新兴铸管
XINXING PIPES

离心球墨铸铁管
DUCTILE IRON PIPES

SWATCO
السعودية لتكنولوجيا المياه
SAUDI WATER TECHNOLOGY
The Agent in Kingdom Of Saudi Arabia

新兴铸管股份有限公司
XINXING DUCTILE IRON PIPES CO., LTD.

专注输水安全
承载品质生活

FOCUS ON WATER DELIVERY SAFETY

TO PROVIDE HIGH QUALITY LIFE

公司简介

COMPANY PROFILE

世界 500 强——新兴际华集团有限公司，由解放军总后勤部原生产部及所辖军需企事业单位整编重组脱钩而来。目前作为国务院国资委监管的中央企业，是集资产管理、资本运营和生产经营于一体的大型国有独资公司。

新兴铸管股份有限公司是新兴际华集团的核心企业，是以铸管、钢铁、机械等多业并举，跨地区、跨行业、集科工贸于一体的上市公司，是全国 520 家重点企业之一， 2016 年公司实现销售收入 521.6 亿元。

新兴铸管股份有限公司拥有河北邯郸、安徽芜湖、湖北黄石、新疆库尔勒、湖南益阳、广东阳江等八大离心球墨铸铁管及管件生产基地 , 下设十个生产厂 , 生产 DN80 至 DN2600mm、长度为 6 米和 8.15 米的各种规格、各种涂层的离心球墨铸铁管，年生产能力为 3.8 万公里管道。新兴铸管的综合技术实力和生产规模位居世界前列。目前国内市场占有率 45% 以上，超过 30% 的产品出口到世界 120 多个国家和地区。

目前已形成新兴铸管、新兴管件、新兴钢铁、新兴复合管、新兴格板等系列产品。公司连续 13 年创造铸管产量、技术经济指标、出口创汇、市场占有率等多项中国企业新纪录，连续 8 年入选“中国最具发展潜力的上市公司 50 强”，2017 年公司荣获“2015-2016 年度全国优秀水利企业”荣誉称号。

整体通过了 GB/T28001 职业健康安全管理体系、ISO14001 环境管理体系和 ISO9001 质量管理体系认证。公司的离心球墨铸铁管通过了法国 BV、韩国 KS 等质量认证，其“新兴”商标为中国驰名商标。

Xinxing Cathay International Group Co., Ltd., one of the world’s top 500 enterprises, was reorganized from the original production department of the general logistics department of PLA and military enterprises and institution. At present, as a central enterprise supervised by the SASAC (State-owned Assets Supervision and Administration Commission) of the state council, it is a large state-owned company that integrates asset management, capital operation and production management.

Xinxing Ductile Iron Pipes Co., Ltd, as the core enterprise of Xinxing Cathay International Group, is a listed company that combines the construction of pipe, steel, machinery and other industry simultaneously, and trans-regional, cross-industry, integrated operation of science, industry and trade. It’s one of the 520 key enterprises in the country and the company owned ¥52.16 billion sales revenue in 2016.

Xinxing Ductile Iron Pipes Co., Ltd. has eight production bases of large centrifugal ductile iron pipes and fittings, which located in Handan, Hebei province; Wuhu, Anhui province; Huangshi, Hubei province; Korla, Xinjiang Uygur Autonomous region; Yiyang, Hunan province; Yangjiang, Guangdong province and so on, which has ten production plants, producing all kinds of centrifugal ductile iron pipes with various specifications and coatings of DN80 to DN2600mm, length of 6meters and 8.15meters, which has 38000 kilometers pipeline annual production capacity. Its comprehensive technical strength and production scale rank forefront of the world. Currently the domestic market share is more than 45%, and over 30% of the products are exported to 120 countries and regions.

So far, the company has formed Xinxing pipes, Xinxing fittings, Xinxing iron and steel, Xinxing composite pipe, Xinxing steel bar grating and other series products. The company has been creating many new records of Chinese enterprises in pipe production, technical and economic indicators, export earnings and market share for 13consecutive years, and has been selected as “China’s most potential for the development of listed companies 50 top” for 8 consecutive years. In 2017 the company was honored the “2015-2016 National outstanding water conservancy enterprises”.

The company has passed GB/T28001 occupational health and safety management system, ISO14001 environmental management system and ISO9001 quality management system certification. The company’s centrifugal ductile iron pipes has passed the French BV, Korea KS and other quality certification, and it’s “Xinxing” trademark is a well-known trademark in China.

离心球墨铸铁管介绍

INTRODUCTION OF CENTRIFUGAL DUCTILE IRON PIPES

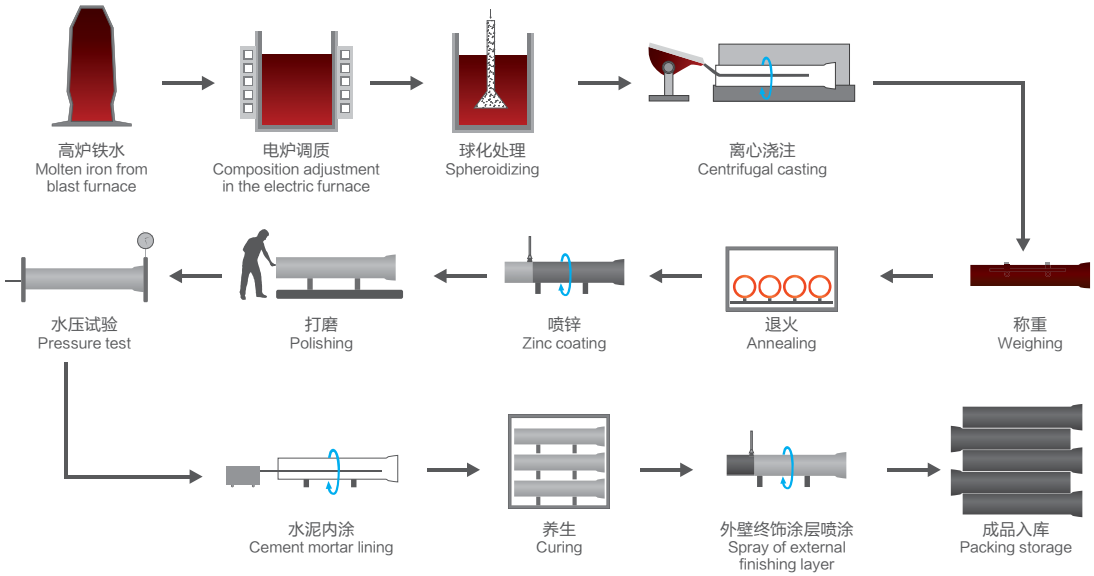
球墨铸铁材料具有同碳钢接近的力学性能，如机械强度高、韧性好等，同时具有铸铁特有的耐腐蚀性能，逐渐成为当今世界给排水领域最安全可靠的管材。

新兴铸管股份有限公司可以提供符合 ISO 2531/7186 或 EN 545/598 等标准要求、规格范围为 DN80 ~ DN2600mm 的球墨铸铁管产品。

The ductile iron material features similar mechanical properties with carbon steel, such as high mechanical strength, good ductility, and the same anti-corrosion performance as cast iron. Therefore, it has gradually become the world's most safe and reliable pipes in the field of water supply and drainage.

Xinxing Ductile Iron Pipes Co., Ltd. provides ductile iron pipe products ranging from DN80 ~ DN2600mm in accordance with ISO 2531/ISO7186 or EN 545/EN598.

制造工艺介绍 MANUFACTURING PROCESS



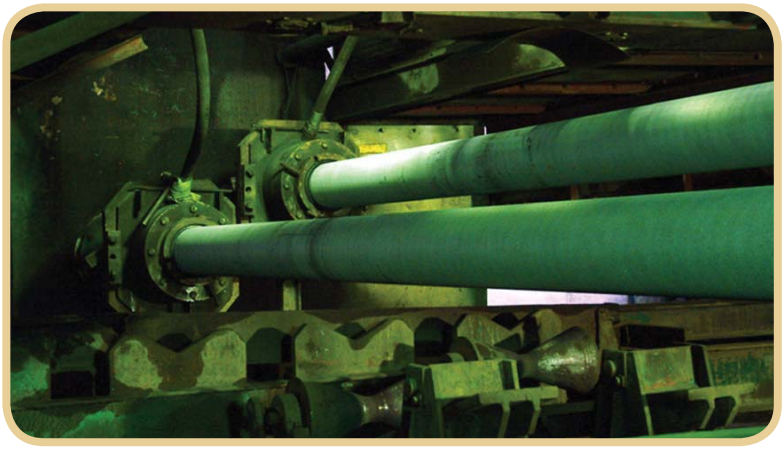
球墨铸铁管制造工艺
Manufacturing process for ductile iron pipe

性能指标 Performance indicators	球墨铸铁管 Ductile iron pipes	灰铁管 Gray iron pipes	钢管 Steel pipes
抗拉强度 (MPa) Tensile strength	⩾ 420	150 ~ 260	⩾ 400
抗弯强度 (MPa) Bending strength	⩾ 590	200 ~ 360	⩾ 400
延伸率 (%) Elongation	DN40 ~ 1000 ⩾ 10 DN1100 ~ 2600 ⩾ 7	–	⩾ 18
弹性模量 (N/mm2) Elastic modulus	约 16 × 104	约 11 × 104	约 16 × 104
硬度 (HB) Hardness	⩽ 230	–	约 140

INTRODUCTION OF CENTRIFUGAL DUCTILE IRON PIPES

日本宫城大地震各种管材破损情况
Breakage rate table

管 种 Pipe	平均破损率 / 公里 Average breakage rate/KM	备注 Note
DIP(球管)	0.04	灰铁管、塑料管每公里平均被害率为球墨铸铁管的四倍。 The average damage rate of CIP and VP per kilometer is four times of DIP.
CIP(灰铁管)	0.17	
VP (塑料管)	0.17	
SP (钢管)	1.24	



实验压力
Experimental pressure

公称直径 Nominal diameter	K9 级水压实验压力 MPa Pressure of K9 level hydrostatic experiment
80–300	6.0
350–600	5.0
700–1000	4.0
1100–2000	2.7
2200–2600	2.0

离心球墨铸铁管介绍

INTRODUCTION OF CENTRIFUGAL DUCTILE IRON PIPES

新兴铸管拥有专业的技术团队为客户提供系统管材连接的解决方案。目前离心球墨铸铁管接口种类分为以下几种：

Xinxing ductile iron pipe owns a professional technical team to provide customers with pipe connection solutions. At present, the types of centrifugal ductile iron pipe joint are divided into the following:

接口型式 Joint type		规格范围 Specification range	防腐涂层 Anti-corrosion coating	
			内防腐涂层 Internal lining	外防腐涂层 External coating
柔性接口 Flexible joint	T 型接口 T-type joint	DN80~2000	水泥砂浆内衬 水泥砂浆内衬 + 环氧封面涂层、 聚氨酯涂层 环氧陶瓷涂层 Cement mortar lining Cement mortar lining +epoxy seal coat Polyurethane lining Ceramic epoxy lining	锌 + 高氯化聚乙烯终饰层 锌 + 环氧树脂终饰层 聚氨酯涂层 Zinc + high chlorinated polyethylene finishing layer Zinc + epoxy coating Polyurethane coating
	XT2 型接口 XT2-type joint	DN80~2600		
自锚接口 Self-anchored joint	TF 接口 TF joint	DN80~1200		
	新兴锚接口 Xanchor joint	DN1400~2600		
刚性 Rigid	焊接法兰接口 Welded flange joint	DN80~2000		
XTJ 顶管 XTJ jacking pipe		DN250~2000		

适用于 DN80~DN300 的 XT2 St 自锚接口球墨铸铁管，适用于 DN300~DN1200 的 SIA Wb 自锚接口球墨铸铁管，适用于 DN1400~DN2000 的新兴锚 ® 自锚接口球墨铸铁管。

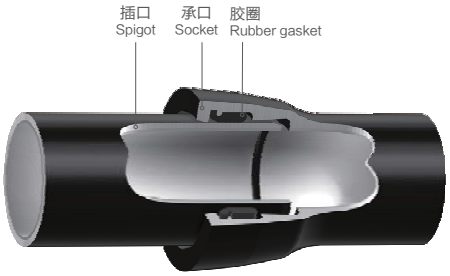
XT2 St Self-Anchored joint ductile iron pipes suitable for DN80~DN300, SIA Wb Self-Anchored joint ductile iron pipes suitable for DN300~DN1200, Xanchor ® Self-Anchored joint ductile iron pipes suitable for DN1400~DN2000.

T 型接口球墨铸铁管接口介绍 DESCRIPTION OF T-TYPE JOINT DUCTILE IRON PIPE

密封原理 Sealing principle

T 型接口的结构如图所示。接口安装时，管子的插口外壁挤压安放在承口内的橡胶圈，使其压缩变形而产生一定的接触压力，利用橡胶圈的自密封作用来保持接口的密封性。

The structure of the T-type joint is shown in the figure. During joint installation, the external spigot is extruded on the rubber ring inside the socket, so that the compression deformation can generate a certain of contact pressure, and the sealing function of the rubber ring is used to keep the joint tight.

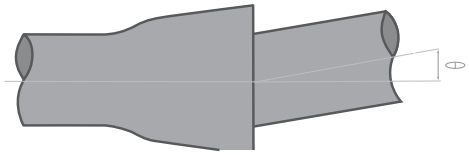


T 型接口结构示意图
T-type joint structure

接口特点 Joint features

该接口具有结构简单，安装方便，密封性能好等特点。在承口结构上考虑了密封圈的定位和接口的偏转，通过控制插口的安装深度，使得接头具有一定的轴向伸缩量，因此，这种接口能适应一定的基础沉降，同时可利用其偏转角 θ 实现管线长距离的转向安装，接口偏转安装如图所示。

胶圈由硬胶和软胶两部分组成，硬胶对管道接口有一定支撑和对心作用，同时安装时也需要更大的推力。



接口偏转示意图
Joint deflection

The joint has the characteristics of simple structure, convenient installation and sound sealing performance. The positioning of the sealing rings and the deflection of the joint are considered during socket structure design. By controlling the installation depth of the spigot, the joint has a certain axial flexibility. Therefore, this joint can adapt to certain foundation subsidence, and can utilize its deflection angle θ to realize long-distance steering installation of pipelines, the joint deflection installation is shown in the figure.

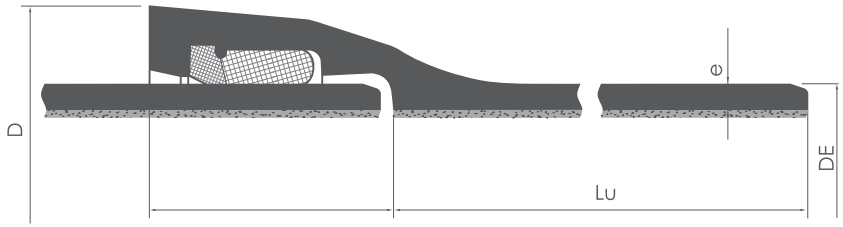
The rubber ring consists of two parts, i.e. the hard rubber and soft rubber. The hard rubber can support and align the pipe joints, and greater thrust is needed during installation.

使用领域 Application field

有 / 无压输水（饮用水、污水等）管线；
地下 / 地上铺设，且管道的敷设坡度不超过 20%（地上铺设）或 25%（地下铺设）时。

Pressure/non-pressure water supply (potable water, sewage, etc.) pipeline;
Belowground/aboveground lying, and the pipe laying slope does not exceed 20% (aboveground) or 25% (belowground).

技术参数
Technical parameters

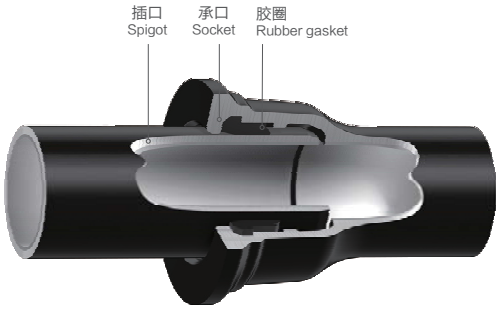


T 型接口球墨铸铁管技术参数表
Technical Parameters of T-type Joint Ductile Iron Pipe

DN	DE（mm）	D（mm）	P（mm）	θ（°）	单支管道末端位移量 Single pipe end displacement（mm）	Lu（mm）	K9		C 级管[1] C-class[1]	
							e_{nom}（mm）	PFA（bar）	e_{nom}（mm）	PFA（bar）
80	98	140	85	5	522	6000	6	64	4.4	40
100	118	163	88				6		4.4	
125	144	190	91				6		4.5	
150	170	217	94				6		4.5	
200	222	278	100				6.3	62	4.7	
250	274	336	105				6.8	54	5.5	
300	326	393	110				7.2	49	6.2	
350	378	448	110	4	418		7.7	45	6.3	30
400	429	500	110				8.1	42	6.5	
450	480	540	120				8.6	40	6.9	
500	532	604	120	3	314		9	38	7.5	
600	635	713	120	2.5	261		9.9	36	8.7	
700	738	824	150				10.8	34	8.8	25
800	842	943	160				11.7	32	9.6	
900	945	1052	175				12.6	31	10.6	
1000	1048	1158	185				13.5	30	11.6	
1100	1152	1270	202		261/355	6000/8150	14.4	29	12.6	
1200	1255	1378	217				15.3	28	13.6	
1400	1462	1600	242				17.1	28	15.7	
1500	1565	1710	253				18	27	16.7	
1600	1668	1821	266				18.9	27	17.7	
1800	1875	2043	297	2	209/284		20.7	26	19.7	
2000	2082	2262	319				22.5	26	21.8	

[1] 符合 ISO 2531-2009 标准要求的首选压力等级的 C 级管。
[1] C-Class pipe of preferred pressure class complying with ISO 2531-2009

XT2 型接口球墨铸铁管接口介绍 DESCRIPTION OF XT2-TYPE JOINT DUCTILE IRON PIPE



XT2 型接口结构示意图
XT2-type joint

密封原理 Sealing principle

XT2 型接口的结构如图所示，其密封原理与 T 型接口类似，由于胶圈尾部为唇形结构，随着管线内部压力的不断升高，胶圈密封面与承插口的接触面就越紧密，密封性就越好，从而保证了可靠的密封性能。

The structure of XT2-type joint is shown in the figure. Its sealing principle is similar with that of T-type joint. As the sealing ring adopts lip-shaped structure, along with pipeline internal pressure rising, the tighter sealing surface of the sealing ring and contact face of socket and spigot, the better sealing, so as to ensure reliable sealing performance.

接口特点 Joint features

与 T 型接口类似。由于 XT2 型接口的密封胶圈采用唇形结构，管子安装时受到的胶圈阻力较小；（T 型胶圈也可使用）。

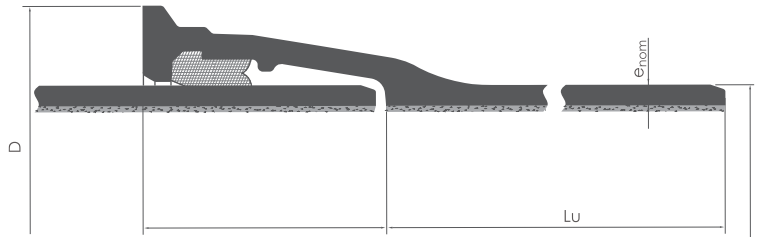
Similar with the T-type joint, as the sealing ring of XT2-type joint adopts the lip-shaped structure, the resistance of the sealing ring is smaller when the pipe is installed (T-type sealing gasket can also be used).

使用领域 Application field

同 T 型接口。

The same with T-type join。

技术参数
Technical parameters



XT2 型接口球墨铸铁管技术参数表
Technical Parameters of XT2-type Joint Ductile Iron Pipe

DN	DE（mm）	D（mm）	P（mm）	θ（°）	单支管道末端位移量 Single pipe end displacement（mm）	Lu（mm）	K9		C 级管[1] C-class[1]	
							e_{nom}（mm）	PFA（bar）	e_{nom}（mm）	PFA（bar）
80	98	140	92.5	5	522	6000	6	64	4.4	40
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400	429	500	112.5				8.1	42	6.5	
450	480	540	115.0				8.6	40	6.9	
500	532	604	117.5				9	38	7.5	
600	635	713	122.5				9.9	36	8.7	
700	738	824	147.5				10.8	34	8.8	25
800	842	943	147.5				11.7	32	9.6	
900	945	1052	147.5				12.6	31	10.6	
1000	1048	1158	157.5				13.5	30	11.6	
1200	1255	1377	167.5		418/568	6000/8150	15.3	28	13.6	
1400	1462	1610	245.0	3	314/426		17.1	28	15.7	
1600	1668	1820	275.0				18.9	27	17.7	
1800	1875	2050	285.0	2.5	261/355		20.7	27	19.7	
2000	2082	2266	290.0	2	209/284		22.5	26	21.8	
2200	2288	2482	328.0	1.8	188/256		24.3	25	23.8	
2400	2495	2702	346.5				26.1	25	25.8	
2600	2702	2921	365.0				27.9	25	27.9	

[1] 符合 ISO 2531-2009 标准要求的首选压力等级的 C 级管。
[1] C-Class pipe of preferred pressure class complying with ISO 2531-2009

自锚管接口球墨铸铁管

SELF-ANCHORED JOINT DUCTILE IRON PIPE

自锚接口采用特殊的机械设计，将承插口锚固在一起，防止接口滑脱，同时保留了滑入式接口的柔性，允许一定的偏转角度。利用自锚接口能够将轴向力相互传递的特点，通过该段管线与周围土壤所产生的摩擦力和被动土压力，有效地抵消轴向和径向产生的水力推力，从而可以取代支墩的功能，实现免支墩设计。

新兴铸管设计生产的自锚接口具有柔性可偏转、结构简单、承压能力高、抗拔脱能力可靠等特点，因此可应用于以下领域：

- 空间、时间或经济条件不适合设置支墩的情况；
- 管线铺设时，地上铺设管线坡度超过 20% 或地下铺设管线坡度超过 25% 的情况；
- 具有一定地基沉降的情况。

本手册分别介绍了适用于 DN80~DN1200 的 TF 自锚、SIA Wb 自锚接口球墨铸铁管，适用于 DN1400~DN2000 的新兴锚®（Xanchor®）自锚接口球墨铸铁管。

The self- anchored joint adopts special mechanical design, anchoring the socket and spigot to prevent the joint slipping, at the same time retaining the flexibility of the sliding-into joint, allowing a certain deflection angle. Using the convey characteristics of axial force of self-anchored joint, through the friction and passive earth pressure generated by pipeline and the surrounding soil, it can effectively offset the axial and radial hydraulic thrust, so that replace the function of the concrete blocks to achieve the design of free concrete blocks.

The self-anchored joint, designed and produced by Xinxing ductile iron pipes, has the characteristics of flexible deflection, simple structure, high pressure bearing capacity and reliable ability to resist pullout, so it can be applied in the following fields.

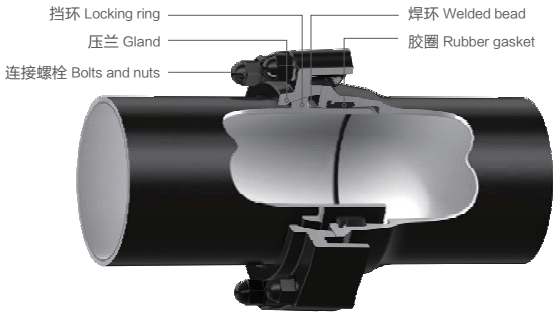
- Conditions for not suitable for concrete blocks accounting for apace, time or economic conditions;
- Conditions for the slope of the ground laying pipelines exceeding 20% or underground laying over 25% when pipelines laid;
- Conditions for a certain foundation settlement;

This manual describes TF self-anchored and SIA Wb self-anchored joint ductile iron pipes suitable for DN80~DN1200 and Xanchor®self-anchored ductile iron pipes suitable for DN1400~DN2000.

TF 自锚管接口球墨铸铁管接口介绍 DESCRIPTION OF THE TF SELF-ANCHORED JOINT DUCTILE IRON PIPE

接口构造 Joint structure

TF 自锚接口采用了 T 型接口的密封结构。相比 T 型接口，它增加了焊接在管子插口端的焊环、活动开口挡环、特殊压兰以及连接螺栓等附件，使接口具有较好的抗拔脱能力。挡环和压兰之间可以滑动，使接口具有一定的轴向伸缩和偏转能力。



TF 型接口结构示意图
TF self-anchored joint structure

TF self-anchored joint adopts the sealing structure of T-type joint. Compared with the T-type joint, it increases a welded bead on the spigot end of the pipe, an open-end locking ring, a special gland and connecting bolts to provide the joint with good anti-slippage performance. The locking ring and the gland can slide between each other, so that the joint has a certain axial stretching and deflection capacity.

工作原理 Working principle

压力管线在拐弯、三通等处产生的轴向推力使接口处的承插口组件产生相对位移。插口端轴向应力通过焊环、挡环、压兰、连接螺栓传递给承口，从而实现了轴向应力的传递，使接口具备防滑脱能力。当形成约束连接一定长度的管道与周围土壤的摩擦力超过管道内部产生的轴向应力时，就能保证管道的安全运行，从而避免了砌筑混凝土支墩（镇墩）。

The axial thrust forces produced at the bending places and tees of the pressure pipeline will cause the socket and spigot components to have relative displacement. Axial stress generated at spigot is passed on to the socket through welded bead, locking ring, gland and connecting bolts, enabling the transmission of axial stress to equip the joint with good anti-slippage performance. When the friction between the restrained pipeline and its surrounding soil is greater than the axial stress generated inside the pipe, safe operation of the pipeline can be guaranteed, thus avoiding the set-up of concrete block.

使用领域 Application field

在下列情况下可通过铺设一定长度的自锚接口球墨铸铁管来防止管线接口滑脱：

1. 弯头、三通、异径管和堵头等处；
2. 当管线的敷设坡度超过 20%（地上铺设）或 25%（地下铺设）时；
3. 设置混凝土支墩不经济时（如大口径高压管线等）或在某些特殊情况下，设置支墩措施不能实施时，如：

A 施工场地过于狭窄，没有空间设置规范规定的支墩；

B 施工工期紧张等。

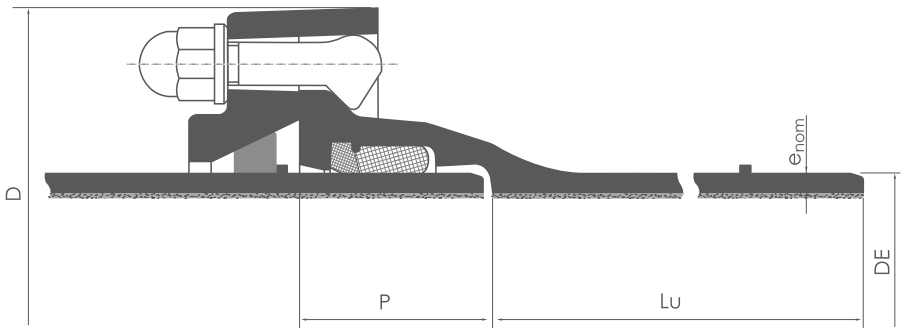
In the following cases, a certain length of self-anchored ductile iron pipes can be used to prevent pipeline joint slippage:

1. Places such as bends, tees, reducers and plugs, etc;
2.When the pipeline laying slope exceeds 20% (aboveground) or 25% (belowground);
3. When the concrete block is uneconomical (such as large diameter high-pressure pipeline, etc.) or in some special cases, the set of block measures cannot be implemented, for example:

A. The construction site is too narrow; there is no space to set up specified concrete block;

B. Construction schedule is tight.

技术参数
Technical parameters



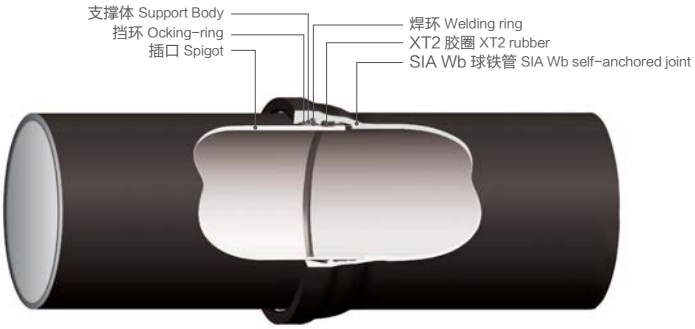
TF 自锚接口球墨铸铁管技术参数表
Technical Parameters of TF Self-anchored Joint Ductile Iron Pipe

DN	DE mm	D mm	P mm	θ °	单支管道末端位移量 Single pipe end displacement (mm)	Lu mm	K9	
							e_{nom} mm	PFA[1] bar
80	98	243	85	5	522	6000	6.0	25
100	118	264	88				6.0	
150	170	321	94				6.0	
200	222	375	100	4	418		6.3	
250	274	433	105				6.8	
300	326	509	110				7.2	
350	378	567		3	314		7.7	
400	429	591.6					8.1	16
450	480	675	120				8.6	
500	532	700					9.0	
600	635	811					9.9	
700	738	935	150	2	209		10.8	
800	842	1048	160				11.7	
900	945	1158	175	1.5	157		12.6	
1000	1048	1308	185				13.5	
1100	1152	1420	200		157/213	6000/8150	14.4	10
1200	1255	1539	215				15.3	

注：如果需要其他厚度级别或者更高压力的管道，请联系我们。
Note: For pipes with other thickness class or with higher pressure, please contact us.

SIA Wb 自锚接口球墨铸铁管 SIA WB SELF-ANCHORED JOINT DUCTILE IRON PIPE

接口介绍 Joint structure



SIA Wb 自锚接口结构示意图
SIA Wb self-anchored joint structure

SIA Wb 接口的结构如图所示，接口主要包括承口、插口、挡环，承口的端部径向向内延伸形成一完整的环形壁部，插口的端部设置插口凸起（焊环），挡环为分体式结构，其包括多个挡环和多个橡胶支撑体；挡环上设置有固定孔，用来固定橡胶支撑体。

SIA Wb 接口球墨铸铁管是一种滑入式柔性自锚接口球墨铸铁管，承口内带有自锚仓和密封仓，插口端带有焊环，该接口管道通过承受轴向力实现自锚，规格范围为 DN300-DN1200。

The structure of the SIA Wb joint is shown in the figure. The joint mainly includes socket, spigot, and locking-ring. The end of the socket extends radically into a complete ring wall, end of spigot has a bump (welding ring), and the locking-ring is divided into the split structure, which comprises a number of locking-rings and rubber support bodies. The locking-ring is arranged with a fixing hole for fixing the rubber support body.

SIA Wb joint ductile iron pipe is a sliding type flexible self-anchored ductile iron pipe, with the self-anchor bin and seal silo, the socket end with a welding ring. The joint pipeline through the axial force to achieve self-anchored. The specification range is fromDN300 to DN1200.

密封原理 Working principle

SIA Wb 接口采用 XT2 胶圈进行接口密封，其密封原理与 XT2 型接口相同。

The SIA Wb joint adopts the XT2 rubber ring to seal the joint, and its sealing principle is identical to the XT2-type joint.

工作原理 Working principle

SIA Wb 接口自锚原理是：利用挡环组与插口焊环相互锚固产生可靠的自锚能力，挡环组包括多个挡环与橡胶支撑体，支撑体在承口自锚仓内可将挡环均匀地向管道轴心支撑，形成一个环形整体，具有较大柔性，同时，支撑体使得挡环始终与插口外壁及焊环紧紧接触，保证接口拥有可靠的自锚性能。

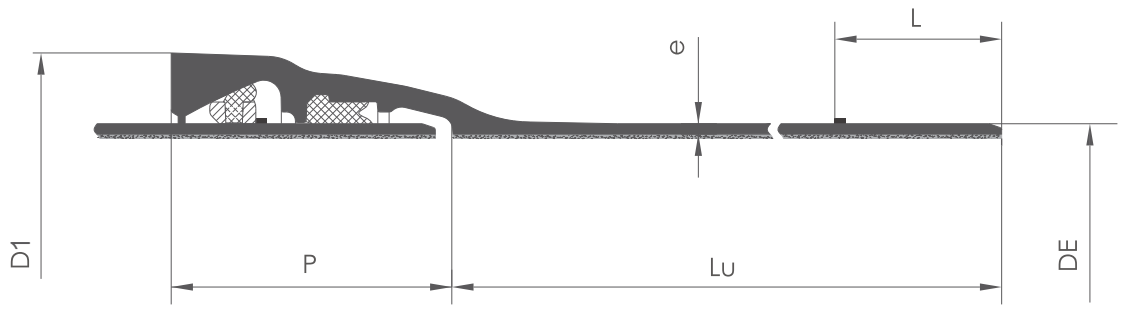
The self-anchored principle of SIA Wb joint is: the reliable self-anchor ability is produced by the mutual anchoring of the self- anchored component and the spigot welding ring, the self-anchor component comprises a plurality of locking-rings and rubber support body, the support body can uniformly support the locking ring to the shaft center of the bearing in the self-anchored bin, forming a circular whole, with greater flexibility. At the same time, the supporting body makes the lockingring tightly contact with the outer wall of spigot and the welding ring, ensuring the reliable jointself-anchoring performance.

使用领域 Application field

同 TF 自锚接口，此外该接口型式还可用于水平定向钻（HDD）施工。

It's the same as the TF self-anchored joint; besides this joint type can also be used for horizontal directional drill (HDD) construction.

技术参数
Technical parameters



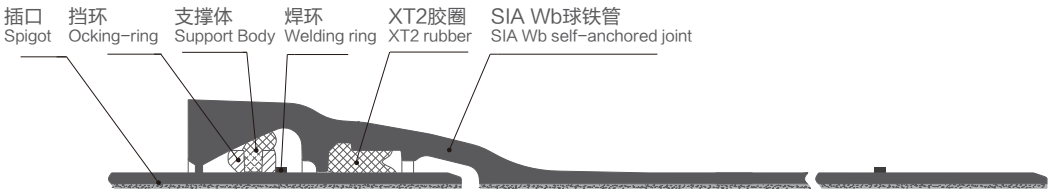
DN80-DN1200 SIA Wb 接口球墨铸铁管尺寸参数表
Technical Parameters of SIA Wb Self-anchored Joint Ductile Iron Pipe

DN	DE (mm)	D1 (mm)	P (mm)	L (mm)	Lu (mm)
80	98	160	135	85	5900
100	118	182	144	92	
150	170	239	150	95	
200	222	292	155	100	
250	274	345	160	103	
300	326	405	171	108	
350	378	461	175	110	
400	429	516	182	115	
450	480	568	186	115	
500	532	631	200	120	
600	635	738	223	136	
700	738	848	250	151	
800	842	964	265	161	
900	945	1072	281	170	
1000	1048	1180	285	172	
1100	1152	1291	298	182	8000
1200	1255	1414	323	192	

自锚管接口球墨铸铁管

SELF-ANCHORED JOINT DUCTILE IRON PIPE

技术参数
Technical parameters

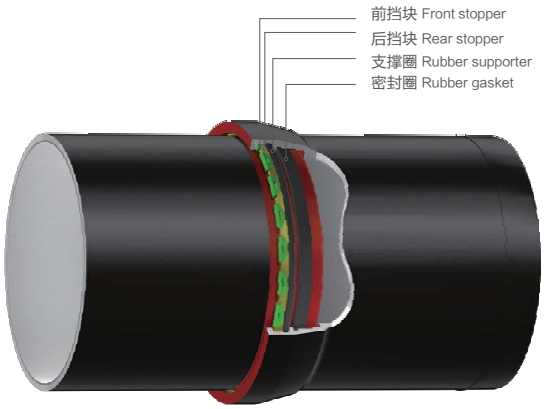


SIA Wb 接口球墨铸铁管性能参数表
Technical Parameters of SIA Wb Self-anchored Joint Ductile Iron Pipe

DN	接口偏转角 θ Deflection (°)	单支管道末端位移量 Single pipe end displacement (mm)	挡环数量 (块/套) Blocker quantity (unit/set)	支撑体（含螺钉）数量 (个) Rubber Supporter (including bolts) Quantity (unit)	K9		
					e (mm)	PFA (Mpa)	允许回拖力 Allowable Pulling Strength (KN)
80	3	308	3	6	6.0	4	30
100					6.0	4	44
150					6.0	4	91
200					6.3	4	155
250					6.8	4	236
300					7.2	4	334
350					7.7	3	337
400					8.1	3	434
450					8.6	3	543
500	2	205			9.0	2.5	556
600					9.9	2.5	792
700					10.8	2.5	1069
800			4	8	11.7	2.5	1392
900	1.5	154			12.6	2.5	1753
1000	1.2	123			13.5	2.5	2157
1100	1.1	153			14.4	2	2085
1200			6	12	15.3	2	2474

注：根据需要，也可以提供更高允许工作压力或允许拖拉力的管道。
Note: Pipes with higher PFA or higher drag force are also available.

新兴锚® 接口球墨铸铁管 XANCHOR® SELF-ANCHORED DUCTILE IRON PIPE



新兴锚® 接口结构示意图
Xanchor® Self-anchored Joint structure

接口介绍 Joint structure

新兴锚® 接口的结构如图所示，它采用了 XT2 型接口的密封结构，承口内设计有密封腔和挡块仓两个环形腔，密封腔安装 XT2 密封胶圈，挡块仓安装自锚组件，自锚组件由挡块 A、挡块 B、支撑胶圈和插口焊环组成。

The structure of the Xanchor® joint is shown in figure. It adopts the sealing structure of the XT2-type joint. The socket is designed with two annular chambers, i.e. sealed chamber and stopper chamber, and the sealed chamber is installed with the XT2 rubber gasket and the stopper chamber is installed with self-anchored components which are comprised of the block A, block B, and the supporting ring and welded bead.

密封原理 Working principle

新兴锚® 接口采用 XT2 胶圈进行接口密封，其密封原理与 XT2 型接口相同。

The Xanchor® joint adopts the XT2 rubber ring to seal the joint, and its sealing principle is identical to the XT2-type joint.

工作原理 Working principle

新兴锚® 接口的自锚工作原理与传统自锚接口有较大区别，其核心是利用前后两排刚性挡块提供可靠的防滑脱能力，同时前后排挡块沿挡块仓环向的滑动使接口具有较大的柔性，该设计使新兴锚® 接口与其他自锚接口相比结构更简单，安装更方便，同时具有更大的轴向抗拔脱能力和柔性。

The anchor principle of Xanchor® joint is quite different from the traditional self-anchored joint. The core is to provide reliable anti-slip capability through two rows of rigid blocks. Meanwhile, the circular sliding of the front and rear rows of blocks along the stopper chamber provides the joint with greater flexibility. Compared with other self-anchored joint, Xanchor® joint features simpler structure, easier installation, greater axial pullout capability and flexibility.

使用领域 Application field

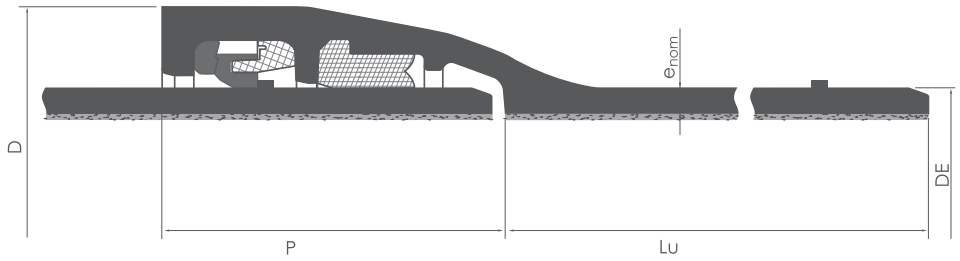
与 TF 接口相同。

The same with TF joint.

自锚管接口球墨铸铁管

SELF-ANCHORED JOINT DUCTILE IRON PIPE

技术参数
Technical parameters



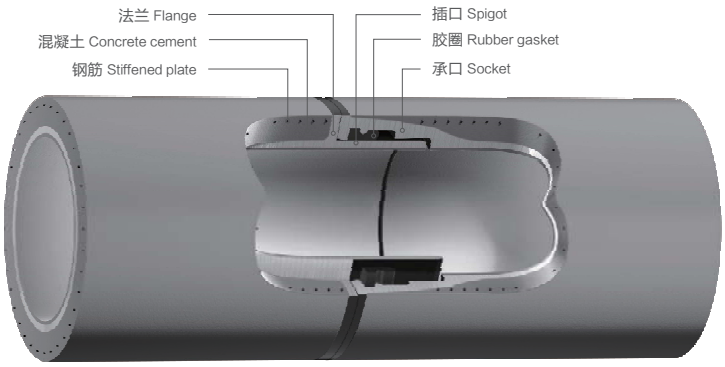
DN1400 ~ DN2600 新兴锚® 接口尺寸参数
Xanchor® Self-anchored Joint structure

DN	DE mm	D mm	P mm	L mm	L_u mm
1400	1462	1602	328	212	8000
1500	1565	1714	342	225	
1600	1668	1824	361	235	
1800	1875	2045	408	260	
2000	2082	2276	425	270	
2200	2288	2492	469	314	
2400	2495	2715	490	334	
2600	2702	2938	512	350	

DN	接口允许偏转角 θ Allowable Deflection (°)	单支管道末端位移量 Single pipe end displacement (mm)	挡块 A 数量 (个) Blocker A quantity (unit)	挡块 B 数量 (个) Blocker B quantity (unit)	K9 级 [1]	
					e_{nom}(mm)	PFA(bar)
1400	1.2	167	21	21	17.1	16
1500	1.1	153	21	21	18.0	
1600			23	23	18.9	
1800	1	139	25	25	20.7	
2000	0.8	111	27	27	22.5	
2200			29	29	24.3	
2400	0.75	104	31	31	26.1	
2600			33	33	27.9	

注 1：如果需要其他厚度级别或者更高压力的管道，请联系我们。
Note: For pipes with other thickness class or with higher pressure, please contact us.

XTJ 球墨铸铁顶管 XTJ DUCTILE IRON JACKING PIPE



XTJ 球墨铸铁顶管结构示意图
XTJ ductile iron jacking pipe structure

管体结构 Pipe structure

XTJ 顶管的结构如图所示，它是在 T 型接口球墨铸铁管的外壁上整体包覆了一个筒状结构的钢筋混凝土保护层，在管子的插口部位焊接顶推法兰。顶管施工时，顶推力通过焊接在插口处的带筋板的法兰均匀地传递给承口端面，从而保证在顶推操作中不会造成插口变形及外保护层的损坏。

The structure of the XTJ jacking pipe, as shown in the figure, is to make a tubular reinforced concrete protective layer on the external wall of T-type joint pipe. There is a jacking flange welded on the spigot of the pipe. During the pipe jacking, the jacking force is evenly transmitted from the flange with the ribbed plate welded at the spigot to the socket, thus ensuring the spigot deformation and the outer protective layer damage will not be caused during the pushing operation.

应用领域 Application field

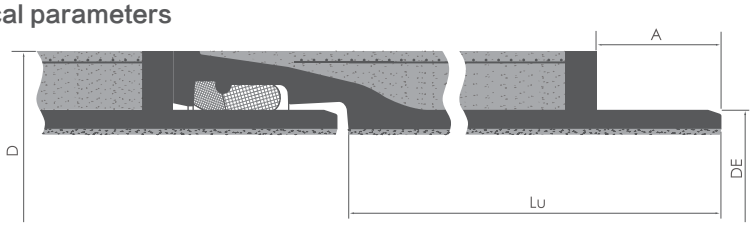
管线需要穿越公路、铁路、河流及地面建筑等障碍物，而施工现场不允许或难以在地面开挖管沟等施工工程。
XTJ 顶管采用 T 型柔性接口，具有密封性能好，施工快捷等特点，更可靠的内外防腐可以适应更多的土壤埋设环境和不同介质的输送。

Pipelines need to cross roads, railways, rivers and ground buildings, while trench excavation is not allowed or difficult to prepare on construction site.
XTJ jacking pipe adopts T-type flexible joint, which has the advantages of good sealing performance, fast construction and so on. More reliable internal and external anti-corrosion can be adapted to more soil burial environments and transmission of different media.

XTJ 球墨铸铁管顶管

XTJ DUCTILE IRON JACKING PIPE

技术参数
Technical parameters



XTJ 球墨铸铁顶管技术参数表

Technical Parameters of XTJ Ductile Iron Jacking Pipe

DN	尺寸参数 Dimensions					总重 Total weight (kg/ 支)	允许顶推力 Allowable jacking force	
	壁厚级别 Wall thickness class	DE mm	D mm	A mm	Lu mm		kN	Tonf
250	K9	274	344	100	4000	518	920	94
					6000	773		
300		326	399	105	4000	639	1240	127
					6000	953		
350		378	450	105	4000	767	1270	129
					6000	1145		
400		429	504	105	4000	907	1350	138
					6000	1353		
450		480	553	115	4000	1046	1560	159
					6000	1556		
500		532	618	115	4000	1268	1910	195
					6000	1890		
600		635	728	115	4000	1626	2720	278
					6000	2423		
700		738	853	145	4000	2281	2720	277
					6000	3385		
800		842	959	155	4000	2661	3300	337
					6000	3992		
900		945	1067	170	4000	3171	4140	422
					6000	4706		
1000		1048	1173	180	4000	3685	5080	518
					6000	5376		
1200		1255	1400	210	4000	5046	7240	739
					6000	7349		
1400		1462	1604	237	4000	6154	9020	920
					6000	8963		
1600		1668	1825	261	4000	7749	12360	1261
					6000	11255		
1800		1875	2047	292	4000	9523	12360	1261
					6000	13826		
2000		2082	2266	314	4000	11352	16970	1731
					6000	16459		
2200		2288	2492	323	6000	20870	16970	1732
					8150	27840		
2400		2495	2710	341.5	6000	24573	16970	1732
					8150	32779		
2600		2702	2928	360	6000	27651	23340	2382
					8150	36830		

注：1. 可根据客户要求提供带灌浆孔的顶管；
2. 可以提供其他壁厚级别的顶管产品，详细技术参数欢迎咨询。

Note：1. Jacking pipes with grout hole are also available according to clients' requirement.
2. Jacking pipes with other thickness class are also available, please contact us for more technical info.

土壤腐蚀性复杂对管材的外防腐性能提出更高要求

The complex soil corrosion requires higher external corrosion resistance of pipelines.

我国地域辽阔，不同地区土壤的腐蚀性差别较大，在深入研究全国各地的典型腐蚀性土壤的前提下，新兴铸管有能力为客户量身定做不同的外防腐涂层来确保管线长期安全运行。

China has a vast territory, and the corrosion of soil in different regions is relatively different. Under the premise of intensive study of typical corrosive soils across the country, Xinxing ductile iron pipes have the ability to tailor different external anti-corrosion coatings for customers, and ensure long-term safe operation of pipelines.

下图展示了我公司在国内各地典型土壤地区进行的管道涂层的腐蚀性实验

The following figures show that the corrosive experiments of pipeline coatings of our company in typical soils areas of our country.

滨海浸盐渍土
Coastal saline soil

灰漠土
Desert grey soil

潮 土
Moisture soil

红壤
Red soil

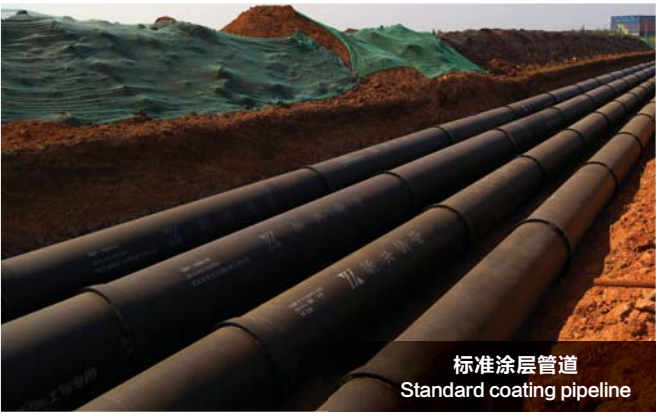
新兴铸管公司提供基本的外防腐涂层是锌层，此涂层在大多数土壤环境中具有很好的防腐性能，但是，在特殊情况下，锌层的保护不能抵抗强腐蚀性土壤的侵蚀，因此附加使用聚乙烯套作为防腐层或者使用特殊涂层等强防腐手段对管子加以保护。新兴铸管公司可根据对管道埋设的土壤环境，以及土壤腐蚀性的判断，帮助用户设计能够满足使用要求且性价比合适的管道外防腐方案。下表为不同腐蚀等级土壤中推荐的防腐涂层方案。

The basic external anti-corrosion coating that Xinxing Ductile Iron Pipes Company provides is the Zinc layer, which has good anti-corrosion performance in most soil environments. However, in special circumstance, the protection of Zinc layer cannot resist the erosion of strong corrosive soils, so it is necessary to protect the pipe by using polyethylene sleeve as an anti-corrosion layer or special coating. According to the soil environment of the buried pipeline, and the judgment of soil corrosive, Xinxing Ductile Iron Pipes Company can help customers to design pipeline anti-corrosion scheme that meeting using requirements as well as high cost performance. Different anti-corrosion schemes recommended according to various corrosive soils are as the table below :

防腐级别 Anti-Corrosion level	管子 pipes
一般腐蚀性 General corrosive	锌 + 高氯化聚乙烯终饰层 Zinc + HCPE finishing layer
较强腐蚀性 corrosive	锌铝稀土合金 + 蓝色环氧涂层 Zn-Al rare earth alloy + blue epoxy coating 锌 + 高氯化聚乙烯终饰层 + 聚乙烯套 Zinc + HCPE finishing layer + PE sleeve
特强腐蚀性 highly corrosive	特殊涂层（聚氨酯涂层） Special coating (PU coating)

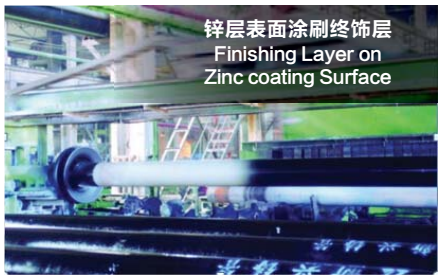
涂层介绍

COATINGS INTRODUCTION

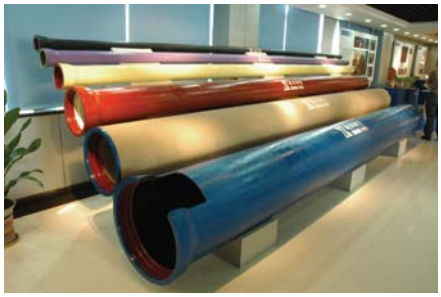


标准涂层管道
Standard coating pipeline

聚乙烯膜在现场施工
Construction of PE film on site



锌层表面涂刷终饰层
Finishing Layer on
Zinc coating Surface



聚氨酯外涂层管道
PU coating pipe

铝粉漆外涂层管道
Aluminum powder paint coated pipe

相关证书

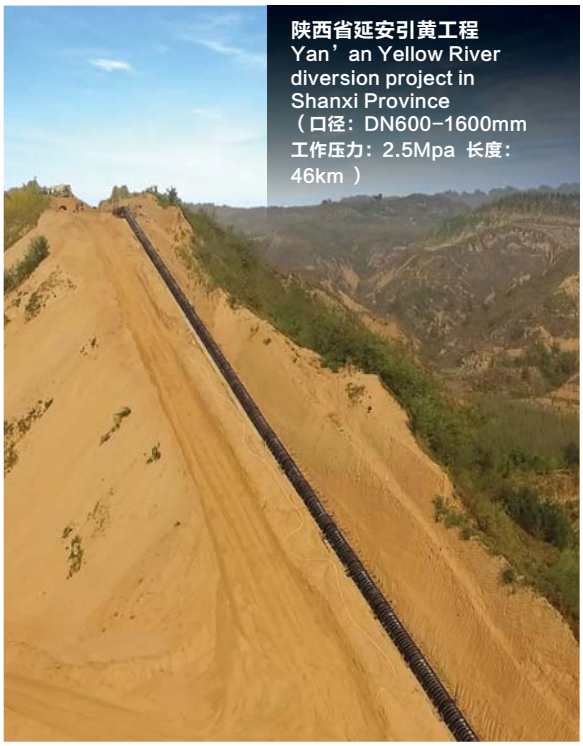
RELEVANT CERTIFICATE

应用案例

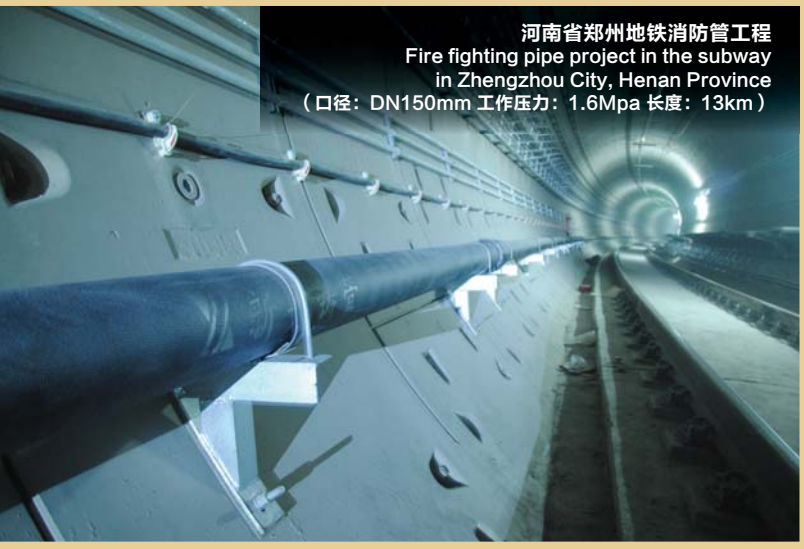
PROJECT CASES

山东省青岛市
西海岸引水工程
The west coast water diversion project in Qingdao City, Shandong Province
（口径：DN1200-1400mm 工作压力：1.1Mpa 长度 110km）

特立尼达与多巴哥工程
Trinidad and Tobago project
（口径：DN1000mm 工作压力：1.7Mpa 长度：40km）



陕西省延安引黄工程
Yan’an Yellow River diversion project in Shanxi Province
（口径：DN600-1600mm 工作压力：2.5Mpa 长度：46km ）



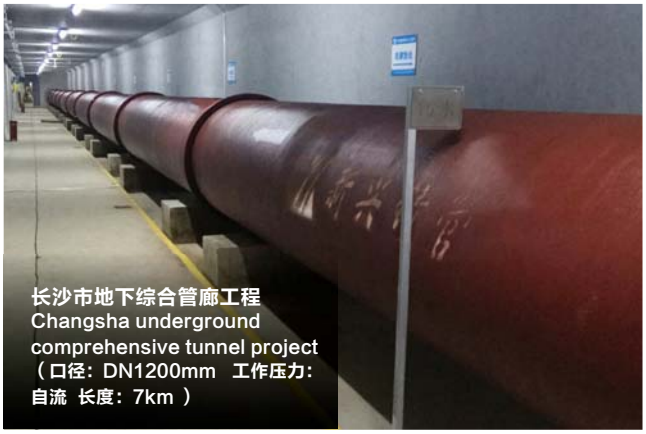
河南省郑州地铁消防管工程
Fire fighting pipe project in the subway in Zhengzhou City, Henan Province
（口径：DN150mm 工作压力：1.6Mpa 长度：13km）

TF 自锚铸管用于巴拿马市政供水工程
TF self-anchored pipe used to Panama municipal water supply project
（口径：DN600mm 工作压力：1.5Mpa 长度：12km ）

江苏省徐州市骆马湖水源地及第二地面水厂工程
Luoma Lake and second ground water works engineering in Xuzhou City, Jiangsu Province
（口径：DN1600-1800mm 工作压力：0.6Mpa 长度：50km）

外喷聚氨酯内自锚铸管用于特力尼达与多巴哥工程
Inner self-anchored ductile iron pipes coatedexternal PU used to Trinidad and Tobago project
（口径：DN1000mm 工作压力：2.0Mpa 长度：40km ）

新郑市政管网
非开挖工程
Xinzheng Municipal network trenchless project
（口径：DN400mm 工作压力：1.0Mpa 长度：100 米 ）



长沙市地下综合管廊工程
Changsha underground comprehensive tunnel project
（口径：DN1200mm 工作压力：自流 长度：7km ）

土耳其 - 北塞浦路斯输水工程
Turkey-Northern Cyprus water delivery project
（口径：DN80-1500mm 工作压力：1.0-2.6Mpa 长度：64km ）

新兴铸管超过30%的产品出口到世界120多

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多个国家和地区，国内市场占有率超过40%.

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