground ; notch planting ; * nr. * x * x * steel angle stakes * m long treated with one coat primer and one coat of approved paint ; plastic coated wire ties				
A	light standard trees approximate * m high and * m spread		nr		
	Preparing ground ; pit planting ; * nr. * x * x * galvanised steel guying stakes * m long treated with one coat primer and one coat of approved paint ; plastic coated wire guys ; root barrier around tree pits				
B	heavy standard trees approximate * m high and * m spread		nr		
	<u>Collecting from * and transplanting ; including provision of temporary storage ; in cultivated or grassed areas prepared by others</u>				
	Preparing ground ; * ; trunking protection ; watering				
C	semi-mature trees approximate * m high and * m spread		nr		
	<u>Boulders</u>				
	Supplying and placing local boulders of * type ; size * x * x * high				
D	fixing in position ; wedging with small rocks ; partially sunk below ground		nr		
	Supplying and placing Yellow Soap Stone of * colour ; *				
E	fixing in position ; wedging with small rocks ; partially sunk below ground ; concrete base and haunching		nr		
	MODEL BILL OF DESCRIPTION		To Collection	\$	
	ASD STANDARD BILLS MODBQ.20/4				

LANDSCAPING

Item	Description	Qty	Unit	Rate	HK\$
<u>PLANTING (Cont'd)</u>					
A	Selecting from boulders on site and placing ; size * x * x * high fixing in position ; wedging with small rocks ; partially sunk below ground ; concrete base and haunching		nr		
<u>Drainage layer</u>					
B	Drainage aggregate ; 25 - 50 diameter ; in planter boxes spreading and levelling ; * thick		m2		
C	Gravel ; 10 - 30 diameter ; * spreading and levelling ; * thick		m2		
D	Geotextile filter fabric ; as General Specification for Building Table 25.1 type * ; lapped at joints ; in planter boxes single layer ; measured net ; allow for laps		m2		
<u>Sundries</u>					
E	Supplying and fixing artificial plants ; * ; filling pots with * ; backfilling with * thick aggregate ; supporting, securing and protecting *		nr		
F	Mulching ; * ; to planted areas * deep		m2		
G	Protective bamboo fencing ; vertical metal stakes treated with one coat primer and one coat of approved paint ; 10 - 20 diameter bamboo palings at 150 centres * high		m		
MODEL BILL OF DESCRIPTION				To Collection \$	
ASD STANDARD BILLS					
MODBQ.20/5					

LANDSCAPING

Item	Description	Qty	Unit	Rate	HK\$
	<u>PLANTING (Cont'd)</u>				
	Plant labels ; 100 x 50 x 2 white acrylic labels ; with botanical and Chinese name in heat embossed black lettering				
A	holed and secured to plant with nylon rope		nr		
	Safety precautions in Tree Works ; allowing for all safety precautions in tree works ; all as described in the General Specification for Building				
B	generally	-	item	-	
	<u>Establishment Works</u>				
	Allowing for the maintenance of the Landscape Works ; all as described in the General Specification for Building				
C	for a period of twelve months	-	item	-	
	<u>GREEN PLANTING SYSTEMS</u>				
	<u>Designing, supplying and fixing vertical green wall systems ; satin finish stainless steel grade 316 ; including all necessary wire meshes, frames, supports, anchors, accessories, fixing screws, bolts, ironmongery and pinning lugs ; all in accordance with the manufacturer's instructions ; as drawing nr. * (plants measured separately)</u>				
	Vertical greening support system ; fixed to concrete planter walls and beams				
D	for *		m2		
	MODEL BILL OF DESCRIPTION				
	ASD STANDARD BILLS MODBQ.20/6				
			To Collection	\$	

Item

Description

Qty

Unit

Rate

HK\$

STATUES, SCULPTURES AND STONE FEATURES

Supplying and fixing statues ; fibre glass or non-combustible material approved by the Supervising Officer ; including all necessary frames, supports, anchors, accessories, fixing screws, bolts, ironmongery and fittings ; assembling, jointing, cutting and pinning lugs ; as drawing nr. *

Statues ; fixed to concrete floors

A * x * x * high overall

nr

C O L L E C T I O N

Item

Description

HK\$

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Bill Nr. MODBQ.20 - LANDSCAPING

To Summary

\$

Bill Nr. MODBQ.21
EXTERNAL WORKS

Item	Description	Qty	Unit	Rate	HK\$
	<u>SITE PREPARATION</u>				
	<u>Site clearance</u>				
	Clearing the site				
A	removing off site or burning all rubbish, tall grass, shrubs, bushes and the like and trees not exceeding 600 girth, including grubbing up roots	-	item	-	
	Cutting down trees ; not in open area				
B	* to * girth ; grubbing up roots and removing off site or burning		nr		
	Stripping top soil for preservation				
C	average * deep ; depositing in separate spoil heaps ; spreading average *m from excavation		m2		
	<u>Demolishing or taking down to ground level</u>				
	All structures				
D	on the site ; shoring and scaffolding	-	item	-	
	Individual structures				
E	* x * x * high ; * storeys ; reinforced concrete framed building ; located at * ; shoring and scaffolding	-	item	-	
	Chain link fencing				
F	* high ; located at * ; grubbing up bases ; making good pavings		m		
	Allowing credit for the value of materials arising from demolition				
G		-	item	-	
	MODEL BILL OF DESCRIPTION		To Collection	\$	
	ASD STANDARD BILLS MODBQ.21/1				

		EXTERNAL WORKS			
Item	Description	Qty	Unit	Rate	HK\$
	<u>SITE PREPARATION (Cont'd)</u>				
	<u>Taking over ; altering when required ; maintaining for the duration of the Contract ; removing on completion ; touching up and repainting surfaces and logos as required</u>				
	Metal hoarding				
A	* high ; located at *		m		
	<u>Providing ; erecting ; altering when required ; maintaining for the duration of the Contract ; removing on completion ; applying primer and two coats of synthetic paint on all exposed surfaces including painting logos and lettering ; making good all works disturbed after removal</u>				
	Metal hoarding Type * ; steel to * ; galvanised ; including posts, corrugated sheet panel coverings, cappings, base plates ; dowel bolts, cleats, runners, handrails, rafters, purlins, concrete bases ; providing and maintaining luminaries with * long tubular fluorescent lamps 20W at *m spacing ; excavating post bases ; disposing of surplus excavated material				
B	* high ; * clear width walkway		m		
	<u>RETAINING WALLS</u>				
	<u>Excavation</u>				
	Excavating trenches for retaining walls ; commencing at natural ground level				
C	not exceeding 1.50m deep		m3		
D	1.50 - 3.00m deep		m3		
	Excavated material				
E	backfilling to excavation ; depositing ; compacting		m3		
	Surplus excavated material				
F	removing from site		m3		
	MODEL BILL OF DESCRIPTION		To Collection	\$	
	ASD STANDARD BILLS MODBQ.21/2				

Item	Description	Qty	Unit	EXTERNAL WORKS	
				Rate	HK\$
<u>RETAINING WALLS (Cont'd)</u>					
A	Graded filter material backfilling behind retaining walls ; depositing and compacting in layers		m3		
B	Compaction tests to determine the maximum dry density and optimum moisture content in accordance with Geospec 3 ; PROVISIONAL		nr		
C	the in-situ field density and moisture content in accordance with Geospec 3 ; PROVISIONAL		nr		
<u>Concrete works</u>					
D	Concrete ; grade */* blinding under foundations ; * thick		m3		
E	Concrete ; grade */* ; no-fines filling behind retaining walls		m3		
F	Reinforced concrete ; grade */* foundations, attached bases or pile caps		m3		
G	ground beams		m3		
H	beds ; * thick		m3		
J	Reinforced concrete ; grade */* ; severe exposure retaining walls ; * thick		m3		
K	Plain steel reinforcing bars ; general reinforcement round bars ; * diameter ; PROVISIONAL		kg		
MODEL BILL OF DESCRIPTION				To Collection \$	
ASD STANDARD BILLS					
MODBQ.21/3					

Item	Description	Qty	Unit	EXTERNAL WORKS	
				Rate	HK\$
<u>RETAINING WALLS (Cont'd)</u>					
	Plain steel reinforcing bars ; links, stirrups and binders				
A	round bars ; * diameter ; PROVISIONAL		kg		
	Ribbed steel reinforcing bars ; general reinforcement				
B	round bars ; * diameter ; PROVISIONAL		kg		
	Sawn formwork				
C	vertical surfaces ; foundations, pile caps, ground beams and the like		m2		
D	vertical surfaces ; walls		m2		
E	vertical surfaces ; walls ; curved		m2		
F	vertical surfaces ; edges and breaks in walls exceeding 300 wide		m2		
G	vertical surfaces ; 100 - 200 wide ; edges and breaks in slabs		m		
	Formwork to produce fair faced finish ; lining with plywood				
H	vertical surfaces ; walls		m2		
J	vertical surfaces ; walls ; curved		m2		
K	vertical surfaces ; edges and breaks in walls exceeding 300 wide		m2		
	Forming movement joints ; formwork ; temporary fillets ; * surface coatings and formation of rebates or other labours				
L	in walls ; * wide x * deep ; filling with inorganic joint fillers ; * wide ; cutting joint filler ; * dowels at * centres ; straight		m		
MODEL BILL OF DESCRIPTION				To Collection	\$
ASD STANDARD BILLS MODBQ.21/4					

Item	Description	Qty	Unit	EXTERNAL WORKS	
				Rate	HK\$
<u>RETAINING WALLS (Cont'd)</u>					
A	Pointing to movement joints with hot poured joint sealant ; both sides * x * ; including backing rod		m		
B	Plastic weep pipes ; casting into concrete * diameter x * long		nr		
<u>Plastering</u>					
C	Spatterdash all surfaces of concrete		m2		
D	External rendering ; two coats ; walls and columns * thick		m2		
E	* thick ; curved		m2		
F	Forming joints in * finishes ; priming surfaces of joints ; pointing with polysulphide liquid polymer sealant * x * ; vertical		m		
G	Brass dividing strips ; bedding in wall finish * x *		m		
<u>Painting</u>					
H	Applying two coats of cement paint ; on fair faced concrete walls and columns over 300 girth		m2		
J	Applying two coats of cement paint ; on rendered walls and columns over 300 girth		m2		
MODEL BILL OF DESCRIPTION				To Collection	\$
ASD STANDARD BILLS MODBQ.21/5					

Item	Description	Qty	Unit	EXTERNAL WORKS	
				Rate	HK\$
	<u>ROADS AND PAVED AREAS</u>				
	<u>Paved areas</u>				
	Excavating over site to reduce levels				
A	not exceeding 0.20m deep ; average * deep		m3		
B	generally		m3		
	Excavating into banks				
C	generally		m3		
	Excavated material				
D	filling in making up levels ; depositing in * layers ; compacting		m3		
	Surplus excavated material				
E	removing from site		m3		
	Hardcore				
F	filling in making up levels ; depositing and compacting in layers		m3		
	Rock filling material				
G	in beds * thick		m2		
	Recycled rock filling material (Grade 200)				
H	in beds * thick		m2		
	Sand				
J	in beds * thick		m2		
	Granular material				
K	in beds * thick		m2		
	Surfaces of hardcore				
L	blinding with fine filling material		m2		
	MODEL BILL OF DESCRIPTION				
	ASD STANDARD BILLS				
	MODBQ.21/6				
		To Collection	\$		

Item	Description	Qty	Unit	EXTERNAL WORKS	
				Rate	HK\$
<u>ROADS AND PAVED AREAS (Cont'd)</u>					
A	Compaction tests to determine the maximum dry density and optimum moisture content in accordance with Geospec 3 ; PROVISIONAL		nr		
B	the in-situ field density and moisture content in accordance with Geospec 3 ; PROVISIONAL		nr		
C	Concrete ; grade */* beds ; * thick		m3		
D	steps		m3		
E	Concrete ; grade */* ; sulphate resisting beds ; * thick		m3		
F	steps		m3		
G	Concrete ; grade */* ; mixed with an approved hardening admixture in accordance with the manufacturer's instructions beds ; * thick		m3		
H	steps		m3		
J	Reinforced concrete ; grade */* beds ; * thick		m3		
K	steps		m3		
L	Reinforced concrete ; grade */* ; sulphate resisting beds ; * thick		m3		
M	steps		m3		
N	Reinforced concrete ; grade */* ; mixed with an approved hardening admixture in accordance with the manufacturer's instructions beds ; * thick		m3		
MODEL BILL OF DESCRIPTION				To Collection	\$
ASD STANDARD BILLS					
MODBQ.21/7					

Item	Description	Qty	Unit	EXTERNAL WORKS	
				Rate	HK\$
<u>ROADS AND PAVED AREAS (Cont'd)</u>					
A	steps		m3		
	Fabric reinforcement ; BS 4483 ; square mesh ; ref. A142 ; weighing 2.22 kg/m2 ; 200 minimum side and end laps ; measured net - allow for laps				
B	in concrete		m2		
	Sawn formwork				
C	vertical surfaces ; not exceeding 100 wide ; edges and breaks in slabs		m		
D	vertical surfaces ; not exceeding 300 wide ; risers		m		
E	vertical surfaces ; not exceeding 300 wide ; open strings		m		
	Precast concrete paving blocks ; BS7533-3:2005+A1:2009, BS EN 1338:2003 & PS * ; * x * x * ; * colour ; smooth finish ; bedding in lime and sand or cement mortar (1:3) bedding to the stated thickness ; pointing in cement, lime and sand or granite fines (1:3:6)				
F	floors ; on 25 bedding ; laying to break joint pattern		m2		
G	floors ; on 25 bedding ; laying to butt joint pattern		m2		
	Forming movement joints in concrete ; formwork				
H	* wide x * deep ; left open		m		
	Surfaces of concrete				
J	finishing with a board edge		m2		
	Layer of polythene sheeting ; lapped at joints				
K	laying on * ; measured net - allow for laps		m2		
MODEL BILL OF DESCRIPTION				To Collection	\$
ASD STANDARD BILLS					
MODBQ.21/8					

Item	Description	Qty	Unit	EXTERNAL WORKS	
				Rate	HK\$
<u>ROADS AND PAVED AREAS (Cont'd)</u>					
	Local granite ; finely squared dressed surface finish to all exposed surfaces ; bedding in cement mortar ; flush pointing				
A	* x * ; steps ; rebated (In Nr. 0)		m		
B	extra over steps for fair ends		nr		
	Granolithic Mix Type "C" ; washed finish				
C	floors ; * thick		m2		
D	treads and risers ; * thick		m2		
	Brass dividing strips ; bedding in *				
E	* x *		m		
	Non-slip inserts to treads ; rounded top edge ; bedding in groove				
F	15 x 25		m		
<u>Access roads and car parking</u>					
	Excavating over site to reduce levels				
G	average * deep		m2		
H	over 200 average depth		m3		
	Excavating trenches for curbs * x * ; with beds ; commencing at reduced level				
J	average * deep		m		
	Excavated material				
K	filling in making up levels ; depositing in * layers ; compacting by vibratory roller		m3		
L	filling in making up levels ; average * thick ; depositing in * layers ; compacting by vibratory roller		m2		
	Surplus excavated material				
M	removing from site		m3		
MODEL BILL OF DESCRIPTION				To Collection	\$
ASD STANDARD BILLS MODBQ.21/9					

Item	Description	Qty	Unit	EXTERNAL WORKS	
				Rate	HK\$
<u>ROADS AND PAVED AREAS (Cont'd)</u>					
Hardcore					
A	filling in making up levels ; depositing and compacting in layers		m3		
B	filling in making up levels ; average * thick ; blinding with fine filling material		m2		
C	in beds * thick ; blinding with fine filling material		m2		
Granular material					
D	filling in making up levels ; depositing and compacting in layers		m3		
E	filling in making up levels ; average * thick		m2		
F	in beds * thick		m2		
Surfaces of hardcore					
G	blinding with fine filling material		m2		
Surfaces of granular material					
H	blinding with fine filling material		m2		
Compaction tests to determine					
J	the maximum dry density and optimum moisture content in accordance with Geospec 3 ; PROVISIONAL		nr		
K	the in-situ field density and moisture content in accordance with Geospec 3 ; PROVISIONAL		nr		
Concrete ; grade */*					
L	foundations		m3		
M	curbs		m3		
MODEL BILL OF DESCRIPTION				To Collection	\$
ASD STANDARD BILLS					
MODBQ.21/10					

Item	Description	Qty	Unit	EXTERNAL WORKS	
				Rate	HK\$
<u>ROADS AND PAVED AREAS (Cont'd)</u>					
A	blinding under foundations ; * thick		m3		
	Reinforced concrete ; grade */*				
B	beds ; * thick		m3		
	Fabric reinforcement ; BS 4483 ; square mesh ; ref. A142 ; weighing 2.22 kg/m2 ; 200 minimum side and end laps ; measured net - allow for laps				
C	in concrete		m2		
	Sawn formwork				
D	vertical surfaces ; foundations and the like		m2		
E	vertical surfaces ; curbs		m2		
F	vertical surfaces ; curbs ; curved		m2		
G	vertical surfaces ; 100 - 200 wide ; curbs		m		
H	vertical surfaces ; 100 - 200 wide ; curbs ; curved		m		
	Precast concrete ; grade */*				
J	* x * curbs ; half battered ; bedding and haunching in cement mortar (1:3) one side ; fair faced finish to all exposed surfaces ; flush pointing		m		
K	* x * curbs ; half battered ; bedding and haunching in cement mortar (1:3) one side ; curved units ; fair faced finish to all exposed surfaces ; flush pointing		m		
L	* x * gutter channels ; splayed ; bedding in cement mortar (1:3) ; fair faced finish to all exposed surfaces ; flush pointing		m		
MODEL BILL OF DESCRIPTION				To Collection	\$
ASD STANDARD BILLS					
MODBQ.21/11					

Item	Description	Qty	Unit	EXTERNAL WORKS	
				Rate	HK\$
<u>ROADS AND PAVED AREAS (Cont'd)</u>					
A	* x * gutter channels ; splayed ; bedding in cement mortar (1:3) ; curved units ; fair faced finish to all exposed surfaces ; flush pointing		m		
B	angle stones ; to gutter channels ; * x *		nr		
	Forming movement joints in concrete ; formwork				
C	* wide x * deep ; filling with inorganic joint fillers ; * wide ; cutting and perforating joint filler ; * dowels at * centres ; straight		m		
	Pointing to movement joints with hot poured joint sealant ; both sides				
D	* x * ; including backing rod		m		
	Surfaces of concrete				
E	finishing with a wood float		m2		
	Layer of polythene sheeting ; lapped at joints				
F	laying on * ; measured net - allow for laps		m2		
	Local granite ; finely squared dressed surface finish to all exposed surfaces ; bedding and haunching in cement mortar one side ; flush pointing				
G	* x * ; curbs, fenders and the like ; chamfered		m		
H	* x * ; curbs, fenders and the like ; chamfered ; curved ; all cutting ; templates		m		
MODEL BILL OF DESCRIPTION				To Collection	\$
ASD STANDARD BILLS					
MODBQ.21/12					

Item	Description	Qty	Unit	EXTERNAL WORKS	
				Rate	HK\$
<u>ROADS AND PAVED AREAS (Cont'd)</u>					
Road surfacing in accordance with Section 9 of the General Specification for Civil Engineering Works, current edition, issued by the Civil Engineering and Development Department of the Hong Kong SAR Government					
A	sub-base ; in beds * thick on sub-grade ; compacting ; preparing sub-grade		m2		
B	roadbase ; bituminous material as Table 9.3 ; * nominal maximum aggregate size with * % bitumen content		m2		
C	base course ; bituminous material as Table 9.3 ; * nominal maximum aggregate size with * % bitumen content		m2		
D	wearing course ; bituminous material as Table 9.3 ; * nominal maximum aggregate size with * % bitumen content		m2		
Marking out ; applying two thick coats of standard hot thermoplastic materials ; BS 3262-3, BS EN 1824 and BS EN 1871 ; on bitumen macadam roads					
E	lines ; * wide		m		
F	letters or numerals ; * high		nr		
G	Chinese characters ; * high		nr		
H	arrow heads ; * wide x * long ; straight		nr		
<u>FENCING AND BALUSTRADING</u>					
<u>Excavating</u>					
Post holes ; commencing at reduced level					
J	not exceeding 0.30m3		nr		
MODEL BILL OF DESCRIPTION				To Collection	\$
ASD STANDARD BILLS				MODBQ.21/13	

Item	Description	Qty	Unit	EXTERNAL WORKS	
				Rate	HK\$
<u>FENCING AND BALUSTRADING (Cont'd)</u>					
<u>Concrete ; grade */*</u>					
	Small bases for fencing posts				
A	* x * x * deep		nr		
<u>Fencing ; erected on existing paving</u>					
	Plastic coated galvanised steel wire to BS 4102 grade A ; chain link mesh ; 3.55 diameter wire and 75 mesh ; * diameter selvedge wire ; * diameter barbed wire ; * strands ; straining tight ; fixing with steel strips ; with and including * x * x * high * posts at * centres ; including all fittings, fixing screws and bolts ; as drawing nr. *				
B	* high ; setting out to a curve but straight between posts		m		
	Extra over for end posts ; galvanised steel to BS EN 10025 grade * ; square hollow sections ; including all fittings, fixing screws and bolts				
C	* x * x * high above ground ; * depth below ground ; setting in concrete bases (measured separately)		nr		
	Galvanised steel to BS EN 10025 grade * gate posts ; tubular sections				
D	* diameter x * high above ground ; * depth below ground ; setting in concrete bases (measured separately)		nr		
<u>Gates ; steel to BS EN 10025 grade * ; galvanised ; welded connections</u>					
	Double leaves ; * x * x * angle framing ; * diameter tubular framing ; * nr. * x * panels infill with 75 x 25 oblong hole mesh ; to BS * ; * diameter wire ; spot welding ; including gate stops, gate catches and gate stays ; as drawing nr. *				
E	gate size * x * high overall		nr		
MODEL BILL OF DESCRIPTION				To Collection	\$
ASD STANDARD BILLS					
MODBQ.21/14					

Item	Description	Qty	Unit	EXTERNAL WORKS	
				Rate	HK\$
<u>FENCING AND BALUSTRADING (Cont'd)</u>					
Ironmongery					
A	pivot hinges ; 15 x 40 x 300 girth plate once bent and once rounded ; 25 diameter hardened steel rod 40 long with washer ; 50 x 50 x 16 plate twice rounded and once holed for 25 diameter pivot		nr		
B	sliding bolts ; 20 diameter shoot 500 girth once bent ; 50 x 50 x 10 holed guide twice rounded ; 25 diameter x 100 long tubing set in concrete		nr		
C	sliding bolts ; 20 diameter shoot 975 long ; 50 x 50 x 10 holed guides twice rounded ; 50 x 50 x 10 holed guide twice rounded with 25 stop ; * x * x * slotted hasp three times bent ; * x * x * staple holed and twice rounded ; 25 diameter x 100 long tubing set in concrete		nr		
D	brass padlocks ; *		nr		
<u>Applying one coat primer, two undercoats and one finishing coat of synthetic paint ; on galvanised metal</u>					
General surfaces					
E	over 300 girth		m2		
Individual members of balustrades, fencing, railings and gates and the like					
F	over 300 girth		m2		
G	not exceeding 300 girth		m		
Mesh covered or ornamental fencing, railings and gates and the like ; both sides measured flat overall					
H	over 300 girth		m2		
MODEL BILL OF DESCRIPTION				To Collection	\$
ASD STANDARD BILLS					
MODBQ.21/15					

Item	Description	Qty	Unit	EXTERNAL WORKS	
				Rate	HK\$
<u>EXTERNAL SERVICES</u>					
<u>Water installation</u>					
	Excavating trenches for service pipes ; commencing at reduced level				
A	0.75m average depth		m		
B	1.00m average depth		m		
	Granular material ; beds				
C	* x * under * diameter pipes		m		
	Concrete ; grade 10/20 ; beds and surrounds ; formwork				
D	* x * under * diameter pipes ; surrounds minimum * thick		m		
	Stop cock pits ; 75 concrete grade */* base ; half brick sides in seconds quality bricks in cement mortar ; flush pointing internally ; cast iron hinged cover and frame ; excavating ; disposing of surplus excavated material				
E	225 x 225 x 600 internally		nr		
<u>Electrical installation</u>					
	Excavating trenches for cables or ducts ; commencing at reduced level				
F	0.75m average depth		m		
G	1.00m average depth		m		
	Sand ; beds				
H	* x * under cables		m		
J	* x * under * diameter ducts		m		
MODEL BILL OF DESCRIPTION				To Collection	\$
ASD STANDARD BILLS MODBQ.21/16					

		<u>EXTERNAL WORKS</u>			
Item	Description	Qty	Unit	Rate	HK\$
	<u>EXTERNAL SERVICES (Cont'd)</u>				
	Earth pits ; 75 concrete grade */* base ; half brick sides in seconds quality bricks in cement mortar ; flush pointing internally ; precast concrete grade */* cover slab reinforced with 12 diameter plain steel reinforcing bars at 150 centres both ways and finished fair on top ; cast iron hinged cover and frame ; excavating ; disposing of surplus excavated material				
A	450 x 450 x 750 internally		nr		
	UPVC ducts and fittings ; solvent welded joints ; laying in trenches ; cable draw wires				
B	* diameter		m		
C	extra over ducts for * bends		nr		
	Galvanised steel ducts and fittings ; screwed joints ; laying in trenches ; cable draw wires				
D	* diameter		m		
E	extra over ducts for * bends		nr		
	<u>Gas installation</u>				
	Excavating trenches for service pipes ; commencing at reduced level				
F	0.75m average depth		m		
G	1.00m average depth		m		
	Sand ; beds				
H	* x * under * diameter pipes		m		
	<u>Telephone installation</u>				
	Excavating trenches for cables or ducts ; commencing at reduced level				
J	0.75m average depth		m		
K	1.00m average depth		m		
	MODEL BILL OF DESCRIPTION				
	ASD STANDARD BILLS				
	MODBQ.21/17				
		To Collection	\$		

		<u>EXTERNAL WORKS</u>			
Item	Description	Qty	Unit	Rate	HK\$
<u>EXTERNAL SERVICES (Cont'd)</u>					
	Sand ; beds				
A	* x * under cables		m		
B	* x * under * diameter ducts		m		
	Cable draw pits ; 300 x 150 concrete grade */ * strip foundations ; 75 bed of rubble fill as base ; 150 concrete grade */ * sides finished fair one side and with rebated tops ; formwork ; 700 x 700 x 50 precast concrete cover reinforced with 12 diameter plain steel reinforcing bars at 150 centres both ways and finished fair on top with adjustable handles ; excavating ; disposing of surplus excavated material				
C	600 x 600 x 550 internally		nr		
	UPVC ducts and fittings ; solvent welded joints ; laying in trenches ; cable draw wires				
D	* diameter		m		
E	extra over ducts for * bends		nr		
	Galvanised steel ducts and fittings ; screwed joints ; laying in trenches ; cable draw wires				
F	* diameter		m		
				To Collection \$	

C O L L E C T I O N

Item

Description

HK\$

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Bill Nr. MODBQ.21 - EXTERNAL WORKS

To Summary

\$

Bill Nr. MODBQ.22
ELECTRICAL INSTALLATION

Item	Description	Qty	Unit	Rate	HK\$
	<u>INCOMING MAINS ; INTERNALLY / IN PLANT ROOM / EXTERNALLY#</u>				
	<u>Transit blocks ; fixed to walls inside L.V. Switch Room ; including busbar sections ; bolted connection to the busbar trunkings</u>				
	Approved type				
A	* A		nr		
	<u>600/1000V cross-linked polyethylene (XLPE) insulated cables ; operating temperature not exceeding 90 degrees Celsius to IEC 60502-1:2004 ; PVC sheathed ; with armour ; solid copper conductors</u>				
	Power cables ; laid in trenches				
B	* mm2 ; single-core cables		m		
	Power cables ; fixed to cable trays or ladders or other surface				
C	* mm2 ; single-core cables		m		
	Cable termination glands				
D	* mm2 ; * core cables		nr		
	<u>MAIN AND SUB-MAIN DISTRIBUTION ; INTERNALLY / IN PLANT ROOM / EXTERNALLY#</u>				
	<u>600/1000V cross-linked polyethylene (XLPE) insulated cables ; operating temperature not exceeding 90 degrees Celsius to IEC 60502-1:2004/Amd 1:2009 ; PVC :sheathed ; with armour ; solid copper conductors</u>				
	Power cables ; laid or drawn into trunking				
E	* mm2 ; single-core cables		m		
				To Collection \$	

ELECTRICAL INSTALLATION

Item	Description	Qty	Unit	Rate	HK\$
<u>MAIN AND SUB-MAIN DISTRIBUTION ;</u> <u>INTERNALLY / IN PLANT ROOM / EXTERNALLY#</u> <u>(Cont'd)</u>					
	Power cables ; fixed to cable trays or ladders or other surface				
A	* mm2 ; multi-core cables		m		
	Power cables ; drawn into underground pipe duct				
B	* mm2 ; multi-core cables		m		
	Cable termination glands				
C	* mm2 ; * core cables		nr		
<u>600/1000V fire resistant, cross-linked polyethylene (XLPE) insulated cables ; low emission of smoke and corrosive gases when affected by fire ; operating temperature not exceeding 90 degrees Celsius to Category F2 / Category F30 / Category F60 / Category F120 / Category as required complying with the FSD requirement of BS 7846:2015 ; fire performance to BS 6387:2013 ; BS 8491:2008 / BS EN 50200:2015 ; BS EN 60332-1-2:2004/Amd 11:2016 / BS EN 60332-3-24:2018 ; BS EN 61034-2:2005/Amd 1:2013 ; BS EN 60754-1:2014 / BS EN 60754-2:2014 ; sheathed ; with armour ; solid copper conductors</u>					
	Power cables ; fixed to cable trays or ladders or other surface				
D	* mm2 ; multi-core cables		m		
	Power cables ; drawn into underground pipe duct				
E	* mm2 ; multi-core cables		m		
	Cable termination glands				
F	* mm2 ; * core cables		nr		
MODEL BILL OF DESCRIPTION				To Collection \$	
ASD STANDARD BILLS MODBQ.22/2					

ELECTRICAL INSTALLATION

Item	Description	Qty	Unit	Rate	HK\$
	<u>MAIN AND SUB-MAIN DISTRIBUTION ;</u> <u>INTERNALLY / IN PLANT ROOM / EXTERNALLY#</u> <u>(Cont'd)</u>				
	<u>Cable cover tiles</u>				
	Laid on top of bedding layer to power cables buried direct in ground				
A	* x * x * overall size		nr		
	<u>Steel surface cable trunkings and fittings to IEC 61084-1:2017 ; removable covers ; cable supporting facilities</u>				
	Surface trunkings and fittings ; fixed to walls and columns				
B	* x * ; * compartments		m		
	Surface trunkings and fittings ; fixed to soffits				
C	* x * ; * compartments		m		
	Extra over * x * ; * compartment surface trunkings for				
D	bends		nr		
E	tees		nr		
F	reducing tees		nr		
G	stop ends		nr		
H	internal fire barriers		nr		
	<u>Perforated steel trays and fittings to BS EN 10149-1:2013 ; hot dipped galvanised to ISO 1460:1992 and ISO 1461:2009</u>				
	Trays and fittings ; fixed to walls and columns				
J	* wide		m		
	Trays and fittings ; fixed to soffits				
K	* wide		m		
	MODEL BILL OF DESCRIPTION				
	ASD STANDARD BILLS				
	MODBQ.22/3				
		To Collection	\$		

		<u>ELECTRICAL INSTALLATION</u>			
Item	Description	Qty	Unit	Rate	HK\$
<u>MAIN AND SUB-MAIN DISTRIBUTION ;</u>					
<u>INTERNALLY / IN PLANT ROOM / EXTERNALLY#</u>					
<u>(Cont'd)</u>					
Extra over * wide trays for					
A	bends		nr		
B	tees		nr		
C	reducing tees		nr		
D	reducing crosses		nr		
<u>Busbar trunkings and fittings ; IEC</u>					
<u>61439-1:2011 and IEC 61439-6:2012 ;</u>					
<u>galvanized sheet steel construction ;</u>					
<u>all-insulated ; totally enclosed type ;</u>					
<u>not less than IP54 of IEC 60529:2013/Corr</u>					
<u>2:2015</u>					
Triple pole and full rated neutral					
E	* A mains ; fixed to walls and columns		m		
F	* A mains ; fixed to soffits		m		
G	* A tap-off units ; plug-in type		nr		
H	* A flange ends		nr		
J	* A fire barriers		nr		
Extra over * A ; triple pole and full rated neutral busbar trunkings for					
K	elbows		nr		
L	tees		nr		
M	stop ends		nr		
<u>Air break switchgears to IEC 60947-3:2015</u>					
Switches ; TPN ; for MCCB boards ; fixed to walls and columns					
N	* A		nr		
MODEL BILL OF DESCRIPTION				To Collection \$	
ASD STANDARD BILLS MODBQ.22/4					

		<u>ELECTRICAL INSTALLATION</u>			
Item	Description	Qty	Unit	Rate	HK\$
	<u>MAIN AND SUB-MAIN DISTRIBUTION ;</u> <u>INTERNALLY / IN PLANT ROOM / EXTERNALLY#</u> <u>(Cont'd)</u>				
A	Switches ; TPN ; for equipment ; fixed to walls and columns * A		nr		
B	Switches ; TPN ; for busbar chambers ; fixed to walls and columns * A		nr		
C	Contactor switches ; SP ; for MCB boards ; fixed to walls and columns * A		nr		
D	<u>Busbar chambers to IEC 61439-1:2011 and IEC 61439-6:2012 ; sheet steel ; totally enclosed type ; internal cables and busbar connections to associated control gears and switchgears</u> Busbar chambers ; four fully sized, hard drawn solid electro-tinned copper busbars to BS EN 13601:2013 ; length sufficient for * number outgoing circuits ; fixed to walls and columns * A		nr		
E	<u>Miniature circuit breaker (MCB) distribution boards to IEC 61439-1:2011 and IEC 61439-3:2012/Corr 1:2013 ; IP41 minimum ; sheet steel ; totally enclosed type ; busbars ; ferrules ; integral incoming switch-disconnector (MCBs measured separately)</u> MCB distribution boards ; TPN ; switch-disconnector to category AC 22A ; flush mounted to walls * way ; * A		nr		
F	blanking plates for single pole spare ways		nr		
MODEL BILL OF DESCRIPTION		To Collection \$			
ASD STANDARD BILLS MODBQ.22/5					

ELECTRICAL INSTALLATION

Item	Description	Qty	Unit	Rate	HK\$
	<u>MAIN AND SUB-MAIN DISTRIBUTION ;</u> <u>INTERNALLY / IN PLANT ROOM / EXTERNALLY#</u> <u>(Cont'd)</u>				
	<u>Miniature circuit breaker (MCB)</u> <u>distribution boards to IEC 61439-1:2011</u> <u>and IEC 61439-3:2012/Corr 1:2013 ; IP41</u> <u>minimum ; sheet steel ; totally enclosed</u> <u>type ; busbars to BS EN 13601:2013 ;</u> <u>ferrules ; integral incoming</u> <u>switch-disconnector (MCBs measured</u> <u>separately)</u>				
	MCB distribution boards ; TPN ; switch-disconnector to category AC 22A ; flush mounted to walls				
A	* way ; * A		nr		
B	blanking plates for single pole spare ways		nr		
	<u>Moulded case circuit breaker (MCCB)</u> <u>distribution boards ; sheet steel ; IEC</u> <u>61439-1:2011, IEC 61439-2:2011 and IEC</u> <u>61439-3:2012/Corr 1:2013 ; IP41 minimum ;</u> <u>busbars ; integral main isolating switches</u> <u>(MCCBs and MCBs measured separately)</u>				
	MCCB distribution boards ; TPN ; rated short circuit withstand current not less than * KA ; fixed to walls and colums				
C	* way ; * A		nr		
D	blanking plates for triple pole spare ways		nr		
	<u>Moulded case circuit breaker (MCCB)</u> <u>distribution boards ; sheet steel ; IEC</u> <u>61439-1:2011, IEC 61439-2:2011 and IEC</u> <u>61439-3:2012/Corr 1:2013 ; IP41 minimum ;</u> <u>busbars to BS EN 13601:2013 ; integral</u> <u>main isolating switches (MCCBs and MCBs</u> <u>measured separately)</u>				
	MCCB distribution boards ; TPN ; rated short circuit withstand current not less than * kA ; fixed to walls and colums				
E	* way ; * A		nr		
	MODEL BILL OF DESCRIPTION		To Collection	\$	
	ASD STANDARD BILLS MODBQ.22/6				

ELECTRICAL INSTALLATION

Item	Description	Qty	Unit	Rate	HK\$
	<u>MAIN AND SUB-MAIN DISTRIBUTION ;</u> <u>INTERNALLY / IN PLANT ROOM / EXTERNALLY#</u> <u>(Cont'd)</u>				
A	blinking plates for triple pole spare ways		nr		
	<u>Miniature circuit breakers (MCBs) to IEC</u> <u>60898-1:2003</u>				
	MCBs ; * pole ; rated instantaneous tripping current Type B ; rated short circuit breaking capacity not less than * kA ; fixed in distribution boards				
B	* A		nr		
	<u>Moulded case circuit breakers (MCCBs) to</u> <u>IEC 60947-2:2013</u>				
	MCCBs ; * pole ; rated short circuit breaking capacity not less than * kA ; facility for padlocking ; fixed in distribution boards				
C	* A		nr		
	<u>Residual current-operated circuit breakers</u> <u>without integral overcurrent protection</u> <u>(RCCBs) to IEC 61008-1:2006</u>				
	RCCBs ; double pole ; instantaneous tripping type without time delaying function ; rated residual operating current *mA ; rated short circuit making and breaking capacity not less than 3 kA ; rail mounted in distribution boards				
D	* A		nr		
	RCCBs ; four pole ; instantaneous tripping type without time delaying function ; rated residual operating current *mA ; rated short circuit making and breaking capacity not less than 3 kA ; rail mounted in distribution boards				
E	* A		nr		
	MODEL BILL OF DESCRIPTION ASD STANDARD BILLS MODBQ.22/7		To Collection	\$	

ELECTRICAL INSTALLATION

Item	Description	Qty	Unit	Rate	HK\$
	<u>MAIN AND SUB-MAIN DISTRIBUTION ;</u> <u>INTERNALLY / IN PLANT ROOM / EXTERNALLY#</u> <u>(Cont'd)</u> <u>Active harmonic filters</u> Active harmonic filters ; IEC 61000-4-2:2008, IEC 61000-4-3:2010, IEC 61000-4-4:2012, IEC 61000-4-5:2014, IEC 61000-6-2:2006 and IEC 61000-6-4:2011 ; all as detailed in the Electrical General Specification ; complete with diagnostics control panel, built-in RS485/232 serial communication ports, power monitoring system, protection devices for thermal overload, internal short circuit and inverter bridge abnormal operation, read-out indicators, circuit breakers, control push buttons and all necessary accessories ; housed in high quality steel sheet industrial grade cabinet to IP21 with front door and key lock ; all necessary interfacing works with other equipment A * kVA ; connection to distribution boards <u>GENERAL LIGHTING AND SMALL POWER ;</u> <u>INTERNALLY / IN PLANT ROOM / EXTERNALLY#</u> <u>Final circuits ; 450/750V PVC insulated</u> <u>cables ; general purpose ; operating</u> <u>temperature not exceeding 70 degrees</u> <u>Celsius to code designation 60227 IEC 01</u> <u>of IEC 60227-3:1993/Amd 1:1997 ;</u> <u>non-sheathed ; solid copper conductors ;</u> <u>drawing into and including conduits and</u> <u>fittings and/or flexible conduits and</u> <u>fittings or any cable installing</u> <u>facilities as specified ; controlling</u> <u>cables ; earth continuity conductors</u> From distribution board ref. * ; * mm2 ; * core cables B to lighting points ; battery power supply ; local switch control C to lighting points ; battery power supply ; central control MODEL BILL OF DESCRIPTION ASD STANDARD BILLS MODBQ.22/8		nr		
			nr		
			nr		
				To Collection \$	

ELECTRICAL INSTALLATION

Item	Description	Qty	Unit	Rate	HK\$
<u>GENERAL LIGHTING AND SMALL POWER ;</u>					
<u>INTERNALLY / IN PLANT ROOM / EXTERNALLY#</u>					
<u>(Cont'd)</u>					
A	to lighting points ; battery power supply ; grid switch control		nr		
B	to lighting points ; battery power supply ; dimmer switch control		nr		
C	to lighting points ; battery power supply ; contactor control		nr		
D	to lighting track points ; local switch control		nr		
E	to lighting switch points ; fixed in bedhead trunkings ; one way		nr		
F	to dimmer switch points ; one way		nr		
G	to contactor switch points		nr		
H	to fan regulator points		nr		
J	to unswitched or switched fused connector unit points ; radial		nr		
K	to unswitched or switched socket points ; * gangs ; ring		nr		
L	to isolator points ; waterproof ; IP *		nr		
M	to DP switch points ; flameproof		nr		
N	to photocell device points ; waterproof ; IP *		nr		
P	to shaver supply unit points ; radial		nr		
Q	to cooker control unit points		nr		

ELECTRICAL INSTALLATION

Item	Description	Qty	Unit	Rate	HK\$
	<u>GENERAL LIGHTING AND SMALL POWER ;</u> <u>INTERNALLY / IN PLANT ROOM / EXTERNALLY#</u> <u>(Cont'd)</u>				
	<u>Final circuits ; 500V (light duty grade)</u> <u>mineral insulated cables ; IEC</u> <u>60702-1:2002/Amd 1:2015 and IEC</u> <u>60702-2:2002/Amd 1:2015 ; copper sheathed</u> <u>; plastic outer coverings of low smoke</u> <u>halogen free or low smoke zero halogen ;</u> <u>IEC 60754-1:2011/Corr 1:2013 ; copper</u> <u>conductors ; fixed to walls and columns or</u> <u>ceilings with any cable installing</u> <u>facilities</u>				
	From distribution board ref. * ; * mm2 ; * core cables				
A	to lighting points ; local switch control		nr		
B	to lighting points ; central switch control		nr		
C	to lighting switch points ; one way		nr		
D	to unswitched or switched socket points ; * gangs ; ring		nr		
	<u>Luminaries ; complete with lamps or tubes</u> <u>and control gears and ballasts ;</u> <u>connections to cables and conduits system</u> <u>; earthing and bonding ; provision of all</u> <u>necessary component parts, suspension rods</u> <u>hangers and fixings</u>				
	Fluorescent fittings ; electronic ballasts ; fixed to walls and columns, ceilings or false ceilings				
E	* no. x * W ; * mm ; batten type ; surface mounted (ref. *)		nr		
F	* no. x * W ; * mm ; batten type ; pendant mounted (ref. *)		nr		
G	* no. x * W ; * x * ; * diffusers ; recess mounted (ref. *)		nr		
	MODEL BILL OF DESCRIPTION		To Collection	\$	
	ASD STANDARD BILLS MODBQ.22/10				

ELECTRICAL INSTALLATION

Item	Description	Qty	Unit	Rate	HK\$
<u>GENERAL LIGHTING AND SMALL POWER ;</u>					
<u>INTERNALLY / IN PLANT ROOM / EXTERNALLY#</u>					
<u>(Cont'd)</u>					
A	* no. x * W ; * x * ; * diffusers ; recess mounted ; completed with battery and charger ; sensors (ref. *)		nr		
B	* no. x * W ; * x * ; * diffusers ; recess mounted ; completed with dimming ballast (ref. *)		nr		
C	* no. x * W ; * x * ; * diffusers ; surface mounted (ref. *)		nr		
	Fluorescent fittings ; self-contained emergency maintained type ; lamps, control gear ; electronic ballast ; battery and charger, * hour emergency operation ; provision of all necessary component parts ; fixed to walls and columns, ceilings or false ceilings				
D	* no. x * W ; * mm ; batten type ; surface mounted ; complete with battery and charger ; sensors (ref. *)		nr		
E	* no. x * W ; * mm ; for exit sign boxes ; surface mounted ; complete with battery and charger ; sensors (ref. *)		nr		
<u>Accessories of approved type</u>					
	Lighting switches ; single pole ; quick make-and-break type ; fixed to walls and columns				
F	* A ; * gang ; one way ; flush mounted		nr		
G	* A ; * gang ; one way ; metalclad front plates ; surface mounted		nr		
	Switched socket outlets ; integral double pole switches ; fixed to walls and columns				
H	* A ; * gang ; flush mounted		nr		
J	* A ; * gang ; metalclad front plates ; surface mounted		nr		
MODEL BILL OF DESCRIPTION				To Collection \$	
ASD STANDARD BILLS				MODBQ.22/11	

		<u>ELECTRICAL INSTALLATION</u>				
Item	Description	Qty	Unit	Rate	HK\$	
<u>GENERAL LIGHTING AND SMALL POWER ;</u>						
<u>INTERNALLY / IN PLANT ROOM / EXTERNALLY#</u>						
<u>(Cont'd)</u>						
	Switched socket outlets ; integral double pole switches ; with residual current devices ; fixed to walls and columns					
A	* A ; * gang ; surface mounted		nr			
B	* A ; * gang ; metalclad front plates ; surface mounted		nr			
C	* A ; * gang ; flameproof ; surface mounted		nr			
	Fused spur units ; fixed to walls and columns, ceilings or false ceilings					
D	* A ; surface mounted		nr			
	Fused spur units ; integral double pole switches and pilot lights ; fixed to walls and columns, ceilings or false ceilings					
E	* A ; flush mounted		nr			
F	* A ; flame proof ; surface mounted		nr			
	Fused spur units ; integral flex outlets ; fixed to walls and columns, ceilings or false ceilings					
G	* A ; flush mounted		nr			
H	* A ; metalclad front plates ; surface mounted		nr			
	Switched fused connection units ; * pole type with neon indicators ; integral switch ; fixed to walls and columns, ceilings or false ceilings					
J	* A ; flush mounted		nr			
	Isolator switches ; TPN ; fixed to walls and columns					
K	* A ; surface mounted		nr			
L	* A ; waterproof ; IP54 minimum ; surface mounted		nr			
MODEL BILL OF DESCRIPTION				To Collection	\$	
ASD STANDARD BILLS				MODBQ.22/12		

		<u>ELECTRICAL INSTALLATION</u>			
Item	Description	Qty	Unit	Rate	HK\$
	<u>GENERAL LIGHTING AND SMALL POWER ;</u> <u>INTERNALLY / IN PLANT ROOM / EXTERNALLY#</u> <u>(Cont'd)</u>				
A	* A ; flameproof ; surface mounted		nr		
	Fan regulators ; D.P. switch control ; pilot light ; fixed to walls and columns				
B	* A ; surface mounted		nr		
	<u>CALL BELL SYSTEM ; INTERNALLY/ IN PLANT</u> <u>ROOM / EXTERNALLY#</u>				
	<u>Electric supply and control circuits ; PVC</u> <u>insulated cables ; drawing into and</u> <u>including conduits and fittings ; earth</u> <u>continuity conductors</u>				
	* mm2 ; single-core cables ; from call boxes to the following outlet points				
C	call buzzer points at * room		nr		
D	indication lamp points at * room		nr		
	* mm2 ; single-core cables ; from indicating panel in * room (ref. *) to the following outlet points				
E	call box points in * room		nr		
	* mm2 ; single-core cables ; between indication panels				
F	from panel in * room to panel in * room		nr		
	<u>Accessories</u>				
	Bells ; underdome type ; fixed to substantial frame				
G	low tone call bells		nr		
	Buzzers ; contained in insulating plastic case				
H	low tone call buzzers		nr		
	MODEL BILL OF DESCRIPTION		To Collection	\$	
	ASD STANDARD BILLS MODBQ.22/13				

		<u>ELECTRICAL INSTALLATION</u>			
Item	Description	Qty	Unit	Rate	HK\$
	<u>CALL BELL SYSTEM ; INTERNALLY/ IN PLANT ROOM / EXTERNALLY# (Cont'd)</u>				
	Call bell pushes ; fixed in 35 deep conduit box ; flush pattern				
A	call bell pushes		nr		
	Table-type pushes ; single way ; plastic bases, top plates and label holders				
B	table-type pushes		nr		
	Indication lights ; fixed to walls and columns				
C	indication lights ; * W lamps ; surface mounted ; suitable for 24V A.C. (ref. *)		nr		
	<u>Call boxes ; flexible cables connected to wall outlets ; indicating lights ; push buttons ; reset buttons ; all necessary interconnecting wiring</u>				
	Call boxes ; mounting on table tops				
D	call boxes ; located in * room		nr		
	Call boxes ; mounting on walls and columns				
E	call boxes ; located in * room		nr		
	<u>Indication panels ; complete power supply units ; indicating lights ; push buttons ; reset buttons ; low tone buzzers ; all necessary interconnecting wiring (ref. *)</u>				
	Indication panels ; mounting on walls and columns				
F	indication panels ; located in * room		nr		
	<u>Steel cable trunkings and fittings to IEC 61084-1:2017 ; removable covers ; cable supporting facilities</u>				
	Surface trunkings and fittings ; fixed to walls and columns				
G	* x * ; * compartments		m		
MODEL BILL OF DESCRIPTION		To Collection		\$	
ASD STANDARD BILLS MODBQ.22/14					

		<u>ELECTRICAL INSTALLATION</u>			
Item	Description	Qty	Unit	Rate	HK\$
	<u>EOS ; TELEPHONE AND PABX SYSTEM ;</u> <u>INTERNALLY / IN PLANT ROOM / EXTERNALLY#</u> <u>(Cont'd)</u>				
A	fax outlet points		nr		
	<u>Accessories ; * type ; galvanised sheet</u> <u>metal plate finished ; moulded blank</u> <u>plates</u>				
	Outlet plates for				
B	telephone outlet boxes ; * x *		nr		
	<u>EOS ; COMPUTER SYSTEM ; INTERNALLY / IN</u> <u>PLANT ROOM / EXTERNALLY#</u>				
	<u>Steel cable trunkings and fittings to IEC</u> <u>61084-1:2017 ; removable covers ; cable</u> <u>supporting facilities</u>				
	Surface trunkings and fittings ; fixed to walls and columns				
C	* x * ; * compartments		m		
	Surface trunkings and fittings ; fixed to soffits				
D	* x * ; * compartments		m		
	Extra over * x * ; * compartment surface trunkings for				
E	bends		nr		
F	tees		nr		
G	reducing tees		nr		
	<u>Conduit system for final circuit ;</u> <u>including conduits and fittings and/or</u> <u>flexible conduits and fittings or any</u> <u>cable installing facilities as specified ;</u> <u>complete with drawn wires</u>				
	From trunkings system (trunkings measured separately) to				
H	computer outlet points		nr		
MODEL BILL OF DESCRIPTION		To Collection		\$	
ASD STANDARD BILLS MODBQ.22/16					

		<u>ELECTRICAL INSTALLATION</u>			
Item	Description	Qty	Unit	Rate	HK\$
	<u>EOS ; COMPUTER SYSTEM ; INTERNALLY / IN PLANT ROOM / EXTERNALLY# (Cont'd)</u>				
	<u>Accessories ; * type ; galvanised sheet metal plate finished ; moulded blank plates</u>				
	Outlet plates for				
A	computer outlet boxes ; * x *		nr		
	<u>EOS ; INTER-COMMUNICATION AND PUBLIC ADDRESS SYSTEM ; INTERNALLY / IN PLANT ROOM / EXTERNALLY#</u>				
	<u>Steel cable trunkings and fittings to IEC 61084-1:2017 ; removable covers ; cable supporting facilities</u>				
	Surface trunkings and fittings ; fixed to walls and columns				
B	* x * ; * compartments		m		
	Surface trunkings and fittings ; fixed to soffits				
C	* x * ; * compartments		m		
	Extra over * x * ; * compartment surface trunkings for				
D	bends		nr		
E	tees		nr		
F	reducing tees		nr		
	<u>Conduit system for final circuit ; including conduits and fittings and/or flexible conduits and fittings or any cable installing facilities as specified ; complete with drawn wires</u>				
	From trunkings system (trunkings measured separately) to				
G	loud speaker outlet points		nr		
H	microphone outlet points		nr		
J	intercom unit outlet points		nr		
	MODEL BILL OF DESCRIPTION				
	ASD STANDARD BILLS				
	MODBQ.22/17				
			To Collection	\$	

		<u>ELECTRICAL INSTALLATION</u>			
Item	Description	Qty	Unit	Rate	HK\$
<u>EOS ; INTER-COMMUNICATION AND PUBLIC ADDRESS SYSTEM ; INTERNALLY / IN PLANT ROOM / EXTERNALLY# (Cont'd)</u>					
A	intercom master unit outlet points		nr		
B	volume control outlet points		nr		
<u>Accessories ; * type ; galvanised sheet metal plate finished ; moulded blank plates</u>					
Outlet plates for					
C	loudspeaker outlet boxes ; * x *		nr		
D	microphone outlet boxes ; * x *		nr		
E	intercom unit outlet boxes ; * x *		nr		
F	intercom master unit outlet boxes ; * x *		nr		
G	volume control outlet boxes ; * x *		nr		
<u>EOS ; STAFF PAGING SYSTEM ; INTERNALLY / IN PLANT ROOM / EXTERNALLY#</u>					
<u>Steel cable trunkings and fittings to IEC 61084-1:2017 ; removable covers ; cable supporting facilities</u>					
Surface trunkings and fittings ; fixed to walls and columns					
H	* x * ; * compartments		m		
Surface trunkings and fittings ; fixed to soffits					
J	* x * ; * compartments		m		
Extra over * x * ; * compartment surface trunkings for					
K	bends		nr		
L	tees		nr		
M	reducing tees		nr		
MODEL BILL OF DESCRIPTION				To Collection \$	
ASD STANDARD BILLS				MODBQ.22/18	

		<u>ELECTRICAL INSTALLATION</u>			
Item	Description	Qty	Unit	Rate	HK\$
	<u>EOS ; CCTV ; INTERNALLY / IN PLANT ROOM /</u> <u>EXTERNALLY#</u>				
	<u>Steel cable trunkings and fittings to IEC</u> <u>61084-1:2017 ; removable covers ; cable</u> <u>supporting facilities</u>				
	Surface trunkings and fittings ; fixed to walls and columns				
A	* x * ; * compartments		m		
	Surface trunkings and fittings ; fixed to soffits				
B	* x * ; * compartments		m		
	Extra over * x * ; * compartment surface trunkings for				
C	bends		nr		
D	tees		nr		
E	reducing tees		nr		
	<u>Conduit system for final circuit ;</u> <u>including conduits and fittings and/or</u> <u>flexible conduits and fittings or any</u> <u>cable installing facilities as specified ;</u> <u>complete with drawn wires</u>				
	From trunkings system (trunkings measured separately) to				
F	CCTV monitor outlet points		nr		
G	CCTV camera outlet points		nr		
	<u>Accessories ; * type ; galvanised sheet</u> <u>metal plate finished ; moulded blank</u> <u>plates</u>				
	Outlet plates for				
H	CCTV monitor outlet boxes ; * x *		nr		
J	CCTV camera outlet boxes ; * x *		nr		
	MODEL BILL OF DESCRIPTION		To Collection	\$	
	ASD STANDARD BILLS MODBQ.22/19				

		<u>ELECTRICAL INSTALLATION</u>			
Item	Description	Qty	Unit	Rate	HK\$
	<u>TRUNKING, LADDER AND TRAY ; INTERNALLY / IN PLANT ROOM / EXTERNALLY#</u>				
	<u>Steel cable trunkings and fittings to IEC 61084-1:2017 ; removable covers ; cable supporting facilities</u>				
	Surface trunkings and fittings ; fixed to walls and columns				
A	* x * ; * compartments		m		
	Surface trunkings and fittings ; fixed to soffits				
B	* x * ; * compartments		m		
	Extra over * x * ; * compartment surface trunkings for				
C	bends		nr		
D	tees		nr		
E	reducing tees		nr		
	<u>Steel underfloor trunkings and fittings to IEC 61084-1:2017 and IEC 61084-2-2:2017 ; covers</u>				
	Underfloor trunkings and fittings ; fixed to floors				
F	* x * ; * compartments		m		
	Extra over * x * ; * compartment underfloor trunkings for				
G	bends		nr		
H	tees		nr		
J	crosses		nr		
K	floor boxes		nr		
MODEL BILL OF DESCRIPTION		To Collection \$			
ASD STANDARD BILLS MODBQ.22/20					

ELECTRICAL INSTALLATION

Item	Description	Qty	Unit	Rate	HK\$
	<u>TRUNKING, LADDER AND TRAY ; INTERNALLY / IN PLANT ROOM / EXTERNALLY# (Cont'd)</u>				
	<u>Bedhead trunkings and fittings ; * type ; cover face plates including all necessary perforations ; running joints and fixed (power sockets, switches, etc. mounted on bedhead trunkings measured separately)</u>				
	Bedhead trunkings and fittings ; surface mounted on walls and columns				
A	* x * ; * compartments		m		
	Extra over * x * ; * compartment bedhead trunkings for				
B	bends		nr		
C	tees		nr		
D	crosses		nr		
E	stop ends		nr		
	<u>Steel skirting trunkings and fittings to IEC 61084-1:2017 ; covers</u>				
	Skirting trunkings and fittings ; fixed to walls and columns				
F	* x * ; * compartments		m		
	Extra over * x * ; * compartment skirting trunkings for				
G	bends		nr		
H	tees		nr		
	<u>Perforated metal trays and fittings to BS EN 10149-1:2013 ; hot dipped galvanised to ISO 1460:1992 and ISO 1461:2009</u>				
	Trays and fittings ; fixed to walls and columns				
J	* wide		m		
	Trays and fittings ; fixed to soffits				
K	* wide		m		
	MODEL BILL OF DESCRIPTION		To Collection	\$	
	ASD STANDARD BILLS MODBQ.22/21				

		<u>ELECTRICAL INSTALLATION</u>			
Item	Description	Qty	Unit	Rate	HK\$
	<u>EARTHING AND BONDING ; INTERNALLY, IN PLANT ROOM AND EXTERNALLY</u>				
	<u>Equipotential bonding to all exposed and extraneous conductive parts of non electric services ; complete with all component clamps and accessories ; complying Electricity (Wiring) Regulations ; all as described in the Particular Specification and General Specification for Electrical Installation</u>				
	Allow for				
A	main equipotential bonding ; except for system	-	item	-	
B	supplementary equipotential bonding ; except for system	-	item	-	
	<u>Tinned copper tapes ; supported at approved spacing ; including jointing and fixing</u>				
	Tapes ; fixed to wall and columns or soffits				
C	* x *		m		
	Tapes ; fixed to cable trays				
D	* x *		m		
	Tapes ; fixed to trunkings				
E	* x *		m		
	<u>* / * PVC insulated * cables ; copper conductors</u>				
	Cables in conduits				
F	* mm2 ; single-core		m		
	<u>Earth terminals</u>				
	Tinned solid copper earth terminal ; connections of all earth tapes ; fixed to walls and columns				
G	approved size		m		
	MODEL BILL OF DESCRIPTION				
	ASD STANDARD BILLS MODBQ.22/24				
		To Collection	\$		

		<u>ELECTRICAL INSTALLATION</u>			
Item	Description	Qty	Unit	Rate	HK\$
	<u>EARTHING AND BONDING ; INTERNALLY, IN PLANT ROOM AND EXTERNALLY (Cont'd)</u>				
	<u>Earth electrodes ; complying Electricity Supply Lines (Protection) Regulation</u>				
	Earth rod electrodes ; copper ; hardened steel point penetrating ends ; driving into ground within earth pits				
A	for * system ; * diameter ; * long		nr		
	<u>ELECTRICAL INSTALLATION SUNDRIES ; INTERNALLY, IN PLANT ROOM AND EXTERNALLY</u>				
	<u>The following items are in respect of the whole Electrical Installation</u>				
	Allow for				
B	marking the positions of holes, mortices, chases and the like in the structure	-	item	-	
C	inspection, testing and commissioning of the complete Electrical Installation (Inspection and testing for Low Voltage Cubicle Switchboards Installation ; testing of Diesel Generating Sets Installation and Uninterruptible Power Supply System measured separately) ; all as described in the Particular Specification, Section D1 to D3 of the General Specification for Electrical Installation	-	item	-	
D	inspection, attendance, operation and maintenance of the complete Electrical Installation during Maintenance Period (Inspection, operation and maintenance of Low Voltage Cubicle Switchboards Installation, Diesel Generating Sets Installation and Uninterruptible Power Supply System during Maintenance Period measured separately) ; all as described in the Particular Specification, Section E1 and E3 of the General Specification for Electrical Installation	-	item	-	
	MODEL BILL OF DESCRIPTION		To Collection	\$	
	ASD STANDARD BILLS MODBQ.22/25				

Item	Description	Qty	Unit	ELECTRICAL INSTALLATION	
				Rate	HK\$
<u>ELECTRICAL INSTALLATION SUNDRIES ;</u>					
<u>INTERNALLY, IN PLANT ROOM AND EXTERNALLY</u>					
<u>(Cont'd)</u>					
A	providing all necessary power and water, diesel and fuels in connection with inspection, testing and commissioning and maintenance	-	item	-	
B	providing installation drawings ; all as described in the Particular Specification and Section A4.2 of the General Specification for Electrical Installation	-	item	-	
C	providing as-built drawings ; all as described in the Particular Specification and Section A4.3 of the General Specification for Electrical Installation	-	item	-	
D	providing operation and maintenance (O&M) manuals and user manuals ; all as described in the Particular Specification and Section A4.4 of the General Specification for Electrical Installation	-	item	-	
E	providing training of Employer's staff as described in the Particular Specification, Section E1 and E2 of the General Specification for Electrical Installation	-	item	-	
F	providing sample boards ; all as described in the Particular Specification and Section A3.7 of the General Specification for Electrical Installation	-	item	-	
G	providing mock-ups and prototypes	-	item	-	
H	supplying conduit sleeves (sleeves fixing by others) and filling holes so formed in walls, floors and ceilings with approved packing materials as described	-	item	-	
MODEL BILL OF DESCRIPTION				To Collection	\$
ASD STANDARD BILLS				MODBQ.22/26	

		<u>ELECTRICAL INSTALLATION</u>			
Item	Description	Qty	Unit	Rate	HK\$
<u>ELECTRICAL INSTALLATION SUNDRIES ;</u>					
<u>INTERNALLY, IN PLANT ROOM AND EXTERNALLY</u>					
<u>(Cont'd)</u>					
A	supplying cable sleeves (sleeves fixing by others) and filling holes so formed in walls, floors and ceilings with approved packing materials as described	-	item	-	
B	supplying and fixing fire stopping to walls and floors	-	item	-	
C	supplying and fixing one complete set of spare fuses in accordance with Section B1.8 of the General Specification for Electrical Installation ; including wooden board with painting	-	item	-	
To Collection \$					

C O L L E C T I O N

Item

Description

HK\$

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C. fwd \$

ELECTRICAL INSTALLATION

C O L L E C T I O N

B.fwd

\$



Item

Description

HK\$

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Bill Nr. MODBQ.22 - ELECTRICAL INSTALLATION

To Summary

\$



Bill Nr. MODBQ.23
AIR CONDITIONING INSTALLATION

Item	Description	Qty	Unit	Rate	HK\$
	<u>COOLING WATER CONDENSING SYSTEM ;</u> <u>INTERNALLY / IN PLANT ROOM / EXTERNALLY#</u>				
	<u>Ductile iron pipes and fittings ; BS EN</u> <u>545:2010 ; appropriate grade ; screw-on</u> <u>flanges connection ; thickness grade of</u> <u>Class K12 ; metallic zinc coating with</u> <u>bitumen painted externally ; internally</u> <u>lined with cement mortar to BS EN</u> <u>545:2010, BS EN 598:2007+A1:2009, BS EN</u> <u>969:2009 type * ; screwed joints ;</u> <u>off-site pre-fabricated metal mounting and</u> <u>fixing brackets</u>				
	Pipework and fittings ; suspended from soffits				
A	* diameter		m		
	Pipework and fittings ; fixed to walls and columns				
B	* diameter		m		
	Pipework and fittings ; laid on floors				
C	* diameter		m		
	Extra over pipework for				
D	* bends		nr		
E	* tees		nr		
F	* reducing bends		nr		
G	* reducing tees		nr		
	Flow and return header pipes ; blanked off at spare outlets ; supporting on floors				
H	* diameter ; * long ; with * nr. * x * x * branches		nr		
	MODEL BILL OF DESCRIPTION		To Collection	\$	
	ASD STANDARD BILLS MODBQ.23/1				

AIR CONDITIONING INSTALLATION

Item	Description	Qty	Unit	Rate	HK\$
	<u>COOLING WATER CONDENSING SYSTEM ;</u> <u>INTERNALLY / IN PLANT ROOM / EXTERNALLY#</u> <u>(Cont'd)</u>				
	<u>Cast gunmetal valves</u>				
	Gate valves				
A	* diameter		nr		
	<u>Bronze valves</u>				
	Drain valves				
B	* diameter		nr		
	<u>Brass cast iron valves</u>				
	Motorized control valves ; DDC control				
C	* diameter		nr		
	<u>Ductile iron valves</u>				
	Butterfly valves				
D	* diameter		nr		
	<u>Cast iron strainers</u>				
	Strainers ; double type				
E	* diameter		nr		
	<u>Gunmetal automatic air vents</u>				
	Automatic air vents ; non-ferrous floats and guides ; corrosion resistance valves and seats				
F	to suit * diameter pipes		nr		
	<u>Thermometers</u>				
	Thermometers ; liquid immersion ; complete with thermometer pockets				
G	to suit * diameter pipes		nr		
To Collection \$					

AIR CONDITIONING INSTALLATION

Item	Description	Qty	Unit	Rate	HK\$
	<u>COOLING WATER CONDENSING SYSTEM ;</u> <u>INTERNALLY / IN PLANT ROOM / EXTERNALLY#</u> <u>(Cont'd)</u>				
	<u>Pressure gauges</u>				
	Pressure gauges				
A	to suit * diameter pipes		nr		
	<u>Test plugs ; complete with sealing caps</u>				
	Test plugs				
B	to suit * diameter pipes		nr		
	<u>Energy meters ; complete with temperature</u> <u>sensors, flow meters, flow transmitter /</u> <u>converter units, calculator units</u>				
	Energy meters ; integrate with CCMS				
C	to suit * diameter pipes		nr		
	<u>Fresh water cooling towers ; glass</u> <u>reinforced plastics (GRP) casings and</u> <u>removable covers ; fan motors ;</u> <u>self-extinguishing PVC fill ; AISI 316</u> <u>stainless steel support structures ; fan</u> <u>guards ; gear boxes, bleed-off pipes,</u> <u>switches and necessary components ;</u> <u>adequate acoustic treatment ; certified by</u> <u>Cooling Tower Institute ; complying</u> <u>statutory noise limit</u>				
	Cooling towers ; induced draught fans ; axial type				
D	heat rejection capacity * kW (ref. *)		nr		
	<u>Condenser water pump sets ; direct driven</u> <u>by electric motors ; cast iron casings ;</u> <u>stuffing boxes ; mechanical seal ;</u> <u>complying statutory noise limit ; as</u> <u>described in the Particular Specification</u> <u>and drawing nr. *</u>				
	Fresh water pump sets ; centrifugal type				
E	water flow rate * l/s ; differential static pressure * kPa (ref. *)		nr		
	MODEL BILL OF DESCRIPTION		To Collection	\$	
	ASD STANDARD BILLS MODBQ.23/3				

AIR CONDITIONING INSTALLATION

Item	Description	Qty	Unit	Rate	HK\$
	<u>CHILLED WATER SYSTEM ; INTERNALLY / IN PLANT ROOM / EXTERNALLY#</u>				
	<u>Design, supply and install steel pipes and fittings ; ISO 65:1981 / BS EN 10255:2004 (medium grade) ; painted externally ; welded joints ; off-site pre-fabricated metal mounting and fixing brackets</u>				
	Pipework and fittings ; suspended from soffits				
A	* diameter		m		
	Pipework and fittings ; fixed to walls and columns				
B	* diameter		m		
	Pipework and fittings ; laid on floors				
C	* diameter		m		
	Extra over pipework for				
D	* bends		nr		
E	* tees		nr		
F	* reducing bends		nr		
G	* reducing tees		nr		
	Flow and return header pipes ; blanked off at spare outlets ; supporting on floors				
H	* diameter ; * long ; with * nr. * x * x * branches		nr		
	<u>Bronze valves</u>				
	Drain valves				
J	* diameter		nr		
	<u>Cast iron valves</u>				
	Gate valves				
K	* diameter		nr		
	MODEL BILL OF DESCRIPTION				
	ASD STANDARD BILLS MODBQ.23/4				
		To Collection	\$		

AIR CONDITIONING INSTALLATION

Item	Description	Qty	Unit	Rate	HK\$
	<u>CHILLED WATER SYSTEM ; INTERNALLY / IN PLANT ROOM / EXTERNALLY# (Cont'd)</u>				
	Globe valves				
A	* diameter		nr		
	Double regulating valves				
B	* diameter		nr		
	<u>Brass cast iron valves</u>				
	Motorized control valves ; DDC control				
C	* diameter		nr		
	<u>Ductile iron valves</u>				
	Butterfly valves				
D	* diameter		nr		
	<u>Flow meters</u>				
	Flow meters ; BS EN 61000-6-1:2007, BS EN 61000-6-2:2005, BS EN 61000-6-3:2007+A1:2011 and BS EN 61000-6-4:2007 ; direct reading type ; complete with flow sensors ; integral signal converter / transmitter, digital display unit ; electromagnetic and ultrasonic				
E	to suit * diameter pipes		nr		
	<u>Cast iron strainers</u>				
	Strainers ; double type				
F	* diameter		nr		
	<u>Gunmetal automatic air vents</u>				
	Automatic air vents ; non-ferrous floats and guides ; corrosion resistance valves and seats				
G	to suit * diameter pipes		nr		
	MODEL BILL OF DESCRIPTION				
	ASD STANDARD BILLS MODBQ.23/5				
			To Collection	\$	

AIR CONDITIONING INSTALLATION

Item	Description	Qty	Unit	Rate	HK\$
	<u>CHILLED WATER SYSTEM ; INTERNALLY / IN PLANT ROOM / EXTERNALLY# (Cont'd)</u>				
	<u>Expansion joints ; stainless steel</u>				
	Bellow expansion joints ; axial movement pattern type				
A	* diameter ; complete with * insulation		nr		
	<u>Thermometers</u>				
	Thermometers ; air immersion ; complete with sealing plugs and test holes				
B	to suit * diameter pipes		nr		
	Thermometers ; liquid immersion ; complete with thermometer pockets				
C	to suit * diameter pipes		nr		
	<u>Pressure gauges</u>				
	Pressure gauges				
D	to suit * diameter pipes		nr		
	<u>Test plugs ; complete with sealing caps</u>				
	Test plugs				
E	to suit * diameter pipes		nr		
	<u>Energy meters ; complete with temperature sensors, flow meters, flow transmitter / converter units, calculator units</u>				
	Energy meters ; integrate with CCMS				
F	to suit * diameter pipes		nr		
	<u>CFC and HCFC free phenolic foam insulation ; rigid preformed section ; Class "O" fire rating ; factory applied double sided reinforced foil vapour barrier ; fixing with approved adhesive</u>				
	* thick ; fixing externally to pipework and fittings				
G	* diameter		m		
MODEL BILL OF DESCRIPTION		To Collection		\$	
ASD STANDARD BILLS MODBQ.23/6					

AIR CONDITIONING INSTALLATION

Item	Description	Qty	Unit	Rate	HK\$
	<u>CHILLED WATER SYSTEM ; INTERNALLY / IN PLANT ROOM / EXTERNALLY# (Cont'd)</u>				
	Extra over * thick insulation to pipework for				
A	* bends		nr		
B	* tees		nr		
C	* reducing bends		nr		
D	* reducing tees		nr		
	<u>Polystyrene insulation ; preformed or slab ; Class "O" fire rating ; non-self combustible ; * vapour barrier ; fixing with approved adhesive</u>				
	* thick ; fixing externally to pipework and fittings				
E	* diameter		m		
	Extra over * thick insulation to pipework for				
F	* bends		nr		
G	* tees		nr		
H	* reducing tees		nr		
	* thick ; fixing externally to flow and return header pipes				
J	* diameter ; * long ; with * nr. * x * x * branches		nr		
	<u>CFC and HCFC free phenolic foam insulation ; rigid preformed 'oversize' section ; Class "O" fire rating ; factory applied double sided reinforced foil vapour barrier ; fixing with approved adhesive</u>				
	* thick ; to valves				
K	* gate valves		nr		
L	* globe valves		nr		
M	* butterfly valves		nr		
	MODEL BILL OF DESCRIPTION		To Collection	\$	
	ASD STANDARD BILLS MODBQ.23/7				

AIR CONDITIONING INSTALLATION

Item	Description	Qty	Unit	Rate	HK\$
	<u>CHILLED WATER SYSTEM ; INTERNALLY / IN PLANT ROOM / EXTERNALLY# (Cont'd)</u>				
A	* motorized control valves		nr		
B	* double regulating valves		nr		
C	* drain valves		nr		
	* thick ; to strainers				
D	* strainers ; double type		nr		
	* thick ; to automatic air vents				
E	* automatic air vents		nr		
	<u>Polystyrene insulation ; preformed or slab ; Class "O" fire rating ; non-self combustible ; * vapour barrier ; fixing with approved adhesive</u>				
	* thick ; to valves				
F	* gate valves		nr		
G	* drain valves		nr		
	* thick ; to strainers				
H	* strainers ; double type		nr		
	* thick ; to automatic air vents				
J	* automatic air vents		nr		
	<u>Protective coverings and finishings ; hammer finish aluminium cladding to CFC and HCFC free phenolic foam</u>				
	* thick ; fixing to * thick insulation for				
K	* diameter pipes		m		
	Extra over * thick protective coverings and finishings to * thick insulation for				
L	* bends		nr		
M	* tees		nr		
N	* reducing bends		nr		
	MODEL BILL OF DESCRIPTION		To Collection	\$	
	ASD STANDARD BILLS MODBQ.23/8				

AIR CONDITIONING INSTALLATION

Item	Description	Qty	Unit	Rate	HK\$	
<u>CHILLED WATER SYSTEM ; INTERNALLY / IN</u>						
<u>PLANT ROOM / EXTERNALLY# (Cont'd)</u>						
A	* reducing tees		nr			
<u>Protective coverings and finishings ;</u>						
<u>galvanised iron wire netting ; cement</u>						
<u>plastering and painting to polystyrene</u>						
<u>insulation</u>						
* thick ; fixing to * thick insulation for						
B	* diameter pipes		m			
Extra over * thick protective coverings						
and finishings to * thick insulation for						
C	* bends		nr			
D	* tees		nr			
E	* reducing tees		nr			
* thick ; fixing to * thick insulation for						
F	* diameter header pipes ; * long ;					
	with * nr. * x * x * branches		nr			
<u>Protective coverings and finishings ;</u>						
<u>hammer finish aluminium cladded hinged</u>						
<u>split boxes to CFC and HCFC free phenolic</u>						
<u>foam insulation</u>						
* thick ; fixing to * thick insulation for						
G	* automatic air vents		nr			
H	* strainers ; double type		nr			
J	* gate valves		nr			
K	* globe valves		nr			
L	* butterfly valves		nr			
M	* motorized control valves		nr			
N	* double regulating valves		nr			
P	* drain valves		nr			
MODEL BILL OF DESCRIPTION					To Collection \$	
ASD STANDARD BILLS					MODBQ.23/9	

AIR CONDITIONING INSTALLATION

Item	Description	Qty	Unit	Rate	HK\$
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CHILLED WATER SYSTEM ; INTERNALLY / IN PLANT ROOM / EXTERNALLY# (Cont'd)

Protective coverings and finishings ; galvanised iron wire netting ; cement plastering and painting ; hammer finish aluminium cladded hinged split boxes to polystyrene insulation

* thick ; fixing to * thick insulation for

A	* automatic air vents		nr		
B	* strainers ; double type		nr		
C	* gate valves		nr		
D	* drain valves		nr		

Design, supply and install packaged chillers ; * refrigerant ; factory assembled and tested units ; ARI Standard 550/590(I-P/2018) ; BS EN 14511-1:2018 to BS EN 14511-4:2018 ; centrifugal type compressors ; condensers ; motors ; evaporators ; electronic/microcomputer control panel ; piping connections ; adequate acoustic treatment ; insulations ; all sensing devices, accessories and associated services ; complying statutory noise limit ; as described in the Particular Specification and drawing nr. *

Fresh water cooled chillers

E	cooling capacity * kW (ref. *)		nr		
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AIR CONDITIONING INSTALLATION

Item	Description	Qty	Unit	Rate	HK\$
	<p><u>CHILLED WATER SYSTEM ; INTERNALLY / IN PLANT ROOM / EXTERNALLY# (Cont'd)</u></p> <p><u>Design, supply and install packaged chillers ; * refrigerant ; factory assembled and tested units ; ARI Standard 550/590(I-P/2018) ; BS EN 14511-1:2018 to BS EN 14511-4:2018 ; oil-free ; semi-hermetic ; variable speed ; two-stage centrifugal type compressors ; condensers ; permanent magnet synchronous motors with integrated liquid refrigerant injection system for cooling ; evaporators ; electronic / microcomputer control panel ; piping connections ; adequate acoustic treatment ; insulations ; sensing devices, accessories and associated services ; complying statutory noise limit ; all as specified in the Particular Specification</u></p> <p>Water-cooled chillers</p>				
A	cooling capacity * kW (ref. *)		nr		
	<p><u>Pressed steel sectional feed and expansion tank ; BS 1564:1975 ; heavily galvanised ; adequate insulation with protective coverings and finishings ; complete with valves, drain facilities, overflow pipes, accessories and connections</u></p> <p>Expansion tanks ; on roof</p>				
B	* litres		nr		
	<p><u>Chilled water pump sets ; direct driven by electric motors ; cast iron casings ; stuffing boxes ; mechanical seal ; adequate insulations ; complying statutory noise limit ; as described in the Particular Specification and drawing nr. *</u></p> <p>Chilled water pump sets ; centrifugal type</p>				
C	water flow rate * l/s ; differential static pressure * kPa (ref. *)		nr		
<p>MODEL BILL OF DESCRIPTION ASD STANDARD BILLS MODBQ.23/11</p>		To Collection \$			

AIR CONDITIONING INSTALLATION

Item	Description	Qty	Unit	Rate	HK\$
	<u>CHILLED WATER SYSTEM ; INTERNALLY / IN PLANT ROOM / EXTERNALLY# (Cont'd)</u>				
	<u>Design, supply and install removable working and service platform ; rigid construction ; stainless steel fixing bolts and nuts ; all necessary accessories</u>				
	Working and service platform ; galvanised steel assembled				
A	approximate size * x * x *		nr		
	<u>WATER TREATMENT ; INTERNALLY, IN PLANT ROOM AND EXTERNALLY</u>				
	<u>Design, supply and install by water treatment specialist complete water treatment system ; all necessary chemical treatment equipment and plant ; metering pumps, panel box, chemical storage ; control, accessories and connections, piping and fittings, drilling and tapping into circulation system</u>				
	Water treatment ; by chemical agents				
B	for cooling tower/condenser cooling water	-	item	-	
C	for chilled water	-	item	-	
	<u>Water treatment service by water treatment specialist for commissioning and testing, pre-cleaning, day-to-day water treatment of the installed system ; on-site water treatment service and water analysis, reports ; all labour, testing equipment, chemicals, instruments, interconnecting pipework, accessories and associated services</u>				
	Water treatment service ; within Contract Period				
D	for cooling tower/condenser cooling water	-	item	-	
E	for chilled water	-	item	-	
	MODEL BILL OF DESCRIPTION				
	ASD STANDARD BILLS MODBQ.23/12				
			To Collection	\$	

AIR CONDITIONING INSTALLATION

Item	Description	Qty	Unit	Rate	HK\$
	<u>WATER TREATMENT ; INTERNALLY, IN PLANT ROOM AND EXTERNALLY (Cont'd)</u>				
	Water treatment service ; during Maintenance Period				
A	for cooling tower/condenser cooling water	-	item	-	
B	for chilled water	-	item	-	
	<u>Water treatment proposal by water treatment specialist ; water specification, method of analysis and testing together with testing report format</u>				
	Water treatment proposal				
C	for all air conditioning water systems	-	item	-	
	<u>CONDENSATE DRAIN SYSTEM ; INTERNALLY / IN PLANT ROOM / EXTERNALLY#</u>				
	<u>Steel pipes and fittings ; ISO 65:1981 / BS EN 10255:2004 (medium grade) ; galvanised ; welded joints ; off-site pre-fabricated metal mounting and fixing brackets</u>				
	Pipework and fittings ; suspended from soffits				
D	* diameter		m		
	Pipework and fittings ; fixed to walls and columns				
E	* diameter		m		
	Pipework and fittings ; laid on floors				
F	* diameter		m		
	Extra over pipework for				
G	* bends		nr		
H	* tees		nr		
J	* reducing tees		nr		
	MODEL BILL OF DESCRIPTION				
	ASD STANDARD BILLS MODBQ.23/13				
				To Collection \$	

AIR CONDITIONING INSTALLATION

Item	Description	Qty	Unit	Rate	HK\$
	<u>CONDENSATE DRAIN SYSTEM ; INTERNALLY / IN PLANT ROOM / EXTERNALLY# (Cont'd)</u>				
	<u>Bronze valves</u>				
	Drain valves				
A	* diameter		nr		
	<u>Gunmetal automatic air vents</u>				
	Automatic air vents ; non-ferrous floats and guides ; corrosion resistance valves and seats				
B	to suit * diameter pipes		nr		
	<u>CFC and HCFC free phenolic foam insulation ; rigid preformed section ; Class "O" fire rating ; factory applied double sided reinforced foil vapour barrier ; fixing with approved adhesive</u>				
	25 (minimum) thick ; fixing externally to pipework and fittings				
C	* diameter		m		
	Extra over 25 (minimum) thick insulation to pipework for				
D	* bends		nr		
E	* tees		nr		
F	* reducing tees		nr		
	<u>CFC and HCFC free phenolic foam insulation ; rigid preformed 'oversize' section ; Class "O" fire rating ; factory applied double sided reinforced foil vapour barrier ; fixing with approved adhesive</u>				
	25 (minimum) thick ; to valves				
G	* drain valves		nr		
	25 (minimum) thick ; to automatic air vents				
H	* automatic air vents		nr		
	MODEL BILL OF DESCRIPTION				
	ASD STANDARD BILLS MODBQ.23/14				
		To Collection	\$		

AIR CONDITIONING INSTALLATION

Item	Description	Qty	Unit	Rate	HK\$
	<u>CONDENSATE DRAIN SYSTEM ; INTERNALLY / IN PLANT ROOM / EXTERNALLY# (Cont'd)</u>				
	<u>Protective coverings and finishings ; hammer finish aluminium cladding to CFC and HCFC free phenolic foam insulation</u>				
	* thick ; fixing to 25 (minimum) thick insulation for				
A	* diameter pipes		m		
	Extra over * thick protective coverings and finishings to 25 (minimum) thick insulation for				
B	* bends		nr		
C	* tees		nr		
D	* reducing tees		nr		
	<u>Protective coverings and finishings ; hammer finish aluminium clad hinged split boxes to CFC and HCFC free phenolic foam insulation</u>				
	* thick ; fixing to 25 (minimum) thick insulation for				
E	* automatic air vents		nr		
F	* drain valves		nr		
	<u>MECHANICAL VENTILATION SYSTEM ; INTERNALLY / IN PLANT ROOM / EXTERNALLY#</u>				
	<u>Hot-dipped galvanised steel sheet ductwork and fittings ; DW/144:2016 medium pressure Class "B" ; BS EN 10346:2009, Grade DX51D+Z, coating type Z275 ; off site prefabricated</u>				
	* thick ; rectangular ducts ; fixed to walls and columns				
G	duct size not exceeding 400 (longer side)		m2		
H	duct size 400 - 600 (longer side)		m2		
MODEL BILL OF DESCRIPTION					To Collection \$
ASD STANDARD BILLS MODBQ.23/15					

AIR CONDITIONING INSTALLATION

Item	Description	Qty	Unit	Rate	HK\$
	<u>MECHANICAL VENTILATION SYSTEM ; INTERNALLY</u> <u>/ IN PLANT ROOM / EXTERNALLY# (Cont'd)</u>				
	* thick ; rectangular ducts ; suspended from soffits				
A	duct size not exceeding 400 (longer side)		m2		
B	duct size 400 - 600 (longer side)		m2		
	<u>Hot-dipped galvanised steel sheet ductwork</u> <u>and fittings ; DW/144:2016 medium pressure</u> <u>Class "B" ; BS EN 10346:2009, Grade</u> <u>DX51D+Z, coating type Z275 ; off site</u> <u>prefabricated ; insulated externally</u> <u>(insulation measured separately)</u>				
	* thick ; rectangular ducts ; fixed to walls and columns				
C	duct size not exceeding 400 (longer side)		m2		
D	duct size 400 - 600 (longer side)		m2		
	* thick ; rectangular ducts ; suspended from soffits				
E	duct size not exceeding 400 (longer side)		m2		
F	duct size 400 - 600 (longer side)		m2		
	<u>Dampers ; galvanised mild steel ;</u> <u>DW/144:2016 ; CIBSE Commissioning Code</u> <u>Series A and BSRIA Application Guide ;</u> <u>flanged type ; BS EN 1751:2014 ;</u> <u>padlocking facilities ; position</u> <u>indicators</u>				
	Volume control dampers ; aerofoil, double skin, opposed blade low leakage type ; approved or accepted by FSD				
G	* x *		nr		
	Fire or smoke dampers ; single-bladed ; * hour fire rated ; approved or accepted by FSD				
H	* x *		nr		
	MODEL BILL OF DESCRIPTION				
	ASD STANDARD BILLS MODBQ.23/16				
		To Collection	\$		

AIR CONDITIONING INSTALLATION

Item	Description	Qty	Unit	Rate	HK\$
	<u>MECHANICAL VENTILATION SYSTEM ; INTERNALLY</u> <u>/ IN PLANT ROOM / EXTERNALLY# (Cont'd)</u>				
A	Motorized shut-off dampers ; * hour fire rated ; actuated by automatic fire control * x *		nr		
	<u>Dampers ; stainless steel ; DW/144:2016 ;</u> <u>CIBSE Commissioning Code Series A and</u> <u>BSRIA Application Guide ; flanged type ;</u> <u>BS EN 1751:2014 ; padlocking facilities ;</u> <u>position indicators</u>				
B	Combined fire and smoke stop dampers ; aerofoil bladed ; * hour fire rated ; temperature exposure tested ; replaceable thermal actuator and fusible link * x *		nr		
	<u>Grilles ; aluminium</u>				
C	Supply air grilles ; complete with two adjustable louvres ; opposed blade multi-leaf dampers * x *		nr		
D	Exhaust air grilles ; complete with single louvre ; opposed blade multi-leaf dampers * x *		nr		
E	Transfer air grilles ; complete with single louvre ; opposed blade multi-leaf dampers * x *		nr		
	<u>Diffusers ; aluminium ; pan type ;</u> <u>complete with volume control dampers</u>				
F	Supply air grilles * x *		nr		
To Collection \$					

AIR CONDITIONING INSTALLATION

Item	Description	Qty	Unit	Rate	HK\$
<u>MECHANICAL VENTILATION SYSTEM ; INTERNALLY</u> <u>/ IN PLANT ROOM / EXTERNALLY# (Cont'd)</u>	<u>Washable panel filters ; heavy duty</u> <u>airtight factory fabricated, robust</u> <u>enclosure, holding frames and housing</u>				
* thick ; washable panel filters and frames ; rolled or extruded					
A	* x *		nr		
	<u>Additional filters ; as described in</u> <u>Section C1.21 of the General Specification</u> <u>for Air-conditioning, Refrigeration,</u> <u>Ventilation and Central Monitoring and</u> <u>Control System Installation</u>				
	* thick ; disposable panel filters ; bonded filter element ; for replacement of used filters during testing and commissioning				
B	* x *		nr		
	* thick ; disposable panel filters ; bonded filter element ; for use by Employer's operation staff during Maintenance Period				
C	* x *		nr		
	* thick ; disposable panel filters ; bonded filter element ; for replacement of used filters before end of Maintenance Period				
D	* x *		nr		
	<u>Additional filter media ; as described in</u> <u>Section C1.21 of the General Specification</u> <u>for Air-conditioning, Refrigeration,</u> <u>Ventilation and Central Monitoring and</u> <u>Control System Installation</u>				
	Renewable panel filter media ; for use by Employer's operation staff during Maintenance Period				
E	to suit * x * filters		nr		
	MODEL BILL OF DESCRIPTION ASD STANDARD BILLS MODBQ.23/18	To Collection \$			

AIR CONDITIONING INSTALLATION

Item	Description	Qty	Unit	Rate	HK\$
<u>MECHANICAL VENTILATION SYSTEM ; INTERNALLY / IN PLANT ROOM / EXTERNALLY# (Cont'd)</u>	<u>Ventilating fans ; galvansied steel / aluminium alloy casings ; all accessories and mountings ; as described in the Particular Specification</u>				
Ventilating fans ; * type ; noise assessment complying with EPD requirements	air volume flow rate * m3/s ; static pressure * kPa (ref. *)		nr		
<u>Design, supply and install water scrubber ; fibreglass reinforced polyester resin (FRP) construction ; factory built and assembled unit ; scrubber section with knockdown baffles / packing, mist eliminator, scrubbing liquid distribution system ; fan, chemical feed pumps, chemical tanks, silencers ; instrumentation, acoustic enclosure, controls and all necessary components ; sensors, flow switch, local and remote control panels and all necessary control accessories ; connections to associated services ; as described in the Particular Specification and drawing nr. *</u>	Horizontal draw-through non-clogging venturi type ; connections to external control circuitry, pipework ; fan and ductwork		nr		
<u>KITCHEN EXTRACTION SYSTEM ; INTERNALLY / IN PLANT ROOM / EXTERNALLY#</u>	<u>Stainless steel sheet ductwork and fittings ; DW/144:2016 medium pressure Class "B" ; BS 1449, Part 2 ; Grade * ; * finish ; EN 10088 Part 2 ; off site prefabricated</u>				
* thick ; rectangular ducts ; fixed to walls and columns	duct size not exceeding 400 (longer side)		m2		
duct size 400 - 600 (longer side)			m2		
MODEL BILL OF DESCRIPTION	ASD STANDARD BILLS MODBQ.23/20	To Collection	\$		

AIR CONDITIONING INSTALLATION

Item	Description	Qty	Unit	Rate	HK\$
	<u>KITCHEN EXTRACTION SYSTEM ; INTERNALLY / IN PLANT ROOM / EXTERNALLY# (Cont'd)</u>				
	* thick ; rectangular ducts ; suspended from soffits				
A	duct size not exceeding 400 (longer side)		m2		
B	duct size 400 - 600 (longer side)		m2		
	<u>Extract hoods ; stainless steel Grade 304 ; satin finish</u>				
	Extract hoods ; ceiling mounted ; fixed independent of ductwork, make-up air grilles ; lighting fittings, grease filters				
C	* thick ; overall size * x * x *		nr		
	<u>Dampers ; stainless steel ; DW/144:2016 ; CIBSE Commissioning Code Series A and BSRIA Application Guide ; flanged type ; BS EN 1751:2014 ; padlocking facilities ; position indicators</u>				
	Volume control dampers ; aerofoil, double skin, opposed blade low leakage type ; approved or accepted by FSD				
D	* x *		nr		
	Fire or smoke dampers ; multi-bladed ; * hour fire rated ; approved or accepted by FSD				
E	* x *		nr		
	<u>Grilles ; steel, stove-enamelled finish</u>				
	Exhaust air grilles ; complete with single louvre ; opposed blade multi-leaf dampers				
F	* x *		nr		
	<u>Ductwork silencers ; galvanised steel inorganic mineral acoustic filler</u>				
	Silencers ; to rectangular ducts				
G	silencers ; * long (ref. *)		nr		
	MODEL BILL OF DESCRIPTION				
	ASD STANDARD BILLS MODBQ.23/21				
		To Collection	\$		

AIR CONDITIONING INSTALLATION

Item	Description	Qty	Unit	Rate	HK\$
	<u>KITCHEN EXTRACTION SYSTEM ; INTERNALLY /</u> <u>IN PLANT ROOM / EXTERNALLY# (Cont'd)</u>				
	<u>Ventilating fans ; galvanised steel /</u> <u>aluminium alloy casings ; all accessories</u> <u>and mountings ; as described in the</u> <u>Particular Specification and drawing nr. *</u>				
	Ventilating fans ; * type ; noise assessment complying with EPD requirements				
A	air volume flow rate * m3/s ; static pressure * kPa (ref. *)		nr		
	<u>DESIGN, SUPPLY AND INSTALL SMOKE</u> <u>EXTRACTION SYSTEM ; INTERNALLY / IN PLANT</u> <u>ROOM / EXTERNALLY#</u>				
	<u>Hot-dipped galvanised steel sheet ductwork</u> <u>and fittings ; DW/144:2016 medium pressure</u> <u>Class "B" ; BS EN 10346:2009, Grade</u> <u>DX51D+Z, coating type Z275 ; off site</u> <u>prefabricated</u>				
	* thick ; rectangular ducts ; fixed to walls and columns				
B	duct size not exceeding 400 (longer side)		m2		
C	duct size 400 - 600 (longer side)		m2		
	* thick ; rectangular ducts ; suspended from soffits				
D	duct size not exceeding 400 (longer side)		m2		
E	duct size 400 - 600 (longer side)		m2		
	<u>Dampers ; stainless steel ; DW/144:2016 ;</u> <u>CIBSE Commissioning Code Series A and</u> <u>BSRIA Application Guide ; flanged type ;</u> <u>BS EN 1751:2014 ; padlocking facilities ;</u> <u>position indicators</u>				
	Combined fire and smoke stop dampers ; aerofoil bladed ; * hour fire rated ; temperature exposure tested ; replaceable thermal actuator and fusible link ; electric motor actuated ; FSD approved				
F	* x *		nr		
	MODEL BILL OF DESCRIPTION				
	ASD STANDARD BILLS MODBQ.23/22				
		To Collection	\$		

AIR CONDITIONING INSTALLATION

Item	Description	Qty	Unit	Rate	HK\$
	<u>DESIGN, SUPPLY AND INSTALL SMOKE</u> <u>EXTRACTION SYSTEM ; INTERNALLY / IN PLANT</u> <u>ROOM / EXTERNALLY# (Cont'd)</u>				
	<u>Grilles ; aluminium</u>				
A	Exhaust air grilles ; complete with single louvres ; opposed blade multi-leaf dampers * x *		nr		
	<u>Galvanised steel mesh bird wires ;</u> <u>complete with all necessary framings</u>				
	10 wire mesh				
B	to suit * x * louvres		nr		
	<u>Ductwork silencers ; galvanised steel</u> <u>inorganic mineral acoustic filler</u>				
	Silencers ; to rectangular ducts				
C	silencers ; * long (ref. *)		nr		
	<u>Fire-rated enclosure ; complying Fire</u> <u>Safety Code ; complete with all necessary</u> <u>framings</u>				
	* hour fire-resistant-period enclosure ; BS 476-20:1987				
D	to rectangular ducts		m2		
	<u>Ventilating fans ; galvanised steel /</u> <u>aluminium alloy casings ; all accessories</u> <u>and mountings ; as described in the</u> <u>Particular Specification and drawing nr. *</u>				
	Ventilating fans ; * type ; * hour fire rated ; coated with finishing materials capable of withstanding exposure to temperature of 250 degrees Celsius for one (1) hour ; 1 hour (minimum) fire rated enclosure				
E	air volume flow rate * m3/s ; static pressure * kPa (ref. *)		nr		
	MODEL BILL OF DESCRIPTION ASD STANDARD BILLS MODBQ.23/23		To Collection	\$	

AIR CONDITIONING INSTALLATION

Item	Description	Qty	Unit	Rate	HK\$
	<u>AIR CONDITIONING SYSTEM ; INTERNALLY / IN PLANT ROOM / EXTERNALLY#</u>				
	<u>Hot-dipped galvanised steel sheet ductwork and fittings ; DW/144:2016 medium pressure Class "B" ; BS EN 10346:2009, Grade DX51D+Z, coating type Z275 ; off site prefabricated ; insulated externally (insulation measured separately)</u>				
	* thick ; rectangular ducts ; suspended from soffits				
A	duct size not exceeding 400 (longer side)		m2		
B	duct size 400 - 600 (longer side)		m2		
	<u>Flexible ductwork ; BS 476-12:1991 Rating Class P ; BS 476-6:1989+A1:2009 performance index not exceeding 12 ; Part 7 Class 1 ; tear-resistant fabric liner and cover ; impregnated and coated with plastics</u>				
	Flexible ducts ; fixed to rigid ductwork or equipment spigots				
C	* diameter ; not exceeding 0.50m long		nr		
D	* diameter ; 0.50 - 1.00m long		nr		
	<u>Galvanised mild steel plenum boxes ; factory fabricated ; complete with appropriate insulation</u>				
	Plenum boxes				
E	size * x * x *		nr		
F	to suit external louvres ; * x *		nr		
	MODEL BILL OF DESCRIPTION		To Collection	\$	
	ASD STANDARD BILLS MODBQ.23/24				

AIR CONDITIONING INSTALLATION

Item	Description	Qty	Unit	Rate	HK\$
	<u>AIR CONDITIONING SYSTEM ; INTERNALLY / IN PLANT ROOM / EXTERNALLY# (Cont'd)</u>				
	<u>Dampers ; galvanised mild steel ; DW/144:2016 ; CIBSE Commissioning Code Series A and BSRIA Application Guide ; flanged type ; BS EN 1751:2014 ; padlocking facilities ; position indicators</u>				
	Volume control dampers ; aerofoil, double skin, opposed blade low leakage type ; approved or accepted by FSD				
A	* x *		nr		
	Fire or smoke dampers ; multi-bladed ; * hour fire rated ; approved or accepted by FSD				
B	* x *		nr		
	Motorized shut-off dampers ; * hour fire rated ; actuated by automatic fire control				
C	* x *		nr		
	<u>Dampers ; stainless steel ; DW/144:2016 ; CIBSE Commissioning Code Series A and BSRIA Application Guide ; flanged type ; BS EN 1751:2014 ; padlocking facilities ; position indicators</u>				
	Combined fire and smoke stop dampers ; aerofoil bladed ; * hour fire rated ; temperature exposure tested ; replaceable thermal actuator and fusible link				
D	* x *		nr		
	<u>Grilles ; aluminium</u>				
	Supply air grilles ; complete with two adjustable louvres ; opposed blade multi-leaf dampers				
E	* x *		nr		
	Return air grilles ; complete with single louvre ; opposed blade multi-leaf dampers				
F	* x *		nr		
MODEL BILL OF DESCRIPTION		To Collection		\$	
ASD STANDARD BILLS MODBQ.23/25					

AIR CONDITIONING INSTALLATION

Item	Description	Qty	Unit	Rate	HK\$
	<u>AIR CONDITIONING SYSTEM ; INTERNALLY / IN PLANT ROOM / EXTERNALLY# (Cont'd)</u>				
A	Transfer air grilles ; complete with single louvre ; opposed blade multi-leaf dampers * x *		nr		
	<u>Diffusers ; aluminium ; pan type ; complete with volume control dampers</u>				
B	Supply air diffusers * x *		nr		
	Linear slot diffusers ; multiple slot ; complete with plenum and fibreglass insulation				
C	* long ; * slots		nr		
	Dummy linear diffusers ; complete with demountable galvanised metal enclosure				
D	* long		nr		
	<u>Bag filters/cartridge filters ; heavy duty airtight factory fabrication, robust enclosure, holding frames and housing</u>				
	* thick ; bag filter ; microfine glass fibre and laminated synthetic backing ; factory assembled filter package				
E	* x *		nr		
	<u>Washable panel filters ; heavy duty airtight factory fabrication, robust enclosure, holding frames and housing</u>				
	* thick ; washable panel filters and frames ; rolled or extruded				
F	* x *		nr		
To Collection \$					

AIR CONDITIONING INSTALLATION

Item	Description	Qty	Unit	Rate	HK\$
	<u>AIR CONDITIONING SYSTEM ; INTERNALLY / IN PLANT ROOM / EXTERNALLY# (Cont'd)</u>				
	<u>High Efficiency Particulate Air (HEPA) filters ; glass microfibres ; heavy duty airtight factory fabrication, robust enclosure and holding frames</u>				
	* thick ; HEPA filters ; fungicidal and waterproofing properties				
A	* x *		nr		
	<u>Additional filters ; as described in Section C1.21 of the General Specification for Air-conditioning, Refrigeration, Ventilation and Central Monitoring and Control System Installation</u>				
	* thick ; HEPA filters ; fungicidal and waterproofing properties ; for replacement of used filters during testing and commissioning				
B	* x *		nr		
	* thick ; HEPA filters ; fungicidal and waterproofing properties ; for use by Employer's operation staff during Maintenance Period				
C	* x *		nr		
	* thick ; HEPA filters ; fungicidal and waterproofing properties ; for replacement of used filters before end of Maintenance Period				
D	* x *		nr		
	<u>Additional filter media ; as described in Section C1.21 of the General Specification for Air-conditioning, Refrigeration, Ventilation and Central Monitoring and Control System Installation</u>				
	Automatic fabric roll filter media ; for use by Employer's operation staff during Maintenance Period				
E	to suit * x * filters		nr		
	MODEL BILL OF DESCRIPTION				
	ASD STANDARD BILLS MODBQ.23/27				
		To Collection	\$		

AIR CONDITIONING INSTALLATION

Item	Description	Qty	Unit	Rate	HK\$
	<u>AIR CONDITIONING SYSTEM ; INTERNALLY / IN PLANT ROOM / EXTERNALLY# (Cont'd)</u>				
	<u>Cleaning detergent for washable type filters ; as described in Section C1.21 of the General Specification for Air-conditioning, Refrigeration, Ventilation and Central Monitoring and Control System Installation</u>				
	Cleaning detergent packs ; for use by Employer's operation staff during Maintenance Period				
A	10 litres per washable filter installation	-	item	-	
	Cleaning detergent packs ; provided before end of Maintenance Period				
B	10 litres per washable filter installation	-	item	-	
	<u>Fluid for viscous type filters ; as described in Section C1.21 of the General Specification for Air-conditioning, Refrigeration, Ventilation and Central Monitoring and Control System Installation</u>				
	Fluid packs ; recommended by filter manufacturer ; for use by Employer's operation staff during Maintenance Period				
C	sufficient for one complete change	-	item	-	
	Fluid packs ; recommended by filter manufacturer ; provided before end of Maintenance Period				
D	sufficient for one complete change	-	item	-	
	<u>Activated oxygen air purifiers ; electromagnetic compatibility (EMC) compliance ; UL 867:2011</u>				
	Activated oxygen air purifiers ; factory fabricated and assembled ; screw-in electrode, power generator, control device and unit ; switches ; support brackets and stiffeners				
E	* x * ; suitable for duct mounting		nr		
	MODEL BILL OF DESCRIPTION				
	ASD STANDARD BILLS MODBQ.23/28				
				To Collection \$	

AIR CONDITIONING INSTALLATION

Item	Description	Qty	Unit	Rate	HK\$
	<u>AIR CONDITIONING SYSTEM ; INTERNALLY / IN PLANT ROOM / EXTERNALLY# (Cont'd)</u>				
	<u>Ultra-violet sterilizing lights ; UV tubes ; tube fitting set ; electric supply unit and monitoring unit ; UL 153:2014 and UL 1598:2008</u>				
	Ultra-violet sterilizing lights ; emitter tube, power generator, built-in regulators				
A	* x *		nr		
	<u>Washing facilities for washable filters ; filter cleaning tank ; 1 thick (minimum) stainless steel AISI 316 ; duplicate cleaning tanks ; complete with 18 diameter drain cock and external handles</u>				
	Filter duplicate cleaning tank sets				
B	* x * x 400		nr		
	<u>Galvanised steel mesh bird wires ; complete with all necessary framings</u>				
	10 wire mesh				
C	to suit * x * louvres		nr		
	<u>Ductwork silencers ; galvanised steel inorganic mineral acoustic filler</u>				
	Silencers ; to rectangular ducts				
D	silencers ; * long (ref. *)		nr		
	<u>CFC and HCFC free phenolic foam board insulation ; Class "O" fire rating ; factory applied double sided reinforced foil vapour barrier ; fixing with approved adhesive</u>				
	* thick ; fixing externally to rectangular ductwork				
E	generally		m2		
	MODEL BILL OF DESCRIPTION				
	ASD STANDARD BILLS MODBQ.23/29				
		To Collection	\$		

AIR CONDITIONING INSTALLATION

Item	Description	Qty	Unit	Rate	HK\$
	<u>AIR CONDITIONING SYSTEM ; INTERNALLY / IN PLANT ROOM / EXTERNALLY# (Cont'd)</u>				
	<u>Protective coverings and finishings ; hammer finish aluminium cladding to CFC and HCFC free phenolic foam insulation</u>				
	* thick ; fixing to * thick insulation for				
A	rectangular ductwork		m2		
	<u>Fire-rated enclosure ; complying Fire Safety Code ; complete with all necessary framings</u>				
	* hour fire-resistant-period enclosure ; BS 476-20:1987				
B	to rectangular ducts		m2		
	<u>Air handling units (AHUs) ; ISO 9001:2015 ; 'type' tested ; with all components from one manufacturer ; including fans, coils, steam humidifiers, access doors, air filters, thermal and acoustic insulation ; galvanised steel casing ; as described in the Particular Specification and drawing nr. *</u>				
	Air handling units (AHU) ; rigid double skin fully modular construction ; floor mounted				
C	supply air volume flow rate * m3/s ; total cooling capacity * kW (ref. *)		nr		
	Primary air handling unit (PAU) ; floor mounted				
D	supply air volume flow rate * m3/s ; total cooling capacity * kW ; total heating capacity * kW (ref. *)		nr		
MODEL BILL OF DESCRIPTION					To Collection \$
ASD STANDARD BILLS MODBQ.23/30					

AIR CONDITIONING INSTALLATION

Item	Description	Qty	Unit	Rate	HK\$
	<u>AIR CONDITIONING SYSTEM ; INTERNALLY / IN PLANT ROOM / EXTERNALLY# (Cont'd)</u>				
	<u>Fan coil units (FCU) ; to ISO 9001:2015 ; complete with fans, air filters, coils, motors, electric heater, high grade AISI 316 stainless steel drain pans ; all necessary components ; galvanised steel / plastic / reinforced glass fibre / corrosion resistant casings and mountings ; thermal and acoustic insulation ; as described in the Particular Specification and drawing nr. *</u>				
	Fan coil units (FCU) ; cooling ; ceiling mounted				
A	supply air volume flow rate * m3/s ; total cooling capacity * kW (ref. *)		nr		
	<u>Ventilating fans ; galvanised steel / aluminium alloy casings ; all accessories and mountings ; as described in the Particular Specification and drawing nr. *</u>				
	Ventilating fans ; * type ; noise assessment complying with EPD requirements				
B	air volume flow rate * m3/s ; static pressure * kPa (ref. *)		nr		
	<u>UNITARY AIR CONDITIONING SYSTEM ; INTERNALLY, IN PLANT ROOM AND EXTERNALLY</u>				
	<u>Copper pipes ; BS EN 12735-1:2016 ; fittings ; ASME B16.22 ; capillary or compressed type joints ; off-site pre-fabricated metal mounting and fixing brackets</u>				
	Pipework and fittings ; between VRV condensing unit (ref. *) and * nr. direct expansion units (ref. *) ; fixed to walls and columns				
C	liquid refrigerant pipes		m		
D	suction pipes		m		
	MODEL BILL OF DESCRIPTION				
	ASD STANDARD BILLS MODBQ.23/31				
		To Collection	\$		

AIR CONDITIONING INSTALLATION

Item	Description	Qty	Unit	Rate	HK\$
	<u>UNITARY AIR CONDITIONING SYSTEM ;</u> <u>INTERNALLY, IN PLANT ROOM AND EXTERNALLY</u> <u>(Cont'd)</u>				
	<u>Variable refrigerant volume (VRV) system ;</u> <u>multi-zone modular split type ; each zone</u> <u>with one air-cooled outdoor condensing</u> <u>unit and a group of fan coil units ; all</u> <u>necessary components and adequate</u> <u>insulations ; direct expansion units ; as</u> <u>described in the Particular Specification</u> <u>and drawing nr. *</u>				
	Direct expansion units ; reverse cycle ; ceiling mounted				
A	total cooling capacity * kW ; total heating capacity * kW (ref. *)		nr		
	<u>Variable refrigerant volume (VRV) system ;</u> <u>multi-zone modular split type ; each zone</u> <u>with one air-cooled outdoor condensing</u> <u>unit and a group of fan coil units ; all</u> <u>necessary components and adequate</u> <u>insulations ; air cooled condensing units</u> <u>; frequency inverted control ; complying</u> <u>statutory noise limit ; as described in</u> <u>the Particular Specification and drawing</u> <u>nr. *</u>				
	Air cooled condensing units ; complete with exhaust hood				
B	to match * nr. direct expansion units (ref. *)		nr		
	<u>Hot-dipped galvanised steel sheet ductwork</u> <u>and fittings ; DW/144:2016 medium pressure</u> <u>Class "B" ; BS EN 10346:2009, Grade</u> <u>DX51D+Z, coating type Z275 ; off site</u> <u>prefabricated ; insulated externally</u> <u>(insulation measured separately)</u>				
	* thick ; rectangular ducts ; fixed to walls and columns				
C	duct size not exceeding 400 (longer side)		m2		
D	duct size 400 - 600 (longer side)		m2		
	MODEL BILL OF DESCRIPTION				
	ASD STANDARD BILLS MODBQ.23/33				
				To Collection \$	

AIR CONDITIONING INSTALLATION

Item	Description	Qty	Unit	Rate	HK\$
	<u>UNITARY AIR CONDITIONING SYSTEM ;</u> <u>INTERNALLY, IN PLANT ROOM AND EXTERNALLY</u> <u>(Cont'd)</u>				
	* thick ; rectangular ducts ; suspended from soffits				
A	duct size not exceeding 400 (longer side)		m2		
B	duct size 400 - 600 (longer side)		m2		
	<u>Dampers ; galvanised mild steel ;</u> <u>DW/144:2016 ; CIBSE Commissioning Code</u> <u>Series A and BSRIA Application Guide ;</u> <u>flanged type ; BS EN 1751:2014 ;</u> <u>padlocking facilities ; position</u> <u>indicators</u>				
	Volume control dampers ; aerofoil, double skin, opposed blade low leakage type ; approved or accepted by FSD				
C	* x *		nr		
	Fire or smoke dampers ; multi-bladed ; * hour fire rated ; approved or accepted by FSD				
D	* x *		nr		
	Motorized shut-off dampers ; * hour fire rated ; actuated by automatic fire control				
E	* x *		nr		
	<u>Dampers ; stainless steel ; DW/144:2016 ;</u> <u>CIBSE Commissioning Code Series A and</u> <u>BSRIA Application Guide ; flanged type ;</u> <u>BS EN 1751:2014 ; padlocking facilities ;</u> <u>position indicators</u>				
	Combined fire and smoke stop dampers ; aerofoil bladed ; * hour fire rated ; temperature exposure tested ; replaceable thermal actuator and fusible link				
F	* x *		nr		
	MODEL BILL OF DESCRIPTION ASD STANDARD BILLS MODBQ.23/34				
		To Collection	\$		

AIR CONDITIONING INSTALLATION

Item	Description	Qty	Unit	Rate	HK\$
	<u>UNITARY AIR CONDITIONING SYSTEM ;</u> <u>INTERNALLY, IN PLANT ROOM AND EXTERNALLY</u> <u>(Cont'd)</u>				
	<u>Grilles ; aluminium</u>				
	Supply air grilles ; complete with two adjustable louvres ; opposed blade multi-leaf dampers				
A	* x *		nr		
	Return air grilles ; complete with single louvre ; opposed blade multi-leaf dampers				
B	* x *		nr		
	Transfer air grilles ; complete with single louvre ; opposed blade multi-leaf dampers				
C	* x *		nr		
	<u>Washable panel filters ; heavy duty</u> <u>airtight factory fabrication ; robust enclosure, holding frames and housing</u>				
	* thick ; washable panel filters and frames ; rolled or extruded				
D	* x *		nr		
	<u>CFC and HCFC free phenolic foam board insulation ; Class "O" fire rating ;</u> <u>factory applied double sided reinforced foil vapour barrier ; fixing with approved adhesive</u>				
	* thick ; fixing externally to rectangular ductwork				
E	generally		m2		
	<u>Protective coverings and finishings ;</u> <u>hammer finish aluminium cladding to CFC and HCFC free phenolic foam insulation</u>				
	* thick ; fixing to * thick insulation for rectangular ductwork				
F	rectangular ductwork		m2		
	MODEL BILL OF DESCRIPTION		To Collection	\$	
	ASD STANDARD BILLS MODBQ.23/35				

AIR CONDITIONING INSTALLATION

Item	Description	Qty	Unit	Rate	HK\$
<u>ELECTRICITY SUPPLY ; INTERNALLY, IN PLANT</u>					
<u>ROOM AND EXTERNALLY (Cont'd)</u>					
A	earth leakage protection		nr		
	Meters				
B	power factor meters		nr		
C	ammeters ; complete with ammeter selector switch for phase selection		nr		
D	voltmeters ; complete with voltmeter selector switches for phase selection		nr		
	Current transformers ; for ammeters				
E	* A/5A		nr		
	Current transformers ; for protection				
F	* A/5A		nr		
	HRC fuses ; complete with carriers				
G	* A		nr		
	Link ; neutral				
H	approved type		nr		
	Indicating lamps ; * V DC ; built-in transformers				
J	indication lamps		nr		
	Busbars ; hard drawn high conductivity copper ; BS EN 13601:2013, electro-tinned ; TPN ; enclosed inside motor control switchboard				
K	* A		nr		
	Motor control switchboard cubicle ; self supporting ; steel construction ; back detachable panels, mounting brackets ; cable supports ; durable nameplates and finishes				
L	overall size *m long x *m wide x *m high		nr		
MODEL BILL OF DESCRIPTION					To Collection \$
ASD STANDARD BILLS MODBQ.23/37					

AIR CONDITIONING INSTALLATION

Item	Description	Qty	Unit	Rate	HK\$
<u>ELECTRICITY SUPPLY ; INTERNALLY, IN PLANT</u>					
<u>ROOM AND EXTERNALLY (Cont'd)</u>					
Allow for the provision of the following items					
A	all interconnecting, control and ancillary wiring for motor control switchboard	-	item	-	-
B	copper earth bars of ample size including fixings, connections and all necessary earthing and bonding accessories for motor control switchboard	-	item	-	-
C	anti-condensation heaters and thermostats	-	item	-	-
D	completion tests and inspection	-	item	-	-
E	hydraulic operated handling truck for handling air circuit breakers and all necessary accessories	-	item	-	-
F	set of portable earthing equipment for each main incoming air circuit breaker	-	item	-	-
G	battery chargers/batteries system ; automatic trickle type battery chargers with manual booster ; nickel-cadmium batteries ; voltmeters ; ammeters ; and battery test facilities ; internal wiring	-	item	-	-
H	operating handles ; jigs and the like for fixing and removal of the detachable panels and normal charging, closing, opening, racking in and out operation of all circuit breakers complete with brass hooks and fixing boards	-	item	-	-
J	insulation mats ; on floors in front of and at the rear of the motor control cubicle switchboard ; length to suit the switchboard	-	item	-	-
MODEL BILL OF DESCRIPTION					To Collection \$
ASD STANDARD BILLS MODBQ.23/38					-

AIR CONDITIONING INSTALLATION

Item	Description	Qty	Unit	Rate	HK\$	
<u>ELECTRICITY SUPPLY ; INTERNALLY, IN PLANT ROOM AND EXTERNALLY (Cont'd)</u>						
A	complete set of fuses for each rating of fuses in all switch-fuses and fuse-switches complete with fixing wooden board	-	item	-		
	Schematic diagram in *					
B	schematic wiring diagram for motor control switchboard mounted on frame with transparent perspex ; fixing adjacent to the motor control switchboard	-	item	-		
<u>Moulded case circuit breaker (MCCB) distribution boards ; rust proofed sheet metal construction ; IEC 61439-1:2011 and IEC 61439-2:2011 ; ingress protection IP41 ; spare ways provision ; busbars ; integral main isolating switches (MCCBs measured separately)</u>						
	MCCB distribution boards ; triple-pole ; rated short circuit withstand current not less than * kA ; fixed to walls and columns					
C	* way ; * A		nr			
D	blanking plates for spare ways		nr			
<u>Moulded case circuit breakers (MCCBs)</u>						
	MCCBs ; * pole ; IEC 60947-2:2013, IP30 protection ; rated short circuit breaking capacity not less than * kA ; facility for padlocking ; fixed in distribution boards					
E	* A		nr			
	MCCBs ; * pole ; IEC 60947-2:2013, IP30 protection ; rated short circuit breaking capacity not less than * kA ; facility for padlocking ; fixed to walls and columns					
F	* A		nr			
MODEL BILL OF DESCRIPTION					To Collection \$	
ASD STANDARD BILLS MODBQ.23/39						

AIR CONDITIONING INSTALLATION

Item	Description	Qty	Unit	Rate	HK\$
	<u>ELECTRICITY SUPPLY ; INTERNALLY, IN PLANT ROOM AND EXTERNALLY (Cont'd)</u>				
	<u>E</u>				
	For pumps				
A	* kW		nr		
	For ventilating fans				
B	* kW		nr		
	<u>Switches, switchfuses, fuseswitches ; air-break type contacts</u>				
	Switches ; TPN ; for MCCB boards ; fixed to walls and columns				
C	* A		nr		
	Fuseswitches ; TPN ; for equipment ; fixed to walls and columns				
D	* A		nr		
	<u>Automatic power factor correction capacitor ; floor mounting cubicle type</u>				
	Capacitor bank, static primary capacitor units, associated equipment				
E	* kVAR		nr		
	<u>Contactors ; complying Code of Practice for the Electricity (Wiring) Regulations (Cap.406E)</u>				
	Contactors				
F	* A ; to suit fan coil units (ref. *)		nr		
	<u>Motor starters ; air-break triple-pole electro-magnetic type, IEC 60947-4-1:2009 or IEC 62271-106:2011/CORR 1:2014</u>				
	Direct on line (DOL) starters				
G	* A ; to suit ventilating fans (ref. *)		nr		
	MODEL BILL OF DESCRIPTION				
	ASD STANDARD BILLS MODBQ.23/40				
			To Collection	\$	

AIR CONDITIONING INSTALLATION

Item	Description	Qty	Unit	Rate	HK\$
	<u>ELECTRICITY SUPPLY ; INTERNALLY, IN PLANT ROOM AND EXTERNALLY (Cont'd)</u>				
	Star-delta starters				
A	* A ; to suit fresh water condenser water pumps (ref. *)		nr		
B	* A ; to suit ventilating fans (ref. *)		nr		
C	* A ; to suit chillers (ref. *)		nr		
D	* A ; to suit chilled water pumps (ref. *)		nr		
E	* A ; to suit cooling towers (ref. *)		nr		
F	* A ; to suit air handling units (ref. *)		nr		
	<u>Power supply cables ; */* V XLPE-insulated ; galvanised steel wires armoured ; PVC sheathed copper conductors</u>				
	Power supply cables ; from motor control switchboard (ref. *) to local motor control panels (ref. *) for ACMV equipment ; fixed to cable trays or cable ladders (motor control switchboard, local motor control panel, cable trays and cable ladders measured separately)				
G	* mm2 ; * core cables		m		
	Termination glands ; non-ferrous mechanical type ; BS EN 62444:2013 ; accommodated in auto-transformer cable boxes				
H	* mm2 ; * core cables		nr		
	<u>Final circuits ; approved power supply cables ; drawn into and including conduit/trunking ; all necessary cabling facilities ; fixing and earth continuity</u>				
	From cooling tower local control panel (ref. *)				
J	* x * mm2 ; * core cables ; to cooling towers (ref. *)		nr		
	MODEL BILL OF DESCRIPTION				
	ASD STANDARD BILLS MODBQ.23/41				
		To Collection	\$		

AIR CONDITIONING INSTALLATION

Item	Description	Qty	Unit	Rate	HK\$
<u>ELECTRICITY SUPPLY ; INTERNALLY, IN PLANT</u>					
<u>ROOM AND EXTERNALLY (Cont'd)</u>					
	From fresh water pump local control panel (ref. *)				
A	* x * mm2 ; * core cables ; to fresh water condenser water pumps (ref. *)		nr		
	From chiller local control panel (ref. *)				
B	* x * mm2 ; * core cables ; to chillers (ref. *)		nr		
	From chilled water pump local control panel (ref. *)				
C	* x * mm2 ; * core cables ; to chilled water pumps (ref. *)		nr		
	From VRV split type packaged unit local control panel (ref. *)				
D	* x * mm2 ; * core cables ; to VRV ; direct expansion units (ref. *)		nr		
E	* x * mm2 ; * core cables ; to VRV ; air cooling condensing units (ref. *)		nr		
	From isolators (isolators measured separately)				
F	* x * mm2 ; * core cables ; to ventilating fans (ref. *)		nr		
G	* x * mm2 ; * core cables ; to water scrubbers (ref. *)		nr		
H	* x * mm2 ; * core cables ; to air handling units (ref. *)		nr		
	From fused spur units (fused spur units measured separately)				
J	* x * mm2 ; * core cables ; to ventilating fans (ref. *)		nr		
K	* x * mm2 ; * core cables ; to fan coil units (ref. *)		nr		
MODEL BILL OF DESCRIPTION					To Collection \$
ASD STANDARD BILLS MODBQ.23/42					

AIR CONDITIONING INSTALLATION

Item	Description	Qty	Unit	Rate	HK\$
	<u>ELECTRICITY SUPPLY ; INTERNALLY, IN PLANT ROOM AND EXTERNALLY (Cont'd)</u>				
	<u>Perforated steel trays and fittings to BS EN 10149-1:2013 ; hot dipped galvanised to ISO 1460:1992 and ISO 1461:2009</u>				
	Trays and fittings ; fixed to walls and columns				
A	* wide		m		
	Trays and fittings ; suspended from soffits				
B	* wide		m		
	Extra over * wide trays for				
C	bends		nr		
D	tees		nr		
E	reducing tees		nr		
	<u>CONTROL SYSTEM - AUTOMATIC CONTROL SYSTEM (ACS) ; INTERNALLY, IN PLANT ROOM AND EXTERNALLY</u>				
	<u>Control panels, hairline finished stainless steel construction ; complete with indicating lights, ammeters, gauges, control switches, motor starters, contactors (motor starters and contactors measured separately), push buttons, alarm chimes, alarm indicating lights ; alarm mute buttons, control wiring ; flush galvanised iron supports and accessories and other necessary equipment to enable remote operation and monitoring of all A/C equipment ; all other necessary instrument and accessories ; as described in the Particular Specification and drawing nr. *</u>				
	1.5 thick main control panel ; floor mounted type				
F	located in * room ; main control panel (ref. *)		nr		
	MODEL BILL OF DESCRIPTION				
	ASD STANDARD BILLS MODBQ.23/43				
				To Collection \$	

AIR CONDITIONING INSTALLATION

Item	Description	Qty	Unit	Rate	HK\$
	<u>CONTROL SYSTEM - AUTOMATIC CONTROL SYSTEM (ACS) ; INTERNALLY, IN PLANT ROOM AND EXTERNALLY (Cont'd)</u>				
	<u>Steel control panels, factory built assemblies, self supporting and framing, IP41 protection ; to IEC 61439-1:2011 and IEC 61439-2:2011 ; complete with LED indicating lamps, digital multifunction power meter, relays, timers, selectors, control switches, motor starters, contactors (motor starters and contactors measured separately), control wiring and other necessary equipment to enable remote operation and monitoring of all A/C equipment ; all other necessary instrument and accessories ; as described in the Particular Specification and drawing nr. *</u>				
	1.6 thick local control panel ; wall mounted type				
A	located in * room ; cooling tower local control panel (ref. *)		nr		
B	located in * room ; fresh water pump local control panel (ref. *)		nr		
C	located in * room ; chiller local control panel (ref. *)		nr		
D	located in * room ; chilled water pump local control panel (ref. *)		nr		
E	located in * room ; fan local control panel (ref. *)		nr		
F	located in * room ; fan coil unit local control panel (ref. *)		nr		
G	located in * room ; AHU local control panel (ref. *)		nr		
H	located in * room ; VRV split type packaged unit local control panel (ref. *)		nr		
J	located in * room ; VAC local control panel (ref. *)		nr		
MODEL BILL OF DESCRIPTION				To Collection \$	
ASD STANDARD BILLS MODBQ.23/44					

AIR CONDITIONING INSTALLATION

Item	Description	Qty	Unit	Rate	HK\$
	<u>CONTROL SYSTEM - AUTOMATIC CONTROL SYSTEM</u> <u>(ACS) ; INTERNALLY, IN PLANT ROOM AND</u> <u>EXTERNALLY (Cont'd)</u> <u>Design, supply and install steel control</u> <u>panels, type tested cubicle ; to IEC</u> <u>61439-1:2011 and IEC 61439-2:2011 ;</u> <u>complete with indicating lamps, ammeters,</u> <u>voltmeters, relays, timers, selectors,</u> <u>control switches, motor starters,</u> <u>contactors (motor starters and contactors</u> <u>measured separately), fire resistant</u> <u>cables, control wiring and other necessary</u> <u>equipment to enable remote operation and</u> <u>monitoring of A/C equipment ; all other</u> <u>necessary instrument and accessories ; as</u> <u>described in the Particular Specification</u> <u>and drawing nr. *</u> 2 thick control panels ; wall mounted type A located in * room ; smoke extraction system local control panel (ref. *)		nr		
	<u>Electrical control circuits ; associated</u> <u>with ACMV equipment ; connections to</u> <u>control panels (control panels measured</u> <u>separately) ; interconnecting wiring,</u> <u>cables, conduits, cabling facilities ;</u> <u>relays, contactors, sensors and control</u> <u>devices ; all necessary instrument and</u> <u>accessories</u> From main control panel (ref. *) B to cooling tower local control panel (ref. *) C to fresh water pump local control panel (ref. *) D to chiller local control panel (ref. *) E to chilled water pump local control panel (ref. *) F to fan local control panel (ref. *) G to fan coil unit local control panel (ref. *)		nr		
	MODEL BILL OF DESCRIPTION ASD STANDARD BILLS MODBQ.23/45		To Collection	\$	

AIR CONDITIONING INSTALLATION

Item	Description	Qty	Unit	Rate	HK\$
<u>CONTROL SYSTEM - AUTOMATIC CONTROL SYSTEM</u>					
<u>(ACS) ; INTERNALLY, IN PLANT ROOM AND</u>					
<u>EXTERNALLY (Cont'd)</u>					
A	to AHU local control panel (ref. *)		nr		
B	to VRV split type packaged unit local control panel (ref. *)		nr		
C	to VAC local control panel (ref. *)		nr		
D	to smoke extraction system local control panels (ref. *)		nr		
E	to pressurization of staircases system local control panels (ref. *)		nr		
	From cooling tower local control panel (ref. *)				
F	to cooling towers (ref. *)		nr		
	From fresh water pump local control panel (ref. *)				
G	to fresh water condenser water pumps (ref. *)		nr		
	From chiller local control panel (ref. *)				
H	to chillers (ref. *)		nr		
	From chilled water pump local control panel (ref. *)				
J	to chilled water pumps (ref. *)		nr		
	From fan local control panel (ref. *)				
K	to ventilating fans (ref. *)		nr		
	From fan coil unit local control panel (ref. *)				
L	to fan coil units (ref. *)		nr		
	From AHU local control panel (ref. *)				
M	to air handling units (ref. *)		nr		
MODEL BILL OF DESCRIPTION					
ASD STANDARD BILLS MODBQ.23/46					
To Collection \$					

AIR CONDITIONING INSTALLATION

Item	Description	Qty	Unit	Rate	HK\$
	<u>CONTROL SYSTEM - AUTOMATIC CONTROL SYSTEM</u> <u>(ACS) ; INTERNALLY, IN PLANT ROOM AND</u> <u>EXTERNALLY (Cont'd)</u>				
	From VRV split type packaged unit local control panel (ref. *)				
A	to VRV ; direct expansion units (ref. *)		nr		
B	to VRV ; air cooling condensing units (ref. *)		nr		
	From VAC local control panel (ref. *)				
C	to ventilating fans (ref. *)		nr		
D	to air handling units (ref. *)		nr		
	From smoke extraction system local motor control panels (ref. *)				
E	to ventilating fans (ref. *)		nr		
	<u>CONTROL SYSTEM - CENTRAL CONTROL AND</u> <u>MONITORING SYSTEM (CCMS) ; INTERNALLY, IN</u> <u>PLANT ROOM AND EXTERNALLY</u>				
	<u>Central equipment ; complete with all</u> <u>components and accessories ; including</u> <u>interfacing, interconnecting and internal</u> <u>wirings, jointing and making all busbars,</u> <u>cables, conduits, fixings ; as described</u> <u>in the Particular Specification and</u> <u>drawing nr. *</u>				
	Central equipment ; housed in the central control console				
F	general purpose controller		nr		
G	monitor		nr		
H	printer		nr		
J	central database repository		nr		
K	gateway/interfacing units		nr		
L	server ; ANSI/ASHRAE standard 135		nr		
M	router		nr		
	MODEL BILL OF DESCRIPTION				
	ASD STANDARD BILLS				
	MODBQ.23/47				
			To Collection	\$	

AIR CONDITIONING INSTALLATION

Item	Description	Qty	Unit	Rate	HK\$
	<u>CONTROL SYSTEM - CENTRAL CONTROL AND MONITORING SYSTEM (CCMS) ; INTERNALLY, IN PLANT ROOM AND EXTERNALLY (Cont'd)</u>				
	Central control console for housing equipment ; fixing and support				
A	located in * room		nr		
	CCMS operator workstation ; ANSI/ASHRAE standard 135 ; with BTL listed				
B	computer		nr		
C	mouse and keyboard		nr		
D	minimum 21" monitor		nr		
E	alarm printer capable of handling paper		nr		
F	A3 ink printer		nr		
G	A3 laser printer		nr		
H	A 16-bit/full duplex audio system complete with speakers		nr		
	Software and back-up copies ; as described in the Particular Specification				
J	generally	-	item	-	
	Uninterrupted power supply ; supplying power with suitable capacity not less than one hour ; complete with batteries and chargers ; supply and interconnecting wiring ; as described in the Particular Specification				
K	backup for CCMS	-	item	-	
	Intercommunication wiring network for data transmission ; approved cable ; including conduit, trunking and accessories				
L	from central equipment to all peripheral equipment	-	item	-	
M	between peripheral equipment	-	item	-	
	MODEL BILL OF DESCRIPTION				
	ASD STANDARD BILLS MODBQ.23/48				
			To Collection \$		

AIR CONDITIONING INSTALLATION

Item	Description	Qty	Unit	Rate	HK\$
	<u>CONTROL SYSTEM - CENTRAL CONTROL AND MONITORING SYSTEM (CCMS) ; INTERNALLY, IN PLANT ROOM AND EXTERNALLY (Cont'd)</u>				
	<u>Wiring network ; standard network support, remote communication, system expansion and support on open system protocols ; as described in the Particular Specification</u>				
	Wiring network				
A	general network	-	item	-	
B	level 1 network	-	item	-	
C	level 2 network	-	item	-	
D	level 3 network	-	item	-	
E	local area network (LAN)	-	item	-	
	<u>Portable terminal hardware ; as described in the Particular Specification</u>				
	Portable terminal hardware ; complete with power supply unit and all necessary components and accessories ; rechargeable battery				
F	generally		nr		
	<u>DDC units/unitary controllers ; as described in the Particular Specification and drawing nr. *</u>				
	DDC units ; complete with power supply units and all necessary components and accessories ; all necessary internal wirings and fixings				
G	DDC units/unitary controllers (ref. *)		nr		
	<u>Control and monitoring circuits ; approved cables ; conduit and cabling facilities ; all necessary sensors, relays, contactors, control devices and instrument ; earth continuity and terminations</u>				
	From DDC units/unitary controllers (ref. *)				
H	to chiller water circuits		nr		
	MODEL BILL OF DESCRIPTION				
	ASD STANDARD BILLS MODBQ.23/49				
			To Collection	\$	







AIR CONDITIONING INSTALLATION

Item	Description	Qty	Unit	Rate	HK\$
	<u>CONTROL SYSTEM - CENTRAL CONTROL AND MONITORING SYSTEM (CCMS) ; INTERNALLY, IN PLANT ROOM AND EXTERNALLY (Cont'd)</u>				
A	to cooling towers		nr		
B	to chillers		nr		
C	to chilled water pumps		nr		
D	to motor control centre		nr		
E	to AHU		nr		
F	to PAU		nr		
G	to ventilation fans		nr		
H	to FCU		nr		
J	to fire dampers		nr		
K	to smoke/fire dampers		nr		
L	to chilled water feed and expansion tank		nr		
M	to water treatment		nr		
N	to room condition monitoring for *		nr		
P	to cooling energy monitoring		nr		
	From DDC units/unitary controllers (ref. *) ; for other CCMS sub-system				
Q	to ACMV monitoring and control		nr		
R	to electrical system monitoring		nr		
S	to lighting control		nr		
T	to emergency generators		nr		
U	to fire pumps		nr		
V	to sprinkler valves		nr		
W	to security installation monitoring		nr		
X	to lifts		nr		

AIR CONDITIONING INSTALLATION

Item	Description	Qty	Unit	Rate	HK\$
<u>CONTROL SYSTEM - CENTRAL CONTROL AND MONITORING SYSTEM (CCMS) ; INTERNALLY, IN PLANT ROOM AND EXTERNALLY (Cont'd)</u>					
A	to escalators		nr		
B	to mechanical pumping and plumbing control and monitoring		nr		
C	to normal, emergency and preventive maintenance notification and works ordering		nr		
D	to IAQ measurement		nr		
<u>AIR CONDITIONING SUNDRIES ; INTERNALLY, IN PLANT ROOM AND EXTERNALLY</u>					
<u>The following items in respect of the whole Air conditioning, Refrigeration, Ventilation and Central Monitoring and Control System Installation</u>					
Allow for					
E	marking the positions of holes, mortices, chases and the like in the structure	-	item	-	
F	inspection, testing and commissioning of the complete ACMV Installation ; all as described in the Particular Specification and Part H of the General Specification for Air-conditioning, Refrigeration, Ventilation and Central Monitoring and Control System Installation [Guidance Notes: 1. Project Officers should refer to the guidance notes set out in the Collection page of Air Conditioning Installation of this Model Bills of Quantities for the applicability of this item. 2. This item should be deleted if the pre-tender estimate of the ACMV Installation excluding the sum for T&C of ACMV Installation is greater than or equal to \$3 million.]	-	item	-	
MODEL BILL OF DESCRIPTION					To Collection \$
ASD STANDARD BILLS					MODBQ.23/51

AIR CONDITIONING INSTALLATION

Item	Description	Qty	Unit	Rate	HK\$
<u>AIR CONDITIONING SUNDRIES ; INTERNALLY, IN</u>					
<u>PLANT ROOM AND EXTERNALLY (Cont'd)</u>					
A	providing all necessary power and water, diesel, gas and fuels in connection with testing, commissioning and maintenance [Guidance Notes: 1. Project Officers should refer to the guidance notes set out in the Collection page of Air Conditioning Installation of this Model Bills of Quantities for the applicability of this item. 2. This item should be deleted if the pre-tender estimate of the ACMV Installation excluding the sum for T&C of ACMV Installation is greater than or equal to \$3 million.]	-	item	-	
B	disinfection of the whole air duct installation before handover including supplying / providing ten bottles of one litre approved disinfection agent	-	item	-	
C	cleaning interior of all ductwork by rotating mechanical brush and removing contaminants by high efficiency vacuum pumps	-	item	-	
D	providing installation drawings ; all as described in the Particular Specification and Section A4.2 of the General Specification for Air-conditioning, Refrigeration, Ventilation and Central Monitoring and Control System Installation	-	item	-	
E	providing as-built drawings ; all as described in the Particular Specification and Section A4.3 of the General Specification for Air-conditioning, Refrigeration, Ventilation and Central Monitoring and Control System Installation	-	item	-	
To Collection \$					

AIR CONDITIONING INSTALLATION

Item	Description	Qty	Unit	Rate	HK\$
<u>AIR CONDITIONING SUNDRIES ; INTERNALLY, IN</u>					
<u>PLANT ROOM AND EXTERNALLY (Cont'd)</u>					
A	providing Operation and Maintenance (O&M) Manuals and User Manuals ; all as described in the Particular Specification and Section A4.4 of the General Specification for Air-conditioning, Refrigeration, Ventilation and Central Monitoring and Control System Installation	-	item	-	█
B	providing sample boards ; all as described in Section A3.7 of the General Specification for Air-conditioning, Refrigeration, Ventilation and Central Monitoring and Control System Installation	-	item	-	█
C	providing mock-ups and prototypes	-	item	-	█
D	supplying pipe sleeves (sleeves fixing by others) and filling holes so formed in walls, floors and ceilings with approved packing materials as described	-	item	-	█
E	supplying conduit sleeves (sleeves fixing by others) and filling holes so formed in walls, floors and ceilings with approved packing materials as described	-	item	-	█
F	supplying cable sleeves (sleeves fixing by others) and filling holes so formed in walls, floors and ceilings with approved packing materials as described	-	item	-	█
G	supplying and fixing fire stopping to walls and floors	-	item	-	█
To Collection					\$ █

AIR CONDITIONING INSTALLATION

Item	Description	Qty	Unit	Rate	HK\$
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AIR CONDITIONING SUNDRIES ; INTERNALLY, IN PLANT ROOM AND EXTERNALLY (Cont'd)

Allow for the requirements on indoor air quality (IAQ) attainment

A providing air cleaning, treatment and conditioning, testing and commissioning of the indoor air quality (IAQ) installation, assessments and measurements ; all as described in the Particular Specification and Part D of the General Specification for Air-conditioning, Refrigeration, Ventilation and Central Monitoring and Control System Installation [Guidance Note: This item should be deleted if the pre-tender estimate of the ACMV Installation excluding the sum for T&C of ACMV Installation is greater than or equal to \$3 million.]

- item -

B providing air cleaning, treatment and conditioning of the indoor air quality (IAQ) installation, assessments and measurements; all as described in the Particular Specification and Part D of the General Specification for Air-conditioning, Refrigeration, Ventilation and Central Monitoring and Control System Installation [Guidance Note: This item should be deleted if the pre-tender estimate of the ACMV Installation excluding the sum for T&C of ACMV Installation is less than \$3 million.]

- item -

C providing training, operation and maintenance requirements for IAQ installation ; all as described in the Particular Specification and Part D of the General Specification for Air-conditioning, Refrigeration, Ventilation and Central Monitoring and Control System Installation

- item -

AIR CONDITIONING INSTALLATION

Item	Description	Qty	Unit	Rate	HK\$
	<u>AIR CONDITIONING SUNDRIES ; INTERNALLY, IN PLANT ROOM AND EXTERNALLY (Cont'd)</u>				
A	providing indoor air quality (IAQ) certification by IAQ CIB and registration of IAQ certificates ; all as described in the Particular Specification	-	item	-	
	Allow for providing all training, inspection, attendance, operation and maintenance services during Maintenance Period ; as described in Part I of the General Specification for Air-conditioning, Refrigeration, Ventilation and Central Monitoring and Control System Installation ; including				
B	Level One Services mandatory	-	item	-	
C	Level Two Services ; full and comprehensive maintenance services	-	item	-	
	MODEL BILL OF DESCRIPTION ASD STANDARD BILLS MODBQ.23/55				
				To Collection \$	

C O L L E C T I O N

Item

Description

HK\$

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C. fwd \$

<u>C O L L E C T I O N</u>		B.fwd	\$
Item	Description		HK\$
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Page No.	MODBQ.23/50	
		C.fwd	\$

AIR CONDITIONING INSTALLATION

C O L L E C T I O N

B.fwd

\$

Item

Description

HK\$

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Page No. MODBQ.23/52

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Page No. MODBQ.23/55

Bill Nr. MODBQ.23 - AIR CONDITIONING INSTALLATION

To Summary

\$

C O L L E C T I O N

B.fwd

\$

INSPECTION, TESTING AND COMMISSIONING OF THE AIR-CONDITIONING AND MECHANICAL VENTILATION INSTALLATION#

[Guidance Notes:

1. The BQ Item set out in the collection page/ bill summary page # below is for the inspection, testing and commissioning of the Air Conditioning and Mechanical Ventilation ("ACMV") Installation.
2. This clause is applicable and used only in Lump Sum/Remeasurement Contracts with BQ when ACMV Installation is procured as domestic sub-contract under the Main Contract, with the pre-tender estimate of the ACMV Installation excluding the sum for T&C of the ACMV Installation (the "Estimate") is greater than or equal to \$3 million.
3. If the Estimate is less than \$3 million, the clause set out in the Collection page/ Bill Summary page# below shall not be applicable. In such a case, the measurement and pricing of this item shall follow normal practice and the rules stated in HKSMM4.
4. The project officer should ensure that no separate T&C item for ACMV Installation is measured in any other parts of the BQ to prevent double measurement.
5. In addition, the following provisions should also be included in the tender documents:
 - (1) NTT (az) - Payment for Testing and Commissioning for Air Conditioning and Mechanical Ventilation Installation;
 - (2) SCC 123 - Payment for Testing and Commissioning; and
 - (3) Preamble clause regarding Testing and Commissioning under Air Conditioning Installation for Mechanical Installations.
6. The project officer shall insert a pre-determined percentage for this item based on the following criteria:
 - (1) If the Estimate is greater than \$20 million, the pre-determined percentage shall be 2%.
 - (2) If the Estimate is greater than or equal to \$3 million but is less than or equal to \$20 million, the pre-determined percentage shall be 3%.

Reference: CAd/I's email to SQS/16 dated 22.6.2016 and BSB Circular No. 8 of 2021.

Amend as appropriate.

* Insert as appropriate.]

C.fwd

\$

C O L L E C T I O N

B.fwd \$
(Sub-total)

INSPECTION, TESTING AND COMMISSIONING OF THE AIR-CONDITIONING AND MECHANICAL VENTILATION INSTALLATION#

The Tenderer shall price the following item:

A

Allow for inspection, testing and commissioning of the complete Air Conditioning and Mechanical Ventilation Installation# ; all costs of necessary power and fuel ; consumables ; filters and any other necessary items ; all as described in Building Services Branch Testing and Commissioning Procedure No. 1 for Air-conditioning, Refrigeration, Ventilation and Central Monitoring & Control System Installation in Government Buildings, Hong Kong, Part H of the General Specification for Air-Conditioning, Refrigeration, Ventilation and Central Monitoring & Control System Installation in Government Buildings of the HKSAR and Clause* of Particular Specification PS-*# (ACSU)

(Notes:

1. The sum inserted for the item shall be determined as follows:
Sub-total x * %
2. The sum inserted for the item shall be deemed to allow for the value of work in connection therewith and any other related obligations, liabilities, risks and profit. In the event that the sum is insufficient, the difference in value shall be deemed to have been included in the rates inserted elsewhere in the Bills of Quantities.
3. For indoor air quality (IAQ) installation, if any, the testing and commissioning of the IAQ installation as described in the Particular Specification and Part D of the General Specification for Air-Conditioning, Refrigeration, Ventilation and Central Monitoring & Control System Installation in Government Buildings of the HKSAR shall be allowed for and priced here whereas the other IAQ requirements as specified shall be allowed for and priced separately elsewhere in the Bills of Quantities and are not to be priced here.)

Bill Nr. MODBQ.23 - AIR CONDITIONING INSTALLATION

To Summary

\$

Bill Nr. MODBQ.24
FIRE SERVICE INSTALLATION

Item	Description	Qty	Unit	Rate	HK\$
	<u>FIRE HYDRANT AND HOSEREEL SYSTEM ;</u> <u>INTERNALLY / IN PLANT ROOM / EXTERNALLY#</u>				
	<u>Galvanised mild steel pipes ; medium grade</u> <u>(minimum) ; BS EN 10255:2004 / ISO 65:1981</u> <u>/ BS EN 10217-1:2002 ; fittings ; BS EN</u> <u>10241:2000, / BS EN 10242:1995 ; flanged</u> <u>joints ; factory-applied</u>				
	Pipework and fittings ; suspended from soffits				
A	* diameter		m		
	Pipework and fittings ; fixed to walls and columns				
B	* diameter		m		
	Extra over pipework for				
C	* bends		nr		
D	* tees		nr		
E	* reducing tees		nr		
	<u>Galvanised mild steel pipes ; heavy grade</u> <u>(minimum) ; BS EN 10255:2004 / ISO 65:1981</u> <u>; fittings ; BS EN 10241:2000 / BS EN</u> <u>10242:1995 ; pressure rating greater than</u> <u>system working pressure ; flanged joints ;</u> <u>factory-applied</u>				
	Pipework and fittings ; suspended from soffits				
F	* diameter		m		
	Pipework and fittings ; fixed to walls and columns				
G	* diameter		m		
	MODEL BILL OF DESCRIPTION				
	ASD STANDARD BILLS MODBQ.24/1				
		To Collection	\$		

FIRE SERVICE INSTALLATION

Item	Description	Qty	Unit	Rate	HK\$
	<u>FIRE HYDRANT AND HOSEREEL SYSTEM ;</u> <u>INTERNALLY / IN PLANT ROOM / EXTERNALLY#</u> <u>(Cont'd)</u>				
	Extra over pipework for				
A	* bends		nr		
B	* tees		nr		
C	* reducing tees		nr		
	<u>Carbon steel pipes ; grade P265TR1 to BS</u> <u>EN 10216-1:2013 / BS EN 10217-1:2002 ;</u> <u>fittings ; BS EN 10253-1:1999 / BS EN</u> <u>10253-2:2007 ; flanged joints ;</u> <u>factory-applied</u>				
	Pipework and fittings ; suspended from soffits				
D	* diameter		m		
	Pipework and fittings ; fixed to walls and columns				
E	* diameter		m		
	Extra over pipework for				
F	* bends		nr		
G	* reducing bends		nr		
H	* tees		nr		
J	* reducing tees		nr		
	Flow and return header pipes ; blanked off at open ends ; supporting on floors				
K	* diameter ; * long ; with * nr. * x * x * branches		nr		
	<u>Cast iron / ductile iron body valves ;</u> <u>heavy duty</u>				
	Gate valves				
L	* diameter		nr		
	MODEL BILL OF DESCRIPTION				
	ASD STANDARD BILLS MODBQ.24/2				
		To Collection	\$		

FIRE SERVICE INSTALLATION

Item	Description	Qty	Unit	Rate	HK\$
	<u>FIRE HYDRANT AND HOSEREEL SYSTEM ;</u> <u>INTERNALLY / IN PLANT ROOM / EXTERNALLY#</u> <u>(Cont'd)</u>				
	Non-return valves / check valves ; BS EN 1561:2011 / BS EN 1563:2011				
A	* diameter		nr		
	Pressure reducing valve sets ; BS EN 1567:1999 ; spring-loaded relay-operated type ; integral strainers ; isolating and bypass valves				
B	to suit * diameter pipes		nr		
	<u>Cast gummetal / bronze body valves</u>				
	Ball float valves ; slow closing ; minimum PN10 pressure rating				
C	to suit * diameter pipes		nr		
	Drain valves/cocks				
D	* diameter		nr		
	<u>Cast iron body strainers</u>				
	Pipeline strainers ; Y-type ; brass screen				
E	* diameter		nr		
	<u>Gummetal / brass automatic air vents ;</u> <u>stainless steel floats and guides ;</u> <u>non-corrodible valves and seats</u>				
	Automatic air vents ; complete with integral lock-shield valves / valves with suitable locking device and air release pipe				
F	to suit * diameter pipes		nr		
	<u>Orifice plates</u>				
	LPCB or UL approved type				
G	to suit system balancing		nr		
	MODEL BILL OF DESCRIPTION				
	ASD STANDARD BILLS				
	MODBQ.24/3				
			To Collection	\$	

FIRE SERVICE INSTALLATION

Item	Description	Qty	Unit	Rate	HK\$
	<u>FIRE HYDRANT AND HOSEREEL SYSTEM ;</u> <u>INTERNALLY / IN PLANT ROOM / EXTERNALLY#</u> <u>(Cont'd)</u>				
	<u>Vortex inhibitors</u>				
	LPCB approved type ; operation under positive head conditions				
A	to suit * diameter pipes		nr		
	<u>Expansion joints ; stainless steel ; BS EN</u> <u>10088-1:2014 No. 1.4401 ; expectancy life</u> <u>twenty years (minimum)</u>				
	Axial pattern bellow type ; with liners ; external protective sleeves				
B	to suit * diameter pipes		nr		
	<u>Hydrant outlets ; gunmetal construction ;</u> <u>screw-down globe type stop valves ;</u> <u>necessary fittings</u>				
	Single type ; housed in cabinet				
C	65 diameter outlets with suitable bore screwed inlets		nr		
	<u>Fire services inlets ; gunmetal</u> <u>construction ; screw-down globe type stop</u> <u>valves ; integral spring loaded resilient</u> <u>seated non-return valves ; necessary</u> <u>fittings</u>				
	Twin type ; housed in cabinet				
D	65 diameter inlets with suitable bore screwed outlets		nr		
	<u>Hose reels ; die cast light alloy drums ;</u> <u>brass hub and shaft ; necessary fittings</u> <u>and supporting brackets ; sheet metal</u> <u>boxes for hose reel nozzles ; padlocks and</u> <u>keys</u>				
	Fixed type ; housed in cabinet				
E	FSD approved type ; not less than 19 internal bore and 30m long ; reinforced rubber hoses ; copper alloy nozzles		nr		
	MODEL BILL OF DESCRIPTION		To Collection	\$	
	ASD STANDARD BILLS MODBQ.24/4				

FIRE SERVICE INSTALLATION

Item	Description	Qty	Unit	Rate	HK\$
	<u>FIRE HYDRANT AND HOSEREEL SYSTEM ;</u> <u>INTERNALLY / IN PLANT ROOM / EXTERNALLY#</u> <u>(Cont'd)</u>				
	<u>Pressure gauges ; BS EN 837-1:1998 ; brass</u> <u>cases and dials ; siphon pipework and</u> <u>connections ; isolating valves/cocks</u>				
A	Pressure gaugesto suit * diameter pipes to suit * diameter pipes		nr		
	<u>Water flow alarm switches ; magnetic /</u> <u>vane type ; pipework and connection</u>				
B	Water flow alarm switches ; LPCB approved type ; capable of standing 1600 kPa (minimum) test pressure to suit * diameter pipes		nr		
	<u>Pumps sets ; cast iron casings ; driving</u> <u>motor ; water seal connection, vents,</u> <u>drains, priming plugs, associated pipework</u> <u>and anti-vibration mountings ; adjacent</u> <u>emergency stops ; all necessary components</u> <u>and accessories</u>				
C	Horizontal spindle type centrifugal pumps ; actuated by manual fire call point duty pump sets ; capable of delivering * l/s at * kPa static pressure (ref. *)		nr		
D	standby pump sets ; capable of delivering * l/s at * kPa static pressure (ref. *)		nr		
E	jockey pump sets ; complying Building Energy Code ; capable of delivering * l/s at * kPa static pressure (ref. *)		nr		
MODEL BILL OF DESCRIPTION					To Collection \$
ASD STANDARD BILLS MODBQ.24/5					

FIRE SERVICE INSTALLATION

Item	Description	Qty	Unit	Rate	HK\$
	<u>AUTOMATIC SPRINKLER SYSTEM ; INTERNALLY / IN PLANT ROOM / EXTERNALLY#</u>				
	<u>Galvanised mild steel pipes ; medium grade (minimum) ; BS EN 10255:2004 / ISO 65:1981 / BS EN 10217-1:2002 ; fittings ; BS EN 10241:2000 / BS EN 10242:1995 ; flanged joints ; factory applied</u>				
	Pipework and fittings ; suspended from soffits				
A	* diameter		m		
	Pipework and fittings ; fixed to walls and columns				
B	* diameter		m		
	Extra over pipework for				
C	* bends		nr		
D	* tees		nr		
E	* reducing tees		nr		
	<u>Galvanised mild steel pipes ; heavy grade (minimum) ; BS EN 10255:2004 / ISO 65:1981 ; fittings ; BS EN 10241:2000 / BS EN 10242:1995 ; pressure rating greater than system working pressure ; flanged joints ; factory applied</u>				
	Pipework and fittings ; suspended from soffits				
F	* diameter		m		
	Pipework and fittings ; fixed to walls and columns				
G	* diameter		m		
	Extra over pipework for				
H	* bends		nr		
J	* tees		nr		
K	* reducing tees		nr		
	MODEL BILL OF DESCRIPTION				
	ASD STANDARD BILLS MODBQ.24/6				
		To Collection	\$		

FIRE SERVICE INSTALLATION

Item	Description	Qty	Unit	Rate	HK\$
	<u>AUTOMATIC SPRINKLER SYSTEM ; INTERNALLY / IN PLANT ROOM / EXTERNALLY# (Cont'd)</u>				
	<u>Carbon steel pipes ; grade P265TR1 to BS EN 10216-1:2013 and BS EN 10217-1:2002 ; fittings ; BS EN 10253-1:1999 / BS EN 10253-2:2007 ; flanged joints ; factory-applied</u>				
	Pipework and fittings ; suspended from soffits				
A	* diameter		m		
	Pipework and fittings ; fixed to walls and columns				
B	* diameter		m		
	Extra over pipework for				
C	* bends		nr		
D	* reducing bends		nr		
E	* tees		nr		
F	* reducing tees		nr		
	Flow and return header pipes ; blanked off at open ends ; supporting on floors				
G	* diameter ; * long ; with * nr. * x * x * branches		nr		
	<u>Cast gummetal / bronze body valves</u>				
	Drain valves/cocks				
H	* diameter		nr		
	<u>Cast iron / ductile iron body valves ; heavy duty</u>				
	Gate valves				
J	* diameter		nr		
	Non-return valves / check valves ; BS EN 1561:2011 / BS EN 1563:2011				
K	* diameter		nr		
	MODEL BILL OF DESCRIPTION				
	ASD STANDARD BILLS MODBQ.24/7				
		To Collection	\$		

FIRE SERVICE INSTALLATION

Item	Description	Qty	Unit	Rate	HK\$
	<u>AUTOMATIC SPRINKLER SYSTEM ; INTERNALLY / IN PLANT ROOM / EXTERNALLY# (Cont'd)</u>				
	<u>Cast iron body strainers</u>				
	Pipeline strainers ; Y-type ; brass screen				
A	* diameter		nr		
	<u>Brass automatic air vents ; stainless steel floats and guides ; non-corrodible valves and seats</u>				
	Automatic air vents ; complete with integral lock-shield valves / valves with suitable locking device and air release pipe				
B	to suit * diameter pipes		nr		
	<u>Orifice plates</u>				
	LPCB or UL approved type				
C	to suit system balancing		nr		
	<u>Vortex inhibitors</u>				
	LPCB approved type ; operation under positive head conditions				
D	to suit * diameter pipes		nr		
	<u>Expansion joints ; stainless steel ; BS EN 10088-1:2014 No. 1.4401 ; expectancy life twenty years (minimum)</u>				
	Axial pattern bellow type ; with liners ; external protective sleeves				
E	to suit * diameter pipes		nr		
	<u>Sprinklers/sprinkler heads ; quick response ; yoke arm, escutcheon, adaptor and cover plate ; chromium plated finish</u>				
	Heat sensitive quartzoid bulb ; temperature rating 68 degrees Celsius				
F	pendant type		nr		
MODEL BILL OF DESCRIPTION		To Collection		\$	
ASD STANDARD BILLS MODBQ.24/8					

FIRE SERVICE INSTALLATION

Item	Description	Qty	Unit	Rate	HK\$
	<u>AUTOMATIC SPRINKLER SYSTEM ; INTERNALLY / IN PLANT ROOM / EXTERNALLY# (Cont'd)</u>				
	<u>Sprinklers/sprinkler heads ; quick response ; yoke arm, escutcheon, adaptor and cover plate ; polyester white colour finish</u>				
	Heat sensitive quartzoid bulb ; temperature rating 68 degrees Celsius				
A	flush pattern, pendant type		nr		
	<u>Sprinklers/sprinkler heads ; quick response ; yoke arm, escutcheon, adaptor and cover plate ; natural brass finish</u>				
	Heat sensitive quartzoid bulb ; temperature rating 68 degrees Celsius				
B	upright type		nr		
	<u>Sprinkler inlets ; gunmetal construction ; screw-down globe type stop valves ; integral spring loaded resilient seated non-return valves ; necessary fittings</u>				
	Twin type ; housed in cabinet				
C	65 diameter inlets with suitable bore screwed outlets		nr		
	<u>Sprinkler guards ; corrosion resistance ; brass, wax coated</u>				
	Fixed to sprinkler pipes				
D	65 high (maximum)		nr		
	<u>Pressure gauges ; BS EN 837-1:1998 ; brass cases and dials ; siphon pipework and connections ; isolating valves/cocks</u>				
	Pressure gauges				
E	to suit * diameter pipes		nr		
	MODEL BILL OF DESCRIPTION				
	ASD STANDARD BILLS MODBQ.24/9				
			To Collection	\$	

FIRE SERVICE INSTALLATION

Item	Description	Qty	Unit	Rate	HK\$
	<u>AUTOMATIC SPRINKLER SYSTEM ; INTERNALLY /</u> <u>IN PLANT ROOM / EXTERNALLY# (Cont'd)</u>				
	<u>Subsidiary stop valves ; electric</u> <u>monitoring type ; capable to generate</u> <u>visual and audible signal</u>				
	Subsidiary stop valves				
A	to suit * diameter pipes		nr		
	<u>Tamper-proof electric switches ;</u> <u>associated wiring and installation,</u> <u>complying LPC Rules and General</u> <u>Specification</u>				
	Tamper proof electric switches ; control and alarm indication				
B	to suit sprinkler system		nr		
	<u>Sprinkler control valve sets ; comprising</u> <u>pressure gauges, valves, alarm and</u> <u>monitoring devices, water motor gongs,</u> <u>testing facilities and retarding chambers</u> <u>; all necessary accessories ; complying</u> <u>LPC Rules</u>				
	Sprinkler control valve sets ; duplicate alarm valve arrangement				
C	to suit * diameter pipes		nr		
	<u>Water flow alarm switches ; high</u> <u>sensitivity ; actuated by operation of one</u> <u>sprinkler head</u>				
	Water flow alarm switches ; LPCB approved type ; automatic flow switch testing system and controlling test panels				
D	to suit * diameter pipes		nr		
	<u>Butterfly valves (anti-pollution valves)</u> <u>without stop screw and lock nut on handle</u> <u>; complying FSD Requirements and Circular</u> <u>Letters</u>				
	Butterfly valves				
E	* diameter		nr		
	MODEL BILL OF DESCRIPTION				
	ASD STANDARD BILLS				
	MODBQ.24/10				
		To Collection	\$		

FIRE SERVICE INSTALLATION

Item	Description	Qty	Unit	Rate	HK\$
	<u>AUTOMATIC SPRINKLER SYSTEM ; INTERNALLY / IN PLANT ROOM / EXTERNALLY# (Cont'd)</u>				
	<u>Pump sets ; cast iron casings ; driving motor ; water seal connection, vents, drains, priming plugs, associated pipework and anti-vibration mountings ; adjacent emergency stops ; all necessary components and accessories ; complete as in the Particular Specification</u>				
	Horizontal spindle type centrifugal pumps ; controlled by independent LPCB approved pressure switches				
A	duty pump sets ; capable of delivering * l/s at * kPa static pressure (ref. *)		nr		
B	standby pump sets ; capable of delivering * l/s at * kPa static pressure (ref. *)		nr		
C	jockey pump sets ; complying Building Energy Code ; capable of delivering * l/s at * kPa static pressure (ref. *)		nr		
	<u>DESIGN, SUPPLY AND INSTALL GASEOUS EXTINGUISHING SYSTEM ; INTERNALLY / IN PLANT ROOM / EXTERNALLY#</u>				
	<u>Galvanised mild steel pipes and fittings ; heavy grade ; BS EN 10255:2004 ; 40 diameter (maximum) ; screwed and socket joints</u>				
	Pipework and fittings ; suspended from soffits				
D	* diameter		m		
	Pipework and fittings ; fixed to walls and columns				
E	* diameter		m		
	Extra over pipework for				
F	* bends		nr		
G	* tees		nr		
	MODEL BILL OF DESCRIPTION		To Collection	\$	
	ASD STANDARD BILLS MODBQ.24/11				

FIRE SERVICE INSTALLATION

Item	Description	Qty	Unit	Rate	HK\$
	<u>DESIGN, SUPPLY AND INSTALL GASEOUS</u> <u>EXTINGUISHING SYSTEM ; INTERNALLY / IN</u> <u>PLANT ROOM / EXTERNALLY# (Cont'd)</u>				
A	* reducing tees		nr		
	<u>Electric resistance and induction welded</u> <u>carbon steel pipes and fittings ; BS EN</u> <u>10217-1:2002 with wall thickness not lower</u> <u>than ASME B36.10M-2004 Schedule No.80</u> <u>pipe, steel Grade P265TR1/ASTM</u> <u>A106/A106M:2008 Grade A hot finished /</u> <u>cold Schedule 80 ; screwed joints</u>				
	Pipework and fittings ; suspended from soffits				
B	* diameter		m		
	Pipework and fittings ; fixed to walls and columns				
C	* diameter		m		
	Extra over pipework for				
D	* bends		nr		
E	* tees		nr		
F	* reducing tees		nr		
	<u>Discharge nozzles ; robust construction ;</u> <u>discharge orifices ; brass / stainless</u> <u>steel ; necessary accessories</u>				
	Discharge nozzles				
G	working pressure * ; temperature *		nr		

FIRE SERVICE INSTALLATION

Item	Description	Qty	Unit	Rate	HK\$
	<u>DESIGN, SUPPLY AND INSTALL GASEOUS EXTINGUISHING SYSTEM ; INTERNALLY / IN PLANT ROOM / EXTERNALLY# (Cont'd)</u>				
	<u>Gas cylinders ; rechargeable and re-usable type ; seamless steel construction ; BS EN ISO 9809-1:2010 and BS EN ISO 9809-3:2010 ; gas valves ; check valves ; actuators ; pressure gauges ; flexible hose ; liquid measuring device ; low pressure supervisory switch ; all release devices and mechanism ; all necessary accessories ; mounting and supports</u>				
	Carbon dioxide cylinders				
A	set of * cylinders ; each capacity * kg		nr		
	<u>System odouriser ; automatically treating gas released from cylinder ; all necessary accessories</u>				
	Odourisers				
B	citrus odour		nr		
	<u>Automatic/manual lock of unit ; key switches</u>				
	Automatic/manual lock off units				
C	for fire detection and system control		nr		
	<u>Emergency release handle ; direct mechanism ; removable pin</u>				
	Emergency release handle				
D	installed near gas cylinders		nr		
	<u>Manual release units ; pull handles in glass box ; "break glass" box cover</u>				
	Manual release units				
E	installed at *		nr		
	MODEL BILL OF DESCRIPTION				
	ASD STANDARD BILLS				
	MODBQ.24/13				
			To Collection	\$	

FIRE SERVICE INSTALLATION

Item	Description	Qty	Unit	Rate	HK\$
	<u>DESIGN, SUPPLY AND INSTALL GASEOUS EXTINGUISHING SYSTEM ; INTERNALLY / IN PLANT ROOM / EXTERNALLY# (Cont'd)</u>				
	<u>Warning lights and notices ; indicator lights ; 1.6 thick metal plate explanatory/warning notices ; connection to power</u>				
A	Green indicator lights and warning notices fixed on entrance doors		nr		
B	Amber indicator lights and warning notices fixed on entrance doors		nr		
C	Red indicator lights and warning notices fixed on entrance doors		nr		
	<u>Smoke detectors</u>				
D	Smoke detectors ; analogue addressable ; point-type ; BS EN 54-7:2001 or other standards acceptable to FSD semi-recessed mounting		nr		
	<u>Heat detectors</u>				
E	Heat detectors ; analogue addressable ; point-type ; Class A2 ; BS EN 54-5:2001 or other standards acceptable to FSD ; flush mounting combined fixed temperature and rate-of-temperature-rise		nr		
	<u>Gaseous extinguishing system control panels</u>				
F	Gaseous extinguishing system control panel ; adjustable time delay unit ; sealed, nickel-metal hydride type battery ; battery charger ; ammeter ; voltmeter ; relays ; contacts ; switches ; necessary accessories ; indication devices ; connection to electrical power source gaseous extinguishing control panel (ref. *)		nr		
	MODEL BILL OF DESCRIPTION		To Collection	\$	
	ASD STANDARD BILLS MODBQ.24/14				

FIRE SERVICE INSTALLATION

Item	Description	Qty	Unit	Rate	HK\$
	<u>DESIGN, SUPPLY AND INSTALL GASEOUS EXTINGUISHING SYSTEM ; INTERNALLY / IN PLANT ROOM / EXTERNALLY# (Cont'd)</u>				
	<u>Control and monitoring circuits ; fire resistant cables ; complying with Section B9.9 of the General Specification for Fire Service Installation ; FSDCoP, FSD Requirements and Circular Letters ; low smoke zero halogen type ; complete with cable trays, cable trunkings, conduits and fittings</u>				
	From gaseous extinguishing system control panel				
A	to automatic / manual lock off units		nr		
B	to emergency release handle		nr		
C	to manual release units		nr		
D	to warning lights		nr		
	<u>DESIGN, SUPPLY AND INSTALL AUDIO/VISUAL ADVISORY SYSTEM ; INTERNALLY, IN PLANT ROOM AND EXTERNALLY</u>				
	<u>Central equipment for audio system ; fire resisting cables and conduits ; as described in Section B9.9 of the General Specification for Fire Service Installation ; ancillary components and accessories ; connections to other equipment and spur units (spur units measured separately)</u>				
	Equipment ; mounted in stainless steel enclosure and equipment rack (enclosure and equipment rack measured separately)				
E	pre-amplifiers		nr		
F	amplifiers		nr		
G	recording and play back devices and decks		nr		
H	CD/DVD decks		nr		
	MODEL BILL OF DESCRIPTION		To Collection	\$	
	ASD STANDARD BILLS MODBQ.24/15				

FIRE SERVICE INSTALLATION

Item	Description	Qty	Unit	Rate	HK\$
	<u>DESIGN, SUPPLY AND INSTALL AUDIO/VISUAL ADVISORY SYSTEM ; INTERNALLY, IN PLANT ROOM AND EXTERNALLY (Cont'd)</u>				
A	desktop microphones ; single zone type ; condenser microphone on gooseneck ; cable minimum 1000 long ; plug		nr		
	<u>Enclosure and equipment rack ; 1.6 thick minimum BS EN 10088-1:2005 No. 1.4401 stainless steel sheet construction</u>				
	Enclosure and equipment racks ; wall mounted				
B	for audio system		nr		
	<u>Loudspeakers ; crisp, clear audio reproduction, alarm tone signalling ; high impact ABS plastic construction ; tapped transformers ; integrated attenuators ; back enclosure</u>				
	Loudspeakers ; flush mounted on false ceiling				
C	maximum output rating 1 Watt, frequency response within +3 and -7dB from 100 to 10,000 Hz		nr		
	<u>Microphone control panels ; 1.6 thick BS EN 10088-1:2014 No. 1.4401 stainless steel housing ; well-ventilated and free from vermin and corrosion proof ; speaker zone switchbank and annunciator module ; tape transfer, power supervisor and remote transmission module ; automatic timer sequencer ; alarm failure transfer units ; general alarm and all call module ; alarm input transfer module ; battery and charger ; accessories ; connection to power ; wirings and conduits</u>				
	Control panels ; located in * room ; wall mounted type				
D	control panels (ref. *)		nr		
	MODEL BILL OF DESCRIPTION ASD STANDARD BILLS MODBQ.24/16		To Collection	\$	

FIRE SERVICE INSTALLATION

Item	Description	Qty	Unit	Rate	HK\$
	<u>DESIGN, SUPPLY AND INSTALL AUDIO/VISUAL ADVISORY SYSTEM ; INTERNALLY, IN PLANT ROOM AND EXTERNALLY (Cont'd)</u> <u>Visual system ; coloured and flashing lights ; illuminated exit/directional signs ; BS ISO 3864-1:2011, BS 5499-4:2013, BS EN 60598-1:2015 (Incorporating corrigendum December 2015), BS EN 60598-2-22:2014 (Incorporating corrigendum June 2014), BS 5266-1:2011, BS EN 50172:2004 and BS EN 1838:2013 ; FSDCoP, FSD Requirements and Circular Letters ; battery, battery chargers, wiring, testing facilities ; changeover switches ; connection to power and all accessories</u> Illuminated exit/directional signs ; integrated flashing light control gear ; lamp-holder sets				
A	size *		nr		
	Low-level lights ; internally illuminated ; direction indicated ; flashing light control gear				
B	size *		nr		
	Low-level directional signs ; non-flashing photo-luminous type				
C	size *		nr		
	<u>Control and monitoring circuits ; fire resistant cables ; complying with Section B9.9 of the General Specification for Fire Service Installation ; FSDCoP, FSD Requirements and Circular Letters ; low smoke zero halogen type ; complete with cable trays, cable trunkings, conduits and fittings</u> From control panel (ref. *)				
D	to pre-amplifiers		nr		
E	to amplifiers		nr		
F	to recording and play back devices and decks		nr		
	MODEL BILL OF DESCRIPTION ASD STANDARD BILLS MODBQ.24/17				
			To Collection	\$	

FIRE SERVICE INSTALLATION

Item	Description	Qty	Unit	Rate	HK\$
	<u>DESIGN, SUPPLY AND INSTALL AUDIO/VISUAL ADVISORY SYSTEM ; INTERNALLY, IN PLANT ROOM AND EXTERNALLY (Cont'd)</u>				
A	to CD/DVD decks		nr		
B	to microphones		nr		
C	to exit/directional signs		nr		
	<u>Amplifier output circuits ; fire resistant cables ; complying with Section B9.9 of the General Specification for Fire Service Installation ; FSDCoP, FSD Requirements and Circular Letters ; low smoke zero halogen type ; complete with cable trays, cable trunkings, conduits and fittings</u>				
	From amplifiers ; low power loss and interference protected twin cables				
D	to loudspeakers		nr		
	<u>MANUAL AND AUTOMATIC FIRE ALARM SYSTEM ; INTERNALLY, IN PLANT ROOM AND EXTERNALLY</u>				
	<u>Manual call points ; non-combustible and corrosion resistant construction ; non-deteriorating alloy contacts ; concealed "test" device</u>				
	Break-glass type ; BS EN 54-11:2001 or other standards acceptable to FSD ; addressable / integrated with interfacing module ; fixed at 0.90-1.20m above finished floor level ; FSD approved				
E	flush semi-recessed mounting		nr		
	<u>Heat detectors ; point-type ; Class A2, BS EN 54-5:2001 or other standards acceptable to FSD ; analogue addressable ; continuous non-condensing under relative humidity up to 95% non-air-conditioned space and air-conditioned space ; LED indicators enable 360 degrees viewing ; all necessary accessories</u>				
	Minimum IP 43 protection ; flush mounting				
F	combined fixed temperature and rate-of-temperature-rise		nr		
	MODEL BILL OF DESCRIPTION		To Collection	\$	
	ASD STANDARD BILLS MODBQ.24/18				

FIRE SERVICE INSTALLATION

Item	Description	Qty	Unit	Rate	HK\$
	<u>MANUAL AND AUTOMATIC FIRE ALARM SYSTEM ;</u> <u>INTERNALLY, IN PLANT ROOM AND EXTERNALLY</u> <u>(Cont'd)</u>				
	<u>Heat detectors ; point-type ; Class CS,</u> <u>DS, ES, FS or GS ; BS EN 54-5:2001 or</u> <u>other standards acceptable to FSD ;</u> <u>analogue addressable ; continuous</u> <u>non-condensing under relative humidity up</u> <u>to 99% ; LED indicators enable 360 degrees</u> <u>viewing ; all necessary accessories</u>				
	Minimum IP 43 protection ; flush mounting				
A	combined fixed temperature and rate-of-temperature-rise		nr		
	<u>Ionisation smoke detectors ; point-type ;</u> <u>BS EN 54-7:2001 or other standards</u> <u>acceptable to FSD ; analogue addressable ;</u> <u>continuous non-condensing under relative</u> <u>humidity up to 99% and 95% in</u> <u>non-airconditioned space and</u> <u>air-conditioned space ; radioactive</u> <u>isotopes with radiation level of less than</u> <u>0.1 mr/h at 100m ; minimum two ionization</u> <u>chambers ; built-in signal integration</u> <u>feature ; LED indicators enable 360</u> <u>degrees viewing ; all necessary</u> <u>accessories ; submissions</u>				
	Ionization smoke detectors ; working life 10 years (minimum)				
B	pendant mounting		nr		
	<u>Optical smoke detectors ; point-type ; BS</u> <u>EN 54-7:2001 or other standards acceptable</u> <u>to FSD ; analogue addressable ; continuous</u> <u>non-condensing under relative humidity up</u> <u>to 99% and 95% in non-airconditioned space</u> <u>and air-conditioned space ; detection</u> <u>chamber housing ; infra-red light emitter</u> <u>and silicon DIN photo diode sensor ; LED</u> <u>indicators enable 360 degrees viewing ;</u> <u>all necessary accessories</u>				
	Optical smoke detectors ; working life 10 years (minimum)				
C	pendant mounting		nr		

FIRE SERVICE INSTALLATION

Item	Description	Qty	Unit	Rate	HK\$
	<u>MANUAL AND AUTOMATIC FIRE ALARM SYSTEM ;</u> <u>INTERNALLY, IN PLANT ROOM AND EXTERNALLY</u> <u>(Cont'd)</u>				
	<u>Remote alarm indicator lamps ; LED</u> <u>indicators enable 360 degrees viewing ;</u> <u>visible at 6m (minimum) in an ambient</u> <u>light of 500 lux (maximum) ; necessary</u> <u>wirings and conduits</u>				
	Remote alarm indicator lamps ; for detectors				
A	ceiling mounting		nr		
B	door mounting		nr		
	<u>Visual alarm units ; * alarm signalling</u> <u>strobe light and associated</u> <u>lens/reflectors system ; back up emergency</u> <u>power supply, battery supply ; all</u> <u>necessary accessories</u>				
	Visual alarm units ; flashing light ; NFPA 72:2016				
C	semi-flush mounting		nr		
	<u>Alarm bells ; BS EN 54-3:2014 or other</u> <u>standards acceptable to FSD ; capable of</u> <u>producing sound level of 80 dB(A)</u> <u>(minimum) at 3m ; high performance and</u> <u>reliability micro motor ; back up</u> <u>emergency power supply, battery supply</u>				
	Alarm bells ; suitable for use in addressable system				
D	minimum 150 diameter gongs		nr		
	<u>Addressable interface modules ; mounted</u> <u>into junction box ; LED lights</u>				
	Monitor modules ; supervised initiating circuit ; fault indicating facilities and testing facilities				
E	monitor modules		nr		
	MODEL BILL OF DESCRIPTION		To Collection	\$	
	ASD STANDARD BILLS MODBQ.24/20				

FIRE SERVICE INSTALLATION

Item	Description	Qty	Unit	Rate	HK\$
	<u>MANUAL AND AUTOMATIC FIRE ALARM SYSTEM ;</u> <u>INTERNALLY, IN PLANT ROOM AND EXTERNALLY</u> <u>(Cont'd)</u>				
	Control modules ; supervising and monitoring wiring to alarm bell, flashing light units, indicator units and interface relay				
A	control modules		nr		
	Fault isolator modules				
B	fault isolator modules		nr		
	<u>Testers ; high level located ; stainless steel label plates</u>				
	Testers ; easily accessible ; flush mounted type				
C	for break glass units		nr		
D	for heat detectors		nr		
E	for smoke detectors		nr		
	<u>PORTABLE HAND-OPERATED APPLIANCES ;</u> <u>INTERNALLY, IN PLANT ROOM AND EXTERNALLY</u>				
	<u>Fire blankets and sand buckets</u>				
	Fire blankets ; BS 7944:1999 ; heavy duty renewable type ; wall mounted				
F	FSD approved heavy duty type		nr		
	Sand buckets ; galvanised steel and painted red ; mounting brackets ; wall mounted				
G	10 litres capacity (minimum)		nr		
	<u>Fire extinguishers ; rechargeable hand-operated type ; manufactured and tested to recognized international standards ; batch-approved certificate/mark</u>				
	Carbon dioxide type ; wall mounted				
H	* capacity		nr		
	MODEL BILL OF DESCRIPTION		To Collection	\$	
	ASD STANDARD BILLS MODBQ.24/21				

FIRE SERVICE INSTALLATION

Item	Description	Qty	Unit	Rate	HK\$
	<u>PORTABLE HAND-OPERATED APPLIANCES ;</u> <u>INTERNALLY, IN PLANT ROOM AND EXTERNALLY</u> <u>(Cont'd)</u>				
	Carbon dioxide type ; housed in cabinet				
A	* capacity		nr		
	NASF III type ; wall mounted				
B	* capacity		nr		
	<u>ELECTRICITY SUPPLY ; INTERNALLY, IN PLANT</u> <u>ROOM AND EXTERNALLY</u>				
	<u>Starters</u>				
	Star-delta starters				
C	* A to suit fire service pumps (ref. *)		nr		
D	* A to suit sprinkler pumps (ref. *)		nr		
	<u>Fire resistant cables ; complying with</u> <u>Section B9.9 of the General Specification</u> <u>for Fire Service Installation ; FSDCoP,</u> <u>FSD Requirements and Circular Letters ;</u> <u>low smoke zero halogen type ; complete</u> <u>with cable trays, cable trunkings,</u> <u>conduits and fittings</u>				
	From electricity supply points/isolators				
E	* mm2, * core cables ; to fire service pump starter panels (ref. *)		nr		
F	* mm2, * core cables ; to sprinkler pump starter panels (ref. *)		nr		
	From starter panels (ref. *)				
G	* mm2, * core cables ; to fire service pumps (ref. *)		nr		
H	* mm2, * core cables ; to sprinkler pumps (ref. *)		nr		
	MODEL BILL OF DESCRIPTION				
	ASD STANDARD BILLS				
	MODBQ.24/22				
			To Collection	\$	

FIRE SERVICE INSTALLATION

Item	Description	Qty	Unit	Rate	HK\$
	<u>CONTROL SYSTEM - AUTOMATIC CONTROL SYSTEM</u>				
	<u>(ACS) ; INTERNALLY, IN PLANT ROOM AND</u>				
	<u>EXTERNALLY</u>				
	<u>Control and indicating panels</u>				
	Fire alarm control and indicating panels ; BS EN 54-2:1997+A1:2006 (Incorporating corrigenda January 2007 and July 2009) ; 1.6 thick minimum BS EN 10088-1:2014 No. 1.4401 stainless steel sheet construction ; BS EN 60529:1992+A2:2013 IP 52 protection ; FSD approved ; glazed lockable door ; detection and alarm devices ; surge arresters ; battery and charger sets ; interconnecting wiring and conduits ; all provisions, components and accessories ; signal transmission to FSD				
A	automatic sprinkler system alarm control and indicating panels		nr		
B	addressable fire alarm control and indicating panels ; analogue addressable intelligent type ; minimum 10% spare capacity for future expansion		nr		
	Alarm repeater panels ; 1.6 thick minimum BS EN 10088-1:2014 No. 1.4401 stainless steel sheet construction ; glazed lockable door ; detection and alarm devices ; surge arresters ; interconnecting wiring and conduits ; battery and charger sets ; all provisions, components and accessories				
C	alarm repeater panels ; with engraved laminated plastic mimic diagram (ref. *)		nr		
	Starter panels ; 1.6 thick minimum mild steel sheet construction ; BS EN 60529:1992+A2:2013 IP 65 protection ; lockable door ; detection and alarm devices ; surge arresters ; battery and charger sets ; interconnecting wiring and conduits ; necessary components and accessories				
D	for fire service pumps (ref. *)		nr		
E	for sprinkler pumps (ref. *)		nr		
	MODEL BILL OF DESCRIPTION		To Collection	\$	
	ASD STANDARD BILLS				
	MODBQ.24/23				

FIRE SERVICE INSTALLATION

Item	Description	Qty	Unit	Rate	HK\$
	<u>CONTROL SYSTEM - AUTOMATIC CONTROL SYSTEM</u>				
	<u>(ACS) ; INTERNALLY, IN PLANT ROOM AND</u>				
	<u>EXTERNALLY (Cont'd)</u>				
	<u>Alarm, detection and control circuits ;</u>				
	<u>fire resistant cables ; complying with</u>				
	<u>Section B9.9 of the General Specification</u>				
	<u>for Fire Service Installation ; FSDCoP,</u>				
	<u>FSD Requirements and Circular Letters ;</u>				
	<u>low smoke zero halogen type ; complete</u>				
	<u>with cable trays, cable trunkings,</u>				
	<u>conduits and fittings</u>				
	From addressable fire alarm control and				
	indicating panel				
A	to A/C system control panel		nr		
B	to lift installation control panel		nr		
C	to security system control panel		nr		
D	to smoke extraction system control panel		nr		
E	to automatic sprinkler system alarm control and indicating panel		nr		
F	to gaseous extinguishing system control panel		nr		
G	to microphone control panel		nr		
H	to alarm repeater panel		nr		
J	to smoke detectors ; via addressable interface modules		nr		
K	to heat detectors ; via addressable interface modules		nr		
L	to visual alarm units and signals ; via addressable interface modules		nr		
M	to alarm bells ; via addressable interface modules		nr		
N	to manual call points ; via addressable interface modules		nr		
P	to water flow alarm switches ; via addressable interface modules		nr		

FIRE SERVICE INSTALLATION

Item	Description	Qty	Unit	Rate	HK\$
<u>CONTROL SYSTEM - AUTOMATIC CONTROL SYSTEM</u>					
<u>(ACS) ; INTERNALLY, IN PLANT ROOM AND</u>					
<u>EXTERNALLY (Cont'd)</u>					
A	to electric alarm pressure switches ; via addressable interface modules		nr		
B	to subsidiary stop valves ; via addressable interface modules		nr		
From automatic sprinkler system alarm control and indicating panel					
C	to sprinkler control valve sets		nr		
From alarm repeated panels (ref. *)					
D	to mimic diagram		nr		
From starter panels (ref. *)					
E	to fire service pumps (ref. *)		nr		
F	to sprinkler pumps (ref. *)		nr		
<u>Fire service computer system</u>					
Fire service computer system ; high-resolution monitor, keyboard, printer, signal cabling facilities and central processing unit ; sufficient capacity and memories ; power supply and battery chargers set ; network link ; all software, hardware, control devices ; all ancillary components and accessories					
G	fire service computer system ; located at *	-	item	-	
<u>Web cameras ; good quality high-resolution colour images ; all ancillaries components ; connections to fire service computer system</u>					
Web cameras ; remote monitoring of room environment and fire service equipment ; initial fire alarm checking					
H	located at fire service pump room		nr		
J	located at fire control room/centre		nr		
MODEL BILL OF DESCRIPTION					To Collection \$
ASD STANDARD BILLS					MODBQ.24/25

FIRE SERVICE INSTALLATION

Item	Description	Qty	Unit	Rate	HK\$
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EMERGENCY LIGHTING ; INTERNALLY, IN PLANT ROOM AND EXTERNALLY

Battery emergency lighting system ; emergency luminaries ; BS EN 60598-2-22:2014 (Incorporating corrigendum June 2014) ; flame and ignition resistant ; operate at 70 degrees Celsius ; connections to power supply ; fire resistant cables and conduits ; ancillary components and accessories ; back up by emergency generator

Design, supply and install central supplied emergency luminaries ; central battery power supply ; ISO 9001:2015

A * no. x * W emergency lighting luminaries

nr

Testing facilities ; simulating normal supply failure ; ancillary components and accessories

Testing facilities for

B centrally supplied emergency luminaries

- item -

EXIT SIGN ; INTERNALLY, IN PLANT ROOM AND EXTERNALLY

Exit signs ; BS ISO 3864-1:2011, BS 5499-4:2013, BS EN 60598-1:2015 (Incorporating corrigendum December 2015), BS EN 60598-2-22:2014 (Incorporating corrigendum June 2014), BS 5266-1:2011, BS EN 50172:2004 and BS EN 1838:2013 ; related directional signs ; maintained operation luminaries ; connections to power supply ; fire resistant wirings and conduits ; ancillary components and accessories

Central supplied exit signs ; connected to central battery set ; complying FSDCoP and Fire Safety Code requirements

C size *

nr

FIRE SERVICE INSTALLATION

Item	Description	Qty	Unit	Rate	HK\$
<p><u>FIRE SERVICES SUNDRIES ; INTERNALLY, IN PLANT ROOM AND EXTERNALLY</u></p> <p><u>The following items are in respect of the whole Fire Service Installation</u></p> <p>Allow for</p>					
A	marking the positions of holes, mortices, chases and the like in the structure	-	item	-	█
B	inspection, testing and commissioning of the complete Fire Service Installation ; all as described in the Particular Specification and Part D of the General Specification for Fire Service Installation	-	item	-	█
C	inspection, attendance, operation and maintenance of the complete Fire Service Installation during Maintenance Period ; all as described in the Particular Specification, Section E1 and E3 of the the General Specification for Fire Service Installation	-	item	-	█
D	providing all necessary power and water, diesel, gas and fuels in connection with testing, commissioning and maintenance	-	item	-	█
E	providing installation drawings ; all as described in the Particular Specification and Section A4.2 of the General Specification for Fire Service Installation	-	item	-	█
F	providing as-built drawings ; all as described in the Particular Specification and Section A4.3 of the General Specification for Fire Service Installation	-	item	-	█

FIRE SERVICE INSTALLATION

Item	Description	Qty	Unit	Rate	HK\$
<u>FIRE SERVICES SUNDRIES ; INTERNALLY, IN</u>					
<u>PLANT ROOM AND EXTERNALLY (Cont'd)</u>					
A	providing Operation and Maintenance (O&M) Manuals and User Manuals ; all as described in the Particular Specification and Section A4.4 of the General Specification for Fire Service Installation	-	item	-	
B	providing training to employer's staff as described in the Particular Specification, Section E1 and E2 of the General Specification for Fire Service Installation	-	item	-	
C	providing sample boards ; all as described in Section A3.7 of the General Specification for Fire Service Installation	-	item	-	
D	providing telephone linking with FSD's approved agency for Maintenance Period ; alarm transmitters ; power supply and conduit works ; including all initial, rental and maintenance charges	-	item	-	
E	providing mock-ups and prototypes	-	item	-	
F	supplying pipe sleeves (sleeves fixing by others) and filling holes so formed in walls, floors and ceilings with approved packing materials as described	-	item	-	
G	supplying conduit sleeves (sleeves fixing by others) and filling holes so formed in walls, floors and ceilings with approved packing materials as described	-	item	-	
H	supplying cable sleeves (sleeves fixing by others) and filling holes so formed in walls, floors and ceilings with approved packing materials as described	-	item	-	
J	supplying and fixing fire stopping to walls and floors	-	item	-	
MODEL BILL OF DESCRIPTION					
ASD STANDARD BILLS MODBQ.24/28					
To Collection \$					

C O L L E C T I O N

Item

Description

HK\$

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C. fwd \$

C O L L E C T I O N

B.fwd

\$

Item

Description

HK\$

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Bill Nr. MODBQ.24 - FIRE SERVICE INSTALLATION

To Summary

\$

Bill Nr. MODBQ.25

LOW VOLTAGE CUBICLE SWITCHBOARDS INSTALLATION

Item	Description	Qty	Unit	Rate	HK\$
	<p><u>DESIGN, SUPPLY AND INSTALL LOW VOLTAGE CUBICLE SWITCHBOARDS INSTALLATION ; IN PLANT ROOM</u></p> <p><u>Low Voltage Cubicle Switchboard (ref. *) ; complete with all interconnecting, control and ancillary wirings ; as detailed in Section C11 of Electrical General Specification comprising :</u></p> <p>Air circuit breakers (ACBs) ; type-tested to IEC 60947-2:2013 ; horizontally withdrawable type ; triple-pole with switched neutral ; complete with built-in overload protection, closing and tripping facilities of IDMT characteristics (IDMT relays measured separately) ; interlocking provisions ; contacts ; safety shutters, racking gears with indicators and padlocks ; identification labels</p>				
A	* A ; breaking capacity * kA		nr		
	<p>Moulded case circuit breakers (MCCBs) ; type-tested to IEC 60947-2:2013 ; IP30 minimum ; triple-pole ; complete with overcurrent and earth fault protection ; padlocking facilities and keys</p>				
B	* A ; breaking capacity * kA		nr		
	<p>Moulded case circuit breakers (MCCBs) ; type-tested to IEC 60947-2:2013 ; IP30 minimum ; triple-pole ; withdrawal type ; complete with overcurrent and earth fault protection ; padlocking facilities and keys</p>				
C	* A ; breaking capacity * kA		nr		

LOW VOLTAGE CUBICLE SWITCHBOARDS INSTALLATION

Item	Description	Qty	Unit	Rate	HK\$
	<u>DESIGN, SUPPLY AND INSTALL LOW VOLTAGE CUBICLE SWITCHBOARDS INSTALLATION ; IN PLANT ROOM (Cont'd)</u>				
	Moulded case circuit breakers (MCCBs) ; type-tested to IEC 60947-2:2013 ; IP30 minimum ; triple-pole ; plug-in type ; complete with overcurrent and earth fault protection ; padlocking facilities and keys				
A	* A ; breaking capacity * kA		nr		
	Fuseswitches ; totally enclosed, quick-make and quick-break type ; complying Electricity (Wiring) Regulations ; SPN ; complete with air-break type contacts ; interlocking provisions ; padlocking facilities				
B	* A ; utilization categories of *		nr		
	Fuseswitches ; totally enclosed, quick-make and quick-break type ; complying Electricity (Wiring) Regulations ; TPN ; complete with air-break type contacts ; interlocking provisions ; padlocking facilities				
C	* A ; utilization categories of *		nr		
	Fuseswitches ; totally enclosed, quick-make and quick-break type ; complying Electricity (Wiring) Regulations ; four-pole ; complete with air-break type contacts ; interlocking provisions ; padlocking facilities				
D	* A ; utilization categories of *		nr		
	Switchfuses ; complying Electricity (Wiring) Regulations ; SPN				
E	* A ; utilization categories of *		nr		
	Switchfuses ; complying Electricity (Wiring) Regulations ; TPN				
F	* A ; utilization categories of *		nr		
	MODEL BILL OF DESCRIPTION				
	ASD STANDARD BILLS MODBQ.25/2				
			To Collection	\$	

LOW VOLTAGE CUBICLE SWITCHBOARDS INSTALLATION

Item	Description	Qty	Unit	Rate	HK\$
	<u>DESIGN, SUPPLY AND INSTALL LOW VOLTAGE CUBICLE SWITCHBOARDS INSTALLATION ; IN PLANT ROOM (Cont'd)</u>				
	Switchfuses ; complying Electricity (Wiring) Regulations ; four-pole				
A	* A ; utilization categories of *		nr		
	IDMT relays ; IEC 60255-1:2009, IEC 60255-21-1:1988, IEC 60255-21-2:1988 and IEC 60255-26:2013 ; electromechanical, draw-out-case type ; flush mounted				
B	overcurrent protection relays		nr		
C	earth fault relays		nr		
	Meters				
D	check meters		nr		
E	power factor meters		nr		
F	ammeters ; complete with selector switches		nr		
G	voltmeters ; complete with selector switches		nr		
	Current transformers ; IEC 61869-2:2012 ; for ammeters ; accuracy Class "3"				
H	* A/ * A		nr		
	Current transformers ; IEC 61869-2:2012 ; for digital multi-function power meters				
J	* A/ * A		nr		
	Current transformers ; IEC 61869-2:2012 ; for protection				
K	* A/ * A		nr		
	Current transformers ; IEC 61869-2:2012 ; for watt-hour meters ; accuracy Class "1"				
L	* A/ * A		nr		
	HRC fuses ; carrier				
M	* A		nr		
	MODEL BILL OF DESCRIPTION				
	ASD STANDARD BILLS MODBQ.25/3				
			To Collection \$		

LOW VOLTAGE CUBICLE SWITCHBOARDS INSTALLATION

Item	Description	Qty	Unit	Rate	HK\$
<u>DESIGN, SUPPLY AND INSTALL LOW VOLTAGE CUBICLE SWITCHBOARDS INSTALLATION ; IN PLANT ROOM (Cont'd)</u>					
A	Links ; neutral approved type		nr		
B	Lamps ; * V DC ; built-in transformers indicating lamps		nr		
C	Copper busbars ; hard drawn high conductivity ; electro-tinned ; triple pole and full neutral ; enclosed inside low voltage cubicle switchboard * A	-	item	-	
D	Anti-condensation heaters and thermostats in low voltage cubicle switchboards approved type	-	item	-	
E	Copper earth bars of ample size ; fixings, connections ; all necessary earthing and bonding accessories approved type	-	item	-	
F	Switchboard ; multi-cubicle, indoor type ; IEC 61439-1:2011 and IEC 61439-2:2011 ; minimum 2 thick sheet steel construction ; IP31 to IEC 60529:2013/Corr 2:2015 ; complete with metering, housing and cabling compartments, C.T. chambers ; mounting brackets ; cabling facilities and supports, space provisions ; insulators ; information name plates ; warning labels ; schematic wiring and operation diagrams overall size *m long x *m wide x *m high ; suitable for cable entry from bottom		nr		
G	Ancillary equipment hydraulic operated handling truck for handling air circuit breaker ; all necessary accessories	-	item	-	
MODEL BILL OF DESCRIPTION					To Collection \$
ASD STANDARD BILLS					MODBQ.25/4

LOW VOLTAGE CUBICLE SWITCHBOARDS INSTALLATION

Item	Description	Qty	Unit	Rate	HK\$
<u>DESIGN, SUPPLY AND INSTALL LOW VOLTAGE CUBICLE SWITCHBOARDS INSTALLATION ; IN PLANT ROOM (Cont'd)</u>					
A	operating handles ; jigs and the like for fixing and removing the detachable panels and normal charging, closing, opening, racking in and out operation of all circuit breakers ; complete with brass hooks and fixing boards	-	item	-	-
B	portable earthing equipment set for each main incoming air circuit breaker	-	item	-	-
C	rubber mats ; IEC 61111:2009 ; 10 thick ; placed on floors in front of and at the rear of low voltage cubicle switchboards ; length to suit the low voltage cubicle switchboards	-	item	-	-
D	complete set of fuses for each rating of fuses in all fuseswitches and switchfuses ; fixing wooden board	-	item	-	-
E	battery charger and batteries set ; solid state secondary d.c. power supply unit ; sealed type nickel-metal-hydride battery ; voltmeter ; ammeter ; battery test facilities ; internal wiring ; * V D.C.	-	item	-	-
<u>The following facilities for items supplied and fixed by the supply company</u>					
Supply Company's cables between current transformers and meters					
F	providing approved cabling facilities for installing the cables	-	item	-	-
Supply Company's metering equipment					
G	providing insulating panels for mounting the meters ; suitable fuses to protect the voltage coil circuits ; fuses and fuseholders	-	item	-	-
MODEL BILL OF DESCRIPTION					To Collection \$
ASD STANDARD BILLS MODBQ.25/5					-

LOW VOLTAGE CUBICLE SWITCHBOARDS INSTALLATION

Item	Description	Qty	Unit	Rate	HK\$
	<u>DESIGN, SUPPLY AND INSTALL LOW VOLTAGE CUBICLE SWITCHBOARDS INSTALLATION ; IN PLANT ROOM (Cont'd)</u>				
	<u>Power factor improvement system</u>				
	Power factor correction equipment ; capacitor bank ; switching facilities ; capacitor modules ; fuses, control relays, contactor switches, ammeters, etc. ; other necessary control accessories ; housing, fixings, earthing and bonding ; internal wiring ; cubicle mounted				
A	* kVAR ; * stages control		nr		
	Fuseswitches ; complying Electricity (Wiring) Regulations ; SPN				
B	* A		nr		
	Fuseswitches ; complying Electricity (Wiring) Regulations ; TPN				
C	* A		nr		
	Fuseswitches ; complying Electricity (Wiring) Regulations ; DP				
D	* A		nr		
	Switchfuses ; complying Electricity (Wiring) Regulations ; SPN				
E	* A		nr		
	Switchfuses ; complying Electricity (Wiring) Regulations ; TPN				
F	* A		nr		
	Switchfuses ; complying Electricity (Wiring) Regulations ; DP				
G	* A		nr		
	Moulded case circuit breakers (MCCBs) ; * pole ; breaking capacity not less than * kA ; handle lock attachment ; complete with padlock and three keys				
H	* A		nr		
	MODEL BILL OF DESCRIPTION		To Collection	\$	
	ASD STANDARD BILLS MODBQ.25/6				

LOW VOLTAGE CUBICLE SWITCHBOARDS INSTALLATION

Item	Description	Qty	Unit	Rate	HK\$
<u>LOW VOLTAGE CUBICLE SWITCHBOARDS</u>					
<u>INSTALLATION SUNDRIES ; IN PLANT ROOM</u>					
<u>The following items are in respect of the</u>					
<u>whole Low Voltage Cubicle Switchboards</u>					
<u>Installation</u>					
Allow for					
A	marking the positions of holes, mortices, chases and the like in the structure	-	item	-	
B	inspection, testing and commissioning of the complete Low Voltage Cubicle Switchboards Installation and each distribution circuit before and after connection of power supply ; all as described in the Particular Specification, Section C11-17 and Part D of the General Specification for Electrical Installation	-	item	-	
C	inspection, attendance, operation and maintenance of the complete Low Voltage Cubicle Switchboards Installation during Maintenance Period ; all as described in the Particular Specification, Section E1 and E3 of the General Specification for Electrical Installation	-	item	-	
D	providing all necessary power and water, diesel, gas and fuels in connection with testing, inspection and commissioning and maintenance	-	item	-	
E	providing installation drawings ; all as described in the Particular Specification and Section A4.2 of the General Specification for Electrical Installation	-	item	-	
F	providing as-built drawings ; all as described in the Particular Specification and Section A4.3 of the General Specification for Electrical Installation	-	item	-	
MODEL BILL OF DESCRIPTION				To Collection	\$
ASD STANDARD BILLS				MODBQ.25/7	

LOW VOLTAGE CUBICLE SWITCHBOARDS INSTALLATION

Item	Description	Qty	Unit	Rate	HK\$
<u>LOW VOLTAGE CUBICLE SWITCHBOARDS</u>					
<u>INSTALLATION SUNDRIES ; IN PLANT ROOM</u>					
<u>(Cont'd)</u>					
A	providing Operation and Maintenance (O&M) Manuals and User Manuals ; all as described in the Particular Specification and Section A4.4 of the General Specification for Electrical Installation	-	item	-	-
B	providing training to Employer's staff as described in the Particular Specification, Section E1 and E2 of the General Specification for Electrical Installation	-	item	-	-
C	providing sample boards ; all as described in the Particular Specification and Section A3.7 of the General Specification for Electrical Installation	-	item	-	-
D	providing mock-ups and prototypes	-	item	-	-
E	supplying conduit sleeves (sleeves fixing by others) and filling holes so formed in walls, floors and ceilings with approved packing materials as described	-	item	-	-
F	supplying cable sleeves (sleeves fixing by others) and filling holes so formed in walls, floors and ceilings with approved packing materials as described	-	item	-	-
G	supplying and fixing fire stopping to walls and floors	-	item	-	-
MODEL BILL OF DESCRIPTION				To Collection	\$
ASD STANDARD BILLS				MODBQ.25/8	

LOW VOLTAGE CUBICLE SWITCHBOARDS INSTALLATION

C O L L E C T I O N








Item

Description

HK\$

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Bill Nr.	MODBQ.25 - LOW VOLTAGE CUBICLE SWITCHBOARDS INSTALLATION		
To Summary			\$

Bill Nr. MODBQ.26
DIESEL GENERATING SETS INSTALLATION

Item	Description	Qty	Unit	Rate	HK\$
	<u>DIESEL GENERATING SETS INSTALLATION ; IN PLANT ROOM</u>				
	<u>Design, supply and install Diesel Generating Sets and associated equipment ; as detailed in the Particular Specification, Section C12 of the General Specification for Electrical Installation and drawing nr. *</u>				
	Diesel Generating Sets Installation ; minimum prime power rating * kVA comprising :				
A	diesel generating engine ; alternator ; electrical battery starting system ; cooling system ; lubricating oil system ; exhaust system and ductwork and silencers ; necessary equipment and accessories	-	item	-	
B	all pipework and accessories	-	item	-	
C	fuel supply system ; * litre daily service fuel tank and supporting frame ; fuel transfer pumping system ; oil drip trays ; oil resistant flexible hose ; fuel oil transfer pump ; diesel fuel level switches ; quick closing mechanism ; painting ; all necessary pipeworks, valves, fittings and accessories	-	item	-	
D	topping up of all fuel tanks with fuel upon satisfactory completion of tests	-	item	-	
E	lifting hoist ; trolley	-	item	-	
F	acoustic treatment installation to the whole diesel generating sets installation and generator room	-	item	-	
	MODEL BILL OF DESCRIPTION		To Collection	\$	
	ASD STANDARD BILLS MODBQ.26/1				

DIESEL GENERATING SETS INSTALLATION

Item	Description	Qty	Unit	Rate	HK\$
<u>DIESEL GENERATING SETS INSTALLATION ; IN PLANT ROOM (Cont'd)</u>					
A	electrical installation ; all cabling works including sensor cables ; earthing system	-	item	-	
B	control cubicle ; panel ; switchgear ; wiring ; control equipment ; rubber mats and accessories ; clean contacts for alarms to be connected for remote indication	-	item	-	
C	interfacing with central control and monitoring system (CCMS) ; complete with interfacing panels, contactors, relays, microswitches, transducers, transformers, signal and control cables, conduits and other necessary accessories ; connection to direct digital control system, CCMS or direct digital controllers (DDC)	-	item	-	
<u>DIESEL GENERATING SETS INSTALLATION SUNDRIES ; IN PLANT ROOM</u>					
<u>The following items are in respect of the whole Diesel Generating Sets Installation</u>					
Allow for					
D	marking the positions of holes, mortices, chases and the like in the structure	-	item	-	
E	testing the complete Diesel Generating Sets Installation ; all as described in the Particular Specification and Section C12.13 of the General Specification for Electrical Installation	-	item	-	
F	inspection, attendance, operation and maintenance of the complete Diesel Generating Sets Installation during Maintenance Period ; all as described in the Particular Specification, Section E1 and E3 of the General Specification for Electrical Installation	-	item	-	
MODEL BILL OF DESCRIPTION				To Collection	\$
ASD STANDARD BILLS				MODBQ.26/2	

DIESEL GENERATING SETS INSTALLATION

Item	Description	Qty	Unit	Rate	HK\$
<u>DIESEL GENERATING SETS INSTALLATION</u>					
<u>SUNDRIES ; IN PLANT ROOM (Cont'd)</u>					
A	providing all necessary power and water, diesel and fuels in connection with inspection, testing and commissioning, and maintenance	-	item	-	
B	providing installation drawings ; all as described in the Particular Specification and Section A4.2 of the General Specification for Electrical Installation	-	item	-	
C	providing as-built drawings ; all as described in the Particular Specification and Section A4.3 of the General Specification for Electrical Installation	-	item	-	
D	providing Operation and Maintenance (O&M) Manuals and User Manuals ; all as described in the Particular Specification and Section A4.4 of the General Specification for Electrical Installation	-	item	-	
E	providing training to Employer's staff as described in the Particular Specification, Section E1 and E2 of the General Specification for Electrical Installation	-	item	-	
F	providing sample boards ; all as described in the Particular Specification and Section A3.7 of the General Specification for Electrical Installation	-	item	-	
G	providing schematic diagrams ; all as described in Section C12.12 of the General Specification for Electrical Installation	-	item	-	
H	providing mock-ups and prototypes	-	item	-	
MODEL BILL OF DESCRIPTION				To Collection	\$
ASD STANDARD BILLS				MODBQ.26/3	

DIESEL GENERATING SETS INSTALLATION


Item	Description	Qty	Unit	Rate	HK\$
<u>DIESEL GENERATING SETS INSTALLATION</u>					
<u>SUNDRIES ; IN PLANT ROOM (Cont'd)</u>					
A	supplying conduit sleeves (sleeves fixing by others) and filling holes so formed in walls, floors and ceilings with approved packing materials as described	-	item	-	
B	supplying cable sleeves (sleeves fixing by others) and filling holes so formed in walls, floors and ceilings with approved packing materials as described	-	item	-	
C	supplying and fixing fire stopping to walls and floors	-	item	-	


C O L L E C T I O N


Item


Description

HK\$

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Bill Nr. MODBQ.26 - DIESEL GENERATING SETS INSTALLATION

To Summary \$ 

Bill Nr. MODBQ.27
UNINTERRUPTIBLE POWER SUPPLY SYSTEM

Item	Description	Qty	Unit	Rate	HK\$
	<u>GUIDANCE NOTE :</u>				
A	The PQS should check with the PBSE and include this section only if a separate approved specialist contractor for Uninterruptible Power Supply (UPS) System is required to carry out the works of this system. However, in many cases, the scope of the UPS System is comparatively small and belongs to other building services systems, which should be measured under the respective sections	-	item	-	
	<u>UNINTERRUPTIBLE POWER SUPPLY SYSTEM ;</u> <u>INTERNALLY / IN PLANT ROOM / EXTERNALLY#</u>				
	<u>Design, supply and install Uninterruptible Power Supply (UPS) System and associated equipment and accessories ; as described in the Particular Specification and drawing nr. *</u>				
	UPS system ; minimum prime power rating * kVA comprising :				
B	UPS module ; inverter, rectifier, batteries, battery chargers, by-pass transfer switches, etc. ; all associated interconnecting wiring and control equipment	-	item	-	
C	mimic diagram boards		nr		
D	visual alarms ; fixing to control panels in * location		nr		
E	control circuits ; approved cables ; conduits and fitting ; from UPS equipment to visual alarm points		nr		
	MODEL BILL OF DESCRIPTION				
	ASD STANDARD BILLS MODBQ.27/1			To Collection \$	

UNINTERRUPTIBLE POWER SUPPLY SYSTEM

Item	Description	Qty	Unit	Rate	HK\$
<u>UNINTERRUPTIBLE POWER SUPPLY SYSTEM</u> <u>SUNDRIES ; INTERNALLY, IN PLANT ROOM AND</u> <u>EXTERNALLY</u>					
<u>The following items are in respect of the</u> <u>supply and installation of the whole</u> <u>Uninterruptible Power Supply System</u>					
Allow for					
A	marking the positions of holes, mortices, chases and the like in the structure	-	item	-	
B	testing the complete Uninterruptible Power Supply System ; all as described in the Particular Specification	-	item	-	
C	inspection, operation and maintenance of the complete Uninterruptible Power Supply System during Maintenance Period ; all as described in the Particular Specification	-	item	-	
D	providing all necessary power and water, diesel and fuels in connection with inspection, testing and commissioning, and maintenance	-	item	-	
E	providing installation drawings ; all as described in the Particular Specification	-	item	-	
F	providing as-built drawings ; all as described in the Particular Specification	-	item	-	
G	providing Operation and Maintenance (O&M) Manuals and User Manuals ; all as described in the Particular Specification	-	item	-	
H	providing tuition of Employer's staff for a period of * weeks ; all as described in the Particular Specification	-	item	-	
MODEL BILL OF DESCRIPTION ASD STANDARD BILLS MODBQ.27/2		To Collection \$			

UNINTERRUPTIBLE POWER SUPPLY SYSTEM


Item	Description	Qty	Unit	Rate	HK\$
<u>UNINTERRUPTIBLE POWER SUPPLY SYSTEM</u>					
<u>SUNDRIES ; INTERNALLY, IN PLANT ROOM AND</u>					
<u>EXTERNALLY (Cont'd)</u>					
A	providing mock-ups and prototypes ; all as described in the Particular Specification	-	item	-	
B	supplying conduit sleeves (sleeves fixing by others) and filling holes so formed in walls, floors and ceilings with approved packing materials as described	-	item	-	
C	supplying cable sleeves (sleeves fixing by others) and filling holes so formed in walls, floors and ceilings with approved packing materials as described	-	item	-	
D	supplying and fixing fire stopping to walls and floors	-	item	-	


C O L L E C T I O N


Item

Description

HK\$

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Bill Nr. MODBQ.27 - UNINTERRUPTIBLE POWER SUPPLY SYSTEM

To Summary \$ 

Bill Nr. MODBQ.28
BROADCAST RECEPTION INSTALLATION

Item	Description	Qty	Unit	Rate	HK\$
	<u>DESIGN, SUPPLY AND INSTALL TERRESTRIAL</u> <u>MASTER ANTENNA TELEVISION SYSTEM ;</u> <u>INTERNALLY / IN PLANT ROOM / EXTERNALLY#</u>				
	<u>Central equipment ; aerials ; 75 ohms</u> <u>unbalanced impedance, able to operate</u> <u>under loading pressure with sustained wind</u> <u>speed 170 km/hr and gusts 240 km/hr,</u> <u>stainless steel masts, earthed and</u> <u>lightning protected, durable protective</u> <u>coating ; stainless steel aerial mask ; as</u> <u>described in the Particular Specification</u> <u>and drawing nr. *</u>				
	Terrestrial aerials ; suitable for analogue and digital terrestrial television				
A	TV aerials, gain at least 13 dB front to back ratio of at least 28 dB		nr		
B	FM aerials, gain at least 6 dB		nr		
	<u>Central equipment ; preamplifiers ; 75</u> <u>ohms impedance (input and output),</u> <u>suitable for analogue and digital</u> <u>terrestrial television ; connection to</u> <u>power source ; interconnecting wirings and</u> <u>signal cables ; interfaces and accessories</u> <u>; weatherproof housing ; as described in</u> <u>the Particular Specification and drawing</u> <u>nr. *</u>				
	Preamplifiers ; frequency FM 88 to 108 MHz and TV 470 to 862 MHz				
C	preamplifiers		nr		
	TV bandpass preamplifiers ; frequency range within CH 21 to CH 62				
D	TV bandpass preamplifiers		nr		
				To Collection \$	

BROADCAST RECEPTION INSTALLATION

Item	Description	Qty	Unit	Rate	HK\$
	<u>DESIGN, SUPPLY AND INSTALL TERRESTRIAL MASTER ANTENNA TELEVISION SYSTEM ; INTERNALLY / IN PLANT ROOM / EXTERNALLY# (Cont'd)</u>				
	FM bandpass preamplifiers ; frequency range 88 to 108 MHz				
A	FM bandpass preamplifiers		nr		
	<u>Central equipment ; filters ; 75 ohms impedance (input and output), suitable for analogue and digital terrestrial television ; connection to power source ; interconnecting wirings and signal cables ; interfaces and accessories ; as described in the Particular Specification and drawing nr. *</u>				
	TV bandpass filters ; frequency range within CH 21 to CH 62				
B	TV bandpass filters		nr		
	FM bandpass filters ; frequency range 88 to 108 MHz				
C	FM bandpass filters		nr		
	<u>Central equipment ; amplifiers ; 75 ohms nominal impedance (input and output), suitable for analogue and digital terrestrial television, properly earthed ; connection to power source ; interconnecting wirings and signal cables ; interfaces and accessories ; as described in the Particular Specification and drawing nr. *</u>				
	Wideband amplifiers ; internally or externally fully screened metal box, mounting legs				
D	wideband amplifiers		nr		
	FM channel amplifiers with processor ; frequency range 88 to 108 MHz ; modular type construction plug-in units, metal-screened internally				
E	FM channel amplifiers with processor		nr		
	MODEL BILL OF DESCRIPTION				
	ASD STANDARD BILLS MODBQ.28/2				
			To Collection	\$	

BROADCAST RECEPTION INSTALLATION

Item	Description	Qty	Unit	Rate	HK\$
	<u>DESIGN, SUPPLY AND INSTALL TERRESTRIAL MASTER ANTENNA TELEVISION SYSTEM ; INTERNALLY / IN PLANT ROOM / EXTERNALLY# (Cont'd)</u>				
	TV channel amplifiers with processor and automated gain control (AGC) modules ; AGC modules ; modular type construction plug-in units, metal-screened internally				
A	TV channel amplifiers with processor and AGC modules		nr		
	<u>Central equipment ; frequency converters ; 75 ohms impedance (input and output) ; as described in the Particular Specification and drawing nr. *</u>				
	Frequency converters ; frequency range 470 to 862 MHz				
B	frequency converters		nr		
	<u>Central equipment ; digital UHF modulators, modulating video signals to UHF range channels ; as described in the Particular Specification and drawing nr. *</u>				
	Output frequency range 100 to 1218 MHz fixed channel				
C	digital UHF modulators		nr		
	<u>Peripheral equipment ; splitters ; cascaded mode of operation ; return path</u>				
	Frequency range 5 to 862 MHz ; 13 dB minimum mutual attenuation between outputs				
D	splitters		nr		
	<u>Peripheral equipment ; tee units ; cascaded mode of operation ; return path</u>				
	Frequency range 5 to 862 MHz ; 22 to 28 dB mutual attenuation between outputs				
E	tee units		nr		
	MODEL BILL OF DESCRIPTION ASD STANDARD BILLS MODBQ.28/3				
			To Collection	\$	

BROADCAST RECEPTION INSTALLATION

Item	Description	Qty	Unit	Rate	HK\$
	<u>DESIGN, SUPPLY AND INSTALL TERRESTRIAL</u> <u>MASTER ANTENNA TELEVISION SYSTEM ;</u> <u>INTERNALLY / IN PLANT ROOM / EXTERNALLY#</u> <u>(Cont'd)</u>				
	<u>Peripheral equipment ; fiber optical</u> <u>transmitters ; modular design</u>				
	Frequency range 54 to 862 MHz				
A	fiber optical transmitters		nr		
	<u>Peripheral equipment ; fiber optical</u> <u>return path transmitters</u>				
	Return path frequency range 5 to 42 MHz				
B	fiber optical return path transmitters		nr		
	<u>Peripheral equipment ; fiber optical</u> <u>transceivers with return path</u>				
	Frequency range 54 to 862 MHz ; return path range 5 to 42 MHz				
C	fiber optical transceivers with return path		nr		
	<u>Peripheral equipment ; fiber optical</u> <u>splitters ; modular design</u>				
	Optical wavelength 1310 nm +/- 10 nm				
D	fiber optical splitters		nr		
	<u>Signal/control circuits ; cables,</u> <u>conduits, trunkings and accessories ;</u> <u>clear identification and labels</u>				
	From central equipment				
E	to all peripheral equipment	-	item	-	
	Linking				
F	between peripheral equipment	-	item	-	
	MODEL BILL OF DESCRIPTION		To Collection	\$	
	ASD STANDARD BILLS MODBQ.28/4				

BROADCAST RECEPTION INSTALLATION

Item	Description	Qty	Unit	Rate	HK\$
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DESIGN, SUPPLY AND INSTALL TERRESTRIAL
MASTER ANTENNA TELEVISION SYSTEM ;
INTERNALLY / IN PLANT ROOM / EXTERNALLY#
(Cont'd)

Final circuit ; coaxial cables ; low
emission of smoke and corrosive gases to
IEC 60332-1-1:2004+AMD1:2015, IEC
61034-2:2005+AMD1:2013 and IEC
60754-1:2011 ; laying in separate
trunkings (measured separately) and
drawing into and including steel conduits
and fittings and/or flexible steel
conduits ; all cabling facilities ; earth
continuity conductors ; clear
identification and labels

75 ohms type copper cable ; permanent
turning radius 10 times (min) of cable
diameter from splitters

A	to data outlets		nr		
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B	to FM/TV outlets		nr		
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Field equipment ; outlet, socket type,
frequency dividing network and sockets,
identified labels

FM/TV/data outlet ; frequency range 54 to
862 MHz and return path frequency 5 to 42
MHz

C	FM/TV/data outlets		nr		
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DESIGN, SUPPLY AND INSTALL SATELLITE
MASTER ANTENNA TELEVISION (SMATV) SYSTEM ;
INTERNALLY / IN PLANT ROOM / EXTERNALLY#

Central equipment ; antennas ;
installation to OFCA requirements, able to
operate under loading pressure with
sustained wind speed 170 km/hr and gusts
240 km/hr, steel frameworks and mounting,
earthed and lightning protected, durable
protective coating ; interconnecting
wirings and signal cables ; interfaces and
accessories

Dish antennas ; solid aluminium plate

D	not less than 3m diameter		nr		
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BROADCAST RECEPTION INSTALLATION

Item	Description	Qty	Unit	Rate	HK\$
	<u>DESIGN, SUPPLY AND INSTALL SATELLITE</u> <u>MASTER ANTENNA TELEVISION (SMATV) SYSTEM ;</u> <u>INTERNALLY / IN PLANT ROOM / EXTERNALLY#</u> <u>(Cont'd)</u>				
	<u>Central equipment ; feedhorns ; suitable</u> <u>for circular and linear C-band and Ku-band</u> <u>reception, prime-focus reflectors,</u> <u>polarizers ; accessories recommended by</u> <u>manufacturers</u>				
	Positioned in focus point of antenna				
A	feedhorns		nr		
	<u>Central equipment ; low noise amplifier</u> <u>(LNA)/low noise block down converter (LNB)</u> <u>; installation to manufacturer's</u> <u>recommendation</u>				
	Input frequency C-band, 3.7 to 4.2 GHz ; Ku-band, 10.75 to 12.75 GHz				
B	low noise amplifiers		nr		
C	low noise block down converters		nr		
	<u>Central equipment ; satellite receivers</u> <u>and modulators ; designed RF signals,</u> <u>video parameters and audio parameters ;</u> <u>properly earthed</u>				
	Multi-system compatible				
D	satellite receivers		nr		
	<u>Central equipment ; satellite amplifiers</u>				
	Input frequency 950 to 2050 MHz				
E	satellite amplifiers		nr		
	<u>Peripheral equipment ; splitters ;</u> <u>cascaded mode of operation</u>				
	Frequency range 950 to 2050 MHz ; 13 dB minimum mutual attenuation between outputs				
F	splitters		nr		
	MODEL BILL OF DESCRIPTION				
	ASD STANDARD BILLS MODBQ.28/6				
				To Collection \$	

BROADCAST RECEPTION INSTALLATION

Item	Description	Qty	Unit	Rate	HK\$
	<u>DESIGN, SUPPLY AND INSTALL SATELLITE</u> <u>MASTER ANTENNA TELEVISION (SMATV) SYSTEM ;</u> <u>INTERNALLY / IN PLANT ROOM / EXTERNALLY#</u> <u>(Cont'd)</u>				
	<u>Peripheral equipment ; tee units ;</u> <u>cascaded mode of operation</u>				
	Frequency range 950 to 2050 MHz ; 28 dB minimum mutual attenuation between outputs				
A	tee units		nr		
	<u>Signal/control circuits ; cables,</u> <u>conduits, trunkings and accessories ;</u> <u>clear identification and labels</u>				
	From central equipment				
B	to all peripheral equipment	-	item	-	
	Linking				
C	between peripheral equipment	-	item	-	
	<u>Final circuit ; coaxial cables ; low</u> <u>emission of smoke and corrosive gases to</u> <u>IEC 60332-1-1:2004+AMD1:2015, IEC</u> <u>61034-2:2005+AMD1:2013 and IEC</u> <u>60754-1:2011 ; laying in separate</u> <u>trunkings (measured separately) and</u> <u>drawing into and including steel conduits</u> <u>and fittings and/or flexible steel</u> <u>conduits ; all cabling facilities ; earth</u> <u>continuity conductors ; clear</u> <u>identification and labels</u>				
	75 ohms type copper cable ; permanent turning radius 10 times of cable diameter from splitters				
D	to data outlets		nr		
E	to FM/TV outlets		nr		
	MODEL BILL OF DESCRIPTION ASD STANDARD BILLS MODBQ.28/7				
			To Collection	\$	

BROADCAST RECEPTION INSTALLATION

Item	Description	Qty	Unit	Rate	HK\$
	<u>DESIGN, SUPPLY AND INSTALL SATELLITE</u> <u>MASTER ANTENNA TELEVISION (SMATV) SYSTEM ;</u> <u>INTERNALLY / IN PLANT ROOM / EXTERNALLY#</u> <u>(Cont'd)</u>				
	<u>Field equipment ; outlet, socket type,</u> <u>frequency dividing network and sockets,</u> <u>identified labels</u>				
	FM/TV/data outlet ; frequency range 54 to 862 MHz and return path frequency 5 to 42 MHz				
A	FM/TV/data outlets		nr		
	<u>BROADCAST RECEPTION INSTALLATION SUNDRIES</u> <u>; INTERNALLY, IN PLANT ROOM AND EXTERNALLY</u>				
	<u>The following items are in respect of the</u> <u>whole Broadcast Reception Installation</u>				
	Allow for				
B	marking the positions of holes, mortices, chases and the like in the structure	-	item	-	
C	inspection, testing and commissioning of the complete Broadcast Reception Installation ; all as described in the Particular Specification and Part D of the General Specification for Broadcast Reception Installation	-	item	-	
D	inspection, attendance, operation and maintenance of the complete Broadcast Reception Installation during Maintenance Period ; all as described in the Particular Specification, Section E1 and E3 of the General Specification for Broadcast Reception Installation	-	item	-	
E	providing all necessary power and water, diesel and fuels in connection with testing, commissioning and maintenance	-	item	-	
	MODEL BILL OF DESCRIPTION		To Collection	\$	
	ASD STANDARD BILLS MODBQ.28/8				

BROADCAST RECEPTION INSTALLATION

Item	Description	Qty	Unit	Rate	HK\$
<u>BROADCAST RECEPTION INSTALLATION SUNDRIES</u>					
<u>; INTERNALLY, IN PLANT ROOM AND EXTERNALLY</u>					
<u>(Cont'd)</u>					
A	providing installation drawings ; all as described in the Particular Specification and Section A4.2 of the General Specification for Broadcast Reception Installation	-	item	-	
B	providing as-built drawings ; all as described in the Particular Specification and Section A4.3 of the General Specification for Broadcast Reception Installation	-	item	-	
C	providing Operation and Maintenance (O&M) Manuals and User Manuals ; all as described in the Particular Specification and Section A4.4 of the General Specification for Broadcast Reception Installation	-	item	-	
D	providing training to Employer's staff as described in the Particular Specification, Section E1 and E2 of the General Specification for Broadcast Reception Installation	-	item	-	
E	providing sample boards ; all as described in Section A3.7 of the General Specification for Broadcast Reception Installation	-	item	-	
F	supplying conduit sleeves (sleeves fixing by others) and filling holes so formed in walls, floors and ceilings with approved packing materials as described	-	item	-	
G	supplying cable sleeves (sleeves fixing by others) and filling holes so formed in walls, floors and ceilings with approved packing materials as described	-	item	-	
H	supplying and fixing fire stopping to walls and floors	-	item	-	
MODEL BILL OF DESCRIPTION				To Collection	\$
ASD STANDARD BILLS				MODBQ.28/9	

C O L L E C T I O N

Item

Description

HK\$

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Bill Nr. MODBQ.28 - BROADCAST RECEPTION INSTALLATION			
To Summary			\$

		<u>COMPRESSED AIR SYSTEM</u>			
Item	Description	Qty	Unit	Rate	HK\$
	<u>DESIGN, SUPPLY AND INSTALL COMPRESSED AIR SYSTEM ; INTERNALLY / IN PLANT ROOM / EXTERNALLY# (Cont'd)</u>				
	Relief or safety valves ; enclosed adjustable spring loaded type				
A	* diameter		nr		
	Pressure reducing valves ; full way type				
B	* diameter		nr		
	Stop and isolating valves ; screw down type				
C	* diameter		nr		
	<u>Air line lubricators ; aluminium die casting body ; transparent plastic type bowl and bowl guard</u>				
	Air line lubricators ; oil fog type with adjustable drip				
D	to suit working pressure and air flow rate of system		nr		
	<u>Oil separators ; combined check and minimum pressure valves, all accessories</u>				
	Oil separators ; complete with easily removable filters				
E	* diameter		nr		
	<u>Pressure gauges ; ISO 4126-1:2013 and BS EN 837-1:1998</u>				
	Pressure gauges				
F	to suit * diameter pipes		nr		
	<u>Drain traps</u>				
	Drain traps ; float-operated and automatic				
G	to suit * diameter pipes		nr		
MODEL BILL OF DESCRIPTION		To Collection \$			
ASD STANDARD BILLS MODBQ.29/2					

		<u>COMPRESSED AIR SYSTEM</u>			
Item	Description	Qty	Unit	Rate	HK\$
	<u>DESIGN, SUPPLY AND INSTALL COMPRESSED AIR SYSTEM ; INTERNALLY / IN PLANT ROOM / EXTERNALLY# (Cont'd)</u>				
	<u>Air compressors ; single stage ; air-cooled ; rotary screw type with oil injection ; suction silencer, framed system diagram, all piping, safety device, control and necessary accessories</u>				
	Air compressors ; fitted with intercoolers				
A	discharge pressure * kPa		nr		
	<u>Air line filters ; aluminium die casting body, bronze filters, auto drain</u>				
	Air line filters ; 5 micrometer grade				
B	to suit working pressure of system		nr		
	<u>Air receivers ; steel welded fabrication ; BS 5169:1992 Class III Grade E</u>				
	Air receivers ; welded bosses ; properly sized supply, delivery, drain, valves, manholes, plugs, identification plates, supports ; all necessary accessories ; vertically mounted				
C	storage capacity of * l		nr		
	<u>DESIGN, SUPPLY AND INSTALL COMPRESSED AIR SYSTEM - ELECTRICITY SUPPLY ; INTERNALLY, IN PLANT ROOM AND EXTERNALLY</u>				
	<u>PVC cables ; run in concealed conduits with draw wires</u>				
	From isolators (isolators measured separately)				
D	* x * mm2 ; to compressed air system control panel (ref. *)		nr		
				To Collection \$	

		<u>COMPRESSED AIR SYSTEM</u>			
Item	Description	Qty	Unit	Rate	HK\$
	<u>DESIGN, SUPPLY AND INSTALL COMPRESSED AIR SYSTEM - CONTROL ; INTERNALLY, IN PLANT ROOM AND EXTERNALLY</u>				
	<u>Control panel ; 2 thick galvanised steel sheet construction ; vermin proof ; IP 54 enclosures ; all as specified in the Particular Specification and drawing nr. *</u>				
	Compressed air system control panel ; wall-mounted type				
A	located in plant room (ref. *)		nr		
	<u>Control and monitoring circuits ; approved cables ; complete with cable trays, cable trunkings, conduits and fittings</u>				
	From compressed air system control panel (ref. *)				
B	to air compressors (ref. *)		nr		
	<u>DESIGN, SUPPLY AND INSTALL COMPRESSED AIR SYSTEM - SUNDRIES ; INTERNALLY, IN PLANT ROOM AND EXTERNALLY</u>				
	<u>The following items in respect of the whole Compressed Air System</u>				
	Allow for				
C	marking the positions of holes, mortices, chases and the like in the structure	-	item	-	
D	inspection, testing and commissioning of the complete Compressed Air System ; all as described in the Particular Specification and Part D of the General Specification for Mechanical Installations	-	item	-	
E	inspection, attendance, operation and maintenance during Maintenance Period ; all as described in the Particular Specification, Sections E1 and E3 of the General Specification for Mechanical Installations	-	item	-	
	MODEL BILL OF DESCRIPTION		To Collection	\$	
	ASD STANDARD BILLS MODBQ.29/4				

COMPRESSED AIR SYSTEM

Item	Description	Qty	Unit	Rate	HK\$
<u>DESIGN, SUPPLY AND INSTALL COMPRESSED AIR SYSTEM - SUNDRIES ; INTERNALLY, IN PLANT ROOM AND EXTERNALLY (Cont'd)</u>					
A	providing all necessary power and water, diesel, gas and fuels in connection with testing, commissioning and maintenance	-	item	-	
B	particular requirements on inspection and testing as described in Section C8.6 of the General Specification for Mechanical Installations	-	item	-	
C	providing installation drawings ; all as described in the Particular Specification and Section A4.2 of the General Specification for Mechanical Installations	-	item	-	
D	providing as-built drawings ; all as described in the Particular Specification and Section A4.3 of the General Specification for Mechanical Installations	-	item	-	
E	providing Operation and Maintenance (O&M) Manuals and User Manuals ; all as described in the Particular Specification and Section A4.4 of the General Specification for Mechanical Installations	-	item	-	
F	training of users and operation and maintenance agents as described in the Particular Specification, Section E1 and E2 of the General Specification for Mechanical Installations	-	item	-	
G	providing sample boards as described in Section A3.7 of the General Specification for Mechanical Installations	-	item	-	
H	supplying pipe sleeves (sleeves fixing by others) and filling holes so formed in walls, floors and ceilings with approved packing materials as described	-	item	-	
MODEL BILL OF DESCRIPTION				To Collection	\$
ASD STANDARD BILLS				MODBQ.29/5	

COMPRESSED AIR SYSTEM

Item	Description	Qty	Unit	Rate	HK\$
<u>DESIGN, SUPPLY AND INSTALL COMPRESSED AIR SYSTEM - SUNDRIES ; INTERNALLY, IN PLANT ROOM AND EXTERNALLY (Cont'd)</u>					
A	supplying conduit sleeves (sleeves fixing by others) and filling holes so formed in walls, floors and ceilings with approved packing materials as described	-	item	-	
B	supplying cable sleeves (sleeves fixing by others) and filling holes so formed in walls, floors and ceilings with approved packing materials as described	-	item	-	
C	supplying and fixing fire stopping to walls and floors	-	item	-	
MODEL BILL OF DESCRIPTION				To Collection \$	
ASD STANDARD BILLS MODBQ.29/6					

C O L L E C T I O N

Item

Description

HK\$

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Bill Nr. MODBQ.29 - COMPRESSED AIR SYSTEM

To Summary			\$
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Bill Nr. MODBQ.30
STEAM BOILER SYSTEM

Item	Description	Qty	Unit	Rate	HK\$
	<u>DESIGN, SUPPLY AND INSTALL STEAM BOILER SYSTEM ; INTERNALLY / IN PLANT ROOM / EXTERNALLY#</u>				
	<u>Black mild steel pipes ; BS EN 10216-1:2013 and BS EN 10217-1:2002+A1:2005 ; cast steel (class 2000) fittings ; BS EN 10242:1995 and BS 143:2000 ; screwed joints</u>				
	Pipework and fittings ; suspended from soffits				
A	* diameter		m		
	Pipework and fittings ; fixed to walls and columns				
B	* diameter		m		
	Extra over pipework for				
C	* bends		nr		
D	* tees		nr		
E	* reducing bends		nr		
F	* reducing tees		nr		
G	* caps		nr		
	<u>Bronze valves</u>				
	Drain valves				
H	* diameter		nr		
	<u>Cast iron valves</u>				
	Gate valves				
J	* diameter		nr		
	MODEL BILL OF DESCRIPTION				
	ASD STANDARD BILLS MODBQ.30/1				
			To Collection	\$	

STEAM BOILER SYSTEM

Item	Description	Qty	Unit	Rate	HK\$
	<u>DESIGN, SUPPLY AND INSTALL STEAM BOILER SYSTEM ; INTERNALLY / IN PLANT ROOM / EXTERNALLY# (Cont'd)</u>				
A	Check valves * diameter		nr		
B	Butterfly valves * diameter		nr		
C	Pressure reducing valve ; spring-loaded relay operated type ; with steam separators to suit * diameter pipes		nr		
D	Safety and relief valves * diameter		nr		
E	<u>Cast iron strainers</u> Strainers ; Y type ; operating temperature 250 degrees Celsuius * diameter		nr		
F	<u>Gunmetal automatic air vents ; non-ferrous floats and guides ; non-corrodible valves and seats</u> Automatic air vents ; complete with integral lock-shield valves ; and air release pipe * diameter		nr		
G	<u>Steam traps</u> Steam trap assemblies ; ball float type * diameter		nr		
H	<u>Temperature gauges ; insertion type ; stainless steel pockets ; scales</u> Temperature gauges ; suitable for 1.5 times working pressure to suit * diameter pipes		nr		
	MODEL BILL OF DESCRIPTION ASD STANDARD BILLS MODBQ.30/2		To Collection	\$	

STEAM BOILER SYSTEM

Item	Description	Qty	Unit	Rate	HK\$
	<u>DESIGN, SUPPLY AND INSTALL STEAM BOILER SYSTEM ; INTERNALLY / IN PLANT ROOM / EXTERNALLY# (Cont'd)</u>				
	<u>Sight glasses, double window type ; toughed glass, SG iron body</u>				
	Sight glasses				
A	suitable for 200 degrees Celsius operating temperature		nr		
	<u>Pressure gauges ; dials calibrated</u>				
	Pressure gauges ; BS EN 837:1998				
B	to suit * diameter pipes		nr		
	<u>Rigid glass or mineral fibre preformed section ; ISO 12241:2008, BS 5970:2012 and BS 5422:2009, Class O ; sealed at all joints by vapour barrier and self adhesive foil tape</u>				
	* thick ; fixing externally to pipework and fittings				
C	* diameter		m		
	Extra over * thick fixing externally to pipework for				
D	* bends		nr		
E	* tees		nr		
F	* reducing bends		nr		
G	* reducing tees		nr		
H	* caps		nr		
	<u>Rigid glass or mineral fibre preformed section ; ISO 12241:2008, BS 5970:2012 and BS 5422:2009, Class O</u>				
	* thick ; to valves				
J	* gate valves		nr		
K	* check valves		nr		
L	* butterfly valves		nr		
	MODEL BILL OF DESCRIPTION		To Collection	\$	
	ASD STANDARD BILLS MODBQ.30/3				

STEAM BOILER SYSTEM

Item	Description	Qty	Unit	Rate	HK\$
	<u>DESIGN, SUPPLY AND INSTALL STEAM BOILER SYSTEM ; INTERNALLY / IN PLANT ROOM / EXTERNALLY# (Cont'd)</u>				
A	* pressure reducing valve		nr		
B	* safety and relief valves		nr		
C	* drain valves		nr		
	* thick ; to strainers				
D	* strainers		nr		
	* thick ; to air vents				
E	* air vents		nr		
	* thick ; to steam trap assemblies				
F	* steam trap assemblies		nr		
	<u>Protective coverings and finishings ; hammered aluminium sheeting</u>				
	0.8 thick ; fixing to * thick insulation for				
G	* diameter pipes		m		
	Extra over 0.8 thick protective coverings and finishings to * thick insulation for				
H	* bends		nr		
J	* tees		nr		
K	* reducing bends		nr		
L	* reducing tees		nr		
M	* caps		nr		
	<u>Protective coverings and finishings ; hammered aluminium split boxes and lids ; easy removal</u>				
	0.8 thick ; fixing to * thick insulation for				
N	* gate valves		nr		
P	* check valves		nr		
	MODEL BILL OF DESCRIPTION				
	ASD STANDARD BILLS MODBQ.30/4				
		To Collection	\$		

STEAM BOILER SYSTEM

Item	Description	Qty	Unit	Rate	HK\$
	<u>DESIGN, SUPPLY AND INSTALL STEAM BOILER SYSTEM ; INTERNALLY / IN PLANT ROOM / EXTERNALLY# (Cont'd)</u>				
A	* butterfly valves		nr		
B	* pressure reducing valves		nr		
C	* safety and relief valves		nr		
D	* drain valves		nr		
E	* strainers		nr		
F	* air vents		nr		
G	* steam trap assemblies		nr		
	<u>Mild steel tanks ; all pipework, accessories and associated services in connection ; complete as in the Particular Specification and drawing nr. *</u>				
	Condensate/feed tank ; anti-corrosion painted internally and externally				
H	* litres		nr		
	<u>Water break cistern ; galvanised steel ; BS 417-2:1987 ; ion exchange resin filtering packaged equipment ; supports, accessories and connections ; complete as in the Particular Specification and drawing nr. *</u>				
	Water break cistern ; supports at high level				
J	* litres		nr		
	<u>Chemical dosing and water sampling ; comprising chemical injection pump, mixing tank, timer controls, pipework and ancillaries ; water sampling closed cylinder and jacket, stainless steel coil, valved inlet and drain line ; complete as in the Particular Specification and drawing nr. *</u>				
	Chemical dosing and water sampling ; corrosion inhibitor and field-test kit				
K	for steam boiler (ref. *)	-	item	-	
	MODEL BILL OF DESCRIPTION				
	ASD STANDARD BILLS				
	MODBQ.30/5				
		To Collection	\$		

STEAM BOILER SYSTEM

Item	Description	Qty	Unit	Rate	HK\$
	<u>DESIGN, SUPPLY AND INSTALL STEAM BOILER SYSTEM ; INTERNALLY / IN PLANT ROOM / EXTERNALLY# (Cont'd)</u>				
	<u>Steam boilers ; BS 2790:1992 ; genuine 3-pass wet back, combustion chamber ; automatic burner ; factory assembled components and control panels (control panels measured separately) ; boiler accessories ; instrumentation ; insulations and controls ; designed footings ; associated services and connection ; complete as in Section * of the Steam Boiler Installation General Specification</u>				
	Steam boilers ; radiant heat type ; diesel oil fired				
A	steam evaporating capacity * kg/hr at * degrees Celsius ; operating pressure * kPa (ref. *)		nr		
	<u>DESIGN, SUPPLY AND INSTALL STEAM BOILER SYSTEM - ELECTRICITY SUPPLY ; INTERNALLY, IN PLANT ROOM AND EXTERNALLY</u>				
	<u>PVC cables ; run in concealed conduits with draw wires</u>				
	From isolators (isolators measured separately)				
B	* x * mm ² ; to steam boiler control panel (ref. *)		nr		
	<u>DESIGN, SUPPLY AND INSTALL STEAM BOILER SYSTEM - CONTROL ; INTERNALLY, IN PLANT ROOM AND EXTERNALLY</u>				
	<u>Control panel ; 2 thick galvanised steel sheet construction ; vermin proof ; IP 54 enclosures ; ergonomically designed ; all as specified in the Particular Specification and drawing nr. *</u>				
	Steam boiler control panel ; wall-mounted type				
C	located in plant room (ref. *)		nr		
	MODEL BILL OF DESCRIPTION ASD STANDARD BILLS MODBQ.30/6		To Collection	\$	

STEAM BOILER SYSTEM

Item	Description	Qty	Unit	Rate	HK\$
	<u>DESIGN, SUPPLY AND INSTALL STEAM BOILER SYSTEM - CONTROL ; INTERNALLY, IN PLANT ROOM AND EXTERNALLY (Cont'd)</u>				
	<u>Control and monitoring circuits ; approved cables ; complete with cable trays, cable trunkings, conduits and fittings</u>				
	From steam boiler control panel (ref. *)				
A	to steam boiler (ref. *)		nr		
B	to ion exchange resin filtering packaged equipment (ref. *)		nr		
C	to chemical injection pump (ref. *)		nr		
	<u>DESIGN, SUPPLY AND INSTALL STEAM BOILER SYSTEM - SUNDRIES ; INTERNALLY, IN PLANT ROOM AND EXTERNALLY</u>				
	<u>The following items in respect of the whole Steam Boiler System</u>				
	Allow for				
D	marking the positions of holes, mortices, chases and the like in the structure	-	item	-	
E	inspection, testing and commissioning of the complete Steam Boiler System ; all as described in the Particular Specification and Part D of the General Specification for Mechanical Installations	-	item	-	
F	inspection, attendance, operation and maintenance during Maintenance Period ; all as described in the Particular Specification, Sections E1 and E3 of the General Specification for Mechanical Installations	-	item	-	
G	providing all necessary power and water, diesel, gas and fuels in connection with testing, commissioning and maintenance	-	item	-	
	MODEL BILL OF DESCRIPTION		To Collection	\$	
	ASD STANDARD BILLS MODBQ.30/7				

STEAM BOILER SYSTEM

Item	Description	Qty	Unit	Rate	HK\$
<u>DESIGN, SUPPLY AND INSTALL STEAM BOILER SYSTEM - SUNDRIES ; INTERNALLY, IN PLANT ROOM AND EXTERNALLY (Cont'd)</u>					
A	particular requirements on inspection and testing as described in Section C1.6 of the General Specification for Mechanical Installations	-	item	-	
B	providing installation drawings ; all as described in the Particular Specification and Section A4.2 of the General Specification for Mechanical Installations	-	item	-	
C	providing as-built drawings ; all as described in the Particular Specification and Section A4.3 of the General Specification for Mechanical Installations	-	item	-	
D	providing Operation and Maintenance (O&M) Manuals and User Manuals ; all as described in the Particular Specification and Section A4.4 of the General Specification for Mechanical Installations	-	item	-	
E	training of users and operation and maintenance agents as described in the Particular Specification, Section E1 and E2 of the General Specification for Mechanical Installations	-	item	-	
F	providing sample boards as described in Section A3.7 of the General Specification for Mechanical Installations	-	item	-	
G	supplying pipe sleeves (sleeves fixing by others) and filling holes so formed in walls, floors and ceilings with approved packing materials as described	-	item	-	
H	supplying conduit sleeves (sleeves fixing by others) and filling holes so formed in walls, floors and ceilings with approved packing materials as described	-	item	-	
MODEL BILL OF DESCRIPTION		To Collection		\$	
ASD STANDARD BILLS MODBQ.30/8					

STEAM BOILER SYSTEM

Item	Description	Qty	Unit	Rate	HK\$
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DESIGN, SUPPLY AND INSTALL STEAM BOILER SYSTEM - SUNDRIES ; INTERNALLY, IN PLANT ROOM AND EXTERNALLY (Cont'd)

A	supplying cable sleeves (sleeves fixing by others) and filling holes so formed in walls, floors and ceilings with approved packing materials as described	-	item	-	
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B	supplying and fixing fire stopping to walls and floors	-	item	-	
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C O L L E C T I O N

Item

Description

HK\$

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Bill Nr. MODBQ.30 - STEAM BOILER SYSTEM			
To Summary			\$

Bill Nr. MODBQ.31
LIQUEFIED PETROLEUM GAS INSTALLATION

Item	Description	Qty	Unit	Rate	HK\$
	<u>LIQUEFIED PETROLEUM GAS INSTALLATION ;</u> <u>INTERNALLY / IN PLANT ROOM / EXTERNALLY#</u>				
	<u>Seamless steel pipes and fittings ;</u> <u>Schedule 80 ; BS EN 10216-1:2013, BS EN</u> <u>10217-1:2002 or ANSI/API Spec 5L:2007 ;</u> <u>design working pressure 2.75 MPa ; welded</u> <u>joints</u>				
	Pipework and fittings ; suspended from soffits				
A	* diameter		m		
	Pipework and fittings ; fixed to walls and columns				
B	* diameter		m		
	Extra over pipework for				
C	* bends		nr		
D	* tees		nr		
E	* reducing tees		nr		
	<u>Heavy grade steel pipes and fittings ; BS</u> <u>EN 10255:2004 or ISO 65:1981 ; welded</u> <u>joints</u>				
	Pipework and fittings ; suspended from soffits				
F	* diameter		m		
	Pipework and fittings ; fixed to walls and columns				
G	* diameter		m		
	Extra over pipework for				
H	* bends		nr		
J	* tees		nr		
	MODEL BILL OF DESCRIPTION				
	ASD STANDARD BILLS MODBQ.31/1				
		To Collection	\$		

LIQUEFIED PETROLEUM GAS INSTALLATION

Item	Description	Qty	Unit	Rate	HK\$
	<u>LIQUEFIED PETROLEUM GAS INSTALLATION ;</u> <u>INTERNALLY / IN PLANT ROOM / EXTERNALLY#</u> <u>(Cont'd)</u>				
A	* reducing bends		nr		
B	* reducing tees		nr		
C	* caps		nr		
	<u>Malleable iron valves ; ASTM A 47 / A</u> <u>47M-99:2014</u>				
	Non-return valves ; suitable for liquid or vapour use				
D	* diameter		nr		
	Ball valves ; BS EN ISO 17292:2015				
E	* diameter		nr		
	Quick-acting shut-off valves ; lever operation				
F	* diameter		nr		
	Emergency shut-off valves ; thermal and manual means of closing				
G	* diameter		nr		
	Excess flow valves				
H	* diameter		nr		
	Pressure relief valves ; spring-loaded, automatic operation ; self-detachable weatherproof cap and chain				
J	* diameter		nr		
	Hydrostatic relief valves ; pressure setting 2.4MPa to 2.75MPa ; self-detachable weatherproof cap and chain				
K	* diameter		nr		
	Drain valves				
L	* diameter		nr		
	MODEL BILL OF DESCRIPTION				
	ASD STANDARD BILLS MODBQ.31/2				
		To Collection	\$		

LIQUEFIED PETROLEUM GAS INSTALLATION

Item	Description	Qty	Unit	Rate	HK\$
	<u>LIQUEFIED PETROLEUM GAS INSTALLATION ;</u> <u>INTERNALLY / IN PLANT ROOM / EXTERNALLY#</u> <u>(Cont'd)</u>				
	<u>Ductile iron valves ; ASTM A 395 / A</u> <u>395M-99:2014</u>				
	Isolating valves ; globe type				
A	* diameter		nr		
	<u>Pressure regulators ; BS EN</u> <u>12864:2001+A3:2009, BS EN</u> <u>13785:2005+A1:2008 and BS EN</u> <u>13786:2004+A1:2008</u>				
	Secondary pressure regulator				
B	capable of maintaining outlet pressure of * kPa		nr		
	<u>Pressure governors ; BS EN</u> <u>12864:2001+A3:2009, BS EN</u> <u>13785:2005+A1:2008, BS EN</u> <u>13786:2004+A1:2008</u>				
	Service governor				
C	capable of maintaining outlet pressure of * kPa		nr		
	<u>Pressure gauges ; stainless steel</u>				
	Pressure gauges ; mounting connection protected				
D	to suit * diameter pipes		nr		
	<u>Temperature gauges ; indirect type with</u> <u>pockets</u>				
	Temperature gauges				
E	to suit * diameter pipes		nr		
	<u>Content gauges</u>				
	To read % water capacity				
F	to suit * diameter pipes		nr		
	MODEL BILL OF DESCRIPTION				
	ASD STANDARD BILLS MODBQ.31/3				
			To Collection	\$	

LIQUEFIED PETROLEUM GAS INSTALLATION

Item	Description	Qty	Unit	Rate	HK\$
	<u>LIQUEFIED PETROLEUM GAS INSTALLATION ;</u> <u>INTERNALLY / IN PLANT ROOM / EXTERNALLY#</u> <u>(Cont'd)</u>				
	To read % rated LPG capacity				
A	to suit * diameter pipes		nr		
	<u>Meters ; BS EN 12405-1:2005 + A2:2010, BS</u> <u>EN 1359:1999, BS EN 12261:2002, BS EN</u> <u>12480:2015 ; corrosion resistant body ;</u> <u>maintenance-free construction</u>				
	Meters ; housed in box for mechanical protection, sufficient ventilation				
B	to suit LPG grade, pressure and flow		nr		
	<u>Vaporisers ; flameproof design electric</u> <u>elements and components with enclosure to</u> <u>BS EN 60079-1:2014 ; pressure relief</u> <u>valves ; liquid control device ;</u> <u>non-bimetal heat input control ; control</u> <u>valves ; water level indicator and low</u> <u>water level cut off ; gauges ; drain</u> <u>valves and shut-off valves ; all</u> <u>facilities and safety devices</u>				
	Vaporisers ; indirect heated type				
C	vaporising capacity * litre/min		nr		
	<u>Gas appliances</u>				
	Domestic instantaneous type water heater ; room sealed balanced flue type ; built-in temperature regulator, flame failure detector, automatic gas shut-off valves, pilot burner, automatic piezo-electric ignition device and all necessary accessories				
D	* kW		nr		
	Burners ; robust and durable metallic alloy ; combustion chamber, heat exchanger and all necessary components and accessories				
E	* kW		nr		
	MODEL BILL OF DESCRIPTION				
	ASD STANDARD BILLS MODBQ.31/4				
				To Collection \$	

LIQUEFIED PETROLEUM GAS INSTALLATION

Item	Description	Qty	Unit	Rate	HK\$
	<u>LIQUEFIED PETROLEUM GAS INSTALLATION ;</u> <u>INTERNALLY / IN PLANT ROOM / EXTERNALLY#</u> <u>(Cont'd)</u>				
A	Gas cookers ; domestic type * kW		nr		
	<u>Liquid-draw LPG cylinders ; supporting</u> <u>frames, all necessary accessories and</u> <u>safety devices</u>				
B	Liquid-draw LPG cylinders * kg		nr		
	<u>Storage vessels ; horizontal ; steel</u> <u>construction ; Gas Authority approval ;</u> <u>post-weld heat treated ; adequate supports</u> <u> ; all necessary valves, level device,</u> <u>gauges ; earthing connection ; piping and</u> <u>accessories ; warning signs ; fitted with</u> <u>cathodic protection system</u>				
C	Above ground ; fitted with inspection openings * litre capacity		nr		
	<u>LIQUEFIED PETROLEUM GAS INSTALLATION -</u> <u>ELECTRICITY SUPPLY ; INTERNALLY, IN PLANT</u> <u>ROOM AND EXTERNALLY</u>				
	<u>Power supply cables ; BS EN 60079-14:2014</u> <u>and BS EN 60079-10-1:2009 ; run in</u> <u>conduits with draw wires</u>				
D	From isolators (isolators measured separately) * x * mm2 ; to vaporisers (ref. *)		nr		
E	* x * mm2 ; to gas leakage detection control panel (ref. *)		nr		
F	From fused spur units (fused spur units measured separately) * x * mm2 ; to domestic instantaneous type water heaters (ref. *)		nr		
G	* x * mm2 ; to burners (ref. *)		nr		
	MODEL BILL OF DESCRIPTION		To Collection	\$	
	ASD STANDARD BILLS MODBQ.31/5				

LIQUEFIED PETROLEUM GAS INSTALLATION

Item	Description	Qty	Unit	Rate	HK\$
	<u>LIQUEFIED PETROLEUM GAS INSTALLATION - ELECTRICITY SUPPLY ; INTERNALLY, IN PLANT ROOM AND EXTERNALLY (Cont'd)</u>				
A	* x * mm2 ; to gas cookers (ref. *)		nr		
	<u>LIQUEFIED PETROLEUM GAS INSTALLATION - CONTROL ; INTERNALLY, IN PLANT ROOM AND EXTERNALLY</u>				
	<u>Design, supply and install control panels ; all as specified in the Particular Specification and drawing nr. *</u>				
	Gas leakage detection control panel (ref. *) ; wall-mounted type				
B	located in plant room		nr		
	<u>Alarm, detection and control circuits ; control cables ; BS EN 60079-14:2014 and BS EN 60079-10-1:2009 ; complete with cable trays, cable trunkings, conduits and fittings</u>				
	From gas leakage detection control panel (ref. *)				
C	to gas detectors		nr		
	<u>Gas detectors</u>				
	Inflammable type				
D	gas detectors		nr		
	<u>LIQUEFIED PETROLEUM GAS INSTALLATION - SUNDRIES ; INTERNALLY, IN PLANT ROOM AND EXTERNALLY</u>				
	<u>The following items in respect of the whole Liquefied Petroleum Gas Installation</u>				
	Allow for				
E	marking the positions of holes, mortices, chases and the like in the structure	-	item	-	
	MODEL BILL OF DESCRIPTION				
	ASD STANDARD BILLS MODBQ.31/6				
		To Collection	\$		

LIQUEFIED PETROLEUM GAS INSTALLATION

Item	Description	Qty	Unit	Rate	HK\$
<u>LIQUEFIED PETROLEUM GAS INSTALLATION -</u>					
<u>SUNDRIES ; INTERNALLY, IN PLANT ROOM AND</u>					
<u>EXTERNALLY (Cont'd)</u>					
A	inspection, testing and commissioning of the complete Liquefied Petroleum Gas Installation ; all as described in the Particular Specification and Part D of the General Specification for Liquefied Petroleum Gas Installation	-	item	-	
B	inspection, attendance, operation and maintenance for the complete Liquefied Petroleum Gas Installation during Maintenance Period ; all as described in the Particular Specification, Part E1 and E3 of the General Specification for Liquefied Petroleum Gas Installation	-	item	-	
C	providing all necessary electricity, water, liquefied petroleum gas, town gas and fuel, calibrated equipment and instrument, apparatus, tools, consumables and non-consumable materials in connection with testing, commissioning and maintenance	-	item	-	
D	providing installation drawings ; all as described in the Particular Specification and Section A4.2 of the General Specification for Liquefied Petroleum Gas Installation	-	item	-	
E	providing as-built drawings ; all as described in the Particular Specification and Section A4.3 of the General Specification for Liquefied Petroleum Gas Installation	-	item	-	

LIQUEFIED PETROLEUM GAS INSTALLATION

Item	Description	Qty	Unit	Rate	HK\$
<u>LIQUEFIED PETROLEUM GAS INSTALLATION -</u>					
<u>SUNDRIES ; INTERNALLY, IN PLANT ROOM AND</u>					
<u>EXTERNALLY (Cont'd)</u>					
A	providing Operation and Maintenance (O&M) Manuals and User Manuals ; all as described in the Particular Specification and Section A4.4 of the General Specification for Liquefied Petroleum Gas Installation	-	item	-	
B	training to Employer's staff as described in Section E1 and E2 of the General Specification for Liquefied Petroleum Gas Installation	-	item	-	
C	providing sample boards as described in Section A3.7 of the General Specification for Liquefied Petroleum Gas Installation	-	item	-	
D	supplying pipe sleeves (sleeves fixing by others) and filling holes so formed in walls, floors and ceilings with approved packing materials as described	-	item	-	
E	supplying conduit sleeves (sleeves fixing by others) and filling holes so formed in walls, floors and ceilings with approved packing materials as described	-	item	-	
F	supplying cable sleeves (sleeves fixing by others) and filling holes so formed in walls, floors and ceilings with approved packing materials as described	-	item	-	
G	supplying and fixing fire stopping to walls and floors	-	item	-	

C O L L E C T I O N

Item

Description

HK\$

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Bill Nr. MODBQ.31 - LIQUEFIED PETROLEUM GAS INSTALLATION

To Summary \$

Bill Nr. MODBQ.32
FUEL SUPPLY SYSTEM

Item	Description	Qty	Unit	Rate	HK\$
	<u>DESIGN, SUPPLY AND INSTALL FUEL SUPPLY SYSTEM ; INTERNALLY / IN PLANT ROOM / EXTERNALLY#</u>				
	<u>Carbon steel pipes and fittings ; heavy quality ; ISO 65:1981 ; screwed joints</u>				
	Pipework and fittings ; laid in trenches ; complete with protections				
A	* diameter		m		
	Pipework and fittings ; suspended from soffits				
B	* diameter		m		
	Pipework and fittings ; fixed to walls and columns				
C	* diameter		m		
	Extra over pipework for				
D	* bends		nr		
E	* tees		nr		
F	* reducing bends		nr		
G	* reducing tees		nr		
H	* caps		nr		
	<u>Cast steel valves ; full way type</u>				
	Gate valves				
J	* diameter		nr		
	Check valves				
K	* diameter		nr		
				To Collection \$	

FUEL SUPPLY SYSTEM

Item	Description	Qty	Unit	Rate	HK\$
	<u>DESIGN, SUPPLY AND INSTALL FUEL SUPPLY SYSTEM ; INTERNALLY / IN PLANT ROOM / EXTERNALLY# (Cont'd)</u> <u>Daily service fuel tanks ; mild steel construction ; stiffeners and support frames ; socket connections ; fittings ; union couplings, valves, gauges and oil drip tray ; all accessories and associated services ; pipework connection and fittings ; as described in the Particular Specification and drawing nr. *</u> Daily services fuel tanks ; for plants and appliances * litre capacity		nr		
A					
	<u>Underground horizontal fuel storage tanks ; EN 12285-1:2003 ; hydraulically tested ; internally linseed oil thick coating and externally painted ; tank chambers, gauges ; dipsticks tank-hole covers ; all accessories, associated services and calibration ; as described in the Particular Specification and drawing nr. *</u> Underground horizontal fuel storage tank ; for plants and appliances * litre capacity		nr		
B					
	<u>Fuel transfer pumps ; high quality cast iron construction ; high tensile steel shafts ; flame proof coupling motors ; valves ; strainers ; switches ; complete with composite pump control cubicles (composite pump control cubicles measured separately), alarm, wiring works ; all necessary accessories and overload protection ; as described in the Particular Specification and drawing nr. *</u> Fuel transfer pumps ; rotary, positive displacement type ; for plants and appliances				
C	duty pumps ; design capacity * (ref. *)		nr		
D	standby pumps ; design capacity * (ref. *)		nr		
	MODEL BILL OF DESCRIPTION ASD STANDARD BILLS MODBQ.32/3		To Collection	\$	

FUEL SUPPLY SYSTEM

Item	Description	Qty	Unit	Rate	HK\$
	<u>DESIGN, SUPPLY AND INSTALL FUEL SUPPLY SYSTEM ; INTERNALLY / IN PLANT ROOM / EXTERNALLY# (Cont'd)</u> <u>Hand pumps ; 25 inlet ; outlet and flexible oil resistant pipes ; all necessary accessories ; as described in the Particular Specification and drawing nr. *</u> Hand pumps ; semi-rotary double acting type ; for plants and appliances A flow rate of * l/s		nr		
	<u>DESIGN, SUPPLY AND INSTALL FUEL SUPPLY SYSTEM - ELECTRICITY SUPPLY ; INTERNALLY, IN PLANT ROOM AND EXTERNALLY</u> <u>PVC cables ; run in concealed conduits with draw wires</u> From isolators (isolators measured separately) B * x * mm2 ; to fuel transfer pump control cubicle (ref. *)		nr		
	<u>DESIGN, SUPPLY AND INSTALL FUEL SUPPLY SYSTEM - CONTROL ; INTERNALLY, IN PLANT ROOM AND EXTERNALLY</u> <u>Control cubicles ; certificate issued by BASEEFA ; EIMCSP and IP 65 enclosure to IEC 60529:2013/Corr 2:2015 ; protection type EEx d flameproof ; as described in the Particular Specification and drawing nr. *</u> Fuel transfer pump control cubicles ; suitable for operation in Zone 1 hazardous area ; wall-mounted type C located in plant room (ref. *)		nr		
	<u>Control and monitoring circuits ; approved cables ; complete with cable trays, cable trunkings, conduits and fittings</u> From fuel transfer pump control cubicle (ref. *) D to fuel transfer pumps (ref. *)		nr		
	MODEL BILL OF DESCRIPTION ASD STANDARD BILLS MODBQ.32/4		To Collection	\$	

FUEL SUPPLY SYSTEM

Item	Description	Qty	Unit	Rate	HK\$
	<u>DESIGN, SUPPLY AND INSTALL FUEL SUPPLY SYSTEM - CONTROL ; INTERNALLY, IN PLANT ROOM AND EXTERNALLY (Cont'd)</u>				
	<u>Alarm, detection and control circuits ; approved cables ; complete with cable trays, cable trunkings, conduits and fittings</u>				
	From fuel transfer pump control cubicle (ref. *)				
A	to level switches		nr		
	<u>DESIGN, SUPPLY AND INSTALL FUEL SUPPLY SYSTEM - SUNDRIES ; INTERNALLY, IN PLANT ROOM AND EXTERNALLY</u>				
	<u>The following items in respect of the whole Fuel Supply System</u>				
	Allow for				
B	marking the positions of holes, mortices, chases and the like in the structure	-	item	-	
C	inspection, testing and commissioning of the complete Fuel Supply System ; all as described in the Particular Specification and Part D of the General Specification for Mechanical Installations	-	item	-	
D	inspection, attendance, operation and maintenance during Maintenance Period ; all as described in the Particular Specification, Sections E1 and E3 of the General Specification for Mechanical Installations	-	item	-	
E	providing all necessary power and water, diesel, gas and fuels in connection with testing, commissioning and maintenance	-	item	-	
F	particular requirements on inspection and testing as described in Section C4.6 of the General Specification for Mechanical Installations	-	item	-	
	MODEL BILL OF DESCRIPTION		To Collection	\$	
	ASD STANDARD BILLS				
	MODBQ.32/5				

FUEL SUPPLY SYSTEM

Item	Description	Qty	Unit	Rate	HK\$
<u>DESIGN, SUPPLY AND INSTALL FUEL SUPPLY SYSTEM - SUNDRIES ; INTERNALLY, IN PLANT ROOM AND EXTERNALLY (Cont'd)</u>					
A	providing installation drawings ; all as described in the Particular Specification and Section A4.2 of the General Specification for Mechanical Installations	-	item	-	
B	providing as-built drawings ; all as described in the Particular Specification and Section A4.3 of the General Specification for Mechanical Installations	-	item	-	
C	providing Operation and Maintenance (O&M) Manuals and User Manuals ; all as described in the Particular Specification and Section A4.4 of the General Specification for Mechanical Installations	-	item	-	
D	training of users and operation and maintenance agents as described in the Particular Specification, Section E1 and E2 of the General Specification for Mechanical Installations	-	item	-	
E	provding sample boards as described in Section A3.7 of the General Specification for Mechanical Installations	-	item	-	
F	supplying pipe sleeves (sleeves fixing by others) and filling holes so formed in walls, floors and ceilings with approved packing materials as described	-	item	-	
G	supplying conduit sleeves (sleeves fixing by others) and filling holes so formed in walls, floors and ceilings with approved packing materials as described	-	item	-	
H	supplying cable sleeves (sleeves fixing by others) and filling holes so formed in walls, floors and ceilings with approved packing materials as described	-	item	-	
MODEL BILL OF DESCRIPTION				To Collection	\$
ASD STANDARD BILLS				MODBQ.32/6	

FUEL SUPPLY SYSTEM

Item	Description	Qty	Unit	Rate	HK\$
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DESIGN, SUPPLY AND INSTALL FUEL SUPPLY SYSTEM - SUNDRIES ; INTERNALLY, IN PLANT ROOM AND EXTERNALLY (Cont'd)

A supplying and fixing fire stopping to walls and floors

- item

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C O L L E C T I O N

Item

Description

HK\$

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Bill Nr. MODBQ.32 - FUEL SUPPLY SYSTEM

To Summary

\$

Bill Nr. MODBQ.33

SWIMMING POOL WATER TREATMENT INSTALLATION

Item	Description	Qty	Unit	Rate	HK\$
	<u>WATER CIRCULATION AND FILTRATION SYSTEM ; INTERNALLY / IN PLANT ROOM / EXTERNALLY#</u>				
	<u>Polyethylene pipes and fittings ; medium density ; BS EN 12201-1:2011 to BS EN 12201-3:2011+A1:2012, BS EN 12201-4:2012, BS EN 12201-5:2011, ISO 4427-1:2007/Corr 1:2008 and ISO 4427-2:2007/Amd 1:2014 ; electrofusion socket joints</u>				
	Pipework and fittings ; laid in trenches				
A	* diameter		m		
	Pipework and fittings ; suspended from soffits				
B	* diameter		m		
	Pipework and fittings ; fixed to walls and columns				
C	* diameter		m		
	Extra over pipework for				
D	* bends		nr		
E	* tees		nr		
F	* reducing tees		nr		
	<u>Bronze valves</u>				
	Ball float valves				
G	* diameter		nr		
	Drain valves				
H	* diameter		nr		

SWIMMING POOL WATER TREATMENT INSTALLATION

Item	Description	Qty	Unit	Rate	HK\$
	<u>WATER CIRCULATION AND FILTRATION SYSTEM ;</u> <u>INTERNALLY / IN PLANT ROOM / EXTERNALLY#</u> <u>(Cont'd)</u>				
	<u>Cast iron valves</u>				
	Gate valves				
A	* diameter		nr		
	Check valves				
B	* diameter		nr		
	Motorized control valves and solenoid valves				
C	* diameter		nr		
	Double regulating valves				
D	* diameter		nr		
	<u>Flow meters ; flow sensors ; integral</u> <u>signal converter / transmitter ; digital</u> <u>display unit ; direct reading</u>				
	Flow meters ; electromagnetic and ultrasonic				
E	to suit * diameter pipes		nr		
	<u>Cast iron strainers</u>				
	Strainers ; double type				
F	* diameter		nr		
	<u>Gunmetal automatic air vents ; non-ferrous</u> <u>floats and guides</u>				
	Automatic air vents ; complete with integral lock-shield valves and air release pipe				
G	to suit * diameter pipes		nr		
	<u>Inlet fittings ; ABS</u>				
	Adjustment type ; minimum 25 diameter orifice				
H	to suit * diameter pipes		nr		
	MODEL BILL OF DESCRIPTION				
	ASD STANDARD BILLS MODBQ.33/2				
			To Collection	\$	

SWIMMING POOL WATER TREATMENT INSTALLATION

Item	Description	Qty	Unit	Rate	HK\$
	<u>WATER CIRCULATION AND FILTRATION SYSTEM ;</u> <u>INTERNALLY / IN PLANT ROOM / EXTERNALLY#</u> <u>(Cont'd)</u>				
	<u>Hydro spa jets ; complete with socket end</u> <u>or threads ; ABS</u>				
	Adjustment type ; capable to be deflected at 15 degrees at any direction to the horizontal axis				
A	to suit * diameter pipes		nr		
	<u>Gutter drains ; ABS</u>				
	Gutter dome scum drain ; designed gratings				
B	to suit * gutter channel		nr		
	<u>Main drain gratings ; ABS</u>				
	Squared type ; grating covers ; installed on concrete sump pit ; twin drain outlets				
C	to suit maximum velocity of 0.3 m/s		nr		
	<u>Vacuum fittings ; ABS</u>				
	Body and plug ; connection for flexible vacuum hose ; adaptor with 38 FIP for pipe connection				
D	to suit * diameter pipes		nr		
	<u>Overflow drains</u>				
	In form of skimmer box ; streamlined ABS grating with thread for UPVC overflow drain pipes connection				
E	to suit * diameter pipes		nr		
	<u>Channel outlets ; ABS</u>				
	50 diameter connection ; * x * gratings				
F	to suit * diameter pipes		nr		
				To Collection \$	

SWIMMING POOL WATER TREATMENT INSTALLATION

Item	Description	Qty	Unit	Rate	HK\$
	<u>WATER CIRCULATION AND FILTRATION SYSTEM ;</u> <u>INTERNALLY / IN PLANT ROOM / EXTERNALLY#</u> <u>(Cont'd)</u>				
	<u>Skimmers ; rugged ABS ; 5 thick</u>				
	Moulded type				
A	to suit * diameter pipes		nr		
	<u>Thermometers</u>				
	Thermometers ; mercury-in-glass type				
B	to suit * diameter pipes		nr		
	<u>Pressure gauges</u>				
	Pressure gauges				
C	to suit * diameter pipes		nr		
	<u>Energy meters</u>				
	Energy meters				
D	to suit * diameter pipes		nr		
	<u>Water level controllers</u>				
	Water level controllers ; all necessary accessories				
E	mercury float type		nr		
	<u>Fibre-glass water tanks ; complete with</u> <u>valves, drains, vents, overflows, covers,</u> <u>supports, accessories and connections</u>				
	Water tanks ; stainless steel internal and external cat ladders				
F	* litres capacity		nr		
	MODEL BILL OF DESCRIPTION				
	ASD STANDARD BILLS MODBQ.33/4				
				To Collection \$	

SWIMMING POOL WATER TREATMENT INSTALLATION

Item	Description	Qty	Unit	Rate	HK\$
	<u>WATER CIRCULATION AND FILTRATION SYSTEM ;</u> <u>INTERNALLY / IN PLANT ROOM / EXTERNALLY#</u> <u>(Cont'd)</u>				
	<u>Water pump sets ; direct driven by</u> <u>electric motors ; type-tested ; complete</u> <u>with cast iron / stainless steel Grade 316</u> <u>/ bronze# split casings ; stuffing boxes ;</u> <u>drain piping and all accessories ;</u> <u>centrifugal type ; volute casing ; as</u> <u>described in the Particular Specification</u> <u>and drawing nr. *</u>				
	Main circulation pump sets				
A	water flow rate * l/s ; differential static pressure * kPa (ref. *)		nr		
	<u>Sand filters ; electrically welded shell ;</u> <u>supported nozzles, balance tank, stainless</u> <u>steel nozzle plates and filtering media</u> <u>supports, internal distribution and</u> <u>draw-off trough ; flanged inlets and</u> <u>outlets, wash-in, drains and air</u> <u>connections, manholes, necessary filtering</u> <u>media, filter supporting feet and all</u> <u>necessary accessories ; as described in</u> <u>the Particular Specification and drawing</u> <u>nr. *</u>				
	Sand filters ; air scoured sand pressure type ; low to medium filtering rate				
B	capacity * l/hr (ref. *)		nr		
	MODEL BILL OF DESCRIPTION ASD STANDARD BILLS MODBQ.33/5				
			To Collection	\$	

SWIMMING POOL WATER TREATMENT INSTALLATION

Item	Description	Qty	Unit	Rate	HK\$
	<u>DESIGN, SUPPLY AND INSTALL COMPRESSED AIR SUPPLY AND BACKWASHING SYSTEM ; IN PLANT ROOM</u> <u>Air compressors ; delivery air pressure gauges ; oil pressure gauges ; suction filter and silencer ; air-oil separator ; oil heater and ancillary control accessories ; acoustic enclosure ; pipeworks and fittings, valves, switches, controls and interlocks ; control panels (control panels measured separately) and supports ; all necessary accessories, wirings and conduits ; as described in the Particular Specification and drawing nr. *</u>				
A	Air compressors, air-cooled rotary air type, pressure lubrication, direct couple motor duty compressors ; air flow rate 50 m/h per unit filter area		nr		
	<u>DESIGN, SUPPLY AND INSTALL OZONE GENERATION SYSTEM ; IN PLANT ROOM</u> <u>Reaction tanks ; electrically welded mild steel / stainless steel Grade 316 (low carbon)# ; complete with automatic air vents, drains, valves, flow meters, maintenance platform, supports, accessories and connection ; as described in the Particular Specification and drawing nr. *</u>				
B	Reaction tanks * litres		nr		
	<u>Water pump sets ; direct driven by electric motors ; suitable type ; as described in the Particular Specification and drawing nr. *</u>				
C	Booster pump sets for ozone generation system water flow rate * m3/hr ; differential static pressure * kPa (ref. *)		nr		
	MODEL BILL OF DESCRIPTION ASD STANDARD BILLS MODBQ.33/6		To Collection	\$	

SWIMMING POOL WATER TREATMENT INSTALLATION

Item	Description	Qty	Unit	Rate	HK\$
	<u>DESIGN, SUPPLY AND INSTALL OZONE GENERATION SYSTEM ; IN PLANT ROOM (Cont'd)</u>				
	<u>Carbon filter tanks ; electrically welded mild steel / stainless steel Grade 316 (low carbon)# ; 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 ; as described in the Particular Specification and drawing nr. *</u>				
	Carbon filter tanks				
A	* litres		nr		
	<u>Ozonator ; full vacuum unit ; duty and standby air dryers ; ozone generators ; high tension transformers, control panels (control panels measured separately) ; associated pipings, wirings and control ; all necessary accessories ; safety devices ; as described in the Particular Specification and drawing nr. *</u>				
	Ozonators ; compact construction cabinet ; lockable doors				
B	* g/hr (ref. *)		nr		
	<u>Mixing equipment ; comprising mixers, mixing chambers, ozone eductors, booster pumps, manometers, piping, valves, pressure gauges and all necessary accessories ; as described in the Particular Specification and drawing nr. *</u>				
	Mixing equipment for mixing and dissolving ozone into water stream				
C	to suit system pressure		nr		
	MODEL BILL OF DESCRIPTION ASD STANDARD BILLS MODBQ.33/7		To Collection	\$	

SWIMMING POOL WATER TREATMENT INSTALLATION

Item	Description	Qty	Unit	Rate	HK\$
	<u>DESIGN, SUPPLY AND INSTALL OZONE GENERATION SYSTEM ; IN PLANT ROOM (Cont'd)</u>				
	<u>Ozone destroyers ; activated carbon filling, thermal or heated catalytic destructor, exhaust vent pipes and all necessary accessories ; as described in the Particular Specification and drawing nr. *</u>				
	Ozone destroyers ; maintaining * months operation at design flow				
A	design flow *		nr		
	<u>ORP analyzers ; sensors, liquid crystal display ; all necessary accessories and signals transmission facilities ; as described in the Particular Specification and drawing nr. *</u>				
	ORP analyzers				
B	to suit system		nr		
	<u>ULTRA VIOLET DISINFECTION SYSTEM ; IN PLANT ROOM</u>				
	<u>Ultra violet disinfection system ; self-contained UV chambers, hydraulically factory tested unit, temperature sensors, UV intensity monitor, stainless steel cover end plate ; all pipework and connection, automatic cleaning device, control and monitoring provisions ; necessary accessories ; as described in the Particular Specification and drawing nr. *</u>				
	Ultra violet disinfection system ; UV wavelength cover spectrum 220 nm to 400 nm				
C	to suit design swimming pool water turnover rate	-	item	-	
	MODEL BILL OF DESCRIPTION		To Collection	\$	
	ASD STANDARD BILLS MODBQ.33/8				

SWIMMING POOL WATER TREATMENT INSTALLATION

Item	Description	Qty	Unit	Rate	HK\$
	<u>CHEMICAL TREATMENT ; IN PLANT ROOM</u>				
	<u>Chemical treatment ; chemical metering pump sets ; chemical tanks ; outlets, pipings, valves, overflows, level indication, level electrodes ; warning notice and instructions ; all necessary accessories and connections ; adequate protective clothing and items for handling chemicals ; as described in the Particular Specification and drawing nr. *</u>				
A	Chemical treatment of pool water by aluminium sulphate (alum) dosing	-	item	-	
	<u>MIXED OXIDANT DISINFECTION SYSTEM ; IN PLANT ROOM</u>				
	<u>Mixed oxidant disinfection system ; electrolytic cell mixed oxidant generators (ref *) ; twin tower softeners, brine generator tanks, oxidant tanks, pressure switches, solenoid valves, pressure regulators, associated pipings, wirings, control panels (control panels measured separately) ; automated control and diagnostics facilities ; conduits and all necessary accessories ; as described in the Particular Specification and drawing nr. *</u>				
B	Mixed oxidant disinfection system ; hydrogen gas detection facilities, blowers filters, gas detectors, air vents and extraction fans to suit designed application	-	item	-	
	<u>UNDERWATER LIGHTING INSTALLATION ; INTERNALLY AND EXTERNALLY</u>				
	<u>Final circuits ; PVC cables ; including all necessary cabling and conduit facilities ; watertight power supply system</u>				
C	From distribution board ref. * ; * core cables ; * mm2 lighting points		nr		
	MODEL BILL OF DESCRIPTION ASD STANDARD BILLS MODBQ.33/9			To Collection \$	

SWIMMING POOL WATER TREATMENT INSTALLATION

Item	Description	Qty	Unit	Rate	HK\$
	<p><u>UNDERWATER LIGHTING INSTALLATION ;</u> <u>INTERNALLY AND EXTERNALLY (Cont'd)</u></p> <p><u>Luminaires ; cast bronze submersible light fittings ; IP 68, BS EN 60529:1992+A2:2013 ; 12V/24V lamp bulbs ; control gears and ballasts ; isolation transformers housed in metal enclosure ; connections to submersible PVC cables and watertight conduit ; earthing and bonding ; provision of all necessary component parts, neoprene gaskets and necessary fixings</u></p> <p>Submersible light fittings ; water proof and vandal proof type ; suitable for operation at the required water depth ; all necessary accessories ; fixing to walls and columns ; tilting upward 10 degrees to vertical ; recessed mounted</p>				
A	* nr. x * W (ref. *)		nr		
	<p><u>Luminaires ; LED light fittings ; connections to submersible PVC cables and watertight conduit ; earthing and bonding ; provision of all necessary component parts, neoprene gaskets and necessary fixings</u></p> <p>LED light fittings ; water proof and vandal proof type ; all necessary accessories ; fixing to walls and columns ; tilting upward 10 degrees to vertical ; recessed mounted</p>				
B	* nr. x * W (ref. *)		nr		
	<p><u>Timer switches ; ON/OFF control operation ; all necessary cabling and conduit facilities</u></p> <p>Timer switches ; with overriding facilities</p>				
C	timer switches ; 24-hour programmed		nr		
<p>MODEL BILL OF DESCRIPTION ASD STANDARD BILLS MODBQ.33/10</p>			To Collection	\$	

SWIMMING POOL WATER TREATMENT INSTALLATION

Item	Description	Qty	Unit	Rate	HK\$
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SWIMMING POOL WATER CIRCULATION,
FILTRATION AND DISINFECTION SYSTEMS -
ELECTRICITY SUPPLY ; INTERNALLY, IN PLANT
ROOM AND EXTERNALLY

PVC cables ; run in concealed conduits
with draw wires

From isolators (isolators measured
separately)

A	* x * mm2 ; to water circulation and filtration system pump control panel (ref. *)		nr		
---	--	--	----	--	--

B	* x * mm2 ; to compressed air and backwashing system control panel (ref. *)		nr		
---	---	--	----	--	--

C	* x * mm2 ; to ozone booster pump control panel (ref. *)		nr		
---	--	--	----	--	--

D	* x * mm2 ; to ozonator control panel (ref. *)		nr		
---	--	--	----	--	--

E	* x * mm2 ; to chemical treatment control panel (ref. *)		nr		
---	--	--	----	--	--

F	* x * mm2 ; to mixed oxidant disinfection system control panel (ref. *)		nr		
---	---	--	----	--	--

SWIMMING POOL WATER CIRCULATION,
FILTRATION AND DISINFECTION SYSTEMS -
CONTROL ; INTERNALLY, IN PLANT ROOM AND
EXTERNALLY

Control panels ; stainless steel
construction ; vermin proof ; IP 54
enclosures ; all as described in the
Particular Specification and drawing nr. *

Control panels ; located in * room

G	water circulation and filtration system pump control panel (ref. *)		nr		
---	---	--	----	--	--

H	compressed air and backwashing system control panel (ref. *)		nr		
---	--	--	----	--	--

J	ozone booster pump control panel (ref. *)		nr		
---	---	--	----	--	--

MODEL BILL OF DESCRIPTION

ASD STANDARD BILLS MODBQ.33/11

To Collection \$	
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SWIMMING POOL WATER TREATMENT INSTALLATION

Item	Description	Qty	Unit	Rate	HK\$
<u>SWIMMING POOL WATER CIRCULATION,</u>					
<u>FILTRATION AND DISINFECTION SYSTEMS -</u>					
<u>CONTROL ; INTERNALLY, IN PLANT ROOM AND</u>					
<u>EXTERNALLY (Cont'd)</u>					
A	ozonator control panel (ref. *)		nr		
B	chemical treatment control panel (ref. *)		nr		
C	mixed oxidant disinfection system control panel (ref. *)		nr		
<u>Levels of control ; Level 2 - centralized control ; all as described in the Particular Specification and drawing nr. *</u>					
Level 2, manual control in Level 1 and automatic control system (ACS) for equipment, pumps, valves and devices, local control panels (local control panels measured separately) ; 1.6 thick stainless steel supervisory panels ; all electrical interlocks ; visual and audible indication, gas leakage detection, electronic programmable logic controller, real time clock, backup battery, approved cable and conduit facilities					
D	Level 2 control	-	item	-	
<u>SWIMMING POOL WATER TREATMENT INSTALLATION</u>					
<u>- SUNDRIES ; INTERNALLY, IN PLANT ROOM AND</u>					
<u>EXTERNALLY</u>					
<u>The following items in respect of the whole Swimming Pool Water Treatment Installation</u>					
Allow for					
E	marking the positions of holes, mortices, chases and the like in the structure	-	item	-	
MODEL BILL OF DESCRIPTION				To Collection	\$
ASD STANDARD BILLS				MODBQ.33/12	

SWIMMING POOL WATER TREATMENT INSTALLATION

Item	Description	Qty	Unit	Rate	HK\$
<u>SWIMMING POOL WATER TREATMENT INSTALLATION</u>					
<u>- SUNDRIES ; INTERNALLY, IN PLANT ROOM AND</u>					
<u>EXTERNALLY (Cont'd)</u>					
A	off-site and on-site inspection, testing and commissioning of the complete Swimming Pool Water Treatment Installation ; type-test certificates ; all as described in the Particular Specification and Part D of the General Specification for Swimming Pool Water Treatment Installation	-	item	-	
B	providing all electricity, main water and other fuels in connection with preliminary runs, full adjustments, testing, commissioning and maintenance	-	item	-	
C	inspection, attendance, operation and maintenance of the complete Swimming Pool Water Treatment Installation during maintenance period ; all as described in the Particular Specification, Section E1 and E3 of the General Specification for Swimming Pool Water Treatment Installation	-	item	-	
D	providing installation drawings ; all as described in the Particular Specification and Section A4.2 of the General Specification for Swimming Pool Water Treatment Installation	-	item	-	
E	providing as-built drawings ; all as described in the Particular Specification and Section A4.3 of the General Specification for Swimming Pool Water Treatment Installation	-	item	-	
F	providing Operation and Maintenance (O&M) Manuals and Users Manuals in prescribed time ; all as described in the Particular Specification and Section A4.4 of the General Specification for Swimming Pool Water Treatment Installation	-	item	-	
MODEL BILL OF DESCRIPTION		To Collection		\$	
ASD STANDARD BILLS MODBQ.33/13					

SWIMMING POOL WATER TREATMENT INSTALLATION

Item	Description	Qty	Unit	Rate	HK\$
<u>SWIMMING POOL WATER TREATMENT INSTALLATION</u>					
<u>- SUNDRIES ; INTERNALLY, IN PLANT ROOM AND</u>					
<u>EXTERNALLY (Cont'd)</u>					
A	providing training to Employer's staff as described in the Particular Specification and Section E1 and E2 of the General Specification for Swimming Pool Water Treatment Installation	-	item	-	
B	providing sample boards ; all as described in the Particular Specification and Section A3.7 of the General Specification for Swimming Pool Water Treatment Installation	-	item	-	
C	supplying pipe sleeves (sleeves fixing by others) and filling holes so formed in walls, floors and ceilings with approved packing materials as described	-	item	-	
D	supplying conduit sleeves (sleeves fixing by others) and filling holes so formed in walls, floors and ceilings with approved packing materials as described	-	item	-	
E	supplying cable sleeves (sleeves fixing by others) and filling holes so formed in walls, floors and ceilings with approved packing materials as described	-	item	-	
F	supplying and fixing fire stopping to walls and floors	-	item	-	

C O L L E C T I O N

Item

Description

HK\$

Page No.	MODBQ.33/1	
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Page No.	MODBQ.33/14	
Bill Nr. MODBQ.33 - SWIMMING POOL WATER TREATMENT INSTALLATION			
To Summary			\$

Bill Nr. MODBQ.34
MEDICAL GAS INSTALLATION

Item	Description	Qty	Unit	Rate	HK\$
	<u>MEDICAL VACUUM SYSTEM ; INTERNALLY / IN PLANT ROOM / EXTERNALLY#</u>				
	<u>Phosphorous de-oxidized, non-arsenical copper pipes and fittings ; BS EN 1412 Grade CW024A ; BS EN 13348-R250 ; BS EN 1254-1 ; HTM 02-01 ; joints as described in the Particular Specification</u>				
	Pipework and fittings ; suspended from soffits				
A	* diameter		m		
	Pipework and fittings ; fixed to walls and columns				
B	* diameter		m		
	Extra over pipework for				
C	* bends		nr		
D	* tees		nr		
E	* reducing bends		nr		
F	* reducing tees		nr		
G	* caps		nr		
	Header pipes ; blanked off at spare outlets ; supporting on floors				
H	* diameter ; * long ; with * nr. * x * x * branches		nr		
	<u>Bronze valves</u>				
	Gate valves				
J	* diameter		nr		
	Check valves				
K	* diameter		nr		
	MODEL BILL OF DESCRIPTION				
	ASD STANDARD BILLS				
	MODBQ.34/1				
		To Collection	\$		

MEDICAL GAS INSTALLATION

Item	Description	Qty	Unit	Rate	HK\$
<u>MEDICAL VACUUM SYSTEM ; INTERNALLY / IN PLANT ROOM / EXTERNALLY# (Cont'd)</u>					
	Ball valves				
A	* diameter		nr		
	Relief or safety valves ; enclosed adjustable spring loaded type				
B	* diameter		nr		
	Pressure reducing valves ; full way type				
C	* diameter		nr		
	Stop and isolating valves ; screw down type				
D	* diameter		nr		
	<u>Filters</u>				
	Air filters				
E	to suit * diameter pipes		nr		
	Oil filters				
F	to suit * diameter pipes		nr		
	<u>Silencers ; low resistance type ; limit noise level to NC76 (maximum) ; necessary accessories</u>				
	Silencers				
G	to suit * diameter pipes		nr		
	<u>Expansion joints ; stainless steel ; external protective sleeve</u>				
	Bellow expansion joints ; axial movement pattern type screw end				
H	* diameter		nr		
MODEL BILL OF DESCRIPTION					To Collection \$
ASD STANDARD BILLS					MODBQ.34/2

MEDICAL GAS INSTALLATION

Item	Description	Qty	Unit	Rate	HK\$
	<u>MEDICAL VACUUM SYSTEM ; INTERNALLY / IN PLANT ROOM / EXTERNALLY# (Cont'd)</u>				
	<u>Fire-rated enclosure ; complying Fire Safety Code ; complete with all necessary framings</u>				
	2 hour fire-resistant-period enclosure				
A	to suit * diameter pipes		m		
	<u>Medical gas terminal outlets ; HTM 02-01 ; BS EN ISO 9170-1, BS 5682 ; spring-loaded cut-off valves and outlet sockets ; satin finish stainless steel plated face plates with a factory fixed plastic film for protection</u>				
	Medical gas terminal outlets ; fixed to walls and columns				
B	* diameter outlets		nr		
	<u>Emergency inlet ports ; complete with lockable valves, non-return valves and blanked connecting ports</u>				
	Emergency inlet ports				
C	to suit * diameter pipes		nr		
	<u>Pressure gauges ; ISO 4126-1:2013 and BS EN 837-1:1998</u>				
	Pressure gauges				
D	to suit * diameter pipes		nr		
	<u>Drain traps</u>				
	Drain traps ; float-operated and automatic				
E	to suit * diameter pipes		nr		
	<u>Pressure switches</u>				
	Pressure switches				
F	to suit * diameter pipes		nr		
	MODEL BILL OF DESCRIPTION				
	ASD STANDARD BILLS				
	MODBQ.34/3				
			To Collection	\$	

MEDICAL GAS INSTALLATION

Item	Description	Qty	Unit	Rate	HK\$
	<u>MEDICAL VACUUM SYSTEM ; INTERNALLY / IN PLANT ROOM / EXTERNALLY# (Cont'd)</u> <u>Vacuum reservoir tanks ; manufactured in accordance with BS EN 286-1 designed for working pressure of 500 mm Hg below atmosphere and a minimum test of 400 kPa ; saddles or legs with ribbed neoprene pads ; inspection openings ; cleaning points ; vacuum gauges with petcock</u> Vacuum reservoir tanks * litres capacity		nr		
A					
	<u>Air-cooled vacuum pump sets ; silent design ; pressure lubricated ; direct driven by electric motors to IEC 60085 insulation Class F and BS 5000 ; type-tested ; complete with oil pressure gauge, built-in non-return valve and stuffing boxes ; drain piping and all necessary accessories</u> Air-cooled vacuum pump sets water flow rate * l/s ; differential static pressure * kPa (ref. *)		nr		
B					
	<u>Cylinder storage racks ; approved rigid frame assembly ; safety chains</u> Cylinder storage racks holding duty bank ; * nrs medical gas cylinders ; each containing * litre gas		nr		
C					
	<u>MEDICAL COMPRESSED AIR PLANT AND SYSTEM ; INTERNALLY / IN PLANT ROOM / EXTERNALLY#</u> <u>Phosphorous de-oxidized, non-arsenical copper pipes and fittings ; BS EN 1412 Grade CW024A ; BS EN 13348-R250 ; BS EN 1254-1 ; HTM 02-01 ; joints as described in the Particular Specification</u> Pipework and fittings ; suspended from soffits * diameter		m		
D					
				To Collection \$	

MEDICAL GAS INSTALLATION

Item	Description	Qty	Unit	Rate	HK\$
<u>MEDICAL COMPRESSED AIR PLANT AND SYSTEM ;</u>					
<u>INTERNALLY / IN PLANT ROOM / EXTERNALLY#</u>					
<u>(Cont'd)</u>					
	Pipework and fittings ; fixed to walls and columns				
A	* diameter		m		
	Extra over pipework for				
B	* bends		nr		
C	* tees		nr		
D	* reducing bends		nr		
E	* reducing tees		nr		
F	* caps		nr		
	Header pipes ; blanked off at spare outlets ; supporting on floors				
G	* diameter ; * long ; with * nr. * x * x * branches		nr		
	<u>Bronze valves</u>				
	Gate valves				
H	* diameter		nr		
	Check valves				
J	* diameter		nr		
	Ball valves				
K	* diameter		nr		
	Relief or safety valves ; enclosed adjustable spring loaded type				
L	* diameter		nr		
	Pressure reducing valves ; full way type				
M	* diameter		nr		
MODEL BILL OF DESCRIPTION					To Collection \$
ASD STANDARD BILLS MODBQ.34/5					

MEDICAL GAS INSTALLATION

Item	Description	Qty	Unit	Rate	HK\$
	<u>MEDICAL COMPRESSED AIR PLANT AND SYSTEM ;</u> <u>INTERNALLY / IN PLANT ROOM / EXTERNALLY#</u> <u>(Cont'd)</u>				
	<u>Medical gas terminal outlets ; HTM 02-01 ;</u> <u>BS EN ISO 9170-1, BS 5682 ; spring-loaded</u> <u>cut-off valves and outlet sockets ; satin</u> <u>finish stainless steel plated face plates</u> <u>with a factory fixed plastic film for</u> <u>protection</u>				
	Medical gas terminal outlets ; fixed to walls and columns				
A	* diameter outlets		nr		
	<u>Emergency inlet ports ; complete with</u> <u>lockable valves, non-return valves and</u> <u>blanked connecting ports</u>				
	Emergency inlet ports				
B	to suit * diameter pipes		nr		
	<u>Air mist separators ; cyclone type ;</u> <u>capable of extracting 99% of liquid</u> <u>particles of between 5 and 40 microns ;</u> <u>automatic drain traps with valved manual</u> <u>bypass ; connection to nearest drains</u>				
	Air mist separators				
C	to suit * diameter pipes		nr		
	<u>Pressure gauges ; ISO 4126-1:2013 and BS</u> <u>EN 837-1:1998</u>				
	Pressure gauges				
D	to suit * diameter pipes		nr		
	<u>Drain traps</u>				
	Drain traps ; float-operated and automatic				
E	to suit * diameter pipes		nr		
	<u>Pressure switches</u>				
	Pressure switches				
F	to suit * diameter pipes		nr		
	MODEL BILL OF DESCRIPTION				
	ASD STANDARD BILLS MODBQ.34/7				
		To Collection	\$		

MEDICAL GAS INSTALLATION

Item	Description	Qty	Unit	Rate	HK\$
	<p><u>MEDICAL COMPRESSED AIR PLANT AND SYSTEM ;</u> <u>INTERNALLY / IN PLANT ROOM / EXTERNALLY#</u> <u>(Cont'd)</u></p> <p><u>Air compressors ; single stage ;</u> <u>air-cooled ; rotary screw type with oil</u> <u>injection ; suction silencer, framed</u> <u>system diagram, all piping, safety device,</u> <u>control and necessary accessories</u></p> <p>Air compressors ; fitted with intercoolers</p> <p>A discharge pressure * kPa</p> <p><u>Air receivers ; vertical type ;</u> <u>constructed of welded mild steel plate,</u> <u>with dished ends, all in accordance with</u> <u>BS EN 286-1, with test certificates</u></p> <p>Air receivers ; welded bosses ; properly sized supply, delivery, drain, valves, manholes, plugs, identification plates, supports ; all necessary accessories ; vertically mounted</p> <p>B storage capacity of * l</p> <p><u>Twin column desiccant air dryers ;</u> <u>automatically cycled operation of two</u> <u>desiccant beds ; moisture indicators ; dew</u> <u>point indicators ; alarm gauges ; pressure</u> <u>gauges and valves ; electric heaters ;</u> <u>internal wirings and necessary accessories</u></p> <p>C Twin column desiccant air dryers capacity of passing free air equivalence * litres/min ; capable of drying air from 42 degree Celsius (saturated) to minus 40(-40) degree Celsius (atmospheric dew point) and carbon monoxide content not greater than 5.5 mg/m3 (5 ppm) of carbon monoxide or more than 0.0005 mg/litre of oil mist (particulate) at standard temperature and pressure</p>		nr		
			nr		
			nr		
				To Collection \$	

MEDICAL GAS INSTALLATION

Item	Description	Qty	Unit	Rate	HK\$
	<u>MEDICAL COMPRESSED AIR PLANT AND SYSTEM ;</u> <u>INTERNALLY / IN PLANT ROOM / EXTERNALLY#</u> <u>(Cont'd)</u>				
	<u>Cylinder storage racks ; approved rigid</u> <u>frame assembly ; safety chains</u>				
	Cylinder storage racks				
A	holding duty bank ; * nrs medical gas cylinders ; each containing * litre gas		nr		
	<u>NON-MEDICAL COMPRESSED AIR PLANT AND</u> <u>SYSTEM ; INTERNALLY / IN PLANT ROOM /</u> <u>EXTERNALLY#</u>				
	<u>Phosphorous de-oxidized, non-arsenical</u> <u>copper pipes and fittings ; BS EN 1412</u> <u>Grade CW024A ; BS EN 13348-R250 ; BS EN</u> <u>1254-1 ; HTM 02-01 ; joints as described</u> <u>in the Particular Specification</u>				
	Pipework and fittings ; suspended from soffits				
B	* diameter		m		
	Pipework and fittings ; fixed to walls and columns				
C	* diameter		m		
	Extra over pipework for				
D	* bends		nr		
E	* tees		nr		
F	* reducing bends		nr		
G	* reducing tees		nr		
H	* caps		nr		
	Header pipes ; blanked off at spare outlets ; supporting on floors				
J	* diameter ; * long ; with * nr. * x * x * branches		nr		
	MODEL BILL OF DESCRIPTION				
	ASD STANDARD BILLS				
	MODBQ.34/9				
		To Collection	\$		

MEDICAL GAS INSTALLATION

Item	Description	Qty	Unit	Rate	HK\$
	<u>NON-MEDICAL COMPRESSED AIR PLANT AND SYSTEM ; INTERNALLY / IN PLANT ROOM / EXTERNALLY# (Cont'd)</u>				
	<u>Bronze valves</u>				
	Gate valves				
A	* diameter		nr		
	Check valves				
B	* diameter		nr		
	Ball valves				
C	* diameter		nr		
	Relief or safety valves ; enclosed adjustable spring loaded type				
D	* diameter		nr		
	Pressure reducing valves ; full way type				
E	* diameter		nr		
	Stop and isolating valves ; screw down type				
F	* diameter		nr		
	<u>Filters</u>				
	Air filters				
G	to suit * diameter pipes		nr		
	Oil filters				
H	to suit * diameter pipes		nr		
	<u>Silencers ; low resistance type ; limit noise level to NC76 (maximum) ; necessary accessories</u>				
	Silencers				
J	to suit * diameter pipes		nr		
	MODEL BILL OF DESCRIPTION		To Collection	\$	
	ASD STANDARD BILLS				
	MODBQ.34/10				

MEDICAL GAS INSTALLATION

Item	Description	Qty	Unit	Rate	HK\$
	<u>NON-MEDICAL COMPRESSED AIR PLANT AND SYSTEM ; INTERNALLY / IN PLANT ROOM / EXTERNALLY# (Cont'd)</u>				
	<u>Expansion joints ; stainless steel ; external protective sleeve</u>				
	Bellow expansion joints ; axial movement pattern type screw end				
A	* diameter		nr		
	<u>Fire-rated enclosure ; complying Fire Safety Code ; complete with all necessary framings</u>				
	2 hour fire-resistant-period enclosure				
B	to suit * diameter pipes		m		
	<u>Medical gas terminal outlets ; HTM 02-01 ; BS EN ISO 9170-1, BS 5682 ; spring-loaded cut-off valves and outlet sockets ; satin finish stainless steel plated face plates with a factory fixed plastic film for protection</u>				
	Medical gas terminal outlets ; fixed to walls and columns				
C	* diameter outlets		nr		
	<u>Emergency inlet ports ; complete with lockable valves, non-return valves and blanked connecting ports</u>				
	Emergency inlet ports				
D	to suit * diameter pipes		nr		
	<u>Air mist separators ; cyclone type ; capable of extracting 99% of liquid particles of between 5 and 40 microns ; automatic drain traps with valved manual bypass ; connection to nearest drains</u>				
	Air mist separators				
E	to suit * diameter pipes		nr		
	MODEL BILL OF DESCRIPTION		To Collection	\$	
	ASD STANDARD BILLS				
	MODBQ.34/11				

MEDICAL GAS INSTALLATION

Item	Description	Qty	Unit	Rate	HK\$
	<u>NON-MEDICAL COMPRESSED AIR PLANT AND SYSTEM ; INTERNALLY / IN PLANT ROOM / EXTERNALLY# (Cont'd)</u>				
	<u>Pressure gauges ; ISO 4126-1:2013 and BS EN 837-1:1998</u>				
A	Pressure gauges to suit * diameter pipes		nr		
	<u>Drain traps</u>				
B	Drain traps ; float-operated and automatic to suit * diameter pipes		nr		
	<u>Pressure switches</u>				
C	Pressure switches to suit * diameter pipes		nr		
	<u>Air compressors ; single stage ; air-cooled ; rotary screw type with oil injection ; suction silencer, framed system diagram, all piping, safety device, control and necessary accessories</u>				
D	Air compressors ; fitted with intercoolers discharge pressure * kPa		nr		
	<u>Air receivers ; vertical type ; constructed of welded mild steel plate, with dished ends, all in accordance with BS EN 286-1, with test certificates</u>				
E	Air receivers ; welded bosses ; properly sized supply, delivery, drain, valves manholes, plugs, identification plates, supports ; all necessary accessories ; vertically mounted storage capacity of * l		nr		
				To Collection \$	

MEDICAL GAS INSTALLATION

Item	Description	Qty	Unit	Rate	HK\$
	<u>NON-MEDICAL COMPRESSED AIR PLANT AND SYSTEM ; INTERNALLY / IN PLANT ROOM / EXTERNALLY# (Cont'd)</u> <u>Twin column desiccant air dryers ; automatically cycled operation of two desiccant beds ; moisture indicators ; dew point indicators ; alarm gauges ; pressure gauges and valves ; electric heaters ; internal wirings and necessary accessories</u> Twin column desiccant air dryers				
A	capacity of passing free air equivalence * litres/min ; capable of drying air from 42 degree Celsius (saturated) to minus 40(-40) degree Celsius (atmospheric dew point) and carbon monoxide content not greater than 5.5 mg/m3 (5 ppm) of carbon monoxide or more than 0.0005 mg/litre of oil mist (particulate) at standard temperature and pressure		nr		
	<u>Cylinder storage racks ; approved rigid frame assembly ; safety chains</u> Cylinder storage racks				
B	holding duty bank ; * nrs medical gas cylinders ; each containing * litre gas		nr		
	<u>OXYGEN SYSTEM ; INTERNALLY / IN PLANT ROOM / EXTERNALLY#</u> <u>Phosphorous de-oxidized, non-arsenical copper pipes and fittings ; BS EN 1412 Grade CW024A ; BS EN 13348-R250 ; BS EN 1254-1 ; HTM 02-01 ; joints as described in the Particular Specification</u> Pipework and fittings ; suspended from soffits				
C	* diameter		m		
	Pipework and fittings ; fixed to walls and columns				
D	* diameter		m		
	MODEL BILL OF DESCRIPTION ASD STANDARD BILLS MODBQ.34/13		To Collection	\$	

MEDICAL GAS INSTALLATION

Item	Description	Qty	Unit	Rate	HK\$
<u>OXYGEN SYSTEM ; INTERNALLY / IN PLANT ROOM</u>					
<u>/ EXTERNALLY# (Cont'd)</u>					
Extra over pipework for					
A	* bends		nr		
B	* tees		nr		
C	* reducing bends		nr		
D	* reducing tees		nr		
E	* caps		nr		
Header pipes ; blanked off at spare outlets ; supporting on floors					
F	* diameter ; * long ; with * nr. * x * x * branches		nr		
<u>Bronze valves</u>					
Gate valves					
G	* diameter		nr		
Check valves					
H	* diameter		nr		
Ball valves					
J	* diameter		nr		
Relief or safety valves ; enclosed adjustable spring loaded type					
K	* diameter		nr		
Pressure reducing valves ; full way type					
L	* diameter		nr		
Stop and isolating valves ; screw down type					
M	* diameter		nr		
MODEL BILL OF DESCRIPTION					To Collection \$
ASD STANDARD BILLS					MODBQ.34/14

MEDICAL GAS INSTALLATION

Item	Description	Qty	Unit	Rate	HK\$
	<u>OXYGEN SYSTEM ; INTERNALLY / IN PLANT ROOM</u> <u>/ EXTERNALLY# (Cont'd)</u>				
	<u>Filters</u>				
	Air filters				
A	to suit * diameter pipes		nr		
	Oil filters				
B	to suit * diameter pipes		nr		
	<u>Silencers ; low resistance type ; limit</u> <u>noise level to NC76 (maximum) ; necessary</u> <u>accessories</u>				
	Silencers				
C	to suit * diameter pipes		nr		
	<u>Expansion joints ; stainless steel ;</u> <u>external protective sleeve</u>				
	Bellow expansion joints ; axial movement pattern type screw end				
D	* diameter		nr		
	<u>Fire-rated enclosure ; complying Fire</u> <u>Safety Code ; complete with all necessary</u> <u>framings</u>				
	2 hour fire-resistant-period enclosure				
E	to suit * diameter pipes		m		
	<u>Medical gas terminal outlets ; HTM 02-01 ;</u> <u>BS EN ISO 9170-1, BS 5682 ; spring-loaded</u> <u>cut-off valves and outlet sockets ; satin</u> <u>finish stainless steel plated face plates</u> <u>with a factory fixed plastic film for</u> <u>protection</u>				
	Medical gas terminal outlets ; fixed to walls and columns				
F	* diameter outlets		nr		
	MODEL BILL OF DESCRIPTION		To Collection	\$	
	ASD STANDARD BILLS				
	MOBQ.34/15				

MEDICAL GAS INSTALLATION

Item	Description	Qty	Unit	Rate	HK\$
	<u>OXYGEN SYSTEM ; INTERNALLY / IN PLANT ROOM</u> <u>/ EXTERNALLY# (Cont'd)</u>				
	<u>Emergency inlet ports ; complete with</u> <u>lockable valves, non-return valves and</u> <u>blanked connecting ports</u>				
	Emergency inlet ports				
A	to suit * diameter pipes		nr		
	<u>Pressure gauges ; ISO 4126-1:2013 and BS</u> <u>EN 837-1:1998</u>				
	Pressure gauges				
B	to suit * diameter pipes		nr		
	<u>Drain traps</u>				
	Drain traps ; float-operated and automatic				
C	to suit * diameter pipes		nr		
	<u>Pressure switches</u>				
	Pressure switches				
D	to suit * diameter pipes		nr		
	<u>Cylinder storage racks ; approved rigid</u> <u>frame assembly ; safety chains</u>				
	Cylinder storage racks				
E	holding duty bank ; * nrs medical gas cylinders ; each containing * litre gas		nr		
MODEL BILL OF DESCRIPTION					To Collection \$
ASD STANDARD BILLS MODBQ.34/16					

MEDICAL GAS INSTALLATION

Item	Description	Qty	Unit	Rate	HK\$
	<u>OXYGEN SYSTEM ; INTERNALLY / IN PLANT ROOM / EXTERNALLY# (Cont'd)</u>				
	<u>Manifold installation ; HTM 02-01 ; including manifold control panel, regulators, pressure gauges, pressure switches, filters, valves, etc. ; manifold header pipes and flexible tail pipes with gas cylinder connectors ; all piping and necessary accessories ; interconnecting wirings and control cables ; power cables and connection to power source ; conduits and cable facilities ; all as described in the Particular Specification and the Drawings</u>				
	Automatic changeover manifolds				
A	located in * room	-	item	-	
	Manual changeover manifolds				
B	located in * room	-	item	-	
	<u>NITROUS OXIDE SYSTEM ; INTERNALLY / IN PLANT ROOM / EXTERNALLY#</u>				
	<u>Phosphorous de-oxidized, non-arsenical copper pipes and fittings ; BS EN 1412 Grade CW024A ; BS EN 13348-R250 ; BS EN 1254-1 ; HTM 02-01 ; joints as described in the Particular Specification</u>				
	Pipework and fittings ; suspended from soffits				
C	* diameter		m		
	Pipework and fittings ; fixed to walls and columns				
D	* diameter		m		
	Extra over pipework for				
E	* bends		nr		
F	* tees		nr		
G	* reducing bends		nr		
H	* reducing tees		nr		
	MODEL BILL OF DESCRIPTION		To Collection	\$	
	ASD STANDARD BILLS MODBQ.34/17				

MEDICAL GAS INSTALLATION

Item	Description	Qty	Unit	Rate	HK\$
	<u>NITROUS OXIDE SYSTEM ; INTERNALLY / IN PLANT ROOM / EXTERNALLY# (Cont'd)</u>				
A	* caps		nr		
	Header pipes ; blanked off at spare outlets ; supporting on floors				
B	* diameter ; * long ; with * nr. * x * x * branches		nr		
	<u>Bronze valves</u>				
	Gate valves				
C	* diameter		nr		
	Check valves				
D	* diameter		nr		
	Ball valves				
E	* diameter		nr		
	Relief or safety valves ; enclosed adjustable spring loaded type				
F	* diameter		nr		
	Pressure reducing valves ; full way type				
G	* diameter		nr		
	Stop and isolating valves ; screw down type				
H	* diameter		nr		
	<u>Filters</u>				
	Air filters				
J	to suit * diameter pipes		nr		
	Oil filters				
K	to suit * diameter pipes		nr		
	MODEL BILL OF DESCRIPTION				
	ASD STANDARD BILLS MODBQ.34/18				
			To Collection	\$	

MEDICAL GAS INSTALLATION

Item	Description	Qty	Unit	Rate	HK\$
	<u>NITROUS OXIDE SYSTEM ; INTERNALLY / IN PLANT ROOM / EXTERNALLY# (Cont'd)</u>				
	<u>Silencers ; low resistance type ; limit noise level to NC76 (maximum) ; necessary accessories</u>				
	Silencers				
A	to suit * diameter pipes		nr		
	<u>Expansion joints ; stainless steel ; external protective sleeve</u>				
	Bellow expansion joints ; axial movement pattern type screw end				
B	* diameter		nr		
	<u>Fire-rated enclosure ; complying Fire Safety Code ; complete with all necessary framings</u>				
	2 hour fire-resistant-period enclosure				
C	to suit * diameter pipes		m		
	<u>Medical gas terminal outlets ; HTM 02-01 ; BS EN ISO 9170-1, BS 5682 ; spring-loaded cut-off valves and outlet sockets ; satin finish stainless steel plated face plates with a factory fixed plastic film for protection</u>				
	Medical gas terminal outlets ; fixed to walls and columns				
D	* diameter outlets		nr		
	<u>Emergency inlet ports ; complete with lockable valves, non-return valves and blanked connecting ports</u>				
	Emergency inlet ports				
E	to suit * diameter pipes		nr		
	<u>Pressure gauges ; ISO 4126-1:2013 and BS EN 837-1:1998</u>				
	Pressure gauges				
F	to suit * diameter pipes		nr		
	MODEL BILL OF DESCRIPTION				
	ASD STANDARD BILLS				
	MODBQ.34/19				
		To Collection	\$		

MEDICAL GAS INSTALLATION

Item	Description	Qty	Unit	Rate	HK\$
	<u>NITROUS OXIDE SYSTEM ; INTERNALLY / IN PLANT ROOM / EXTERNALLY# (Cont'd)</u>				
	<u>Drain traps</u>				
	Drain traps ; float-operated and automatic				
A	to suit * diameter pipes		nr		
	<u>Pressure switches</u>				
	Pressure switches				
B	to suit * diameter pipes		nr		
	<u>Cylinder storage racks ; approved rigid frame assembly ; safety chains</u>				
	Cylinder storage racks				
C	holding duty bank ; * nrs medical gas cylinders ; each containing * litre gas		nr		
	<u>Manifold installation ; HTM 02-01 ; including manifold control panel, regulators, pressure gauges, pressure switches, filters, valves, etc. ; manifold header pipes and flexible tail pipes with gas cylinder connectors ; all piping and necessary accessories ; interconnecting wirings and control cables ; power cables and connection to power source ; conduits and cable facilities ; all as described in the Particular Specification and the Drawings</u>				
	Automatic changeover manifolds				
D	located in * room	-	item	-	
	Manual changeover manifolds				
E	located in * room	-	item	-	
	MODEL BILL OF DESCRIPTION		To Collection	\$	
	ASD STANDARD BILLS MODBQ.34/20				

MEDICAL GAS INSTALLATION

Item	Description	Qty	Unit	Rate	HK\$
<u>ACTIVE ANAESTHETIC GAS SCAVENING SYSTEM ;</u> <u>INTERNALLY / IN PLANT ROOM / EXTERNALLY#</u>	<u>Exhauster units ; multi-stage lateral</u> <u>channel pumps ; directly driven by</u> <u>electric motors ; no lubrication within</u> <u>casings ; anti-vibration mountings ; all</u> <u>necessary accessories</u>				
A	Exhauster units generally	-	item	-	
<u>MEDICAL GAS ALARM SYSTEM ; INTERNALLY /</u> <u>IN PLANT ROOM / EXTERNALLY#</u>	<u>Valve box assembly ; approved type ;</u> <u>stainless steel carcass and lockable</u> <u>hinged cover with breakable glass panel ;</u> <u>vacuum alarm panel ; isolating valves ;</u> <u>pressure switches ; dry contacts</u>				
B	Valve box assembly ; recess wall mounted for one medical gas		nr		
<u>ELECTRICITY SUPPLY ; INTERNALLY, IN PLANT</u> <u>ROOM AND EXTERNALLY</u>	<u>Variable speed drives (VSDs), IEC</u> <u>60068-2-6:2007, IEC 60068-2-27:2008, IEC</u> <u>61000-4-2:2008, IEC 61000-4-3:2010, IEC</u> <u>61000-4-4:2012, IEC 61000-4-5:2014 and ISO</u> <u>9001:2015 ; housed in integrated</u> <u>enclosure, single front-access</u>				
C	For pumps * kW		nr		
<u>Switches, switchfuses, fuseswitches ;</u> <u>complying Code of Practice for the</u> <u>Electricity (Wiring) Regulations</u> <u>(Cap.406E) and C12.1.3(b) of EE GS on</u> <u>voltage dip protection ; air-break type</u> <u>contacts</u>	Switches ; TPN ; for equipment ; fixed to walls and columns				
D	* A		nr		
MODEL BILL OF DESCRIPTION	ASD STANDARD BILLS MODBQ.34/21	To Collection	\$		

MEDICAL GAS INSTALLATION

Item	Description	Qty	Unit	Rate	HK\$
	<u>ELECTRICITY SUPPLY ; INTERNALLY, IN PLANT ROOM AND EXTERNALLY (Cont'd)</u>				
	<u>Motor starters ; air-break triple-pole electro-magnetic type, IEC 60947-4-1:2009 or IEC 62271-106:2011/CORR 1:2014 ; complying IEC 61000 and C12.1.3(b) of EE GS on voltage dip protection ; 0 - 30 minutes time delay</u>				
	Direct on line (DOL) starters				
A	* A ; to suit * pumps (ref. *)		nr		
	Star-delta starters				
B	* A ; to suit * pumps (ref. *)		nr		
	<u>Final circuits ; approved power supply cables ; drawn into and including conduit / trunking to HTM 02-01 ; all necessary cabling facilities ; fixing and earth continuity</u>				
	From isolators (isolators measured separately)				
C	* x * mm2 ; * core cables ; to * pumps (ref. *)		nr		
	<u>Perforated steel trays and fittings to BS EN 10149-1:2013 ; hot dipped galvanised to ISO 1460:1992 and ISO 1461:2009</u>				
	Trays and fittings ; fixed to walls and columns				
D	* wide		m		
	Trays and fittings ; suspended from soffits				
E	* wide		m		
	Extra over * wide trays for				
F	bends		nr		
G	tees		nr		
	MODEL BILL OF DESCRIPTION		To Collection	\$	
	ASD STANDARD BILLS MODBQ.34/22				

MEDICAL GAS INSTALLATION

Item	Description	Qty	Unit	Rate	HK\$
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CONTROL SYSTEM - AUTOMATIC CONTROL SYSTEM (ACS) ; INTERNALLY, IN PLANT ROOM AND EXTERNALLY

Control panels, hairline finished stainless steel construction ; complete with indicating lights, ammeters, gauges, control switches, motor starters, contactors (motor starters and contactors measured separately), push buttons, alarm chimes, alarm indicating lights ; alarm mute buttons, control wiring ; flush galvanised iron supports and accessories and other necessary equipment to enable remote operation and monitoring of all medical gas equipment ; all other necessary instrument and accessories

* thick local control panel ; floor mounted type

A located in * room ; * local control panel (ref. *)

nr

Steel control panels, factory built assemblies, self supporting and framing, IP* protection ; to IEC 61439-1:2011 and IEC 61439-2:2011 ; complete with LED indicating lamps, ammeters, voltmeters, relays, timers, selectors, control switches, motor starters, contactors (motor starters and contactors measured separately), control wiring and other necessary equipment to enable remote operation and monitoring of all medical gas equipment ; all other necessary instrument and accessories

* thick local control panel ; wall mounted type

B located in * room ; * local control panel (ref. *)

nr

MEDICAL GAS INSTALLATION

Item	Description	Qty	Unit	Rate	HK\$
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CONTROL SYSTEM - AUTOMATIC CONTROL SYSTEM (ACS) ; INTERNALLY, IN PLANT ROOM AND EXTERNALLY (Cont'd)

Design, supply and install steel control panels, type tested cubicle ; to BS EN 61439-1:2011 and BS EN 61439-2:2011 ; complete with indicating lamps, ammeters, voltmeters, relays, timers, selectors, control switches, motor starters, contactors (motor starters and contactors measured separately), fire resistant cables, control wiring and other necessary equipment to enable remote operation and monitoring of medical gas equipment ; all other necessary instrument and accessories

* thick local control panel ; wall mounted type

A located in * room ; * local control panel (ref. *)

nr

Electrical control circuits ; associated with medical gas equipment ; connections to control panels (control panels measured separately) ; interconnecting wiring, cables, conduits, cabling facilities ; relays, contactors, sensors and control devices ; all necessary instrument and accessories

From * pump local control panel (ref. *)

B to * pumps (ref. *)

nr

From compressor unit local control panel (ref. *)

C to compressor units (ref. *)

nr

From central alarm control panel (ref. *)

D to repeater alarm control panel

nr

MEDICAL GAS INSTALLATION

Item	Description	Qty	Unit	Rate	HK\$
	<u>CONTROL SYSTEM - AUTOMATIC CONTROL SYSTEM (ACS) ; INTERNALLY, IN PLANT ROOM AND EXTERNALLY (Cont'd)</u>				
	<u>Interfacing work with central control and monitoring system ; including all necessary interface devices, contactors, relays, control cables, cable facilities, trunking and trays</u>				
	Interfacing work with central control and monitoring system				
A	for * system	-	item	-	
	<u>MEDICAL GAS SUNDRIES ; INTERNALLY, IN PLANT ROOM AND EXTERNALLY</u>				
	<u>The following items in respect of the whole medical gas installation</u>				
	Allow for				
B	marking the positions of holes, mortices, chases and the like in the structure	-	item	-	
C	inspection, testing and commissioning of the complete medical gas installation ; all as described in the Particular Specification, HTM 02-01, Part H of the General Specification for Air-conditioning, Refrigeration, Ventilation and Central Monitoring and Control System Installation and Part D of the General Specification for Electrical Installation	-	item	-	
D	inspection, attendance, operation and maintenance during Maintenance Period ; all as described in the Particular Specification, HTM 02-01, Sections I1 and I3 of the General Air-conditioning, Refrigeration, Ventilation and Central Monitoring and Control System Installation, Sections of E1 and E3 of the General Specification for Electrical Installation	-	item	-	
	MODEL BILL OF DESCRIPTION		To Collection	\$	
	ASD STANDARD BILLS MODBQ.34/25				

MEDICAL GAS INSTALLATION

Item	Description	Qty	Unit	Rate	HK\$
<u>MEDICAL GAS SUNDRIES ; INTERNALLY, IN PLANT ROOM AND EXTERNALLY (Cont'd)</u>					
A	providing all necessary power and water, diesel, gas and fuels in connection with testing, commissioning and maintenance	-	item	-	
B	providing installation drawings ; all as described in the Particular Specification, Section A4.2 of both the General Specification for Air-conditioning, Refrigeration, Ventilation and Central Monitoring and Control System Installation and the General Specification for Electrical Installation	-	item	-	
C	providing as-built drawings ; all as described in the Particular Specification, HTM 02-01, Section A4.3 of both the General Specification for Air-conditioning, Refrigeration, Ventilation and Central Monitoring and Control System Installation and the General Specification for Electrical Installation	-	item	-	
D	providing Operation and Maintenance (O&M) Manuals and User Manuals ; all as described in the Particular Specification, HTM 02-01, Section A4.4 of both the General Specification for Air-conditioning, Refrigeration, Ventilation and Central Monitoring and Control System Installation and the General Specification for Electrical Installation	-	item	-	
E	providing document submission to FSD, relevant government department and Authority ; all as described in the Particular Specification	-	item	-	
MODEL BILL OF DESCRIPTION ASD STANDARD BILLS MODBQ.34/26		To Collection \$			

MEDICAL GAS INSTALLATION

Item	Description	Qty	Unit	Rate	HK\$
<u>MEDICAL GAS SUNDRIES ; INTERNALLY, IN</u>					
<u>PLANT ROOM AND EXTERNALLY (Cont'd)</u>					
A	training of users and operation and maintenance agents as described in the Particular Specification, HTM 02-01, Section I1 and I2 of the General Specification for Air-conditioning, Refrigeration, Ventilation and Central Monitoring and Control System Installation and the General Specification for Electrical Installation	-	item	-	
B	providing sample boards as described in HTM 02-01 and Section A3.7 of both the General Specification for the Air-conditioning, Refrigeration, Ventilation and Central Monitoring and Control System Installation and the General Specification for Electrical Installation	-	item	-	
C	supplying pipe sleeves (sleeves fixing by others) and filling holes so formed in walls, floors and ceilings with approved packing materials as described	-	item	-	
D	supplying conduit sleeves (sleeves fixing by others) and filling holes so formed in walls, floors and ceilings with approved packing materials as described	-	item	-	
E	supplying cable sleeves (sleeves fixing by others) and filling holes so formed in walls, floors and ceilings with approved packing materials as described	-	item	-	
F	supplying and fixing fire stopping to walls and floors	-	item	-	
MODEL BILL OF DESCRIPTION					To Collection \$
ASD STANDARD BILLS					MODBQ.34/27

MEDICAL GAS INSTALLATION

Item	Description	Qty	Unit	Rate	HK\$
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MEDICAL GAS SUNDRIES ; INTERNALLY, IN
PLANT ROOM AND EXTERNALLY (Cont'd)

A	acoustic treatment installation to the whole medical gas installation ; all as described in the Particular Specification and both the General Specification for Air-conditioning, Refrigeration, Ventilation and Central Monitoring and Control System Installation and CIBSE Guide	-	item	-	
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C O L L E C T I O N

Item

Description

HK\$

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C. fwd \$

MEDICAL GAS INSTALLATION

C O L L E C T I O N

B.fwd

\$

Item

Description

HK\$

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Bill Nr. MODBQ.34 - MEDICAL GAS INSTALLATION

To Summary

\$

Bill Nr. MODBQ.35
PRIME COST, PROVISIONAL AND CONTINGENCY SUMS

Item Description HK\$

PRIME COST SUMS FOR WORK TO BE CARRIED OUT BY NOMINATED
SUB-CONTRACTORS

Lift and Escalator Installation

Prime Cost Sum of \$ * for

A Lift and escalator installation.

Add for profit

B % (BP)

Allow for attendance

C Attendances, arrangements, etc. as detailed in Bill Nr. 1 and for cutting away for and making good in all trades after installation of the following:

(a) * no. firemen's lift serving * floor to * floor in lift shaft approximate size * m x * m on plan.

(b) * no. firemen's lift serving * floor to * floor in lift shaft approximate size * m x * m on plan.

(c) * no. passenger's lift serving * floor to * floor in lift shaft approximate size * m x * m on plan.

(d) * no. machine-room-less passenger's lifts serving * floor to * floor in lift shafts with each of approximate size * m x * m on plan.

(e) * no. machine-room-less passenger's lifts serving * floor to * floor in lift shaft approximate size * m x * m on plan.

(f) * no. escalators serving * floor to * floor.

(g) * no. escalators serving * floor to * floor.

Item

Description

HK\$

PRIME COST SUMS FOR WORK TO BE CARRIED OUT BY NOMINATED
SUB-CONTRACTORS (Cont'd)

A

Specific items of attendance:

(a) Provision, maintenance and subsequent removal of scaffolding in the lift shafts with the consultation with the Supervising Officer, erected in such a manner that it can be used by both the Contractor and the Lift Sub-contractor and left in position unit completion of the lifts installation.

(b) Provision, maintenance and subsequent removal of adequate guard rails to prevent accidental access to the lift shafts at every point of entry.

(c) Provision prior to completion of temporary plywood or hardwood lining complete with framing to all sides, floor and entrance door of each lift car and architraves for protection during moving in of tenants' furniture and fittings, including maintaining and removing whenever ordered during the Maintenance Period.

(d) Provision for loading materials to the roof machine room for strength testing of the lift machine hoist beams to the loading specified by the Lift Sub-contractor and in accordance with Schedule 1 of Factories and Industrial Undertakings (Lifting Appliances and Lifting Gear) Regulations (Chapter 59J), including removal of loading materials after tests have been satisfactorily completed.

(e) Packing and filling of cement and sand (1:4) rough rendering behind lift architraves.

(f) Temporary electricity supply of * amp, * volt, * phase, * wires to each lift machine room for the testing of the Lift Sub-contractor's installation, including payment of all charges for power consumed.

(g) Temporary electricity supply of * amp, * volt, single-phase, * wires for the Lift Sub-contractor's storage shed/working area, including payment of all charges for power consumed.

PRIME COST, PROVISIONAL AND CONTINGENCY SUMS

Item

Description

HK\$

PRIME COST SUMS FOR WORK TO BE CARRIED OUT BY NOMINATED
SUB-CONTRACTORS (Cont'd)

Building Services Installation

Prime Cost Sum of \$ * for

A Building Services Installation including electrical
installation, air-conditioning and mechanical
ventilation installation, fire service installation
and plumbing installation.

Add for profit

B [redacted] %

(BP)

[redacted]

Item

Description

HK\$

PRIME COST SUMS FOR WORK TO BE CARRIED OUT BY NOMINATED
SUB-CONTRACTORS (Cont'd)

Alternative I

Allow for attendance

A

Attendances, arrangements, etc. as detailed in Bill Nr. 1 and for cutting away for and making good in all trades after installation of the following:-

Electrical installation

(a) Incoming electricity supply ; main and sub-main distribution ; lighting and power final circuit, luminaires and accessories ; electrical appliances ; cabling facilities for other services ; emergency call bell, intercom, public address and CCTV systems ; lightning protection system ; earthing and bonding system.

(b) Low voltage switchgears installation.

Air-conditioning and mechanical ventilation installation

(a) Split type room coolers and outdoor units ; associated pipework, ductwork, thermal insulation, electrical and control work.

(b) Ventilation system, associated ductwork, fans, electrical and control work.

Fire service installation

(a) Hose reel system ; visual fire alarm system ; fire alarm and control system ; automatic sprinkler system ; portable hand-operated appliances ; associated pipework, electrical and control works.

Plumbing installation

(a) Cold water system ; hot water system ; flushing water system ; irrigation water system ; cleansing water system ; rainwater recycling system ; water pump sets, tanks, pipework, electrical and control works.

B

Specific items of attendance for Building Services Installation

(a) co-ordinating and providing for the logistics (such as tower cranes, hoists, loading and unloading platforms, access, temporary openings etc) and allow for coordinating for the storage of off-site prefabricated building components, such as Modular Integrated Construction (MiC) or Multi-trade Mechanical, Electrical and Plumbing (MiMEP) etc.

Item	Description	HK\$
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PRIME COST SUMS FOR WORK TO BE CARRIED OUT BY NOMINATED
SUB-CONTRACTORS (Cont'd)

A	<p>Specific items of attendance for Electrical installation</p> <p>(a) temporary electricity supply of * amp, * volt, three phase, four wires for the testing, including payment of all charges for power consumed.</p> <p>(b) temporary electricity supply of * amp, * volt, single phase, two wires for the storage shed/woring area, including payment of all charges for power consumed.</p>	
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B	<p>Specific items of attendance for Air-conditioning and mechanical ventilation installation</p> <p>(a) temporary electricity supply of * amp, * volt, * phase, * wires for the testing, including payment of all charges for power consumed.</p> <p>(b) temporary electricity supply of * amp, * volt, * phase, * wires for the storage shed/working area, including payment of all charges for power consumed.</p>	
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C	<p>Specific items of attendance for Fire Service installation</p> <p>(a) temporary electricity supply of * amp, * volt, * phase, * wires for the testing, including payment of all charges for power consumed.</p> <p>(b) temporary electricity supply of * amp, * volt, * phase, * wires for the storage shed/working area, including payment of all charges for power consumed.</p>	
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D	<p>Specific items of attendance for Plumbing installation</p> <p>(a) temporary electricity supply of * amp, * volt, * phase, * wires for the tesing, including payment of all charges for power consumed.</p> <p>(b) temporary electricity supply of * amp, * volt, * phase, * wires for the storage shed/working area, including payment of all charges for power consumed.</p>	
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Alternative II

Item

Description

HK\$

PRIME COST SUMS FOR WORK TO BE CARRIED OUT BY NOMINATED
SUB-CONTRACTORS (Cont'd)

Allow for attendance

A

Attendances, arrangements, etc. as detailed in Bill
Nr. 1 and for cutting away for and making good in
all trades after installation of the following:-

Electrical and L.V. Switchboard installations
(for school project)

lighting points (* nr.)

power points (* nr.)

ceiling fans (* nr.)

water heaters (* nr.)

machines, single-phase (* nr.)

machines, 3-phase (* nr.)

trunking, conduits, pipes to be painted (* m)

Air-conditioning and mechanical ventilation
installation
(for school project)

mechanical ventilation systems to Assembly Halls,
toilets, changing and dressing rooms, stores,
pantries, tuck shops and plant rooms

VRV conditioning units (* nr.)

exhausted fans (* nr.)

fan coil units (* nr.)

fresh air pre-conditioners (* nr.)

chilled water pumps (* nr.)

Fire service installation
(for school project)

hosereels (* nr.)

break glass (including weatherproof type) (* nr.)

fire service inlets (* nr.)

Item

Description

HK\$

PRIME COST SUMS FOR WORK TO BE CARRIED OUT BY NOMINATED
SUB-CONTRACTORS (Cont'd)

fire service control panels (* nr.)

pump control panels (* nr.)

red flashing lights (including weatherproof type)
(* nr.)

alarm bells (including weatherproof type) (* nr.)

exit signs (* nr.)

fire hydrants (single outlet) (* nr.)

4.5kg CO2 fire extinguishers (* nr.)

associated pipework, valves, controls, electrical
connections, switches and accessories

Plumbing installation
(for school project)

water pumps (* nr.)

pump control panels (* nr.)

associated pipework, valves, controls, electrical
connections, switches and accessories

A Specific items of attendance for Building Services
Installation

(a) co-ordinating and providing for the logistics
(such as tower cranes, hoists, loading and
unloading platforms, access, temporary openings
etc) and allow for coordinating for the storage of
off-site prefabricated building components, such as
Modular Integrated Construction (MiC) or
Multi-trade Mechanical, Electrical and Plumbing
(MiMEP) etc.

Item	Description	HK\$
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PRIME COST SUMS FOR WORK TO BE CARRIED OUT BY NOMINATED
SUB-CONTRACTORS (Cont'd)

A	<p>Specific items of attendance for Electrical installation</p> <p>(a) temporary electricity supply of * amp, * volt, three phase, four wires for the testing, including payment of all charges for power consumed.</p> <p>(b) temporary electricity supply of * amp, * volt, single phase, two wires for the storage shed/working area, including payment of all charges for power consumed.</p>	
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B	<p>Specific items of attendance for Air-conditioning and mechanical ventilation installation</p> <p>(a) temporary electricity supply of * amp, * volt, * phase, * wires for the testing, including payment of all charges for power consumed.</p> <p>(b) temporary electricity supply of * amp, * volt, * phase, * wires for the storage shed/working area, including payment of all charges for power consumed.</p>	
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C	<p>Specific items of attendance for Fire service installation</p> <p>(a) temporary electricity supply of * amp, * volt, * phase, * wires for the testing, including payment of all charges for power consumed.</p> <p>(b) temporary electricity supply of * amp, * volt, * phase, * wires for the storage shed/working area, including payment of all charges for power consumed.</p>	
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D	<p>Specific items of attendance for Plumbing installation</p> <p>(a) temporary electricity supply of * amp, * volt, * phase, * wires for the testing, including payment of all charges for power consumed.</p> <p>(b) temporary electricity supply of * amp, * volt, * phase, * wires for the storage shed/working area, including payment of all charges for power consumed.</p>	
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Item	Description	HK\$
<u>ATTENDANCE ON CONTRACTORS EMPLOYED DIRECT BY EMPLOYER</u>		
<u>Electronic Installation (approximate value \$ *)</u>		
Allow for attendance		
A	Attendances, arrangements, etc. as detailed in Bill Nr. 1 for cutting away for and making good in all trades after installation of electronic installation.	
B	Specific items of attendance for Building Services Installation	
	(a) co-ordinating and providing for the logistics (such as tower cranes, hoists, loading and unloading platforms, access, temporary openings etc) and allow for coordinating for the storage of off-site prefabricated building components, such as Modular Integrated Construction (MiC) or Multi-trade Mechanical, Electrical and Plumbing (MiMEP) etc.	
<u>PROVISIONAL SUMS</u>		
<u>Provide the following sums to be expended wholly or in part as directed by the Supervising Officer or wholly deducted from the Contract Sum if not required</u>		
C	Signage	
D	Graphics design, murals and art works	
E	Additional fitting out works and furniture	
F	Lift interior decoration	
G	Equipment and safety matting at fitness room, children's room and multi-purpose room	
H	Statutory requirement for the universal accessibility	
J	Dynamic testing of floor on steel truss	
K	Additional works resulting from additional statutory fire service requirements	
L	Additional works resulting from SCCU inspection	
M	Movable maintenance platforms	

PRIME COST, PROVISIONAL AND CONTINGENCY SUMS

Item Description HK\$

PROVISIONAL SUMS (Cont'd)

- A Special features and furniture to open areas
- B Supply of special tools and spare parts for building services materials
- C Additional builder's works in connection with building services installations
- D Utility diversion works outside site boundary and utility connections
- E Interfacing with outside site boundary materials
- F Interfacing works in connection with electronic installation
- G Supply of spare building materials
- H Topping out and opening ceremony
- J Fluctuations in the costs of labour and materials

CONTINGENCY SUM

Provide the following sums to be expended wholly or in part as directed by the Supervising Officer or wholly deducted from the Contract Sum if not required

- K Allow a Contingency Sum of \$ * for general contingencies

PRIME COST, PROVISIONAL AND CONTINGENCY SUMS

C O L L E C T I O N

Item

Description

HK\$

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Bill Nr. MODBQ.35 - PRIME COST, PROVISIONAL AND CONTINGENCY SUMS

To Summary \$