

**General Specification for Mechanical Installations in Government  
Buildings of the Hong Kong Special Administrative Region  
(2017 Edition)**

The 2017 edition of the General Specification for Mechanical Installations has incorporated updates and revisions to the 2012 edition (incorporating Corrigendum No. GSMI01-2012). Please refer to the summary of major changes for the updates and revisions involved.

Electronic version of this 2017 edition can be viewed on the ArchSD Internet website.

In view of the updates and revisions, there will be an introductory period of 6 months in preparation for full implementation of this 2017 edition as contract document by 1 October 2017. In summary,

- For tenders to be invited on or after 1 October 2017, this 2017 edition shall be used.
- Existing contracts (including contracts using previous editions tendered before 1 October 2017) will not be affected.

**MAJOR CHANGES IN THE GENERAL SPECIFICATION FOR MECHANICAL INSTALLATION  
IN GOVERNMENT BUILDINGS OF THE HONG KONG SPECIAL ADMINISTRATIVE REGION  
2017 EDITION**

Old Ref. No. (2012)	New Ref. No. (2017)	Major Changes
<b>PREFACE</b>		
-	-	The descriptions in the Preface are revised.
<b>TABLE OF CONTENTS</b>		
-	A3.11	Title amended as “A3.11 Labels and Related Instruction”
-	A3.12	New sub-section “A3.12 Manufacturers’ Technical Support in Hong Kong” added.
-	A3.13	New sub-section “A3.13 Equipment Deviations” added.
-	A4.2	Title amended as “Installation Drawings and Submissions”
-	Section C12	Add a new section on “ <b>FOOD WASTE COMPOSTING SYSTEM</b> ” comprising: C12.1 Scope of Section C12.2 Compliance with Special Regulatory Requirements and Standards C12.3 Design C12.4 Equipment and Material C12.5 Erection and Installation
-	Part D	Subtitles amended to match with revision of the whole section to be in line with other General Specifications.
-	Part E	Subtitles amended to match with revision of the whole section to be in line with other General

Old Ref. No. (2012)	New Ref. No. (2017)	Major Changes
		Specifications.
<b>PART A</b>		
Various parts of the whole GS	Various Parts of the whole GS	Replace “Architect” with “Supervising Officer” or “Supervising Officer or his Representative” where appropriate.
Various parts of the whole GS	Various Parts of the whole GS	Replace “this Specification” by “this General Specification” where appropriate.
A1.1	A1.1	<p>Replace “...General Conditions of Contract, Special Conditions of Contract,...” by “.... Conditions,...”.</p> <p>Replace “...Particular Specification for the Installations, ...” by “Particular Specification, ...”.</p>
A1.3.1	A1.3.1	<p>Revise the definition of “Conditions” as</p> <p style="text-align: center;"><i>The “Conditions of Contract” as defined in the Contract. For Nominated Sub-contract works, the “Main Contract Conditions” and the “Sub-contract Conditions” as defined in the Nominated Sub-contract as appropriate.</i></p> <p>Replace “Architect” and its definition “The Architect or the Maintenance Surveyor or the Supervising Officer as defined in the Contract” by “Supervising Officer” defined as “The Supervising Officer or the Maintenance Surveyor defined in the Contract as appropriate”.</p> <p>Revise “Proprietary brand name materials or products” by “Proprietary brand name products or materials” and with the definition below:</p>

Old Ref. No. (2012)	New Ref. No. (2017)	Major Changes						
		<p><i>‘The phrase “or alternative materials having equivalent functions or performance” is deemed to be included wherever products or materials are specified by proprietary brand names in the Contract. Alternative products or materials of different brands or manufacture having equivalent functions or performance may be submitted for the consideration of the Supervising Officer.’.</i></p> <p>The following definitions are added.</p> <table data-bbox="860 571 1995 799"> <tr> <td data-bbox="860 571 1003 699">or equivalent standards</td> <td data-bbox="1167 571 1995 799">Means internationally recognised standards acceptable to the Supervising Officer having similar requirements and specification as regards to the type of construction, functions, performance, general appearance and standard of quality of manufacture and approved by the Supervising Officer</td> </tr> </table>	or equivalent standards	Means internationally recognised standards acceptable to the Supervising Officer having similar requirements and specification as regards to the type of construction, functions, performance, general appearance and standard of quality of manufacture and approved by the Supervising Officer				
or equivalent standards	Means internationally recognised standards acceptable to the Supervising Officer having similar requirements and specification as regards to the type of construction, functions, performance, general appearance and standard of quality of manufacture and approved by the Supervising Officer							
-	A1.3.2	<p>Added sub-title “A1.3.2 Abbreviations”.</p> <p>Definition for the following terms added:</p> <table data-bbox="860 1015 1995 1337"> <tr> <td data-bbox="860 1015 972 1046">ArchSD</td> <td data-bbox="1167 1015 1995 1094">Architectural Services Department, the Government of the HKSAR</td> </tr> <tr> <td data-bbox="860 1158 909 1190">BD</td> <td data-bbox="1167 1158 1872 1190">Buildings Department, the Government of the HKSAR</td> </tr> <tr> <td data-bbox="860 1254 927 1286">BEC</td> <td data-bbox="1167 1254 1995 1334">Code of Practice for Energy Efficiency of Building Services Installation issued by the EMSD</td> </tr> </table>	ArchSD	Architectural Services Department, the Government of the HKSAR	BD	Buildings Department, the Government of the HKSAR	BEC	Code of Practice for Energy Efficiency of Building Services Installation issued by the EMSD
ArchSD	Architectural Services Department, the Government of the HKSAR							
BD	Buildings Department, the Government of the HKSAR							
BEC	Code of Practice for Energy Efficiency of Building Services Installation issued by the EMSD							

Old Ref. No. (2012)	New Ref. No. (2017)	Major Changes
		<p data-bbox="862 236 1995 363">BS British Standards, including British Standard Specifications and British Standard Codes of Practice, published by the British Standards Institution</p> <p data-bbox="862 427 1995 555">BS EN BSB European Standard adopted as British Standard The Building Services Branch of the ArchSD, the Government of the HKSAR</p> <p data-bbox="862 619 1995 746">EE_GS General Specification for Electrical Installation in Government Buildings of the Hong Kong Special Administrative Region, issued by the ArchSD</p> <p data-bbox="862 810 1995 906">EMSD Electrical and Mechanical Services Department, the Government of the HKSAR</p> <p data-bbox="862 970 1995 1034">EPD Environmental Protection Department, the Government of the HKSAR</p> <p data-bbox="862 1098 1995 1145">FSD Fire Services Department, the Government of the HKSAR</p> <p data-bbox="862 1209 1995 1241">HKSAR Hong Kong Special Administrative Region</p> <p data-bbox="862 1305 1995 1337">IEC International Electrotechnical Commission</p>

Old Ref. No. (2012)	New Ref. No. (2017)	Major Changes
		<p>ISO International Organisation for Standardization</p> <p>LD Labour Department, the Government of the HKSAR</p> <p>O&amp;M Operation and Maintenance</p> <p>WSD Water Supplies Department, the Government of the HKSAR</p>
Section A2	Section A2	Replace title “STATUTORY OBLIGATIONS AND OTHER REQUIREMENTS” by “STATUTORY OBLIGATIONS AND OTHER REGULATIONS” to match with title at content page and be in line with same section used in other General Specifications.
A2.1	A2.1	Replace para. 1 as “The Installations shall conform in all respects with the followings:”.
A2.1.1	A2.1.1	Add in para. 1: “All Enactments and Regulations, in particular, the MI Contractor’s attention is drawn to the followings:”.
-	A2.1.1(p)	Add “(p) Buildings Energy Efficiency Ordinance (Cap. 610), and other subsidiary legislation made under the Ordinance; and”.
-	A2.1.1(q)	Add “(q) Energy Efficiency (Labelling of Products) Ordinance (Cap. 598)”.
A2.1.2, A2.1.3	A2.1.2, A2.1.3	Use abbreviation defined in A1.3.2 to replace long name of the terms, e.g.. “Electrical and Mechanical Services Department, the Government of the HKSAR” by “EMSD”.
-	A2.1.2(g)	Add “(g) General Specification for Fire Service Installation in Government Buildings, HKSAR, issued by the ArchSD;”.

Old Ref. No. (2012)	New Ref. No. (2017)	Major Changes
A2.1.2(h)	A2.1.2(i)	Replace “by the Electrical and Mechanical Services Department,” by “issued by Prevention of Legionnaires' Disease Committee,”.
-	A2.1.2(k)	<p>Add the following:-</p> <p>(k) Codes of Practice issued by the following international institutions:-</p> <ul style="list-style-type: none"> <li>- American National Standard Institute</li> <li>- Air-conditioning and Refrigeration Institute</li> <li>- American Society of Mechanical Engineers</li> <li>- American Society for Testing and Materials</li> <li>- Committee for European Normalisation</li> <li>- The Institute of Electrical and Electronic Engineers</li> <li>- International Organisation for Standardisation</li> <li>- Japanese International Standard</li> <li>- National Fire Protection Association;</li> </ul>
-	A2.1.2(l)	<p>Add the following:-</p> <p>(l) The Supply Rules and other requirements issued by the relevant local electricity supplier and water authority;</p>
A2.1.2(j) to (r)	A2.1.2(m) to (u)	Add names of the organisations publishing/issuing the publications.
A2.1.2(s)	A2.1.2(v)	Replace “, Hong Kong,” by “of the HKSAR”.

Old Ref. No. (2012)	New Ref. No. (2017)	Major Changes
-	A2.1.2(x) and (y)	<p>Added “(x) General Specification for Plumbing Installation in Government Buildings of the HKSAR issued by the ArchSD;”.</p> <p>Added “(y) General Specification for Drainage Installation in Government Buildings of the HKSAR issued by the ArchSD; and”.</p>
-	A2.1.2(z)	Added “(z) Green Specifications on green procurement of items adopted by Bureaux and Government Departments maintained by the EPD.”.
A.2.1.3(g) to (l)	A2.1.3(g) to (l)	Add “ issued by the LD”.
A2.1.4	A2.1.4	Replace “...first date invitation...” by “...first tender invitation...”.
A3.1	A3.1	Revise it as “The International System of Units ( <del>System International d’Unites</del> ) of weights and measures ... ..”.
A3.5	A3.5	Add at end of the para. 1, add “...and keep the Site in a clean and tidy condition”.
A3.6	A3.6	<p>Add as para. 4:</p> <p><i>All tradesmen must be experienced in the trade and the work carried out shall be consistent with good practice in Hong Kong and to the satisfaction of the Supervising Officer. In this connection, the MI Contractor’s attention is drawn to the Special Conditions of Contract under the Contract for the requirements relating to Qualified Tradesmen/Qualified Skilled Workers and Intermediate Tradesmen/Qualified Semi-skilled Workers.</i></p>
A3.9	A3.9	At para. 2, (1 <sup>st</sup> sentence), delete the sentence “Materials and equipment delivered to Site are the Employer’s property.”.

Old Ref. No. (2012)	New Ref. No. (2017)	Major Changes
		<p>At para. 3 (1<sup>st</sup> sentence), revise it as “Where ... all incoming/outgoing materials <b>and equipment</b>.”.</p> <p>Add as para. 4</p> <p><i>The MI Contractor shall print the major technical details on equipment/ materials or supporting documents (e.g. delivery note), or else submit a written declaration to confirm compliance of the equipment/materials with the approved technical details so as to facilitate checking of equipment/materials delivered on site.</i></p>
A3.11	A3.11	<p>Title changed to “LABELS AND RELATED INSTRUCTION”. The content is totally revised to harmonise with GS of other BS installations.</p>
-	A3.12	<p>Section added to harmonise with General Specification for other BS installations.</p> <p>A3.12 Manufacturers’ Technical Support in Hong Kong</p> <p><i>All equipment listed in the Equipment Schedule shall be supplied through authorised agencies of the manufacturers in Hong Kong or through the Hong Kong offices of the manufacturers. These local agencies or offices shall have adequate technical staff to provide pre-sale and after-sale services to the MI Contractor. Unless otherwise specified in the Particular Specification, equipment supplied directly by the manufacturers, which do not have local agencies or offices will not be accepted. Spare parts should also be available in the local market easily.</i></p>
-	A3.13	<p>Section added to harmonise with General Specification for other BS installations.</p> <p>A3.13 Equipment Deviations</p> <p><i>Subsequent to the acceptance of his Tender, and only in exceptional circumstances where it is</i></p>

Old Ref. No. (2012)	New Ref. No. (2017)	Major Changes
		<p><i>demonstrated in writing by the MI Contractor that the original equipment offered cannot be obtained, the Supervising Officer may, subject to the Conditions, consider and approve, in writing, alternative equipment and materials having equivalent functions or performance as proposed by the MI Contractor provided always that these are fully in compliance with the relevant Specification and Drawings and do not impose any additional contractual or financial liabilities onto the Employer.</i></p>
A4.1	A4.1	<p>Replace “CAD Standard of Works Projects (CSWP) as posted in the web site of the Works Branch, Development Bureau” by “CAD Standard for Works Projects (CSWP) as posted in the website of the Development Bureau”.</p>
A4.2	A4.2	<p>Revised title as “INSTALLATION DRAWINGS AND SUBMISSIONS”.</p>
A4.2.1	A4.2.1	<p>Revise title as “Submission Schedule”.</p>
A4.2.1.3	A4.2.1.3	<p>Content revised as below:</p> <p><i>Eight weeks prior to the commencement of testing and commissioning, draft as-fitted drawings and ‘Operation and Maintenance Manuals’, in English and/or Chinese, with format in accordance with Clause A4.4 of this Specification shall be submitted for the Supervising Officer’s approval prior to producing formal copies of as-fitted drawings and O&amp;M manuals.</i></p>
A4.2.2, A4.3.2	A4.2.2, A4.3.2	<p>Replace “ISO 5457:1999” by “ISO 5457:1999/Amd 1:2010”.</p>
A4.3.1	A4.3.1	<p>Replace para. 1 “The MI Contractor shall submit...” by the following paragraphs.</p> <p><i>The MI Contractor shall submit to the Supervising Officer as-built drawings, including the</i></p>

Old Ref. No. (2012)	New Ref. No. (2017)	Major Changes
		<p><i>draft prints and revised draft prints for checking and the final approved drawings for record in accordance with the requirements set out in the contract documents. Unless otherwise specified in other part of the contract documents, the followings shall be provided.</i></p> <p><i>Three sets of the first draft prints of as-built drawings within 28 days of the issuance of the certification of completion to the Supervising Officer for checking. The Supervising Officer after checking the above draft prints shall return one set of the marked up copies of these as-built drawings to the MI Contractor within 42 days from the date of submission of the MI Contractor's draft prints with comments. The MI Contractor shall within a further 28 days from the date of receiving the Supervising Officer's comments on the draft as-built drawings re-submit to the Supervising Officer for his approval another 3 sets of the second draft prints of as-built drawings with the Supervising Officer's comments incorporated. This process of submission and approval shall continue until the final approval of the Supervising Officer on these as-built drawing is obtained.</i></p> <p>Delete last para. "The detailed requirements and the media of as-built drawings set out in the Preliminaries of the Bills of Quantities or the Specification Preliminaries shall be followed as appropriate."</p>
A4.3.3	A4.3.3	<p>Replace the whole paragraph by:</p> <p><i>The MI Contractor shall ensure all as-built drawings are accurate representation of the Installations, before submitting them to the Supervising Officer.</i></p>
A4.4.3	A4.4.3	<p>Replace the whole paragraph by:</p> <p><i>The MI Contractor shall submit to the Supervising Officer draft of O&amp;M Manuals and User Manual for checking and approval and the approved O&amp;M Manuals and User Manual for</i></p>

Old Ref. No. (2012)	New Ref. No. (2017)	Major Changes
		<p><i>record according to the requirements as specified in the contract documents.</i></p> <p><i>Unless otherwise specified, within six weeks of signing the contract, the MI Contractor shall submit 3 sets of the data sheet and circuit diagram for each of the equipment for approval. The data sheet and circuit diagram shall be included in the O&amp;M Manual upon approval by the Supervising Officer.</i></p> <p><i>The equipment data sheet shall include the important data, such as make, model number, serial number, capacity, rating, power consumption, operating pressure, testing pressure, operating voltage, size, etc.</i></p> <p><i>The circuit diagrams for the electrical, electronic and refrigeration system of equipment shall show all parts used and how they are connected.</i></p>
A4.4.6	A4.4.6	Replace “Government” by “Government of the HKSAR”.
<b>PART B</b>		
B1.1	B1.1	<p>Revise the whole paragraph as follows :</p> <p><i>Unless otherwise specified in the Particular Specification, the equipment to be supplied shall be suitable for the following service conditions:</i></p> <p><i>Climate : Hong Kong (tropical);</i></p> <p><i>Ambient temperature :</i></p> <p><i>Peak -5°C to +40°C (continuously 4 hours)</i></p>

Old Ref. No. (2012)	New Ref. No. (2017)	Major Changes
		<p><i>Average 0°C to +35°C (over 24 hours);</i></p> <p><i>Altitude : up to 2000m above sea level; and</i></p> <p><i>Relative humidity : 99% maximum</i></p>
B2.2	B2.2	<p>At para. 8, replace “IEC 60034-1:2004” by “IEC 60034-1:2010”</p> <p>At para. 10, replace “Motor starters shall be rated to intermittent class 0.1 60% on-load factor and utilisation category AC-3 in accordance with IEC 60947-4-1:2009” by “Motor starters shall be rated to intermittent class 12 i.e 12 operating cycles per hour 60% on-load factor and utilisation category AC-3 in accordance with IEC 60947-4-1:2012”</p> <p>At para. 11,</p> <ul style="list-style-type: none"> <li>- replace “IEC 60947-4-1:2009” by “IEC 60947-4-1:2012”; and</li> <li>- replace “Direct-on-line starters shall be used for motors smaller than 3.8 kW and for motors over 3.8 kW, star delta starters shall be used unless otherwise specified” by “Motors should be started by adopting appropriate starting method. For motors rated over 3.8 kW, star delta starters shall be used unless otherwise specified”.</li> </ul>
B3.1	B3.1	<p>Replace “BS 7668:2004 Weldable Structural Steel : Hot Finished Structural Hollow Sections in Weather Resistant Steels” by “BS 7668:2004 Weldable Structural Steel — Hot Finished Structural Hollow Sections in Weather Resistant Steels — Specification”.</p> <p>Replace “BS EN 10029:1991 Tolerances on Dimensions, Shape and Mass for Hot Rolled Steel Plates 3 mm Thick or Above” by “BS EN 10029:2010 Hot-rolled steel plates 3 mm thick or above -</p>

Old Ref. No. (2012)	New Ref. No. (2017)	Major Changes
		<p>Tolerances on dimensions and shape”.</p> <p>Replace “BS EN 10025:2004 Hot Rolled Products of Structural Steels. Technical Delivery Notes for Long Products, Thermomechanical Rolled Weldable Fine Grain Steels, Structural Steels with Improved Atmospheric Corrosion Resistance, Plates and Wide Flats of High Yield Strength Structural Steels in the Quenched and Tempered Condition by “BS EN 10025:2004 Hot Rolled Products of Structural Steels.”.</p> <p>Replace “BS EN 10210 Hot Finished Structural Hollow Sections of Non-Alloy and Fine Grain Structural Steels by “BS EN 10210:2006 Hot Finished Structural Hollow Sections of Non-Alloy and Fine Grain Steels”.</p> <p>Replace “ISO 14713:1991 Protection against corrosion of iron and Steel in Structures, Zinc and Aluminum Coating” by “ISO 14713:2009 Zinc coatings — Guidelines and recommendations for the protection against corrosion of iron and steel in structures”.</p>
B3.3	B3.3	<p>Delete “BS 638 Arc Welding Power Sources, Equipment and Accessories”.</p> <p>Replace “IEC 60974-6:2003 Arc Welding Equipment. Limited Duty Manual Metal Arc Welding Power Sources” by “IEC 60974-6:2015 Arc welding equipment – Limited duty equipment”.</p> <p>Add “BS EN 50525:2011 Electric cables – Low voltage energy cables of rated voltages up to and including 450/750 V (U0/U)” due to withdrawn of BS 638.</p>
B3.4	B3.4	At para. 1, replace “ISO 12944:1998” by “ISO 12944:1998+Part5:2007”.
B3.4.2	B3.4.2	At para. 1, replace “Specification” by “General Specification”.

Old Ref. No. (2012)	New Ref. No. (2017)	Major Changes
		<p>At para. 4, replace “ISO 8504:2000” by “ISO 8504:2001.</p> <p>At para. 4 and 5, replace “ISO 8501:2007” by “ISO 8501-1:2007 and ISO 8501-2:1994”.</p>
B3.4.3	B3.4.3	<p>At para. 3, replace last sentence “Only those paints with a Volatile Organic Compound limit lower than 420 g/l will be allowed.” with the following paragraphs.</p> <p><i>All paints shall be submitted for the approval of the Supervising Officer or his Representative. The volatile organic compound (VOC) content, in grams per litre, of all paint and primer shall not exceed the prescribed limit under the Air Pollution Control (Volatile Organic Compounds) Regulation or the limit set by EPD, whichever is more stringent.</i></p> <p><i>VOC content of paint shall be determined by methods stipulated in Air Pollution Control (Volatile Organic Compounds) Regulation or other methods acceptable to EPD.</i></p>
B3.4.3(c)	B3.4.3(c)	<p>Replace “BS 1710:1984” by “BS 1710:2014”.</p> <p>Replace “BS 4800:1989” by “BS 4800:2011”.</p>
<b>PART C</b>		
C1.2, C2.2, C4.2, C6.2, C7.2, C8.2, C10.2,	C1.2, C2.2, C4.2, C6.2, C7.2, C8.2, C10.2,	Unify the wordings of para. 1 of this clause of each sections as “In addition to the Section A2.1, the Installations shall comply with all relevant statutory regulations and standards, in particular”.
C3.2, C5.2, C9.2, C11.2, C12.2	C3.2, C5.2, C9.2, C11.2, C12.2	Unify the wordings of para. 1 of this clause of each sections as “The Installations shall comply with all relevant statutory regulations and standards stated in Section A2.1.”.

Old Ref. No. (2012)	New Ref. No. (2017)	Major Changes
<b>SECTION C1</b>		
C1.3.1	C1.3.1	At para. 3, - replace “BS EN 1515:2000” by “BS EN 1515-1:2000”. - replace " BS EN 1092-1:2007" by " BS EN 1092-1:2007 + A1:2013".
C1.3.1.2(c)	C1.3.1.2(c)	Replace “The burner firing shall be controlled by steam pressure transducers with capability of 30% adjustment <b>about</b> the nominal working pressure.” by “The burner firing shall be controlled by steam pressure transducers with capability of 30% adjustment <b>above</b> the nominal working pressure.”.
C1.3.1.3	C1.3.1.3	Delete “(Climatic temperature being 40°C)”.
C1.3.1.4(d)	C1.3.1.4(d)	Replace “...200mm dial...” with “...200mm diameter dial...”.
C1.3.2	C1.3.2	Correct typo “(Cap. 358)” by “(Cap. 311)”.
C1.3.2.1	C1.3.2.1	At para. 1, - replace “BS 5410-2:1978” by “BS 5410-2:2013”. - replace “BS EN 590:2009” by “BS EN 590:2013”.  At para. 2, - replace “BS 4999” by “BS 4999-141:2004 + A1:2010”. - replace “IEC 60947-1:2004” by “IEC 60947-1:2014”.

Old Ref. No. (2012)	New Ref. No. (2017)	Major Changes
		<ul style="list-style-type: none"> <li>- replace “BS EN 1906:2002” by “BS EN 1906:2012”.</li> </ul>
C1.3.2.2	C1.3.2.2	<p>At para. 1,</p> <ul style="list-style-type: none"> <li>- replace “The MI Contractor shall make connection of the burner...” by “The MI Contractor shall engage a registered gas contractor to make connection of the burner...”.</li> <li>- replace “The towngas piping installation...” by “The towngas installation...”.</li> <li>- replace “...MI Contractor and selected from the list of the Gas Supply Company’s authorised dealers.” by “...registered gas contractor and selected from the list of Registered Gas Contractors of relevant class under the Gas Safety Ordinance, Cap.51.”.</li> </ul> <p>At para. 2, replace “MI Contractor” by “registered gas contractor”.</p>
C1.3.2.3	C1.3.2.3	<p>At para. 2, replace “...the towngas MI Contractor...” by “...the registered gas contractor...”.</p>
C1.3.2.4	C1.3.2.4	<p>At para. 3,</p> <ul style="list-style-type: none"> <li>- replace “BS EN 88:2007” by “BS EN 88-1:2011”.</li> <li>- replace “BS EN 12864:2001” by “BS EN 12864:2001+A3:2009”.</li> <li>- replace “BS EN 13785:2005” by “BS EN 13785:2005+A1:2008”.</li> <li>- replace “BS EN 13786:2004” by “BS EN 13786:2004+A1:2008 or BS EN 16129:2013”.</li> </ul> <p>At para. 5, replace “BS ISO 10770:1998” by “BS ISO 10770-1:2009”.</p> <p>At para. 7,</p>

Old Ref. No. (2012)	New Ref. No. (2017)	Major Changes
		<ul style="list-style-type: none"> <li>- replace “BS 4999” by “BS 4999-141:2004 + A1:2010”.</li> <li>- replace “BS EN 1906:2002” by “BS EN 1906:2012”.</li> </ul>
C1.3.2.5	C1.3.2.5	<p>At para. 3,</p> <ul style="list-style-type: none"> <li>- replace “BS 4999” by “BS 4999-141:2004 + A1:2010”.</li> <li>- replace “BS EN 1906:2002” by “BS EN 1906:2012”.</li> </ul>
C1.3.2.7(a)	C1.3.2.7(a)	<p>Replace “BS EN 590:2009 Class A2” by “BS EN 590:2013 Class A2”.</p> <p>Replace “BS EN 230:2005” by “BS EN 298:2012” due to “BS EN 230” has been superseded by “BS EN 298”.</p>
C1.3.4	C1.3.4	<p>At para. 4, replace “BS 6068 Section 6.7:1994” by “BS 6068-6.7:1994”.</p>
C1.3.5(f)	C1.3.5(f)	<p>Delete duplicate item “(f) Parallel Slide Valve” in previous edition.</p>
C1.3.5(g), (h)	C1.3.5(f), (g)	<p>Sub-clauses rearranged.</p>
C1.3.6(c)	C1.3.6(c)	<p>Replace “Spira-tec Trap Failure Sensor Chamber complete with Blanking Plug” by “Spira-tec or functionally equivalent Trap Failure Sensor Chamber complete with Blanking Plug”.</p>
C1.4.1	C1.4.1(a)	<p>Add sub-clause no. (a) for “Pipework materials for the various services shall comply with the following:”.</p>
C1.4.1	C1.4.1(a)(i)	<p>Replace “ (a) Steam” by “(i) Steam”.</p>

Old Ref. No. (2012)	New Ref. No. (2017)	Major Changes
		<p>Replace “BS EN 10216-1:2002” by “BS EN 10216-1:2013”.</p> <p>Replace “BS EN 10217-1:2002” by “BS EN 10217-1:2002+A1:2005”.</p> <p>Replace “BS EN 1092-1:2002” by “BS EN 1092-1:2007 + A1:2013”.</p>
C1.4.1	C1.4.1(a)(ii)	<p>Replace “(b) Hot and Cold Water” by “(ii) Hot and Cold Water”</p> <p>For hot water supply pipe up to and including 65mm:</p> <ul style="list-style-type: none"> <li>- Replace "BS EN 1057-1:2006" by "BS EN 1057:2006 + A1:2010".</li> <li>- Delete “BSEN 1254:1998”.</li> </ul> <p>For hot water supply pipe above 65mm and up to 150mm dia.:</p> <ul style="list-style-type: none"> <li>- Replace "BS EN 1057-1:2006" by "BS EN 1057:2006 + A1:2010".</li> </ul> <p>For cold water supply pipe:</p> <ul style="list-style-type: none"> <li>- Replace "BS EN 1057-1:2006" by "BS EN 1057:2006 + A1:2010".</li> <li>- Replace “BS EN 1254:1998” by “BS EN 1254-1,2,4,5:1998”.</li> </ul>
C1.4.1	C1.4.1(a)(iii)	<p>Replace “(c) Compressed Air System” by “(iii) Compressed Air System”.</p>
C1.4.1	C1.4.1(b)	<p>Replace “The valve manufacturer’s name and figure nos. given below, indicate the required minimum acceptable standard. Alternatives may be offered on an equal basis always subject to the valves having equivalent functions or performance.” by “(b) Valve materials for the various services shall comply with the following:”.</p>

Old Ref. No. (2012)	New Ref. No. (2017)	Major Changes
		Replace “BS EN 1984: 2000” by “BS EN 1984: 2010” at various locations under this clause.
C1.4.1	C1.4.1(b)(i)	<p>Replace “(a) Steam – General Isolating” by “(i) Steam – General Isolating”.</p> <p>Delete “Fig. No. Biseat Two Stop IMI Bailey”.</p> <p>Delete “Fig. No. 7609 IMI Bailey”.</p>
C1.4.1	C1.4.1(b)(ii)	<p>Replace “(b) Steam – for Connection to Equipment” by “(ii) Steam – for Connection to Equipment”.</p> <p>Delete “Fig. No. Biseat Two Stop IMI Bailey”.</p> <p>Delete “Fig. No. 7609 IMI Bailey”.</p>
C1.4.1	C1.4.1(b)(iii)	<p>Replace “(c) Condensate – General Isolation” by “(iii) Condensate – General Isolation”.</p> <p>Delete “Fig. No. 33 Hattersley N.H”.</p>
C1.4.1	C1.4.1(b)(iv)	<p>Replace “(d) Condensate – HWS Check Valves” by “(iv) Condensate – HWS Check Valves”.</p> <p>Delete “Fig. No. 47 Hattersley N.H.”.</p> <p>Delete “Fig. No. M651 PN16 Hattersley”.</p>
C1.4.1	C1.4.1(b)(v)	<p>Replace “(e) Drain Valves” by “(v) Drain Valves”.</p> <p>Replace “Bronze drain valve with hose union ends and loose key” by “Bronze drain valve”.</p> <p>Replace “Fig. No. 81 HU Hattersley N.H” by “hose union ends and loose key”.</p>
C1.4.1	C1.4.1	At last para., replace "ISO 4126-1:2004" by "ISO 4126-1:2013".

Old Ref. No. (2012)	New Ref. No. (2017)	Major Changes
C1.4.6	C1.4.6	At para. 2, replace "ISO 4126:2006 and ISO 4126-1:2004" by "ISO 4126-1:2013".
C1.4.9	C1.4.9(a)	<p>Add sub-clause no. (a) for existing title “Materials used for towngas service riser and pipes at pressure exceeding 7.5 kPa but not exceeding 200 kPa shall comply with the following requirements where appropriate.”.</p> <p>Replace previous sub-clause no. (a) to (i) by (i) to (ix).</p>
C1.4.9(h)	C1.4.9(a)(viii)	Replace “BS 3063:2005” by “BS 3063:1965” due to correction of typo.
C1.4.9	C1.4.9(a)(ix)	Replace “BS EN 1514:1998 Dimensions of Gaskets for pipe flanges to BS EN 1092-1: 2002 and BS EN 1092-2:1997 Part I Dimensions of non-metallic gaskets for pressure up to 64 bar.” By “BS EN 1514:1997: Dimensions of Gaskets for pipe flanges-Dimensions of non-metallic gaskets for pressure up to 64 bar to BS EN 1092-1: 2007 + A1:2013 and BS EN 1092-2:1997”.
C1.4.9	C1.4.9(b)	<p>Add Sub-clause no. (b) for existing title “All materials used for gas installation pipes and fittings at pressure not exceeding 7.5 kPa should comply with the requirements of the Standards listed below and any relevant International Standards, in addition to those stated above where appropriate. Where no such standard exists, materials used should be as specified by the Gas Supply Company.”.</p> <p>Replace previous sub-clause no. (a) to (i) by (i) to (ix).</p>
C1.4.9	C1.4.9(b)(i)	Replace "BS EN 1057:2006" by "BS EN 1057:2006 + A1:2010".
C1.4.9	C1.4.9(b)(ii)	Replace “BS EN 12449:1999” by “BS EN 12449:2012”.
C1.4.9	C1.4.9(b)(iii)	Replace “BS EN ISO 9453:2006” by “BS EN ISO 9453:2014”.

Old Ref. No. (2012)	New Ref. No. (2017)	Major Changes
C1.4.9	C1.4.9(b)(iv)	Due to withdrawn of standard, the second (f) item “BS 2051-1:1973 & BS 2051-2:1984” of the previous edition was merged to (b)(iv) item “BS EN 1254-2:1998” of this new edition.
C1.5.7	C1.5.7	<p>At para. 1, replace “...,gas welding by the oxy-acetylene process to BS 2640:1982...” by “...,gas welding to ISO 9692-1:2013 and ISO 15609-2:2001 relevant subsections for gas welding (steel pipe)...” due to withdrawn of standard BS 2640:1982.</p> <p>At para. 3, replace “BS 2971:2006” by “BS 2971:1991” due to correction of typo.</p>
C1.5.8	C1.5.8	Replace tables nos. “1.5.1(a)” and “1.5.1(b)” by “1.5.8(a)” and “1.5.8(b)”.
C1.5.12	C1.5.12	<p>At para. 2,</p> <ul style="list-style-type: none"> <li>- replace “ISO 12241:1998” by “ISO 12241:2008”.</li> <li>- replace “BS 5970:2001” by “BS 5970:2012”.</li> </ul>
<b>SECTION C2</b>		
C2.2	C2.2	<p>At (a), replace “BS 4076:1989 – Specification for Steel Chimneys” by “BS EN 1993-3-2:2006 – Eurocode 3. Design of steel structures. Towers, masts and chimneys-Chimneys” due to “BS 4076” has been superseded by “BS EN 1993-3-2”.</p> <p>At (b), replace “BS 4872-1:1982 - Fusion Welding of Steel (for approval testing of welders)” by “BS 4872-1:1982 - Specification for approval testing of welders when welding procedure approval is not required. Fusion welding of steel”.</p> <p>At (c), replace “BS EN 62305:2006” by “BS EN/IEC 62305:2011”.</p>

Old Ref. No. (2012)	New Ref. No. (2017)	Major Changes
		At (f), add “issued by the BD”.
C2.3	C2.3	At para. 9, replace “Clause 5 of BS 4076:1989” by “BS EN 1993-3-2:2006” due to “BS 4076” has been superseded by “BS EN 1993-3-2”.  At last para., replace “BS 4076:1989” by “BS EN 1993-3-2:2006”.
C2.4	C2.4	At para. 1, replace “BS EN 10029:1997” to “BS EN 10029:2010”.
C2.4.1	C2.4.1	Replace “BS 4076:1989” by “BS EN 1993-3-2:2006”.
C2.4.2	C2.4.2	At para. 1,  - replace “BS 5970:2001” by “BS 5970:2012”.  - delete “ISO 12241:1998” in duplication.  - replace “ISO 12241:1998” by “ISO 12241:2008”.  - replace “BS 476” by “BS 476-7:1997”.
C2.5	C2.5	At para. 2, replace “BS 4076:1989 Specification for Steel Chimneys” by “BS EN 1993-3-2:2006 – Eurocode 3. Design of steel structures. Towers, masts and chimneys-Chimneys.” due to “BS 4076” has been superseded by “BS EN 1993-3-2”.
C2.5.3	C2.5.3	Replace “BS EN 62305:2006” by “BS EN/IEC 62305:2011”.
<b>SECTION C3</b>		

Old Ref. No. (2012)	New Ref. No. (2017)	Major Changes
C3.3.1.1	C3.3.1.1	At para. 1, - replace “BS EN 13001-1:2004” by “BS EN 13001-1:2015”. - replace “BS EN 13001-2:2004” by “BS EN 13001-2:2014”.
C3.3.1.2	C3.3.1.2	At para. 3, - replace “BS 436” by “BS 436-5:1997”. - replace “BS 721” by “BS 721-2:1983”.
C3.3.1.4	C3.3.1.3(d)	Move the last para. “Electromagnetic release coils shall be continuous rating...dismantling the brake mechanism” to C3.3.1.3(d).
C3.3.1.5	C3.3.1.5	At para. 1, - replace “150%” by “200%”. - replace “safety catch” by “safety latch”.
C3.3.1.6(c)	C3.3.1.6(c)	Replace “Gears” by “Gear”.
C3.3.1.7	C3.3.1.1	Move the last para. “The crane structures, motor frames...bonded to earth.” to C3.3.1.1.
C3.3.1.8(c)	C3.3.1.8(c)	Replace "IEC 60529:2001" by "IEC 60529:2013/Corr 2:2015".
C3.3.1.8(d)	C3.3.1.8(d)	Replace "IEC 60439-1:1999" by "IEC 61439-1:2011" due to withdrawn of “IEC 60439” and replaced by “IEC 61439”.

Old Ref. No. (2012)	New Ref. No. (2017)	Major Changes
C3.3.1.9(a),(f) and (n)	C3.3.1.9(a),(f) and (n)	Replace "IEC 60529:2001" by "IEC 60529:2013/Corr 2:2015".
C3.3.1.9(f),(g) and (h)	C3.3.1.9(f),(g) and (h)	Replace “IEC 60034:2004” with “IEC 60034-1:2010”.
C3.3.1.9(f)	C3.3.1.9(f)	Replace “Motor enclosures shall have a degree of protection of IP54 to IEC 60529:2001” by “Motor enclosures shall comply with IEC 60034-5:2006 and shall have a degree of protection of IP54 to IEC 60529:2013/Corr 2:2015”.
C3.3.1.9(j)	C3.3.1.9(j)	<p>Replace “IEC 60439-1:1999” by “IEC 61439-1:2011” due to withdrawn of “IEC 60439” and replaced by “IEC 61439”.</p> <p>Replace “IEC 60947-4-1:2009” by “IEC 60947-4-1:2012”.</p>
C3.3.1.9(k)	C3.3.1.9(k)	Replace “The duty rating shall be not lower than intermittent class 0.3, 30 operating cycles per hour and 30% on-load” with “The duty rating shall be not lower than intermittent class 30 i.e. 30 operating cycles per hour and 30% on-load”.
C3.3.1.9(n)	C3.3.1.9(n)	Replace “BS 88:1998” by “IEC 60269-1:2014”.
C3.3.2.1	C3.3.2.1	<p>At para. 1, replace “BS EN 13157:2004” by “BS EN 13157:2004+A1:2009”.</p> <p>At para. 3,</p> <ul style="list-style-type: none"> <li>- replace “EN 1677-5:2001” by “BS EN 1677-5:2001+A1:2008”.</li> <li>- replace “safety catch” by “safety latch”.</li> </ul>

Old Ref. No. (2012)	New Ref. No. (2017)	Major Changes
		- replace “150%” by “200%”.
C3.3.2.2	C3.3.2.2	At para. 1, add “For hoist fitted to crane,”.
C3.4.1	C3.4.1	At para. 7, replace “EN 1677-5:2001” by “BS EN 1677-5:2001+A1:2008”.
C3.4.2	C3.4.2	At para. 1, - replace “high tensile aluminium alloy lightweight” by “high tensile lightweight metallic material”. - replace “EN 1677-5:2001” by “BS EN 1677-5:2001+A1:2008”.
C3.5.1	C3.5.1	At para. 1, - replace “BS EN 13001-1:2004” by “BS EN 13001-1:2015”. - replace “BS EN 13001-2:2004” by “BS EN 13001-2:2014”.
C3.6	C3.6	At para. 2, replace “Gears” by “Gear”.
<b>SECTION C4</b>		
C4.2	C4.2	Add C4.2.1 for “In addition to the Section A2.1, the Installations shall comply with all relevant statutory regulations and standards, in particular”  At C4.2.1(b), replace “The Institute of Petroleum Model Code of Safe Practice (Electrical) (IPMCSP)” by “The Energy Institute Model Code of Safe Practice (Electrical) (EIMCSP)”.  Relocate special definitions from Clause 4.3.5(a)(i) to(iii) to as C4.2.2 “In addition to the Section

Old Ref. No. (2012)	New Ref. No. (2017)	Major Changes
		<p>A1.3, the following definitions shall be used throughout this Section.”</p> <p>Add at(b) the definition of “Competent person” to match with FSD Circular Letter No. 7/2016 “Revised Testing Standards for Static Tanks for the Purpose of Storage of Dangerous Goods in Cat 5 Class 3 in Bulk”</p> <p><i>‘Competent person’ means a registered professional engineer in the ‘Marine &amp; Naval Architecture Discipline’ or ‘Mechanical Discipline’ or an ‘Authorized Surveyor’ under the Merchant Shipping (Local Vessels) Ordinance (Cap 548) or the ‘Boiler Inspector’ under Boilers and Pressure Vessels Ordinance (Cap 56);</i></p>
C4.3.2	C4.3.2	<p>At para. 2, replace “BS EN 1011-1” by “BS EN 1011-1:2009”.</p> <p>At para. 3, replace “No longitudinal weld in any ring shall lie within the bottom third of the tank circumference EN 12285-1:2003. Longitudinal seam welds in adjoining rings of plate shall be staggered from one another by a minimum of 45 degrees.” by “No longitudinal weld in any ring shall lie within the bottom <b>half</b> of the tank circumference to EN 12285-1:2003. Cross seams are not allowed. Longitudinal seam welds in adjoining rings of plate shall be staggered from one another by a minimum of 5 times tank wall thickness but not less than 25mm.” to comply with the requirements quoted in the standard EN 12285-1:2003.</p>
C4.3.4	C4.3.4	<p>At para. 2, replace “capacity of ‘light’ diesel/jet fuel at 300 kPa at a speed of 950 rpm” by “the capacity of the fuel transfer system”</p> <p>Add Sub-clause no. (a) for “Audible alarm shall be given off under the following conditions:”</p> <p>Replace previous sub-clause no. (a) to (b) by (i) to (ii).</p>

Old Ref. No. (2012)	New Ref. No. (2017)	Major Changes
C4.3.4	C4.3.4(b)	<p>Add Sub-clause no. (b) for “The following controls and indicator lights shall be incorporated on the control cubicle:”.</p> <p>Replace previous sub-clause no. (a) to (g) by (i) to (vii).</p>
C4.4.3	C4.4.3	<p>Replace “IPMCSP” by “EIMCSP”.</p> <p>Replace “IEC 60529:2001” by “IEC 60529:2013/Corr 2:2015”.</p>
C4.4.4	C4.4.4	<p>At (a) (i)- replace “IEC 60079 Electrical Apparatus for Explosive Gas Atmospheres” by “IEC 60079-0:2011 Explosive Atmospheres”.</p> <p>At (a) (ii)- replace “The Institute of Petroleum Model Code of Safe Practice (Electrical) (IPMCSP)” by “The Energy Institute Model Code of Safe Practice (Electrical) (EIMCSP)”.</p> <p>At (b)- replace “IEC 60079-0:2007” by “IEC 60079-0:2011”.</p> <p>At (c)- replace “IPMCSP” by “EIMCSP”.</p> <p>At (d)- replace “IPMCSP” by “EIMCSP”; and “EEx P” with “EEx p”.</p>
C4.4.8	C4.4.8	<p>At para. 1,</p> <ul style="list-style-type: none"> <li>- replace “ISO 65” by “ISO 65:1981”.</li> </ul> <p>At para. 2,</p> <ul style="list-style-type: none"> <li>- replace “ISO 7005:1992” by “ISO 7005-1:2011”.</li> </ul>

Old Ref. No. (2012)	New Ref. No. (2017)	Major Changes
		- replace “ISO 7-1:1999” by “ISO 7-1:1994/Corr 1:2007”.
C4.5.1	C4.5.1	<p>At the para. 1, add “/Daily Service Fuel Tank”.</p> <p>At (a)- add “/the daily service fuel tank”.</p> <p>The last sentence revised as “The test shall be carried out <b>by a competent person</b> in the presence of and to the satisfaction of the Supervising Officer or his Representative:”</p> <p>At (c)- replace “...the tank shall be drained and dried out it...” by “...the tank shall be drained and dried out...”.</p> <p>At (d)- replace “ISO 12944:1998” by “ISO 12944:1998+Part5:2007”.</p> <p>At (e)- replace “The tank” by “For the underground fuel storage tank, it”.</p> <p>Add “(i) If alternative method for tank calibration is proposed, detailed calibration procedures shall be submitted for consideration and approval; and”.</p> <p>Add “(j) The following information shall be permanently and clearly marked on a nameplate to be provided to the tanks in an agreed position:</p> <ul style="list-style-type: none"> <li>- Contractor’s name;</li> <li>- Gross capacity in litres; and</li> <li>- Date of hydraulic test</li> </ul>

Old Ref. No. (2012)	New Ref. No. (2017)	Major Changes
C4.5.2	C4.5.2	<p>Add “(c) The completed pipework, fitting and valves shall be tested hydraulically before application of protection and painting to a pressure of 700kPa for a period of time not less than 2 hours without undue leaking and distortion;”. [To be in line with EE GS item C12.13.3]</p> <p>Add “(d) All associated pipework, fitting and valves shall be completely drained after hydraulic test and shall be blown with compressed air to remove any trace of water and dirt; and”.</p> <p>Add “(e) After being dried, the pipework, fitting and valves shall be flushed with oil to prevent rusting”.</p>
C4.6(a)	C4.6(a)	Add at end “For storage tanks, the tests shall be completed and certified by a competent person.”
<b>SECTION C5</b>		
C5.3.5.1	C5.3.5.1	Replace ...”white dial...” by “...display...”.
C5.3.9.3	C5.3.9.3	At para. 2, replace “BS 4999” by “BS 4999-141:2004 + A1:2010”.
C5.3.17	C5.3.17(a)	<p>Add sub-clause no. (a) for “The battery charger shall be designed for vehicle battery charging and engine starting. The required duty of the battery charger shall be as follows:”.</p> <p>Replace previous sub-clause no. (a) to (d) by (i) to (iv).</p>
C5.3.17	C5.3.17(b)	<p>Add sub-clause no. (b) for “The battery charger shall be of the mobile type with a maximum weight of 40 kg. The charger shall be suitable for operating on power input of 220 volt single phase 50 Hz. The battery charger shall comprise the followings:”.</p> <p>Replace previous sub-clause no. (a) to (h) by (i) to (viii).</p>

Old Ref. No. (2012)	New Ref. No. (2017)	Major Changes
C5.4.1	C5.4.1	<p>At para. 1,</p> <ul style="list-style-type: none"> <li>- replace “ISO 65” by “ISO 65:1981”.</li> <li>- replace “BS EN 10216-1:2002” by “BS EN 10216-1:2013”.</li> </ul> <p>At para. 2,</p> <ul style="list-style-type: none"> <li>- replace ISO 7005:1992/” by “ISO 7005-1:2011,”.</li> <li>- replace “BS EN 1759:2004” by “BS EN 1759-1:2004”.</li> <li>- replace “ISO 7-1:1999/” by “ISO 7-1:1994/Corr 1:2007,”.</li> <li>- replace “BS 21:1985” by “BS EN 10226-1:2004”.</li> </ul>
C5.5.2 C5.5.3	C5.5.2 C5.5.3	Replace “Specification” by “General Specification”.
<b>SECTION C6</b>		
C6	C6	Replace “luffing” by “movement/luffing” in various locations.
C6.2	C6.2	<p>At para. 1, add “ and the following standards :-“ at end of the para.</p> <p>At (b), replace “BS EN 1808:1999 – Safety Requirements on Suspended Access Equipment” by “BS EN 1808:2015 – Safety Requirements for Suspended Access Equipment. Design Calculations, Stability Criteria, Construction, Examinations and Tests”.</p>

Old Ref. No. (2012)	New Ref. No. (2017)	Major Changes
C6.3.4	C6.3.4	At para. 1, replace "...rotate by $\pm 180^\circ$ and to suit site conditions" by "rotate by $\pm 180^\circ$ unless otherwise approved by the Supervising Officer as to suit site conditions".
C6.3.5	C6.3.5	At para. 3, replace "It shall be possible for the jib arms to luff to the back of the roof carriage for the ..." by "The operation of the jib arms shall allow...".
C6.3.7.1	C6.3.7.1	At para. 1, delete "The dimension restriction...shall be met".  At para. 4, add "between restraint levels" at end of the paragraph.
C6.3.11.3	C6.3.11.3	At para. 1, add "except allowed in C6.3.1(c)" at end of the 1 <sup>st</sup> sentence.
C6.3.14.1	C6.3.14.1	At para. 2, replace "...steel wire armoured to BS 6346:1997" by "...suitably sheathed and protected wherever possible from damage of breaking, and should have sufficient cable strength to avoid the cables from being damaged by its own weight.".
C6.3.14.3	C6.3.14.3	Replace "BS 7671:2008" by "BS 7671:2008 + A3:2015".  Replace "BS 7430:1998" by "BS 7430:2011".
C6.3.14.4	C6.3.14.4	At para. 1,  - replace "...be designed to have good electrical conductivity and shall comply..." by "...be protected from lightning strike with lightning system complying...".  - replace "BS EN 62305:2006" by "BS EN/IEC 62305-1:2011".
C6.7.2(b)(vii)	C6.7.2(a)(vii)	Move "electrical wiring and earthing component" from "Function test" to "Inspection".

Old Ref. No. (2012)	New Ref. No. (2017)	Major Changes
C6.7.3	C6.7.3	Correct “Section 19(1)” by “Section 20(1)”.  At para. 2, replace “Commissioner” by “Commissioner for Labour”.
-	C6.7.3(a)	Add sub-clause no. (a) for “The following functional test items shall be carried out under maximum safe working load:”.  Replace sub-clause no. (a) to (e) by (i) to (v).
-	C6.7.3(b)	Add sub-clause no. (b) for “The following visual inspection items shall be carried out:”.  Replace sub-clause no. (a) to (d) by (i) to (iv).
C6.7.4	C6.7.4	At para. 1, after “In addition to the items in six monthly check,” add “under Section 20(2) of the Factories and Industrial Undertakings (Suspended Working Platforms) Regulation (Cap. 59AC),”.
C6.7.6	C6.7.6	Add “...and provide a list of recommended spares to be stored in situ...”.
C6.7.7	C6.7.7	At para. 2 first sentence, delete “Clause 56 of”.
C6.7.8	C6.7.8	Replace “...longer that one hours” by “... longer than one hour for emergency/urgent fault calls as defined at Part E3 of this Specification.”.
<b>SECTION C7</b>		
C7.3.1	C7.3.1	At para. 3,  - replace “BS 21:1985” by “BS 21:1985 and BS EN 10226-1:2004” due to “BS 21:1985” partially superseded by “BS EN 10226-1:2004”.

Old Ref. No. (2012)	New Ref. No. (2017)	Major Changes
		- replace “BS EN 1092-1:2002” by “BS EN 1092-1: 2007 + A1: 2013”.
C7.3.1.2	C7.3.1.2	After “60 °C”, delete “ (Climatic temperature being 40°C.)”.
C7.3.2	C7.3.2	<p>At para. 1, replace "BS 853-1:1996" by "BS 853-1:1990 + A3:2011".</p> <p>At para. 2,</p> <ul style="list-style-type: none"> <li>- replace “BS EN 10029:1991” by “BS EN 10029:2010”.</li> <li>- replace “BS EN 10051:1992” by “BS EN 10051:2010”.</li> <li>- replace “BS EN 10258:1997 and BS EN 10259:1997” by “BS EN ISO 9445:2010” due to “BS EN 10258 and 10259” have been superseded by “BS EN ISO 9445”.</li> <li>- replace “BS EN 1172:1997” by “BS EN 1172:2011”.</li> </ul> <p>At para. 3, replace "BS EN 1057:2006" by "BS EN 1057:2006 + A1:2010".</p> <p>At para. 6,</p> <ul style="list-style-type: none"> <li>- replace “ISO 7-1:1999/” by “ISO 7-1:1994/Corr 1:2007,”.</li> <li>- replace “BS 21:1985” by “BS 21:1985 and BS EN 10226-1:2004”.</li> <li>- replace “BS EN 1092-1:2002” by “BS EN 1092-1:2007 + A1:2013”.</li> </ul>
C7.3.3	C7.3.3	<p>At para. 1, replace “BS 853-1:1996” by “BS 853-1:1990 + A3:2011”.</p> <p>At para. 2,</p>

Old Ref. No. (2012)	New Ref. No. (2017)	Major Changes
		<ul style="list-style-type: none"> <li>- replace “BS EN 10029:1991” by “BS EN 10029:2010”.</li> <li>- replace “BS EN 10051:1992” by “BS EN 10051:2010”.</li> <li>- replace “BS EN 10258:1997 and BS EN 10259:1997” by “BS EN ISO 9445:2010”.</li> <li>- replace “BS EN 1172:1997” by “BS EN 1172:2011”.</li> <li>- replace “ISO 7-1:1999” by “ISO 7-1:1994/Corr 1:2007,”.</li> <li>- replace “BS 21:1985” by “BS 21:1985 and BS EN 10226-1:2004”.</li> <li>- replace “BS EN 1092-1:2002” by “BS EN 1092-1:2007 + A1:2013”.</li> </ul> <p>At para. 4, replace "BS EN 1057:2006" by "BS EN 1057:2006 + A1:2010".</p>
C7.3.6	C7.3.6	<p>At para. 3,</p> <ul style="list-style-type: none"> <li>- replace “ISO 12241:1998” by “ISO 12241:2008”.</li> <li>- replace “BS 5970:2001” by “BS 5970:2012”.</li> </ul> <p>At para. 5, replace “ISO 12241:1998” by “ISO 12241:2008”.</p>
C7.4.1.1(f)	C7.4.1.1(f)	<p>Replace “BS EN 13480-1:2002” by “BS EN 13480-1:2012”.</p> <p>Replace “BS EN 13480-2:2002” by “BS EN 13480-2:2012 + A1:2013”.</p> <p>Replace “BS EN 13480-3:2002” by “BS EN 13480-3:2012”.</p> <p>Replace “BS EN 13480-4:2002” by “BS EN 13480-4:2012 + A1:2013”.</p>

Old Ref. No. (2012)	New Ref. No. (2017)	Major Changes
C7.4.1.2	C7.4.1.2	At para. 1, replace “BS EN 1057-1:2006 by “BS EN 1057:2006 + A1:2010”. At para. 2, replace “BS EN 1254:1998” by “BS EN 1254-1:1998”.
C7.4.1.3	C7.4.1.3	At para. 2, replace “BS EN 1057-1:2006” by “BS EN 1057:2006 + A1:2010”.
C7.4.4	C7.4.4	At (c), replace “BS EN 13789:2002” by “BS EN 13789:2010”. At last para., replace “BS EN 12165:1998” by “BS EN 12165:2011”.
C7.4.5	C7.4.5	At para. 1, replace “ISO 4126-1:2004” by “ISO 4126-1:2013”.
C7.4.7	C7.4.7	At para. 3, replace “IEC 60529:2001” by “IEC 60529:2013/Corr 2:2015”.
C7.5.1(k)	C7.5.1(k)	Delete the word “testing” before the “...procedures described...”. Replace “BS 1724:1990” by “ISO 9692-1:2013 and ISO 15609-2:2001” due to withdrawn of “BS 1724”.
C7.5.5	C7.5.5	At last para., - replace “BS 1710:1984” by “BS 1710:2014”. - replace “BS 4800:1989” by “BS 4800:2011”.
C7.6	C7.6	At para. 3, replace “Clauses D1.1 and D1.4” by “Section D1”.
<b>SECTION C8</b>		
C8.2	C8.2	Add “ (b) A Guide to the Construction, Installation, Operation and Maintenance of Air Receivers,

Old Ref. No. (2012)	New Ref. No. (2017)	Major Changes
		published by the Labour Department”.
C8.2(b) to (e)	C8.2(c) to (f)	Sub-clause no. rearranged.
C8.2(d)	C8.2(e)	Replace " ISO 4126:2006 Specification for Safety Valves for Compressed Air or Inert Gases" by " ISO 4126-1:2013 Safety devices for protection against excessive pressure – Part 1: Safety Valves".
C8.2(e)	C8.2(f)	Replace title for ISO 1217:2009 as " Methods for Acceptance Testing of Positive Displacement Compressors and Exhausters" by " Displacement compressors -- Acceptance tests".
C8.4.1	C8.4.1(a)	Add sub-clause no. (a) for para. 11 “The instrumentation and control panel shall incorporate the following items:”.  Replace sub-clause no. (a) to (e) by (i) to (v).
C8.4.1	C8.4.1(b)	Add sub-clause no. (b) for para. 11 “The plant shall be automatically shut down under the following fault conditions with light indication:”.  Replace sub-clause no. (a) to (b) by (i) to (ii).
C8.4.8	C8.4.8	At para. 1, 3 and 4, replace "BS EN 13480:2002" by "BS EN 13480:2012".
C8.4.9	C8.4.9	At para. 4, replace “ISO 4126:2006” with “ISO 4126-1:2013”.
C8.4.14	C8.4.14	At para., 1, replace “ISO 4126:2006” with “ISO 4126-1:2013”.
C8.5.3	C8.5.3	At last para.,

Old Ref. No. (2012)	New Ref. No. (2017)	Major Changes
		<ul style="list-style-type: none"> <li>- replace “BS 5378:1980” with “ISO 3864-1:2011” due to withdrawn of standard “BS 5378:1980”.</li> <li>- replace "BS1710:1984" by "BS 1710:2014".</li> </ul>
<b>SECTION C9</b>		
C9.3.3	C9.3.3	At para. 2, replace “no-flow condition” by “pump running with no-flow condition”.
C9.4.1	C9.4.1	<p>For Pump casing, replace “EN 1564:1997” by “EN 1564:2011”.</p> <p>For Impeller, replace “BS EN 13835:2002” by “BS EN 13835:2012”.</p> <p>For Shaft, replace “EN 10088” by “EN 10088-1:2015” and “EN 10250-1” by “EN 10250-1:1999”.</p>
C9.4.2	C9.4.2	<p>At para. 1, replace “BS 4999” by “BS 4999-141:2004 + A1:2010”.</p> <p>At para. 2,</p> <ul style="list-style-type: none"> <li>- replace “IEC 60085:2004” by “IEC 60085:2007”.</li> <li>- replace "IEC 60529:2001" by "IEC 60529:2013/Corr 2:2015".</li> </ul>
C9.4.3	C9.4.3	At para. 1, replace "IEC 60529:2001" by "IEC 60529:2013/Corr 2:2015".
C9.4.5	C9.4.5	<p>At para. 3,</p> <ul style="list-style-type: none"> <li>- replace “EN 10084:1998” by “EN 10084:2008”.</li> <li>- replace ” EN10088 “ by “EN10088-1:2015”</li> </ul>
<b>SECTION C10</b>		

Old Ref. No. (2012)	New Ref. No. (2017)	Major Changes
C10.2(d)	C10.2(d)	At end of para., add “issued by the ArchSD”.
C10.3.1	C10.3.1	At para. 3, add “...or to the quantity specified in the Particular Specification.”.
C10.3.2	C10.3.2	At para. 3, delete “...vacuum-pressure...”. At para. 5, add “...or specimens...”.
C10.3.3	C10.3.3	Replace “...6m/s and 3m/s respectively.” by “...well designed as not to cause material/specimen damage or spillage or affecting the specimen characteristics while satisfying the delivery time performance requirements specified in this and the Particular Specification. However the maximum speed should not be more than 6 m/s.”.
C10.3.6	C10.3.6	At para. 3, - replace “...1.6m...” by “...1.55m...”. - add “...to suit the operational need.”.  Delete previous para. 4 “Stations shall be robust in construction.”.  Delete previous para. 5 “Carriers shall be received from either above or below of the Stations.”.  At para. 8, replace “...not less than 5kg payload” by “not less than the specified design payload or 5 kg payload at the designed speed.”.
C10.3.7	C10.3.7	Replace “Baskets” by “Receivers”.
C10.3.9	C10.3.9(a)	Add sub-clause no. (a) for para. 3 “Alarm message shall be displayed for the following conditions:”.

Old Ref. No. (2012)	New Ref. No. (2017)	Major Changes
		Replace sub-clause no. (a) to (c) by (i) to (iii).
C10.3.9	C10.3.9(b)	<p>Add sub-clause no. (b) for para. 4 “A cleanable membrane keypad shall be provided for entering instructions / control. The operation of the interface shall be simple and easy to be understood. The keypad shall provide a control to the following functions:”.</p> <p>Replace sub-clause no. (a) to (j) by (i) to (x).</p>
C10.3.10	C10.3.10	<p>At para. 2, replace “...one set as standby...” by “...one set as hot standby...”.</p> <p>Divide the clause into sub-clauses C10.3.10.1 to C10.3.10.4 for clearer referral.</p>
C10.3.10	C10.3.10.2	At para. 3, add at end “or to the quantity specified in the Particular Specification.”.
C10.3.10	C10.3.10.4	At para. 2, replace “A pointer” by “A printer”.
C10.3.12	C10.3.12	At para. 2, add “...or the designed maximum speed specified in the Particular Specification.”.
C10.3.13	C10.3.13	<p>Delete previous para. 3 “Each motor shall be able to provide...up to 300mbar.”.</p> <p>At para. 3,</p> <ul style="list-style-type: none"> <li>- replace “IEC 60034:2004” by “IEC 60034-1:2010”.</li> <li>- replace “IEC 60072:1994” by “IEC 60072-1:1991, IEC 60072-2:1990 and IEC 60072-3:1994”.</li> <li>- delete (d) Method of starting.</li> <li>- delete (e) Method of Earthing.</li> </ul>

Old Ref. No. (2012)	New Ref. No. (2017)	Major Changes
		- delete (f) Dimensions.
C10.3.14	C10.3.14	Delete the whole para. “The switch over time...0.7 second.”.
C10.3.15	C10.3.15	<p>At para. 1,</p> <ul style="list-style-type: none"> <li>- add “...autoclavable, transparent, ...”.</li> <li>- delete “polycarbonate”.</li> </ul> <p>At para. 5, add “or the specified design payload” at end of the paragraph.</p>
C10.3.18	C10.3.18	<p>Revise the para. 1 as</p> <p style="text-align: center;"><i>In order to ensure quiet and smooth operation, the arrival carriers shall be able to decelerate gradually. Once the carrier comes to a complete stop, it shall then be released to a collection receiver or a carrier storage below the Station.</i></p>
C10.4	C10.4	<p>At para. 1, replace “...stainless and acid-proof chromium-nickel steel AISI 321...” by “...AISI Type 321 stainless and acid-proof chromium-nickel steel...”.</p> <p>At para. 2, replace “...of not less than 800mm...” by “...to suit the system requirement...”.</p> <p>At para. 4, replace “...shall be colour banded at...” by “...provide with certificates from...”.</p>
C10.5.1	C10.5.1	<p>At para 1, replace “...not exceed 4.5m.” by “...not exceed 3m.”.</p> <p>Delete the previous para. 6 “The system shall be supplied, ...be coated with hot poured bitumen.”.</p> <p>At para. 7, replace “...all transfer tubing...” by “...all horizontal transfer tubing...”.</p>

Old Ref. No. (2012)	New Ref. No. (2017)	Major Changes
		<p>At para. 10, replace “BS 7671:2008” by “BS 7671:2008 + A3:2015”.</p> <p>Add a new para. “Thermal insulation for the sections of the tubes that are subject to condensation especially those routed outside the air-conditioned area of the building shall be provided.”.</p>
C10.5.2	C10.5.2	At para 2, replace “Holes shall be made...in the walls or floors.” by “For holes passing through walls or floors...in the walls or floors.”.
C10.5.3	C10.5.3	At para 8, delete “Each guide shall not be...14 pipe diameters.”.
C10.6.1	C10.6.1	<p>At para. 1, replace “BS 4142:1997” by “BS 4142:2014”.</p> <p>At last para., replace “Particular specification” by “Particular Specification”.</p>
<b>SECTION C11</b>		
C11.3.6	C11.3.6	<p>At para. 3, add “or other type of finishing material such as stainless steel approved by the Supervising Officer” at end of para.</p> <p>At para. 8, replace "IEC 60529:2001" by "IEC 60529:2013/Corr 2:2015".</p> <p>At para. 9, replace “IEC 60439-1:2004” by “IEC 61439-1:2011”.</p> <p>At (a), replace “IEC 60947-4-1:2009” by “IEC 60947-4-1:2012”.</p>
C11.3.7	C11.3.7	<p>Replace</p> <ul style="list-style-type: none"> <li>- “BS 4999” by “BS 4999-141:2004+A1:2010”.</li> <li>- "IEC 60529:2001" by "IEC 60529:2013/Corr 2:2015".</li> </ul>

<b>Old Ref. No. (2012)</b>	<b>New Ref. No. (2017)</b>	<b>Major Changes</b>
C11.4	C11.4	At para. 1, replace “BS EN 10029:1991” by “BS EN 10029:2010”.  At para. 2, replace “ISO 8501-1:2006” by “ISO 8501-1:2007”.  At para. 2, - after “...(SA 2.5)” add “or be hot-dip galvanised to BS EN ISO 1461:2009 as specified in the Particular Specification”.
C11.4.2	C11.4.2	At para. 2, replace “ISO 606:2004” by “ISO 606:2015”.
C11.4.4	C11.4.4	At para. 1, - replace “BS 6724:1997” by “BS 6724:1997 + A3:2008”. - replace “BS 7671:2008” by “BS 7671:2008 + A3:2015”.
C11.5.2	C11.5.2	At para. 1, delete the last sentence “Grease point shall also be provided for each castor”.
<b>SECTION C12</b>		
-	C12.1 to C12.5	Add a new section on Food Waste Composting System.
<b>PART D</b>		
D1 to D5	D1 to D3	Completely revised to harmonise with General Specification for other BS installations.
<b>PART E</b>		
E1 to E4	E1 to E3	Completely revised to harmonise with General Specification for other BS installations.

Old Ref. No. (2012)	New Ref. No. (2017)	Major Changes
E2.1	E3.1	<p>Response time for attendance of emergency and fault call revised from “one hour” to as follows:</p> <p>(a) <i>Emergency/Urgent Fault Calls</i></p> <p><i>This refers to any service call arising from defective work materials, equipment and/or system operation bearing safety implication or seriously affecting the operation of the whole installation or substantial part of the installation. The MI Contractor shall attend to emergency/urgent calls within ONE hour at any time during the Maintenance Period and rectify all defects leading to fault or breakdown of the equipment and/or system within 24 hours after the receipt of the calls.</i></p> <p>(b) <i>Other Type of Fault Calls</i></p> <p><i>This refers to any incident for anything that is not as serious as being included in (a) above. The MI Contractor shall attend to this kind of fault calls within FOUR hours at any time during the Maintenance Period and rectify all defects leading to fault or breakdown of the equipment and/or system within 24 hours after the receipt of the calls.</i></p>
-	E3.2	Add “Food Waste Composting System” to Category One installations
<b>ANNEX I</b>		
<b>Standard Number</b>	<b>Description</b>	
Table listing the standards	A column “Parts and Clause No.” is added.	
Various standards	Version year and title of standards updated.	