National Water Services Commission

GUIDELINES FOR LISTING AND REGISTRATION OF PRODUCTS AND SUPPLIERS

REVISION 13

Industry Development & Audit Division

15 July 2021

This updated Guidelines has been approved by the Jawatankuasa Teknikal, Produk, Penyelidikan dan Pembangunan (JKTPPP), SPAN No. 4/2021 (15 July 2021)

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GUIDELINES FOR LISTING AND REGISTRATION OF PRODUCTS AND SUPPLIERS

1.0 INTRODUCTION

1.1 A supplier who supplies equipment, device, material, system or facility (here in collectively called as products) for use in water supply and sewerage services in Peninsular Malaysia, Federal Territories of Kuala Lumpur, Putrajaya and Labuan is required to list and register its standard products with SPAN.

1.2 Listing and registration with SPAN shall be made before the standard products supplied for any purpose of installing, working or operating and failure to supply a standard product is an offence under Section 129 of the Water Services Industry Act 2006 [Act 655].

1.3 In exercise of the powers conferred by section 180 of the Water Services Industry Act 2006 [Act 655], SPAN makes the Water Services Industry (Water Reticulation and Plumbing) Rules 2014.

2.0 DEFINITION

2.1 In this document, unless the context otherwise requires:

(a) **A supplier** means a company constituted under the laws of Malaysia and carrying out business in Malaysia. A supplier can be a manufacturer, an importer, a local authorised representative or a distributor but does not include the retailer.

(b) **A product** is referred to any device, material, system, facility or equipment relating to water supply system, sewerage system, septic tank, individual internal sewerage piping or common internal sewerage piping.

(c) **A custody transfer meter** is referred to a meter that will be “used for trade” as defined in the Weights and Measure Act 1972 [Act 71].

(d) **Certification body** means a competent certification body recognized by the Commission, whose activities and expertise include assessment of compliance of product to product standard.

(e) **Conforming product** means product that complies with product standard and issued with a product certificate by a certification body.

(f) **Guidelines** means the guidelines issued by the Commission on matters pertaining to supplier and standard product including any amendments thereto from time to time.

(g) **Industry standard** means any standards issued by associations or organizations representing a specific industry.

(h) **Non-conforming product** means product not having any product standard.

(i) **Performance test standard** means any international performance standard, regional performance standard, national performance standard, Malaysia performance standard or testing standard for product recognised by the Commission.

(j) **Product certificate** means certificate issued by a certification body to certify that a product conforms to product standard.

(k) **Product standard** means any international standard, regional standard, national standard or Malaysia Standard for product recognised by the Commission.

(l) **Standard product** means conforming product that are listed or non conforming product that are registered by Commission.

(m) **Technical specification** means any specification document developed by an agency / supplier to specify technical requirements required.

3.0 PRODUCT CATEGORY

3.1 All products are classified into two (2) main categories as listed below:

Category A : *Products that can undergo full certification to any SPAN recognised standards/specifications by any Certification Bodies recognised by SPAN, and*

Category B : *Products without any standards/specifications or products with standards/specifications but full compliance to the standards/specification cannot be met. Products under this category are assessed based on recognised manufacturer specifications/standards or recognised performance testing or through a pilot project investigation.*

3.2 Product Categories A and B with their respective recognised standards are listed in Appendices A and B respectively, where the Appendices shall be referred together with the First Schedule [Rule 2 and Subrule 4(1)] of the Water Services Industry (Water Reticulation and Plumbing) Rules 2014 and any amendments thereto.

3.3 In the event of any inconsistency between the recognised standards and the provisions of the Water Services Industry (Water Reticulation and Plumbing) Rules 2014 relating to any matter, the provisions of these Rules shall prevail.

4.0 LISTING AND REGISTRATION OF SUPPLIERS

4.1 Listing is applied for suppliers whose products listed under product Category A. Listed suppliers will be given a letter of confirmation on the products that are listed with SPAN.

4.2 Registration is applied for suppliers whose products listed under product Category B. Registered suppliers will be given a certificate on confirming the registration with SPAN.

4.3 Only a company incorporated in Malaysia or such other supplier as may be decided by SPAN from time to time to be eligible to apply for listing or registration of supplier and product.

4.4 Except for chemical products, SPAN will not accept any application for same product from two (2) suppliers. The manufacturers/principals need to decide either one as their agent of the product.

4.5 All listed and registered suppliers with their products will be displayed at the SPAN website (www.span.gov.my).

5.0 PROCEDURES FOR LISTING

5.1 Application

5.1.1 Application for listing shall be made via e-Registration at the SPAN website (http://eregistration.span.gov.my/Product_Internet/Login.aspx)

5.1.2 The following document shall be uploaded during the on-line application:

(a) Company Registration Documents:
  (i) Certificate of Incorporation/Registration;
  (ii) Particulars of Directors/Officers;
  (iii) Particulars of Stakeholders;
  (iv) Particular of Share Capital;

(b) Organization Management Chart;

(c) Certificate of ISO Quality Management System (if any);

(d) Letter of Appointment (as an agent or distributor);

(e) Product Catalogue;

(f) Product Certificate/Certificate of Conformity;
(shall showed the expiry date and the validity not less than three month)

(g) Halal Certificate and Safety Data Sheet (SDS);
(for water treatment chemicals only)

(h) Pattern Approval and Certificate of Approval Weighing/Measuring/ Weighing Devices/Measuring Devices which produced by National Metrology Institute of Malaysia (NMIM);
(for custody transfer meter only)

(i) *Perakuan Pematuhan Standard (PPS)* issued by CIDB;
(for local & imported products of building materials which stated in the Fourth Schedule of Act 520 only)

(j) Any other additional information, document, specification and requirements as may be required by SPAN.

5.1.3 Product certificate/certificate of conformity that is submitted to SPAN shall comply with requirements as specified in Section 7.

5.2 Processing

5.2.1 Application for listing will be processed **within 21 working days.**

5.2.2 The processing time include the time for reviewing and approving of a complete application, issuing of confirmation letter and listing of suppliers at the SPAN website.

5.3 Approval

5.3.1 Approval for listing is based on SPAN's assessment on the application received and SPAN has a right not to approved the application for listing.

5.4 Confirmation of Listing

5.4.1 A confirmation letter will be issued to the suppliers confirming the listing of products with SPAN and will be displayed at the SPAN website.

5.5 Duration of Listing

5.5.1 Unless the listing is revoked by SPAN before its expiry, the listing shall be valid until the expiry of the validity of the product certificate for the standard product or such other duration as may be determined by SPAN.

5.5.2 Every listed product and supplier will be maintained at the SPAN website until the expiry date of the product certificate.

5.5.3 However, to facilitate any unforeseen delay in the renewal of conforming product certificate, the expired listing will remain valid in SPAN listing for an additional one month.

5.6 Renewal of Listing

5.6.1 In order to maintain listing, the suppliers shall submit the renewed product certificate through e-Registration before the expiry date.

5.6.2 Supplier will be delisted if SPAN does not receive the renewed certificate within the one (1) month extended period.

5.7 Suspension or Revocation of Listing

5.7.1 SPAN may by a written notice suspend or revoke the listing if:

(a) The supplier fails to comply with any of the conditions imposed by SPAN or any of the requirements specified in the guidelines;

(b) The product certificate for the standard product is revoked or suspended by a certification body;

(c) The supplier fails to comply with any of the provisions of the Act, these Guidelines or any subsidiary legislation under the Act;

(d) SPAN receives any complaint regarding the supplier or the standard product;

(e) The supplier has fraudulently, improperly or illegally obtained the listing;

(f) The information, data, document or product certificate provided to SPAN is found to be in error;

(g) The supplier ceases to carry on the business in respect of which he is listed;

(h) The supplier has been adjudicated a bankrupt; or

(i) There has been any act or default on the part of the supplier or there has been a change in the circumstances such that the supplier would no longer be entitled to be approved for listing under these Guidelines.

5.7.2 SPAN may require the supplier to suspend the supply of the product pending the decision on the suspension or revocation from the date of the notice.

5.7.3 The supplier shall not be entitled to any form of compensation from SPAN for any loss caused to the supplier due to the suspension or revocation under these Guidelines.

5.7.4 Supplier shall bare any testing cost if there is any complaint regarding listed product received by SPAN that requires testing of products or as instructed by SPAN.

5.8 Transfer of Listing

5.8.1 The listing is personal to the supplier and shall not be assigned or transferred to any other party.

6.0 PROCEDURES FOR REGISTRATION

6.1 Application

6.1.1 Application for registration shall be made via e-Registration at SPAN website (http://eregistration.span.gov.my/Product_Internet/Login.aspx).

6.1.2 The following document shall be uploaded during the on-line application:

(a) Company Registration Documents:
  (i) Certificate of Incorporation/Registration;
  (ii) Particulars of Directors/Officers;
  (iii) Particulars of Stakeholders;
  (iv) Particular of Share Capital;

(b) Organizational management chart;

(c) Certificate of ISO Quality Management System (if any);

(d) Letter of Appointment (as an agent or a distributor);

(e) Product catalogue;

(f) Technical specification;

(g) Design criteria;

(h) Engineering drawing;

(i) Operation manual;

(j) Test Report/Performance Report/Report of Pilot Project;

(k) Halal Certificate and Safety Data Sheet (SDS);
(for water treatment chemicals only)

(l) Pattern Approval and Certificate of Approval Weighing/Measuring/ Weighing Devices/Measuring Devices which produced by National Metrology Institute of Malaysia (NMIM);
(for custody transfer meter only)

(m) Any other additional information, document, specification and requirements as may be required SPAN.

6.1.3 Testing or performance report that is submitted to SPAN shall comply with requirements as specified in Section 8.

6.2 Processing

6.2.1 Certificate of registration will be issued to the successful applicant within **21 working days** from the date of receipt of a complete application.

6.2.2 However, for products that need to be assessed through pilot project investigation, the processing time depends on the required time to complete the project. Certificate of registration will only be issued to the suppliers after the pilot project demonstrated full compliance to requirements determined by SPAN.

6.3 Approval

6.3.1 Approval for registration is based on SPAN's assessment on the application received and SPAN has a right not to approved the application for registration.

6.4 Certificate of Registration

6.4.1 An approved applicant will be displayed at the SPAN website and will be issued with a Certificate of Registration signed by Chief Executive Officer of SPAN that consists of the following information:

(a) details of product approved;
(b) details of supplier of the product;
(c) general conditions of the registration; and
(d) additional requirements or conditions for specific products of the registration (if any).

6.4.2 The general conditions apply to all registered suppliers are:

(a) the approval is applicable to Peninsular Malaysia and Federal Territories Kuala Lumpur, Putrajaya and Labuan only;
(b) the supplier will ensure that only registered products are supplied to the user;

(c) SPAN also reserve right to conduct compliance audit on products at any time within the listing/registration period and the supplier shall give full cooperation during the audit,

(d) the supplier shall comply with other instructions issued by SPAN from time to time, and

(e) the supplier shall update record of supply or record of installation of products to the water services industry through e-Registration.

6.4.3 In certain circumstances and depending on type of product, additional requirements or conditions for specific products as listed in the certificate of registration will be imposed on suppliers.

6.5 Validity of Certificate of Registration

6.5.1 The validity period of certificate of registration will be determined by SPAN and shall be valid for a period as specified in the certificate.

6.5.2 However, to facilitate any unforeseen delay, the expired registration will remain valid in SPAN registration for an additional one month.

6.6 Renewal of Certificate Registration

6.6.1 Every application for renewal of certificate shall be made online within two months before the end of the expiry date. Either, SPAN has a right to delete any application which submitted earlier from the period.

6.6.2 Supplier will be deregistered if SPAN does not receive the renewed certificate within the one (1) month extended period.

6.7 Suspension or Revocation of Registration

6.7.1 SPAN may by a written notice suspend or revoke the registration if:

(a) The supplier fails to comply with any of the conditions imposed by SPAN or any of the requirements specified in the guidelines;

(b) The product certificate for the product is revoked or suspended by a certification body;

(c) The supplier fails to comply with any of the provisions of the Act, these Guidelines or any subsidiary legislation under the Act;

(d) SPAN receives any complaint regarding the supplier or the product;

(e) The supplier has fraudulently, improperly or illegally obtained the registration;

(f) The information, data, document, report or certificate provided to SPAN is found to be in error;

(g) The supplier ceases to carry on the business in respect of which he is registered;

(h) The supplier has been adjudicated a bankrupt; or

(i) There has been any act or default on the part of the supplier or there has been a change in the circumstances such that the supplier would no longer be entitled to be approved for registration under these Guidelines.

6.7.2 SPAN may require the supplier to suspend the supply of the product pending the decision on the suspension or revocation from the date of the notice.

6.7.3 The supplier shall not be entitled to any form of compensation from SPAN for any loss caused to the supplier due to the suspension or revocation under these Guidelines.

6.7.4 Supplier shall bare any testing cost if there is any complaint regarding registered product received by SPAN that requires testing of products or as instructed by SPAN.

6.8 Transfer of Registration

6.8.1 The registration is personal to the supplier and shall not be assigned or transferred to any other party.

7.0 PRODUCT CERTIFICATE AND CERTIFICATION BODIES

7.1 Application for listing shall be accompanied with a product certificate/certificate of conformity to confirm the compliance of products to SPAN recognised standards as specified in Appendix A. Product that are tested and certified to the same standards of later revisions are also acceptable.

7.2 The certificate shall be written either in English or Bahasa Malaysia. Certificate in other languages shall be translated into either in English or Bahasa Malaysia before submission to SPAN. Translation can be made by any of the following:

(a) Malaysian National Institute of Translation (ITBM);
(b) ITBM registered translators;
(c) The embassy of the country of origin of products;
(d) Translator / Malaysia Court Translator;
(e) The Institute of Language and Literature (DBP);
(f) The recognize university of the country of origin of products;
(g) Local university that has expertise in Language & Linguistic; and
(h) Translator whom appointed/certified by foreign Embassy/High Commission to Malaysia.

7.3 Certificates from any of the following certification bodies (CB's) or organisations are recognised by SPAN:

(a) CBs that are accredited by Standard Malaysia under the Accreditation of Certification Bodies (ACB) Scheme,

(b) CBs that are accredited by an accreditation body that is part of the international and regional mutual global recognition arrangement Multi Lateral Recognition (MLA) implemented by Pacific Accreditation Cooperation (PAC) and International Accreditation Forum (IAF), and

(c) Organisations that are recognised by SPAN as deem competent to carry out product certification.

7.4 The CB's must comply with Type 5 Certification Scheme and the activity must cover by accreditation listed in the scope of accreditation.

7.5 Any supplier whose provide product certificate which have validity more than one (1) year, shall submit yearly surveillance audit report during renewal application.

8.0 TEST REPORT AND TESTING LABORATORIES

8.1 Application for registration for most products under product Category B shall be accompanied with a test report to show compliance with requirements as specified in Appendix B.

8.2 Test report to be submitted for registration shall be written either in English or Bahasa Malaysia. Report in other languages shall be translated into either in English or Bahasa Malaysia before submission to SPAN. Translation can be made by any of the following:

(a) Malaysian National Institute of Translation (ITBM);
(b) ITBM registered translators;
(c) The embassy of the country of origin of products;
(d) Translator / Malaysia Court Translator;
(e) The Institute of Language and Literature (DBP);
(f) The recognize university of the country of origin of products;
(g) Local university that have expertise in Language & Linguistic; and

(h) Translator whom appointed/certified by foreign Embassy/High Commission to Malaysia.

8.3 The validity of the test report shall be within five (5) years from the date of the report issued.

8.4 Performance test report or calibration certificate/report must be issued by manufacturer laboratory or third-party laboratory which accredited by ISO/IEC 17025:2017. The following laboratories are recognised by SPAN:

(a) Labs that are accredited by Standard Malaysia under the Skim Akreditasi Makmal Malaysia (SAMM),

(b) Labs that have been accredited by an accreditation body that is part of the international and regional mutual global recognition arrangement (MRA) implemented by International Laboratory Accreditation Cooperation (ILAC) and Asia Pacific Laboratory Accreditation Cooperation (APLAC), and

(c) Organisations that are recognised by SPAN as deem competent to carry out testing that was specified by SPAN.

9.0 GUIDANCE TO CONDUCT A PILOT PROJECT

9.1 SPAN may require a non-conforming product to be assessed through a pilot project.

9.2 The supplier shall carry out the pilot project at a venue approved by the SPAN before proceeding with the implementation of the pilot project.

9.3 SPAN shall stipulate the terms and procedures to carry out the pilot project and the criteria to measure the safety, quality and performance of the non-conforming product.

9.4 The supplier shall appoint assessment body approved by SPAN to supervise the pilot project. The list of Third Parties (Independent Agency) certified and endorsed by SPAN for the purpose of monitoring and verification of Pilot Project are:

(a) Licensee or a person recognised by SPAN for Water Supply System:
   (i) water supply operators
   (ii) water treatment plant operated by concession company

(b) Licensee or a person recognised by SPAN for sewerage services:
   (i) Indah Water Konsortium Sdn. Bhd.
   (ii) Any sewerage treatment plant operated by private sector

(c) Testing Body recognised by the Department of Standards Malaysia:
   (i) SIRIM QAS International Sdn. Bhd.
   (ii) IKRAM QA Services Sdn. Bhd.
   (iii) CIDB Holdings Sdn. Bhd.
   (iv) SGS (Malaysia) Sdn.Bhd
   (v) ANQAS Certification Sdn.Bhd
   (vi) Watermarks Certification (Malaysia) Sdn.Bhd.

(d) Higher Education Institutions recognised by SPAN:
   (i) Research Management Centre (RMC), Universiti Teknologi MARA (UiTM)
   (ii) Fakulti Teknologi Kejuruteraan Awam (FTKA), Universiti Malaysia Perlis (UniMAP)
   (iii) Jabatan Kejuruteraan Air dan Alam Sekitar, Sekolah Kejuruteraan Awam, Fakulti Kejuruteraan, Universiti Teknologi Malaysia (UTM)
   (iv) Research Management Centre (RMC), Universiti Putra Malaysia (UPM)
   (v) Unit Perundingan Universiti Malaya (UPUM)
   (vi) Fakulti Kejuruteraan Awam dan Alam Bina (FKAAB), Universiti Tun Hussein Onn Malaysia (UTHM)

9.6 Third Party (Independent Agency) for the purpose of sampling:

(a) Testing Laboratory accredited by the Department of Standards Malaysia Laboratory Accreditation Scheme of Malaysia (SAMM)

(i) List of accredited laboratories can be obtained from http://www.jsm.gov.my/cab-directories

9.7 The assessment body supervising the pilot project shall issue a conformity assessment report if the non performing product conforms to the safety, quality and performance requirements stipulated by the SPAN.

10.0 MANUFACTURER'S STANDARD

10.1 SPAN may require a non-conforming product to be assessed through evaluation of the specification, test report and performance report submitted by the manufacturer of the non-conforming product.

10.2 SPAN shall evaluate the specification, test report or performance report submitted by the manufacturer and if the specification, test report or performance report meet the requirements for the non-conforming product, SPAN shall approve that product for registration.

11.0 COMPLIANCE TO SPAN ADDITIONAL REQUIREMENTS OR CONDITIONS FOR SPECIFIC PRODUCTS

11.1 In addition to compliance to standards, SPAN also imposed additional requirements or conditions on specific products as specified in Appendix C.

11.2 Compliance to the additional requirements or conditions is a part of listing and registration procedures.

12.0 FEES OF APPLICATION

12.1 No fees are imposed for the application of listing or registration of products and suppliers at this moment.

12.2 However, SPAN reserves the right to impose any fees or charges at any time for the registration and listing of the suppliers.

13.0 USE OF SPAN LOGO

13.1 Use of SPAN logo on product or marketing material is not allowed.

13.2 However, the supplier may quote “product has been listed/registered with SPAN (state listing/registration number)” on marketing materials.

13.3 Statement connoting that the product is “SPAN certified” or “SPAN approved” are prohibited.

13.4 SPAN have right to suspend or revoke the listing or registration and take legal action if supplier still using the logo after being informed.

14.0 OFFENCE FOR GIVING FALSE OR MISLEADING INFORMATION

14.1 It is an offence under Section 130 of the Water Services Industry Act 2006 for “*a person who discloses or provides information to the Commission or its authorized officers that he knows or has reason to believe is false or misleading commits an offence and shall, on conviction, be liable to a* ***fine not exceeding two hundred thousand ringgit*** *or to* ***imprisonment for a term not exceeding two years*** *or to both*.”

14.2 SPAN also has the right not to process an application or to cancel a listing or a registration if it is believed that false or misleading information is given by the suppliers.

15.0 ENQUIRIES

15.1 For any further information about listing and registration of products and suppliers, please contact Industry Development Division of SPAN at e-mail: eregistrationadmin@span.gov.my or telephone: 03 – 8317 9372, 03 – 8317 9374 or 03 – 8317 9376.

APPENDIX A1

WATER SUPPLY SYSTEM

(CATEGORY A)

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APPENDIX A1

PRODUCT CATEGORY A AND THE RECOGNIZED STANDARDS

Listing of product Category A for water supply system requires the products to have undergone full certification by recognised certification bodies and shall be referred together with the First Schedule [Rule 2 and Subrule 4(1)] of the Water Services Industry (Water Reticulation and Plumbing) Rules 2014 and any amendments thereto. Product that are tested and certified to the same standards of latest revisions are also acceptable.

PRODUCT CATEGORY A (WATER SUPPLY)				
No.	**Product Type**	**Standard Number**	**Standard Title**	**Effective Date**
(A) Water Pipes				
1	Polyethylene (PE) Pipes *refer Appendix C1 (SPAN Additional Requirement)	MS 1058: Part 2: 2005	Specification for Polyethylene (PE) piping systems for water supply. Part 2: Pipes (Forth Revision)	01 Jan 2008
2	Polyethylene Raised Temperature (PE-RT) Pipes	MS 2508-2:2012	Plastics piping systems for hot and cold water installations. – Polyethylene of Raised Temperature Resistance (PE-RT) Part 2: Pipes (ISO 22391-2:2009, MOD)	01 Jan 2013
3	Multilayer Pipe PE-RT/AL/PE-RT	BS EN ISO 21003-2:2008+A1:2011	Multilayer piping systems for hot and cold water installations inside buildings. Pipes.	14 Apr 2018
4	Crosslinked Polyethylene (PE-X) Pipes	MS 1736:Part 2: 2004	Plastics piping systems for hot and cold water installations. Cross-linked Polyethylene (PE-X). Part 2: Pipes	01 Jan 2008

PRODUCT CATEGORY A (WATER SUPPLY)				
No.	**Product Type**	**Standard Number**	**Standard Title**	**Effective Date**
5	Multilayer Pipe PE-X/AL/PE-X	AS 4176.2:2010	Multilayer pipes for pressure applications. Multilayer piping systems for hot and cold water plumbing applications. Pipes.	10 Sept 2014
		AS 4176:1994	Polyethylene / Aluminium and Cross-linked Polyethylene / Aluminium Macro-composite pipe systems for pressure applications. ***This standard shall be applicable to the existing supplier or user only and is recognized for SPAN product listing until 31st December 2022 only.*	01 Jan 2008
6	Multilayer Pipes Polyethylene-Aluminium-Polyethylene (PE-AL-PE)	ASTM F1282-17	Standard specification for Polyethylene / Aluminium / Polyethylene (PE-AL-PE) composite pressure pipe.	15 April 2021
		ASTM F1282-10	Standard specification for Polyethylene / Aluminium / Polyethylene (PE-AL-PE) composite pressure pipe. ***This standard shall be applicable to the existing supplier or user only and is recognized for SPAN product listing until 31st December 2023 only.*	26 Ogos 2020
		ASTM F1282-03	Standard specification for Polyethylene / Aluminium / Polyethylene (PE-AL-PE) composite pressure pipe. ***This standard shall be applicable to the existing supplier or user only and is recognized for SPAN product listing until 31st December 2023 only.*	01 Jan 2008

PRODUCT CATEGORY A (WATER SUPPLY)				
No.	**Product Type**	**Standard Number**	**Standard Title**	**Effective Date**
7	Unplasticized Poly(Vinyl Chloride) (PVC-U) Pipes *refer Appendix C1 (SPAN Additional Requirement)	MS 628-2:2014	Plastics piping systems for water supply and for buried and above-ground drainage and sewerage under pressure. Unplasticized Poly(Vinyl Chloride) (PVC-U) Part 2: Pipes (Second Revision) (ISO 1452-3:2009, Mod)	14 Apr 2018
		MS 628:Part 1: 1999 AMD.1:2001 & AMD.2:2002	Specification for Unplasticised PVC (uPVC) Pipes for Water Supply: Part 1: Pipes (1st revision) ***This standard shall be applicable to the existing supplier or user only and is recognized for SPAN product listing until 31st December 2022 only.*	01 Jan 2008
8	Solvent cement for PVC-U piping system *refer Appendix C1 (SPAN Additional Requirement)	MS 628-4:2015	Plastics piping systems for water supply and for buried and above-ground drainage and sewerage under pressure. Unplasticized Poly(Vinyl Chloride) (PVC-U) Part 4: Solvent Cement.	14 Apr 2018
9	Chlorinated Poly(Vinyl Chloride) (PVC-C) Pipes	MS 2045:2007	Chlorinated Poly(Vinyl Chloride) (PVC-C) plastic hot and cold water distribution systems. – Specification	01 Jan 2008
		MS 1757: Part 1: 2008	Chlorinated Poly(Vinyl Chloride) (PVC-C) Plastic Piping System. Part 1: Specification for Schedules 40 & 80 Pipes	01 June 2009

PRODUCT CATEGORY A (WATER SUPPLY)				
No.	**Product Type**	**Standard Number**	**Standard Title**	**Effective Date**
10	Oriented Poly(Vinyl Chloride) (PVC-O) Pipes	ISO 16422:2014 (any total adoption of the standard is accepted)	Pipes and joints made of Oriented Unplasticized Poly (Vinyl Chloride) (PVC-O) for the conveyance of water under pressure. – Specifications	14 Apr 2018
11	Acrylonitrile-Butadiene-Styrene (ABS) Pipes *refer Appendix C1 (SPAN Additional Requirement)	MS 1419: Part 1: 2007	Acrylonitrile-Butadiene Styrene (ABS) piping systems for pressure applications. Part 1: Specification for compounds, pipes and fittings (First Revision)	01 Jan 2008
12	Solvent cement for ABS piping system *refer Appendix C1 (SPAN Additional Requirement)	MS 1419: Part 3: 1997	Specification for Acrylonitrile Butadiene Styrene (ABS) pipes and fittings for pressure applications. Part 3: Solvent cement and priming (cleaning) fluids for use with ABS pipes and fittings.	01 Jan 2008
13	Polypropylene (PP) Pipes	MS 2286-2:2012	Plastics piping systems for hot and cold water installations. Polypropylene (PP) Part 2: Pipes (ISO 15874-2:2003, Amd.1:2007, MOD)	01 Jan 2013
14	Polybutylene (PB) Pipes	MS ISO 15876-2: 2004,AMD.1:2009	Plastics piping systems for hot and cold water installations. – Polybutylene (PB) Part 2: Pipes (ISO 15876-2:2003, MOD)	01 June 2010
		AS/NZS 2642-2: 2008	Polybutylene (PB) plumbing pipe systems.	01 June 2009

PRODUCT CATEGORY A (WATER SUPPLY)				
No.	**Product Type**	**Standard Number**	**Standard Title**	**Effective Date**
			– Polybutylene (PB) pipe for hot and cold water applications ***This standard is recognized for SPAN product listing until further notice*	
15	Glass Reinforced Plastic (GRP) Pipes	ISO 10639:2017	Plastics piping system for pressure and non-pressure water supply. – Glass Reinforced Thermosetting Plastics (GRP) systems based on Unsaturated Polyester (UP) resin	14 April 2021
		ISO 10639:2004/ Amd 1:2011	Plastics piping system for pressure and non-pressure water supply. – Glass Reinforced Thermosetting Plastics (GRP) systems based on Unsaturated Polyester (UP) resin ***This standard shall be applicable to the existing supplier or user only and is recognized for SPAN product listing until 31st December 2023 only.*	14 Apr 2018
		BS EN 1796:2013	Plastics piping system for water supply with or without pressure. – Glass Reinforced Thermosetting Plastics (GRP) based on Unsaturated Polyester resin.	10 Sept 2014
		ISO 25780:2011 (any total adoption of the standard is accepted)	<u>Jacking Pipe</u> Plastics piping system for pressure and non-pressure water supply, irrigation, drainage or sewerage. – Glass Reinforced Thermosetting Plastics (GRP) systems based on Unsaturated Polyester (UP) resin.	14 Apr 2018

PRODUCT CATEGORY A (WATER SUPPLY)				
No.	**Product Type**	**Standard Number**	**Standard Title**	**Effective Date**
			– Pipes with flexible joints intended to be installed using jacking techniques. *Listing for GRP Pipes using Jacking Method shall accompany with ISO 10639	
16	Steel Pipes	SPAN TS 21827: 2013	Specification for Steel Pipes, Fittings and Joints for water and sewage. Part 1: Technical Delivery Requirements Part 2: Tube Requirements	15 June 2013
		MS 1968:2007 (confirmed 2011)	Non-Alloy Steel Tubes and Fittings for the conveyance of aqueous liquids including water for human consumption. – Technical delivery conditions	18 Apr 2014
17	Stainless Steel (SS) Pipes – Industrial	MS 1841:2010	Seamless, welded and heavily cold austenitic Stainless Steel Pipes. – Specification (First Revision)	01 June 2011
18	Stainless Steel (SS) Light Gauge Tubes	MS 1988:2007 (Confirmed: 2011)	Welded Stainless Steel Tubes for the conveyance of water and other aqueous liquids. – Technical delivery conditions and includes amendment A1	18 Apr 2014
		BS EN 10312:2002	Welded Stainless Steel Tubes for the conveyance of aqueous liquids including water for human consumption. Technical delivery conditions. ***This standard is recognized for SPAN product listing until 30th June 2022 only.*	01 Jan 2008

PRODUCT CATEGORY A (WATER SUPPLY)				
No.	**Product Type**	**Standard Number**	**Standard Title**	**Effective Date**
		JIS G 3448:2012	Light Gauge Stainless Steel Tubes for ordinary piping. ***This standard is recognized for SPAN product listing until 30th June 2022 only.*	18 Apr 2014
19	Ductile Iron (DI) Pipes	MS 1919:2013	Ductile Iron pipes, fittings, accessories and their joints for water pipelines. – Requirements and test methods (First Revision)	18 April 2014
20	Copper Tubes	BS EN 1057:2006+ A1:2010	Copper and copper alloys. Seamless, round copper tubes for water and gas in sanitary and heating applications.	18 Apr 2014
21	Steel Pipe with Plastic Lining	CJ/T 136:2001	Steel Pipes of lining plastic for water supply. ***This standard shall be applicable to the existing supplier or user only and is recognized for SPAN product listing until 31st December 2023 only.*	10 Sept 2014
22	Modified Poly(Vinyl Chloride) (PVC-M) Pipes	AS/NZS 4765:2017	Modified PVC (PVC-M) pipes for pressure applications.	15 April 2021
		AS/NZS 4765:2007	Modified PVC (PVC-M) pipes for pressure applications. ***This standard shall be applicable to the existing supplier or user only and is recognized for SPAN product listing until 31st December 2023 only.*	14 Apr 2018

PRODUCT CATEGORY A (WATER SUPPLY)				
No.	**Product Type**	**Standard Number**	**Standard Title**	**Effective Date**
(B) Water Fittings				
1	Polyethylene (PE) Fittings	MS 1058: Part 3: 2006	Polyethylene (PE) piping systems for water supply. – Part 3: Fittings	01 Jan 2008
		1225-3: 2011+A1:2012	<u>Socket Fusion only</u> Plastics piping systems for water supply, and for drainage and sewerage under pressure. Polyethylene (PE). Fittings ***This standard is recognized for SPAN product listing until further notice*	18 Apr 2014
2	High Density Polyethylene (HDPE) Joints Assemblies and Fittings	DIN 16963-5 (1999-10)	Pipe fittings and joints and assemblies for PE 80 and PE 100 Polyethylene pressure pipes. – Part 5: General Quality Requirements and Testing	31 Dec 2013
		MS 1058: Part 2: 2005 AMD.1:2011	<u>PE Fabricated Fittings</u> Polyethylene (PE) piping systems for water supply. – Part 2: Pipes (Forth Revision)	14 Apr 2018
		DIN 16963-1 (1980-08)	Pipe joints and elements for High Density Polyethylene (HDPE) Pressure Pipelines, Type 1 and 2; Pipe Bends of segmental construction for butt-welding. Dimensions.	14 Apr 2018
		DIN 16963-2 (1983-02)	Pipe joint assemblies and fittings for type 1 and 2 High-	14 Apr 2018

PRODUCT CATEGORY A (WATER SUPPLY)				
No.	**Product Type**	**Standard Number**	**Standard Title**	**Effective Date**
			Density Polyethylene (HDPE) pressure pipes; Tees and braches produced by segment inserts and necking for butt welding. Dimension.	
		DIN 16963-5 (1999-10)	Pipe joint assemblies and fittings for high density polyethylene (PE-HD) pressure pipes; General quality requirements, testing.	14 Apr 2018
		DIN 16963-4 (1988-11)	<u>PE Injection Fittings</u> Pipe joint assemblies and fittings for high-density polyethylene (PE-HD) pressure pipes; adaptors for fusion jointing, flanges and sealing elements; dimensions.	14 Apr 2018
		DIN 16963-5 (1999-10)	Pipe joint assemblies and fittings for high density polyethylene (PE-HD) pressure pipes; general quality requirements, testing.	14 Apr 2018
		DIN 16963-6 (1989-10)	Pipe joint assemblies and fittings for high-density polyethylene (PE-HD) pressure pipes; injection-moulded fittings for butt welding; dimensions.	14 Apr 2018
3	Crosslinked Polyethylene (PE-X) Fittings	MS 1736: Part 3: 2004	Plastics piping systems for hot and cold water installation. – Crosslinked Polyethylene (PE-X). Part 3: Fittings	01 Jan 2008

PRODUCT CATEGORY A (WATER SUPPLY)				
No.	**Product Type**	**Standard Number**	**Standard Title**	**Effective Date**
4	Polyethylene Raised Temperature Resistance (PE-RT) Fittings	MS 2508-3:2012	Plastics piping systems for hot and cold water installations. Polyethylene of Raised Temperature Resistance (PE-RT) Part 3: Fittings (ISO 22391-3: 2009, MOD)	25 July 2013
5	Multilayer Fittings PE-RT/AL/PE-RT	ISO 21003–3:2008	Multilayer piping systems for hot and cold water installations inside buildings. – Part 3: Fittings	01 Jan 2009
6	Poly(*p*-Phenylene Oxide) (PPO) and Macro-Composite Fittings	AS 4176.3:2010	Multilayer pipes for pressure applications. Multilayer piping systems for hot and cold water plumbing applications. – Fittings	10 Sept 2014
		AS 4176:1994	Polyethylene / Aluminium and Cross-linked Polyethylene / Aluminium Macro-composite pipe systems for pressure applications. ***This standard shall be applicable to the existing supplier or user only and is recognized for SPAN product listing until 31st December 2023 only.*	10 Sept 2014
7	Mechanical Joints and Compression Fittings	ISO 17885:2015 (any total adiption of the standard is accepted)	Plastic piping systems. Mechanical fittings for pressure piping system. - Specification	14 Apr 2018
8	Polypropylene (PP) Fittings	MS 2286-3:2012	Plastics piping systems for hot and cold water installations. Polypropylene (PP) Part 3: Fittings	15 June 2013

PRODUCT CATEGORY A (WATER SUPPLY)				
No.	**Product Type**	**Standard Number**	**Standard Title**	**Effective Date**
			(ISO 15874-3:2003, FDAM 1:2009, MOD)	
9	Polybutylene (PB) Fittings	MS ISO 15876–3: 2004	Plastics piping systems for hot and cold water installations – Polybutylene (PB) Part 3: Fittings	01 Jan 2008
		AS/NZS 2642-3: 2008	Polybutylene (PB) plumbing pipe systems – Mechanical jointing fittings for use with Polybutylene (PB) pipes for hot and cold water applications ***This standard is recognized for SPAN product listing until further notice*	01 Jan 2009
10	Unplasticized Poly(Vinyl Chloride) (PVC-U) Joints/Fittings *refer Appendix C1 (SPAN Additional Requirement)	MS 628-3:2014	Plastics piping systems for water supply and for buried and above-ground drainage and sewerage under pressure. Unplasticized Poly(Vinyl Chloride) (PVC-U) - Part 3: Fittings (First Revision) (ISO 1452-3:2009, Mod)	14 Apr 2018
		MS 628:Part 2:Section 2.1:1999	Specification for Unplasticised PVC (uPVC) Pipes for Water Supply : Part 2: Joints and Fittings for Use with uPVC Pipes: Section 2.1: uPVC Joints and Fittings ***This standard shall be applicable to the existing supplier or user only and is recognized for SPAN product listing until 31st December 2022 only.*	01 Jan 2008

PRODUCT CATEGORY A (WATER SUPPLY)				
No.	**Product Type**	**Standard Number**	**Standard Title**	**Effective Date**
11	Chlorinated Poly(Vinyl Chloride) (PVC-C) Fittings	MS 2045:2007	Chlorinated Poly(Vinyl Chloride) (PVC-C) plastic hot and cold water distribution systems. – Specification.	01 Jan 2008
		MS 1757: Part 2: 2008	Chlorinated Poly(Vinyl Chloride) (PVC-C) Plastic Piping System. – Part 2: Specification for Schedule 40 Socket-type pipe fittings.	01 Jan 2009
		MS 1757: Part 3: 2008	Chlorinated Poly(Vinyl Chloride) (PVC-C) Plastic Piping System. – Part 3: Specification for Schedule 80 Pipe Fittings.	01 Jan 2009
12	Oriented Poly(Vinyl Chloride) (PVC-O) Fittings	ISO 16422:2014 (any total adoption of the standard is accepted)	Pipes and joints made of Oriented Unplasticized Poly (Vinyl Chloride) (PVC-O) for the conveyance of water under pressure – Specifications	14 Apr 2018
		CEN/TS 17176-3:2019	Plastic Piping Systems for Water Supply and for Buried and Above Ground Drainage, Sewerage and Irrigation Under Pressure – Oriented Unplasticized Poly(Vinyl Chloride) (PVC-O) - Part 3: Fittings	15 Apr 2021
13	Acrylonitrile-Butadiene-Styrene (ABS) Fittings	MS 1419: Part 1: 2007	Acrylonitrile-Butadiene Styrene (ABS) piping systems for pressure applications.	01 Jan 2008

PRODUCT CATEGORY A (WATER SUPPLY)				
No.	**Product Type**	**Standard Number**	**Standard Title**	**Effective Date**
	*refer Appendix C1 (SPAN Additional Requirement)		– Part 1: Specification for compounds, pipes and fittings (First Revision)	
14	Glass Reinforced Plastic (GRP) Fittings	ISO 10639:2017	Plastics piping system for pressure and non-pressure water supply – Glass Reinforced Thermosetting Plastics (GRP) systems based on Unsaturated Polyester (UP) resin	15 Apr 2021
		ISO 10639:2004/ Amd 1:2011	Plastics piping system for pressure and non-pressure water supply – Glass Reinforced Thermosetting Plastics (GRP) systems based on Unsaturated Polyester (UP) resin – Amendment 1 ***This standard shall be applicable to the existing supplier or user only and is recognized for SPAN product listing until 31st December 2023 only.*	14 Apr 2018
		BS EN 1796:2013	Plastics piping system for water supply with or without pressure – Glass Reinforced Thermosetting Plastics (GRP) based on Unsaturated Polyester resin	10 Sept 2014
15	Steel Pipe Specials	SPAN TS 21827: 2013	Specification for Steel Pipes, fittings and joints for water and sewerage Part 1: Technical delivery requirements Part 2: Tube requirements	15 June 2013

PRODUCT CATEGORY A (WATER SUPPLY)				
No.	**Product Type**	**Standard Number**	**Standard Title**	**Effective Date**
		MS 1968:2007	Non-alloy steel tubes and fittings for the conveyance of aqueous liquids including water for human consumption – Technical delivery conditions	01 Jan 2008
16	Stainless Steel (SS) Threaded Fittings	MS 2495:2012	Pipework – Stainless steel fittings threaded in accordance with MS 1989: Part 1 (ISO 4144:2003, MOD)	01 Jan 2013
17	Stainless Steel (SS) Welded Fittings	MS 1842:2010	Wrought Austenitic Stainless Steel piping fittings – Specification (First Revision)	01 Jan 2011
18	Ductile Iron Fittings	MS 1919:2013	Ductile Iron pipes, fittings, accessories and their joints for water pipelines – Requirement and test method (First Revision)	14 Apr 2018
		EN 12842:2012	<u>PVC-U or PE piping</u> Ductile Iron Fittings for PVC-U or PE piping systems. Requirement and test method	01 Mar 2016
19	Copper & Copper Alloys Fittings	BS EN 1254-1: 1998	Copper and Copper Alloys. plumbing fittings. fittings with short ends for capillary brazing to Copper Tubes.	01 Jan 2008
		BS EN 1254-2: 1998	Copper and Copper Alloys. plumbing fittings. Fittings with compression ends for use with Copper Tubes.	01 Jan 2008

PRODUCT CATEGORY A (WATER SUPPLY)				
No.	**Product Type**	**Standard Number**	**Standard Title**	**Effective Date**
		BS EN 1254-3: 1998	Copper and Copper Alloys. Plumbing fittings. Fittings with compression ends for use with plastic pipes.	01 Jan 2008
		BS EN 1254-4: 1998	Copper and Copper Alloys. Plumbing fittings. Fittings combining other end connections with capillary or compression ends.	01 Jan 2008
		BS 8537:2010	Copper and Copper Alloys. Plumbing fittings. Specification for press ends of plumbing fittings for use with metallic tubes.	10 Sept 2014
		AS 3688:2016	Water supply and Gas System – Metallic fittings and end connectors	15 April 2021
		AS 3688:2005	Water supply – Metallic fittings and end connectors ***This standard shall be applicable to the existing supplier or user only and is recognized for SPAN product listing until 31st December 2023 only.*	15 Apr 2015
20	Steel Fittings with Plastic Lining	CJ/T 137:2008	Malleable Iron Threaded Fittings of Lining Plastic for water supply.	15 April 2021
		CJ/T 137:2001	Malleable Iron Threaded Fittings of Lining Plastic for water supply. ***This standard shall be applicable to the existing supplier or user only and is recognized for SPAN product listing until 31st December 2023 only.*	10 Sept 2014

PRODUCT CATEGORY A (WATER SUPPLY)				
No.	**Product Type**	**Standard Number**	**Standard Title**	**Effective Date**
21	Variable Adapter	Spesifikasi JKR 20200-0045-99	JKR Standard Specification for Detachable Joints and Variable Adaptors for uPVC, Ductile Iron and AC Pipes.	01 Jan 2008
22	Flange Adapter	Spesifikasi JKR 20200-0048-99	JKR Standard Specification for Flexible Couplings and Flange Adaptors	01 Jan 2008
23	Flexible Coupling	Spesifikasi JKR 20200-0048-99	JKR Standard Specification for Flexible Couplings and Flange Adaptors	01 Jan 2008
24	Detachable Joint	Spesifikasi JKR 20200-0045-99	JKR Standard Specification for Detachable Joints and Variable Adaptors for uPVC, Ductile Iron and AC Pipes	01 Jan 2008
25	Ferrous Saddle	Spesifikasi JKR 20200-0044-99	JKR Standard Specification for Ferrous Saddles	01 Jan 2008
		JKR Spec. 20200-0184-04	JKR Standard Specification for Ferrous Saddles	10 Sept 2014
26	Pillar Hydrant	MS 1395:2011	Pillar Fire Hydrants: Specification (First Revision)	18 Apr 2014
		Spesifikasi JKR 20200-0042-99	JKR Standard Specification for Ductile Iron Pillar Hydrants	01 Jan 2008
27	Ductile Iron (DI) Strainer	Spesifikasi JKR 20200-0100-01	JKR Standard Specification for Ductile Iron Y and T Strainers (DN 50 to DN 600)	01 Jan 2008
28	Swivel Ferrules	Spesifikasi JKR 20200-0174-04	JKR Standard Specification for Ferrules	01 Jan 2008

PRODUCT CATEGORY A (WATER SUPPLY)				
No.	**Product Type**	**Standard Number**	**Standard Title**	**Effective Date**
29	Under Pressure Vertical Ferrules	MS 1396:2018	Ferrules – Specification (Second revision)	01 Jun 2020
		MS 1396:2006	Ferrules – Specification (First Revision) ***This standard shall be applicable to the existing supplier or user only and is recognized for SPAN product listing until 31st May 2022 only.*	01 Jan 2008
30	Polypropylene (PP) Tapping Ferrules	Spesifikasi JKR 20200-0055-99	JKR Standard Specification for Polypropylene (PP) Tapping Ferrules to be used with Polyethylene (PE) and uPVC Pipes	01 Jan 2008
31	Manhole Cover	SPAN TS 3003: 2021	Manhole Tops - Specification	10 Feb 2021
		BS EN 124-1:2015	Gully tops and manhole tops for vehicular and pedestrian areas. Definitions, classification, general principle of design, performance requirements and test methods. ***This standard shall be applicable to the existing supplier or user only and is recognized for SPAN product listing until 31st December 2022 only.*	14 Apr 2018
		BS EN 124-2:2015	Gully tops and manhole tops for vehicular and pedestrian areas. Gully tops and manhole tops made of cast iron. ***This standard shall be applicable to the existing supplier or user only and*	14 Apr 2018

PRODUCT CATEGORY A (WATER SUPPLY)				
No.	**Product Type**	**Standard Number**	**Standard Title**	**Effective Date**
			is recognized for SPAN product listing until 31st December 2022 only.	
		BS EN 124-3:2015	Gully tops and manhole tops for vehicular and pedestrian areas. Gully tops and manhole tops made of steel or aluminium alloys. ***This standard shall be applicable to the existing supplier or user only and is recognized for SPAN product listing until 31st December 2022 only.*	14 Apr 2018
		BS EN 124-4:2015	Gully tops and manhole tops for vehicular and pedestrian areas. Gully tops and manhole tops made of steel reinforced concrete. ***This standard shall be applicable to the existing supplier or user only and is recognized for SPAN product listing until 31st December 2022 only.*	14 Apr 2018
		BS EN 124-5:2015	Gully tops and manhole tops for vehicular and pedestrian areas. Gully tops and manhole tops made of composite materials. ***This standard shall be applicable to the existing supplier or user only and is recognized for SPAN product listing until 31st December 2022 only.*	14 Apr 2018
		BS EN 124-6:2015	Gully tops and manhole tops for vehicular and pedestrian areas. Gully tops and manhole tops made of Polypropylene (PP), Polyethylene (PE) or Unplasticized Poly(Vinyl Chloride) (PVC-U).	14 Apr 2018

PRODUCT CATEGORY A (WATER SUPPLY)				
No.	**Product Type**	**Standard Number**	**Standard Title**	**Effective Date**
			***This standard shall be applicable to the existing supplier or user only and is recognized for SPAN product listing until 31st December 2022 only.*	
		BS EN 124:1994	Gully tops and manhole tops for vehicular and pedestrian areas Design req., type testing, marking, quality control ***This standard is recognized for SPAN product listing until 30th Aug 2021 only*	01 Jan 2008
32	Polypropylene (PP) Clamp Saddle	Spesifikasi JKR No. 1-95 (BA)	JKR Standard Specification for Polypropylene (PP) Clamp Saddle to be used with Polyethylene (PE) Pipe	15 April 2015
33	Vulcanized Rubber Pipe Joint Seals	BS EN 681-1:1996	Elastomeric Seals – Material requirements for pipe joint seals used in water and drainage application. Part 1: Vulcanized Rubber	15 April 2015
34	Steel Flange	BS EN 1092-1: 2018	Flanges and their joints. Circular flanges for pipes, valves, fittings and accessories, PN Designated - Part 1: Steel Flanges	15 April 2021
		BS EN 1092-1: 2007+A1:2013	Flanges and their joints. Circular flanges for pipes, valves, fittings and accessories, PN Designated - Part 1: Steel Flanges ***This standard shall be applicable to the existing supplier or user only and is recognized for SPAN product listing until 31st December 2023 only.*	01 Mar 2016

PRODUCT CATEGORY A (WATER SUPPLY)				
No.	**Product Type**	**Standard Number**	**Standard Title**	**Effective Date**
		BS EN 1759-1: 2004	Flanges and their joints. Circular flanges for pipes, valves, fittings and accessories, class-designated. Steel flanges, NPS 1/2 to 24	01 Mar 2016
35	Thermoplastic Mechanical Fittings	SIRIM 11:2017	Specification for Thermoplastic Mechanical Fittings for Plastics Pressure Piping Systems	01 Jun 2020
(C) Service Reservoir				
1	Cylindrical Double Fold System	BS 5950-1:2000	Structural Use of Steelwork in Building Part 1: Code of practice for design rolled and welded section ***This standard shall be applicable to the existing supplier or user only and is recognized for SPAN product listing until 31st December 2023 only.*	15 June 2015
2	Glass Coated/ Glass Lined/ Glass Fused/ Epoxy Coated/ Epoxy Lining	ISO 28765:2016 (any total adoption of the standard is accepted)	Vitreous and Porcelain Enamels – Design of bolted steel tanks for the storage treatment of water or municipal or industrial effluents and sludges	14 Apr 2018
		AWWA D103-19	Factory-Coated Bolted Steel Tanks for Water Storage	15 April 2021
		AWWA D103-09	Factory-Coated Bolted Steel Tanks for Water Storage ***This standard shall be applicable to the existing supplier or user only and is recognized for SPAN product listing until 31st December 2023 only.*	01 Jan 2008

PRODUCT CATEGORY A (WATER SUPPLY)				
No.	**Product Type**	**Standard Number**	**Standard Title**	**Effective Date**
		AWWA D103-97	Factory-Coated Bolted Steel Tanks for Water Storage ***This standard shall be applicable to the existing supplier or user only and is recognized for SPAN product listing until 31st December 2023 only.*	01 Jan 2008
(D) Storage Cistern				
1	Cylindrical Double Fold System *refer Appendix C1 (SPAN Additional Requirement)	BS 5950-1:2000	Structural use of steelwork in building. Part 1: Code of practice for design – Rolled and welded section ***This standard shall be applicable to the existing supplier or user only and is recognized for SPAN product listing until 31st December 2023 only.*	15 June 2015
2	Glass Coated/ Glass Lined/ Glass Fused/ Epoxy Coated/ Epoxy Lining/ HDPE Lining *refer Appendix C1 (SPAN Additional Requirement)	ISO 28765:2016 (any total adoption of the standard is accepted)	Vitreous and Porcelain Enamels. – Design of bolted steel tanks for the storage treatment of water or municipal or industrial effluents and sludges	14 Apr 2018
		AWWA D103-19	Factory-Coated Bolted Steel Tanks for Water Storage	15 April 2021
		AWWA D103-09	Factory-Coated Bolted Steel Tanks for Water Storage ***This standard shall be applicable to the existing supplier or user only and is recognized for SPAN product listing until 31st December 2023 only.*	01 Jan 2008
		AWWA D103-97	Factory-Coated Bolted Steel Tanks for Water Storage	01 Jan 2008

PRODUCT CATEGORY A (WATER SUPPLY)				
No.	**Product Type**	**Standard Number**	**Standard Title**	**Effective Date**
			***This standard shall be applicable to the existing supplier or user only and is recognized for SPAN product listing until 31st December 2023 only.*	
3	Storage Tank Polyethylene (PE) Tanks *refer Appendix C1 (SPAN Additional Requirement)	MS 1225-1:2014	Polyethylene (PE) Tanks for cold water storage; Part 1: Capacity up to 600G (Third Revision)	14 Apr 2018
		MS 1225: Part 2: 2006 AMD.1:2011	Polyethylene (PE) Tanks for cold water storage; Part 2: Capacity more than 600G (First Revision)	18 Apr 2014
4	Glass-fibre Reinforced Polyester (GRP) Sectional Water Tank *refer Appendix C1 (SPAN Additional Requirement)	MS 1390:2010	Glass-fibre Reinforced Polyester panels and panel water tanks. - Specification (First Revision)	01 Jan 2011
5	Corrugated Steel Panel with Polyethylene-Lined Water Storage Tank *refer Appendix C1 (SPAN Additional Requirement)	SS 245:2014	Specification for glass reinforced polyester sectional water tank.	14 Apr 2018
		BS 1449-1.1:1991	Steel Plate, Sheet & Strip. Carbon and carbon-manganese plate, sheet and strip general specification.	01 Jan 2008
		SIRIM 18:2017	Specification for Corrugated Steel Panel Tanks with Liner for Water Storage	01 Jun 2020

PRODUCT CATEGORY A (WATER SUPPLY)				
No.	**Product Type**	**Standard Number**	**Standard Title**	**Effective Date**
6	Glass-fibre Reinforced Polyester (GRP) One-Piece Water Tank *refer Appendix C1 (SPAN Additional Requirement)	MS 1241:2011	One Piece Glass-fibre Reinforced Polyester (GRP) water tanks nominal capacity of 100 000 litres and below. -Specification (First Revision)	18 Apr 2014
7	Pressed Steel Sectional Rectangular Tank Panel *refer Appendix C1 (SPAN Additional Requirement)	BS 1564:1975	Specification for Pressed Steel Sectional Rectangular Tanks.	01 Jan 2008
8	Stainless Steel Storage Tank *refer Appendix C1 (SPAN Additional Requirement)	JKR 20200-0041-99	Stainless Steel water tanks (with effective capacity up to 15,000L)	01 Jan 2008
9	Stainless Steel Storage Tank (Rectangular / Panel Tank) *refer Appendix C1 (SPAN Additional Requirement)	CNS 9443:2000	Stainless Steel Storage Tanks.	01 Jan 2008
(E) Valves				
1	Butterfly Valve *refer Appendix C1 (SPAN Additional Requirement)	Directive 2014/68/EU	Pressure Equipment Directive	14 Apr 2018
		BS EN 593:2017	Industrial Valves. Metallic Butterfly Valves	01 Jun 2020

PRODUCT CATEGORY A (WATER SUPPLY)				
No.	**Product Type**	**Standard Number**	**Standard Title**	**Effective Date**
		BS EN 593:2009+ A1:2011	Industrial Valves. Metallic Butterfly Valves ***This standard shall be applicable to the existing supplier or user only and is recognized for SPAN product listing until 31st May 2022 only.*	18 Apr 2014
2	Air Valve *refer Appendix C1 (SPAN Additional Requirement)	Directive 2014/68/EU	Pressure Equipment Directive	14 Apr 2018
		BS EN 1074-4: 2000	Valves for water supply. Fitness for purpose requirements and appropriate verification tests. Air Valves	01 Jan 2008
		JKR 20200-0097-01	Ductile Iron Air Valves (Revised Edition 2001)	01 Jan 2008
		JKR 20200-0043-99	Ductile Iron Air Valves (Revised Edition 1999)	01 Jan 2008
		AWWA C512-15	Air Release, Air/Vacuum, and combination Air Valve for waterworks service	15 April 2021
		AWWA C512-07	Air Release, Air/Vacuum, and combination Air Valve for waterworks service ***This standard shall be applicable to the existing supplier or user only and is recognized for SPAN product listing until 31st December 2023 only.*	18 Apr 2014
3	Gate Valve	Directive 2014/68/EU	Pressure Equipment Directive	14 Apr 2018

PRODUCT CATEGORY A (WATER SUPPLY)				
No.	**Product Type**	**Standard Number**	**Standard Title**	**Effective Date**
	*refer Appendix C1 (SPAN Additional Requirement)	EN 1074-2:2004 (any total adoption of the standard is accepted)	Valves for water supply. Fitness for purpose requirements and appropriate verification tests. Part 2: Isolating valves	14 Apr 2018
		BS EN 12288:2010	Industrial Valves. Copper Alloy Gate Valves	01 Jan 2011
		BS EN 1171:2015	Industrial Valves. Cast Iron Gate Valves	01 Jun 2020
		BS EN 1171:2002	Industrial Valves. Cast Iron Gate Valves ***This standard shall be applicable to the existing supplier or user only and is recognized for SPAN product listing until 31st May 2022 only.*	01 Jan 2008
		BS 5163-1:2004	Valves for waterworks purposes. Predominantly key-operated cast iron gate valves. Code of practice	01 Jan 2008
		BS 5163-2:2004	Valves for waterworks purposes. Stem Caps for use on isolating valves and associated water control apparatus. Specification	01 Jan 2008
		JKR 20200-0077-00	Ductile Iron Type B Large Sluice Valves (DN700 - DN1800)	01 Jan 2008

PRODUCT CATEGORY A (WATER SUPPLY)				
No.	**Product Type**	**Standard Number**	**Standard Title**	**Effective Date**
4	Check Valve *refer Appendix C1 (SPAN Additional Requirement)	Directive 2014/68/EU	Pressure Equipment Directive	14 Apr 2018
		BS EN 12334:2001	Industrial Valves. Cast Iron Check Valves ***This standard shall be applicable to the existing supplier or user only and is recognized for SPAN product listing until 31st May 2022 only.*	01 Jan 2008
		BS EN 14341:2006	Industrial Valves. Steel Check Valves ***This standard shall be applicable to the existing supplier or user only and is recognized for SPAN product listing until 31st December 2023 only.*	01 Jan 2008
		BS EN 1074-3: 2000	Valves for water supply. Fitness for purpose requirements and appropriate verification tests. Check valves	01 Jan 2008
		AWWA C508-09	Swing-Check Valves for waterworks service, 2-In. (50 mm) through 24-In. (600 mm) NPS	01 Jan 2008
		BS EN 16767:2020	Industrial valves. Steel and cast iron check valves	15 April 2021
		BS EN 16767:2016	Industrial valves. Steel and cast iron check valves ***This standard shall be applicable to the existing supplier or user only and is recognized for SPAN product listing until 31st Dicember 2023 only.*	01 Jun 2020

PRODUCT CATEGORY A (WATER SUPPLY)				
No.	**Product Type**	**Standard Number**	**Standard Title**	**Effective Date**
5	Control Valve	BS EN 1074-5: 2001	Valves for Water Supply – Fitness Purpose Requirements and Appropriate Verification Tests. Part 5: Control Valve	01 Jan 2008
		AWWA C530-17	Pilot-operated control valve	15 April 2021
		AWWA C530-12	Pilot-operated control valve ***This standard shall be applicable to the existing supplier or user only and is recognized for SPAN product listing until 31st December 2023 only.*	14 Apr 2018
6	Stop Valve	BS EN 1213:2000	Building Valves. Copper alloy stopvalves for potable water supply in buildings. Test & Requirements	01 Jan 2008
		BS 6675:1986	Specification for servicing valves (copper alloy) for water services	01 Jan 2008
		JKR 20200-0172-04	JKR Standard Specification for Stop Valves (Revised Edition 2004)	10 Sept 2014
		SIRIM 9:2017	Thermoplastic Stopvalves for Potable Water Supply in Buildings	01 Jun 2020
7	Ball Valves	BS EN 13828:2003	Building valves. Manually operated copper alloy and stainless steel ball valves	14 Apr 2018

PRODUCT CATEGORY A (WATER SUPPLY)				
No.	**Product Type**	**Standard Number**	**Standard Title**	**Effective Date**
			for potable water supply in buildings. Tests and requirements.	
		BS 1212: Part 1: 1990	<u>Float Operated Valve</u> Float Operated Valves. Specification for piston type float operated valves (Copper Alloy Body)	01 Jan 2008
		BS 1212: Part 2: 1990	Float Operated Valves. Specification for diaphragm type float operated valves (Copper Alloy) (Excluding Float)	01 Jan 2008
8	Landing Valve	MS 1210: Part 1: 1991 (Confirmed:2011)	Specification for Fire Hydrant systems equipment – Part 1: Landing Valves for wet risers	01 Jan 2008
		MS 1210: Part 2: 1991 (Confirmed:2011)	Specification for Fire Hydrant systems equipment Part 2: Landing Valves for dry risers	01 Jan 2012
		MS 1210: Part 3: 1991 (Confirmed:2011)	Specification for Fire Hydrant systems equipment Part 3: Inlet Breeching for Riser Inlet	01 Jan 2012
9	Mixing Valve (Manually Operated)	BS EN 1286:1999	Sanitary Tapware. Low Pressure Mechanical Mixing Valves. General technical specification	01 Jan 2008

PRODUCT CATEGORY A (WATER SUPPLY)				
No.	**Product Type**	**Standard Number**	**Standard Title**	**Effective Date**
10	Float Operated Valve	MS 1882:2005 (Confirmed 2013)	Piston Type Float Operated Valves – Specification	14 Apr 2018
		JKR 20200-0178-04	JKR Standard Specification for Piston Type Float Operated Valves. (Revised Edition 2004)	10 Sept 2014
11	Pressure Reducing Valves	BS EN 1567:2000	Building Valves. Water pressure valves and combination water reducing valves. Requirements and test.	01 Jan 2008
12	Plug Valve	BS 5158:1989	Specification for cast iron plug valves.	01 Mar 2016
		AWWA C517-16	Resilient-Seated Cast-Iron Eccentric Plug Valves.	15 April 2021
		AWWA C517-09	Resilient-Seated Cast-Iron Eccentric Plug Valves. ***This standard shall be applicable to the existing supplier or user only and is recognized for SPAN product listing until 31st December 2023 only.*	01 Jan 2013
13	Penstock	BS 7775:2005	Penstocks for use in water and other liquid flow applications. Specification.	01 Jan 2008
		JKR 20200-0108-01	JKR Standard Specification for Penstocks. (Revised Edition 2001)	01 Jan 2008

PRODUCT CATEGORY A (WATER SUPPLY)				
No.	**Product Type**	**Standard Number**	**Standard Title**	**Effective Date**
14	Globe Valve	BS EN 13789:2010	Industrial Valves: Cast Iron Globe Valve.	14 Apr 2018
15	Knife Gate Valve	MSS SP-81-2017	Stainless-Steel or Stainless-Steel-Lined, Bonnetless, Knife Gate Valve with Flanged Ends.	15 April 2021
		MSS SP-81-2013	Stainless-Steel or Stainless-Steel-Lined, Bonnetless, Knife Gate Valve with Flanged Ends. ***This standard shall be applicable to the existing supplier or user only and is recognized for SPAN product listing until 31st December 2023 only.*	14 Apr 2018
16	Polyethylene (PE) Valve	EN 12201-4:2012	Plastic Piping Systems for Water Supply, and for Drainage and Sewerage Under Pressure – Polyethylene (PE) – Part 4: Valves.	01 Jun 2020
17	Flat Seat Valve	JKR 20200-0072-00	Drain Plugs, Sludge Plugs or Mud Valve	1 Jan 2008
(F) Back flow preventer				
1	Dual Check Backflow Preventer	AS/NZS 3500.1: 2018	Plumbing and drainage. - Water Services	15 April 2021
		AS/NZS 3500.1: 2015	Plumbing and drainage. - Water Services ***This standard shall be applicable to the existing supplier or user only and is recognized for SPAN product listing until 31st December 2023 only.*	14 Apr 2018

PRODUCT CATEGORY A (WATER SUPPLY)				
No.	**Product Type**	**Standard Number**	**Standard Title**	**Effective Date**
		BS EN 14454:2005	Devices to prevent pollution by backflow of potable water. Hose Union backflow preventer DN15 to DN32 inclusive. Family H, Type A.	01 Jan 2008
2	Reduced Pressure Zone Assembly	AS/NZS 3500.1: 2018	Plumbing and drainage. - Water Services	15 April 2021
		AS/NZS 3500.1: 2015	Plumbing and drainage. - Water Services ***This standard shall be applicable to the existing supplier or user only and is recognized for SPAN product listing until 31st December 2023 only.*	14 Apr 2018
		BS EN 12729:2002	Devices to prevent pollution by backflow of potable water. Controllable backflow preventer with reduced pressure zone. Family B, Type A	01 Jan 2008
3	Cast Iron Check Valves	BS EN 16767:2020	Industrial valves. Steel and cast iron check valves	15 April 2021
		BS EN 16767:2016	Industrial valves. Steel and cast iron check valves ***This standard shall be applicable to the existing supplier or user only and is recognized for SPAN product listing until 31st Dicember 2023 only.*	01 Jun 2020

PRODUCT CATEGORY A (WATER SUPPLY)				
No.	**Product Type**	**Standard Number**	**Standard Title**	**Effective Date**
		BS EN 12334:2001	Industrial Valves. Cast Iron Check Valves. ***This standard shall be applicable to the existing supplier or user only and is recognized for SPAN product listing until 31st May 2022 only.*	01 Jan 2008
4	Steel Check Valves	BS EN 16767:2020	Industrial valves. Steel and cast iron check valves	15 April 2021
		BS EN 16767:2016	Industrial valves. Steel and cast iron check valves ***This standard shall be applicable to the existing supplier or user only and is recognized for SPAN product listing until 31st Dicember 2023 only.*	01 Jun 2020
		BS EN 14341:2006	Industrial Valves. Steel Check Valves. ***This standard shall be applicable to the existing supplier or user only and is recognized for SPAN product listing until 31st December 2022 only.*	01 Jan 2008
5	Copper Alloy Globe, Globe Stop, Check and Gate Valves	BS EN 12288:2010	Industrial Valve. Copper Alloy Gate Valve.	18 Apr 2014
(G) Meter				
(a) Custody Transfer Meter				
1 a) 1 b)	Mechanical Water Meter Ultrasonic Water Meter	MS ISO 4064-1: 2006	Measurement of Water Flow in fully charged closed conduits. Meters for Clod Potable Water and Hot Water. Part 1: Specification.	01 Jan 2012

PRODUCT CATEGORY A (WATER SUPPLY)				
No.	**Product Type**	**Standard Number**	**Standard Title**	**Effective Date**
1c)	Electromagnet-ic Water Meter		(First revision) (ISO 4064-1:2005, IDT)	
		ISO 4064-1:2014	Measurement of Water Flow in fully charged closed conduits. Meters for Clod Potable Water and Hot Water. Part 1: Specification.	01 Jan 2012
Note: *Listing for custody mechanical water meter shall accompany **with** **Certificate of Approval Weight /Measure/Instrument for Weighing/Instrument for Measuring** (issued by National Metrology Institute of Malaysia (NMIM)).*				
(b) Non-Custody Transfer Meter				
1 a) 1 b) 1 c)	Mechanical Water Meter Ultrasonic Water Meter Electromagnet-ic Water Meter	MS ISO 4064-1: 2006	Measurement of Water Flow in fully charged closed conduits. Meters for Clod Potable Water and Hot Water. Part 1: Specification. (First revision) (ISO 4064-1:2005, IDT)	01 Jan 2012
		ISO 4046-1:2014	Measurement of Water Flow in fully charged closed conduits. Meters for Clod Potable Water and Hot Water. Part 1: Specification.	01 Jan 2012
Note: *Meter **without Certificate of Approval Weight / Measure / Instrument for Weighing / Instrument for Measuring** will be listed as for non-custody transfer meter which mean that the meter cannot be "use for trade*				

PRODUCT CATEGORY A (WATER SUPPLY)				
No.	**Product Type**	**Standard Number**	**Standard Title**	**Effective Date**
(H) Sanitary Fittings – Taps & Mixer				
1	Bib Tap Pillar Tap Faucet	SPAN TS 3004: 2021	Water Taps – Single and Combination Taps - Specification	10 Feb 2021
		AS/NZS 3718:2005	Water Supply – Tap ware ***This standard shall be applicable to the existing supplier or user only and is recognized for SPAN product listing until 31st December 2022 only.*	01 Jan 2008
		BS EN 200:2008	Sanitary Tapware. Single taps and combination taps for water supply systems of Type 1 and Type 2. General technical specification ***This standard shall be applicable to the existing supplier or user only and is recognized for SPAN product listing until 31st December 2022 only.*	01 Jan 2009
		BS EN 816:2017	Sanitary tapware. Automatic shut-off valves PN 10	01 Jun 2020
		BS EN 15091:2013	Sanitary tapware. Electronic Opening and Closing Sanitary Tapware	01 Jun 2020
2	Mixer	BS EN 817:2008	Sanitary tapware. Mechanical mixing valves (PN 10). General technical specification	01 Jan 2009

PRODUCT CATEGORY A (WATER SUPPLY)				
No.	**Product Type**	**Standard Number**	**Standard Title**	**Effective Date**
		BS EN 1286:1999	Sanitary Tapware. Low Pressure Mechanical Mixing Valves. General technical specification.	01 Jan 2008
		BS EN 1287:2017	Sanitary tapware. Low Pressure Thermostatic Mixing Valves. General Technical Specification	01 Jun 2020
(I) Sanitary Wares – Water Closet				
1	Water Closet *refer Appendix C1 (SPAN Additional Requirement)	MS 1522:2015	Vitreous China Water Closet Pans. – Specification. (Fourth Revision)	14 Apr 2018
(J) Water Closet Flushing Cistern & Flush Pipes				
1	Water Closet Flushing Cistern & Flush Pipes *refer Appendix C1 (SPAN Additional Requirement)	MS 795-1:2019	WC Flushing Cisterns. – Part 1: Specification. (Second Revision)	10 Sept 2020
		MS 795-1:2011	WC Flushing Cisterns. – Part 1: Specification. (Second Revision) ***This standard shall be applicable to the existing supplier or user only and is recognized for SPAN product listing until 31st December 2022 only.*	01 Jan 2012
(K) Flush Valve				
1	Flush Valve *refer Appendix C1 (SPAN Additional Requirement)	MS 2545:2014	Flush Valve: Specification.	10 Sept 2014

PRODUCT CATEGORY A (WATER SUPPLY)				
No.	**Product Type**	**Standard Number**	**Standard Title**	**Effective Date**
(L) Sanitary Appliances				
1	Urinal bowls Pedastal Bidets WC Pan *refer Appendix C1 (SPAN Additional Requirement)	MS 147:2001	Specification for quality of Vitreous China Sanitary Appliances. (First Revision)	01 Jan 2008
(M) Sanitary Wares – Urinals				
1	Urinals *refer Appendix C1 (SPAN Additional Requirement)	MS 1799:2020	Urinals. – Specification (First revision)	10 Sept 2020
		MS 1799:2008	Urinals. – Specification ***This standard shall be applicable to the existing supplier or user only and is recognized for SPAN product listing until 31st December 2022 only.*	01 Jan 2008
(N) Shower Head				
1	Shower Head	SPAN TS 3005: 2021	Shower Outlet for Sanitary Tapware for Water Supply System – Spesification	10 Feb 2021
		BS EN 1112:2008	Sanitary Tapware - Shower Outlets for Sanitary Tapware for Water Supply Systems of Type 1 and Type 2 - General Technical Specification ***This standard shall be applicable to the existing supplier or user only and is recognized for SPAN product listing until 31st December 2022 only.*	01 Jun 2020

PRODUCT CATEGORY A (WATER SUPPLY)				
No.	**Product Type**	**Standard Number**	**Standard Title**	**Effective Date**
(O) Chemical for Water Treatment				
1	Activated Carbon (Granular)	MS 1815:2005	Granular Activated Carbon for use in potable water supply. – Specification.	01 Dec 2015
2	Activated Carbon (Powdered)	MS 873:2005	Powdered Activated Carbon for use in potable water supply. – Specification. (First Revision)	01 Dec 2015
3	Aluminium Sulphate	MS 699:2008	Aluminium Sulphate for Use in Potable Water Supply. – Specification. (Second Revision)	01 Jan 2009
4	Calcium Hydroxide/ Hydrated Lime	MS 1836:2005	Hydrated Lime and Slurry Lime for use in potable water supply. – Specification.	01 Jan 2008
5	Calcium Hypochlorite	MS 1584:2003	Specification for Calcium Hypochlorite use for potable water supply 2003.	01 Jan 2012
6	Chlorine *refer Appendix C1 for SPAN Additional Requirement	MS 171:2013	Liquid Chlorine used for potable water supply. – Specification (Second Revision)	01 Mar 2016
7	Copper Sulphate	MS 1571:2003	Specification for Copper Sulphate used for potable water.	01 Jan 2012

PRODUCT CATEGORY A (WATER SUPPLY)				
No.	**Product Type**	**Standard Number**	**Standard Title**	**Effective Date**
8	Ferric Chloride	MS 1450:1999	Specification for liquid Ferric Chloride for potable water treatment	01 Jan 2008
9	Ferric Sulphate	MS 1452:1999	Specification for liquid Ferric Sulphate for potable water treatment	01 Jan 2008
10	Polyaluminium Chloride and ACH	MS 1454:2007	Liquid Polyaluminium Chloride for use in potable water supply – Specification (first revision) 2007	01 Jan 2008
11	Polymer based on Poly acrylamides	MS 1928:2007	Polyacrylamides for use in potable water supply - Specification	01 Jan 2008
12	Polymer based on Polyamines	MS 1929:2007	Polyamines for use in potable water supply - Specification	01 Jan 2008
13	Polymer based on PolyDADMAC	MS 1930:2007	Poly(Polydiallyldimethyl Ammonium Chloride) or PolyDADMAC for use in potable water supply - Specification	01 Jan 2008
14	Potassium Permanganate	MS 1576:2003	Specification for Potassium Permanganate used for potable water supply	01 Jan 2012
15	Soda Ash (Sodium Carbonate)	MS 1551:2002	Specification for Soda Ash (Sodium Carbonate) used for potable water supply	01 Jan 2008

PRODUCT CATEGORY A (WATER SUPPLY)				
No.	**Product Type**	**Standard Number**	**Standard Title**	**Effective Date**
16	Sodium Aluminate	MS 1572:2003	Specification for Sodium Aluminate used for potable water supply	01 Jan 2008
17	Sodium Fluoride	MS 1573:2003	Specification for Sodium Fluoride used for potable water supply	01 Jan 2008
18	Sodium Hydroxide / Caustic Soda	MS 700:1981	(Specification) for Sodium Hydroxide (technical grades)	01 Jan 2008
19	Sodium Hypochlorite	MS 1718:2003	Sodium Hypochlorite for use in potable water supply - Specification	01 Jan 2012
20	Sodium Silicoflouride	MS 1724:2004	Sodium Silicofloride for use in potable water supply - Specification	01 Jan 2008

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APPENDIX A2

SEWERAGE SYSTEM

(CATEGORY A)

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APPENDIX A2

PRODUCT CATEGORY A AND THE RECOGNIZED STANDARDS

Listing of product Category A for sewerage system requires the products to have undergone full certification by recognised certification bodies. Product that are tested and certified to the same standards of latest revisions are also acceptable.

PRODUCT CATEGORY A (SEWERAGE)				
No.	**Product Type**	**Standard Number**	**Standard Title**	**Effective Date**
(A) Flow Control				
1	Air Valve	AWWA C512-15	Air Release, Air/Vacuum, and Combination Air Valve for Water and Wastewater Service	01 Mar 2016
		JKR 20200-0097-01	Ductile Iron Air Valves (Revised Edition 2001)	01 Nov 2014
		JKR 20200-0043-99	Ductile Iron Air Valves (Revised Edition 1999)	01 Nov 2014
2	Butterfly Valve	BS EN 593:2017	Industrial Valves. Metallic Butterfly Valves	01 Jun 2020
		BS EN 593:2009+ A1:2011	Industrial Valves. Metallic Butterfly Valves ***This standard shall be applicable to the existing supplier or user only and is recognized for SPAN product listing until 31st May 2022 only.*	01 Mar 2016
3	Check Valve	BS EN 16767:2020	Industrial valves. Steel and cast iron check valves	15 April 2021

PRODUCT CATEGORY A (SEWERAGE)				
No.	**Product Type**	**Standard Number**	**Standard Title**	**Effective Date**
		BS EN 16767:2016	Industrial valves. Steel and cast iron check valves ***This standard shall be applicable to the existing supplier or user only and is recognized for SPAN product listing until 31st Dicember 2023 only.*	01 Jun 2020
		EN 12334:2001 (any total adiption of the standard is accepted)	Industrial valves. Cast Iron Check Valves ***This standard shall be applicable to the existing supplier or user only and is recognized for SPAN product listing until 31st May 2022 only.*	01 Jan 2008
		AWWA C508-09	Swing Check Valve for waterworks service	01 Mar 2016
4	Gate Valve	BS EN 1171:2015	Industrial Valves. Cast Iron Gate Valves	01 Jun 2020
		BS EN 1171:2002	Industrial Valves. Cast Iron Gate Valves ***This standard shall be applicable to the existing supplier or user only and is recognized for SPAN product listing until 31st May 2022 only.*	01 Jan 2008
		BS 5163-1:2004	Valves for waterworks purposes. Predominantly key-operated cast iron gate valves. Code of practice	01 Jan 2008
		BS 5163-2:2004	Valves for waterworks purposes. Stem Caps for use on isolating valves and associated water control apparatus. Specification	01 Mar 2016

PRODUCT CATEGORY A (SEWERAGE)				
No.	**Product Type**	**Standard Number**	**Standard Title**	**Effective Date**
5	Knife Gate Valve	MSS SP-81-2017	Stainless-Steel or Stainless-Steel-Lined, Bonnetless, Knife Gate Valve with Flanged Ends	15 April 2021
		MSS SP-81-2013	Stainless-Steel or Stainless-Steel-Lined, Bonnetless, Knife Gate Valve with Flanged Ends ***This standard shall be applicable to the existing supplier or user only and is recognized for SPAN product listing until 31st December 2023 only.*	01 Mar 2016
6	Plug Valve	AWWA C517-16	Resilient Seated Cast Iron Eccentric Plug Valves	15 April 2021
		AWWA C517-09	Resilient Seated Cast Iron Eccentric Plug Valves ***This standard shall be applicable to the existing supplier or user only and is recognized for SPAN product listing until 31st December 2023 only.*	01 Jan 2013
7	Penstock • Channel • Weir Gate • Wall Mounted	BS 7775:2005	Penstocks for use in water and other liquid flow applications. Specification	01 Jan 2008
		JKR 20200-0061-2000	JKR Standard Specification for Penstocks	01 Jan 2008

PRODUCT CATEGORY A (SEWERAGE)				
No.	**Product Type**	**Standard Number**	**Standard Title**	**Effective Date**
(B) Sewage Conveyance				
1	Manhole	MS 881: Part 1: 1991	Specification for precast concrete pipes and fittings for drainage and sewerage Part 1: Specification for pipe and fittings with flexible joints and manholes	01 Jan 2008
2	Manhole Cover	SPAN TS 3003: 2021	Manhole Tops - Specification	10 Feb 2021
		BS EN 124-1:2015 & BS EN 124-2:2015	Gully tops and manholes tops for vehicular and pedestrian areas. <u>Part 1</u>: Definitions, classification, general principles of design, performance requirements and test methods <u>Part 2</u>: Gully tops and manhole tops made of cast iron ***This standard shall be applicable to the existing supplier or user only and is recognized for SPAN product listing until 31st December 2022 only.*	14 June 2017
		BS EN 124:1994 AMD 8587/1995	Gully tops & manhole tops for vehicular & pedestrian areas design req., type testing, marking, quality control ***This standard is recognized for SPAN product listing until 30th Aug 2021 only*	01 Jan 2008

PRODUCT CATEGORY A (SEWERAGE)				
No.	**Product Type**	**Standard Number**	**Standard Title**	**Effective Date**
3	Acrylonitrile Butadiene Styrene (ABS) Pipes & Fittings	MS 1419: Part 1: 2007 & MS 1419: Part 3: 1997	Acrylonitrile Butadiene Styrene (ABS) pipes and fittings for pressure application Part 1: Specification for Compounds, Pipes and Fittings (First Revision) Part 3: Solvent cement and priming (cleaning) fluids for use with ABS pipes and fittings	14 June 2017
4	Cast Iron Pipes & Fittings	ISO 6594:2006	Cast Iron Pipes & Fittings - Spigot Series	01 Jan 2008
5	Ductile Iron (DI) Pipes & Fittings	BS EN 598:2007 +A1:2009	Ductile Iron pipes, fittings, accessories and their joints for sewerage applications. Requirements and test methods	01 Jan 2008
6	Glass Reinforced Thermosetting Plastic (GRP) Pipes	ISO 10467:2018	Plastic piping systems for pressure and non-pressure drainage and sewerage - Glass Reinforced Thermosetting Plastic (GRP) systems based on Unsaturated Polyester (UP) resin	15 April 2021

PRODUCT CATEGORY A (SEWERAGE)				
No.	**Product Type**	**Standard Number**	**Standard Title**	**Effective Date**
		ISO 10467:2004/ Amd. 1:2012 (E)	Plastic piping systems for pressure and non-pressure drainage and sewerage - Glass Reinforced Thermosetting Plastic (GRP) systems based on Unsaturated Polyester (UP) resin (Amendment 1) ***This standard shall be applicable to the existing supplier or user only and is recognized for SPAN product listing until 31st December 2023 only.*	31 July 2015
		BS EN 14364:2013	Plastics piping systems for drainage and sewerage with or without pressure. - Glass Reinforced Thermosetting Plastic (GRP) based on unsaturated polyester resin (UP). Specifications for pipes, fittings and joints	01 Jan 2014
		<u>Jacking pipe</u> ISO 25780:2011	<u>Jacking pipe</u> Plastic Piping systems for pressure and non-pressure water supply, irrigation, drainage or sewerage – Glass Reinforced Thermosetting Plastic (GRP) systems based on Unsaturated Polyester (UP) resin – Pipes with flexible joints intended to be installed using jacking techniques.	01 July 2013

PRODUCT CATEGORY A (SEWERAGE)				
No.	**Product Type**	**Standard Number**	**Standard Title**	**Effective Date**
7	Polyethylene (PE) Pipes & Fittings	BS EN12201-2: 2011+A1:2013	<u>Solid Wall</u> Plastics piping systems for water supply and for drainage and sewerage under pressure. Polyethylene (PE). Pipes.	01 Mar 2016
		BS EN12201-3: 2011+A1:2012	Plastics piping systems for water supply and for drainage and sewerage under pressure. Polyethylene (PE). Fittings.	01 Mar 2016
		DIN 16961-2:2018	<u>Profile Wall</u> (double wall corrugated) Thermoplastics pipes and fittings with profiled wall and smooth pipe inside. Part 2: Technical delivery Specifications	15 April 2021
		DIN 16961-2 (2010-03)	<u>Profile Wall</u> (double wall corrugated) Thermoplastics pipes and fittings with profiled wall and smooth pipe inside. Part 2: Technical delivery Specifications ***This standard shall be applicable to the existing supplier or user only and is recognized for SPAN product listing until 31st December 2023 only.*	01 Oct 2016

PRODUCT CATEGORY A (SEWERAGE)				
No.	**Product Type**	**Standard Number**	**Standard Title**	**Effective Date**
8	Polypropylene (PP) Pipes & Fittings	Profile Wall DIN 16961-2:2018	Profile Wall Thermoplastics pipes and fittings with profiled wall and smooth pipe inside - Part 2: Technical delivery Specifications	15 April 2021
		Profile Wall DIN 16961-2 (2000-03)	Profile Wall Thermoplastics pipes and fittings with profiled wall and smooth pipe inside - Part 2: Technical delivery Specifications ***This standard shall be applicable to the existing supplier or user only and is recognized for SPAN product listing until 31st December 2023 only.*	01 Jan 2008
9	Poly(Vinyl Chloride) (PVC) Pipes & Fittings • PVC-C • PVC-M • PVC-U • PVC-O *refer Appendix C2 for SPAN Additional Requirement	AS/NZS 4765:2017	Modified PVC (PVC-M) pipes for pressure applications	15 April 2021
		AS/NZS 4765:2007	Modified PVC (PVC-M) pipes for pressure applications ***This standard shall be applicable to the existing supplier or user only and is recognized for SPAN product listing until 31st December 2023 only.*	14 June 2017
		MS 979: Part 1: 1985	Specification for unplasticized sewerage pipe and fitting Part 1: Pipes of diameter 100mm and 155mm	01 Jan 2008

PRODUCT CATEGORY A (SEWERAGE)				
No.	**Product Type**	**Standard Number**	**Standard Title**	**Effective Date**
		MS 979: Part 2: 1985	Specification for unplasticized sewerage pipe and fitting Part 2: Pipes of diameter 200mm and above	01 Jan 2008
		ISO 16422:2014 (any total adoption of the standard is accepted)	Pipes and joints made of Oriented Unplasticized Poly (Vinyl Chloride) (PVC-O) for the conveyance of water under pressure. – Specifications	14 Apr 2018
10	Reinforced Concrete (RC) Pipes & Fittings *refer Appendix C2 for SPAN Additional Requirement	MS 881: Part 1: 1991	Specification for precast concrete pipes and fittings for drainage and sewerage Part 1: Specification for pipe and fittings with flexible joints and manholes	01 Jan 2008
		MS 881: Part 2: 1991	Specification for precast concrete pipes and fittings for drainage and sewerage Part 2: Specification for inspection chambers and street gullies	01 Jan 2008
		MS 881: Part 3: 1991	Specification for precast concrete pipes and fittings for drainage and sewerage Part 3: Specification for pipes and fittings with ogee joints	01 Jan 2008
		<u>Jacking pipe</u> MS EN 1916:2011	<u>Jacking pipe</u> Concrete pipes and fittings, unreinforced, steel fibre and reinforced (first revision)	01 Jan 2008

PRODUCT CATEGORY A (SEWERAGE)				
No.	**Product Type**	**Standard Number**	**Standard Title**	**Effective Date**
		BS 5911-1:2002 +A2: 2010	Concrete pipes and ancillary concrete products. Specification for unreinforced and reinforced concrete pipe (including jacking pipes) and fittings with flexible joints ***This standard is recognized for SPAN product listing until further notice*	01 Mar 2016
11	Stainless Steel (SS) Pipes & Fittings	ASTM A312/A312M-19	Standard specification for seamless, welded, and heavily cold worked austenitic Stainless Steel pipes	15 April 2021
		ASTM A312/A312M-2014B	Standard specification for seamless, welded, and heavily cold worked austenitic Stainless Steel pipes ***This standard shall be applicable to the existing supplier or user only and is recognized for SPAN product listing until 31st December 2023 only.*	01 Mar 2016
		ASTM A403/A403M-19	Standard specification for Wrought Austenitic Stainless Steel piping fittings	15 April 2021
		ASTM A403-13	Standard specification for Wrought Austenitic Stainless Steel piping fittings ***This standard shall be applicable to the existing supplier or user only and is recognized for SPAN product listing until 31st December 2023 only.*	01 Jan 2012

PRODUCT CATEGORY A (SEWERAGE)				
No.	**Product Type**	**Standard Number**	**Standard Title**	**Effective Date**
12	Steel Pipes & Fittings	SPAN TS 21827: 2013	Specification for Steel Pipes, fittings and joint for water and sewerage Part 1: Technical delivery requirements	15 June 2013
13	Vitrified Clay (VC) Pipes & Fittings	MS 1061: Part 1: 1999	Vitrified clay pipes and fittings and pipes joints for drains and sewers. Part 1: Requirement (First Revision)	01 Jan 2008
		<u>Jacking pipe</u> BS EN 295-7:2013	<u>Jacking pipe</u> Vitrified clay pipes systems for drains and sewers. Requirements for pipes and joints for pipe jacking	01 Mar 2016
		BS EN 295-7:1996	Vitrified clay pipes systems for drains and sewers. Requirements for pipes and joints for pipe jacking ***This standard is recognized for SPAN product listing until 30th Aug 2021 only*	01 Jan 2008
14	Polymer Concrete Pipes & Fittings	BS EN 14636-1:2009	Plastics Piping Systems for Non-Pressure Drainage and Sewerage. Polyester Resin Concrete (PRC). Pipes and Fittings with Flexible Joints	14 Apr 2018
15	Steel Reinforced Polyethylene (PE) Pipe & Fittings	KS M 3509:2017	Steel Reinforced Polyethylene (PE) Composite Pipe for Sewerage and Drainage	14 Apr 2018

PRODUCT CATEGORY A (SEWERAGE)				
No.	**Product Type**	**Standard Number**	**Standard Title**	**Effective Date**
		SPS KWWA M209:2011	Fittings for Spiral Polyethylene (PE) Pipe Reinforced with Steel Sheets	14 Apr 2018
16	Hot dipped Galvanized Iron Pipe & Fittings *refer Appendix C2 for SPAN Additional Requirement	MS 863:2010	Non-Alloy Steel Tubes Suitable For Welding And Threading - Technical Delivery Conditions	15 April 2021
(C) Treatment System				
1	Package Plant *refer Appendix C2 for SPAN Additional Requirement	SPAN TS 1401: 2010 (A1:2013) Part 1	Sewage Treatment System Part 1: Prefabricated Tanks – Packaged Plants	01 Apr 2012
		SPAN TS 1402: 2010 (A1:2013) Part 2	Sewage Treatment System Part 2: Construction and Installation – Packaged Plants	01 Apr 2013
2	Small Sewage Treatment System (SSTS) *refer Appendix C2 for SPAN Additional Requirement	MS 2441-2:2014	On Site Sewage Treatment Units – Part 2: Packaged Prefabricated Small Sewage Treatment System Specifications	01 June 2015
3	Septic Tank	MS 2441-1:2012	On-site sewage treatment units – Part 1: Prefabricated septic tanks specifications	14 June 2017

APPENDIX B1

WATER SUPPLY SYSTEM

(CATEGORY B)

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APPENDIX B1

PRODUCT CATEGORY B AND TESTING/PERFORMANCE REQUIREMENTS FOR REGISTRATION

PRODUCT CATEGORY B (WATER SUPPLY)			
No.	**Product Type**	**Requirements**	**Effective Date**
A) Chemical For Water Treatment			
1	Imported Chemicals for Water Treatment: • Chlorine Dioxide	BS EN 12671:2016 Chemical used for treatment of water intended for human consumption – Chlorine Dioxide generated in situ	15 April 2021
		BS EN 12671:2009 Chemical used for treatment of water intended for human consumption – Chlorine Dioxide generated in situ ***This standard shall be applicable to the existing supplier or user only and is recognized for SPAN product listing until 31st December 2023 only.*	01 Jan 2010
2	Imported Chemicals for Water Treatment: • Soda Ash • Polymers • Potassium permanganate • Mineral based	NSF/ANSI 60 Drinking water treatment chemical – Health Effects *(any revision year of standard also accepted)*	01 Mar 2016
3	Propietery Calcium Hydroxide for Water Treatment: • Granular	NSF/ANSI 60 Drinking water treatment chemical – Health Effects *(any revision year of standard also accepted)*	14 June 2017

PRODUCT CATEGORY B (WATER SUPPLY)			
No.	**Product Type**	**Requirements**	**Effective Date**
4	Activated Carbon	NSF/ANSI 61 Drinking water system components – Health effects *(any revision year of standard also accepted)*	01 Dec 2019
Note: • Requirements for registration of chemical shall be include Halal Certificate issued by: (i) Department of Islamic Development Malaysia (JAKIM) (ii) local Islamic bodies recognized by JAKIM (iii) foreigner bodies recognized by JAKIM *refer Appendix C1 for SPAN Additional Requirement			
B) Conveyance of Water			
1	Chlorinated Poly(Vinyl Chloride) (PVC-C) Pipes *refer Appendix C1 (SPAN Additional Requirement)	NSF SE 8225 PVC-C Pipes made to Copper Tube Size (CTS)	14 June 2017
2	Multi-Layer Unplasticized Polyvinyl Chloride (PVC-U) Pipes *refer Appendix C1 (SPAN Additional Requirement)	MS 628-2:2014 (Excluding Clause 6) Plastics piping systems for water supply and for buried and above-ground drainage and sewerage under pressure. Unplasticized Poly(Vinyl Chloride) (PVC-U) Part 2: Pipes (Second Revision) (ISO 1452-3:2009, Mod)	15 April 2021
		MS 628: Part 1:1999 (Excluding Clause 6) Specification for Unplasticized PVC (uPVC) pipes for water supply: Part 1: Pipes (1st revision) ***This standard shall be applicable to the existing supplier or user only and is recognized for SPAN product listing until 31st December 2023 only.*	01 Nov 2015

PRODUCT CATEGORY B (WATER SUPPLY)			
No.	**Product Type**	**Requirements**	**Effective Date**
3	Coupling • Ductile Iron (DI)	IACS Requirements concerning Pipes and Pressure Vessels P2 – Rules for piping design, construction and testing	14 June 2017
4	Ductile Iron (DI) Ferrous Saddle (without Polyamide)	JKR 20200-0184-04 JKR Standard Specification for Ferrous Saddle	01 Nov 2014
5	Stainless Steel (SS) Press Fittings	SAS 322:2003 Pipe coupling performance standards for Stainless Steel pipes for general piping	17 Aug 2015
6	Ductile Iron (DI) Strainer (beyond size) • T Strainer (DN250 and above)	Speifikasi JKR 20200-0100-01 JKR Specification for Ductile Iron Y and T Strainers	14 June 2017
		Manufacturer Standard Performance Test Report	01 Nov 2012
7	Rubber Flexible & Expansion Joint	Manufacturer Standard Performance Test Report	12 Nov 2012
8	Repair Clamp	Manufacturer Standard Performance Test Report	12 Nov 2012
9	Steel Flange (beyond size – DN1200 and above)	BS EN 1092-1:2018 Flanges and their joints. Circular flanges for pipes, valves, fittings and accessories, PN Designated - Part 1: Steel Flanges	15 April 2021

PRODUCT CATEGORY B (WATER SUPPLY)			
No.	**Product Type**	**Requirements**	**Effective Date**
		BS EN 1092-1:2007+A1:2013 Flanges and their joints. Circular flanges for pipes, valves, fittings and accessories, PN Designated - Part 1: Steel Flanges ***This standard shall be applicable to the existing supplier or user only and is recognized for SPAN product listing until 31st December 2023 only.*	01 Nov 2017
C) Flow Control			
1	Centrifugal Pump • End Suction • Multistage • Self-Priming • Split Casing • Submersible	ISO 9906:2012 Rotodynamic pumps - Hydraulic performance acceptance tests - Grades 1B, 1E, 1U and 2B *(any total adoption standard with ISO 9906:2012 also accepted)*	01 Oct 2015
		ANSI/HI 14.6:2016 Rotodynamic pumps for hydraulic performance acceptance tests - Grades 1B, 1E, 1U and 2B	15 April 2021
		ANSI/HI 14.6:2011 Rotodynamic pumps for hydraulic performance acceptance tests - Grades 1B, 1E, 1U and 2B ***This standard shall be applicable to the existing supplier or user only and is recognized for SPAN product listing until 31st December 2023 only.*	01 Mar 2016

PRODUCT CATEGORY B (WATER SUPPLY)			
No.	**Product Type**	**Requirements**	**Effective Date**
Note: • The report of pump performance must show the detail as per below: (i) Official letter head or official stamping (ii) Information of the pump & motor (iii) Date of testing (iv) Table & graph of result (head vs flow, efficiency vs flow, power vs flow) (v) Duty point of the pump (vi) Standard & grade used for the testing *refer Appendix C1 for SPAN Additional Requirement			
2	Constant Flow Controllers	ATS 5200.037.1-2006 Technical specification for plumbing and drainage products flow controllers. - For controlling flows in cold or heated water systems	14 June 2017
3	Knife Gate Valve (Different material) • Ductile Iron (DI)	MSS SP-81-2017 Stainless-Steel or Stainless-Steel-Lined, Bonnetless, Knife Gate Valve with Flanged Ends.	15 April 2021
		MSS SP-81-2013 Stainless-Steel or Stainless-Steel-Lined, bonnetless, knife gate valve with flanged ends ***This standard shall be applicable to the existing supplier or user only and is recognized for SPAN product listing until 31st December 2023 only.*	01 Mar 2016
4	Control Valve	AWWA C530-17 Pilot-operated control valves	15 April 2021
		AWWA C530-12 Pilot-operated control valves ***This standard shall be applicable to the existing supplier or user only and is recognized for SPAN product listing until 31st December 2023 only.*	01 Oct 2015

PRODUCT CATEGORY B (WATER SUPPLY)			
No.	**Product Type**	**Requirements**	**Effective Date**
		BS EN 12266-1:2012 Industrial valves – Testing of metallic valves. Pressure tests, test procedures and acceptance criteria. – Mandatory requirements	01 Sept 2014
		Manufacturer Standard Performance Test Report	01 July 2017
5	Thermoplastic Stopvalves	BS EN 1213:2000 (Excluding Clause 6.2) Thermoplastic Stopvalves for Potable Water Supply in Buildings	14 June 2017
6	Water Hammer Arresters	Standard PDI-WH 201 (Revise 2010) - Water hammer arresters	14 June 2017
		Manufacturer Standard Performance Test Report	01 Nov 2012
7	Valves for Waterworks. Beyond the range of diameter specified in the standard • Air Valve • Butterfly Valve • Check Valve • Gate Valve	Directive 2014/68/EU Pressure Equipment Directive	14 June 2017
		BS EN 12266-1:2012 Industrial valves – Testing of metallic valves. Pressure tests, test procedures and acceptance criteria. – Mandatory requirements	14 June 2017

<table>
<tr><th colspan="4">PRODUCT CATEGORY B (WATER SUPPLY)</th></tr>
<tr><th>No.</th><th>Product Type</th><th>Requirements</th><th>Effective Date</th></tr>
<tr><td colspan="4">Note:
• Registration valve shall be together with:
(i) BS EN 681-1:1996
Elastomeric seals. Material requirements for pipe joint seals used in water and drainage applications. Vulcanized rubber

• Requirements for registration valve shall be include ONE of the following standards:
(i) MS 1583: Part 1:2003
Suitability of non-metallic products for use in contact with water intended for human consumption with regard to their effect on the quality of the water.
Part 1: Specification

(ii) NSF/ANSI 61 (accept any revision year of standard)
Drinking Water System Components
- Health Effects</td></tr>
<tr><td colspan="4">D) Instrumentation and Control</td></tr>
<tr><td>1</td><td>Motorised Actuator
• Electric operated
➢ Quarter-turn
➢ Multi-turn

• Battery operated
➢ Quarter-turn
➢ Multi-turn</td><td>BS EN 15714-2:2009
Industrial valves - Actuators
Part 2: Electric actuators for industrial valves – Basic requirements

&

IEC 60529 / EN 60529
Degrees of protection provided by enclosures (IP Code)</td><td>01 Mar 2016</td></tr>
<tr><td colspan="4">Note:
Test report/certificate of IEC 60529 / EN 60529 shall show the following information:
• Testing Body Letter Head / Certificate
• Manufacturer Name
• Model of Product
• Scope of testing (examples: IP65 / IP67 / IP68 / IP69K)
• Type of testing
• Date of testing</td></tr>
</table>

PRODUCT CATEGORY B (WATER SUPPLY)			
No.	**Product Type**	**Requirements**	**Effective Date**
2	Actuator • Pneumatic	BS EN 15714-3:2009 Industrial valves - Actuators Part 3: Pneumatic part-turn actuators for industrial valves – Basic requirements	15 April 2021
3	System Control • RTU • Submaster System • SCADA	Manufacturer Standard Performance Test Report	15 April 2021
		IEEE C37.1-2007 SCADA and Automation Systems	
4	Level Meter • Capacitive • Electrode • Float Gauging • Hydrostatic • Ultrasonic	Calibration Certificate/Report	15 April 2021
E) Lining / Coating / Waterproofing / Sealant / Adhesive / Solvent Cement			
1	Lining Coating Waterproofing Sealant Adhesive Solvent Cement	MS 1583: Part 1:2003 Suitability of non-metallic products for use in contact with water intended for human consumption with regard to their effect on the quality of the water. Part 1: Specification	01 Jan 2008
		NSF/ANSI 61 Drinking Water System Components - Health Effects *(accept any revision year of standard)*	01 Mar 2016

PRODUCT CATEGORY B (WATER SUPPLY)			
No.	**Product Type**	**Requirements**	**Effective Date**
Note: For the test report that using standards **MS 1583-Part 1,** the report must complete with the tests as below: (i) Odour and flavour water (ii) Appearance of water (iii) Growth of aquatic microorganism's test (iv) The extraction of substances that may be concern to public health (v) The extraction of metals *refer Appendix C1 for SPAN Additional Requirement			
F) Measuring Device			
1	Electromagnetic Flowmeter (Custody Transfer Meter)	Directive 2014/32/EU Measurement Instrument (MI-001)	14 June 2017
		OIML R49-1:2013 Water meters intended for the metering of cold potable water and hot water Part 1: Metrological and technical requirement	14 June 2017
Note: Registration for custody electromagnetic flowmeter shall accompany **with Certificate of Approval Weight/Measure/Instrument for Weighing/Instrument for Measuring** (issued by National Metrology Institute of Malaysia (NMIM)).			
2	Electromagnetic Flowmeter (Non-Custody Transfer Meter)	Calibration Certificate/Report *(one certificate/report for every single size of flowmeter)*	01 Mar 2016
3	Ultrasonic Flowmeter • Clamp-On • Insertion	Calibration Certificate/Report	01 Mar 2016

PRODUCT CATEGORY B (WATER SUPPLY)			
No.	**Product Type**	**Requirements**	**Effective Date**
	• Open Channel	OIML R49-1:2013 Water meters intended for the metering of cold potable water and hot water Part 1: Metrological and technical requirement	14 June 2017
G) New Innovative Product			
1	New Innovative System / Product for Treatment of Water, Storage of Water or Conveyance of Water	Assessment for performance efficiency is made through a pilot project.	01 Jan 2010
H) Storage of Water			
1	Cylindrical Double Fold System Tank *refer Appendix C1 (SPAN Additional Requirement)	Manufacturer Standard Performance Test Report	01 Nov 2012
		BS 5950-1:2000 Structural use of steelwork in building Part 1: Code of practice for design – Rolled and welded section ***This standard shall be applicable to the existing supplier or user only and is recognized for SPAN product listing until 31st December 2022 only.*	01 Jan 2008
2	Corrugated Steel Panel with Polyethylene-Lined Water Storage Tank	BS 1449-1.1:1991 Steel plate, sheet & strip. carbon and carbon-manganese sheet and strip	01 Mar 2016

PRODUCT CATEGORY B (WATER SUPPLY)			
No.	**Product Type**	**Requirements**	**Effective Date**
	*refer Appendix C1 (SPAN Additional Requirement)	SS 245:2014 (Cl. 10.2.1 & Cl. 10.2.2) Specification for glass reinforced polyester sectional water tanks	01 Mar 2016
3	Pre-Cast Concrete Tank *refer Appendix C1 (SPAN Additional Requirement)	Manufacturer Standard Performance Test Report	01 Nov 2012
4	Stainless Steel Pressed Steel Sectional Rectangular Water Tank *refer Appendix C1 (SPAN Additional Requirement)	Manufacturer Standard Performance Test Report	01 Nov 2018
		BS 1564:1975 (Deviation Clause 5: Size/Dimension of Tank) (Deviation Clause 6: Material of Tank)	01 Jan 2008
I) Water Quality Monitoring Equipment			
1	Laboratory Equipment Test Portable/Fix Type • Single Parameter • Multiple Parameter	Calibration Certificate/Report	01 Mar 2016
2	On-Line Analyser Monitoring System • Single Parameter • Multiple Parameter	Calibration Certificate/Report	01 Mar 2016

PRODUCT CATEGORY B (WATER SUPPLY)			
No.	**Product Type**	**Requirements**	**Effective Date**
J) Water Treatment Equipment			
1	Chlorine Dosing System (Vacuum regulator, Remote meter/ Chlorinator, Ejector)	Manufacturer Standard Performance Test Report	14 June 2017
2	Ozone Generator • Disinfection • Decolorization • Mineral removal *refer Appendix C1 (SPAN Additional Requirement)	Assessment for performance efficiency is made through a pilot project.	14 June 2017
3	Ultraviolet (UV)	ONORM M5 873-1:2020 Devices for the disinfection of water using ultraviolet radiation — Part 1: Devices equipped with UV low pressure lamps — Requirements and testing	15 April 2021
		ONORM M5873-1:2001 Plants for the disinfection of water using ultraviolet radiation. - Requirements and testing. Low pressure mercury lamp plants. ***This standard shall be applicable to the existing supplier or user only and is recognized for SPAN product listing until 31st December 2023 only.*	14 June 2017
		DVGW W294:2006 UV Disinfection Equipment for Water Supply Systems	14 June 2017
		NWRI UV Disinfection Guidelines - Guidelines for drinking water and water reuse.	14 June 2017

PRODUCT CATEGORY B (WATER SUPPLY)			
No.	**Product Type**	**Requirements**	**Effective Date**
		USEPA UVDGM - Ultraviolet Disinfection Guidance Manual for the Final Long Term 2 Enhanced Surface Water Treatment Rule	15 April 2021
4	Electro Chlorination	SPAN TS 3001:2021 Disinfection of Water – Electrochlorination System	10 Feb 2021
5	Membrane Filtration • Ceramic • Micro-filtration • Nano-filtration • Ultra-filtration • Reverse Osmosis • VPMF *refer Appendix C1 (SPAN Additional Requirement)	Assessment for performance efficiency is made through a pilot project	14 June 2017
6	Metering Pumps • Diaphragm pumps • Piston pumps • Peristaltic pumps • Screw pumps	ANSI/ HI 7.6-2012 Controlled Volume Metering Pumps for Test	14 June 2017
		GB/T 7782-2008 Metering Pumps	14 June 2017
7	Screen • Travelling Band Screen • Static Screen • Mechanical Screen	Assessment for performance efficiency is made through a pilot project	15 April 2021
8	Screening Transfer • Compactor • Conveyor • Conveyor & Compactor	Assessment for performance efficiency is made through a pilot project	15 April 2021

PRODUCT CATEGORY B (WATER SUPPLY)			
No.	**Product Type**	**Requirements**	**Effective Date**
9	Agitator	CJ/T 109-2007 Submersible Agitator	15 April 2021
10	Mixer • Flow Booster • Flowmaker • Surface Mixer	Manufacturer Standard Performance Test Report	15 April 2021
11	Mixer Submersible Mixer	ISO 21630:2007 Pumps Testing. Submersible mixers for wastewater and similar applications.	15 April 2021
12	Odour Control	Assessment for performance efficiency is made through a pilot project.	15 April 2021
13	Air Blower & Air Compressor	<u>For blowing application</u> JIS B 8341:2008 Displacement Compressors – Acceptance tests	15 April 2021
		BS ISO 1217:2009/Amd 1:2016 Displacement Compressors. – Acceptance tests Amendment 1: Calculation of isentropic efficiency and relationship with specific energy	15 April 2021
		KS B 6350:2014 Testing Method for Turbo Compressor.	15 April 2021
		JB/T 8941.2-2014 (Roots Type Blowers for General Purpose) Part 2: Performance test methods.	15 April 2021

PRODUCT CATEGORY B (WATER SUPPLY)			
No.	**Product Type**	**Requirements**	**Effective Date**
		ASME PTC 10-1997 Performance Test Code on Compressors and Exhausters	15 April 2021
14	Diffused Aerator • Aspirating Aerator • Ejector • Submersible Aerator Mechanical Aerator • Brush Aerator • Hydrojet Aerator • Surface Aerator • Paddle Wheel Aerator Diffuser • Disc • Tube/Pipe • Panel	BS EN 12255-15:2003 Wastewater treatment plants. Measurement of the oxygen transfer in clean water in aeration tanks of activated sludge plants.	15 April 2021
		ASCE/EWRI 2-06 Measurement of oxygen transfer in clean water *(Note: Standards for material is subject to manufacturer recommendations)*	15 April 2021
		CJ/T 264-2018 Membrane fine bubble diffuser for water & wastewater treatment	15 April 2021
		HJ/T 252-2006 Specification for environmental protection product middle and fine bubble diffuser	15 April 2021
		CJ/T 475-2015 Micropore Aerator Clean Water Oxygen Mass Transfer Performance Measurement	15 April 2021
15	Vacuum pump	BS ISO 21360-1:2012 Vacuum technology. Standard methods for measuring vacuum-pump performance. General description	15 April 2021
16	Clarifier / Sedimentation	Assessment for performance efficiency is made through a pilot project.	15 April 2021

PRODUCT CATEGORY B (WATER SUPPLY)			
No.	**Product Type**	**Requirements**	**Effective Date**
17	Sludge Thickener • Centrifuge Decanter • Belt Thickener • Rotary Drum	SPAN TS 3002:2021 Equipment for Sludge/Residual Treatment (Sludge Thickening and Dewatering)	15 April 2021
18	Sludge Dewatering • Belt Filter Press • Filter Press • Centrifuge Decanter • Screw Press	SPAN TS 3002:2021 Equipment for Sludge/Residual Treatment (Sludge Thickening and Dewatering)	15 April 2021
19	Chemical Dosing Preparation	Manufacturer Standard Performance test report	15 April 2021
K) Water Treatment System			
1	Compact Plant / Package Plant *refer Appendix C1 (SPAN Additional Requirement)	Assessment for performance efficiency is made through a pilot project.	14 June 2017

APPENDIX B2

SEWERAGE SYSTEM

(CATEGORY B)

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APPENDIX B2

PRODUCT CATEGORY B AND TESTING/PERFORMANCE REQUIREMENTS FOR REGISTRATION

PRODUCT CATEGORY B (SEWERAGE)			
No.	**Product Type**	**Requirements**	**Effective Date**
A) Aeration			
1 a)	Diffused Aerator • Aspirating Aerator • Ejector • Submersible Aerator	BS EN 12255-15:2003 Wastewater treatment plants. Measurement of the oxygen transfer in clean water in aeration tanks of activated sludge plants.	01 Jan 2008
1 b)	Mechanical Aerator • Brush Aerator • Hydrojet Aerator • Surface Aerator • Paddle Wheel Aerator	ASCE/EWRI 2-06 Measurement of oxygen transfer in clean water *(Note: Standards for material is subject to manufacturer recommendations)*	01 Jan 2008
1 c)	Diffuser • Disc • Tube/Pipe • Panel	CJ/T 264-2018 Membrane fine bubble diffuser for water & wastewater treatment	15 April 2021
		CJ/T 264-2007 Membrane fine bubble diffuser for water & wastewater treatment ***This standard shall be applicable to the existing supplier or user only and is recognized for SPAN product listing until 31st December 2023 only.*	14 June 2017
		HJ/T 252-2006 Specification for environmental protection product middle and fine bubble diffuser	14 June 2017
		CJ/T 475-2015 Micropore Aerator Clean Water Oxygen Mass Transfer Performance Measurement	14 Apr 2018

PRODUCT CATEGORY B (SEWERAGE)			
No.	**Product Type**	**Requirements**	**Effective Date**
B) Air Supply			
1	Air Blower & Air Compressor	<u>For blowing application</u> JIS B 8341:2008 Displacement Compressors – Acceptance tests	01 Dec 2015
		BS ISO 1217:2009/Amd 1:2016 Displacement Compressors. – Acceptance tests Amendment 1: Calculation of isentropic efficiency and relationship with specific energy	15 April 2021
		BS ISO 1217:2009 Displacement Compressors. – Acceptance tests ***This standard shall be applicable to the existing supplier or user only and is recognized for SPAN product listing until 31st December 2023 only.*	01 Dec 2015
		KS B 6350:2014 Testing Method for Turbo Compressor.	01 Dec 2015
		JB/T 8941.2-2014 (Roots Type Blowers for General Purpose) Part 2: Performance test methods.	15 April 2021
		JB/T 8941.2-1999 (Roots Type Blowers for General Purpose) Part 2: Performance test methods. ***This standard shall be applicable to the existing supplier or user only and is recognized for SPAN product listing until 31st December 2023 only.*	31 Dec 2013
		ASME PTC 10-1997 Performance Test Code on Compressors and Exhausters	14 June 2017

PRODUCT CATEGORY B (SEWERAGE)			
No.	**Product Type**	**Requirements**	**Effective Date**
C) Air Vacuum			
1	Vacuum pump	BS ISO 21360-1:2012 Vacuum technology. Standard methods for measuring vacuum-pump performance. General description	15 April 2021
		BS ISO 21360:2007 Vacuum technology. Standard methods for measuring vacuum-pump performance. General description ***This standard shall be applicable to the existing supplier or user only and is recognized for SPAN product listing until 31st December 2023 only.*	01 Dec 2015
D) Clarifier / Sedimentation			
1	Scum Skimmer • Weir Skimmer • Trough/Pipe • Chain & Flight • Multiple travelling collector	Assessment for performance efficiency is made through a pilot project.	01 Mar 2016
2	Sludge Scrapper • Rectangular - Chain & Flight - Multiple travelling collector	Assessment for performance efficiency is made through a pilot project.	01 Mar 2016
3	Sludge Scrapper & Scum Skimmer • Circular • Rectangular - Chain & Flight - Bridge travelling	Assessment for performance efficiency is made through a pilot project.	01 Mar 2016

PRODUCT CATEGORY B (SEWERAGE)			
No.	**Product Type**	**Requirements**	**Effective Date**
E) Disinfection			
1	Chlorination	Manufacturer Standard Performance Test Report	01 Mar 2016
2	Ultraviolet (UV)	ONORM M5 873-1:2020 Devices for the disinfection of water using ultraviolet radiation — Part 1: Devices equipped with UV low pressure lamps — Requirements and testing	15 April 2021
		ONORM M5873-1:2001 Plants for the disinfection of water using ultraviolet radiation. - Requirements and testing. Low pressure mercury lamp plants. ***This standard shall be applicable to the existing supplier or user only and is recognized for SPAN product listing until 31st December 2023 only.*	14 June 2017
		DVGW W294:2006 UV Disinfection equipment for water supply systems	14 June 2017
		NWRI UV Disinfection Guidelines - Guidelines for drinking water and water reuse.	14 June 2017
F) Effluent and Water Removal / Recycle			
1	Effluent Transfer & Dewatering (Centrifugal Pump) • End Suction • Multistage • Self-Priming • Submersible	ISO 9906:2012 Rotodynamic pumps - Hydraulic performance acceptance tests - Grades 1B/1E/1U and 2B *(any total adoption standard with ISO 9906:2012 also accepted)*	01 Mar 2016

PRODUCT CATEGORY B (SEWERAGE)			
No.	**Product Type**	**Requirements**	**Effective Date**
		ANSI/HI 14.6:2011 Rotodynamic Pumps for hydraulic performance acceptance tests Grades 1B/1E/1U and 2B	01 Mar 2016
Note: • The report of pump performance must show the detail as per below: (i) Official letter head or official stamping (ii) Information of the pump (iii) Date of testing (iv) Table & graph of result (head vs flow, efficiency vs flow, power vs flow) (v) Duty point of the pump (vi) Standard & grade used for the testing			
G) Effluent Decanting			
1	Effluent Decanter • Fixed Pipe • Floating • Surface Skimming	Assessment for performance efficiency is made through a pilot project.	01 Mar 2016
H) Flow Control			
1	Air Relief Valve	BS EN 12266-1:2012 Industrial valves – Testing of metallic valves. Pressure tests, test procedures and acceptance criteria. – Mandatory requirements	15 April 2021
		Manufacturer Standard Performance Test Report ***This standard shall be applicable to the existing supplier or user only and is recognized for SPAN product listing until 31st December 2023 only.*	01 Mar 2016

PRODUCT CATEGORY B (SEWERAGE)			
No.	**Product Type**	**Requirements**	**Effective Date**
2	Automatic Control Valve	BS EN 12266-1:2012 Industrial valves – Testing of metallic valves. Pressure tests, test procedures and acceptance criteria. – Mandatory requirements	15 April 2021
		Manufacturer Standard Performance Test Report ***This standard shall be applicable to the existing supplier or user only and is recognized for SPAN product listing until 31st December 2022 only.*	01 Mar 2016
3	Eccentric Semi Ball-Plug Valve	Manufacturer Standard Performance Test Report	01 Mar 2016
4	Flap Valve	Manufacturer Standard Performance Test Report	01 Mar 2016
5	Interface Valve	Manufacturer Standard Performance Test Report	01 Mar 2016
6	Recoil Check Valve	BS EN 16767:2016 Industrial valves. Steel and cast iron check valves	15 April 2021
		BS EN 12334:2001 Industrial valves. Cast iron check valves ***This standard shall be applicable to the existing supplier or user only and is recognized for SPAN product listing until 31st December 2023 only.*	01 Mar 2016

PRODUCT CATEGORY B (SEWERAGE)			
No.	**Product Type**	**Requirements**	**Effective Date**
		BS EN 14341:2006 Industrial valves. Steel check valves ***This standard shall be applicable to the existing supplier or user only and is recognized for SPAN product listing until 31st December 2023 only.*	01 Mar 2016
I) Grit and Grease Removal			
1	Grease Collector • Chain & Flight • Trough-Pipe Skimmer • Weir Skimmer	Assessment for performance efficiency is made through a pilot project.	01 Mar 2016
2	Grit & Grease Collector (Horizontal Flow) • Chain & Flight • Detritor • Travelling Bridge	Assessment for performance efficiency is made through a pilot project.	01 Mar 2016
3	Grit Collector • Aerated • Horizontal Flow • Vortex	Assessment for performance efficiency is made through a pilot project.	01 Mar 2016
4	Grit Transfer Pump (Positive Displacement) • Reciprocating • Rotary	BS EN 14343:2005 Rotary positive displacement pumps. Performance tests for acceptance.	01 Mar 2016
		VDMA 24284:1973 Testing of Displacement Pumps, General Rules of Testing	14 Apr 2018

<table>
<tr><th colspan="4">PRODUCT CATEGORY B (SEWERAGE)</th></tr>
<tr><th>No.</th><th>Product Type</th><th>Requirements</th><th>Effective Date</th></tr>
<tr><td rowspan="2"></td><td rowspan="2">Grit Transfer Pump
(Centrifugal Pump)
End Suction
Self-Priming
Submersible</td><td>ISO 9906:2012
Rotodynamic pumps
- Hydraulic performance acceptance tests
- Grades 1B/1E/1U and 2B
(any total adoption standard with ISO 9906:2012 also accepted)</td><td>01 Mar 2016</td></tr>
<tr><td>ANSI/HI 14.6:2011
Rotodynamic Pumps for hydraulic performance acceptance tests
Grades 1B/1E/1U and 2B</td><td>01 Mar 2016</td></tr>
<tr><td colspan="4">Note:
The report of pump performance must show the detail as per below:
(i) Official letter head or official stamping
(ii) Information of the pump
(iii) Date of testing
(iv) Table & graph of result (head vs flow, efficiency vs flow, power vs flow)
(v) Duty point of the pump
(vi) Standard & grade used for the testing</td></tr>
<tr><td>5</td><td>Grit Transfer
Chain and Bucket
Compactor
Compactor and Conveyor
Conveyor</td><td>Assessment for performance efficiency is made through a pilot project.</td><td>01 Mar 2016</td></tr>
<tr><td>6</td><td>Grit Washing & Dewatering
Drum Screen
Rotary Screen
Screw Screen
Static Screen</td><td>Assessment for performance efficiency is made through a pilot project.</td><td>01 Mar 2016</td></tr>
</table>

PRODUCT CATEGORY B (SEWERAGE)			
No.	**Product Type**	**Requirements**	**Effective Date**
J) Instrumentation and Control			
1	Actuator • Electric	BS EN 15714-2:2009 Industrial valves - Actuators Part 2: Electric actuators for industrial valves – Basic requirements and comply with SPAN TS 1701:2015 Technical Specification for Instrumentation and Control – Part 1: Actuator	01 Oct 2016
2	Actuator • Pneumatic	BS EN 15714-3:2009 Industrial valves - Actuators Part 3: Pneumatic part-turn actuators for industrial valves – Basic requirements	14 June 2017
3	Analyser • Ammonium & Nitrate • Chlorine • Suspended Solids • Total Organic Carbon	Calibration Certificate/Report	01 Mar 2016
4	Chemical Dosing • Monitoring System	Calibration Certificate/Report	01 Mar 2016
5	Dissolved Oxygen • Amperometric • Galvanic • Luminescent • Ultrasonic	Calibration Certificate/Report	01 Mar 2016

PRODUCT CATEGORY B (SEWERAGE)			
No.	**Product Type**	**Requirements**	**Effective Date**
6	Gas Control • Gas Combustor • Gas Detector • Gas Holder	Calibration Certificate/Report	01 Mar 2016
7	Level Meter • Capacitive • Electrode • Float Gauging • Hydrostatic • Ultrasonic	Calibration Certificate/Report	01 Mar 2016
	• Float Switch	Performance Test Report: i) Physical Endurance according to MS 795-2:2011; and ii) Chemical Resistance according to MS 795-2:2011; and iii) Maximum Water Temperature according to IEC 60730-2-15; and iv) Water Level Operating Controls according to IEC 60730-2-15	15 April 2021
8	Non-Custody Flowmeter • Differential Pressure (DP) • Electromagnetic • Rotameter • Ultrasonic	Calibration Certificate/Report	01 Mar 2016
9	• Oxidation Reduction Potential (ORP) Meter • pH Meter	Calibration Certificate/Report	01 Mar 2016

PRODUCT CATEGORY B (SEWERAGE)			
No.	**Product Type**	**Requirements**	**Effective Date**
10	Pressure Meter • Differential • Switch • Transmitter	Calibration Certificate/Report	01 Mar 2016
11	Sludge Density Meter	Calibration Certificate/Report	01 Mar 2016
12	System Control • Air Control System • Monitoring System • SCADA	Manufacturer Standard Performance Test Report	01 Mar 2016
		IEEE C37.1-2007 SCADA and Automation Systems.	01 Mar 2016
13	Temperature Meter • RTD • Switch • Thermocouple • Transmitter	Calibration Certificate/Report	01 Mar 2016
K) Mixing			
1	Agitator	CJ/T 109-2007 Submersible Agitator	15 April 2021
2	Mixer • Flow Booster • Flowmaker • Surface Mixer	Manufacturer Standard Performance Test Report	14 June 2017
3	Mixer • Submersible Mixer	ISO 21630:2007 Pumps Testing. Submersible mixers for wastewater and similar applications.	01 Dec 2015

PRODUCT CATEGORY B (SEWERAGE)			
No.	**Product Type**	**Requirements**	**Effective Date**
L) Odour Control and Treatment			
1	Odour Control • Biofiltration • Bioscrubbing • Carbon Adsorption • Deodorizer • Liquid Redox • Photoionization • Solid Scavenger • Wet Air Scrubbing	Assessment for performance efficiency is made through a pilot project.	14 June 2017
M) Pre-Treatment			
1	Communal Grease Trap	Assessment for performance efficiency is made through a pilot project.	14 June 2017
2	Complete Pre-Treatment System	Assessment for performance efficiency is made through a pilot project.	14 June 2017
N) Primary and Secondary Screening			
1	Screen	Assessment for performance efficiency is made through a pilot project	01 Mar 2016
2	Screening Transfer • Compactor • Conveyor • Conveyor & Compactor	Assessment for performance efficiency is made through a pilot project	01 Mar 2016

PRODUCT CATEGORY B (SEWERAGE)			
No.	**Product Type**	**Requirements**	**Effective Date**
O) Raw Sewage Pumping			
1	Positive Displacement Pump • Rotary - Archimedes - Lobes - Screw	BS EN 14343:2005 Rotary positive displacement pumps. Performance tests for acceptance	01 Oct 2016
2	Centrifugal Pump • End Suction • Self-Priming • Submersible	ISO 9906:2012 Rotodynamic pumps - Hydraulic performance acceptance tests - Grades 1B/1E/1U and 2B *(any total adoption standard with ISO 9906:2012 also accepted)*	01 Dec 2015
		ANSI/HI 14.6:2011 Rotodynamic Pumps for hydraulic performance acceptance tests Grades 1B/1E/1U and 2B	01 Mar 2016
Note: • The report of pump performance must show the detail as per below: (i) Official letter head or official stamping (ii) Information of the pump (iii) Date of testing (iv) Table & graph of result (head vs flow, efficiency vs flow, power vs flow) (v) Duty point of the pump (vi) Standard & grade used for the testing *refer Appendix C2 for SPAN Additional Requirement			
3	Pre-fabricated Pumping Station	Assessment for performance efficiency is made through a pilot project	01 May 2019

PRODUCT CATEGORY B (SEWERAGE)			
No.	**Product Type**	**Requirements**	**Effective Date**
P) Sewage Conveyance			
1	Sewer Liner • Cured-in-place pipes (CIPP)	BS EN ISO 11296:2018 Plastics piping systems for renovation of underground non-pressure drainage and sewerage networks Part 1: General Part 2: Lining with continuous pipes Part 3: Lining with close-fit pipes Part 4: Lining with cured-in-place pipes	15 April 2021
		BS EN ISO 11296:2011 Plastics piping systems for renovation of underground non-pressure drainage and sewerage networks Part 1: General Part 2: Lining with continuous pipes Part 3: Lining with close-fit pipes Part 4: Lining with cured-in-place pipes ***This standard shall be applicable to the existing supplier or user only and is recognized for SPAN product listing until 31st December 2023 only.*	01 Dec 2015
		ASTM D5813-04 (2018) Standard specification for cured-in-place thermosetting resin sewer piping systems	15 April 2021
		ASTM D5813-04 (2012) Standard specification for cured-in-place thermosetting resin sewer piping systems ***This standard shall be applicable to the existing supplier or user only and is recognized for SPAN product listing until 31st December 2023 only.*	01 Dec 2015

PRODUCT CATEGORY B (SEWERAGE)			
No.	**Product Type**	**Requirements**	**Effective Date**
		ASTM F2019-20 Standard practice for rehabilitation of existing pipelines and conduits by the pulled in place installation of Glass Reinforced Plastic (GRP) Cured-in-Place Thermosetting Resin Pipe (CIPP) using the UV-Light Curing Method	15 April 2021
		ASTM F2019-11 Standard practice for rehabilitation of existing pipelines and conduits by the pulled in place installation of Glass Reinforced Plastic (GRP) Cured-in-Place Thermosetting Resin Pipe (CIPP) ***This standard shall be applicable to the existing supplier or user only and is recognized for SPAN product listing until 31st December 2023 only.*	01 Dec 2015
		ASTM F1216-16 Standard practice for rehabilitation of existing pipelines and conduits by the Inversion and Curing of a Resin-Impregnated Tube	14 June 2017
2	Sewer Liner • FRP Slip Lining • HDPE Lining	BS EN ISO 178:2010+A1:2013 Plastics - Determination of flexural properties	01 Dec 2015
		BS EN ISO 11296:2018 Plastics piping systems for renovation of underground non-pressure drainage and sewerage networks Part 1: General Part 2: Lining with continuous pipes Part 3: Lining with close-fit pipes Part 4: Lining with cured-in-place pipes	15 April 2021

PRODUCT CATEGORY B (SEWERAGE)			
No.	**Product Type**	**Requirements**	**Effective Date**
		BS EN ISO 11296:2011 Plastics piping systems for renovation of underground non-pressure drainage and sewerage networks Part 1: General Part 2: Lining with continuous pipes Part 3: Lining with close-fit pipes Part 4: Lining with cured-in-place pipes ***This standard shall be applicable to the existing supplier or user only and is recognized for SPAN product listing until 31st December 2023 only.*	01 Dec 2015
3	Sewer Liner • CIPP Resin	Performance Test Report: i) Compressive Strength according to DIN EN ISO 604; and ii) Flexural Strength Test according to DIN ISO 178; and iii) 10,000 Hours Long Term Peak Pressure Test according to DIN EN 761 (This report shall be valid for a period of 10 years)	15 April 2021
4	Sewer Liner • Patching Resin	Performance Test Report: i) Compressive Strength according to DIN EN ISO 604	15 April 2021
Q) Sludge Treatment			
1	Biogas System • Gas Holder	Assessment for performance efficiency is made through a pilot project	01 Mar 2016
2	Gas Control • Gas Holder	Assessment for performance efficiency is made through a pilot project	01 Mar 2016
3	Gas Holder • Dry Seal	Assessment for performance efficiency is made through a pilot project	01 Mar 2016

PRODUCT CATEGORY B (SEWERAGE)			
No.	**Product Type**	**Requirements**	**Effective Date**
4	Polymer Dosing • Metering Pump - Positive Displacement	GB/T 7782-2008 Metering Pumps	01 Mar 2016
		ANSI/ HI 7.6-2012 Controlled volume Metering Pumps for test	14 June 2017
	Polymer Dosing • Polymer Preparation	Manufacturer Standard Performance test report	14 June 2017
5	Sludge Dewatering • Belt Filter Press • Filter Press • Centrifuge Decanter • Screw Press	SPAN TS 3002:2021 Equipment for Sludge/Residual Treatment (Sludge Thickening and Dewatering)	10 Feb 2021
6	Sludge Digester	Assessment for performance efficiency is made through a pilot project	01 Mar 2016
7	Sludge Dryer • Screw Press • Gravity Container • Fluidised Bed Sludge • Rotary Klin	Assessment for performance efficiency is made through a pilot project	01 Mar 2016
8	Sludge Reception Facilities	Assessment for performance efficiency is made through a pilot project	01 Mar 2016

PRODUCT CATEGORY B (SEWERAGE)			
No.	**Product Type**	**Requirements**	**Effective Date**
9	Sludge Screen • Mechanical - Drum Screen - Micro Screen - Screw Screen	Assessment for performance efficiency is made through a pilot project	01 Mar 2016
10	Sludge Thickener • Centrifuge Decanter • Belt Thickener • Rotary Drum	SPAN TS 3002:2021 Equipment for Sludge/Residual Treatment (Sludge Thickening and Dewatering)	10 Feb 2021
	• Gravity Thickener - Central Driven - Peripheral Driven	Assessment for performance efficiency is made through a pilot project.	01 Mar 2016
11	Sludge Transfer (Positive Displacement Pump) • Progressive Cavity • Rotary	BS EN 14343:2005 Rotary positive displacement pumps. Performance tests for acceptance	01 Oct 2016
		VDMA 24284:1973 Testing of Displacement Pumps, General Rules of Testing	14 Apr 2018
		JB/T 8644-2017 & JB/T 8091-2014 Single Screw Pump & Testing Methods for Screw Pumps	01 Jun 2020
	Sludge Transfer (Centrifugal Pump) • End Suction • Self-Priming • Submersible	ISO 9906:2012 Rotodynamic pumps - Hydraulic performance acceptance tests - Grades 1B/1E/1U and 2B *(any total adoption standard with ISO 9906:2012 also accepted)*	01 Mar 2016

PRODUCT CATEGORY B (SEWERAGE)			
No.	**Product Type**	**Requirements**	**Effective Date**
		ANSI/HI 14.6:2016 Rotodynamic Pumps for hydraulic performance acceptance tests Grades 1B/1E/1U and 2B	15 April 2021
		ANSI/HI 14.6:2011 Rotodynamic Pumps for hydraulic performance acceptance tests Grades 1B/1E/1U and 2B ***This standard shall be applicable to the existing supplier or user only and is recognized for SPAN product listing until 31st December 2023 only.*	01 Mar 2016
Note: • The report of pump performance must show the detail as per below: (i) Official letter head or official stamping (ii) Information of the pump (iii) Date of testing (iv) Table & graph of result (head vs flow, efficiency vs flow, power vs flow) (v) Duty point of the pump (vi) Standard & grade used for the testing *refer Appendix C2 for SPAN Additional Requirement			
R) Treatment System			
1	Package Sewage Treatment System • Glass-fibre Reinforced Plastic (GRP) • High Density Polyethylene (HDPE) • Steel	Assessment for performance efficiency is made through a pilot project	01 Mar 2016
2	Innovative System for Sewage Treatment	Assessment for performance efficiency is made through a pilot project	14 June 2017
3	Integrated Fixed Film Activated Sludge	Assessment for performance efficiency is made through a pilot project	01 Mar 2016

PRODUCT CATEGORY B (SEWERAGE)			
No.	**Product Type**	**Requirements**	**Effective Date**
4	Membrane Bioreactor (MBR)	Assessment for performance efficiency is made through a pilot project	01 Mar 2016
5	Moving Bed Bioreactor (MBBR)	Assessment for performance efficiency is made through a pilot project	01 Mar 2016
6	Rotating Biological Contactor (RBC)	Assessment for performance efficiency is made through a pilot project	01 Mar 2016
7	Super Dissolved Oxygen • Bi-Act SDO	Assessment for performance efficiency is made through a pilot project	01 Mar 2016
8	Trickling Filter	Assessment for performance efficiency is made through a pilot project	01 Mar 2016
S) Post Effluent			
1	Effluent Polishing System	Assessment for performance efficiency is made through a pilot project	14 Apr 2018

APPENDIX C1

SPAN Additional Requirement or Condition for Specific Products

(WATER SUPPLY SYSTEM PRODUCTS)

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WATER SUPPLY SYSTEM PRODUCTS

NO.	PRODUCT NAME	SPAN ADDITIONAL REQUIREMENTS
A. WATER PIPES		
1	Polyethylene (PE) Pipes	1. Minimum rating for PE Pipes is PN 12.5. 2. Minimum material grade for PE Pipes is PE100. 3. Polyethylene Pipes (PE) product should have a blue marking stripe (blue stripes) on the pipe as an identification for water supply usage. The blue stripes must comply with the following condition: a. mixture of compound used to produce the blue stripes have to use the same PE polymers with the original PE polymers as used in the manufacture of the PE pipe. b. Dark blue stripe for PE100 pipe in order to identify the classification of PE material. c. Minimum number of stripes shall be 4 spaced at 90º interval. d. Thickness of stripes should be less than 10% of the wall thickness of the pipe.
2	Unplasticized Poly(Vinyl Chloride) (PVC-U) Pipes	1. PVC-U pipes should be used together with the PVC-U fittings and solvent cement of the same brand. 2. Minimum rating for PVC-U pipe is PN 12.
3	Solvent Cement for PVC-U Piping Ststem	1. PVC-U Solvent Cement should be used together with the PVC-U Pipes and PVC-U Fittings of the same brand.
4	Acrylonitrile-Butadiene-Styrene (ABS) Pipes	1. ABS Pipes should be used together with the ABS Fittings and Solvent Cement of the same brand. 2. Minimum rating for ABS Pipes is Class 12.
5	Solvent Cement for ABS Piping Ststem	1. ABS Solvent Cement should be used together with the ABS Pipes and ABS Fittings of the same brand.

NO.	PRODUCT NAME	SPAN ADDITIONAL REQUIREMENTS
B. WATER FITTINGS		
1	Unplasticized Poly(Vinyl Chloride) (PVC-U) Fittings	1. PVC-U Fittings should be used together with the PVC-U Pipes and Solvent Cement of the same brand.
2	Acrylonitrile-Butadiene-Styrene (ABS) Fittings	1. ABS Fittings should be used together with the ABS Pipes and Solvent Cement of the same brand.
C. SERVICE RESERVOIR / STORAGE CISTERN		
1	All Types of Tanks	1. The basic information of the tank in the form of tags, stickers or other markers that are permanently affixed should be displayed on the site in a visible and unobtrusive place. The tag, sticker or other marker must have the following information: a. Installation date b. Type of tank c. Standard of product d. Capacity of tank e. Manufacturer and supplier f. SPAN registration number
2	Cylindrical Double Fold System	2. Maximum capacity allowed is 1.0 million gallon (MG). 3. Maximum height allowed is 5 meter. 4. Tank must be supplied and installed by the same supplier or installer who is appointed by the supplier. 5. Minimum 10 years warranty period for tank is required.

NO.	PRODUCT NAME	SPAN ADDITIONAL REQUIREMENTS
3	Steel Tank with Lining or Coating (Glass Coated / Glass Lined / Glass Fused / Epoxy Coated / Epoxy Lining / HDPE Lining)	1. Maximum capacity allowed for elevated tank is 500,000 G and for ground storage tank is 750,000 G. 2. Maximum height allowed is 5 meter or 4 panels or which one is lower. 3. Tank must be supplied and installed by the same supplier or installer who is appointed by the supplier. 4. Minimum 10 years warranty period for tank and sealant/ lining is required. 5. All stainless steel accessories (nozzles, flange, manways, ladders, brackets, etc) that come in to direct contact with epoxy panels need to have applied an elastic, 1-component sealant with a polyurethane base. (specially designed for sealing tanks built in section) Coat the entire stainless steel mounting area where it will attach to the epoxy coated steel.
4	Storage Tanks Polyethylene (PE) Tanks	1. Tank should have an interlocking mechanism
5	Glass-fibre Reinforced Polyester (GRP) Sectional Water Tank	1. Tank must be supplied and installed by the same supplier or installer who is appointed by the supplier. 2. Maximum capacity allowed is 500,000 litres (100,000 G). 3. Maximum height allowed is 4 meter. 4. Tank only can be used for system that will not be surrendered to the water operator. 5. Minimum 10 years warranty period for tank and sealant is required. 6. Users are encouraged to provide protection for the tank from direct sunlight. (i.e. roof etc.) 7. Suppliers must ensure levelling of plinth prior to tank installation.

NO.	PRODUCT NAME	SPAN ADDITIONAL REQUIREMENTS
6	Corrugated Steel Panels with Polyethylene-Lined Water Storage Tank	1. Tank only can be used for system that will not be surrendered to the water operator. 2. Maximum capacity allowed is 500,000 litres (100,000 G). 3. Maximum height allowed is 5 meter or 4 panels or which one is lower. 4. Minimum thickness of the PE Lining is 2.0mm. 5. Tank must be supplied and installed by the same supplier or installer who is appointed by the supplier. 6. Minimum 10 years warranty period for tanks and sealant/ lining is required.
7	Glass–fibre Reinforced Polyester (GRP) One-Piece Water Tank	1. Tank must be supplied and installed by the same supplier or installer who is appointed by the supplier. 2. Maximum capacity allowed is 100,000 litres (22,000 G) 3. Tank only can be used for system that will not be surrendered to the water operator. 4. Tank is not allowed to be cast *in-situ.*
8	Pressed Steel Sectional Rectangular Tank Panel	1. Tank only can be used for system that will not be surrendered to the water operator. 2. Maximum capacity allowed is 500,000 litres (100,000 G) 3. Maximum height allowed is 4 panels. 4. The tank must be lined with PE lining; minimum thickness of the PE lining is 2.0mm (Except for stainless steel tank) 5. Minimum 10 years warranty period for tanks and linings. 6. Tank must be supplied and installed by the same supplier or installer who is appointed by the supplier.

NO.	PRODUCT NAME	SPAN ADDITIONAL REQUIREMENTS
D. VALVES		
1	Type of Valves: 1. Butterfly Valve 2. Air Valve 3. Gate Valve 4. Check Valve	1. O-Ring/ Gasket shall be of EPDM. 2. Body material shall be of Ductile Iron. 3. For valve which is more than 600 mm in diameter, water operator is allowed to make any test which they feel necessary before purchasing is made.
E. SANITARY		
1	Water Closet	Except for flushing cistern using a siphonic system, flushing cistern serving a water closet pan shall be dual flushes with a nominal volume of a full and partial flush not exceeding 6 and 3 litres, respectively.
2	Uniral	Hand operated flush valve for a urinal shall ensure that it is so designed to give a single flush of not exceeding 2.5 litres per stall or per 600 mm width of slab and not exceeding 2.5 litres for wall hung urinals.
F. CHEMICALS FOR WATER TREATMENT		
1	All type of chemicals	1. Certificate of Analysis (CoA) submission to water operators is required for every batch of chemicals delivered 2. Halal Certificate issued by: • Department of Islamic Development Malaysia (JAKIM); • local Islamic bodies recognized by JAKIM; • foreigner bodies recognized by JAKIM 3. Safety Data Sheet (SDS)
2	Chlorine	1. The drum/cylinder used for chlorine storage shall comply with: a. Chlorine Drum • BS 1500; • ASME Sect VIII; or • any equivalent standard

NO.	PRODUCT NAME	SPAN ADDITIONAL REQUIREMENTS
		b. Chlorine Cylinder • JIS B 8421; or • any equivalent standard 2. The product listing will be revoked in the event of an unsatisfactory decision as a result of an audit by the Department of Occupational Safety and Health (DOSH) in relation to the Occupational Safety and Health (Control of Industrial Major Accident Hazards) Regulations, 1996 (CIMAH). 3. Must follow requirements that stated in the "Garis Panduan Keselamatan Pembekalan dan Penggunaan Bahan Kimia Klorin utuk Sistem Bekalan air".
G. CENTRIFUGAL PUMP		
1	All types of pump	Registered pumps are subject to the following conditions: **1.1 For internal plumbing system that will be maintained by the owner premises** 1.1.1 Booster pumps of capacity lower than 10m^3/hr (<10m^3/hr) shall have efficiencies of **not less than 45%.** 1.1.2 Booster pumps of capacity equal and exceeding 10m^3/hr (≥10m^3/hr) but lower than 30m^3/hr (< 30m^3/hr) shall have efficiencies of **not less than 50%.** 1.1.3 The efficiency of all types of booster pumps of higher capacity shall meet the minimum requirement tabulated under item 1.2.1 below. 1.1.4 Compliance with EFF1 rating for booster pump motors is voluntary. However, building conforming to Green Building Rating should have pump motors complying with EFF1 rating. **1.2 For external reticulation system that will be handed over and maintained by the water operators** 1.2.1 Design Criteria for Pump sets:

NO.	PRODUCT NAME	SPAN ADDITIONAL REQUIREMENTS
	All types of pump *(continued)*	

Pumping Rate Per Pump (m^3/ hr)	Number of Pump Sets	Total Pump Sets	Pumping Hours	Minimum Pump Efficiency	Maximum Pumping Head	Maximum Speed (rpm)	
						Horizontal Split Casing Pumps	End Suction Pumps
≥ 30 <100	On Duty = 1 Standby = 1	2	12	60	75	-	2900
≥100 <300	On Duty = 1 Standby = 1	2	12	70	75	1500	2900
≥ 300 <1000	On Duty = 2 Standby = 2	4	12	75	75	1,500	-
≥ 1000	On Duty = 4 Standby = 2	6	12	80	75	1,500	-

1.2.2 Material Condition:

1.2.2.1 General conditions:

NO	PART	MATERIAL
1	Pump shaft	The material shall be of Stainless Steel Grade 420 or better.
2	Bolt & Nuts	All exposed bolts and nuts in the construction for the pump shall be cadmium treated or hot dipped galvanized.

<table>
<tr><th>NO.</th><th>PRODUCT NAME</th><th>SPAN ADDITIONAL REQUIREMENTS</th></tr>
<tr><td></td><td>All types of pump
(continued)</td><td>
1.2.2.2 Specific Conditions for Horizontal Split Casing Pump:
<table>
<tr><th>NO</th><th>PART</th><th>MATERIAL</th></tr>
<tr><td>1</td><td>Pump casing</td><td>Shall be axially split grey cast iron or ductile iron type, and be fitted with high tensile steel shafts running on ball or roller bearings with suitable lubricating arrangements.</td></tr>
<tr><td>2</td><td>Impeller, neck rings, sleeves, gland, lantern ring and bushes</td><td>The material shall be of zinc-free bronze or stainless steel.</td></tr>
<tr><td>3</td><td>Gland seal</td><td>The material shall be silicon carbide or tungsten carbide mechanical seal type.</td></tr>
</table>
1.2.2.3 Specific Conditions for End Suction Pump:
<table>
<tr><th>NO</th><th>PART</th><th>MATERIAL</th></tr>
<tr><td>1</td><td>Gland seal</td><td>The material shall be silicon carbide or tungsten carbide mechanical seal type.</td></tr>
<tr><td>2</td><td>Impeller</td><td>The material shall be of zinc-free bronze or stainless steel.</td></tr>
</table>
1.2.3 Class Definition for Electrical Motors:

All motors shall be of the High Efficiency Motor standard type, i.e. EFF1 CEMEP-EU standard, Class 1 as detailed in the table below. Motors of capacity greater than 90 kW shall have an efficiency of not less than 95.0%. Compliance to this Clause is mandatory for external pumping stations.
<table>
<tr><th rowspan="2">MOTOR CAPACITY (kW)</th><th colspan="2">MOTOR EFFICIENCY Class EFF1 (%)</th></tr>
<tr><th>2-Pole Motors</th><th>4-Pole Motors</th></tr>
<tr><td>1.1</td><td>≥ 82.8</td><td>≥ 83.8</td></tr>
</table>
</td></tr>
</table>

NO.	PRODUCT NAME	SPAN ADDITIONAL REQUIREMENTS
	All types of pump *(continued)*	

1.5	≥ 84.1	≥ 85.0
2.2	≥ 85.6	≥ 86.4
3	≥ 86.7	≥ 87.4
4	≥ 87.6	≥ 88.3
5.5	≥ 88.6	≥ 89.2
7.5	≥ 89.5	≥ 90.1
11	≥ 90.5	≥ 91.0
15	≥ 91.3	≥ 91.8
18.5	≥ 91.8	≥ 92.2
22	≥ 92.2	≥ 92.6
30	≥ 92.9	≥ 93.2
37	≥ 93.3	≥ 93.6
45	≥ 93.7	≥ 93.9
55	≥ 94.0	≥ 94.2
75	≥ 94.6	≥ 94.7
90	≥ 95.0	≥ 95.0
37	≥ 93.3	≥ 93.6
45	≥ 93.7	≥ 93.9
55	≥ 94.0	≥ 94.2
75	≥ 94.6	≥ 94.7
90	≥ 95.0	≥ 95.0

1.3 <u>Water Treatment Plant</u>

Pump design is subject to the specifications set by the Consulting Engineers.

2. Minimum 2 years warranty period for pump is required.

NO.	PRODUCT NAME	SPAN ADDITIONAL REQUIREMENTS
H. LINING / COATING / WATERPROOFING / SEALANT / ADHERSIVE / SOLVENT CEMENT		
1	All type of: • Lining • Coating • Waterproofing • Sealant • Adhersive • Solvent Cement	1. Submit Safety Data Sheet (SDS) 2. Submit Safety procedure of the product 3. To provide detail information of applicant of the product: a) CIDB Green Card b) SPAN Permit c) Training Certificate
I. WATER TREATMENT EQUIPMENT		
1	Ozone generator / Membrane Filtration	1. Product shall be supplied in **supply and install mode** (Supplied, installed, testing and commissioning of products shall be done by same supplier). 2. For renewal of registration, supplier must submit supporting documents as follows: a) Product performance reports submitted during pilot projects if applicable. If not, testing based on the appropriate parameters must be performed by a recognized third party. b) Product quantity tested is five percent (5%) of total assembly units or a minimum of three units (whichever is greater). c) Sampling and testing must be performed by a third party recognized by SPAN. d) The validity of the evaluation report is five (5) years from the date the report is issued.
J. WATER TREATMENT SYSTEM		
1	All types of water treatment systems	1. System shall be supplied in **design and build mode** (Design, built, install, testing and commissioning of products shall be done by same supplier). 2. All mechanical equipment, instrumentation, pipes and valves to be used in the system must be SPAN registered. 3. For renewal of registration, supplier must submit supporting documents as follows:

NO.	PRODUCT NAME	SPAN ADDITIONAL REQUIREMENTS
		a) Product performance reports submitted during pilot projects if applicable. If not, testing based on the appropriate parameters must be performed by a recognized third party. b) Product quantity tested is five percent (5%) of total assembly units or a minimum of three units (whichever is greater). c) Sampling and testing must be performed by a third party recognized by SPAN. d) The validity of the evaluation report is five (5) years from the date the report is issued.

APPENDIX C2

SPAN Additional Requirement or Condition for Specific Products

(SEWERAGE SYSTEM PRODUCTS)

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SEWERAGE SYSTEM PRODUCTS

Definition:

Design and Built - *design, built, install, testing and commissioning of products shall be done by same supplier*

Supply and Install – *supplied, installed, testing and commissioning of products shall be done by same supplier*

NO	PRODUCT NAME	RECOGNISED STANDARDS	SPAN ADDITIONAL REQUIREMENTS
A. SEWAGE CONVEYANCE			
1	Poly(Vinyl Chloride) PVC Pipes & Fittings	Pipe can only be used for: a) Internal piping in sewerage facilities; b) Internal sanitary piping.	
2	Reinforced Concrete (RC) Pipes & Fittings	1. Only sizes 300 mm or above are allowed.	
3	Hot dipped Galvanized Iron Pipe & Fittings	1. Pipe can only be used as air pipe in sewerage facilities. 2. Pipe cannot be contacted with sewage.	
4	All types of Sewer Liner	1. Product shall be supplied in **design and build mode**.	
B. TREATMENT SYSTEM			
1	Package Plant (Category A)	1. System shall be supplied in **design and build mode**. 2. All mechanical equipment, instrumentation, pipes and valves to be used in the system must be SPAN registered. 3. Details of model and design criteria shall be submitted to the Sewerage Certifying Agencies during application for approval of plan for sewerage system. 4. For renewal of listing, supplier must submit supporting documents based on SPAN TS 1402: 2010 (A1: 2013) Part 2 as follows:	

NO	PRODUCT NAME	RECOGNISED STANDARDS	SPAN ADDITIONAL REQUIREMENTS
		a) Effluent quality compliance test report (yearly basis) in accordance with specification in the technical specification document. b) Data and samples must be verified by the plant operator. c) Sampling and testing must be performed by a third party recognized by SPAN.	
2	Small Sewage Treatment System	1. Sysytem application for plant capacity from 31 PE to 149 PE. 2. System shall be supplied in **design and build mode**. 3. System design must include oil and grease removal according to Malaysian Sewerage Industrial Guideline (MSIG). 4. All mechanical equipment, instrumentation, pipes and valves to be used in the system must be SPAN registered. 5. Details of model and design criteria shall be submitted to the Sewerage Certifying Agencies during application for approval of plan for sewerage system.	
3	All types of treatment system / Package Plant (Category B)	1. System shall be supplied in **design and build mode**. 2. All mechanical equipment, instrumentation, pipes and valves to be used in the system must be SPAN registered. 3. Details of model and design criteria shall be submitted to the Sewerage Certifying Agencies during application for approval of plan for sewerage system. 4. For renewal of registration, supplier must submit supporting documents based on Klausa 7 at SPAN TS 1402: 2010 (A1: 2013) Part 2 as follows: a) Effluent quality compliance test report (yearly basis) in accordance with specification in the technical specification document. b) Data and samples must be verified by the plant operator.	

NO	PRODUCT NAME	RECOGNISED STANDARDS	SPAN ADDITIONAL REQUIREMENTS
		c) Sampling and testing must be performed by a third party recognized by SPAN. d) The validity of the evaluation report is five (5) years from the date the report is issued.	
C. AERATION			
1	Diffuser • Disc • Tube/Pipe • Panel	<u>Tube diffuser</u> 1. Installation of tube diffuser which effective length is 1000mm or more shall be anchored according to the specification to avoid floating. 2. Product cannot be used for package Plant.	
D. AIR SUPPLY			
1	Air Blower	<u>Diaphragm blower</u> Product can only be used in small sewage treatment system (SSTS) only.	
E. CLARIFIER / SEDIMENTATION			
1	Scum Skimmer / Sludge Scrapper / Sludge Scrapper & Scum Skimmer	1. Product shall be supplied in **supply and install mode**. 2. For renewal of registration, supplier must submit supporting documents as follows: a) Product performance reports submitted during pilot projects if applicable. If not, testing based on the appropriate parameters must be performed by a recognized third party. b) Product quantity tested is five percent (5%) of total assembly units or a minimum of three units (whichever is greater). c) Sampling and testing must be performed by a third party recognized by SPAN. d) The validity of the evaluation report is five (5) years from the date the report is issued.	

NO	PRODUCT NAME	RECOGNISED STANDARDS	SPAN ADDITIONAL REQUIREMENTS
F. EFFLUENT AND WATER REMOVAL / RECYCLE			
1	Effluent Transfer & Dewatering (Centrifugal Pump)	1. Grade: 1B/1E/1U dan 2B only. 2. Effluent Transfer & Dewatering pump products are not allowed for untreated sewage pump applications. 3. Minimum 2 years warranty period for pump is required.	
G. EFFLUENT DECANTING			
1	All Types of Effluent Decanter	1. Product shall be supplied in **supply and install mode**. 2. For renewal of registration, supplier must submit supporting documents as follows: a) Product performance reports submitted during pilot projects if applicable. If not, testing based on the appropriate parameters must be performed by a recognized third party. b) Product quantity tested is five percent (5%) of total assembly units or a minimum of three units (whichever is greater). c) Sampling and testing must be performed by a third party recognized by SPAN. d) The validity of the evaluation report is five (5) years from the date the report is issued.	
H. GRIT & GREASE REMOVAL			
1	Grease Collector / Grit & Grease Collector / Grit Collector / Grit Transfer / Grit Washing & Dewatering	1. Product shall be supplied in **supply and install mode**. 2. For renewal of registration, supplier must submit supporting documents as follows: a) Product performance reports submitted during pilot projects if applicable. If not, testing based on the appropriate parameters must be performed by a recognized third party.	

NO	PRODUCT NAME	RECOGNISED STANDARDS	SPAN ADDITIONAL REQUIREMENTS
		b) Product quantity tested is five percent (5%) of total assembly units or a minimum of three units (whichever is greater). c) Sampling and testing must be performed by a third party recognized by SPAN. d) The validity of the evaluation report is five (5) years from the date the report is issued.	
2	Grit Transfer Pump (Centrifugal) • Submersible • End suction • Self priming	1. Grade: 1B/1E/1U dan 2B only. 2. Minimum pass through opening: **50mm** 3. Minimum suction and discharge opening: **80mm** 4. Minimum pump efficiency: 5. **40% (for < 5.5 kW)** 6. **60% (for > 5.5 kW)** 7. Maximum rpm: **1500** 8. Motor: **4-pole** only 9. Minimum 2 years warranty period for pump is required.	
I. INSTRUMENTATION AND CONTROL			
1	All types of instrumentation and control	1. Only for the product that fixed to the plant.	
J. ODOUR CONTROL & TREATMENT			
1	All types of Odour Control & Treatment	1. System shall be supplied in **design and build mode**. 2. All mechanical equipment, instrumentation, pipes and valves to be used in the system must be registered 3. For renewal of registration, supplier must submit supporting documents as follows: a) Product performance reports submitted during pilot projects if applicable. If not, testing based on the appropriate parameters must be performed by a recognized third party.	

NO	PRODUCT NAME	RECOGNISED STANDARDS	SPAN ADDITIONAL REQUIREMENTS
		b) Product quantity tested is five percent (5%) of total assembly units or a minimum of three units (whichever is greater). c) Sampling and testing must be performed by a third party recognized by SPAN. d) The validity of the evaluation report is five (5) years from the date the report is issued.	
K. PRE-TREATMENT			
1	Communal Grease Trap / Complete Pre-Treatment System	1. System shall be supplied in **design and build mode**. 2. All mechanical equipment, instrumentation, pipes and valves to be used in the system must be SPAN registered. 3. Details of model and design criteria shall be submitted to the Sewerage Certifying Agencies during application for approval of plan for sewerage system. 4. For renewal of registration, supplier must submit supporting documents as follows: a) Product performance reports submitted during pilot projects if applicable. If not, testing based on the appropriate parameters must be performed by a recognized third party. b) Product quantity tested is five percent (5%) of total assembly units or a minimum of three units (whichever is greater). c) Sampling and testing must be performed by a third party recognized by SPAN. d) The validity of the evaluation report is five (5) years from the date the report is issued.	
L. PRIMARY AND SECONDARY SCREENING			
1	All types of screen and screening transfer	1. Product shall be supplied in **supply and install mode**. 2. For renewal of registration, supplier must submit supporting documents as follows:	

NO	PRODUCT NAME	RECOGNISED STANDARDS	SPAN ADDITIONAL REQUIREMENTS
		a) Product performance reports submitted during pilot projects if applicable. If not, testing based on the appropriate parameters must be performed by a recognized third party. b) Product quantity tested is five percent (5%) of total assembly units or a minimum of three units (whichever is greater). c) Sampling and testing must be performed by a third party recognized by SPAN. d) The validity of the evaluation report is five (5) years from the date the report is issued.	
M. RAW SEWAGE PUMPING			
1	Pump (Centrifugal) • Submersible • End suction • Self-Priming	<u>Raw Sewage Application</u> 1. Minimum pass through opening: **75mm** 2. Minimum suction and discharge opening: **100mm** 3. Minimum pump efficiency: **60%** 4. Maximum rpm: **1500** 5. Motor: **4-pole** only 6. Minimum 2 years warranty period for pump is required.	
2	Pre-fabricated Pumping Station	1. Pre-fabricated pump stations are acceptable for small installations of **PE less than or equal to 2000 PE**. 2. System shall be supplied in **design and build mode**. 3. All mechanical equipment, instrumentation, pipes and valves to be used in the system must be SPAN registered. 4. Details of model and design criteria shall be submitted to the Sewerage Certifying Agencies during application for approval of plan for sewerage system.	

NO	PRODUCT NAME	RECOGNISED STANDARDS	SPAN ADDITIONAL REQUIREMENTS
		5. For renewal of registration, supplier must submit supporting documents as follows: a) Product performance reports submitted during pilot projects if applicable. If not, testing based on the appropriate parameters must be performed by a recognized third party. b) Product quantity tested is five percent (5%) of total assembly units or a minimum of three units (whichever is greater). c) Sampling and testing must be performed by a third party recognized by SPAN. d) The validity of the evaluation report is five (5) years from the date the report is issued.	
N. SLUDGE TREATMENT			
1	Biogas System / Gas Control / Gas Holder / Sludge Dewatering / Sludge Digester / Slude Dryer / Sludge Reception Facilities / Sludge Screen / Sludge Thickener	1. Product shall be supplied in **supply and install mode**. 2. For renewal of registration, supplier must submit supporting documents as follows: a) Product performance reports submitted during pilot projects if applicable. If not, testing based on the appropriate parameters must be performed by a recognized third party. b) Product quantity tested is five percent (5%) of total assembly units or a minimum of three units (whichever is greater). c) Sampling and testing must be performed by a third party recognized by SPAN. d) The validity of the evaluation report is five (5) years from the date the report is issued.	

NO	PRODUCT NAME	RECOGNISED STANDARDS	SPAN ADDITIONAL REQUIREMENTS
2	Sludge Transfer (Centrifugal) • Submersible • End Suction • Self-Priming	1. Minimum pass through opening: **50mm** 2. Minimum suction and discharge opening: **80mm** 3. Minimum pump efficiency: **40% (for < 5.5 kW)** **60% (for > 5.5 kW)** 4. Maximum rpm: **1500** 5. Motor: **4-pole** only 6. Minimum 2 years warranty period for pump is required.	
I. SLUDGE TREATMENT			
1	Effluent Polishing System	1. System shall be supplied in **design and build mode**. 2. All mechanical equipment, instrumentation, pipes and valves to be used in the system must be SPAN registered. 3. Details of model and design criteria shall be submitted to the Sewerage Certifying Agencies during application for approval of plan for sewerage system. 5. For renewal of registration, supplier must submit supporting documents as follows: a) Product performance reports submitted during pilot projects if applicable. If not, testing based on the appropriate parameters must be performed by a recognized third party. b) Product quantity tested is five percent (5%) of total assembly units or a minimum of three units (whichever is greater). c) Sampling and testing must be performed by a third party recognized by SPAN. d) The validity of the evaluation report is five (5) years from the date the report is issued.	