Suruhanjaya Perkhidmatan Air Negara

GUIDELINES FOR REGISTRATION OF SUPPLIERS

REVISION 15

Industry Development & Audit Division

15 November 2022

This updated Guidelines has been approved by the Jawatankuasa Teknikal, Produk, Penyelidikan dan Pembangunan (JKTPPP), SPAN No. 5/2022

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GUIDELINES FOR REGISTRATION OF SUPPLIERS

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2. INTRODUCTION

2.1 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 register as a supplier with SPAN.

2.2 Registration as a supplier 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].

2.3 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.

3. DEFINITION

3.1 In this document, unless the context otherwise requires:

(a) **SPAN** means Suruhanjaya Perkhidmayan Air Negara established pursuant to Suruhanjaya Perkhidmatan Air Negara Act 2006.

(b) **A supplier** means a company constituted under the laws of Malaysia and carrying out business in Malaysia. A supplier can be a manufacturer, importer or distributor of a product including their agents or representatives that supply or distribute the product to any user but does not include a retailer.

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

(d) **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].

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

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

(g) **Guidelines** means the guidelines issued by the SPAN on matters pertaining to registration of suppliers including any amendments thereto from time to time.

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

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

(j) **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 SPAN.

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

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

(m) **Standard product** means conforming products that the supplier of the said product is registered with SPAN.

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

4. PRODUCT CATEGORY

4.1 All products supplied by suppliers are classified into two (2) main categories as 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 assessment.*

4.2 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.

4.3 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.

5. REGISTRATION OF SUPPLIERS

5.1 Registration for suppliers whose products listed under product Category A and B. Registered suppliers will be given a certificate on the products that are registered with SPAN.

5.2 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 registration of suppliers.

5.3 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.

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

6. PROCEDURES FOR REGISTRATION

6.1 Application

6.1.1 Application for registration of supplier shall be made via e-Registration at the 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) Organization Management Chart.

(c) Certificate of ISO 9001 - Quality Management System (if any).

(d) Letter of Appointment (as an agent or distributor from manufacturer or principle).

(e) Product Catalogue.

(f) Technical specification.

(g) Design criteria.

(h) Engineering drawing.

(i) Operation manual.

(j) Product Certificate/Certificate of Conformity (where applicable) for product Category A.(Shall showed the expiry date and the validity not less than three month).

(k) Test Report/Performance Report/Report of Pilot Project for product Category B. (Shall showed the testing date)

(l) Halal Certificate and Safety Data Sheet (SDS).
(For water treatment chemicals only).

(m) 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).

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

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

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

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

6.2 Processing

6.2.1 Application for registration will be processed **within 21 working days.**

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

6.2.3 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 listing is based on SPAN's assessment on the application received and SPAN has the right not to approve the application for listing.

6.4 Confirmation of Certificate of Registration

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

6.4.2 An approved applicant will be displayed at the SPAN website and digital Certificate of Registration will be issued 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).

6.4.3 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 the right to conduct compliance audit on products at any time within the 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.

7.4.3 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 Registration

6.5.1 Unless the registration is revoked by SPAN before its expiry, the registration 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.

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

6.5.3 However, to facilitate any unforeseen delay, the expired registration will remain valid for an additional of one month.

6.6 Renewal of Registration

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

6.6.2 Supplier shall submit all the documents required as mentioned in 6.1.2 or as stated in the e-Registration.

6.6.3 Supplier will be delisted if they fail to submit the renewal submission within two (2) months extended period.

6.7 Suspension or Revocation of Application

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 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 and verifies any complaint that is proved to be well-founded and there is merit for legal action regarding the supplier or product supplied by the supplier.

(e) The registration is found to has fraudulently, improperly or illegally obtained the registration.

(f) The information, data, document, product certificate or report 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.

(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 under these Guidelines; or

(j) The accreditation status of the Certification Body on the related product suspended or terminated by the Department of Standards Malaysia, Ministry of International Trade and Industry (MITI).

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, damage or costs to the supplier due to the suspension or revocation under these Guidelines.

6.7.4 The supplier shall bear any testing cost if there is any complaint regarding listed 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. PRODUCT CERTIFICATE AND CERTIFICATION BODIES

7.1 Application for supplier under product Category A 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. Products 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 Department of 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 recognition arrangement Mutual Recognition Arrangement (MRA) / Multi Lateral Recognition (MLA) implemented by Asia Pacific Accreditation Cooperation (APAC) and International Accreditation Forum (IAF), and

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

7.4 The CB's must comply with Type 5 Certification Scheme and the activity shall be covered in the scope of accreditation.

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

8. TEST, CALIBRATION/INSPECTION REPORT, LABORATORIES, AND INSPECTION LABORATORIES

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

8.2 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 has expertise in Language & Linguistic; or
(h) Translator whom appointed/certified by foreign Embassy/High Commission to Malaysia.

8.3 The validity of the report shall be within five (5) years from the date of the report issued. Upon submission for registration, the report should be valid for at least one (1) year.

8.4 Report (test/calibration/inspection) must be issued by:

a) Conformity Assessment Bodies (CABs) accredited for ISO/IEC 17025 or ISO/IEC 17020. The following laboratories/inspection bodies are recognised by SPAN:

i. Laboratories that are accredited by Department of Standards Malaysia under the Laboratory Accreditation Scheme of Malaysia (Skim Akreditasi Makmal Malaysia, SAMM);

ii. Inspection Bodies that are accredited by Department of Standards Malaysia under Malaysia Inspection Bodies Accreditation Scheme (MIBAS);

iii. Laboratories/Inspection Bodies that have been accredited by an accreditation body that is part of the international and regional mutual recognition arrangement (MRA) implemented by International Laboratory Accreditation Cooperation (ILAC) and Asia Pacific Accreditation Cooperation (APAC); or

iv. Organisations that are recognised by SPAN as deemed competent to carry out testing/calibration/inspection that has been specified by SPAN.

b) any certification bodies (CB's) or organisations are recognised by SPAN as specified in item 7.3 or 9.4.

9. 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) Product Certification Body accredited by the Department of Standards Malaysia (DSM) such as:

(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.

(vii) Platinum Shauffmantz Veritas Sdn. Bhd.

(viii) Trans Certification International Sdn. Bhd.

(ix) PC&I Services Sdn. Bhd.

(x) Others (as listed in DSM website directories under the specific scopes).

(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)

9.5 Third Party (Independent Agency) for the purpose of sampling:
Testing Laboratory accredited by the Department of Standards Malaysia under Laboratory Accreditation Scheme of Malaysia (SAMM). List of accredited laboratories can be obtained from http://www.jsm.gov.my/cab-directories.

9.6 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.

9.7 Details for implementation and procedures of pilot project shall be referred to Garis Panduan Pelaksanaan Projek Perintis.

10. 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 Certification bodies (CB's) or organisations are recognised by SPAN as specified in 7.3 or 9.4 shall evaluate and verify the performance testing procedures given by manufacturer and to provide report accordingly.

11. 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. FEES OF APPLICATION

12.1 No fees are imposed for the application registration of suppliers at this moment.

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

13. 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 registered with SPAN (state registration number)” on marketing materials.

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

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

14. 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. ENQUIRIES

15.1 For any further information about registration of suppliers, please contact Industry Development Division of SPAN at e-mail: product@span.gov.my or telephone: 03 – 8317 9371.

APPENDIX A1

WATER SUPPLY SYSTEM

(CATEGORY A)

APPENDIX A1

PRODUCT CATEGORY A AND THE RECOGNIZED STANDARDS

Listing of products 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/ 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, AMD.1:2011	Specification for Polyethylene (PE) piping systems for water supply. Part 2: Pipes (Fourth Revision)	01 Nov 2022
		MS 1058: Part 2: 2005	Specification for Polyethylene (PE) piping systems for water supply. Part 2: Pipes (Fourth Revision) ***This standard shall be applicable to the existing supplier or user only and is recognized for SPAN product listing until 31st December 2024 only.*	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

PRODUCT CATEGORY A (WATER SUPPLY)				
No.	**Product/ Product Type**	**Standard Number**	**Standard Title**	**Effective Date**
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
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

PRODUCT CATEGORY A (WATER SUPPLY)				
No.	**Product/ Product Type**	**Standard Number**	**Standard Title**	**Effective Date**
		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
7	Unplasticized Poly(Vinyl Chloride) (PVC-U) Pipes *refer Appendix C1 (SPAN Additional Requirement)	MS 628-2:2014 (Confirmed 2019)	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)	01 Nov 2022
		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) ***This standard shall be applicable to the existing supplier or user only and is recognized for SPAN product listing until 31st December 2024 only*	14 Apr 2018

PRODUCT CATEGORY A (WATER SUPPLY)				
No.	**Product/ Product Type**	**Standard Number**	**Standard Title**	**Effective Date**
		MS 628-1:2014 (CONFIRMED: 2019)	Plastics piping systems for water supply and for buried and above-ground drainage and sewerage under pressure - Unplasticized poly (vinyl chloride) (PVC-U) Part 1: General (Second Revision) (ISO 1452-1:2009, MOD)	1 Nov 2022
		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	Multi-Layer Unplasticized Polyvinyl Chloride (PVC-U) Pipes	MS 2713-1:2021	Multilayer unplasticized poly (vinyl chloride) (PVC-U) pipes for water supply and for buried and above ground drainage and sewerage under pressure application	15 Dec 2021
9	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

PRODUCT CATEGORY A (WATER SUPPLY)				
No.	**Product/ Product Type**	**Standard Number**	**Standard Title**	**Effective Date**
10	Chlorinated Poly(Vinyl Chloride) (PVC-C) Pipes	MS 2045:2007 (Confirmed: 2019)	Chlorinated Poly(Vinyl Chloride) (PVC-C) plastic hot and cold water distribution systems. – Specification	01 Nov 2022
		MS 2045:2007	Chlorinated Poly(Vinyl Chloride) (PVC-C) plastic hot and cold water distribution systems. – Specification ***This standard shall be applicable to the existing supplier or user only and is recognized for SPAN product listing until 31st December 2024 only.*	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
11	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
12	Acrylonitrile-Butadiene-Styrene (ABS) Pipes *refer Appendix C1 (SPAN Additional Requirement)	MS 1419 -1:2020	Acrylonitrile-butadiene-styrene (ABS) piping systems for pressure applications. Part 1: Specification for compounds, pipes and fittings (Second revision)	01 Nov 2022
		MS 1419: Part 1: 2007	Acrylonitrile-Butadiene Styrene (ABS) piping systems for pressure applications.	01 Jan 2008

PRODUCT CATEGORY A (WATER SUPPLY)				
No.	**Product/ Product Type**	**Standard Number**	**Standard Title**	**Effective Date**
			Part 1: Specification for compounds, pipes and fittings (First 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.*	
13	Solvent cement for ABS piping system *refer Appendix C1 (SPAN Additional Requirement)	MS 1419-3: 1997, AMD. 1:2018	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 Amendment 1	01 Nov 2022
		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. ***This standard shall be applicable to the existing supplier or user only and is recognized for SPAN product listing until 31st December 2024 only.*	01 Jan 2008
14	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

PRODUCT CATEGORY A (WATER SUPPLY)				
No.	**Product/ Product Type**	**Standard Number**	**Standard Title**	**Effective Date**
		ISO 15874-2: 2013	For PP-RCT only Plastics piping systems for hot and cold water installations — Polypropylene (PP) — Part 2: Pipes ***This standard is recognized for SPAN product listing until further notice*	01 July 2022
15	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. – Polybutylene (PB) pipe for hot and cold water applications ***This standard is recognized for SPAN product listing until further notice*	01 June 2009
16	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

PRODUCT CATEGORY A (WATER SUPPLY)				
No.	**Product/ Product Type**	**Standard Number**	**Standard Title**	**Effective Date**
		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. – Pipes with flexible joints intended to be installed using jacking techniques. *Listing for GRP Pipes using Jacking Method shall accompany with ISO 10639	14 Apr 2018

PRODUCT CATEGORY A (WATER SUPPLY)				
No.	**Product/ Product Type**	**Standard Number**	**Standard Title**	**Effective Date**
17	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 2020)	Non-Alloy Steel Tubes and Fittings for the conveyance of aqueous liquids including water for human consumption. – Technical delivery conditions	01 Nov 2022
		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 ***This standard shall be applicable to the existing supplier or user only and is recognized for SPAN product listing until 31st December 2024 only.*	18 Apr 2014
18	Stainless Steel (SS) Pipes – Industrial	MS 1841:2010	Seamless, welded and heavily cold austenitic Stainless Steel Pipes. – Specification (First Revision) ***This standard shall be applicable to the existing supplier or user only and is recognized for SPAN product listing until 31st December 2024 only.*	01 June 2011

PRODUCT CATEGORY A (WATER SUPPLY)				
No.	**Product/ Product Type**	**Standard Number**	**Standard Title**	**Effective Date**
19	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
		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
20	Ductile Iron (DI) Pipes	MS 1919:2013 (Confirmed: 2020)	Ductile Iron pipes, fittings, accessories and their joints for water pipelines. – Requirements and test methods (First Revision)	01 Nov 2022
		MS 1919:2013	Ductile Iron pipes, fittings, accessories and their joints for water pipelines. – Requirements and test methods (First Revision) ***This standard shall be applicable to the existing supplier or user only and is recognized for SPAN product listing until 31st December 2024 only.*	18 April 2014

PRODUCT CATEGORY A (WATER SUPPLY)				
No.	**Product/ Product Type**	**Standard Number**	**Standard Title**	**Effective Date**
21	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
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
(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
		BS EN 12201-3: 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

PRODUCT CATEGORY A (WATER SUPPLY)				
No.	**Product/ Product Type**	**Standard Number**	**Standard Title**	**Effective Date**
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	PE Fabricated Fittings Polyethylene (PE) piping systems for water supply. – Part 2: Pipes (Fourth 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-Density Polyethylene (HDPE) pressure pipes; Tees and braches produced by segment inserts and necking for butt welding. Dimension.	14 Apr 2018
		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	14 Apr 2018

PRODUCT CATEGORY A (WATER SUPPLY)				
No.	**Product/ Product Type**	**Standard Number**	**Standard Title**	**Effective Date**
		DIN 16963-4 (1988-11)	PE Injection Fittings 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 fittings and joints and assemblies for PE 80 and PE 100 Polyethylene pressure pipes. – Part 5: General Quality Requirements and 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
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

PRODUCT CATEGORY A (WATER SUPPLY)				
No.	**Product/ Product Type**	**Standard Number**	**Standard Title**	**Effective Date**
5	Multilayer Fittings (PE-RT/AL/PE-RT/PE-X/PP/PVC-C/PB/Other plastic material allowed in the standard/ Metallic fittings (copper and copper alloy))	ISO 21003–3:2008 (Amd 1: 2021)	Multilayer piping systems for hot and cold water installations inside buildings. –Part 3: Fittings – Amendment 1	01 Nov 2022
		ISO 21003–3:2008	Multilayer piping systems for hot and cold water installations inside buildings. – Part 3: Fittings ***This standard shall be applicable to the existing supplier or user only and is recognized for SPAN product listing until 31st December 2024 only.*	01 Jan 2009
		AS 4176.3:2010	Multilayer pipes for pressure applications. Multilayer piping systems for hot and cold water plumbing applications. – Fittings	01 Nov 2022
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	Aluminium Polyethylene 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

PRODUCT CATEGORY A (WATER SUPPLY)				
No.	**Product/ Product Type**	**Standard Number**	**Standard Title**	**Effective Date**
7	Mechanical Joints and Compression Fittings	ISO 17885:2021 (any total adoption of the standard is accepted)	Plastic piping systems. Mechanical fittings for pressure piping system. - Specification	01 Nov 2022
		ISO 17885:2015 (any total adoption of the standard is accepted)	Plastic piping systems. Mechanical fittings for pressure piping system. - Specification ***This standard shall be applicable to the existing supplier or user only and is recognized for SPAN product listing until 31st December 2024 only.*	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 (ISO 15874-3:2003, FDAM 1:2009, MOD)	15 June 2013
		ISO 15874-3: 2013	<u>For PP-RCT only</u> Plastics piping systems for hot and cold water installations — Polypropylene (PP) — Part 3: Fittings ***This standard is recognized for SPAN product listing until further notice*	01 July 2022

PRODUCT CATEGORY A (WATER SUPPLY)				
No.	**Product/ Product Type**	**Standard Number**	**Standard Title**	**Effective Date**
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 (Confirmed: 2019)	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)	01 Nov 2022
		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) ***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/ Product Type**	**Standard Number**	**Standard Title**	**Effective Date**
		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
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

PRODUCT CATEGORY A (WATER SUPPLY)				
No.	**Product/ Product Type**	**Standard Number**	**Standard Title**	**Effective Date**
		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 *refer Appendix C1 (SPAN Additional Requirement)	MS 1419: Part 1: 2020	Acrylonitrile-Butadiene Styrene (ABS) piping systems for pressure applications. – Part 1: Specification for compounds, pipes and fittings (Second Revision)	01 July 2022
		MS 1419: Part 1: 2007	Acrylonitrile-Butadiene Styrene (ABS) piping systems for pressure applications. – Part 1: Specification for compounds, pipes and fittings (First 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 Jan 2008
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

PRODUCT CATEGORY A (WATER SUPPLY)				
No.	**Product/ Product Type**	**Standard Number**	**Standard Title**	**Effective Date**
		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 ISO 23856: 2021	Plastics piping systems for pressure and non-pressure water supply, drainage or sewerage - Glass-reinforced thermosetting plastics (GRP) systems based on unsaturated polyester (UP) resin	01 Nov 2022
		BS EN 1796:2013	Plastics piping system for water supply with or without pressure – Glass Reinforced Thermosetting Plastics (GRP) based on Unsaturated Polyester resin ***This standard shall be applicable to the existing supplier or user only and is recognized for SPAN product listing until 31st December 2024 only*	10 Sept 2014

PRODUCT CATEGORY A (WATER SUPPLY)				
No.	**Product/ Product Type**	**Standard Number**	**Standard Title**	**Effective Date**
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
		MS 1968:2007 (Confirmed 2020)	Non-alloy steel tubes and fittings for the conveyance of aqueous liquids including water for human consumption – Technical delivery conditions	01 Nov 2022
		MS 1968:2007	Non-alloy steel tubes and fittings for the conveyance of aqueous liquids including water for human consumption – Technical delivery conditions ***This standard shall be applicable to the existing supplier or user only and is recognized for SPAN product listing until 31st December 2024 only*	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

PRODUCT CATEGORY A (WATER SUPPLY)				
No.	**Product/ Product Type**	**Standard Number**	**Standard Title**	**Effective Date**
18	Ductile Iron Fittings	MS 1919:2013 (Confirmed 2020)	Ductile Iron pipes, fittings, accessories and their joints for water pipelines – Requirement and test method (First Revision)	01 Nov 2022
		MS 1919:2013	Ductile Iron pipes, fittings, accessories and their joints for water pipelines – Requirement and test method (First Revision) ***This standard shall be applicable to the existing supplier or user only and is recognized for SPAN product listing until 31st December 2024 only*	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	SPAN TS 3010:2022	Copper Alloy Threaded Fittings for Water Industry	01 July 2022
		BS EN 1254-1:2021	Cooper and Copper Alloys. Plumbing fittings – Capillary fittings for soldering or brazing to copper tubes	01 Nov 2022
		BS EN 1254-1:1998	Copper and Copper Alloys. Plumbing fittings. fittings with short ends for capillary brazing to Copper Tubes. ***This standard shall be applicable to the existing supplier or user only and is recognized for SPAN product listing until 31st December 2024 only.*	01 Jan 2008

PRODUCT CATEGORY A (WATER SUPPLY)				
No.	**Product/ Product Type**	**Standard Number**	**Standard Title**	**Effective Date**
		BS EN 1254-2: 2021	Copper and copper alloys. Plumbing fittings – Compression fittings for use with copper tubes.	01 Nov 2022
		BS EN 1254-2: 1998	Copper and Copper Alloys. plumbing fittings. Fittings with compression ends for use with Copper Tubes. ***This standard shall be applicable to the existing supplier or user only and is recognized for SPAN product listing until 31st December 2024 only.*	01 Jan 2008
		BS EN 1254-3:2021	Copper and copper alloys. Plumbing fitting – Compression fittings for use with plastics and multilayer pipes.	01 Nov 2022
		BS EN 1254-3: 1998	Copper and Copper Alloys. Plumbing fittings. Fittings with compression ends for use with plastic pipes. ***This standard shall be applicable to the existing supplier or user only and is recognized for SPAN product listing until 31st December 2024 only.*	01 Jan 2008
		BS EN 1254-4: 2021	Copper and Copper Alloys. Plumbing fittings – Threaded fittings	01 Nov 2022

PRODUCT CATEGORY A (WATER SUPPLY)				
No.	**Product/ Product Type**	**Standard Number**	**Standard Title**	**Effective Date**
		BS EN 1254-4: 1998	Copper and Copper Alloys. Plumbing fittings. Fittings combining other end connections with capillary or compression ends. ***This standard shall be applicable to the existing supplier or user only and is recognized for SPAN product listing until 31st December 2024 only*	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/ 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
		Spesifikasi JKR 20200-0070-00	JKR Standard Specification for Coupling and Flange Adaptor Products for Use on Polyethylene Pipes (for DN63 to DN 315)	01 Nov 2022
23	Flexible Coupling	Spesifikasi JKR 20200-0048-99	JKR Standard Specification for Flexible Couplings and Flange Adaptors	01 Jan 2008
		Spesifikasi JKR 20200-0070-00	JKR Standard Specification for Coupling and Flange Adaptor Products for Use on Polyethylene Pipes (for DN63 to DN 315)	01 Nov 2022
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, AMD. 1:2015	Pillar Fire Hydrants: Specification (First Revision) Amendment 1	01 Nov 2022

PRODUCT CATEGORY A (WATER SUPPLY)				
No.	**Product/ Product Type**	**Standard Number**	**Standard Title**	**Effective Date**
		MS 1395:2011	Pillar Fire Hydrants: Specification (First Revision) ***This standard shall be applicable to the existing supplier or user only and is recognized for SPAN product listing until 31st December 2024 only*	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
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

PRODUCT CATEGORY A (WATER SUPPLY)				
No.	**Product/ Product Type**	**Standard Number**	**Standard Title**	**Effective Date**
		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 is recognized for SPAN product listing until 31st December 2022 only.*	14 Apr 2018
		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

PRODUCT CATEGORY A (WATER SUPPLY)				
No.	**Product/ Product Type**	**Standard Number**	**Standard Title**	**Effective Date**
		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). ***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
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

PRODUCT CATEGORY A (WATER SUPPLY)				
No.	**Product/ Product Type**	**Standard Number**	**Standard Title**	**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 Mar 2016
		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
36	Repair Clamp	AS 4181:2013	Repair and off-take clamps for water industry purposes	01 Nov 2022
(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

PRODUCT CATEGORY A (WATER SUPPLY)				
No.	**Product/ Product Type**	**Standard Number**	**Standard Title**	**Effective Date**
2	Steel Tank with Lining or Coating (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
		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

PRODUCT CATEGORY A (WATER SUPPLY)				
No.	**Product/ Product Type**	**Standard Number**	**Standard Title**	**Effective Date**
2	Steel Tank with Lining or Coating (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 ***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
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

PRODUCT CATEGORY A (WATER SUPPLY)				
No.	**Product/ Product Type**	**Standard Number**	**Standard Title**	**Effective Date**
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)	SIRIM 18:2017	Specification for Corrugated Steel Panel Tanks with Liner for Water Storage	01 Jun 2020
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 *refer Appendix C1 (SPAN Additional Requirement)	SS 22: 1979 (Amd. 3: 2012)	Presses steel sectional rectangular tanks	01 July 2022
		SANS 10329:2020 (Ed. 1.04)	The design and construction of sectional steel tanks for storage of liquids at or above ground level	01 July 2022

PRODUCT CATEGORY A (WATER SUPPLY)				
No.	**Product/ Product Type**	**Standard Number**	**Standard Title**	**Effective Date**
		BS 1564:1975	Specification for Pressed Steel Sectional Rectangular Tanks. ***This standard shall be applicable to the existing supplier or user only and is recognized for SPAN product listing until 15th June 2024 only*	01 Jan 2008
8	Pressed Stainless Steel Sectional Rectangular Tank *refer Appendix C1 (SPAN Additional Requirement)	SANS 10329:2020 (Ed. 1.04)	The design and construction of sectional steel tanks for storage of liquids at or above ground level	01 July 2022
9	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
10	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/ Product Type**	**Standard Number**	**Standard Title**	**Effective Date**
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 *refer Appendix C1 (SPAN Additional Requirement)	Directive 2014/68/EU	Pressure Equipment Directive	14 Apr 2018
		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

PRODUCT CATEGORY A (WATER SUPPLY)				
No.	**Product/ Product Type**	**Standard Number**	**Standard Title**	**Effective Date**
		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
4	Check Valve *refer Appendix C1 (SPAN Additional Requirement)	Directive 2014/68/EU	Pressure Equipment Directive	14 Apr 2018
		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 C508-17	Swing-Check Valves for waterworks service, 2-In. (50 mm) through 24-In. (600 mm) NPS	01 Nov 2022

PRODUCT CATEGORY A (WATER SUPPLY)				
No.	**Product/ Product Type**	**Standard Number**	**Standard Title**	**Effective Date**
		AWWA C508-09	Swing-Check Valves for waterworks service, 2-In. (50 mm) through 24-In. (600 mm) NPS ***This standard shall be applicable to the existing supplier or user only and is recognized for SPAN product listing until 31st December 2024 only.*	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 December 2023 only.*	01 Jun 2020
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

PRODUCT CATEGORY A (WATER SUPPLY)				
No.	**Product/ Product Type**	**Standard Number**	**Standard Title**	**Effective Date**
		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 for potable water supply in buildings. Tests and requirements.	14 Apr 2018
8	Landing Valve	MS 1210: Part 1: 1991 (Confirmed:2015)	Specification for Fire Hydrant systems equipment – Part 1: Landing Valves for wet risers	01 Nov 2022
		MS 1210: Part 1: 1991 (Confirmed:2011)	Specification for Fire Hydrant systems equipment – Part 1: Landing Valves for wet risers ***This standard shall be applicable to the existing supplier or user only and is recognized for SPAN product listing until 31st December 2024 only.*	01 Jan 2008
		MS 1210: Part 2: 1991 (Confirmed:2015)	Specification for Fire Hydrant systems equipment Part 2: Landing Valves for dry risers	01 Nov 2022

PRODUCT CATEGORY A (WATER SUPPLY)				
No.	**Product/ Product Type**	**Standard Number**	**Standard Title**	**Effective Date**
		MS 1210: Part 2: 1991 (Confirmed:2011)	Specification for Fire Hydrant systems equipment Part 2: Landing Valves for dry risers ***This standard shall be applicable to the existing supplier or user only and is recognized for SPAN product listing until 31st December 2024 only.*	01 Jan 2012
		MS 1210: Part 3: 1991 (Confirmed:2015)	Specification for Fire Hydrant systems equipment Part 3: Inlet Breeching for Riser Inlet	01 Nov 2022
		MS 1210: Part 3: 1991 (Confirmed:2011)	Specification for Fire Hydrant systems equipment Part 3: Inlet Breeching for Riser Inlet ***This standard shall be applicable to the existing supplier or user only and is recognized for SPAN product listing until 31st December 2024 only*	01 Jan 2012
9	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
		BS 1212: Part 1: 1990	Float Operated Valves. Specification for piston type float operated valves (Copper Alloy Body)	01 Jan 2008

PRODUCT CATEGORY A (WATER SUPPLY)				
No.	**Product/ Product Type**	**Standard Number**	**Standard Title**	**Effective Date**
		BS 1212: Part 2: 1990	Float Operated Valves. Specification for diaphragm type float operated valves (Copper Alloy) (Excluding Float)	01 Jan 2008
10	Pressure Reducing Valves	BS EN 1567:2000	Building Valves. Water pressure valves and combination water reducing valves. Requirements and test.	01 Jan 2008
11	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
12	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
13	Globe Valve	BS EN 13789:2010	Industrial Valves: Cast Iron Globe Valve.	14 Apr 2018

PRODUCT CATEGORY A (WATER SUPPLY)				
No.	**Product/ Product Type**	**Standard Number**	**Standard Title**	**Effective Date**
14	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
15	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
16	Flat Seat Valve	JKR 20200-0072-00	Drain Plugs, Sludge Plugs or Mud Valve	01 Jan 2008
17	Slide Gate	AWWA C-561:2021	Fabricated Stainless Steel Slide Gates	01 July 2022
(F) Back Flow Preventer				
1	Dual Check Backflow Preventer	AS/NZS 3500.1: 2021	Plumbing and drainage. - Water Services	01 Nov 2022
		AS/NZS 3500.1: 2018	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 2024 only.*	15 April 2021

PRODUCT CATEGORY A (WATER SUPPLY)				
No.	**Product/ Product Type**	**Standard Number**	**Standard Title**	**Effective Date**
		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 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: 2021	Plumbing and drainage. - Water Services	01 Nov 2022
		AS/NZS 3500.1: 2018	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 2024 only.*	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

PRODUCT CATEGORY A (WATER SUPPLY)				
No.	**Product/ Product Type**	**Standard Number**	**Standard Title**	**Effective Date**
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
		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

PRODUCT CATEGORY A (WATER SUPPLY)				
No.	**Product/ Product Type**	**Standard Number**	**Standard Title**	**Effective Date**
5	Copper Alloy Globe, Globe Stop, Check and Gate Valves	BS EN 12288:2010	Industrial Valve. Copper Alloy Gate Valve.	18 Apr 2014
		BS 5154:1991	Specification for copper alloy globe, globe stop and check, check and gate valves	01 Nov 2022
(G) Water Meter				
(a) Custody Water Meter				
1 a) 1 b) 1c)	Mechanical Water Meter Ultrasonic Water Meter Electromagnet -ic Water Meter	MS ISO 4064-1: 2006 (confirmed: 2012)	Measurement of Water Flow in fully charged closed conduits. Meters for Cold Potable Water and Hot Water. Part 1: Specification. (First revision) (ISO 4064-1:2005, IDT)	01 Nov 2022
		MS ISO 4064-1: 2006	Measurement of Water Flow in fully charged closed conduits. Meters for Cold Potable Water and Hot Water. Part 1: Specification. (First revision) (ISO 4064-1:2005, IDT) ***This standard shall be applicable to the existing supplier or user only and is recognized for SPAN product listing until 31st December 2024 only*	01 Jan 2012

PRODUCT CATEGORY A (WATER SUPPLY)				
No.	**Product/ Product Type**	**Standard Number**	**Standard Title**	**Effective Date**
		ISO 4064-1:2014 (any total adoption of the standard is accepted)	Measurement of Water Flow in fully charged closed conduits. Meters for Cold 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 Water Meter				
1 a) 1 b)	Mechanical Flowmeter Ultrasonic Clamp-On Flowmeter -Battery -Mains power	MS ISO 4064-1: 2006 (confirmed: 2012)	Measurement of Water Flow in fully charged closed conduits. Meters for Cold Potable Water and Hot Water. Part 1: Specification. (First revision) (ISO 4064-1:2005, IDT)	01 Nov 2022
1 c) 1 d)	Electromagnet-ic Flowmeter -Battery -Mains power Electromagnet-ic Insertion Flowmeter -Battery -Mains power	MS ISO 4064-1: 2006	Measurement of Water Flow in fully charged closed conduits. Meters for Cold Potable Water and Hot Water. Part 1: Specification. (First revision) (ISO 4064-1:2005, IDT) ***This standard shall be applicable to the existing supplier or user only and is recognized for SPAN product listing until 31st December 2024 only.*	01 Jan 2012

PRODUCT CATEGORY A (WATER SUPPLY)				
No.	**Product/ Product Type**	**Standard Number**	**Standard Title**	**Effective Date**
		ISO 4064-1:2014 (any total adoption of the standard is accepted)	Measurement of Water Flow in fully charged closed conduits. Meters for Cold 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 <u>non-custody transfer meter</u> which mean that the meter cannot be "use for trade*				
(H) Sanitary Fittings – Taps & Mixer				
1	Bib Tap Pillar Tap Faucet *refer Appendix C1 (SPAN Additional Requirement)	SPAN TS 3004:2021	Water Taps – Single and Combination Taps - Specification	10 Feb 2021
		SPAN TS 3012:2022	Sanitary Tapware – Delay Action or Self-Closing Valve PN10	01 July 2022
		AS/NZS 3718:2005	Water Supply – Tap ware	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

PRODUCT CATEGORY A (WATER SUPPLY)				
No.	**Product/ Product Type**	**Standard Number**	**Standard Title**	**Effective Date**
		BS EN 15091:2013	Sanitary tapware. Electronic Opening and Closing Sanitary Tapware	01 Jun 2020
2	Mixer *refer Appendix C1 (SPAN Additional Requirement)	SPAN TS 3012:2022	Sanitary Tapware – Delay Action or Self-Closing Valve PN10	01 July 2022
		BS EN 817:2008	Sanitary tapware. Mechanical mixing valves (PN 10). General technical specification	01 Jan 2009
		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
		BS EN 1111:2017	Sanitary tapware - thermostatic mixing valves (PN 10) - general technical specification	01 Nov 2022
(I) Sanitary Wares – Water Closet				
1	Water Closet Pans *refer Appendix C1 (SPAN Additional Requirement)	MS 1522:2021	Vitreous China Water Closet Pans. – Specification. (Fifth Revision)	01 Nov 2022

PRODUCT CATEGORY A (WATER SUPPLY)				
No.	**Product/ Product Type**	**Standard Number**	**Standard Title**	**Effective Date**
		MS 1522:2015	Vitreous China Water Closet Pans. – Specification. (Fourth 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.*	14 Apr 2018
2	Water Closet Pans with Ceramic Flushing Cisterns (One-piece)	MS 1522:2021 & MS 147:2021 & MS 795 -1:2019	Vitreous China Water Closet Pans. – Specification (Fifth Revision) & Specification for quality of Vitreous China Sanitary Appliances. (Second Revision) & WC Flushing Cisterns. – Part 1: Specification. (Second Revision)	14 Apr 2018

PRODUCT CATEGORY A (WATER SUPPLY)				
No.	**Product/ Product Type**	**Standard Number**	**Standard Title**	**Effective Date**
		MS 1522:2015 & MS 147:2021 & MS 795 -1:2011	Vitreous China Water Closet Pans. – Specification (Fifth Revision) & Specification for quality of Vitreous China Sanitary Appliances. (Second Revision) & 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 2023 only*	14 Apr 2018
3	Water Closet Integrated with Hand Basin	SPAN TS 3011: 2022	Water Closet Integrated with Hand Basin	01 July 2022
(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

PRODUCT CATEGORY A (WATER SUPPLY)				
No.	**Product/ Product Type**	**Standard Number**	**Standard Title**	**Effective Date**
(K) Flush Valve				
1	Flush Valve *refer Appendix C1 (SPAN Additional Requirement)	MS 2545:2022	Flush Valve: Specification (First revision)	1 Dec 2022
		MS 2545:2014	Flush Valve: Specification. ***This standard shall be applicable to the existing supplier or user only and is recognized for SPAN product listing until 31st December 2024 only.*	10 Sept 2014
(L) Sanitary Appliances				
1	Pedestal Bidets Cistern and Covers *refer Appendix C1 (SPAN Additional Requirement)	MS 147:2021	Specification for quality of Vitreous China Sanitary Appliances. (Second Revision)	01 July 2022
		MS 147:2001	Specification for quality of Vitreous China Sanitary Appliances. (First Revision) ***This standard for **Urinal Bowl** 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
(M) Sanitary Wares – Urinals				
1	Urinals	MS 1799:2020	Urinals. – Specification (First revision)	10 Sept 2020

PRODUCT CATEGORY A (WATER SUPPLY)				
No.	**Product/ Product Type**	**Standard Number**	**Standard Title**	**Effective Date**
	*refer Appendix C1 (SPAN Additional Requirement)	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 *refer Appendix C1 (SPAN Additional Requirement)	SPAN TS 3005: 2021	Shower Outlet for Sanitary Tapware for Water Supply System – Specification	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
(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

PRODUCT CATEGORY A (WATER SUPPLY)				
No.	**Product/ Product Type**	**Standard Number**	**Standard Title**	**Effective Date**
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
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

PRODUCT CATEGORY A (WATER SUPPLY)				
No.	**Product/ Product Type**	**Standard Number**	**Standard Title**	**Effective Date**
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 1551:2021	Specification for Soda Ash (Sodium Carbonate) for use in potable water supply – Spesification (First revision)	01 Nov 2022
		MS 1551:2002	Specification for Soda Ash (Sodium Carbonate) used for potable water supply ***This standard shall be applicable to the existing supplier or user only and is recognized for SPAN product listing until 31st December 2024 only.*	01 Jan 2008
16	Sodium Aluminate	MS 1572:2003	Specification for Sodium Aluminate used for potable water supply	01 Jan 2008
17	Sodium Fluoride	MS 1573:2022	Sodium Fluoride for use in potable water supply - Specification (First revision)	01 Nov 2022

PRODUCT CATEGORY A (WATER SUPPLY)				
No.	**Product/ Product Type**	**Standard Number**	**Standard Title**	**Effective Date**
		MS 1573:2003	Specification for Sodium Fluoride used for potable water supply ***This standard shall be applicable to the existing supplier or user only and is recognized for SPAN product listing until 31st December 2024 only.*	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 1724:2022	Sodium Silicofluoride for use in potable water supply - Specification (First revision)	01 Nov 2022
		MS 1724:2004	Sodium Silicofloride for use in potable water supply - Specification ***This standard shall be applicable to the existing supplier or user only and is recognized for SPAN product listing until 31st December 2024 only.*	01 Jan 2008

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/ 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
		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 December 2023 only.*	01 Jun 2020

PRODUCT CATEGORY A (SEWERAGE)				
No.	**Product/ Product Type**	**Standard Number**	**Standard Title**	**Effective Date**
		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 C508-17	Swing-Check Valves for waterworks service, 2-In. (50 mm) through 24-In. (600 mm) NPS	01 Nov 2022
		AWWA C508-09	Swing Check 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 2024 only.*	01 Mar 2016
4	Gate Valve	BS EN 1171:2015	Industrial Valves. Cast Iron Gate Valves	01 Jun 2020
		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
5	Knife Gate Valve	MSS SP-81-2017	Stainless-Steel or Stainless-Steel-Lined, Bonnetless, Knife Gate Valve with Flanged Ends	15 April 2021

PRODUCT CATEGORY A (SEWERAGE)				
No.	**Product/ Product Type**	**Standard Number**	**Standard Title**	**Effective Date**
		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
8	Slide Gate	AWWA C-561:2021	Fabricated Stainless Steel Slide Gates	01 July 2022
(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

PRODUCT CATEGORY A (SEWERAGE)				
No.	**Product/ Product Type**	**Standard Number**	**Standard Title**	**Effective Date**
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. Part 1: Definitions, classification, general principles of design, performance requirements and test methods Part 2: 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
3	Acrylonitrile Butadiene Styrene (ABS) Pipes & Fittings	MS 1419: Part 1: 2020 & MS 1419: Part 3: 1997, AMD.1 2018	Acrylonitrile Butadiene Styrene (ABS) pipes and fittings for pressure application Part 1: Specification for Compounds, Pipes and Fittings (Second Revision) Part 3: Solvent cement and priming (cleaning) fluids for use with ABS pipes and fittings. Amendment 1	01 Nov 2022

PRODUCT CATEGORY A (SEWERAGE)				
No.	**Product/ Product Type**	**Standard Number**	**Standard Title**	**Effective Date**
		MS 1419: Part 1: 2007 & MS 1419: Part 3:1997	Acrylonitrile Butadiene Styrene (ABS) pipes and fittings for pressure application <u>Part 1</u>: Specification for Compounds, Pipes and Fittings (First Revision) <u>Part 3</u>: Solvent cement and priming (cleaning) fluids for use with ABS pipes and fittings ***This standard shall be applicable to the existing supplier or user only and is recognized for SPAN product listing until 31st December 2024 only.*	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/ 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/ 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/ 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	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

PRODUCT CATEGORY A (SEWERAGE)				
No.	**Product/ Product Type**	**Standard Number**	**Standard Title**	**Effective Date**
	*refer Appendix C2 for SPAN Additional Requirement	MS 979: Part 1: 1985	Specification for unplasticized sewerage pipe and fitting Part 1: Pipes of diameter 100mm and 155mm	01 Jan 2008
		MS 979: Part 2: 1985, AMD.1:2000	Specification for unplasticized sewerage pipe and fitting Part 2: Pipes of diameter 200mm and above	01 Nov 2022
		MS 979: Part 2: 1985	Specification for unplasticized sewerage pipe and fitting Part 2: Pipes of diameter 200mm and above ***This standard shall be applicable to the existing supplier or user only and is recognized for SPAN product listing until 31st December 2024 only.*	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

PRODUCT CATEGORY A (SEWERAGE)				
No.	**Product/ Product Type**	**Standard Number**	**Standard Title**	**Effective Date**
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 2685:2017	Precast Concrete and Fittings for Drainage and Sewerage - Specification - Pipes and Fitting with Ogee Joints	10 Dec 2021
		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 ***This standard shall be applicable to the existing supplier or user only and is recognized for SPAN product listing until 31st December 2024 only.*	01 Jan 2008
		<u>Jacking pipe</u> MS EN 1916:2011 (Confirmed: 2015)	<u>Jacking pipe</u> Concrete pipes and fittings, unreinforced, steel fibre and reinforced (First revision)	01 Nov 2022

PRODUCT CATEGORY A (SEWERAGE)				
No.	**Product/ Product Type**	**Standard Number**	**Standard Title**	**Effective Date**
		MS EN 1916:2011	Concrete pipes and fittings, unreinforced, steel fibre and reinforced (First revision) ***This standard shall be applicable to the existing supplier or user only and is recognized for SPAN product listing until 31st December 2024 only*	01 Jan 2008
		BS 5911-1:2021	Concrete pipes and ancillary concrete products. Specification for unreinforced and reinforced concrete pipe (including jacking pipes) and fittings with flexible joints (complementary to BE EN 1916:2002). Specification. ***This standard is recognized for SPAN product listing until further notice*	01 Nov 2022
		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 shall be applicable to the existing supplier or user only and is recognized for SPAN product listing until 31st December 2024 only*	01 Mar 2016

PRODUCT CATEGORY A (SEWERAGE)				
No.	**Product/ Product Type**	**Standard Number**	**Standard Title**	**Effective Date**
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-20	Standard specification for Wrought Austenitic Stainless Steel piping fittings	01 Nov 2022
		ASTM A403/A403M-19	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 2024 only*	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/ 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: 2022	Vitrified clay pipes and fittings and pipes joints for drains and sewers. Part 1: Requirement (Second Revision)	01 Dec 2022
		MS 1061: Part 1: 1999	Vitrified clay pipes and fittings and pipes joints for drains and sewers. Part 1: Requirement (First Revision) ***This standard shall be applicable to the existing supplier or user only and is recognized for SPAN product listing until 31st December 2024 only.*	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 ***This standard shall be applicable to the existing supplier or user only and is recognized for SPAN product listing until 31st December 2024 only.*	01 Mar 2016

PRODUCT CATEGORY A (SEWERAGE)				
No.	**Product/ Product Type**	**Standard Number**	**Standard Title**	**Effective Date**
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
		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 (Confirmed: 2020)	Non-Alloy Steel Tubes Suitable For Welding And Threading - Technical Delivery Conditions (Second Revision)	01 Nov 2022
		MS 863:2010	on-Alloy Steel Tubes Suitable For Welding And Threading - Technical Delivery Conditions ***This standard is recognized for SPAN product listing until 30th Aug 2024 only*	15 April 2021

PRODUCT CATEGORY A (SEWERAGE)				
No.	**Product/ Product Type**	**Standard Number**	**Standard Title**	**Effective Date**
(C) Treatment System				
1	Package Plant *refer Appendix C2 for SPAN Additional Requirement	SPAN TS 1401: 2010 (A1:2013) Part 1 & SPAN TS 1402: 2010 (A1:2013) Part 2	Sewage Treatment System Part 1: Prefabricated Tanks – Packaged Plants & Sewage Treatment System Part 2: Construction and Installation – Packaged Plants	01 Apr 2012
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)

APPENDIX B1

PRODUCT CATEGORY B AND TESTING/PERFORMANCE REQUIREMENTS FOR REGISTRATION

PRODUCT CATEGORY B (WATER SUPPLY)			
No.	**Product / 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	Proprietary 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 / 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 (Confirmed: 2019) 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) (Excluding Clause 6)	01 Nov 2022

PRODUCT CATEGORY B (WATER SUPPLY)			
No.	**Product / Product Type**	**Requirements**	**Effective Date**
		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) (Excluding Clause 6) ***This standard shall be applicable to the existing supplier or user only and is recognized for SPAN product listing until 31st December 2024 only.*	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
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

PRODUCT CATEGORY B (WATER SUPPLY)			
No.	**Product / Product Type**	**Requirements**	**Effective Date**
6	Ductile Iron (DI) Strainer (beyond size) • T Strainer (DN250 and above)	Spesifikasi 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 ***This standard shall be applicable to the existing supplier or user only and is recognized for SPAN product registration until 30 October 2024 only.*	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
		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

PRODUCT CATEGORY B (WATER SUPPLY)			
No.	**Product / Product Type**	**Requirements**	**Effective Date**
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

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

PRODUCT CATEGORY B (WATER SUPPLY)			
No.	**Product / Product Type**	**Requirements**	**Effective Date**
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
		BS EN 12266-1:2012 Industrial valves – Testing of metallic valves. Pressure tests, test procedures and acceptance criteria. – Mandatory requirements	01 Sept 2014

PRODUCT CATEGORY B (WATER SUPPLY)			
No.	**Product / Product Type**	**Requirements**	**Effective Date**
		Manufacturer Standard Performance Test Report	01 July 2017
5	Water Hammer Arresters	Standard PDI-WH 201 (Revise 2017) - Water hammer arresters	01 Nov 2022
		Standard PDI-WH 201 (Revise 2010) - Water hammer arresters ***This standard shall be applicable to the existing supplier or user only and is recognized for SPAN product listing until 31st December 2024 only.*	14 June 2017
		Manufacturer Standard Performance Test Report	01 Nov 2012
6	Valves for Waterworks. (Beyond the range of diameter specified in the standard) • Air Valve • Butterfly Valve • Check Valve • Gate Valve • Knife Gate Valve	BS EN 16767:2020 Industrial valves. Steel and cast iron check valves & BS EN 681-1:1996 Elastomeric seals. Material requirements for pipe joint seals used in water and drainage applications. Vulcanized rubber	01 Nov 2022

PRODUCT CATEGORY B (WATER SUPPLY)			
No.	**Product / 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 & BS EN 681-1:1996 Elastomeric seals. Material requirements for pipe joint seals used in water and drainage applications. Vulcanized rubber	14 June 2017
		AWWA C530-17 Pilot-operated control valve & BS EN 681-1:1996 Elastomeric seals. Material requirements for pipe joint seals used in water and drainage applications. Vulcanized rubber	01 Nov 2022

- 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

<table>
<tr><th colspan="4">PRODUCT CATEGORY B (WATER SUPPLY)</th></tr>
<tr><th>No.</th><th>Product / Product Type</th><th>Requirements</th><th>Effective Date</th></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>
<tr><td>2</td><td>Actuator
Pneumatic</td><td>BS EN 15714-3:2009
Industrial valves - Actuators
Part 3: Pneumatic part-turn actuators for industrial valves
– Basic requirements</td><td>15 April 2021</td></tr>
</table>

PRODUCT CATEGORY B (WATER SUPPLY)			
No.	**Product / Product Type**	**Requirements**	**Effective Date**
3	System Control • Remote Terminal Unit (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 • Radar • Sludge Level	Calibration Certificate/ Inspection Report	15 April 2021
	Point Level Meter • Vibronic • Electrode	Calibration Certificate/ Inspection Report	
5	Pressure Meter • Differential • Switch • Transmitter	Calibration Certificate/ Inspection Report	01 July 2022

PRODUCT CATEGORY B (WATER SUPPLY)			
No.	**Product / Product Type**	**Requirements**	**Effective Date**
6	Analyzer • Ammonium & Nitrate • Chlorine • Suspended Solids/Turbidity • Sludge Density • pH/Oxidation Reduction Potential (ORP) • Dissolved Oxygen • Aluminium • Current	Calibration Certificate/ Inspection Report	01 July 2022
7	Non-Custody Flow Meter • Ultrasonic Clamp-on • Electromagnetic Flowmeter • Open Chanel (Ultrasonic/Radar)	Calibration Certificate/ Inspection Report *(one certificate/report for every single size of **ultrasonic flowmeter)*** ***This standard shall be applicable to the existing supplier or user only and is recognized for SPAN product listing until 31st August 2024 only.*	01 March 2016
		OIML R49-1:2013 Water meters intended for the metering of cold potable water and hot water Part 1: Metrological and technical requirement ***This standard shall be applicable to the existing supplier or user only and is recognized for SPAN product listing until 31st August 2024 only.*	14 June 2017

PRODUCT CATEGORY B (WATER SUPPLY)			
No.	**Product / Product Type**	**Requirements**	**Effective Date**
8	Custody Flow Meter • Electromagnetic Flowmeter	Directive 2014/32/EU Measurement Instrument (MI-001) ***This standard shall be applicable to the existing supplier or user only and is recognized for SPAN product listing until 31st August 2024 only.*	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 ***This standard shall be applicable to the existing supplier or user only and is recognized for SPAN product listing until 31st August 2024 only.*	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)).			
E) Lining / Coating / Waterproofing / Sealant / Adhesive / Solvent Cement			
1	Lining Coating Waterproofing Sealant Adhesive	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

PRODUCT CATEGORY B (WATER SUPPLY)			
No.	**Product / Product Type**	**Requirements**	**Effective Date**
	Solvent Cement	NSF/ANSI 61 Drinking Water System Components - Health Effects *(accept any revision year of standard)*	01 Mar 2016
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) New Innovative Product			
1	Innovative Product for Water Supply, Storage of Water or Conveyance of Water *refer Appendix C1 (SPAN Additional Requirement)	SPAN TS 3007: 2022 New Technology / Innovative Water Treatment System (Performance Validation Procedures)	01 July 2022
G) Storage of Water			
1	Cylindrical Double Fold System Tank	Manufacturer Standard Performance Test Report	01 Nov 2012

PRODUCT CATEGORY B (WATER SUPPLY)			
No.	**Product / Product Type**	**Requirements**	**Effective Date**
	*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 2022 only.*	01 Jan 2008
2	Pre-Cast Concrete Tank *refer Appendix C1 (SPAN Additional Requirement)	Manufacturer Standard Performance Test Report	01 Nov 2012
3	Stainless Steel Pressed Steel Sectional Rectangular Water Tank *refer Appendix C1 (SPAN Additional Requirement)	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 2024 only.*	01 Nov 2018
		BS 1564:1975 (Deviation Clause 5: Materials) (Deviation Clause 6: Dimensions of Unit Plates) ***This standard shall be applicable to the existing supplier or user only and is recognized for SPAN product listing until 31st December 2024 only.*	01 Jan 2008
H) Water Treatment Equipment			
1	Chlorine Dosing System • Vacuum regulator • Remote meter • Chlorinator • Ejector	Manufacturer Standard Performance Test Report	14 June 2017

PRODUCT CATEGORY B (WATER SUPPLY)			
No.	**Product / Product Type**	**Requirements**	**Effective Date**
2	Ozone Generator • Disinfection • Decolorization • Mineral removal *refer Appendix C1 (SPAN Additional Requirement)	SPAN TS 3007: 2022 New Technology / Innovative Water Treatment System (Performance Validation Procedures) ***Under subsystem category*	01 July 2022
3	Ultraviolet (UV)	ONORM M 5873-1:2020 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 M 5873-1:2001 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
		NWRI UV Disinfection Guidelines - Guidelines for drinking water and water reuse.	14 June 2017
		DVGW W294:2006 UV Disinfection Equipment for Water Supply Systems	14 June 2017
		USEPA UVDGM - Ultraviolet Disinfection Guidance Manual for the Final Long Term 2 Enhanced Surface Water Treatment Rule	15 April 2021

PRODUCT CATEGORY B (WATER SUPPLY)			
No.	**Product / Product Type**	**Requirements**	**Effective Date**
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)	SPAN TS 3007: 2022 New Technology / Innovative Water Treatment System (Performance Validation Procedures) ***Under subsystem category*	01 July 2022
6	Metering Pumps • Diaphragm pumps • Piston pumps • Peristaltic pumps • Screw pumps	ANSI/ HI 7.6-2018 Controlled Volume Metering Pumps for Test	01 Nov 2022
		ANSI/ HI 7.6-2012 Controlled Volume Metering Pumps for Test ***This standard shall be applicable to the existing supplier or user only and is recognized for SPAN product listing until 31st December 2024 only.*	14 June 2017
		GB/T 7782-2020 Metering Pumps	01 Nov 2022
		GB/T 7782-2008 Metering Pumps ***This standard shall be applicable to the existing supplier or user only and is recognized for SPAN product listing until 31st December 2024 only.*	14 June 2017

PRODUCT CATEGORY B (WATER SUPPLY)			
No.	**Product / Product Type**	**Requirements**	**Effective Date**
7	Screen • Travelling Band Screen • Static Screen • Mechanical Screen *refer Appendix C1 (SPAN Additional Requirement)	SPAN TS 3007: 2022 New Technology / Innovative Water Treatment System (Performance Validation Procedures) ***Under subsystem category*	15 April 2021
8	Screening Transfer • Compactor • Conveyor • Conveyor & Compactor *refer Appendix C1 (SPAN Additional Requirement)	SPAN TS 3007: 2022 New Technology / Innovative Water Treatment System (Performance Validation Procedures) ***Under subsystem category*	15 April 2021
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 *refer Appendix C1 (SPAN Additional Requirement)	SPAN TS 3009: 2022 Odour Control System for Water Services Industry (Performance Validation Procedures)	01 July 2022
13	Air Blower & Air Compressor	<u>For blowing application</u> JIS B 8341:2008 Displacement Compressors – Acceptance tests	15 April 2021

PRODUCT CATEGORY B (WATER SUPPLY)			
No.	**Product / Product Type**	**Requirements**	**Effective Date**
		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
		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	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

PRODUCT CATEGORY B (WATER SUPPLY)			
No.	**Product / Product Type**	**Requirements**	**Effective Date**
	Diffuser • Disc • Tube/Pipe • Panel	CJ/T 475-2015 Micropore Aerator Clean Water Oxygen Mass Transfer Performance Measurement	15 April 2021
15	Vacuum pump	BS ISO 21360-1:2020 Vacuum technology. Standard methods for measuring vacuum-pump performance. General description	01 Nov 2022
		BS ISO 21360-1:2012 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 2024 only.*	15 April 2021
16	Sedimentation / Clarifier *refer Appendix C1 (SPAN Additional Requirement)	SPAN TS 3007: 2022 New Technology / Innovative Water Treatment System (Performance Validation Procedures) ***Under subsystem category*	01 July 2022
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

PRODUCT CATEGORY B (WATER SUPPLY)			
No.	**Product / Product Type**	**Requirements**	**Effective Date**
19	Chemical Dosing Preparation	Manufacturer Standard Performance test report	15 April 2021
20	Underdrain System *refer Appendix C1 (SPAN Additional Requirement)	SPAN TS 3007: 2022 New Technology / Innovative Water Treatment System (Performance Validation Procedures) ***Under subsystem category*	01 Nov 2022
I) Water Treatment System			
1	Compact Plant / Package Plant *refer Appendix C1 (SPAN Additional Requirement)	SPAN TS 3007: 2022 New Technology / Innovative Water Treatment System (Performance Validation Procedures)	01 July 2022
2	Innovative Water Treatment System	SPAN TS 3007: 2022 New Technology / Innovative Water Treatment System (Performance Validation Procedures)	01 July 2022

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/ 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
		ASCE/EWRI 2-06 Measurement of oxygen transfer in clean water *(Note: Standards for material is subject to manufacturer recommendations)*	01 Jan 2008
1 b)	Mechanical Aerator • Brush Aerator • Hydrojet Aerator • Surface Aerator • Paddle Wheel Aerator	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
1 c)	Diffuser • Disc • Tube/Pipe • Panel	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/ 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

PRODUCT CATEGORY B (SEWERAGE)			
No.	**Product/ Product Type**	**Requirements**	**Effective Date**
		ASME PTC 13-2018 Air Performance Test Code for Blower Systems	01 Nov 2022
		ASME PTC 10-1997 Performance Test Code on Compressors and Exhausters ***This standard shall be applicable to the existing supplier or user only and is recognized for SPAN product listing until 31st December 2024 only.*	14 June 2017
C) Air Vacuum			
1	Vacuum pump	BS ISO 21360-1:2020 Vacuum technology. Standard methods for measuring vacuum-pump performance. General description	01 Nov 2022
		BS ISO 21360-1:2012 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 2024 only.*	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

PRODUCT CATEGORY B (SEWERAGE)			
No.	**Product/ Product Type**	**Requirements**	**Effective Date**
D) Clarifier / Sedimentation			
1	Sludge Scrapper & Scum Skimmer • Circular • Rectangular - Chain & Flight - Bridge travelling *refer Appendix C1 (SPAN Additional Requirement)	SPAN TS 3008: 2022 New Technology / Innovative Sewage Treatment System (Performance Validation Procedures) ***Under subsystem category*	01 July 2022
E) Disinfection			
1	Chlorination	Manufacturer Standard Performance Test Report	01 Mar 2016
2	Ultraviolet (UV)	NWRI UV Disinfection Guidelines - Guidelines for drinking water and water reuse.	14 June 2017
		USEPA UVDGM Ultraviolet Disinfection Guidance Manual for the Final Long Term 2 Enhanced Surface Water Treatment Rule	15 April 2021
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/ Product Type**	**Requirements**	**Effective Date**
	*refer Appendix C1 (SPAN Additional Requirement)	ANSI/HI 14.6:2016 Rotodynamic Pumps for hydraulic performance acceptance tests Grades 1B/1E/1U and 2B	01 Nov 2022
		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 2024 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			
G) Effluent Decanting			
1	Effluent Decanter • Fixed Pipe • Floating • Surface Skimming *refer Appendix C1 (SPAN Additional Requirement)	SPAN TS 3008: 2022 New Technology / Innovative Sewage Treatment System (Performance Validation Procedures) ***Under subsystem category*	01 July 2022

PRODUCT CATEGORY B (SEWERAGE)			
No.	**Product/ Product Type**	**Requirements**	**Effective Date**
H) Flow Control			
1	Air Relief Valve	BS EN 12266-1:2012 Industrial valves SPAN TS – 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
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

PRODUCT CATEGORY B (SEWERAGE)			
No.	**Product/ Product Type**	**Requirements**	**Effective Date**
6	Recoil Check Valve	BS EN 16767:2020 Industrial valves. Metallic check valve	01 Nov 2022
		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 December 2024 only.*	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
		BS EN 14341:2020 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 Nov 2022
		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

PRODUCT CATEGORY B (SEWERAGE)			
No.	**Product/ Product Type**	**Requirements**	**Effective Date**
I) Grit and Grease Removal *refer Appendix C2 (SPAN Additional Requirement)			
1	Grease Collector • Chain & Flight • Trough-Pipe Skimmer • Weir Skimmer	SPAN TS 3008: 2022 New Technology / Innovative Sewage Treatment System (Performance Validation Procedures) ***Under subsystem category*	01 July 2022
2	Grit & Grease Collector (Horizontal Flow) • Chain & Flight • Detritor • Travelling Bridge	SPAN TS 3008: 2022 New Technology / Innovative Sewage Treatment System (Performance Validation Procedures) ***Under subsystem category*	01 July 2022
3	Grit Collector • Aerated • Horizontal Flow • Vortex	SPAN TS 3008: 2022 New Technology / Innovative Sewage Treatment System (Performance Validation Procedures) ***Under subsystem category*	01 July 2022
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
	Grit Transfer Pump (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

<table>
<tr><th colspan="4">PRODUCT CATEGORY B (SEWERAGE)</th></tr>
<tr><th>No.</th><th>Product/
Product Type</th><th>Requirements</th><th>Effective Date</th></tr>
<tr><td></td><td></td><td>ANSI/HI 14.6:2016
Rotodynamic Pumps for hydraulic performance acceptance tests
Grades 1B/1E/1U and 2B</td><td>01 Nov 2022</td></tr>
<tr><td></td><td></td><td>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 2024 only.</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>SPAN TS 3008: 2022
New Technology / Innovative Sewage Treatment System (Performance Validation Procedures)

**Under subsystem category</td><td>01 July 2022</td></tr>
</table>

PRODUCT CATEGORY B (SEWERAGE)			
No.	**Product/ Product Type**	**Requirements**	**Effective Date**
6	Grit Washing & Dewatering • Drum Screen • Rotary Screen • Screw Screen • Static Screen	SPAN TS 3008: 2022 New Technology / Innovative Sewage Treatment System (Performance Validation Procedures) ***Under subsystem category*	01 July 2022
J) Instrumentation and Control *refer Appendix C2 (SPAN Additional Requirement)			
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

PRODUCT CATEGORY B (SEWERAGE)			
No.	**Product/ Product Type**	**Requirements**	**Effective Date**
3	Analyser • Ammonium & Nitrate • Chlorine • Suspended Solids • Total Organic Carbon • Sludge Density • pH/Oxidation Reduction Potential (ORP) • Dissolved Oxygen	Calibration Certificate/Report	01 Mar 2016
4	Chemical Dosing • Monitoring System	Calibration Certificate/Report	01 Mar 2016
5	Gas Control • Gas Combustor • Gas Detector • Gas Holder	Calibration Certificate/Report	01 Mar 2016
6	Level Meter • Capacitive • Electrode • Float Gauging • Hydrostatic • Ultrasonic • Radar • Sludge Level • Point level (Switch) – Vibronic /Conductive	Calibration Certificate/Report	01 Mar 2016

PRODUCT CATEGORY B (SEWERAGE)			
No.	**Product/ Product Type**	**Requirements**	**Effective Date**
	• Point Level (Switch) -Float	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: 2017; and iv) Water Level Operating Controls according to IEC 60730-2-15: 2017	15 April 2021
7	Non-Custody Transfer Meter (Flow Meter) • Differential Pressure (DP) Flow • Mechanical • Rotameter • Electromagnetic • Ultrasonic (Clamp-on/Insertion) • Open Chanel (Ultrasonic/Radar)	Calibration Certificate/Report	01 Mar 2016
8	Pressure Meter • Differential • Switch • Transmitter	Calibration Certificate/Report	01 Mar 2016
9	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

PRODUCT CATEGORY B (SEWERAGE)			
No.	**Product/ Product Type**	**Requirements**	**Effective Date**
10	Temperature Meter • RTD • Switch • Thermocouple • Transmitter	Calibration Certificate/Report	01 Mar 2016
K) Mixing			
1	Agitator/Mixer • Submersible	CJ/T 109-2007 Submersible Agitator	15 April 2021
		ISO 21630:2007 Pumps Testing. Submersible mixers for wastewater and similar applications.	01 Dec 2015
2	Agitator/Mixer • Flow Booster • Flowmaker • Surface	Manufacturer Standard Performance Test Report	14 June 2017
L) Odour Control and Treatment			
1	Odour Control • Biofiltration • Bioscrubbing • Carbon Adsorption • Deodorizer • Liquid Redox • Photoionization • Solid Scavenger • Wet Air Scrubbing *refer Appendix C1 (SPAN Additional Requirement)	SPAN TS 3009: 2022 Odour Control System for Water Services Industry (Performance Validation Procedures)	01 July 2022

PRODUCT CATEGORY B (SEWERAGE)			
No.	**Product/ Product Type**	**Requirements**	**Effective Date**
M) Primary and Secondary Screening			
1	Screen *refer Appendix C1 (SPAN Additional Requirement)	SPAN TS 3008: 2022 New Technology / Innovative Sewage Treatment System (Performance Validation Procedures) ***Under subsystem category*	01 July 2022
2	Screening Transfer • Compactor • Conveyor • Conveyor & Compactor *refer Appendix C1 (SPAN Additional Requirement)	SPAN TS 3008: 2022 New Technology / Innovative Sewage Treatment System (Performance Validation Procedures) ***Under subsystem category*	01 July 2022
N) 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 *refer Appendix C1 (SPAN Additional Requirement)	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 14.6:2016 Rotodynamic Pumps for hydraulic performance acceptance tests Grades 1B/1E/1U and 2B	01 Nov 2022

PRODUCT CATEGORY B (SEWERAGE)			
No.	**Product/ 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 *refer Appendix C2 for SPAN Additional Requirement			
3	Pre-fabricated Pumping Station *refer Appendix C1 (SPAN Additional Requirement)	Assessment for performance efficiency is made through a pilot project	01 May 2019
O) Sewage Conveyance *refer Appendix C2 (SPAN Additional Requirement)			
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 BS EN ISO 11296-4:2018+A1:2021 Part 4: Lining with cured-in-place pipes	01 Nov 2022

PRODUCT CATEGORY B (SEWERAGE)			
No.	**Product/ Product Type**	**Requirements**	**Effective Date**
		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 ***This standard shall be applicable to the existing supplier or user only and is recognized for SPAN product listing until 31st December 2024 only.*	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/ 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 178:2019 Plastics - Determination of flexural properties	01 Nov 2022
		BS EN ISO 178:2010+A1:2013 Plastics - Determination of flexural properties ***This standard shall be applicable to the existing supplier or user only and is recognized for SPAN product listing until 31st December 2024 only.*	01 Dec 2015

PRODUCT CATEGORY B (SEWERAGE)			
No.	**Product/ Product Type**	**Requirements**	**Effective Date**
		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 BS EN ISO 11296-4:2018+A1:2021 Part 4: Lining with cured-in-place pipes	01 Nov 2022
		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 ***This standard shall be applicable to the existing supplier or user only and is recognized for SPAN product listing until 31st December 2024 only.*	15 April 2021

PRODUCT CATEGORY B (SEWERAGE)			
No.	**Product/ 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
P) 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

PRODUCT CATEGORY B (SEWERAGE)			
No.	**Product/ Product Type**	**Requirements**	**Effective Date**
3	Polymer Dosing • Metering Pump - Positive Displacement	GB/T 7782-2020 Metering Pumps	01 Nov 2022
		GB/T 7782-2008 Metering Pumps ***This standard shall be applicable to the existing supplier or user only and is recognized for SPAN product listing until 31st December 2024 only.*	01 Mar 2016
		ANSI/ HI 7.6-2018 Controlled volume Metering Pumps for test	01 Nov 2022
		ANSI/ HI 7.6-2012 Controlled volume Metering Pumps for test ***This standard shall be applicable to the existing supplier or user only and is recognized for SPAN product listing until 31st December 2024 only*	14 June 2017
	Polymer Dosing • Polymer Preparation	Manufacturer Standard Performance test report	14 June 2017
4	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
5	Sludge Digester	Assessment for performance efficiency is made through a pilot project	01 Mar 2016

PRODUCT CATEGORY B (SEWERAGE)			
No.	**Product/ Product Type**	**Requirements**	**Effective Date**
6	Sludge Dryer • Screw Press • Gravity Container • Fluidized Bed Sludge • Rotary Kiln	Assessment for performance efficiency is made through a pilot project	01 Mar 2016
7	Sludge Reception Facilities	Assessment for performance efficiency is made through a pilot project	01 Mar 2016
8	Sludge Screen • Mechanical - Drum Screen - Micro Screen - Screw Screen	SPAN TS 3008: 2022 New Technology / Innovative Sewage Treatment System (Performance Validation Procedures) ***Under subsystem category*	01 Mar 2016
9	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	SPAN TS 3008: 2022 New Technology / Innovative Sewage Treatment System (Performance Validation Procedures) ***Under subsystem category*	01 July 2022
10	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

PRODUCT CATEGORY B (SEWERAGE)			
No.	**Product/ Product Type**	**Requirements**	**Effective Date**
		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
		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 (SEWERAGE)			
No.	**Product/ 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 (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			
Treatment System *refer Appendix C2 for SPAN Additional Requirement			
1	Package Sewage Treatment System • Glass-fibre Reinforced Plastic (GRP) • High Density Polyethylene (HDPE) • Steel	SPAN TS 3008: 2022 New Technology / Innovative Sewage Treatment System (Performance Validation Procedures)	01 July 2022
2	Innovative System for Sewage Treatment	SPAN TS 3008: 2022 New Technology / Innovative Sewage Treatment System (Performance Validation Procedures)	01 July 2022
3	Integrated Fixed Film Activated Sludge	SPAN TS 3008: 2022 New Technology / Innovative Sewage Treatment System (Performance Validation Procedures)	01 July 2022
4	Membrane Bioreactor (MBR)	SPAN TS 3008: 2022 New Technology / Innovative Sewage Treatment System (Performance Validation Procedures)	01 July 2022

PRODUCT CATEGORY B (SEWERAGE)			
No.	**Product/ Product Type**	**Requirements**	**Effective Date**
5	Moving Bed Bioreactor (MBBR)	SPAN TS 3008: 2022 New Technology / Innovative Sewage Treatment System (Performance Validation Procedures)	01 July 2022
6	Rotating Biological Contactor (RBC)	SPAN TS 3008: 2022 New Technology / Innovative Sewage Treatment System (Performance Validation Procedures)	01 July 2022
7	Super Dissolved Oxygen • Bi-Act SDO	SPAN TS 3008: 2022 New Technology / Innovative Sewage Treatment System (Performance Validation Procedures)	01 July 2022
8	Trickling Filter	SPAN TS 3008: 2022 New Technology / Innovative Sewage Treatment System (Performance Validation Procedures)	01 July 2022

APPENDIX C1

SPAN Additional Requirement or Condition for Specific Products

(WATER SUPPLY SYSTEM)

.

WATER SUPPLY SYSTEM

Definition:

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

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

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 System	1. PVC-U Solvent Cement should be used together with the PVC-U Pipes and PVC-U Fittings of the same brand.

NO.	PRODUCT NAME	SPAN ADDITIONAL REQUIREMENTS
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 System	1. ABS Solvent Cement should be used together with the ABS Pipes and ABS Fittings of the same brand.
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 (litres/gallon) e. Manufacturer and supplier f. SPAN registration number

NO.	PRODUCT NAME	SPAN ADDITIONAL REQUIREMENTS
2	Cylindrical Double Fold System	1. Maximum capacity allowed is 1.0 million gallon (MG). 2. Maximum height allowed is 5 meter. 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 is required.
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 230,000 litres (500,000 G) and for ground storage tank is 340,000 litres (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 454,000 litres (100,000 G). 3. Maximum height allowed is 4 meters.

NO.	PRODUCT NAME	SPAN ADDITIONAL REQUIREMENTS
		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.
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 454,000 litres (100,000 G). 3. Maximum height allowed is 5 meters 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.*

NO.	PRODUCT NAME	SPAN ADDITIONAL REQUIREMENTS
8	Pressed Steel / Stainless Steel Sectional Rectangular Tank	1. Tank only can be used for system that will not be surrendered to the water operator. 2. Maximum capacity allowed is 454,000 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.
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	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	Urinal	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.

NO.	PRODUCT NAME	SPAN ADDITIONAL REQUIREMENTS
3	Tap & Mixer	Flow rate of the tap and the mixing valve not exceeding 8 litres per minute except for: (a) cleaning activity that requires higher water flow rate; (b) watering plant activity that uses hose and requires higher water flow rate; and (c) vehicle washing activity at the car wash center
4	Showerhead	Shower mixing valve and the shower head not exceeding 10 litres per minute.
5	Flush valve	Flush valve serving for urinal only shall ensure that it is so designed to give a single flush of not exceeding 2.5 litres.
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; or • foreigner bodies recognized by JAKIM 3. Safety Data Sheet (SDS)
2	Chlorine	1. The drum/cylinder used for chlorine storage shall comply with: a. <u>Chlorine Drum</u> • BS 1500; • ASME Sect VIII; or • any equivalent standard b. <u>Chlorine Cylinder</u> • JIS B 8421; or • any equivalent standard

NO.	PRODUCT NAME	SPAN ADDITIONAL REQUIREMENTS
		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 untuk Sistem Bekalan air".
G. CENTRIFUGAL PUMP		
1	All types of pump	Registered pumps are subject to the following conditions: **1.1 <u>For internal plumbing system that will be maintained by the owner premises</u>** 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 $10m^3/hr$ ($\geq 10m^3/hr$) 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 <u>For external reticulation system that will be handed over and maintained by the water operators</u>**

NO.	PRODUCT NAME	SPAN ADDITIONAL REQUIREMENTS
	All types of pump *(continued)*	**1.2.1 Design Criteria for Pump sets:**

Pumping Rate Per Pump (m^3/ hr)	Number of Pump Sets	Total Pump Sets	Pumping Hours	Minimum Pump Efficiency	Maximum Pumping Head (m)	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	-

<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 Material Condition:

1.2.2.1 General conditions:
<table>
<tr><th>NO</th><th>PART</th><th>MATERIAL</th></tr>
<tr><td>1</td><td>Pump shaft</td><td>The material shall be of Stainless Steel Grade 420 or better.</td></tr>
<tr><td>2</td><td>Bolt & Nuts</td><td>All exposed bolts and nuts in the construction for the pump shall be cadmium treated or hot dipped galvanized.</td></tr>
</table>
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>
</td></tr>
<tr><td></td><td>All types of pump
(continued)</td><td>1.2.3 Class Definition for Electrical Motors:</td></tr>
</table>

<table>
<tr><th>NO.</th><th>PRODUCT NAME</th><th>SPAN ADDITIONAL REQUIREMENTS</th></tr>
<tr><td></td><td></td><td>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>
<tr><td>1.5</td><td>≥ 84.1</td><td>≥ 85.0</td></tr>
<tr><td>2.2</td><td>≥ 85.6</td><td>≥ 86.4</td></tr>
<tr><td>3</td><td>≥ 86.7</td><td>≥ 87.4</td></tr>
<tr><td>4</td><td>≥ 87.6</td><td>≥ 88.3</td></tr>
<tr><td>5.5</td><td>≥ 88.6</td><td>≥ 89.2</td></tr>
<tr><td>7.5</td><td>≥ 89.5</td><td>≥ 90.1</td></tr>
<tr><td>11</td><td>≥ 90.5</td><td>≥ 91.0</td></tr>
<tr><td>15</td><td>≥ 91.3</td><td>≥ 91.8</td></tr>
<tr><td>18.5</td><td>≥ 91.8</td><td>≥ 92.2</td></tr>
<tr><td>22</td><td>≥ 92.2</td><td>≥ 92.6</td></tr>
<tr><td>30</td><td>≥ 92.9</td><td>≥ 93.2</td></tr>
<tr><td>37</td><td>≥ 93.3</td><td>≥ 93.6</td></tr>
<tr><td>45</td><td>≥ 93.7</td><td>≥ 93.9</td></tr>
<tr><td>55</td><td>≥ 94.0</td><td>≥ 94.2</td></tr>
<tr><td>75</td><td>≥ 94.6</td><td>≥ 94.7</td></tr>
<tr><td>90</td><td>≥ 95.0</td><td>≥ 95.0</td></tr>
<tr><td>37</td><td>≥ 93.3</td><td>≥ 93.6</td></tr>
<tr><td>45</td><td>≥ 93.7</td><td>≥ 93.9</td></tr>
<tr><td>55</td><td>≥ 94.0</td><td>≥ 94.2</td></tr>
<tr><td>75</td><td>≥ 94.6</td><td>≥ 94.7</td></tr>
<tr><td>90</td><td>≥ 95.0</td><td>≥ 95.0</td></tr>
</table>
</td></tr>
</table>

NO.	PRODUCT NAME	SPAN ADDITIONAL REQUIREMENTS
		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.
H. LINING / COATING / WATERPROOFING / SEALANT / ADHERSIVE / SOLVENT CEMENT		
1	All type of: • Lining • Coating • Waterproofing • Sealant • Adhesive • 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	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 and operational reliability report conducted on an actual installation during a period of at least 6 months based SPAN TS 3007:2022 and must be performed by a recognized third party. The 6 months period should be within 2 years from the time of application. b) Product quantity tested is minimum one unit; or any numbers imposed by SPAN. c) The validity of the test report is five (5) years from the date the report is issued.
2	Membrane Filtration	1. Product shall be supplied in **supply and install mode** (Supply, install, testing and commissioning of products shall be done by same supplier).

NO.	PRODUCT NAME	SPAN ADDITIONAL REQUIREMENTS
		2. For new registration, supplier must follow procedures as follows: i. Application via e-Registration at SPAN website. ii. SPAN will issue notification letter for compliance of SPAN TS 3007:2022. iii. Supplier shall appoint assessment body (3rd parties) approved by SPAN to supervise the validation procedures. iv. Supplier needs to obtain an installation location for testing. During this testing period, any installation or use of the tested product in another location is not allowed. v. Supplier must submit detailed information and a proposal report based on SPAN TS 3007:2022 to the appointed Assessment Body. vi. The assessment body shall approve proposal according to SPAN TS 3007:2002 and shall submit summary proposal for validation procedures to SPAN. vii. SPAN will issue notice to start performance validation. viii. The assessment body shall submit final evaluation report to SPAN after testing is completed. ix. Certificate Approval will be given after final evaluation report has been submitted to SPAN by the assessment body **(under sub-system).** 3. For renewal of registration, supplier must submit supporting documents as follows: i. Product performance and operational reliability report conducted on an actual installation during a period of at least 2 months (except for biological treatment shall be minimum 6 months) based on SPAN TS 3007:2022 and must be performed by a recognized third party. The 2 months period should be within 2 years from the time of application. ii. Product quantity tested is minimum one unit; or any numbers imposed by SPAN. iii. The validity of the test report is five (5) years from the date the report is issued.

NO.	PRODUCT NAME	SPAN ADDITIONAL REQUIREMENTS
3	Odour Control	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 based on the SPAN TS 3009:2022 and 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) The validity of the test report is five (5) years from the date the report is issued.
4	Sedimentation/ Clarifier	1. Product shall be supplied in **design and build mode** (Supplied, installed, testing and commissioning of products shall be done by same supplier). 2. For new registration, supplier must follow procedures as follows: i. Application via e-Registration at SPAN website. ii. SPAN will issue notification letter for compliance of SPAN TS 3007:2022. iii. Supplier shall appoint assessment body (3rd parties) approved by SPAN to supervise the validation procedures. iv. Supplier needs to obtain an installation location for testing. During this testing period, any installation or use of the tested product in another location is not allowed. v. Supplier must submit detailed information and a proposal report based on SPAN TS 3007:2022 to the appointed Assessment Body. vi. The assessment body shall approve proposal according to SPAN TS 3007:2002 and shall submit summary proposal for validation procedures to SPAN. vii. SPAN will issue notice to start performance validation.

NO.	PRODUCT NAME	SPAN ADDITIONAL REQUIREMENTS
		viii. The assessment body shall submit final evaluation report to SPAN after testing is completed. ix. Certificate Approval will be given after final evaluation report has been submitted to SPAN by the assessment body **(under sub-system).** 3. For renewal of registration, supplier must submit supporting documents as follows: i. Product performance and operational reliability report conducted on an actual installation during a period of at least 2 months (except for biological treatment shall be minimum 6 months) based on SPAN TS 3007:2022 and must be performed by a recognized third party. The 2 months period should be within 2 years from the time of application. ii. Product quantity tested is minimum one unit; or any numbers imposed by SPAN. iii. The validity of the test report is five (5) years from the date the report is issued.
5	Sludge Thickener/Sludge Dewatering	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 and operational reliability report conducted on an actual installation during a period of at least 6 months based on SPAN TS 3002:2021 and must be performed by a recognized third party. The 6 months period should be within 2 years from the time of application. b) Product quantity tested is five percent (5%) of total assembly units or a minimum of three units (whichever is greater).

NO.	PRODUCT NAME	SPAN ADDITIONAL REQUIREMENTS
		c) The validity of the test report is five (5) years from the date the report is issued.
J. WATER TREATMENT SYSTEM		
1	All types of water treatment system *non-conventional systems only	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 new registration, supplier must follow procedures as follows: i. Application via e-Registration at SPAN website. ii. SPAN will issue notification letter for compliance of SPAN TS 3007:2022. iii. Supplier shall appoint assessment body (3rd parties) approved by SPAN to supervise the validation procedures. iv. Supplier needs to obtain an installation location for testing. During this testing period, any installation or use of the tested product in another location is not allowed. v. Supplier must submit detailed information and a proposal report based on SPAN TS 3007:2022 to the appointed Assessment Body. vi. The assessment body shall approve proposal according to SPAN TS 3007:2002 and shall submit summary proposal for validation procedures to SPAN. vii. SPAN will issue notice to start performance validation. viii. The assessment body shall submit final evaluation report to SPAN after testing is completed. ix. Certificate Approval will be given after the product has been approved by Commissioner. 4. For renewal of registration, supplier must submit supporting documents as follows:

NO.	PRODUCT NAME	SPAN ADDITIONAL REQUIREMENTS
		i. Product performance and operational reliability report conducted on an actual installation during a period of at least 2 months (except for biological treatment shall be minimum 6 months) based on SPAN TS 3007:2022 and must be performed by a recognized third party. The 2 months period should be within 2 years from the time of application. ii. Product quantity tested is minimum one unit; or any numbers imposed by SPAN. iii. The validity of the test report is five (5) years from the date the report is issued.
K. New Innovative Product		
1	Innovative Product for Water Supply, Storage of Water or Conveyance of Water	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, instrumentations, pipes and valves to be used in the system must be SPAN registered. 3. For new registration, supplier must follow procedures as follows: i. Application via e-Registration at SPAN website. ii. SPAN will issue notification letter for compliance of SPAN TS 3007:2022. iii. Supplier shall appoint assessment body (3rd parties) approved by SPAN to supervise the validation procedures. iv. Supplier needs to obtain an installation location for testing. During this testing period, any installation or use of the tested product in another location is not allowed. v. Supplier must submit detailed information and a proposal report based on SPAN TS 3007:2022 to the appointed Assessment Body. vi. The assessment body shall approve proposal according to SPAN TS 3007:2002 and shall submit

NO.	PRODUCT NAME	SPAN ADDITIONAL REQUIREMENTS
		summary proposal for validation procedures to SPAN. vii. SPAN will issue notice to start performance validation. viii. The assessment body shall submit final evaluation report to SPAN after testing is completed. ix. Certificate Approval will be given after the product has been approved by Commissioner (**for full system only**) or Certificate Approval will be given after final evaluation report has been submitted to SPAN by assessment body (**for sub-system only**). 4. For renewal of registration, supplier must submit supporting documents as follows: i. Product performance and operational reliability report conducted on an actual installation during a period of at least 2 months (except for biological treatment shall be minimum 6 months) based on SPAN TS 3007:2022 and must be performed by a recognized third party. The 2 months period should be within 2 years from the time of application. ii. Product quantity tested is minimum one unit; or any numbers imposed by SPAN. iii. The validity of the test report is five (5) years from the date the report is issued.

APPENDIX C2

SPAN Additional Requirement or Condition for Specific Products

(SEWERAGE SYSTEM)

.

SEWERAGE SYSTEM

Definition:

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

Supply and Install – *supply, install, 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 **supply and install 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.

NO	PRODUCT NAME	RECOGNISED STANDARDS	SPAN ADDITIONAL REQUIREMENTS
2	Small Sewage Treatment System	1. System 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) *Other than systems stated in MSIG	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 new registration, supplier must follow procedures as follows: i. Application via e-Registration at SPAN website. ii. SPAN will issue notification letter for compliance of SPAN TS 3008:2022. iii. Supplier shall appoint assessment body (3rd parties) approved by SPAN to supervise the validation procedures. iv. Supplier needs to obtain an installation location for testing. During this testing period, any installation or use of the tested product in another location is not allowed. v. Supplier must submit detailed information and a proposal report based on SPAN TS 3008:2022 to the appointed assessment body. vi. The assessment body shall approve proposal according to SPAN TS 3008:2002 and shall submit summary proposal for validation procedures to SPAN.	

NO	PRODUCT NAME	RECOGNISED STANDARDS	SPAN ADDITIONAL REQUIREMENTS
		vii. SPAN will issue notice to start performance validation. viii. The assessment body shall submit final evaluation report to SPAN after testing is completed. ix. Certificate Approval will be given after the product has been approved by Commissioner **(for full system only)** or Certificate Approval will be given after final evaluation report has been submitted to SPAN by the assessment body **(for sub-system only).** 5. For renewal of registration, supplier must submit supporting documents as follows: i. Product performance and operational reliability report conducted on an actual installation for a period of at least 6 months based on SPAN TS 3008:2022 and must be performed by a recognized third party. The 6 months period should be within 2 years from the time of application. For this purpose, section 4.7 of SPAN TS 3008:2022 is not applicable and data should represent normal plant operating conditions. ii. Product quantity tested is minimum one unit; or any amount imposed by SPAN. iii. The validity of the test 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.	

NO	PRODUCT NAME	RECOGNISED STANDARDS	SPAN ADDITIONAL REQUIREMENTS
E. CLARIFIER / SEDIMENTATION			
1	Sludge Scrapper & Scum Skimmer	1. Product shall be supplied in **supply and install mode**. 2. For new registration, supplier must follow procedures as follows: i. Application via e-Registration at SPAN website. ii. SPAN will issue notification letter for compliance of SPAN TS 3008:2022. iii. Supplier shall appoint assessment body (3rd parties) approved by SPAN to supervise the validation procedures. iv. Supplier needs to obtain an installation location for testing. During this testing period, any installation or use of the tested product in another location is not allowed. v. Supplier must submit detailed information and a proposal report based on SPAN TS 3008:2022 to the appointed assessment body. vi. The assessment body shall approve proposal according to SPAN TS 3008:2002 and shall submit summary proposal for validation procedures to SPAN. vii. SPAN will issue notice to start performance validation. viii. The assessment body shall submit final evaluation report to SPAN after testing is completed. ix. Certificate Approval will be given after final evaluation report has been submitted to SPAN by the assessment body **(for sub-system only).** 2. For renewal of registration, supplier must submit supporting documents as follows: i. Product performance and operational reliability report conducted on an actual installation for a period of at least 6 months-based on SPAN TS 3008:2022 and must be performed by a recognized third party. The 6 months period should be within 2 years from the time of application. For this purpose, section 4.7 of SPAN TS 3008:2022 is not applicable and data should represent normal plant operating conditions. ii. Product quantity tested is minimum one unit; or any numbers imposed by SPAN.	

NO	PRODUCT NAME	RECOGNISED STANDARDS	SPAN ADDITIONAL REQUIREMENTS
		iii. The validity of the test report is five (5) years from the date the report is issued.	
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	Effluent Decanter • Fixed Pipe • Floating • Surface Skimming	1. Product shall be supplied in **supply and install mode**. 2. For new registration, supplier must follow procedures as follows: i. Application via e-Registration at SPAN website. ii. SPAN will issue notification letter for compliance of SPAN TS 3008:2022. iii. Supplier shall appoint assessment body (3rd parties) approved by SPAN to supervise the validation procedures. iv. Supplier needs to obtain an installation location for testing. During this testing period, any installation or use of the tested product in another location is not allowed. v. Supplier must submit detailed information and a proposal report based on SPAN TS 3008:2022 to the appointed assessment body. vi. The assessment body shall approve proposal according to SPAN TS 3008:2002 and shall submit summary proposal for validation procedures to SPAN. vii. SPAN will issue notice to start performance validation. viii. The assessment body shall submit final evaluation report to SPAN after testing is completed. ix. Certificate Approval will be given after final evaluation report has been submitted to SPAN by the assessment body **(for sub-system only).**	

NO	PRODUCT NAME	RECOGNISED STANDARDS	SPAN ADDITIONAL REQUIREMENTS
		2. For renewal of registration, supplier must submit supporting documents as follows: i. Product performance and operational reliability report conducted on an actual installation for a period of at least 6 months-based on SPAN TS 3008:2022 and must be performed by a recognized third party. The 6 months period should be within 2 years from the time of application. For this purpose, section 4.7 of SPAN TS 3008:2022 is not applicable and data should represent normal plant operating conditions. ii. Product quantity tested is minimum one unit; or any numbers imposed by SPAN. iii. The validity of the test 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 new registration, supplier must follow procedures as follows: i. Application via e-Registration at SPAN website. ii. SPAN will issue notification letter for compliance of SPAN TS 3008:2022. iii. Supplier shall appoint assessment body (3rd parties) approved by SPAN to supervise the validation procedures. iv. Supplier needs to obtain an installation location for testing. During this testing period, any installation or use of the tested product in another location is not allowed. v. Supplier must submit detailed information and a proposal report based on SPAN TS 3008:2022 to the appointed assessment body. vi. The assessment body shall approve proposal according to SPAN TS 3008:2002 and shall submit summary proposal for validation procedures to SPAN. vii. SPAN will issue notice to start performance validation. viii. The assessment body shall submit final evaluation report to SPAN after testing is completed.	

NO	PRODUCT NAME	RECOGNISED STANDARDS	SPAN ADDITIONAL REQUIREMENTS
		ix. Certificate Approval will be given after final evaluation report has been submitted to SPAN by the assessment body **(for sub-system only).** 2. For renewal of registration, supplier must submit supporting documents as follows: i. Product performance and operational reliability report conducted on an actual installation for a period of at least 6 months-based on SPAN TS 3008:2022 and must be performed by a recognized third party. The 6 months period should be within 2 years from the time of application. For this purpose, section 4.7 of SPAN TS 3008:2022 is not applicable and data should represent normal plant operating conditions. ii. Product quantity tested is minimum one unit; or any numbers imposed by SPAN. iii. The validity of the test 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.	

NO	PRODUCT NAME	RECOGNISED STANDARDS	SPAN ADDITIONAL REQUIREMENTS
J. ODOUR CONTROL & TREATMENT			
1	All types of Odour Control & Treatment		1. System shall be supplied in **supply and install 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 based on the SPAN TS 3009:2022 and 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) The validity of the test report is five (5) years from the date the report is issued.
K. PRIMARY AND SECONDARY SCREENING			
1	All types of screens and screening transfer		1. Product shall be supplied in **supply and install mode**. 2. For new registration, supplier must follow procedures as follows: i. Application via e-Registration at SPAN website. ii. SPAN will issue notification letter for compliance of SPAN TS 3008:2022. iii. Supplier shall appoint assessment body (3rd parties) approved by SPAN to supervise the validation procedures. iv. Supplier needs to obtain an installation location for testing. During this testing period, any installation or use of the tested product in another location is not allowed. v. Supplier must submit detailed information and a proposal report based on SPAN TS 3008:2022 to the appointed assessment body. vi. The assessment body shall approve proposal according to SPAN TS 3008:2002 and shall submit summary proposal for validation procedures to SPAN.

NO	PRODUCT NAME	RECOGNISED STANDARDS	SPAN ADDITIONAL REQUIREMENTS
		vii. SPAN will issue notice to start performance validation. viii. The assessment body shall submit final evaluation report to SPAN after testing is completed. ix. Certificate Approval will be given after final evaluation report has been submitted to SPAN by the assessment body **(for sub-system only).** 3. For renewal of registration, supplier must submit supporting documents as follows: i. Product performance and operational reliability report conducted on an actual installation for a period of at least 6 months-based on SPAN TS 3008:2022 and must be performed by a recognized third party. The 6 months period should be within 2 years from the time of application. For this purpose, section 4.7 of SPAN TS 3008:2022 is not applicable and data should represent normal plant operating conditions. ii. Product quantity tested is minimum one unit; or any numbers imposed by SPAN. iii. The validity of the test 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.	

NO	PRODUCT NAME	RECOGNISED STANDARDS	SPAN ADDITIONAL REQUIREMENTS
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. 5. For renewal of registration, supplier must submit supporting documents as follows: a) Product performance reports based on testing during pilot projects if applicable. If not, testing based on the appropriate performance or 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) 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 Digester / Slude Dryer / Sludge Reception Facilities / Sludge Screen		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 based on testing during pilot projects if applicable. If not, testing based on the appropriate performance or 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) The validity of the evaluation report is five (5) years from the date the report is issued.	
2	Sludge Dewatering / Sludge Thickener	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 based on the SPAN TS 3002:2021 and 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) The validity of the test report is five (5) years from the date the report is issued.	
3	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.	