



WATER PIPE

Introduction

ORIENTAL STEEL PIPE SDN. BHD. (OSPipe) is an entity wholly owned by Oriental Castle Sdn. Bhd., established and commenced operation in 2007. Equipped with 3 spiral pipe forming machines, OSPipe produces spiral welded steel pipe from its sites located at Pulau Indah, Klang, Selangor Malaysia and at Gelang Patah, Johor, Malaysia with a production capacity of up to 100,000mt per annum.

Pulau Indah, Port Klang, MY



Gelang Patah, Johor, MY



OSPipe plants comprise of the following facilities to provide one-stop solution to our customers :

- Spiral Line : 3 spiral pipe forming machines
- Capacity : 100,000 MT per annum
- Pipe OD : Up to 3000mm OD
- Pipe Wall : Up to 25mm thick
- Hydrostatic Test & End Forming
- Pipe Coating & Lining
- Fittings Fabrication

Driven by ambition and business expansion, Oriental Steel Pipe has built a modern automated spiral pipe plant with a water front access in Pulau Indah which is strategically located to serve projects throughout SE-Asia. OSPipe has the technology and the expertise to supply products that meets the various international standards & requirements.

For local water projects, our products are listed with "National Water Services Commission (SPAN), Malaysia" and certified by IKRAM QA SERVICES SDN BHD for conformance to SPAN TS 21827: PART 1 & PART 2: 2013 which is adopted & improved from MS1968:2007 & BS534.

In order to align the company policies, procedures and controls are needed to achieve the best possible working conditions. This will bring internationally recognized best practice into the business and achieve the maximum return for employees, operations and customers. OSP's Management Systems are accredited and certified to various applicable quality, environmental & safety systems.

ISO 9001: 2015 Quality Management System	ISO 14001: 2015 Environmental Management System	OHSAS 18001:2007 Occupational Health and Safety Assessment Series	CIDB Perakuan Pematuhan Standard (Bahan Binaan)	Product Certificate of Conformity SPAN TS 21827 : Parts 1 : 2013	Product Certificate of Conformity SPAN TS 21827 : Parts 2 : 2013

Production Process



Forming

Various diameters can be produced economically by changing the forming angle.



Welding

Automatic submerged arc welding from inside and outside.



Shearing

The pipe is sheared automatically to a specified length without stopping the other operation.



Lining

Different protection maybe applied to the internal wall of the pipes.



Coating

Different blasting & coatings system dependent on situations and requirements.



Testing & Inspection

Various testing are in place to ensure quality of the pipes.



Handling & Storage

Dedicated pipe curing area before delivery.



Capability Snapshot

Quality Standards

Mild steel pipes and fittings complying with MS 1968, SPAN TS 21827, BS EN 10224, BS EN 10311, AS 1579, AWWA C200, PUB

Water Pipe Scope

- Nominal diameter 600mm to 2200mm
- Lengths up to 14m

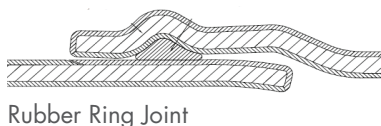
Fittings and Specials

Fabricate to order

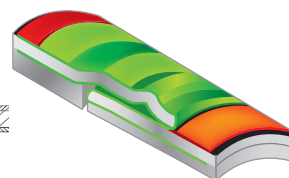


Joint Configurations

- Push-fit gasket joint (RRJ)
- Plain ended butt weld
- Socket and spigot slip-in joint
- Collar welded joint
- Flange joint



Rubber Ring Joint



Internal Lining & External Coating

Different protection may be applied to the external and internal surfaces of the pipes, subject to the environment condition and type of water the pipes intended to convey. Available applications are:

Surface Preparation

Proper surface preparation is essential for the success of any protective coating scheme. The importance of removing oil, grease, old coatings and surface contaminants (such as mill scale and rust on steel and zinc salts on galvanized surfaces) cannot be over emphasized.



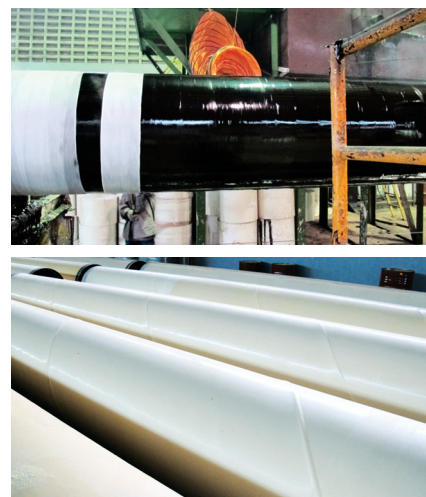
Internal lining

- Cement mortar
- High built epoxy
- 100% solid rigid polyurethane (PU)



External Coating

- Bitumen enamel and reinforced bitumen enamel wrapping
- 100% solid rigid polyurethane (PU)
- High built epoxy
- MDPE
- Multi layer polyethylene (PE)
- Concrete clad





INCOMING QC

- Coil inspection & measurements
- Charpy V-Notch Test
- Chemical Analysis



IN-PROCESS QC

- Radiography inspection – pipe ends, skelp joint and butt weld on specials
- Ultrasonic test – on spiral seam weld
- Hydrostatic test
- Concrete-cube strength test
- Engagement test
- Visual & Dimensional inspection
- Transvers Bend Test
- Tensile Test



OUTGOING QC

- Holiday test on coated surfaces
- Dye Penetration Test
- Visual & dimensional inspection

Technical Data For Water Pipe

COMPLYING TO "SPAN TS 21827 : PART 1 & PART 2 : 2013" In Malaysia, Adopted & Improved from MS 1968:2007 & BS 534.

ND	OD (mm)	Pipewall (mm)	Internal Cement Lining (mm)	External Bitumen Enamel Wrapped (mm)	Pipe Weight (Kg/m)	
					Bare Pipe	Coated & Lined
80	88.9	3.2	6	3	6.76	11.27
100	114.3	3.6	6	3	9.83	15.74
150	168.3	3.6	6	3	14.62	23.58
200	219.1	4	10	4.5	21.22	40.12
250	273	4	10	4.5	26.53	50.39
300	323.9	4	10	4.5	31.55	60.09
350	355.6	4.5	13	6	38.96	79.73
400	406.4	4.5	13	6	44.60	91.47
450	457	5	13	6	55.73	108.58
500	508	5	13	6	62.02	121.00
550	559	6.3	13	6	85.87	150.72
600	610	6.3	13	6	93.79	164.77
650	660	6.3	19	6	101.56	205.42
700	711	6.3	19	6	109.48	221.70
750	762	6.3	19	6	117.40	237.97
800	813	7.1	19	6	141.10	269.80
850	864	7.1	19	6	150.03	287.08
900	914	8	19	6	178.74	323.72
1000	1016	8	19	6	198.86	360.55
1200	1219	10	19	6	298.14	492.52
1400	1422	10	25	6	348.20	635.14
1600	1626	11	25	6	438.08	766.98
1800	1829	12.5	25	6	559.94	930.40
2000	2032	14.2	25	6	706.58	1,118.53
2200	2235	16	25	6	875.53	1,328.94
2300	2337	16	25	6	915.77	1,390.34
2400	2438	16	25	6	955.62	1,4514.41
2500	2540	17.5	25	6	1,088.58	1,604.72
2600	2642	17.5	25	6	1,132.60	1,669.89
2700	2743	17.5	25	6	1,176.19	1,734.43

Notes:

- The above data are for Standard Pipes Dimension applicable for SPAN Regulated Water Works in Malaysia. Other set of size range are available upon request.
- Steel Grade to BS EN 10025 S275JR or equivalent.

Technical Data For Water Pipe - Singapore

Public Utilities Board (Water Supply) Regulations and Singapore Standard CP 48 : Code of Practice for Water Services.

ND	OD (mm)	Pipewall (mm)	Internal Cement Lining (mm)	External Bitumen Enamel Wrapped (mm)	Pipe Weight (Kg/m)	
					Bare Pipe	Coated & Lined
100	118	6	6	3	16.58	22.48
150	170	6	6	3	24.27	33.11
200	222	6	10	4.5	31.96	50.85
300	326	6	10	4.5	47.35	75.79
400	426.2	6	13	6	62.18	111.14
500	506.9	6	13	6	74.12	132.77
700	667.2	6	19	6	97.84	202.96
800	825.9	8	19	6	161.36	291.92
900	933.5	9.5	19	6	216.47	364.24
1000	1028.7	12.7	19	6	318.2	480.67
1200	1244.7	12.7	19	6	385.85	583.68
1400	1422.4	12.7	25	6	441.5	727.54
1600	1549.4	12.7	25	6	481.27	793.66
1800	1746.3	12.7	25	6	542.94	896.17
1900	1911.3	15.9	25	6	743.18	1129.48
2200	2216.2	15.9	25	6	862.73	1,312.27

Notes:

- The above data are for Standard Pipes Dimension applicable for PUB Regulated Water Works in Singapore. Other set of size range are available upon request.
- Steel Grade to BS EN 10025 S275JR or equivalent.

EN 10219-1

Steel Grade	Min Yield Strength (T ≤ 16mm) N/mm ²	Min Yield Strength (16 < T ≤ 40mm) N/mm ²	Min Ultimate Tensile Strength (3 < T ≤ 40mm) N/mm ²	Min Elongation (T ≤ 40mm) %
S 235 JRH	235	225	340 - 470	24
S 275 JOH	275	265	410 - 560	20
S 355 JOH	355	345	490 - 630	20
S 420 MH	420	400	500 - 660	19
S 460 MH	460	440	530 - 720	17

Tolerances	EN 10219 - 2
Outside diameter (D)	±1%, min ±0.5mm and max ±10mm
Wall thickness (T)	±10%, max ±2mm (D > 406mm)
Straightness	0.20% of total length
Out of roundness	±2%
Mass	±6%
Maximum weld bead height (submerged weld)	3.5mm (T ≤ 14.2mm) 4.8mm (T ≤ 14.2mm)

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