TYTON® Z+ DUCTILE IRON PIPE SYSTEMS
PN30/25 RUBBER RING JOINT DN375-750

For Potable Water, Raw Water, Sewer and Aggresive Fluids

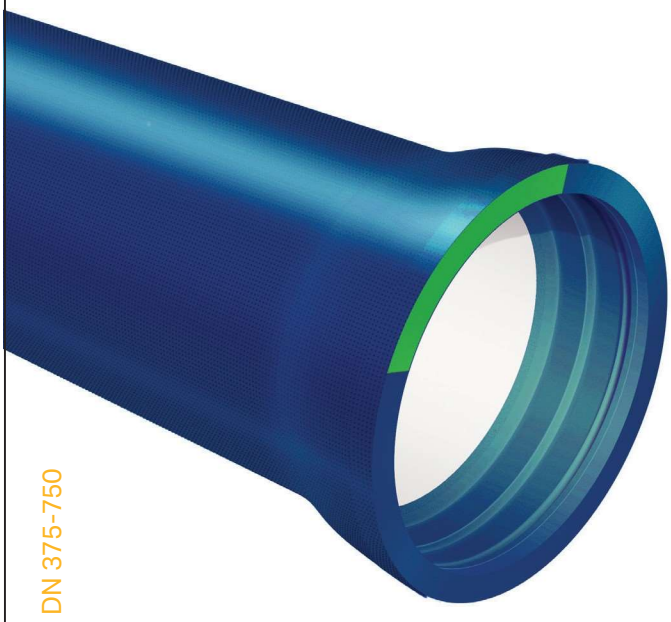
DIMAX
Quality you demand

THE BENEFITS OF DUCTILE IRON

Pressure Class PN30/25 is a cost-effective solution for lower pressure pipelines without compromising on strength, flexibility and ease of installation.

Peace of mind considering water hammer, rogue surges, cyclic stresses, varying soil loads, unpredictable traffic loads, and all unforseen rigours of a pipe system in construction, operation and maintenance.

Operational savings and benefits via larger bores with reduced headlosses,reduced pumping costs and increased flows.



DN 375-750

Z+ ZINC/ALUMINIUM/RARE EARTH ALLOY & SYNTHETIC RESIN COATING

Z+ is a modern, highly effective Active Corrosion protection layer made up of Zinc, Aluminium and Rare Earths. Applied at 400g/m2, Z+ is twice the density required by AS2280 for Zinc and is finished with an100µm average synthetic resin layer. Active protection means the pipe continues to be protected in the case of superficial damage to the external coating.

Z+ gives you the opportunity to take advantage of a factory applied corrosion protection system which will extend the life of your pipeline and reduce on site handling by eliminating the requirement for polyethylene sleeving.

THE Z+ ADVANTAGE

Z+ Provides for exceptional pipeline performance and durability.

Pipe life increased to 3 times that of standard zinc coated pipe.

Suitable for more than 95% of the most frequently encountered ground types.

Soil assessment must be carried out to ensure resistivity is greater than 500 ohm.cm prior to sleeveless installation.

Speak to us about soil assessment options where required.

TYTON XCEL Z+

TYTON XCEL is synonymous with the introduction of pressure class DI Pipe into Australia. Efficiency gains and cost savings are achieved without sacrificing the time proven superior performance capabilities associated with ductile iron.

Lining Opions
The standard lining is a centrifugally spun cement mortar lining made up of Type SR (Sulphate Resisting) cement.

An additional Seal Coat applied to the cement lining surface is available as an option to inhibit the leaching of lime where very aggressive, soft waters of low hardness (total alkalinity <30mg/L) or high dissolved C02 are being conveyed.

For the conveyance of potable water, recycled water & raw water

TYTON XTREME Z+

TYTON XTREME incorporates a highly wear resistant Calcium Aluminate Cement (CAC) mortar lining.

This lining protects the internal surface from corrosion, tuberculation and bacteriogenic acid attack when conveying aggressive fluids common in sewage and wastewater pipelines. Perfectly watertight & prevents root ingress.

For the conveyance of wastewater including:

- Gravity & Pressure Sewer effluent
- Domestic waste waters
- Mining slurries & process water
- Fluids between pH4 and pH12

TYTON XCEED Z+

When it comes to highly aggressive fluids Polyurethane (PU) is the lining which simply exceeds all expectation.

TYTON XCEED's PU lining is applied in accordance with EN15655 and has an average thickness of 1300-1500µm.

For the conveyance of potable water, wastewater & sewer including:

- Very soft water (hardness less than 1mg/L) combined with extremely long residence times
- Mineral water, i.e. water whose chemical specifications must remain unchanged between the pipeline inlet and outlet
- Aggressive conveyants including septic sewage, high CO2, chlorides, sulphates & brine

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For Potable Water, Raw Water, Sewer and Aggressive Fluids

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NOMINAL SIZE		Symbol	Units	375	450	500	600	750
KEY METRICS	Nominal pressure	PN	Nom	30	30	30	30	25
	Mean external diameter	Øy	mm	426	507	560	667	826
	Effective laying length	L_e	m	5.70	5.70	5.70	5.70	5.70
	Joint defelection	°	deg	2.5	2.5	2.5	2.5	1
UNLINED PIPE	Mean internal diameter	DI	mm	413	493	544	649	807
	Pipe barrel mass per metre	m_u	kg/m	58.6	79.7	95.4	131.2	171.8
	Pipe mass including socket	M_u	kg	367	492	586	799	1,048
SOCKET	Socket mass	S	kg	32.7	37.8	42.6	51.2	68.5
DI WALL THICKNESS	Nominal	t	mm	6.3	7.2	7.8	9.0	9.5
	Minimum	a	mm	4.6	5.4	6.0	7.1	7.4
CEMENT MORTAR LINED PIPE	Mean internal diameter	D_c	mm	404	484	535	640	796
	Nominal CML thickness	t_c nom	mm	5	5	5	5	6
	Minimum CML thickness	t_c min	mm	3.5	3.5	3.5	3.5	4.5
	Pipe barrel mass per metre	m_L	kg/m	72.4	96.3	113.7	153.0	205.0
	Pipe mass including socket and CML	M_l	kg	446	587	691	924	1,237
THEORETICALLY RATED PRESSURES	Allowable operating pressure	AOP	MPa	3.06	3.01	3.03	3.01	2.53
	Maximum allowable operating pressure	MAOP	MPa	3.67	3.62	3.64	3.62	3.04
	Allowable site test pressure	ASTP	MPa	3.82	3.77	3.79	3.77	3.16
	Burst pressure	BURST	MPa	9	9	9	9	8
STRUCTURAL & HYDRAULIC PROPERTIES	Transform wall thickness	t_t	mm	5.80	6.65	7.25	8.40	8.90
	Celerity of mean CML bore	c	m/s	1,048	1,038	1,034	1,026	985
	Barrel ring stiffness	S_D	kN/m/m	37	33	32	29	18
	Buckling pressure	P	kPa	392	350	337	310	193
FREIGHT	Pipes (lined) per truck	P/T	n	40	24	24	12	8
	Kilos per truck	n x M_L	kg	17,824	14,077	16,580	11,082	9,897
WATER MASS	Mass of water contained in pipe	m_w	kg/m	128	184	225	322	498
MASS FULL	Mass of pipe full of water	M_T	kg/m	206	286	345	484	715
BENDING MOMENT AND FOS AGAINST FLEXURAL YIELD	Moment = $wL^2/8$ for simply supported beam over ELL	M_B	kNm	8.23	11.42	13.80	19.27	28.47
	y = DE/2	y	mm	213	254	280	334	413
	I = π (Do^4-Di^4) /64	I	mm^4	1.35E+08	2.68E+08	4.01E+08	8.01E+08	1.59E+09
	σ = My/I Note max M = $3wl^2/8$	σy	MPa	39	32	29	24	22
	FOS = Yield stress / Working stress	FOS	ŋ	7.7	9.3	10.4	12.5	13.6

CERTIFICATIONS

AS/NZS2280 – Ductile Iron Pipes & Fittings
Licence No. - WMK26514 SMK26514
AS4020 – Testing for use in contact with drinking water
EN15655.1 - Polyurethane lining of pipes and fittings

WaterMark

Certified Product™