



追求卓越 携手共赢

美国卓越能源集团
嘉益美盛（北京）国际投资有限公司
USA PRIMACY GROUP, INC.
Primacy Energy (Beijing) International Investment Co.,Ltd

Add:333 WEST GARVEY AVENUE #B646 MONTEREY PARK CALIFORNIA 81754
地址：北京市朝阳区东大桥8号尚都国际中心805室
Rm 805, Shangdu International Center, 8#,Dongdaqiao Road, Chaoyang Distr.,
Beijing, CHINA.
Tel :+86-10-56629288 58700579
Fax :+86-10-58700580 Email: sales@ primacy-group.com
P.C.:100020

www.primacy-group.com



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销售网络

SALES NETWORK

公司理念：

追求卓越 携手共赢

Culture concept: Pursue brilliance , Win together

■ 公司简介 Company Introduction

美国卓越能源集团，是一家致力于能源投资、环境保护、油气田服务、钢铁产品、石油设备销售的国际性公司，并且投资、合作于国内几大著名钢铁企业。

嘉益美盛（北京）国际投资有限公司，作为美国卓越能源集团旗下一个独立的、专业的、国际性销售公司，负责集团工厂的产品销售和售后服务工作。公司在北京、山东、河北、天津、上海、美国加州、哥伦比亚等地设有办事处或分公司，年无缝钢管销售5万余吨，焊接钢管销售3万余吨，其他型材、板材销售2万余吨及石油、钻井、油气田、环保等设备若干；公司销售石油油井管、油气输送管等获得API 认证；船用无缝产品获得了CCS、DNV、LR、GL、ABS、BV、KR、NK和RINA船级社的工厂认证；锅炉等压力容器产品获得了中国特种设备制造许可证和欧盟PED、TUV认证和俄罗斯GOST认证。

凭借良好的产品质量和品牌信誉，公司与中石油、中石化、中海油、天津大无缝、上海宝钢等著名企业建立了长期战略合作伙伴关系，产品远销东南亚、中东、南美洲、北美洲、欧洲、澳洲、非洲等地区，形成了覆盖全球的销售网络。

公司在进行能源投资、环境保护、国际贸易的同时，建立了能源行业的第一个公益慈善基金——卓越基金，致力于帮助、支持国内及国际上失学、残障、饥饿的儿童，争取把此基金发展成为国际上著名的公益慈善基金。

USA Primacy Group,INC is an international company dedicated in energy investment, environment protect, oil&gas service, steel products and oil equipments sales, and it invests and cooperates with several famous steel enterprises.

Primacy (Beijing) International Investment Co.,Ltd,as a subsidiary of USA Primacy Energy Group, is an independent, multi-functional and professional sales company and responsible for both sales and services.

The group has offices in Beijing, Shandong, Hebei, Tianjin, Shanghai, Los Angeles, and Columbia, with an annual sales of 50000 MT seamless pipes, 30000MT welded pipes, 20000MT for other plates and sheets, and other oil, drilling, gas and environment protecting equipments.

The group has been approved by API 5L and API 5CT; and also got the shipping yard certificates such as : CCS、DNV、LR、GL、ABS、BV、KR、NK and RINA, etc. For boiler tube or pressure vessel application tubes, we have been certified by international PED,TUV, Russian GOST, and National Special Equipment License.

With good product quality and brand reputation , we have established a long-term and stable strategic cooperative partnership with Sinopec, Petro-China ,CNOOC, TPCO, and Baosteel Group. We have formed a global sales network such as South-Asia, Middle East, South America, North America, Europe, Oceania, Africa and so on.

Besides energy investment, environment protection, and international trading, the group has founded the first charity fund-Primacy Charity Fund,to dedicate in helping and supporting the dropout, disable and hungry children, and aims to be a well-known industry public charity fund.



● Φ 340 PQF 轧管机组 Φ 340 PQF Rolling Machine Unit

PQF (Premium Quality Finishing Mill) 连轧机组是现代无缝钢管生产先进技术的集中体现，它代表了当今世界无缝钢管生产的最新技术水平。卓越能源石油管材 Φ 340 PQF轧管机组核心设备三辊六机架PQF连轧机从德国SMS MEER公司引进，主要设备还有环形加热炉、锥形辊穿孔机、三辊式14 机架定径机、六辊全液压快开式矫直机等。该机组适用于生产石油油井管、油气输送管和核电用管等。

PQF (Premium Quality Finishing Mill) continuous rolling machine unit reflects modern and advanced technology of seamless pipe production, and it also represents the up-to-date technology of seamless pipe production in the world. The core equipment of Φ 340 PQF assembled in Primacy Energy Oil Pipe is three-roller-six-rack PQF continuous rolling machine, which is imported from SMS MEER, Germany. Other main equipments also include Rotary Heating Furnace, Tapered Roller Puncher, Three-Roller-Fourteen-Rack Sizing Mill and Six-Roller Full Hydraulic Quick Open Straightening Machine. This machine unit is applied in the production of OCTG, Petroleum and Gas Pipelines, Nuclear Power Plant Pipes, etc.



● 环形加热炉 Ring shape furnace



● 穿孔机 Hole-piercing machine



● 德国SMS MEER三辊六机架PQF连轧机
SMS MEER, Germany, three-roller-six-rack PQF continuous rolling machine

● $\Phi 140$ Assel 轧管机组

$\Phi 140$ Assel Rolling Machine Unit

卓越能源石油管材拥有国内第一条国内自主知识产权的 Assel 三辊轧管机组，由太原重工股份有限公司制造，该机组采用全浮动芯棒轧制薄壁钢管，回退芯棒轧制特厚壁钢管，轧机工艺技术和装备水平处于同类机组国际领先水平。主要设备有环形加热炉、锥形穿孔机、Assel 轧管机、14架微张力定径机等。该机组适用于生产高压炉管、船舶用管、液压支柱管、接箍管和机械用管等。

Primacy Energy Oil Pipe has installed Assel Rolling Machine Unit, which is the first machine unit holding Domestic Independent Intellectual Property Right. Full Floating Mandrel of the unit is used in the production of Thin-wall steel pipes, while Rollback Mandrel is applied in the production of extra thick-wall pipes. The technical skill and equipment level of this rolling machine is leading around the world, while comparing with other similar machine unit. Main equipments include Rotary Heating Furnace, Tapered Roller Puncher, Assel rolling machine, Fourteen-rack Micro-tension Sizing Machine, etc. This machine unit is applied in the production of High Pressure Boiler Tubes, Ship-building Pipes, seamless steel tubes for hydraulic pillar service, seamless steel pipes for coupling, steel pipe for mechanical structure purpose, etc.



● 环形加热炉 Ring shape furnace



● 穿孔机 Hole-piercing machine



● 轧管机 Rolling machine



● 步进炉 Walking furnace

● 热处理生产线

Heat Treatment Production Line

卓越能源石油管材拥有三条钢管热处理生产线，主要设备包括淬火炉、回火炉，先进的设备确保了钢管品种始终处理领先地位，可生产N80-Q、L80、P110等高钢级、抗挤毁系列油井管产品，提高了油井管的钢级性能。

Primacy Energy Oil Pipe has installed three heat treatment production lines, of which the main equipments are quenching furnace and tempering furnace. Advanced equipments always ensure the quality and varieties of the pipes in Anhui Tianda Oil Pipe are all leading in world, and can produce N-80Q, L80, P110 and other high grade and anti-collapsing oil well pipe with great promotion of steel grade property





● 拧紧机 Screw Down Machine



● 管螺纹数控车床 CNC Lathe



● 日本MORI SEIKI数控车床
MORI SEIKI CNC Lathe

● 管加工生产线 Pipe Threading Line

卓越能源石油管材管加工系统装配五条进口及两条国产管螺纹加工线，主要设备包括从日本引进的5台森精机，配套设备有 7台水压机，7 套称重测量装置及切管机、接箍车丝机、接箍拧接机、液压管端加厚机等。可为各种规格油管和套管加工多种形式的螺纹。

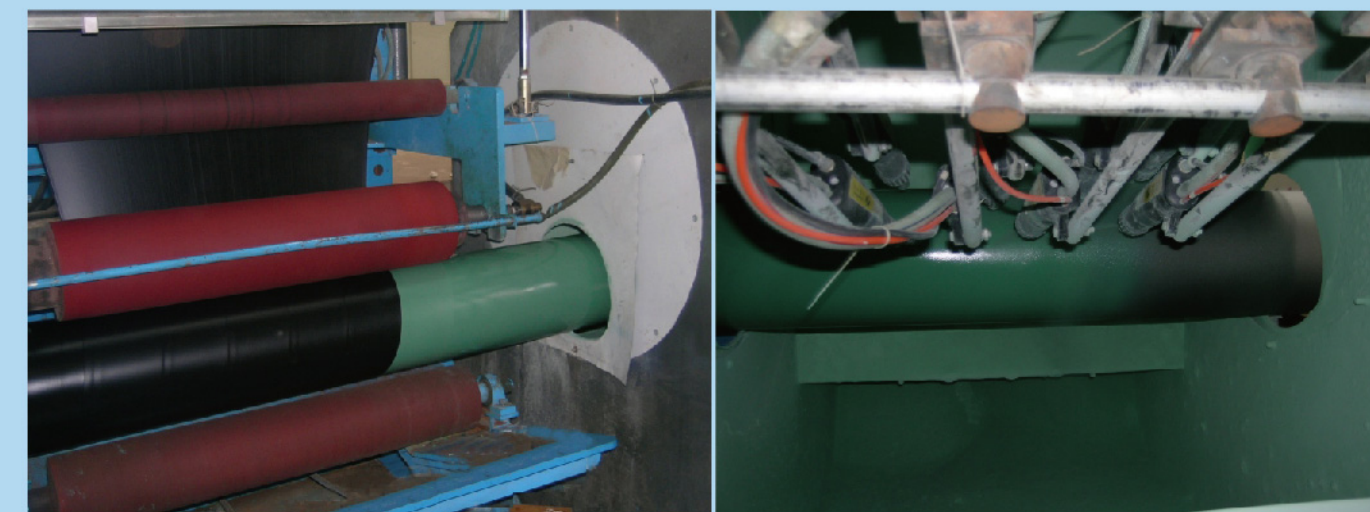
The system is constituted by five imported and two domestic threading & coupling lines, which are five MORI SEIKI imported from Japan with seven hydrostatic machines, seven sets of measurement equipment, pipe cutting machine, threading machine, coupling screw-on machine and upsetting machine as the support equipment. It can process thread in all various forms for all tubing and casing.



● 液压管端加厚机 Hydraulic upsetter



● 抛丸除锈机 Blasting derusting machine



● 涂敷装备 Coating equipment

● 管道内外防腐生产线 Internal and External Anti-corrosion Pipe Production Line

卓越能源石油管材拥有一条年产200万平方米钢管内外防腐加工生产线，主要设备有钢管内外壁喷(抛)丸清理机、管道内外防腐生产线等。可加工3PE、3PP、2PE、FBE涂层管。

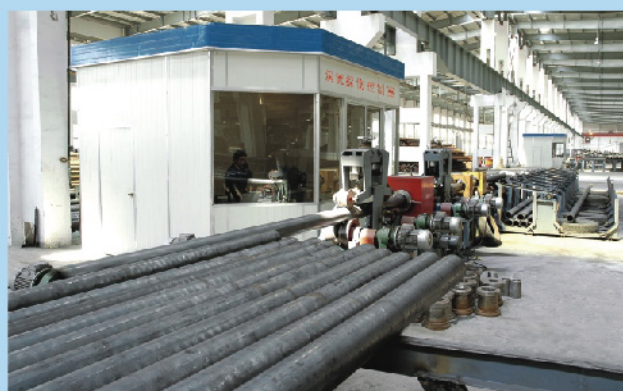
Primacy Energy Oil Pipe has an annual output of 2 million square meters of pipe internal and external coating line. The main equipment have inner and outer wall spray (thrown) pill cleaning machine and Internal and External anti-corrosion pipe production line and so on, which can process 3PE, 3PP, 2PE, FBE coating pipe.



● 德国GE全长测厚超声波探伤机组
GE EMI



● 美国TUBOSCOPE漏磁探伤机组
Tuboscope LMT



● 涡流探伤机组 Eddy test machine



● 超声波探伤机组 Ultrasonic test machine



● 液压试验机组
Hydrostatic Pressure Test Machine



● 冲击试验机 Impact test machine



● 液压式万能试验机
Hydraulic universal test machine



● 洛氏硬度计
Rockwell hardness tester



● 试验室用直读光谱仪
Readable Spectrum Instrument for Lab

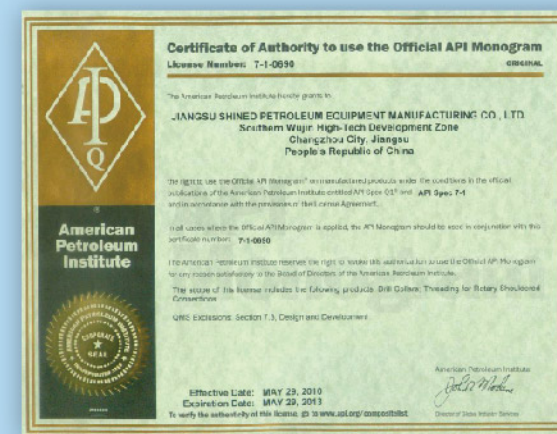
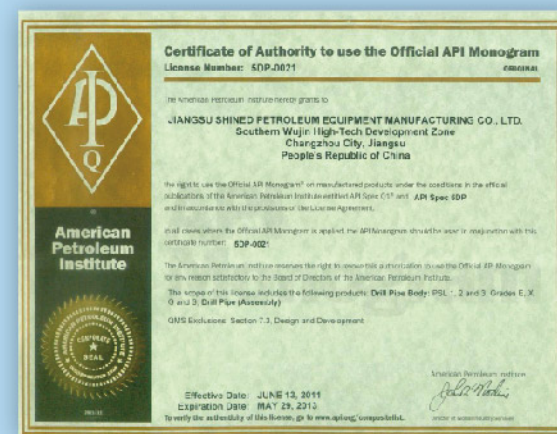
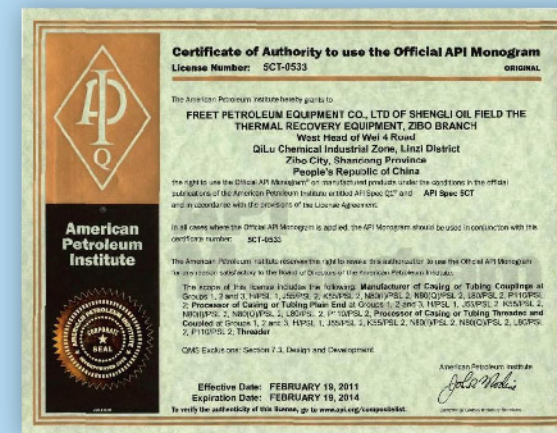
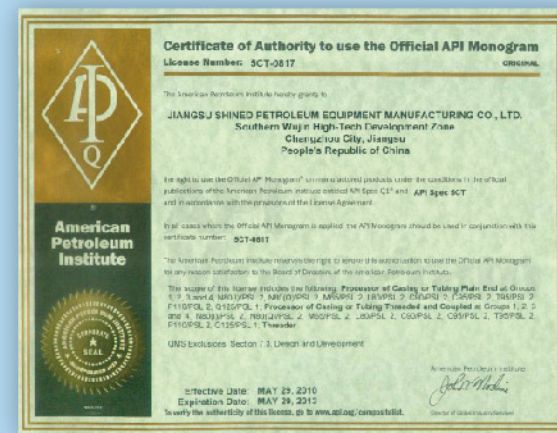
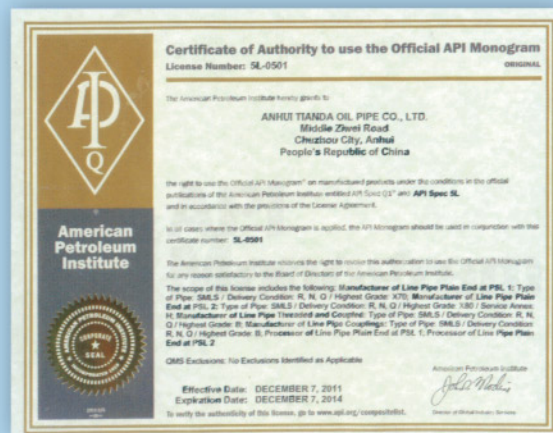
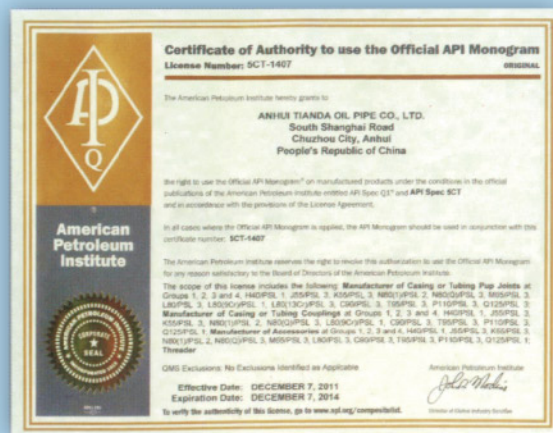


● 布氏硬度计
Brinell hardness tester

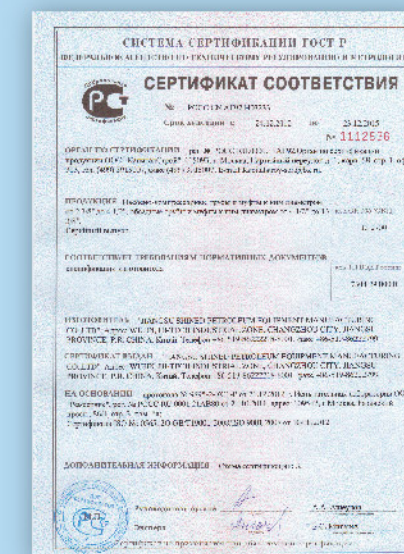
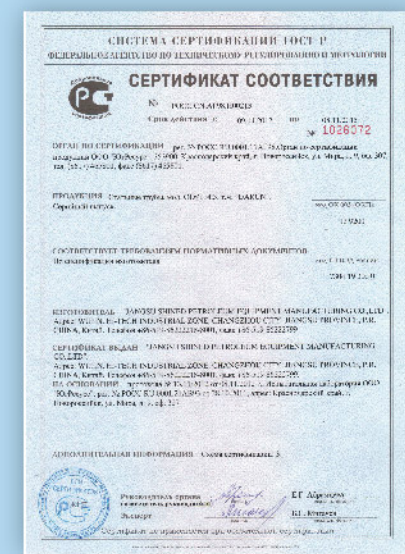
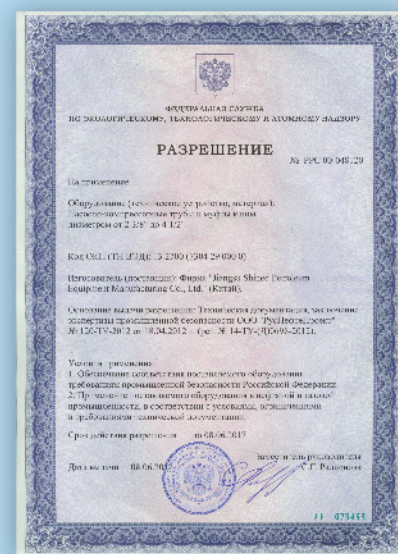
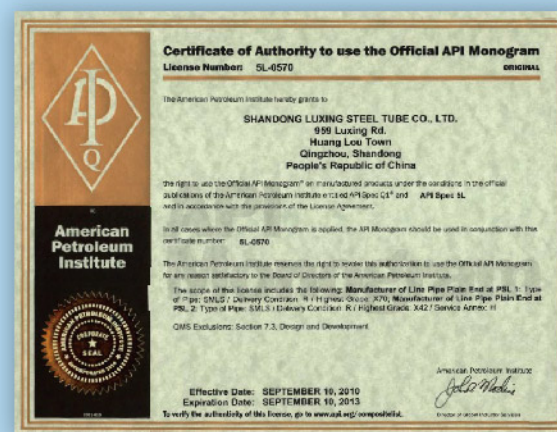
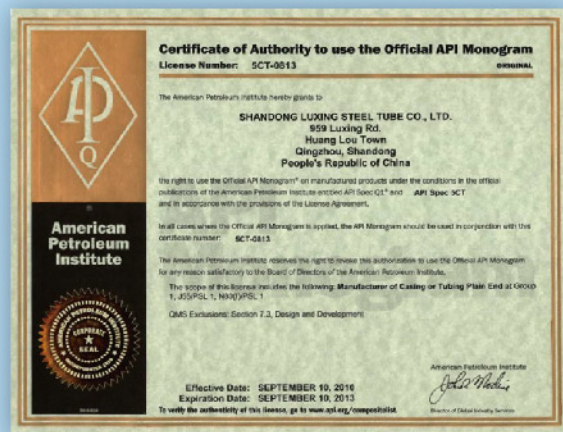
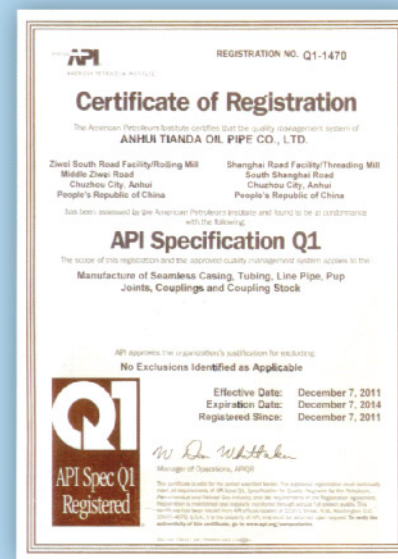
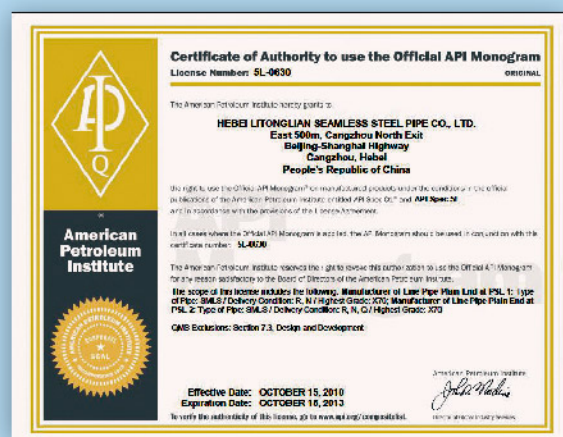


● 金相显微镜
Metallographic microscope

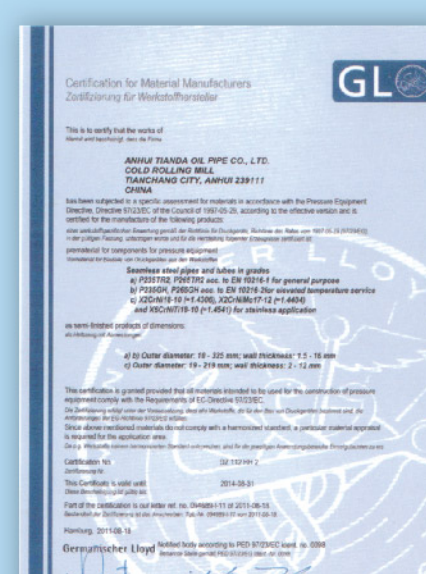
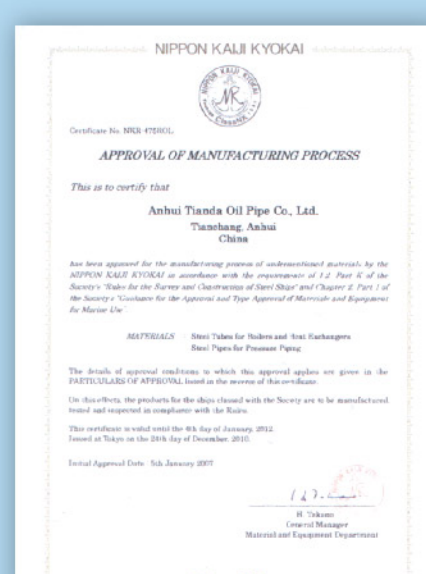
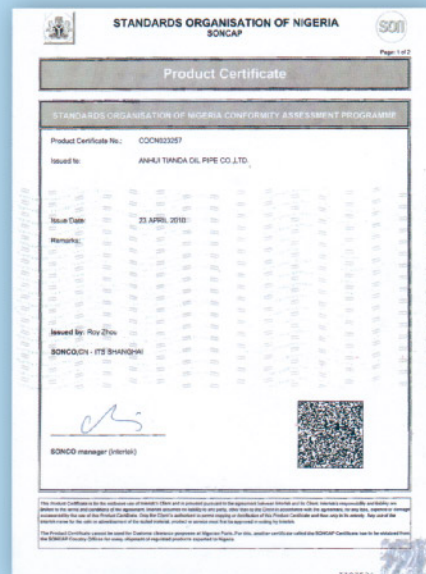
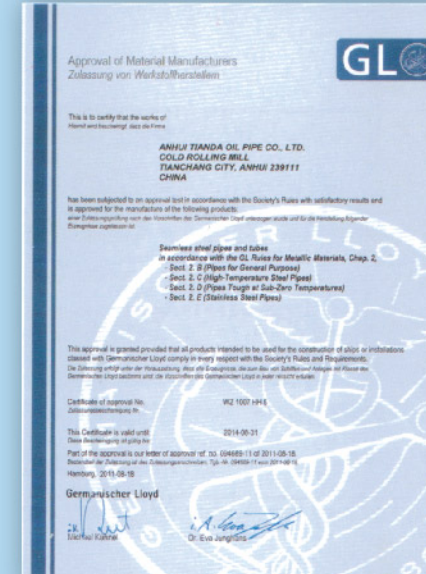
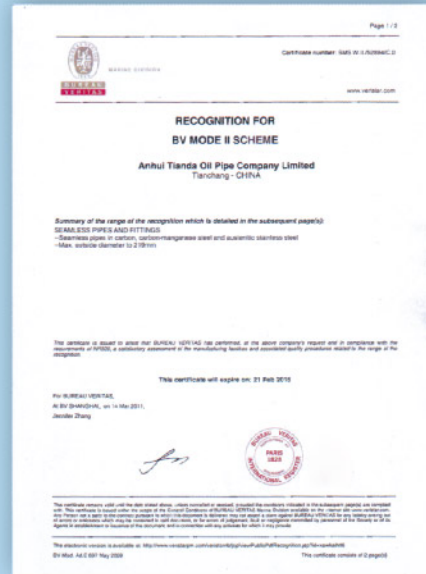
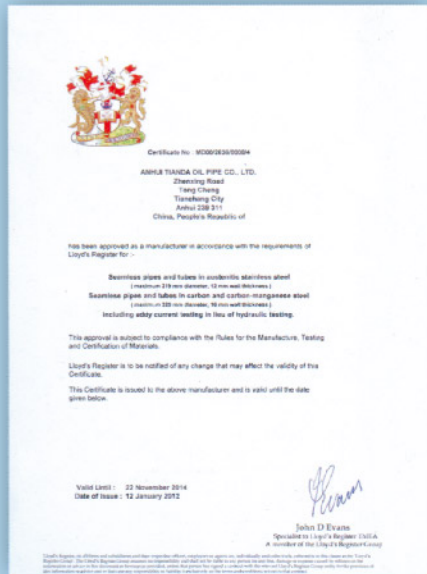
荣誉资质 HONOUR & CREDENTIALS



荣誉资质 HONOUR & CREDENTIALS



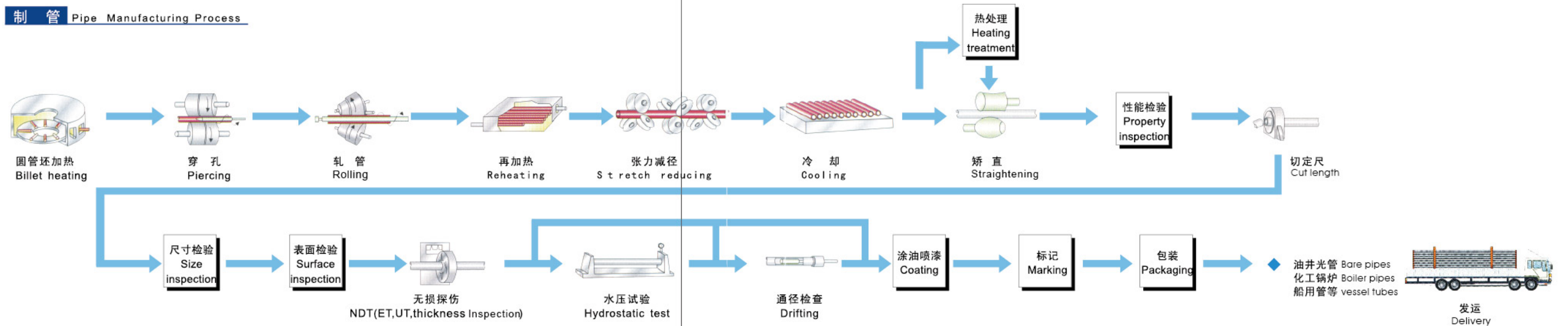
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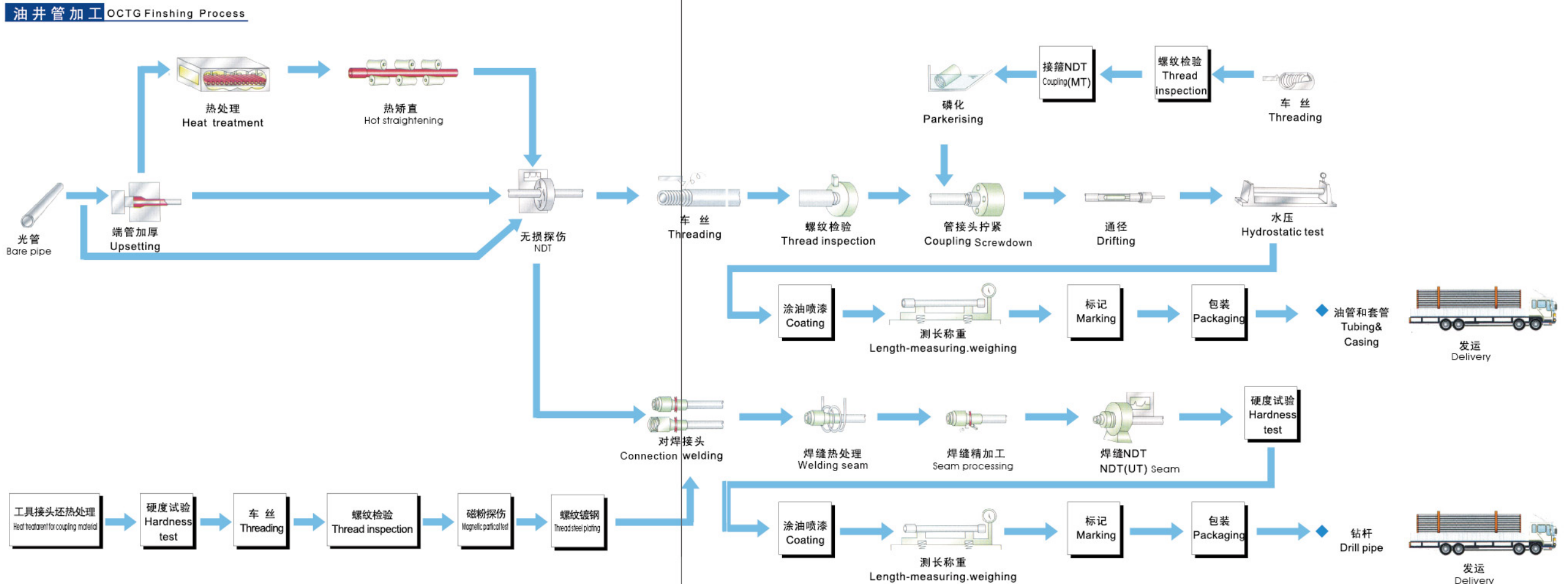
工艺流程 PROCESS FLOW



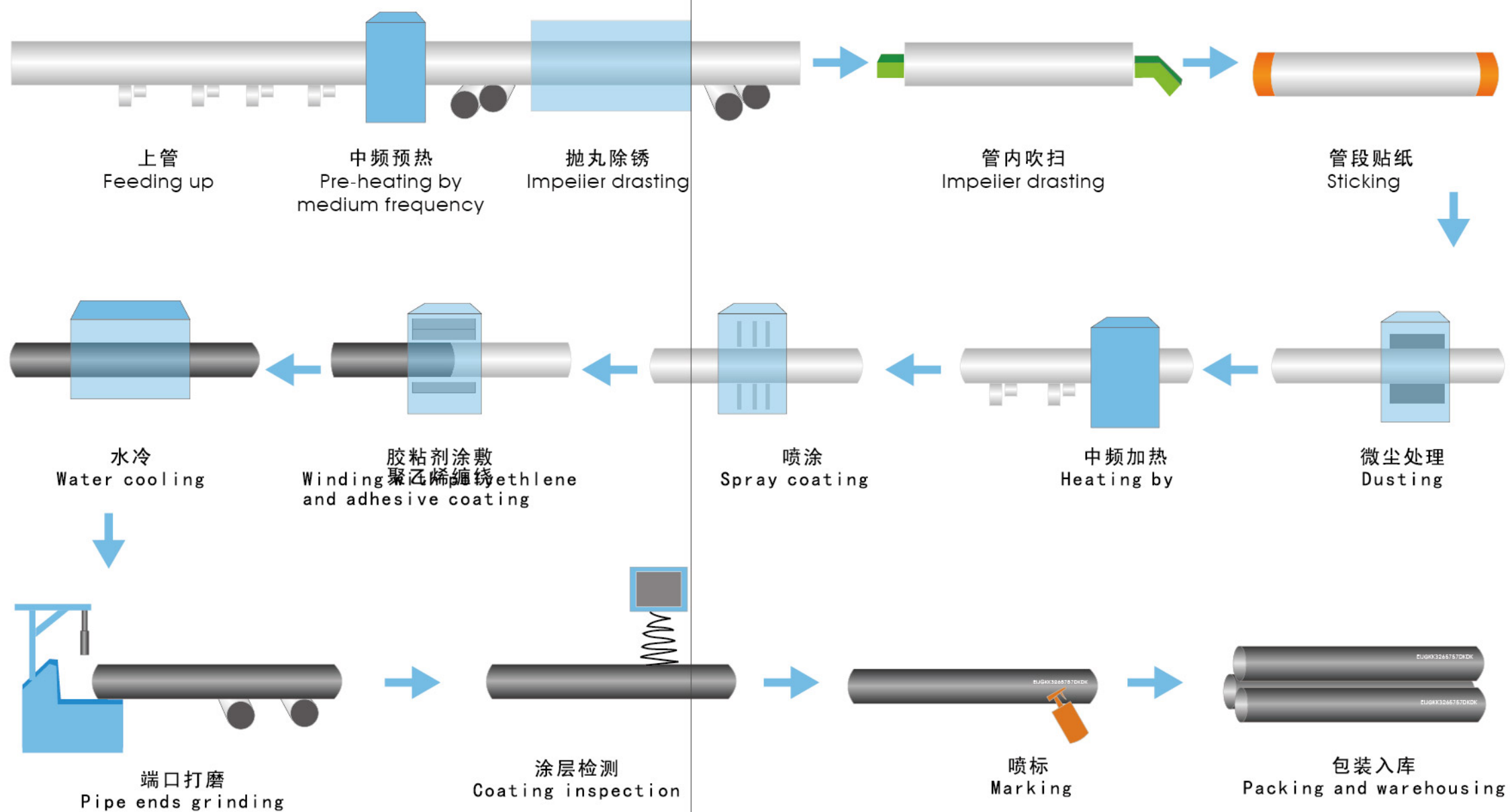
制管 Pipe Manufacturing Process



油井管加工 OCTG Finishing Process



3PP/3PE/FBE外防腐生产工艺流程图
3PP/3PE/FBE External anticorrosion manufacturing flow chart





产品简介 PRODUCTS INTRODUCTION

API 5CT标准 API 5CT STANDARD

油套管

TUBING AND CASING

标准: Standard:

Standard: API SPEC 5CT、API SPEC 5B、ISO11960

用途: Application:

油管用于油井中抽取石油或天然气。

套管用作油气井的井壁。

Tubing is used to extracting petroleum and natural gas from a well.

Casing serves as walls of a well.

油管规格: Size of Tubing:

尺寸代号 Size Designation	重量代号 Weight Designation		外径 Outside Diameter		壁厚 Wall Thickness		端部加工形式 Type of End Finish					
	不加厚 T&C Non-Upset	外加厚 T&C External Upset	in	mm	in	mm	钢级 Grade					
							J55	L80-1	N80	C90	T95	P110
1.900"	2.40	-	1.900	48.26	0.125	3.18	PI	-	-	-	-	-
	2.75	2.90	1.900	48.26	0.145	3.68	PNU	PNU	PNU	PNU	PNU	-
	3.65	-	1.900	48.26	0.200	5.08	PU	PU	PU	PU	PU	PU
2 3/8"	4.00	-	2.375	60.32	0.167	4.24	PN	PN	PN	PN	PN	-
	4.00	4.70	2.375	60.32	0.190	4.83	PNU	PNU	PNU	PNU	PNU	PNU
	5.80	5.95	2.375	60.32	0.254	6.45	-	PNU	PNU	PNU	PNU	PNU
	6.60	-	2.375	60.32	0.259	7.49	-	P	-	P	P	-
	7.35	7.45	2.375	60.32	0.336	8.53	-	PU	-	PU	PU	-
2 7/8"	6.40	6.50	2.875	73.02	0.217	5.51	PNU	PNU	PNU	PNU	PNU	PNU
	7.80	7.90	2.875	73.02	0.276	7.01	-	PNU	PNU	PNU	PNU	PNU
	8.60	8.70	2.875	73.02	0.308	7.82	-	PNU	PNU	PNU	PNU	PNU
	9.35	9.45	2.875	73.02	0.340	8.64	-	PU	-	PU	PU	-
	10.50	-	2.875	73.02	0.392	9.96	-	P	-	P	P	-
	11.50	-	2.875	73.02	0.440	11.18	-	P	-	P	P	-
3 1/2"	7.70	-	3.500	88.90	0.216	5.49	PN	PN	PN	PN	PN	-
	9.20	9.30	3.500	88.90	0.254	6.45	PNU	PNU	PNU	PNU	PNU	PNU
	10.20	-	3.500	88.90	0.289	7.34	PN	PN	PN	PN	PN	-
	12.70	12.95	3.500	88.90	0.375	9.52	-	PNU	PNU	PNU	PNU	PNU
	14.30	-	3.500	88.90	0.430	10.92	-	P	-	P	P	-
	15.50	-	3.500	88.90	0.476	12.00	-	P	-	P	P	-
	17.00	-	3.500	88.90	0.530	13.46	-	P	-	P	P	-
4"	9.50	-	4.000	101.60	0.226	5.74	PN	PN	PN	PN	PN	-
	10.70	11.00	4.000	101.60	0.262	6.65	PU	PU	PU	PU	PU	-
4 1/2"	12.60	12.75	4.500	114.30	0.271	6.88	PNU	PNU	PNU	PNU	PNU	-
	15.20	-	4.500	114.30	0.337	8.56	-	P	-	P	P	-
	17.00	-	4.500	114.30	0.380	9.65	-	P	-	P	P	-
	18.90	-	4.500	114.30	0.430	10.92	-	P	-	P	P	-
	21.50	-	4.500	114.30	0.500	12.70	-	P	-	P	P	-
	23.70	-	4.500	114.30	0.560	14.22	-	P	-	P	P	-
	26.10	-	4.500	114.30	0.630	16.00	-	P	-	P	P	-

注: 1、P---平端; N---不加厚、U---外加厚、T&C---车螺纹带接箍、I---整体接头。

Note: 1、P-Plain-end; N-Non upset; U- Upset; T&C--Threaded and coupled; I--Integrate connector



产品简介 PRODUCTS INTRODUCTION

API 5CT标准 API 5CT STANDARD

套管规格: Size of Casing:

尺寸代号 Size Designation	重量代号 Weight Designation	外径 Outside Diameter		壁厚 Wall Thickness		端部加工形式 Type of End Finish							
						钢级 Grade							
		In	mm	In	mm	J55 K55	L80-1	N80	C90	C95	T95	P110	M65
4 1/2"	9.50	4.500	114.30	0.205	5.21	PS	-	-	-	-	-	-	-
	10.50	4.500	114.30	0.224	5.69	PS B	-	-	-	-	-	-	-
	11.60	4.500	114.30	0.250	6.35	PSLB	PLB	PLB	PLB	PLB	PLB	PLB	PLB
	13.50	4.500	114.30	0.290	7.37	-	PLB	PLB	PLB	PLB	PLB	PLB	PLB
	15.10	4.500	114.30	0.337	8.56	-	-	-	-	-	-	PLB	-
5"	11.50	5.000	127.00	0.220	5.59	PS	-	-	-	-	-	-	-
	13.00	5.000	127.00	0.253	6.43	PSLB	-	-	-	-	-	-	-
	15.00	5.000	127.00	0.296	7.52	PSLB	PLB	PLB	PLB	PLB	PLB	PLB	PLB
	18.00	5.000	127.00	0.362	9.19	-	PLB	PLB	PLB	PLB	PLB	PLB	PLB
	21.40	5.000	127.00	0.437	11.10	-	PLB	PLB	PLB	PLB	PLB	PLB	PLB
	23.20	5.000	127.00	0.478	12.14	-	PLB	PLB	PLB	PLB	PLB	PLB	PLB
	24.10	5.000	127.00	0.500	12.70	-	PLB	PLB	PLB	PLB	PLB	PLB	PLB
5 1/2"	14.00	5.500	139.70	0.244	6.20	PS	-	-	-	-	-	-	-
	15.50	5.500	139.70	0.275	6.99	PSLB	-	-	-	-	-	-	-
	17.00	5.500	139.70	0.304	7.72	PSLB	PLB	PLB	PLB	PLB	PLB	PLB	PLB
	20.00	5.500	139.70	0.361	9.17	-	PLB	PLB	PLB	PLB	PLB	PLB	PLB
	23.00	5.500	139.70	0.415	10.54	-	PLB	PLB	PLB	PLB	PLB	PLB	PLB
	26.80	5.500	139.70	0.500	12.70	-	-	-	P	-	P	-	-
	29.70	5.500	139.70	0.562	14.27	-	-	-	P	-	P	-	-
	32.60	5.500	139.70	0.625	15.88	-	-	-	P	-	P	-	-
	35.30	5.500	139.70	0.687	17.45	-	-	-	P	-	P	-	-
	38.00	5.500	139.70	0.750	19.05	-	-	-	P	-	P	-	-
	40.50	5.500	139.70	0.812	20.62	-	-	-	P	-	P	-	-
	43.10	5.500	139.70	0.875	22.22	-	-	-	P	-	P	-	-
6 5/8"	20.00	6.625	168.28	0.288	7.32	PSLB	-	-	-	-	-	-	-
	24.00	6.625	168.28	0.352	8.94	PSLB	PLB	PLB	PLB	PLB	PLB	PLB	PLB
	28.00	6.625	168.28	0.417	10.59	-	PLB	PLB	PLB	PLB	PLB	PLB	PLB
	32.00	6.625	168.28	0.475	12.06	-	PLB	PLB	PLB	PLB	PLB	PLB	PLB
7"	20.00	7.000	177.80	0.272	6.91	PS	-	-	-	-	-	-	PS
	23.00	7.000	177.80	0.317	8.05	PSLB	PLB	PLB	PLB	PLB	-	-	PLB
	26.00	7.000	177.80	0.362	9.19	PSLB	PLB	PLB	PLB	PLB	PLB	PLB	PLB
	29.00	7.000	177.80	0.408	10.36	-	PLB	PLB	PLB	PLB	PLB	PLB	PLB
	32.00	7.000	177.80	0.453	11.51	-	PLB	PLB	PLB	PLB	PLB	PLB	PLB
	35.00	7.000	177.80	0.498	12.65	-	PLB	PLB	PLB	PLB	PLB	PLB	PLB
	38.00	7.000	177.80	0.540	13.72	-	PLB	PLB	PLB	PLB	PLB	PLB	PLB
7 5/8"	26.40	7.625	193.68	0.328	8.33	PSLB	PLB	PLB	PLB	PLB	PLB	PLB	-
	29.70	7.625	193.68	0.375	9.52	-	PLB	PLB	PLB	PLB	PLB	PLB	PLB
	33.70	7.625	193.68	0.430	10.92	-	PLB	PLB	PLB	PLB	PLB	PLB	PLB
	39.00	7.625	193.68	0.500	12.70	-	PLB	PLB	PLB	PLB	PLB	PLB	PLB
	42.80	7.625	193.68	0.562	14.27	-	PLB	PLB	PLB	PLB	PLB	PLB	PLB
	45.30	7.625	193.68	0.595	15.11	-	PLB	PLB	PLB	PLB	PLB	PLB	PLB
	47.10	7.625	193.68	0.625	15.88	-	PLB	PLB	PLB	PLB	PLB	PLB	PLB



产品简介 PRODUCTS INTRODUCTION

API 5CT标准 API 5CT STANDARD

套管规格: Size of Casing:

尺寸代号 Size Designation	重量代号 Weight Designation	外径 Outside Diameter		壁厚 Wall Thickness		端部加工形式 Type of End Finish							
		In	mm	In	mm	钢级 Grade							
						J55 K55	L80-1	N80	C90	C95	T95	P110	M65
8 5/8"	24.00	8.625	219.08	0.264	6.71	PS	-	-	-	-	-	-	-
	28.00	8.625	219.08	0.304	7.72	-	-	-	-	-	-	-	-
	32.00	8.625	219.08	0.352	8.94	PSLB	-	-	-	-	-	-	-
	36.00	8.625	219.08	0.400	10.16	PSLB	PLB	PLB	PLB	PLB	PLB	PLB	-
	40.00	8.625	219.08	0.450	11.43	-	PLB	PLB	PLB	PLB	PLB	PLB	PLB
	44.00	8.625	219.08	0.500	12.70	-	PLB	PLB	PLB	PLB	PLB	PLB	PLB
	49.00	8.625	219.08	0.557	14.15	-	PLB	PLB	PLB	PLB	PLB	PLB	PLB
9 5/8"	32.30	9.625	244.48	0.312	7.92	-	-	-	-	-	-	-	-
	36.00	9.625	244.48	0.352	8.94	PSLB	-	-	-	-	-	-	PSLB
	40.00	9.625	244.48	0.395	10.03	PSLB	PLB	PLB	PLB	PLB	PLB	-	PSLB
	43.50	9.625	244.48	0.435	11.05	-	PLB	PLB	PLB	PLB	PLB	PLB	PLB
	47.00	9.625	244.48	0.472	11.99	-	PLB	PLB	PLB	PLB	PLB	PLB	PLB
	53.50	9.625	244.48	0.545	13.84	-	PLB	PLB	PLB	PLB	PLB	PLB	-
	58.40	9.625	244.48	0.595	15.11	-	PLB	PLB	PLB	PLB	PLB	PLB	-
	59.40	9.625	244.48	0.609	15.47	-	-	-	P	-	P	-	-
	64.90	9.625	244.48	0.672	17.07	-	-	-	P	-	P	-	-
	70.30	9.625	244.48	0.734	18.64	-	-	-	P	-	P	-	-
10 3/4"	32.75	10.750	273.05	0.279	7.09	-	-	-	-	-	-	-	-
	40.50	10.750	273.05	0.350	8.89	PSB	-	-	-	-	-	-	PSB
	45.50	10.750	273.05	0.400	10.16	PSB	-	-	-	-	-	-	PSB
	51.00	10.750	273.05	0.450	11.43	Possible	PSB	PSB	PSB	PSB	PSB	PSB	PSB
	55.50	10.750	273.05	0.495	12.57	-	PSB	PSB	PSB	PSB	PSB	PSB	PSB
	60.70	10.750	273.05	0.545	13.84	-	-	-	PSB	-	PSB	PSB	-
	65.70	10.750	273.05	0.595	15.11	-	-	-	PSB	-	PSB	PSB	-
	73.20	10.750	273.05	0.672	17.07	-	-	-	P	-	P	-	-
	79.20	10.750	273.05	0.734	18.64	-	-	-	P	-	P	-	-
11 3/4"	85.30	10.750	273.05	0.797	20.24	-	-	-	P	-	P	-	-
	42.00	11.750	298.45	0.333	8.46	-	-	-	-	-	-	-	-
	47.00	11.750	298.45	0.375	9.53	PSB	-	-	-	-	-	-	PSB
	54.00	11.750	298.45	0.435	11.05	PSB	-	-	-	-	-	-	PSB
	60.00	11.750	298.45	0.489	12.42	Possible	PSB	PSB	PSB	PSB	PSB	PSB	PSB
	65.00	11.750	298.45	0.534	13.56	-	P	P	P	P	P	P	-
13 3/8"	71.00	11.750	298.45	0.582	14.78	-	P	P	P	P	P	P	-
	48.00	13.375	339.72	0.330	8.38	-	-	-	-	-	-	-	-
	54.50	13.375	339.72	0.380	9.65	PSB	-	-	-	-	-	-	PSB
	61.00	13.375	339.72	0.430	10.92	Possible	-	-	-	-	-	-	PSB
	68.00	13.375	339.72	0.480	12.19	Possible	PSB	PSB	PSB	PSB	PSB	PSB	PSB
16"	72.00	13.375	339.72	0.514	13.06	-	PSB	PSB	PSB	PSB	PSB	PSB	-
	65.00	16.000	406.40	0.375	9.53	-	-	-	-	-	-	-	-
	75.00	16.000	407.40	0.438	11.13	PSB	-	-	-	-	-	-	PSB
	84.00	16.000	408.40	0.495	12.57	PSB	-	-	-	-	-	-	Possible
	109.00	16.000	409.40	0.660	16.66	possible	P	P	-	-	-	P	-

注: P---平端; S---短圆螺纹、L---长圆螺纹、B---偏梯形螺纹;
Note: P-Plain end; S-Short round thread; L-Long round thread; B-Buttress thread;



产品简介 PRODUCTS INTRODUCTION

API 5CT标准 API 5CT STANDARD

接箍: Coupling:

- 1、标准接箍
Standard Coupling
- 2、特殊间隙接箍
Special Space Coupling
- 3、特殊倒角接箍
Special Bevelled Coupling
- 4、改进型带密封环接箍
API Improved Seal-Ring Coupling(SR13)
- 5、组合接箍或异径接箍
Combination Coupling or Special Diameter Coupling

短节或连接管Pup Joint or Connector:

包括所有油套管规格、螺纹或其他组合
All size, thread or their combination of tubing and casing are supplied.

尺寸偏差: Dimensions and Tolerances:

外径、壁厚、重量允许偏差 Outside Diameter, Wall Thickness and Weight Tolerances:

项目 Item		允许偏差 Tolerance
外 径 Outside Diameter	管体 Pipe Body	$D \leq 101.60 \text{ mm} \pm 0.79 \text{ mm}$
		$D \geq 114.30 \text{ mm} \begin{matrix} +1.0\%D \\ -0.5\%D \end{matrix}$
	接箍 coupling	$\pm 1\%D$
壁厚 Wall Thickness		0, -12.5%t
重量 Weight	单根 Single Lengths	$\begin{matrix} +6.5\% \\ -3.5\% \end{matrix}$
	车载量 Carload Lots	0, -1.75%

螺纹参数允许偏差 Thread Parameter Tolerances:

品种规格 Type and Size			锥度 Taper mm/m	螺距 Pitch mm		齿 高 Height mm	螺纹角度 Angle 度 deg.	螺纹长度a Length L4 (外螺纹 External Thread)	管 端 倒 角 Chamber on End of Pipe 度 deg.	紧 密 矩 a Standoff	
				每英寸 Per Inch	累 计 Accu- mulative					管体螺纹 Pipe Thread	接箍螺纹 Coupling Thread
圆螺纹油管 Round Thread Tubing 2 3/8" ~ 4 1/2"	10	牙/英寸 Threads per inch	+5.208 -2.600	± 0.076	± 0.152	+0.051 -0.102	1 1/2 1 1/2	1 1/2P	+5 -0	$\pm 1 1/2P$	$\pm 1 1/2P$
	8	牙/英寸 Threads per inch	+5.208 -2.600	± 0.076	± 0.152	+0.051 -0.102	1 1/2	1P	+5 -0	$\pm 1P$	$\pm 1P$
圆螺纹套管 Round Thread Casing 4" ~ 7"			+5.208 -2.600	± 0.076	± 0.152	+0.051 -0.102	1 1/2	1P	+5 -0	$\pm 1P$	$\pm 1P$
偏梯形螺纹套管 Buttress Thread Casing 4 1/2" ~ 7"	接箍 Coupling		+4.50 -2.50	± 0.051	± 0.102	± 0.025	-	-	+5 -0	$+1 1/2P$ -0	+0 -1 1/2P
		完整螺纹 Perfect thread	+3.50 -1.50								
		不完整螺纹 Imperfect thread length	+4.50 -1.50								

注a: p—螺距

Note a: p—Pitch.

化学成分: Chemical Composition:

钢级 Grade	化学成分Chemical Composition%												
	C		Mn		Mo		Cr		Ni	Cu	P	S	Si
	min	max	min	max	min	max	min	max	max	max	max	max	max
J55	-	-	-	-	-	-	-	-	-	-	0.030	0.030	-
K55	-	-	-	-	-	-	-	-	-	-	0.030	0.030	-
N80	-	-	-	-	-	-	-	-	-	-	0.030	0.030	-
L80-1	-	0.43	-	1.90	-	-	-	-	0.25	0.35	0.030	0.030	0.45
C90-1	-	0.35	-	1.00	0.25	0.75	-	1.20	0.99	-	0.020	0.010	-
C90-2	-	0.50	-	1.90	-	N.L.	-	N.L.	0.99	-	0.030	0.010	-
C95	-	0.45	-	1.90	-	-	-	-	-	-	0.030	0.030	0.45
T95-1	-	0.35	-	1.20	0.25	0.85	0.40	1.50	0.99	-	0.020	0.010	-
T95-2	-	0.50	-	1.90	-	-	-	-	-	-	0.030	0.010	-
P110	-	-	-	-	-	-	-	-	-	-	0.030	0.020	-

机械性能: Mechanical Properties:

钢级 Grade	屈服强度Yield Strength				抗拉强度 Tensile Strength		硬度 Hardness		允许硬度变化 Allowable Hardness Variation
	最低min		最高max		最低min		最高max		
	Psi	Mpa	Psi	Mpa	Psi	Mpa	HRC	BHN	
J55	55,000	379	80,000	552	75,000	517	-	-	-
K55	55,000	379	80,000	552	95,000	655	-	-	-
N80	80,000	552	110,000	758	100,000	689	-	-	-
L80-1	80,000	552	95,000	655	95,000	655	23	241	-
C90	90,000	621	105,000	724	100,000	689	25.4	255	3.0
C95	95,000	655	110,000	758	105,000	724	-	-	-
T95	95,000	655	110,000	758	105,000	724	25.4	255	3.0
P110	110,000	758	140,000	965	125,000	862	-	-	-

长度: Lengths:

	范围1(Range 1)	范围2(Range 2)	范围3(Range 3)
油管 Tubing	6.10-7.32m	8.53-9.75m	11.58-12.80m
套管 Casing	4.88-7.62m	7.62-10.36m	10.36-14.63m
短节 Pup Joint	0.5m-6.0m(2FEET-20FEET)		



产品简介 PRODUCTS INTRODUCTION

API 5CT标准 API 5CT STANDARD

高真空隔热油管

VACUUM INSULATED TUBING(VIT)

标准 Standard:

SY/T5324-94, API SPEC 5CT

用途 Application:

用于油田“蒸汽驱”、蒸汽“吞吐”和“注采一体化”， $\leq 350^{\circ}\text{C}$ 下稠油热采作业。

The vacuum insulated tubing applies to such operating condition as the temperature of heat carrier is not over 350°C . The insulated tubing mainly applies to steam thermal recovery well with “huff and puff” and “steam drive” as well as heavy oil well with “integration of production and injection”.

亚临界预应力隔热油管主要技术性能参数

Technical Performance Parameters Of Subcritical Vacuum Insulated Tubing

序号 No.	规格 (外管外径*内管内径) specs.(OD of outer pipe&ID of inner pipe)		基本参数 Basic Parameters					主要性能参数 Key Performance Parameters							使用参数 Service parameters			
			钢级 Grade	外管 外径*壁厚 Outer Pipe OD&Wall Thickness	内管 外径*壁厚 Inner Pipe OD&Wall Thickness	外箍 外径 OD of coup lingup ling	联接螺纹 Connecting threads	视导热系数 (内管内壁 350℃时) Thermal conductivity (inner wall of inner pipe 350℃)	常温抗 拉载荷 Tensile strength at normal temp	抗内压		抗外挤		平直度 Flatness	井深 Well Depth	温度 Temperature		固井套 管 ceme- nting casing
										internal pressure strength	collapse resistance	%	m			正常 工况 regular condition	过热 (3-4h) Over heating (3-4h)	
	mm x mm		mm x mm		mm	W/m.℃	kN	MPa	MPa		m							
	in*in		in*in		in													
1	73×40	2-7/8*1.61	N80	73.02×5.51	48.26×3.68	88.9	2-7/8USS	0.002~0.08	385	32	20	30	28	≤0.2	≤1500	350	380	4-1/2
2	88×40	3-1/2*1.61	N80	88.9×6.45	48.26×3.68	108	3-1/2USS	0.002~0.08	402	32	20	30	28	≤0.2	≤1500	350	380	5
3	88×50	3-1/2*1.995	N80	88.9×6.45	60.32×4.83	108	3-1/2USS	0.002~0.08	432	32	20	30	28	≤0.2	≤1500	350	380	5
4	114×62	4-1/2*2.441	N80	114.3×6.88	73.02×5.51	132	4-1/2BC	0.002~0.08	506	32	20	26	24	≤0.2	≤1500	350	380	7
5	114×76	4-1/2*2.992	N80	114.3×6.88	88.9×6.45	132	4-1/2BC	0.002~0.08	537	32	20	26	24	≤0.2	≤1500	350	380	7
6	127×76	5*2.992	N80	127.0×9.19	88.9×6.45	141.3	5BC	0.002~0.08	615	32	20	23	21	≤0.2	≤1500	350	380	9-5/8

注: BC-----API偏梯形螺纹; USS-----相当于BC Note:BC---API Buttress Thread;USS-----Equals to BC

超临界预应力隔热油管主要技术性能参数

Technical Performance Parameters of Supercritical Vacuum Insulated Tubing

序号 No.	规格 (外管外径*内管内径) specs.(OD of outer pipe&ID of inner pipe)		基本参数 Basic Parameters					主要性能参数 Key Performance Parameters							使用参数 Service parameters					
			钢级 Grade	外管 外径*壁厚 Outer Pipe OD&Wall Thickness	内管 外径*壁厚 Inner Pipe OD&Wall Thickness	外箍 外径 OD of coup lingup ling	联接螺纹 Connecting threads	视导热系数 (内管内壁 350℃时) Thermal conductivity (inner wall of inner pipe 350℃)	常温抗 拉载荷 Tensile strength at normal temp	抗内压		抗外挤		平直度	井深	温度		固井套 管 ceme- nting casing		
										MPa	MPa	MPa	MPa			%	m		正常 工况 regular condition	过热 (3-4h) Over heating (3-4h)
	mm x mm	in'in	mm x mm	mm x mm	mm	W/m.℃	kN											in		
	1	88×50	3-1/2*1.995	P110	88.9×6.45	60.32×4.83	108	3-1/2USS	≤0.04	432	50	40	50	37	≤0.2	≤1400	<390	400	5	
2	114×62	4-1/2*2.441	P110	114.3×6.88	73.02×5.61	127	4-1/2BC	≤0.04	600	50	40	50	37	≤0.2	≤1400	<390	400	7		

注: BC-----API偏梯形螺纹

Note:BC---API Buttress Thread



产品简介 PRODUCTS INTRODUCTION

API 5CT标准 API 5CT STANDARD

环氧粉末内喷涂防腐油管

ANTI-CORROSIVE TUBING

标准 Standard:

SY/T 0442-97、SPEI SPEC 5CT、API SPEC 5B

用途 Application:

主要用于注水井、酸化井、含H₂S油气井、结垢严重的油井、结蜡井等。

These products are mainly used injection wells, acid-fracturing wells, H₂S gas wells, and heavy scaled wells, paraffin troubled wells, etc.

环氧粉末内喷涂防腐油管主要性能参数

Technical Performance Parameters of Anti-corrosive tubing internally coated epoxy power

序号 No.	规格 Specs.	油管参数 Tubing parameters			涂层参数 Coating Parameters				
		管体外径 OD of Pipe	管体壁厚 Wall Thickness	管端加工形式 Type of End-finish	抗冲击强度 Shock Strength	耐磨性 Abrasion Resistance	附着力 Adhesion	针孔数(个/m²) Pin-hole	涂层厚度 Coating Thickness
		mm	mm					(piece/m²)	
1	1.9	48.26	3.68	不加厚或 外加厚 Non-upset or External upset	≥11J	≤20mg	1-3级 Grade	≤1	250-300um 或 按用户要求 250-300mm Or according to customers demand
2	2-3/8	60.32	4.83						
3	2-7/8	73.02	5.51						
4	3-1/2	88.90	6.45						
5	4	101.6	5.74						
			6.65						
6	4-1/2	114.3	6.88						

地面活动注汽管线

THERMAL LINE PIPE

用途 Application:

联结蒸汽锅炉、地面固定管线至热采井口，并可重复拆卸再用的输汽管线。

The thermal line pipe is used to connect the steam boiler and ground fixed fixed pipes to bot-production well, and it can be removed and used again.

地面注汽管线技术参数

Technical Parameters of Thermal Line Pipe

序号 No.	管体外径 OD of Pipe	使用性能 Operating Performance				
		正常情况 Normal Condition		特殊工况 Special Operation Condition		
		温度 Temperature	压力 Pressure	最高安全使用温度 Supreme Safe Temperature	最高安全使用温度下的使用压力 Service Pressure under Supreme Safe Temperature	允许持续时间 Permitting Lifetime
		mm	℃	MPa	℃	MPa
1	76	350	18	380	20	4
2	89	350	18	380	20	4



产品简介 PRODUCTS INTRODUCTION

API 5CT标准 API 5CT STANDARD

高抗挤毁套管

HIGH COLLAPSE TUBING AND CASING

标准 Standard:

API SPEC 5CT

用途 Application:

用于高抗挤毁条件下的油井。

It is used in high collapse condition's well

1、机械性能

规格 Size	屈服强度MPa Yield Strength	抗拉强度MPa Tensile Strength	伸长率% Elongation	冲击功J Impact
114.3×6.35	871~1062	≥948	≥15	≥52
114.3×7.37				

2、残余应力控制

残余应力、屈服强度 ≤ 20%

实际性能

规格 Size	屈服强度MPa Yield Strength	抗拉强度MPa Tensile Strength	伸长率% Elongation	冲击功J Impact
114.3×6.35	955	980	19	65
114.3×7.37	930	973	18.5	94

注：1、冲击试样尺寸为10×7.5×55mm
2、以上数据由10份以上试验结果整合所得

3、残余应力的检测

残余应力的检测采用环切法，测量时环切试样的长度为外径的3倍，残余应力计算公式如下：

$$\sigma_r = ES(I/D_o - I/D_i)/(1 - \mu^2)$$

式中 σ_r —管体表面残余应力，MPa；E—弹性模量， $E=2 \times 10^4$ MPa

S—平均壁厚，mm； D_o —开缝前钢管外径平均值，mm

D_i —开缝后钢管外径平均值，mm； μ —泊松比， $\mu=0.3$

试样编号 Sample No.	屈服强度 Yield Strength MPa	残余应力 Residual MPa	(残余应力/屈服强度) Residual/Yield Strength %
114.3×6.35	655	14.3	15.0
114.3×7.37	930	13.8	14.8

挤毁试验结果 Performance & Parameter

规格 Size	挤毁压力MPa Collapse Pressure	API标准值MPa API Standard	实际值/API标准值 Actual Valu
114.3×6.35	63.8	52.3	1.22
114.3×7.37	90.6	73.6	1.23



产品简介 PRODUCTS INTRODUCTION

API 5D标准 API 5D STANDARD

钻杆

DRILL PIPE

标准: Standard:

API SPEC 5D

用途: Application:

用于钻井

For well drilling

规格: Size:

外径 Designation		公称重量 normal Weight	计算重量 Calculated Weight		钢级 Grade	壁厚 Wall Thickness		加厚形式 (见注) Upset Ends,for Weld-on Tool Joints(seeNote)	工具接头型号 Tool Joint Designation
in	mm		lb/ft	kg/m		in	mm		
2 3/8 "	60.3	6.65	6.26	9.32	E.X.G.S	0.280	7.11	EU	NC26
2 7/8 "	73.0	10.40	9.72	14.48	E.X.G.S	0.362	9.19	EU	NC31
3 1/2 "	88.9	13.30	12.31	18.34	E.X.G.S	0.368	9.35	EU	NC38
3 1/2 "	88.9	15.50	14.63	21.79	E.X.G.S	0.449	11.40	EU	NC38,NC40
4 "	101.6	14.00	12.93	19.26	E.X.G.S	0.330	8.38	IU,EU	NC40
4 1/2 "	114.3	16.60	14.98	22.31	E.X.G.S	0.337	8.56	EU,IEU	NC46,NC50
4 1/2 "	114.3	20.00	18.69	27.84	E.X.G.S	0.430	10.92	EU	NC50
5 "	127.0	19.50	17.93	26.71	E.X.G.S	0.362	9.19	IEU	NC50
5 "	127.0	25.60	24.03	35.79	E.X.G.S	0.500	12.70	IEU	NC50
5 1/2 "	139.7	21.90	19.81	29.51	E.X.G.S	0.361	9.17	IEU	51/2FH
5 1/2 "	139.7	24.70	22.54	22.57	E.X.G.S	0.415	10.54	IEU	51/2FH

注: 1、EU-外加厚、IEU-内外加厚; 2、工具接头螺纹有右旋螺纹和左旋螺纹两种; 3、螺纹镀铜或磷化。

Note : 1、EU-External Upset;IEU-Internal&External Upset;

2、Threads of tool joint are right-hand or left-hand;

3、Threads are copper-plated phosphorized.

尺寸公差Tolerance on Dimension:

外径、壁厚、重量允许偏差 Outside Diameter,Wall Thickness and Weight Tolerances

项目Item		允许偏差Tolerance
管体 Pipe Body	外径Outside Diameter	$D \leq 101.6\text{mm} \pm 0.79\text{mm}$ $D \geq 114.3\text{mm} \begin{matrix} +0.1\% \\ -0.5\% \end{matrix}$
	壁厚 Wall Thickness	-12.5%
重量 Weight	单根 Single Lengths	$\begin{matrix} +6.5\% \\ -3.5\% \end{matrix}$



产品简介 PRODUCTS INTRODUCTION

API 5D标准 API 5D STANDARD

螺纹参数允许偏差: Thread Parameter Tolerance:

名称 Name		锥度 Taper mm/m	螺距每英寸 Pitch per in. mm	紧密距 Stand off mm
钻杆 2 7/8 " -5 " Drill Pipe	公端 Pin	+2.50 -0	±0.038	+0.254mm -0.127mm
	母端 Box	+0 -2.5	±0.038	+0 -0.254

化学成分: Chemical Composition:

钢级 Grade	化学成分Chemical composition%	
	P≤	S≤
E-75	0.015	0.003
X-95	0.015	0.003
G-105	0.015	0.003
S-135	0.015	0.003
工具接头Tool Joint	0.015	0.003

机械性能: Mechanical Properties:

管体 Pipe Body	钢 级 Grade	屈服强度 Yield Strength				抗拉强度 Tensile Strength		延伸率（%） Elongation	硬度 Hardness		全尺寸纵向 夏氏冲击功 Longitudinal Charpy Impact （J）	
		最低 min		最高 max		最低 min			HB	HRC	最低 min	
		Psi	Mpa	Psi	Mpa	Psi	Mpa				平均值 Average	单个值 Each
	E-75	75000	517	105000	724	100000	689	625000A ^{0.2} /U ^{0.9}	-	-	80	65
	X-95	95000	655	125000	862	105000	724		-	-	80	65
	G-105	105000	724	135000	931	115000	793		-	-	80	65
	S-135	135000	931	165000	1138	145000	1000		-	-	80	65
焊接 Weld Zone	工具接头 Tool Joint	120000	827.4	-	-	140000	965.3	≥13%	≥285	-	80	65
	E-75	75000	517	-	-	100000	689		-	≤37	40	27
	X-95	88000	609	-	-	103000	712		-	≤37	40	27
	G-105	95000	655	-	-	105000	724		-	≤37	40	27
	S-135	105000	724	-	-	115000	793		-	≤37	40	27



产品简介 PRODUCTS INTRODUCTION

API 5D标准 API 5D STANDARD

钻铤

DRILL COLLAR

标准 Standard:

API SPEC 5D

用途 Application:

用于钻井 For well drilling

螺旋、无磁钻铤规格

Drill collar

外径 Outside Diameter		内径 Bore Diameter		扣型 Connections
4-1/8	104.78	2	50.80	NC31,NC35
		2-1/4	57.15	NC35
4-3/4	120.65	2	50.80	NC35,
		2-1/4	57.15	NC35,NC38(31/2IF)
6-1/4	158.75	2-1/4	57.15	NC46(4IF)
		2-13/16	71.44	NC46(4IF)
6-1/2	165.1	2-1/4	57.15	NC46(4IF)
		2-13/16	71.44	NC46(4IF)
7	177.8	2-1/4	57.15	NC50(41/2IF)
		2-13/16	71.44	NC50(41/2IF)
8	203.2	2-13/16	71.44	65/8REG
		3	76.20	65/8REG
9	228.6	2-13/16	71.44	75/8REG
		3	76.20	75/8REG
9-1/2	241.3	3	76.20	75/8REG
10	254	3	76.20	NC70
11	275.4	3	76.20	NC77



产品简介 PRODUCTS INTRODUCTION

API 5L标准 API 5L STANDARD

管线管

PIPELINE

标准: Standard:

API SPEC 5L、ISO3183、GB/T9711

用途: Application:

用于石油、天然气工业中的气、水、油输送

It is used for conveying gas, water, and petroleum for oil and natural gas industries.

机械性能 Mechanical Properties:

标准 Standard	钢 级 Grade	屈服强度(MPa) Yield strength		抗拉强度(MPa) Tensile Strength		延伸率(%) Elongation
		min	max	min	max	min
GB/9711 API 5L ISO3183 DNV-OS-F101 IPS-M-PI-190(2)	PSL1					
	L245/B	245		415		$A_1 = C \frac{A_{12}}{U_{12}}$
	L290/X42	290		415		
	L320/X46	320		435		
	L360/X52	360		460		
	L390/X56	390		490		
	L415/X60	415		520		
	L450/X65	450		535		
	PSL2					
	L245R/BR, L245N/BN, L245NS/BNS	245	450	415	760	$A_1 = C \frac{A_{12}}{U_{12}}$
	L290R/X42R, L290N/X42N, L290NS/X42NS	290	495	415	760	
	L320N/X46N, L320NS/X46NS, L320NO/X46NO,	320	252	435	760	
	L360N/X52N, L360NS/X52NS, L360NO/X52NO,	360	530	460	760	
	L390N/X56N, L390Q/X56Q, L390NS/X56NS, L390QS/X56QS L390NO/X60N, L390QO/X60QO	390	545	490	760	
	L415N/X60N, L415Q/X60Q L415NS/X60NS, L415QS/X60QS, L415NO/X60NO, L415QO/X60QO	415	565	520	760	
	L450N/X65N, L450Q/X65Q, L450NS/X65NS, L450QS/X65QS, L450NO/X65NO, L450QO/X65QO	450	600	535	760	

化学成分 Chemical Composition(%)

标准 Standard	钢 级 Grade	化学成分 Chemical Composition(%)					CEV(max)	
		C(max)	Si(max)	Mn(max)	P(max)	S(max)	CE _{IRW}	CE _{Pcm}
GB/T9711.1	L245	0.27	/	1.15	0.030	0.030	/	/
GB/T9711.2	L245NB	0.16	0.40	1.10	0.025	0.020	0.42	/
GB/T9711.3	L245NC	0.14	0.40	1.35	0.020	0.010	0.36	/
GB/T9711.3	L245NCS	0.14	0.40	1.35	0.020	0.003	0.369	/
API 5L/ISO3183	L245 or B PSL1	0.28	/	1.20	0.30	0.030	/	/
API 5L/ISO3183	L245N or BN PSL2	0.24	0.40	1.20	0.025	0.015	0.43	0.25
API 5L/ISO3183	L245NS or BNS PSL2	0.14	0.40	1.35	0.020	0.003	0.36	0.19
API 5L/ISO3183	L245NO or BNO	0.14	0.40	1.35	0.020	0.010	0.36	0.19
DNV-OS-F101	245	0.14	0.40	1.35	0.020	0.010	0.34	0.20
IPS-M-PI-190(2)	B(Sour services)	0.17	0.40	1.15	0.015	0.003	0.39	0.21
IPS-M-PI-190(2)	B	0.17	0.40	1.15	0.020	0.015	0.39	0.21

化学成分 Chemical Composition(%)

标准 Standard	钢级 Grade	化学成分 Chemical Composition (%)					CEV (max)	
		C (max)	Si (max)	Mn (max)	P (max)	S (max)	CE _W	CEP _{om}
GB/T9711.1	L290	0.29	/	1.25	0.030	0.030	/	/
GB/T9711.2	L290NB	0.17	0.40	1.20	0.025	0.020	0.42	/
GB/T9711.3	L290NC	0.14	0.40	1.35	0.020	0.010	0.36	/
GB/T9711.3	L290NCS	0.14	0.40	1.35	0.020	0.003	0.36	/
API 5L/ ISO3183	L290 or X42 PSL1	0.28	/	1.30	0.030	0.030	/	/
API 5L/ ISO3183	L290N or X42N PSL2	0.24	0.40	1.20	0.025	0.015	0.43	0.25
API 5L/ ISO3183	L290NS or X42NS PSL2	0.14	0.40	1.35	0.020	0.003	0.36	0.19
API 5L/ ISO3183	L290NO or X42NO PSL2	0.14	0.40	1.35	0.020	0.010	0.36	0.19
DNV-OS-F101	290	0.14	0.40	1.65	0.020	0.010	0.34	0.20
IPS-M-PI-190(2)	X42	0.18	0.40	1.25	0.020	0.015	0.39	0.21
IPS-M-PI-190(2)	X42(Sour services)	0.16	0.40	1.25	0.015	0.003	0.39	0.21

标准 Standard	钢级 Grade	化学成分 Chemical Composition (%)					CEV (max)	
		C (max)	Si (max)	Mn (max)	P (max)	S (max)	CE _W	CEP _{om}
GB/T9711.1	L360	0.31	/	1.35	0.030	0.030	/	/
GB/T9711.2	L360NB	0.20	0.45	1.60	0.025	0.020	0.45	/
GB/T9711.2	L360QB	0.16	0.45	1.40	0.025	0.020	0.42	/
GB/T9711.3	L360NC	0.16	0.45	1.65	0.020	0.010	0.43	0.22
GB/T9711.3	L360QC	0.16	0.45	1.65	0.020	0.010	0.39	0.20
GB/T9711.3	L360NCS	0.16	0.45	1.65	0.020	0.003	0.43	0.22
GB/T9711.3	L360QCS	0.16	0.45	1.65	0.020	0.003	0.39	0.20
API 5L/ ISO3183	L360 or X52 PSL1	0.28	/	1.40	0.030	0.030	/	/
API 5L/ ISO3183	L360N or X52N PSL2	0.24	0.40	1.40	0.025	0.015	0.43	0.25
API 5L/ ISO3183	L360NS or X52NS PSL2	0.16	0.45	1.65	0.020	0.003	0.43	0.22
API 5L/ ISO3183	L360QS or X52QS PSL2	0.16	0.45	1.65	0.020	0.003	0.39	0.20
API 5L/ ISO3183	L360NO or X52NO PSL2	0.16	0.45	1.65	0.020	0.010	0.43	0.22
API 5L/ ISO3183	L360QO or X52QO PSL2	0.16	0.45	1.65	0.020	0.010	0.39	0.20
DNV-OS-F101	360	0.14	0.45	1.65	0.020	0.010	0.37	0.21
IPS-M-PI-190(2)	X52	0.17	0.40	1.25	0.020	0.015	0.39	0.21
IPS-M-PI-190(2)	X52(Sour services)	0.17	0.40	1.25	0.015	0.003	0.39	0.21

标准 Standard	钢级 Grade	化学成分 Chemical Composition (%)					CEV (max)	
		C (max)	Si (max)	Mn (max)	P (max)	S (max)	CE _W	CEP _{om}
GB/T9711.1	L415	0.26	/	1.35	0.030	0.030	/	/
GB/T9711.2	L415NB	0.21	0.45	1.60	0.025	0.020	按协议	/
GB/T9711.2	L415QB	0.16	0.45	1.60	0.025	0.020	0.43	/
GB/T9711.3	L415QC	0.16	0.45	1.65	0.020	0.010	0.41	0.22
GB/T9711.3	L415QCS	0.16	0.45	1.65	0.020	0.003	0.41	0.22
API 5L/ ISO3183	L415 or X60 PSL1	0.28	/	1.40	0.030	0.030	/	/
API 5L/ ISO3183	L415N or X60N PSL2	0.24	0.45	1.40	0.025	0.015	按协议 as agreed	
API 5L/ ISO3183	L415Q or X60Q PSL2	0.18	0.45	1.70	0.025	0.015	0.43	0.25
API 5L/ ISO3183	L415QS or X60QS PSL2	0.16	0.45	1.65	0.020	0.003	0.41	0.22
API 5L/ ISO3183	L415QO or X60QO PSL2	0.16	0.45	1.65	0.020	0.010	0.41	0.22
DNV-OS-F101	415	0.14	0.45	1.65	0.020	0.010	0.39	0.22
DNV-OS-F101	415(Sour services)	0.13	0.45	1.45	0.015	0.003	0.39	0.21
IPS-M-PI-190(2)	X60	0.15	0.35	1.45	0.020	0.015	0.39	0.21
IPS-M-PI-190(2)	X60(Sour services)	0.15	0.35	1.30	0.015	0.003	0.39	0.21

标准 Standard	钢级 Grade	化学成分 Chemical Composition (%)					CEV (max)	
		C (max)	Si (max)	Mn (max)	P (max)	S (max)	CE _W	CEP _{om}
GB/T9711.1	L450	按协议 as agreed					/	/
GB/T9711.2	L450QB	0.16	0.45	1.60	0.025	0.020	0.43	/
GB/T9711.3	L450QC	0.16	0.45	1.65	0.020	0.010	0.42	0.22
GB/T9711.3	L450QCS	0.16	0.45	1.65	0.020	0.003	0.42	0.22
API 5L/ ISO3183	L450 or X65 PSL1	0.28	/	1.40	0.030	0.030	/	/
API 5L/ ISO3183	L450Q or X65Q PSL2	0.18	0.45	1.70	0.025	0.015	0.43	0.25
API 5L/ ISO3183	L450QS or X65QS PSL2	0.16	0.45	1.65	0.020	0.003	0.42	0.22
API 5L/ ISO3183	L450QO or X65QO PSL2	0.16	0.45	1.65	0.020	0.010	0.41	0.22
DNV-OS-F101	450	0.15	0.45	1.65	0.020	0.010	0.40	0.23
DNV-OS-F101	450(Sour services)	0.14	0.45	1.55	0.015	0.003	0.40	0.23
IPS-M-PI-190(2)	X65	0.15	0.35	1.50	0.020	0.015	0.39	0.21
IPS-M-PI-190(2)	X65(Sour services)	0.15	0.35	1.30	0.015	0.003	0.39	0.21



产品简介 PRODUCTS INTRODUCTION

管道3PE/PP防腐加工 ANTI-CORROSION PROCESSING ABOUT PIPELINE 3PE/PP

标准 Standard:

外涂层: NF A49-710、DIN30670、CAN CSA 21、CAN CSA 20、SY/T0413、SY/T0315及其他国家相关钢管外防腐标准;
External coating Referto: NFA49-710、DIN30670、CAN CSA21、CAN CSA20、SY/T0413、SY/T0315
and other country's external anti-corrosion standards;

内涂层: NF A49-709、API RP 5L2、SY/T0457及其他国家相关钢管内涂层标准;
Internal coating Referto NF: A49-709、API RP 5L2、SY/T0457 and other country's internal anti-corrosion standards;

用途 Application:

外涂层主要用于油输送用管道埋地前的防腐保护; 减阻内涂层主要起降低管线投资和运行维护成本。
The external coating is mainly used for anti-corrosion protection for liquid pipes before burying,
and internal drag-reducing coating is mainly used to reduce the investment and maintenance costs.

钢管外防腐 Outer Corrosion Protection of Steel Pipes:

1、单层熔结环氧粉末防腐 (FBE) Single-layer FBE Coating

环氧粉末涂层因其优良的防腐性、绝缘性和较长的使用寿命而成为目前先进的管道外防腐涂层之一。分普通型和加强型两种, 厚度: 普通型300~400 μm; 加强型400~500 μm。

Characterized by excellent corrosion-proof performance, insulatibity and relatively long service life, epoxy powder coating is one of the most advanced outer anticorrosive coating of pipeline. There are normal type and strengthened type. Thickness: normal type: 300~400 μm; strengthened type: 400~500 μm.

2、双层熔结环氧粉末防腐 (2FBE) Two-layer FBE Coating:

双层环氧粉末外涂层为复合涂层结构, 由防腐型环氧粉末底层和抗机械损伤型环氧粉末面层一次喷涂成膜完成。分普通型和加强型两种, 厚度: 普通型总厚度≥620 μm; 加强型总厚度≥800 μm。

Two-layer epoxy powder coating is a compound coating structure composed of anticorrosive epoxy powder floor layer and mechanical damage resistant epoxy powder surface layer. There are normal type and strengthened type. Thickness: Total Thickness of Normal Type: ≥620 μm; Total Thickness of Strengthened Type: ≥800 μm.

3、二层聚乙烯/聚丙烯防腐 (2PE/2PP) Two-layer PE/PP Coating:

二层聚乙烯/聚丙烯层具有良好的防腐性、绝缘性、较长的使用寿命和一定的抗机械损伤性。分普通型和加强型两种, 厚度根据钢管规格不同而有所变化: 普通型最小厚度1.8mm; 加强型最小厚度2.5mm。

Two-layer PE/PP coating is characterized by excellent corrosion-proof performance, insulatibity, relatively long service life and mechanical damage resistance. There are normal type and strengthened type. The thickness varies with the specification shift of steel pipe: Thickness Min. of Normal Type: 1.8mm; Thickness Min. of Strengthened Type: 2.5mm.

4、三层聚乙烯/聚丙烯防腐 (3PE/3PP) Three-layer PE/3PP Coating:

三层聚乙烯/聚丙烯层是具有优良防腐性、绝缘性、较长的使用寿命和一定的抗机械损伤性的防腐层, 已被广泛应用于各种大型管道工程的防腐中。分普通型和加强型两种, 厚度根据钢管规格不同而有所变化: 普通型最小厚度1.8mm; 加强型最小厚度2.5mm。

Three-layer PE/PP coating is characterized by excellent corrosion-proof performance, insulatibity, relatively long service life and mechanical damage resistance. It is widely used in coating for all kinds of major pipeline engineering. There are normal type and strengthened type. The thickness varies with the specification shift of steel pipe: Thickness Min. of Normal Type: 1.8mm; Thickness Min. of Strengthened Type: 2.5mm.

钢管内防腐 Inner Corrosion Protection of Steel Pipes:

DN100-1500mm的钢质管道均可进行内防腐, 采用离心喷涂铁红防锈漆或双组分液态环氧涂料, 或由用户指定的其他涂料, 对处理后的钢质管道内壁进行防腐加工。

We offer inside corrosion protection for DN100~700mm steel pipes. We coat inner wall of treated steel pipe with red oxide anticorrosive paint, bicomponent liquid epoxy paint or other paint designated by clients by means of Centrifugal coating.

3PE/PP防腐层性能 The properties of anti-corrosion coating 3PE/PP:

项 目 Item	性能指标 Property index
剥离强度 Peel Strength (N/cm) 20±5℃ 50±5℃	≥60 ≥40
阴极剥离 Cathodic stripping (mm) (65℃, 48h)	≤10
冲击强度 Impact strength (J/mm)	≥5
抗弯曲 Anti-bending (2.5°)	聚乙烯无开裂 Polyethylene without cracking

3PE/PP厚度 Thickness of 3 PE/PP:

钢管 Steel pipeDN	环氧厚度 Thickness of epoxy（μm）	胶粘剂 Adhesives（μm）	防腐层厚度 Thickness of coating（mm）		
Dn≤100	60-80	170-250	1	2	3
100<DN≤250			1.0	1.8	2.5
250<DN<500			1.2	2.0	2.5
500≤DN<800			1.5	2.2	3.0
Dn≥800			2.0	2.5	3.5
			2.2	3.0	3.5



产品简介 PRODUCTS INTRODUCTION

EN 标准 EUROPEAN STANDARD

标准 Standard:

EN10297-1

机械和通用工程用途的无缝圆形钢管

SEAMLESS CIRCULAR STEEL TUBES FOR MECHANICAL AND GENERAL ENGINEERING PURPOSES.

非合金钢管NON- ALLOY STEEL TUBE

化学成分: Chemical Composition:

钢 级 Steel Grade		C		Si		Mn		P	S	其它元素 Other elements
Steel Name	Steel No.	min.	max.	min.	max.	min.	max.	min.	max.	
E235	1.0308	-	0.17	-	0.35	-	1.20	0.030	0.035	
E275	1.0225	-	0.21	-	0.35	-	1.40	0.030	0.035	
E315	1.0236	-	0.21	-	0.30	-	1.50	0.030	0.035	
E355 a	1.0580	-	0.22	-	0.55	-	1.60	0.030	0.035	
E470	1.0536	0.16	0.22	0.10	0.50	1.30	1.70	0.030	0.035	Al: min. 0.010; N: max. 0.020; Nb: max. 0.07; V: 0.06-0.15
C22E	1.1151	0.17	0.24	-	0.40	0.40	0.70	0.035	0.035	b
C35E	1.1181	0.32	0.39	-	0.40	0.50	0.80	0.035	0.035	b
C45E	1.1191	0.42	0.50	-	0.40	0.50	0.80	0.035	0.035	b
C60E	1.1221	0.57	0.65	-	0.40	0.60	0.90	0.035	0.035	b
38Mn6	1.1127	0.34	0.42	0.15	0.35	1.40	1.65	0.035	0.035	b

a: 制造商可根据需要添加铌、钒和钛元素, 但这些元素的成分含量应注明。
Additions of Nb, V and Ti are permitted at the discretion of the manufacturer, the content of these elements shall be reported.

b: Cr: max. 0.40%; Mo: max. 0.10%; Ni: max. 0.40%; Cr + Mo + Ni max. 0.63%

机械性能: Mechanical Properties:

钢 级 Steel Grade	Minimum Mechanical Properties										
	屈服强度 Yield Strength (ReH) Mpa *					抗拉强度 Tensile Strength (Rm) Mpa				伸长率 Elongation A %	
	壁厚 For T in mm					壁厚 For T in mm				l	t
	≤16	>16 ≤40	>40 ≤65	>65 ≤80	>80 ≤100	≤16	>16 ≤40	>40 ≤65	>65 ≤100		
E235	235	225	215	205	195	360	360	360	340	25	23
E275	275	265	255	245	235	410	410	410	380	22	20
E315	315	305	295	280	270	450	450	450	420	21	19
E355	355	345	335	315	295	490	490	490	470	20	18
E470	470	430	-	-	-	650	600	-	-	17	15

钢 级 Steel Grade	屈服强度 Yield Strength (ReH) Mpa *			抗拉强度 Tensile Strength (Rm) Mpa			伸长率 Elongation A %					
	壁厚 For T in mm			壁厚 For T in mm			≤16		>16≤40		>40≤80	
	≤16	>16 ≤40	>40 ≤80	≤16	>16 ≤40	>40 ≤80						
	l	t		l	t		l	t	l	t	l	t
C22E	240	210	210	430	410	410	24	22	25	23	25	23
C35E	300	270	270	550	520	520	18	16	19	17	19	17
C45E	340	305	305	620	580	580	14	12	16	14	16	14
C60E	390	350	340	710	670	670	10	8	11	9	11	9
38Mn6	400	380	360	670	620	570	14	12	15	13	16	14

注/Note: l=longitudinal,纵向的; t=transverse横向的。 a: 1Mpa=1 N/mm2



产品简介 PRODUCTS INTRODUCTION

EN 标准 EUROPEAN STANDARD

标准 Standard:

EN10297-1

机械和通用工程用途的无缝圆形钢管

SEAMLESS CIRCULAR STEEL TUBES FOR MECHANICAL AND GENERAL ENGINEERING PURPOSES.

合金钢管 ALLOY STEEL TUBE

化学成分: Chemical Composition:

钢 级 Steel Grade	C		Si		Mn		P	S	Cr	Mo		Ni		Al*	Cu	N	Nb	Ti	V	
	min.	max.	min.	max.	min.	max.	max.	max.	max.	min.	max.	min.	max.	min.	max.	max.	max.	max.	Max.	
E275K2	-	0.20	-	0.40	0.50	1.40	0.030	0.030	0.30	-	0.10	-	0.30	0.020	0.35	0.015	0.05	0.03	-	0.05
E355K2	-	0.20	-	0.50	0.90	1.65	0.030	0.030	0.30	-	0.10	-	0.50	0.020	0.35	0.015	0.05	0.05	-	0.12
E420J2	0.16	0.22	0.10	0.50	1.30	1.70	0.030	0.035	0.30	-	0.08	-	0.40	0.010	0.30	0.020	0.07b	0.05	0.08	0.15b
E460K2	-	0.20	-	0.60	1.00	1.70	0.030	0.030	0.30	-	0.10	-	0.80	0.020	0.70	0.025	0.05b	0.05	-	0.20b
E590K2	0.16	0.22	0.10	0.50	1.30	1.70	0.030	0.035	0.30	-	0.08	-	0.40	0.010	0.30	0.020	0.07b	0.05	0.08	0.15b
E730K2	-	0.20	-	0.50	1.40	1.70	0.025	0.025	0.30	0.30	0.45	0.30	0.70	0.020	0.20	0.020	0.05	0.05	-	0.12
钢 级 Steel Grade	C		Si		Mn		P	S	Cr	Mo		Ni		Cu						
	min.	max.	min.	max.	min.	max.	max.	max.	min.	max.	min.	max.	min.	max.	Max.					
41Cr4	0.38	0.45	-	0.40	0.60	0.90	0.035	0.035	0.90	1.20	-	-	-	-	-	-	-	-	-	-
25CrMo4	0.22	0.29	-	0.40	0.60	0.90	0.035	0.035	0.90	1.20	0.15	0.30	-	-	-	-	-	-	-	-
30CrMo4	0.27	0.34	-	0.35	0.35	0.60	0.035	0.035	0.80	1.15	0.15	0.30	-	-	-	-	-	-	-	-
34CrMo4	0.30	0.37	-	0.40	0.60	0.90	0.035	0.035	0.90	1.20	0.15	0.30	-	-	-	-	-	-	-	-
42CrMo4	0.38	0.45	-	0.40	0.60	0.90	0.035	0.035	0.90	1.20	0.15	0.30	-	-	-	-	-	-	-	-
36CrNiMo4	0.32	0.40	-	0.40	0.50	0.80	0.035	0.035	0.90	1.20	0.15	0.30	0.90	1.20	-	-	-	-	-	-
30CrNiMo8	0.26	0.34	-	0.40	0.30	0.60	0.035	0.035	1.80	2.20	0.30	0.50	1.80	2.20	-	-	-	-	-	-
41NiCrMo7-3-2	0.38	0.44	-	0.30	0.60	0.90	0.025	0.025	0.70	0.90	0.15	0.30	1.65	2.00	0.25	-	-	-	-	-
a: 如有充足的其它氮化合物出现, 最小铝含量就不适用。 If sufficient other N-binding elements are present the minimum total Al content does not apply.																				
b: 铌和钒总含量最大值为0.20%。Nb +V =0.20% Max.																				

机械性能: Mechanical Properties:

钢 级 Steel Grade	Minimum Mechanical Properties											冲击性能 Impact properties			
	屈服强度 Yield Strength (ReH) Mpa*					抗拉强度 Tensile Strength (Rm) Mpa				伸长率 Elongation A %		Minimum average absorbed energy, KV min. J at a test temperature of -20℃			
	壁厚 For T inmm					壁厚 For T inmm									
	≤16	>16 ≤40	>40 ≤65	>65 ≤80	>80 ≤100	≤16	>16 ≤40	>40 ≤65	>65 ≤100	l	t				
E275K2	275	265	255	245	235	410	410	410	380	22	20	40	27		
E355K2	355	345	335	315	295	490	490	470	470	20	18	40	27		
E420J2	420	400	390	370	360	600	560	530	500	19	17	27	20		
E460K2	460	440	430	410	390	550	550	550	520	19	17	40	27		
E590K2	590	540	480	455	420	700	650	570	520	16	14	40	27		
E730K2	730	670	620	580	540	790	750	700	680	15	13	40	27		

钢 级 Steel Grade	屈服强度 Yield Strength (ReH) Mpa *				抗拉强度 Tensile Strength (Rm) Mpa				伸长率 Elongation A %							
	壁厚 For T inmm				壁厚 For T inmm				l							
	≤8	>8 ≤20	>20 ≤50	>50 ≤80	≤8	>8 ≤20	>20 ≤50	>50 ≤80								
									l	t	l	t	l	t	l	t
41Cr4	800	660	560	-	1000	900	800	-	11	9	12	10	14	12	-	-
25CrMo4	700	600	450	400	900	800	700	650	12	10	14	12	15	13	16	14
30CrMo4	750	630	520	480	950	850	750	700	12	10	13	11	14	12	15	13
34CrMo4	800	650	550	500	1000	900	800	750	11	9	12	10	14	12	15	13
42CrMo4	900	750	650	550	1100	1000	900	800	10	8	11	9	12	10	13	11
36CrNiMo4	900	800	700	600	1100	1000	900	800	10	8	11	9	12	10	13	11
30CrNiMo8	1050	1050	900	800	1250	1250	1100	1000	9	7	9	7	10	8	11	9
41NiCrMo7-3-2	950	870	800	750	1150	1050	1000	900	9	7	10	8	11	9	12	10

注/Note: l=longitudinal,纵向的; t=transverse横向的.



产品简介 PRODUCTS INTRODUCTION

EN 标准 EUROPEAN STANDARD

标准 Standard:

EN10210-1

非合金结构钢和细晶粒结构钢制热成型空心型材

HOT FINISHED STRUCTURAL HOLLOW SECTIONS OF NON-ALLOY AND FINE GRAIN STEELS

主要生产牌号 Main steel tube grade:

S235JRH S275J0H S275J2H S355J0H S355J2H S355K2H

化学成分: Chemical Composition:

钢 级 Steel Grade	化学成分 Chemical composition limits, %					
	C max	Si max	Mn max	P max	S max	N max
S235JRH	0.17	/	1.40	0.040	0.040	0.009
S275J0H	0.20	/	1.50	0.035	0.035	0.009
S275J2H	0.20	/	1.50	0.030	0.030	/
S355J0H	0.22	0.55	1.60	0.035	0.035	0.009
S355J2H	0.22	0.55	1.60	0.030	0.030	/
S355K2H	0.22	0.55	1.60	0.030	0.030	/

机械性能: Mechanical Properties:

钢 级 Steel Grade	机械性能 Mechanical properties			冲击功 Impact energy KV J min		
	屈服强度 Yield strength MPa	抗拉强度 Tensile strength MPa	伸长率 Elongation %	试验温度 At test temperature of °C		
				-20	0	20
S235JRH	235	360-510	26	/	/	27
S275J0H	275	410-560	23	/	27	/
S275J2H	275	410-560	23	27	/	/
S355J0H	355	510-680	22	/	27	/
S355J2H	355	510-680	22	27	/	/
S355K2H	355	510-680	22	40	/	/



产品简介 PRODUCTS INTRODUCTION

EN 标准 EUROPEAN STANDARD

管道、压力容器、锅炉钢管

TUBE FOR PRESSURE PURPOSES

标准 Standard

EN 10216-1

EN 10216-2

用途 Application

适用于制造管道、容器、设备、管件及钢结构

It is available to manufacture pipeline, vessel, equipment, pipe fittings and steel structure.

主要生产钢管牌号 Main Steel Grad supplied

P195TR1、P195TR2、P235TR1、P235TR2、P265TR1、P265TR2、P195GH、P235GH、P265GH、
13CrMo4-5、10CrMo9-10

化学成分: Chemical Composition:

标准 Standard	牌号 Steel Grad	化学成分Chemical Composition%												
		C	Si	Mn	P	S	Cr	Mo	Ni	Al	Cu	Nb	Ti	V
EN10216-1	P195TR1	≤0.13	≤0.35	≤0.70	≤0.025	≤0.02	≤0.30	≤0.08	≤0.30	\	≤0.30	≤0.01	≤0.04	≤0.02
	P195TR2	≤0.13	≤0.35	≤0.70	≤0.025	≤0.02	≤0.30	≤0.08	≤0.30	≥0.02	≤0.30	≤0.01	≤0.04	≤0.02
	P235TR1	≤0.16	≤0.35	≤1.20	≤0.025	≤0.02	≤0.30	≤0.08	≤0.30	\	≤0.30	≤0.01	≤0.04	≤0.02
	P235TR2	≤0.16	≤0.35	≤1.20	≤0.025	≤0.02	≤0.30	≤0.08	≤0.30	≥0.02	≤0.30	≤0.01	≤0.04	≤0.02
	P265TR1	≤0.20	≤0.40	≤1.40	≤0.025	≤0.02	≤0.30	≤0.08	≤0.30	\	≤0.30	≤0.01	≤0.04	≤0.02
	P265TR2	≤0.20	≤0.40	≤1.40	≤0.025	≤0.02	≤0.30	≤0.08	≤0.30	≥0.02	≤0.30	≤0.01	≤0.04	≤0.02
EN10216-2	P195GH	≤0.13	≤0.35	≤0.70	≤0.025	≤0.020	≤0.03	≤0.08	≤0.30	≥0.02	≤0.30	≤0.01	≤0.04	≤0.02
	P235GH	≤0.16	≤0.35	≤1.20	≤0.025	≤0.020	≤0.03	≤0.08	≤0.30	≥0.02	≤0.30	≤0.01	≤0.04	≤0.02
	P265GH	≤0.20	≤0.40	≤1.40	≤0.025	≤0.020	≤0.03	≤0.08	≤0.30	≥0.02	≤0.30	≤0.01	≤0.04	≤0.02
	13CrMo4-5	0.10-0.17	≤0.35	0.40-0.70	≤0.025	≤0.020	0.70-1.15	0.40-0.60	≤0.30	≤0.04	≤0.30	\	\	\
	10CrMo9-10	0.08-0.14	≤0.50	0.30-0.70	≤0.025	≤0.020	2.00-2.50	0.90-1.10	≤0.30	≤0.04	≤0.30	\	\	\

机械性能: Mechanical Properties:

标准 Standard	牌号 Steel Grad	机械性能 Mechanical Properties			
		抗拉强度(Mpa)Tensile Strength	屈服强度(Mpa)Yield Strength	伸长率(%)Elongation	冲击功(J) Impact Energy
EN10216-1	P195TR1	320-440	≥195	≥27	\
	P195TR2	320-440	≥195	≥27	≥40
	P235TR1	360-500	≥235	≥25	\
	P235TR2	360-500	≥235	≥25	≥40
	P265TR1	410-570	≥265	≥21	\
	P265TR2	410-570	≥265	≥21	≥40
EN10216-2	P195GH	320-440	≥195	≥27	≥40
	P235GH	360-500	≥235	≥25	≥40
	P265GH	410-570	≥265	≥23	≥40
	13CrMo4-5	440-590	≥290	≥22	≥40
	10CrMo9-10	480-630	≥280	≥22	≥40



产品简介 PRODUCTS INTRODUCTION

ASME/ASTM 标准 ASME/ASTM STANDARD

机械结构管

MECHANICAL TUBE

标准 Standard:

ASTM A519-03---美国材料和试验协会标准 Standard of American Society for Testing & Materials
SAE-----美国汽车工程师协会标准 Standard of American Society of Automotive Engineers

用途 Application:

机械、汽车及其它零部件用无缝钢管

It is used for machine, automobile and other mechanical accessory purposes .

化学成分: Chemical Composition:

钢 级 Steel Grade	化学成分 Chemical composition limits %						
	C	Mn	P max	S max	Si	Cr	Mo
MT 1010	0.05-0.15	0.30-0.60	0.040	0.050	/	/	/
MT 1015	0.10-0.20	0.30-0.60	0.040	0.050	/	/	/
MT X 1015	0.10-0.20	0.60-0.90	0.040	0.050	/	/	/
MT 1020	0.15-0.25	0.30-0.60	0.040	0.050	/	/	/
MT X 1020	0.15-0.25	0.70-1.00	0.040	0.050	/	/	/
1008	0.10	0.30-0.50	0.040	0.050	/	/	/
1010	0.08-0.13	0.30-0.60	0.040	0.050	/	/	/
1012	0.10-0.15	0.30-0.60	0.040	0.050	/	/	/
1015	0.13-0.18	0.30-0.60	0.040	0.050	/	/	/
1016	0.13-0.18	0.60-0.90	0.040	0.050	/	/	/
1017	0.15-0.20	0.30-0.60	0.040	0.050	/	/	/
1018	0.15-0.20	0.60-0.90	0.040	0.050	/	/	/
1019	0.15-0.20	0.70-1.00	0.040	0.050	/	/	/
1020	0.18-0.23	0.30-0.60	0.040	0.050	/	/	/
1021	0.18-0.23	0.60-0.90	0.040	0.050	/	/	/
1022	0.18-0.23	0.70-1.00	0.040	0.050	/	/	/
1025	0.22-0.28	0.30-0.60	0.040	0.050	/	/	/
1026	0.22-0.28	0.60-0.90	0.040	0.050	/	/	/
1030	0.28-0.34	0.60-0.90	0.040	0.050	/	/	/
1035	0.32-0.38	0.60-0.90	0.040	0.050	/	/	/
1040	0.37-0.44	0.60-0.90	0.040	0.050	/	/	/
1045	0.43-0.50	0.60-0.90	0.040	0.050	/	/	/
1050	0.48-0.55	0.60-0.90	0.040	0.050	/	/	/
1518	0.15-0.21	1.10-1.40	0.040	0.050	/	/	/
1524	0.19-0.25	1.35-1.65	0.040	0.050	/	/	/
1541	0.36-0.44	1.35-1.65	0.040	0.050	/	/	/
4118	0.18-0.23	0.70-0.90	0.040	0.040	0.15-0.35	0.40-0.80	0.08-0.15
4130	0.28-0.33	0.40-0.60	0.040	0.040	0.15-0.35	0.80-1.10	0.15-0.25
4135	0.33-0.38	0.70-0.90	0.040	0.040	0.15-0.35	0.80-1.10	0.15-0.25
4137	0.35-0.40	0.70-0.90	0.040	0.040	0.15-0.35	0.80-1.10	0.15-0.25



产品简介 PRODUCTS INTRODUCTION

ASME/ASTM 标准 ASME/ASTM STANDARD

锅炉、过热器和换热器管

BOILER TUBE

标准 Standard:

ASTM A213-----美国材料与试验协会标准Standard of American Society for Testing&Materials

用途 Application:

适用于锅炉和过热器用最小壁厚的无缝铁素体和奥氏体钢管以及换热器用奥氏体钢管。
It is used for boiler and superheater min.wall thickness seamless steel ferrite and austenitic steel tube and heat exchanger austenitic steel tube.

主要生产钢管牌号 Main Steel Tube Grade:

A213T11、A213T12、A213T22等 (etc)

经协商，也可供应其它牌号的钢管。

Other grade can also be provided after consulting with customers.

化学成分、机械性能 Chemical Composition & Mechanical Properties

标准 Standard	牌号 Grade	化学成分 Chemical Composition(%)									机械性能 Mechanical Properties		
		C	Si	Mn	P、S	Cr	Mo	V	Cu	Ni	抗拉强度(MPa) Tensile Strength	屈服强度(MPa) Yield Strength	伸长率(%) Elongation
ASTM A213	T11	0.05~0.15	0.50~1.00	0.30~0.60	≤0.025	1.00~1.50	0.44~0.65	/	/	/	≥415	≥170	≥30
	T12	0.05~0.15	≤0.50	0.30~0.61	≤0.025	0.80~1.25	0.44~0.65	/	/	/	≥415	≥205	≥30
	T22	0.05~0.15	≤0.50	0.30~0.60	≤0.025	1.90~2.60	0.87~1.13	/	/	/	≥415	≥205	≥30

锅炉、过热器管

BOILER TUBE

标准 Standard:

ASTM A210-----美国材料与试验协会标准Standard of American Society for Testing & Materials

用途 Application:

适用于锅炉管和锅炉烟道管，包括安全端、拱顶及支撑管以及过热器管用的最小壁厚的无缝中碳钢。
It is used for boiler and boiler flue tubes. Including safe end, vault and supporting tube, and superheater min wall thickness seamless medium--carbon steel tube,

主要生产钢管牌号 Main Steel Tube Grade:

A210A1、A210C等 (etc)

经协商，也可供应其它牌号的钢管。

Other grade can also be provided after consulting with customers.

化学成分、机械性能 Chemical Composition & Mechanical Properties

标准 Standard	牌号 Grade	化学成分 Chemical Composition(%)									机械性能 Mechanical Properties		
		C	Si	Mn	P、S	Cr	Mo	V	Cu	Ni	抗拉强度(MPa) Tensile Strength	屈服强度(MPa) Yield Strength	伸长率(%) Elongation
ASTM A210	A-1	≤0.27	≥0.10	≤0.93	≤0.035	/	/	/	/	/	≥415	≥255	≥30
	C	≤0.35	≥0.10	0.29~1.06	≤0.035	/	/	/	/	/	≥485	≥275	≥30



产品简介 PRODUCTS INTRODUCTION

ASME/ASTM 标准 ASME/ASTM STANDARD

锅炉管

BOILER TUBE

标准 Standard:

ASTM A192-----美国材料与试验协会标准 Standard of American Society for Testing & Materials

用途 Application:

适用于高压用最小壁厚的无缝碳素钢锅炉及过热器用钢管。

It is used for high pressure min. Wall thickness seamless carbon steel Boiler and Superheater tube.

主要生产钢管牌号 Main Steel Tube Grade:

A192

经协商，也可供应其它牌号的钢管。

Other grade can also be provided after consulting with customers.

化学成分、机械性能 Chemical Composition & Mechanical Properties

标准 Standard	牌号 Grade	化学成分 Chemical Composition(%)							机械性能 Mechanical Properties		
		C	Si	Mn	P、S	Mo	Ni	Cu	抗拉强度(MPa) Tensile Strength	屈服强度(MPa) Yield Strength	伸长率(%) Elongation
ASTM A192	A192	0.06~0.18	≤0.25	0.27~0.63	≤0.035	/	/	/	≥325	≥180	≥35

换热器、冷凝器管

BOILER TUBE

标准 Standard:

ASTM A179-----美国材料与试验协会标准 Standard of American Society for Testing & Materials

用途 Application:

适用于管式换热器、冷凝器及类似传热设备用钢管。

It is used for tubed heat exchanger, condenser and similar heat conveying equipments

主要生产钢管牌号 Main Steel Tube Grade: A179

化学成分、机械性能 Chemical Composition & Mechanical Properties

标准 Standard	牌号 Grade	化学成分 Chemical Composition(%)										机械性能 Mechanical Properties		
		C	Si	Mn	P	S	Cr	Mo	Cu	Ni	V	抗拉强度(MPa) Tensile Strength	屈服强度(MPa) Yield Strength	伸长率(%) Elongation
ASTM A179	A179	0.06~0.18	/	0.27~0.63	≤0.035	≤0.035	/	/	/	/	/	≥325	≥180	35



产品简介 PRODUCTS INTRODUCTION

ASME/ASTM 标准 ASME/ASTM STANDARD

管道管

TUBE FOR PIPELINES

标准 Standard:

ASTM A106-----美国材料与试验协会标准Standard of American Society for Testing&Materials

用途 Application:

适用于弯曲、卷边及类似的成形加工。

It is used for the machining for bending, border--coiling and similar shape forming.

主要生产钢管牌号 Main Steel Tube Grade:

A106A、A106B、A106C

经协商，也可供应其它牌号的钢管。

Other grade can also be provided after consulting with customers.

化学成分、机械性能 Chemical Composition & Mechanical Properties

标准 Standard	牌号 Grade	化学成分 Chemical Composition(%)									机械性能 Mechanical Properties	
		C	Si	Mn	P、S	Cr	Mo	Ni	Cu	V	抗拉强度 (MPa) Tensile Strength	屈服强度 (MPa) Yield Strength
ASTM A106	A	≤0.25	≥0.10	0.27~0.93	≤0.035	≤0.40	≤0.15	≤0.40	≤0.40	≤0.08	≥330	≥205
	B	≤0.30	≥0.10	0.29~1.06	≤0.035	≤0.40	≤0.15	≤0.40	≤0.40	≤0.08	≥415	≥240
	C	≤0.35	≥0.10	0.29~1.06	≤0.035	≤0.40	≤0.15	≤0.40	≤0.40	≤0.08	≥485	≥275

一般用途管

BLACK STEEL PIPE

标准 Standard:

ASTM A53-----美国材料与试验协会标准Standard of American Society for Testing & Materials

用途 Application:

适用于作受力及承压件,也可以用于一般用途的蒸汽、水、气体及空气管线。

It is applied as pressed and forced parts and as pipeline for steam,water,gas and atmosphere delivery.

主要生产钢管牌号 Main Steel Tube Grade:

A53A、A53B等 (etc)。

经协商，也可供应其它牌号的钢管。

Other grade can also be provided after consulting with customers.

化学成分、机械性能 Chemical Composition & Mechanical Properties

标准 Standard	牌号 Grade	化学成分 Chemical Composition(%)										机械性能 Mechanical Properties	
		C	Si	Mn	P	S	Cu	Ni	Mo	Cr	V	抗拉强度 (MPa) Tensile Strength	屈服强度 (MPa) Yield Strength
ASTM A53	A	≤0.25	/	≤0.95	≤0.05	≤0.045	≤0.40	≤0.40	≤0.15	≤0.40	≤0.08	≥330	≥205
	B	≤0.30	/	≤1.20	≤0.05	≤0.045	≤0.40	≤0.40	≤0.15	≤0.40	≤0.08	≥415	≥240



产品简介 PRODUCTS INTRODUCTION

ASME/ASTM 标准 ASME/ASTM STANDARD

不锈钢管

STAINLESS STEEL PIPE

标准 Standard:

ASTM A312/A312M05a-----美国材料和试验协会标准Standard of American Society for Testing & Materials

ASTM A269 04-----美国材料和试验协会标准Standard of American Society for Testing & Materials

用途 Application:

ASTM A269 04适用于一般耐腐蚀和低温或高温环境

ASTM A269 04 is used for general corrosive and low-or-high-temperature condition service.

ASTM A312/A312M05a 适用于高温和一般的腐蚀环境

ASTM A312/A312M05a is used for high-temperature and general corrosive condition service.

主要生产钢管牌号Main Steel Tube Grade:

TP304、TP304L、TP321、TP316、TP316L、TP347、TP347H

化学成分: Chemical Composition:

钢 级 Steel Grade	化学成分Chemical Composition%							
	C	Mn	P	S	Si	Cr	Ni	Mo
TP304	0.08	2.00	0.045	0.030	0.75	18.0-20.0	8.0-11.0	/
TP304L	0.035	2.00	0.045	0.030	0.75	18.0-20.0	8.0-13.0	/
TP304H	0.04-0.10	2.00	0.045	0.030	0.75	18.0-20.0	8.0-11.0	/
TP316	0.08	2.00	0.045	0.030	0.75	16.0-18.0	11.0-14.0	2.00-3.00
TP316L	0.035	2.00	0.045	0.030	0.75	16.0-18.0	10.0-14.0	2.00-3.00
TP316H	0.04-0.10	2.00	0.045	0.030	0.75	16.0-18.0	11.0-14.0	2.00-3.00
TP321	0.08	2.00	0.045	0.030	0.75	17.0-19.0	9.0-12.0	/
TP347	0.08	2.00	0.040	0.030	0.75	17.0-20.0	9.0-13.0	/
TP347H	0.04-0.10	2.00	0.040	0.030	0.75	17.0-20.0	9.0-13.0	/

机械性能: Mechanical Properties:

钢 级 Steel Grade	机械性能 Mechanical Properties		
	抗拉强度(Mpa)Tensile Strength	屈服强度(Mpa)Yield Strength	伸长率(%) Elongation
TP304	> 515	> 205	> 35
TP304L	> 485	> 170	> 35
TP304H	> 515	> 205	> 35
TP316	> 515	> 205	> 35
TP316L	> 485	> 170	> 35
TP316H	> 515	> 205	> 35
TP321	> 515	> 205	> 35
TP347	> 515	> 205	> 35
TP347H	> 515	> 205	> 35

压力管道、高压管道、高温管道用碳素钢管

CARBON STEEL PIPE FOR PRESSURE PIPELINE, HIGH PRESSURE APPLICATION
AND HIGH TEMPERATURE APPLICATION

标准 Standard:

JIS G3454-----日本国家标准 Japanese National Standard
JIS G3455-----日本国家标准 Japanese National Standard
JIS G3456-----日本国家标准 Japanese National Standard

用途 Application:

JIS G3454适用于在350℃以下使用的压力管道用碳素钢管;

It is used as Carbon Steel Pipe for Pressure Pipeline in the condition under 350℃ temperature.

JIS G3455 适用于在350℃以下使用的工作压力高的管道用碳素钢管;

It is used as Carbon Steel Pipe for the pipeline which in the temperature less than 350℃ and high working pressure.

JIS G3456适用于在超过350℃下使用的管道用碳素钢管。

It is used as Carbon Steel Pipeline in the condition that over 350℃ .

主要生产钢管牌号 Main Steel Tube Grade:

STPG370 STS 370 STPT370

化学成分、机械性能

Chemical Composition & Mechanical Properties

牌号 Grade	化学成分 Chemical Composition(%)					机械性能 Mechanical Properties		
	C	Si	Mn	P	S	抗拉强度(MPa) Tensile Strength	屈服强度(MPa) Yield Strength	伸长率(%) Elongation
STPG 370	≤0.25	≤0.35	0.30~0.90	≤0.040	≤0.040	≥370	≥215	30
STS 370	≤0.25	0.10~0.35	0.30~1.10	≤0.035	≤0.035	≥370	≥215	30
STPT 370	≤0.25	0.10~0.35	0.30~0.90	≤0.035	≤0.035	≥370	≥215	30



产品简介 PRODUCTS INTRODUCTION

JIS 标准 JIS STANDARDS

机械管

MECHANICAL TUBE

标准 Standard:

JIS G3445

用途 Application:

适用于机械、汽车、自行车、家具、器具及其他机械零件用碳素钢管

It is used for machinery, automobile, bicycle, furniture and components for other machines.

主要生产钢管牌号 Main Steel Tube Grade:

STKM11A、STKM12 (A, B, C)、STKM13 (A, B, C)、STKM14 (A, B, C)

化学成分: Chemical Composition:

钢 级 Standard	牌 号 Steel Grade	化学成分Chemical Composition%				
		C	Si	Mn	P	S
JIS G3445	STKM11A	≤0.12	≤0.35	≤0.60	≤0.040	≤0.040
	STKM12A	≤0.20	≤0.35	≤0.60	≤0.040	≤0.040
	STKM12B					
	STKM12C					
	STKM13A	≤0.25	≤0.35	0.30-0.90	≤0.040	≤0.040
	STKM13B					
	STKM13C					
	STKM14A	≤0.30	≤0.35	0.30-1.00	≤0.040	≤0.040
	STKM14B					
	STKM14C					

机械性能: Mechanical Properties:

标准 Standard	牌号 Steel Grade	机械性能 Mechanical Properties		
		抗拉强度(Mpa)Tensile Strength	屈服强度(Mpa)Yield Strength	伸长率(%)Elongation
JIS G3445	STKM11A	≥295	\	≥35
	STKM12A	≥345	≥175	≥35
	STKM12B	≥390	≥275	≥25
	STKM12C	≥470	≥355	≥20
	STKM13A	≥375	≥215	≥30
	STKM13B	≥440	≥305	≥20
	STKM13C	≥510	≥380	≥15
	STKM14A	≥410	≥245	≥25
	STKM14B	≥500	≥355	≥15
	STKM14C	≥550	≥410	≥15

高压容器、气瓶管

TUBES FOR HIGH PRESSURE GAS CYLINDER

标准 Standard:

JIS G3429

用途 Application:

使用于制造高压容器用无缝钢管

It is used to manufacture high pressure gas cylinder.

主要生产钢管牌号 Main Steel Tube Grade:

STH11 STH12 STH21 STH22 STH31

化学成分: Chemical Composition:

钢 级 Standard	牌 号 Steel Grade	化学成分Chemical Composition%							
		C	Si	Mn	P max	Smax	Ni	Cr	Mo
JIS G3429	STH11	≤0.50	0.10-0.35	≤1.80	0.035	0.035	/	/	/
	STH12	0.30-0.41	0.10-0.35	1.35-1.70	0.030	0.030	/	/	/
	STH21	0.25-0.35	0.15-0.35	0.40-0.90	0.030	0.030	≤0.25	0.80-1.20	0.15-0.30
	STH22	0.33-0.38	0.15-0.35	0.40-0.90	0.030	0.030	≤0.25	0.80-1.20	0.15-0.30

锅炉、换热器用钢管

BOILER AND HEAT EXCHANGER STEEL TUBE

标准 Standard:

JIS G3461

JIS G3462

用途 Application:

适用于锅炉和管内外热交换器钢管

It is used for boiler and heat exchanger inside & outside tube.

主要生产钢管牌号 Main Steel Tube Grade:

STB340、STB410、STB510、STBA12、STBA13、STBA20、STBA22、STBA24

化学成分: Chemical Composition:

标准 Standard	钢 级 Steel Grade	化学成分Chemical Composition%						
		C	Si	Mn	P	S	Cr	Mo
JIS G3461	STB340	≤0.18	≤0.35	0.30-0.60	≤0.035	≤0.035	\	\
	STB410	≤0.32	≤0.35	0.30-0.80	≤0.035	≤0.035	\	\
	STB510	≤0.25	≤0.35	1.00-1.50	≤0.035	≤0.035	\	\
JIS G3462	STBA12	0.10-0.20	0.10-0.50	0.30-0.80	≤0.035	≤0.035	\	0.45-0.65
	STBA13	0.15-0.25	0.10-0.50	0.30-0.80	≤0.035	≤0.035	\	0.45-0.65
	STBA20	0.10-0.20	0.10-0.50	0.30-0.60	≤0.035	≤0.035	0.50-0.80	0.40-0.65
	STBA22	≤0.15	≤0.50	0.30-0.60	≤0.035	≤0.035	0.80-1.25	0.45-0.65
	STBA24	≤0.15	≤0.50	0.30-0.60	≤0.030	≤0.030	1.90-2.60	0.87-1.18

机械性能: Mechanical Properties:

标准 Standard	牌 号 Steel Grade	机械性能 Mechanical Properties		
		抗拉强度(Mpa)Tensile Strength	屈服强度(Mpa)Yield Strength	伸长率(%) Elongation
JIS G3461	STB340	≥340	≥175	≥35
	STB410	≥410	≥255	≥25
	STB510	≥510	≥295	≥25
JIS G3462	STBA12	≥380	≥205	≥30
	STBA13	≥410	≥205	≥30
	STBA20	≥410	≥205	≥30
	STBA22	≥410	≥205	≥30
	STBA24	≥410	≥205	≥30



产品简介 PRODUCTS INTRODUCTION

DIN 标准 DIN STANDARDS

管道、容器、设备结构用管

STEEL PIPE FOR PIPELINE, VESSEL AND EQUIPMENT STRUCTURE

标准 Standard:

DIN1629-----德国工业标准 Germany Industry Standard

用途 Application:

适用于制造管道、容器、设备、管件及钢结构。

It is used for manufacturing pipeline, vessel, equipment, pipe fittings and steel structure.

主要生产钢管牌号 Main Steel Tube Grade:

St37.0、St44.0、St52.0

化学成分、机械性能 Chemical Composition & Mechanical Properties

标准 Standard	牌号 Grade	化学成分 Chemical Composition(%)						机械性能 Mechanical Properties		
		C	Si	Mn	P	S	Cr	抗拉强度 (MPa) Tensile Strength	屈服强度 (MPa) Yield Strength	伸长率 (%) Elongation
DIN1629	St37.0	≤0.17	/	/	≤0.04	≤0.04	/	350~480	≥235	≥25
	St44.0	≤0.21	/	/	≤0.04	≤0.04	/	420~550	≥255	≥21
	St52.0	≤0.22	≤0.55	≤1.70	≤0.04	≤0.04	/	550~650	≥270	≥21

锅炉管

BOILER TUBE

标准 Standard:

DIN17175-----德国工业标准 Germany Industry Standard

用途 Application:

适用于锅炉行业用管道。

It is used for the pipelines of boiler industry.

主要生产钢管牌号 Main Steel Tube Grade:

St35.8、St45.8、15Mo3、13CrMo44、10CrMo910等 (etc)。

经协商, 也可供应其它牌号的钢管。

Other grade can also be provided after consulting with customers.

化学成分、机械性能 Chemical Composition & Mechanical Properties

标准 Standard	牌号 Grade	化学成分 Chemical Composition(%)							机械性能 Mechanical Properties		
		C	Si	Mn	P	S	Cr	Mo	抗拉强度 (MPa) Tensile Strength	屈服强度 (MPa) Yield Strength	伸长率 (%) Elongation
DIN17175	St35.8	≤0.17	0.10~0.35	0.40~0.80	≤0.030	≤0.030	/	/	360~480	≥235	≥25
	St45.8	≤0.21	0.10~0.35	0.40~1.20	≤0.030	≤0.030	/	/	410~530	≥255	≥21
	15Mo3	0.12~0.20	0.10~0.35	0.40~0.80	≤0.030	≤0.030	/	0.25~0.35	450~600	≥270	≥20
	13CrMo44	0.10~0.18	0.10~0.35	0.04~0.70	≤0.030	≤0.030	0.70~1.10	0.45~0.65	440~590	≥290	≥20
	10CrMo910	0.08~0.15	≤0.50	0.40~0.70	≤0.030	≤0.030	2.00~2.50	0.90~1.20	450~600	≥280	≥18

耐腐蚀专用管

PIPE FOR CORROSION RESISTANT

(1) 抗硫 (S、H₂S) 腐蚀专用管 07Cr2AlMo

SULFUR CORROSION(S、H₂S) RESISTANT STEEL PIPE TO 07Cr2AlMo

标准 Standard:

Q/TDGG0036-2003-----企业标准 Enterprise Standard

用途 Application:

用于H₂S和Cl⁻应力腐蚀环境下的压力容器管束专用无缝钢管。
It is used for the special pipes for pressure vessel in the condition of H₂S and Cl⁻ stress corroded

主要生产钢管牌号 Main Steel Tube Grade:

07Cr2AlMo

化学成分、机械性能

Chemical Composition & Mechanical Properties

牌号 Grade	化学成分 Chemical Composition(%)								机械性能 Mechanical Properties		
	C	Si	Mn	P	S	Cr	Al	Mo	抗拉强度 (MPa) Tensile Strength	屈服强度 (MPa) Yield Strength	伸长率 (%) Elongation
07Cr2AlMo	0.05~0.09	0.17~0.37	0.20~0.50	≤0.025	≤0.015	2.00~2.50	0.30~0.70	0.30~0.40	≥220	380~530	≥25.0

(2) 抗海水 (Cl⁻) 腐蚀专用管 09CrMoAl

SEA WATER CORROSION(Cl⁻) RESISTANT SPECIAL PIPE TO 09CrMoAl

标准 Standard:

Q/TDGG0037-2003-----企业标准 Enterprise Standard

用途 Application:

用于海水和潮湿大气应力腐蚀环境下的压力容器管束专用无缝钢管。
It is used for the special pipes for the pressure vessel in the condition of sea water and wet atmosphere stress.

主要生产钢管牌号 Main Steel Tube Grade:

09CrMoAl

化学成分、机械性能

Chemical Composition & Mechanical Properties

牌号 Grade	化学成分 Chemical Composition(%)								机械性能 Mechanical Properties		
	C	Si	Mn	P	S	Cr	Al	Mo	抗拉强度 (MPa) Tensile Strength	屈服强度 (MPa) Yield Strength	伸长率 (%) Elongation
09CrMoAl	0.06~0.10	0.20~0.50	0.30~0.60	≤0.025	≤0.015	0.80~1.20	0.40~0.80	0.25~0.35	≥220	380~530	≥25.0



产品简介 PRODUCTS INTRODUCTION

企业标准 ENTERPRISE STANDARD

异型管、波纹管、螺纹管

SPECIAL-SHAPE PIPES

(1) 换热器管束用U型无缝钢管

U-SHAPED SEAMLESS STEEL TUBES FOR TUBE-BUNDLE HEAT EXCHANGER

标准 Standard:

TD/GG2025-----企业标准 Enterprise Standard

用途 Application:

用于锅炉低中高压换热器及石化行业用换热器。

For heat exchanger of low/ medium/high boilers and petrochemical industry.

主要生产钢管牌号 Main Steel Tube Grade:

10、20、20G、15CrMoG、12Cr1MoVG、07Cr2AlMo、09CrMoAl、1Cr18Ni9Ti、0Cr18Ni9等(etc)。

化学成分、机械性能 Chemical Composition & Mechanical Properties

参照相应的国家标准或国外标准。

To reference corresponding National Standard or Foreign Standard.

(2) 换热器用波纹管、螺旋槽管

CORRUGATED & HELICAL GROOVE SEAMLESS STEEL TUBES FOR HEAT EXCHANGER

标准 Standard:

TD/GG2026-----企业标准 Enterprise Standard

用途 Application:

用于石油化工行业换热器。

For heat exchanger of petrochemical industry.

主要生产钢管牌号 Main Steel Tube Grade:

10、20、20G、1Cr18Ni9Ti、0Cr18Ni9、09CrMoAl、07Cr2AlMo等(etc)。

经协商，也可供应其它牌号的钢管。

Other grades can also be provided after consulting with customers.

化学成分、机械性能 Chemical Composition & Mechanical Properties

参照相应的国家标准或国外标准。

To reference corresponding National Standard or Foreign Standard.

特殊合金钢管 SPECIAL ALLOY STEEL PIPE

合金管 09MnD ALLOY STEEL PIPE TO 09MnD

标准 Standard:
Q/TDGG0040-2004-----企业标准 Enterprise Standard

用途 Application:
适用于低温压力容器用钢管。
It is used for low temperature pressure vessel

主要生产钢管牌号 Main Steel Tube Grade:
09MnD

化学成分、机械性能 Chemical Composition & Mechanical Properties

牌号 Grade	化学成分 Chemical Composition(%)									机械性能 Mechanical Properties		
	C	Si	Mn	P	S	V	Cr	Cu	Sb	抗拉强度 (MPa) Tensile strength	屈服强度 (MPa) Yield Strength	伸长率 (%) Elongation
09MnD	≤0.12	0.17~0.37	0.95~1.35	≤0.025	≤0.015	≤0.03	/	/	/	400~540	≥240	≥26

合金管 09CrCuSb(即ND钢) ALLOY STEEL PIPE TO 09CrCuSb(ND STEEL)

标准 Standard:
Q/TDGG0039-2004-----企业标准 Enterprise Standard

用途 Application:
广泛应用于电厂和炼油厂在制造高含硫烟气中工作的省煤器、空气预热器、热交换器和蒸发器等用以抵御含硫烟气结露腐蚀。
It is widely applied in power industries, refinery industries, It's used for coal-saving machine, air-warm-up machine, heat exchanger and evaporator, etc that in the condition that with much sulfur smoke in the air, because it can resist the corrosion of sulfured smoke and gas.

主要生产钢管牌号 Main Steel Tube Grade:
09CrCuSb(即ND钢) (ND STEEL)

化学成分、机械性能 Chemical Composition & Mechanical Properties

牌号 Grade	化学成分 Chemical Composition(%)									机械性能 Mechanical Properties		
	C	Si	Mn	P	S	V	Cr	Cu	Sb	抗拉强度 (MPa) Tensile strength	屈服强度 (MPa) Yield Strength	伸长率 (%) Elongation
09CrCuSb	≤0.10	0.20~0.40	0.35~0.65	≤0.10	≤0.10	/	0.70~1.20	0.25~0.45	≤0.10	390~550	≥245	≥25



产品简介 PRODUCTS INTRODUCTION

GB 标准 NATIONAL STANDARDS

锅炉管

BOILER TUBE

(1) 低中压锅炉用无缝钢管 Seamless Steel Tubes for Low and Medium Pressure Boiler

标准 Standard:

GB3087-----国家标准 National Standard

用途 Application:

用于中低压锅炉（工作压力一般不大于5.88MPa，工作温度在450℃以下）的受热面管子、集箱及蒸汽管道。

For manufacturing heating-pipelines, containers, steaming pipelines of low or medium pressure boilers ($P \leq 5.88 \text{ MPa}$, $T \leq 450^\circ \text{C}$)

主要生产钢管牌号 Main Steel Tube Grade:

10、20

经协商，也可供应其它牌号的钢管。

Other grade can also be provided after consulting with customers.

化学成分、机械性能

Chemical Composition Mechanical Properties

标准 Standard	牌号 Grade	化学成分 Chemical Composition(%)								机械性能 Mechanical Properties		
		C	Si	Mn	P、S	Cr	Cu	Ni	Mo、V	抗拉强度(MPa) Tensile Strength	屈服强度(MPa) Yield Strength	伸长率(%) Elongation
GB3087	10	0.07~0.14	0.17~0.37	0.35~0.65	≤ 0.035	≤ 0.25	≤ 0.25	≤ 0.25	/	335~475	≥ 195	≥ 24
	20	0.17~0.24	0.17~0.37	0.35~0.65	≤ 0.035	≤ 0.25	≤ 0.25	≤ 0.25	/	410~550	≥ 245	≥ 20

锅炉用无缝钢管

SEAMLESS STEEL TUBES AND PIPES FOR BOILER

(2) 高压锅炉用无缝钢管 Seamless Steel Tubes And Pipes for High Pressure Boiler

标准 Standard:

GB5310-----国家标准 National Standard

用途 Application:

用于高压锅炉（工作压力一般在9.8MPa以上，工作温度在450℃~650℃之间）的受热面管子、集箱、省煤器、过热器、再热器等。
For manufacture heating-pipelines, containers, coal-saving devices, superheaters and reheaters of high pressure boilers ($P > 9.8 \text{ MPa}$, $450^\circ\text{C} < T < 650^\circ\text{C}$)

主要生产钢管牌号 Main Steel Tube Grade:

20G、20MnG、15MoG、15CrMoG、12Cr2MoG、12Cr1MoVG等 (etc)。

经协商，也可供应其它牌号的钢管。

Other grade can also be provided after consulting with customers.

化学成分、机械性能

Chemical Composition & Mechanical Properties

标准 Standard	牌号 Grade	化学成分 Chemical Composition(%)								机械性能 Mechanical Properties		
		C	Si	Mn	P	S	Cr	Mo	V	抗拉强度 (MPa) Tensile Strength	屈服强度 (MPa) Yield Strength	伸长率 (%) Elongation
GB5310	20G	0.17~0.24	0.17~0.37	0.35~0.65	≤0.030	≤0.030	/	/	/	410~550	≥245	≥24
	20MnG	0.17~0.24	0.17~0.37	0.70~1.00	≤0.030	≤0.030	/	/	/	≥415	≥240	≥22
	15MoG	0.12~0.20	0.17~0.37	0.40~0.80	≤0.030	≤0.030	/	0.25~0.35	/	450~600	≥270	≥22
	15CrMoG	0.12~0.18	0.17~0.37	0.40~0.70	≤0.030	≤0.030	0.80~1.10	0.40~0.55	/	440~640	≥235	≥21
	12Cr2MoG	0.08~0.15	≤0.50	0.40~0.70	≤0.030	≤0.030	2.00~2.50	0.90~1.20	/	450~600	≥280	≥20
	12Cr1MoVG	0.08~0.15	0.17~0.37	0.40~0.70	≤0.030	≤0.030	0.90~1.20	0.25~0.35	0.15~0.30	470~640	≥255	≥21



产品简介 PRODUCTS INTRODUCTION

GB 标准 NATIONAL STANDARDS

石油裂化管

TUBES FOR PETROLEUM CRACKING

标准 Standard:

GB9948-----国家标准 National Standard

用途 Application:

适用于石油精炼厂的炉管、热交换器管和管道用无缝钢管。

It is used for the seamless steel tubes for furnace, heat exchangers and pipeline in petroleum refining factories

主要生产钢管牌号 Main Steel Tube Grade:

10、20、12CrMo、15CrMo、1Cr2Mo、1Cr5Mo、1Cr19Ni9、1Cr19Ni11Nb等 (etc)。

经协商, 也可供应其它牌号的钢管。

Other grade can also be provided after consulting with customers.

化学成分、机械性能 Chemical Composition & Mechanical Properties

牌号 Grade	化学成分 Chemical Composition(%)								机械性能 Mechanical Properties			
	C	Si	Mn	P	S	Cr	Mo	Ni	抗拉强度 (MPa) Tensile Strength	屈服强度 (MPa) Yield Strength	伸长率 (%) Elongation	冲击功 (J) Impact Energy
10	0.07~0.14	0.17~0.37	0.35~0.65	≤0.035	≤0.035	≤0.15	/	≤0.25	330~490	≥205	≥24	/
20	0.17~0.24	0.17~0.37	0.35~0.65	≤0.035	≤0.035	≤0.25	/	≤0.25	410~550	≥245	≥21	≥39
12CrMo	0.08~0.15	0.17~0.37	0.40~0.70	≤0.035	≤0.035	0.40~0.70	0.40~0.55	≤0.30	410~560	≥205	≥21	≥55
15CrMo	0.12~0.18	0.17~0.37	0.40~0.70	≤0.035	≤0.035	0.80~1.10	0.40~0.55	≤0.30	440~640	≥235	≥21	≥47
1Cr2Mo	≤0.15	0.50~1.00	0.30~0.60	≤0.035	≤0.030	2.15~2.85	0.45~0.65	/	≥390	≥175	≥22	≥92
1Cr5Mo	≤0.15	≤0.50	≤0.60	≤0.035	≤0.030	4.00~6.00	0.45~0.60	≤0.60	≥390	≥195	≥22	≥92
1Cr19Ni9	0.04~0.10	≤1.00	≤2.00	≤0.035	≤0.030	18.00~20.00	/	8.00~11.00	≥520	≥205	≥35	/
1Cr19Ni11Nb	0.04~0.10	≤1.00	≤2.00	≤0.035	≤0.030	17.00~20.00	/	9.00~13.00	≥520	≥205	≥35	/

化肥管

TUBES FOR CHEMICAL FERTILIZER EQUIPMENTS

标准 Standard:

GB6479-----中国国家标准 Chinese National Standard

用途 Application:

用于高压化肥设备和管道用优质碳素钢、低合金钢和合金钢无缝钢管。

It is excellent quality carbon steel, low alloy steel and alloy steel pipes for high pressure fertilizer equipments and pipelines.

主要生产钢管牌号 Main Steel Tube Grade:

20 16Mn/Q345等(etc)

化学成分、机械性能 Chemical Composition & Mechanical Properties

牌号 Grade	化学成分 Chemical Composition(%)								机械性能 Mechanical Properties		
	C	Si	Mn	P	S	Mo	Ni		抗拉强度 (MPa) Tensile Strength	屈服强度 (MPa) Yield Strength	伸长率 (%) Elongation
20	0.17~0.24	0.17~0.37	0.35~0.65	≤0.030	≤0.030	/	/		410~550	≥245	≥24
16Mn	0.12~0.20	0.20~0.60	1.20~1.6	≤0.030	≤0.030	/	/		490~670	≥320	≥21

机械结构管 STRUCTURAL TUBE

标准 Standard:

GB/T8162-----国家标准 National Standard

用途 Application:

适用于一般结构，机械结构用无缝钢管。

For common structures and mechanical structures

主要生产钢管牌号 Main Steel Tube Grade:

10、20、35、45、16Mn、12CrMo、15CrMo、12Cr1MoV等 (etc)。

化学成分、机械性能

Chemical Composition & Mechanical Properties

标准 Standard	牌号 Grade	化学成分 Chemical Composition(%)								机械性能 Mechanical Properties		
		C	Si	Mn	P、S	Cu	Ni	Mo	Cr	抗拉强度 (MPa) Tensile Strength	屈服强度 (MPa) Yield Strength	伸长率 (%) Elongation
GB/T8162	10	0.07~0.14	0.17~0.37	0.35~0.65	≤0.035	≤0.25	≤0.25	/	≤0.15	≥335	≥205	≥24
	20	0.17~0.24	0.17~0.37	0.35~0.65	≤0.035	≤0.25	≤0.25	/	≤0.25	≥390	≥245	≥20
	35	0.32~0.40	0.17~0.37	0.50~0.80	≤0.035	≤0.25	≤0.25	/	≤0.25	≥510	≥305	≥17
	45	0.42~0.50	0.17~0.37	0.50~0.80	≤0.035	≤0.25	≤0.25	/	≤0.25	≥590	≥335	≥14
	16Mn	0.12~0.20	0.20~0.55	1.20~1.60	≤0.035	≤0.25	≤0.25	/	≤0.25	≥490	≥325	≥21
	12CrMo	0.08~0.15	0.17~0.37	0.40~0.70	≤0.035	≤0.25	≤0.30	0.40~0.55	0.40~0.70	≥410	≥265	≥24
	15CrMo	0.12~0.18	0.17~0.37	0.40~0.70	≤0.035	≤0.25	≤0.30	0.40~0.55	0.80~1.10	≥440	≥295	≥22
	12Cr1MoV	0.08~0.15	0.17~0.37	0.40~0.70	≤0.035	≤0.25	≤0.30	0.25~0.35	0.90~1.20	≥490	≥245	≥22

输送流体管

TUBE FOR CONVEYANCE OF FLUID

标准 Standard:

GB/T8163-----中国国家标准 Chinese National Standard

用途 Application:

用于石油、天然气输送以及其它一般流体输送。

For conveyance of petroleum, natural gas and other common fluids.

主要生产钢管牌号 Main Steel Tube Grade:

10、20、Q345等 (etc)。

经协商，也可供应其它牌号的钢管。

Other grade can also be provided after consulting with customers.

化学成分、机械性能

Chemical Composition & Mechanical Properties

标准 Standard	牌号 Grade	化学成分 Chemical Composition(%)							机械性能 Mechanical Properties		
		C	Si	Mn	P、S	Cr	Ni	Cu	抗拉强度 (MPa) Tensile Strength	屈服强度 (MPa) Yield Strength	伸长率 (%) Elongation
GB/T8163	10	0.07~0.14	0.17~0.37	0.35~0.65	≤0.035	≤0.15	≤0.25	≤0.25	335~475	≥205	≥24
	20	0.17~0.24	0.17~0.37	0.35~0.65	≤0.035	≤0.25	≤0.25	≤0.25	410~550	≥245	≥20
	Q345	0.12~0.20	0.20~0.55	1.20~1.60	≤0.045	/	/	/	490~665	≥325	≥21



产品简介 PRODUCTS INTRODUCTION

GB 标准 NATIONAL STANDARDS

不锈钢管

STAINLESS STEEL PIPE

标准 Standard:

GB/T14975-----国家标准 National Standard

GB/T14976-----国家标准 National Standard

GB13296-----国家标准 National Standard

用途 Application:

用于机械结构、流体管道、锅炉过热器、热交换器、冷凝器、催化管等。

For manufacture of mechanical structure, fluid tubes, superheaters of boiler, heat exchangers, condenser, catalytic tubes etc.

主要生产钢管牌号 Main Steel Tube Grade:

0Cr18Ni9, 0Cr25Ni20, 0Cr18Ni10Ti, 00Cr17Ni14Mo2, 0Cr18Ni12Mo2Ti, 1Cr18Ni9Ti等 (etc)。

经协商, 也可供应其它牌号的钢管。

Other grade can also be provided after consulting with customers.

化学成分、机械性能 Chemical Composition & Mechanical Properties

牌号 Grade	化学成分 Chemical Composition(%)									机械性能 Mechanical Properties		
	C	Si	Mn	P	S	Ni	Cr	Mo	Ti	抗拉强度 (MPa) Tensile strength	屈服强度 (MPa) Yield Strength	伸长率 (%) Elongation
	max									min		
0Cr18Ni9	0.07	1.00	2.00	0.035	0.030	8.00~11.00	17.00~19.00		/	520	205	35
0Cr25Ni20	0.08	1.00	2.00	0.035	0.030	19.00~22.00	24.00~26.00		5c%-0.07	520	205	35
0Cr18Ni10Ti	0.08	1.00	2.00	0.035	0.030	9.00~12.00	17.00~19.00		≥5c%	520	205	35
00Cr17Ni14Mo2	0.03	1.00	2.00	0.035	0.030	12.00~15.00	16.00~18.00	2.00~3.00		480	175	35
0Cr18Ni12Mo2Ti	0.08	1.00	2.00	0.035	0.030	11.00~14.00	16.00~19.00	1.80~2.50	5c%-0.70	530	205	35
1Cr18Ni9Ti	0.12	1.00	2.00	0.035	0.030	8.00~11.00	17.00~19.00		5(c%-0.02)-0.08	550	205	35

精密钢管

PRECISION TUBE

标准 Standard:

GB/T3639-----国家标准 National Standard

GB/T8713-----国家标准 National Standard

用途 Application:

用于机械结构、液压设备、液压和气动缸筒的制造。

For manufacture of mechanical structure, hydraulic pressure equipment, hydraulic pressure and cylinder.

主要生产钢管牌号 Main Steel Tube Grade:

10、20、35、45等 (etc)。

经协商, 也可供应其它牌号的钢管。Other grade can also be provided after consulting with customers.

化学成分、机械性能 Chemical Composition & Mechanical Properties

化学成分参照相应的国家标准或国外标准。

Chemical composition reference for corresponding national standard or foreign standard.

牌号 Grade	交货状态 Delivery Condition								
	BK		BKW		BKS		NBK		
	抗拉强度 (MPa) Tensile Strength	伸长率 (%) Elongation	抗拉强度 (MPa) Tensile Strength	伸长率 (%) Elongation	抗拉强度 (MPa) Tensile Strength	伸长率 (%) Elongation	抗拉强度 (MPa) Tensile Strength	屈服强度 (MPa) Yield Strength	伸长率 (%) Elongation
	min								
10	410	6	375	10	335	12	335	205	24
20	510	5	450	8	430	10	410	245	20
35	590	4	550	6	520	8	530	315	17
45	645	4	630	5	610	7	600	355	14



产品简介 PRODUCTS INTRODUCTION

GB 标准 NATIONAL STANDARDS

液压支柱管

TUBE FOR HYDRAULIC PILLAR SERVICE

标准 Standard:

GB/T17396

用途 Application:

使用于制造煤矿液压支架和支柱用无缝钢管

It is used for hydraulic pillars for manufacturing colliery.

主要生产钢管牌号 Main Steel Tube Grade:

20、35、45、27SiMn

化学成分: Chemical Composition

标准 Standard	钢 级 Steel Grade	化学成分Chemical Composition%							
		C	Si	Mn	P	S	Cr	Ni	Cu
GB/T17396 Gb8713	20	0.17-0.24	0.17-0.37	0.35-0.65	≤0.035	≤0.035	≤0.25	≤0.25	≤0.20
	35	0.32-0.40	0.17-0.37	0.50-0.80	≤0.035	≤0.035	≤0.25	≤0.25	≤0.20
	45	0.42-0.50	0.17-0.37	0.50-0.80	≤0.035	≤0.035	≤0.25	≤0.25	≤0.20
	27SiMn	0.24-0.32	1.10-1.40	1.10-1.40	≤0.035	≤0.035	≤0.30	≤0.30	≤0.30

机械性能: Mechanical Properties:

标准 Standard	牌 号 Steel Grade	机械性能 Mechanical Properties				
		抗拉强度(Mpa)Tensile Strength	屈服强度(Mpa)Yield Strength	伸长率(%)Elongation	冲击功(J)	硬度(HB)
GB/T17396 Gb8713	20	≥400	≥245	≥20	\	\
	35	≥510	≥305	≥17	\	\
	45	≥590	≥335	≥14	\	\
	27SiMn	≥980	≥835	≥12	≥39	≥217

气瓶管

TUBE FOR GAS CYLINDER

标准 Standard:

GB 18248

用途 Application:

使用于制造高压气瓶用无缝钢管

It is used for manufacturing high pressure gas cylinder.

主要生产钢管牌号 Main Steel Tube Grade:

37Mn 34Mn2V 30CrMo 35CrMo

化学成分: Chemical Composition

标准 Standard	钢 级 Steel Grade	化学成分Chemical Composition%										
		C	Si	Mn	Pmax	S max	P+Smax	Cr max	Mo max	V max	Ni max	Cu max
GB 18248	37Mn	0.34~0.40	0.10~0.30	1.35~1.65	0.030	0.030	0.055	0.30	/	/	0.30	0.20
	34Mn2V	0.30~0.37	0.17~0.37	1.40~1.75	0.030	0.030	0.055	0.30	/	0.07~0.12	0.30	0.20
	30CrMo	0.26~0.34	0.17~0.37	0.40~0.70	0.030	0.030	0.055	0.80~1.10	0.15~0.25	/	0.30	0.20
	35CrMo	0.32~0.40	0.17~0.37	0.40~0.70	0.030	0.030	0.055	0.80~1.10	0.15~0.25	/	0.30	0.20

机械性能: Mechanical Properties:

标准 Standard	牌号 Steel Grade	机械性能 Mechanical Properties			Impact energy Ku2 J
		T.S MPa	Y.S Mpa	E %	
		Min			
GB 18248	37Mn	750	630	16	55
	34Mn2V	745	530	16	55
	30CrMo	930	785	12	63
	35CrMo	980	835	12	63



产品简介 PRODUCTS INTRODUCTION

GB 标准 NATIONAL STANDARDS

石油天然气工业管线钢管

PIPELINE FOR PETROLEUM AND NATURAL GAS

标准 Standard

GB/T 9711 国家标准 National Standard

ISO 3183 国际标准 International Standard

用途 Application

用于石油、天然气工业中的气、水、油输送。

It is used for conveying gas, water, and petroleum for oil and natural gas industries.

主要牌号 Main Steel Tube Grade

L245、L290、L320、L360、L390、L415、L450等(etc)

化学成分、机械性能 Chemical Composition & Mechanical Properties

标准	牌号 Grade	化学成分 Chemical Composition(%)								机械性能 Mechanical Properties		
		C	Si	Mn	P	S	V	Nb	Ti	T.S(MPa)	Y.S(MPa)	A(%)
		max	max	max	max	max	max	max	max	min	min	min
GB/T9711.1	L245	0.27	-	1.15	0.030	0.030	-	-	-	415	245	21
	L290	0.29	-	1.25	0.030	0.030	-	-	-	415	290	21
	L320	0.31	-	1.35	0.030	0.030	-	-	-	435	320	20
	L360	0.31	-	1.35	0.030	0.030	-	-	-	460	360	19
	L390	0.29	-	1.25	0.030	0.030	-	-	-	490	390	18
	L415	0.26	-	1.35	0.030	0.030	-	-	-	520	415	17
	L450	0.28	-	1.40	0.030	0.030	-	-	-	535	450	17
GB/T9711.2	L245NB	0.16	0.40	1.10	0.025	0.020	-	-	-	415	245~440	22
	L290NB	0.17	0.40	1.20	0.025	0.020	0.05	0.05	0.04	415	290~440	21
	L360NB	0.20	0.45	1.60	0.025	0.020	0.10	0.05	0.04	460	360~510	20
	L415NB	0.21	0.45	1.60	0.025	0.020	0.15	0.05	0.04	520	415~565	18
	L450QB	0.16	0.45	1.60	0.025	0.020	0.09	0.05	0.06	535	450~570	18
GB/T9711.3	L245NC	0.14	0.40	1.35	0.020	0.010	-	-	-	415	245~440	22
	L290NC	0.14	0.40	1.35	0.020	0.010	0.05	0.05	0.04	415	290~440	21
	L360NC	0.16	0.45	1.65	0.020	0.010	0.10	0.05	0.04	460	360~510	20
	L415QC	0.16	0.45	1.65	0.020	0.010	0.08	0.05	0.04	520	415~565	18
	L450QC	0.16	0.45	1.65	0.020	0.010	0.09	0.05	0.06	535	450~570	18
ISO3183	L245 or B	0.28	-	1.20	0.030	0.030	0.06	0.06	0.15	415	245	21
	L290 or X42	0.28	-	1.30	0.030	0.030	0.15	0.15	0.15	415	290	21
	L320 or X46	0.28	-	1.40	0.030	0.030	0.15	0.15	0.15	435	320	20
	L360 or X52	0.28	-	1.40	0.030	0.030	0.15	0.15	0.15	460	360	19
	L390 or X56	0.28	-	1.40	0.030	0.030	0.15	0.15	0.15	490	390	18
	L415 or X60	0.28	-	1.40	0.030	0.030	0.15	0.15	0.15	520	415	17
	L450 or X65	0.28	-	1.40	0.030	0.030	0.15	0.15	0.15	535	450	17

船用管

PIPE FOR SHIP-BUILDING

标准 Standard:

中国船级社材料与焊接规范-----中国船级社(CCS)
CCS Regulations of Material and Welding-----China Classification Society

德国劳埃德船级社(GL)规范-----德国劳埃德船级社(GL)
GL Regulations-----Germanischer Lloyd

英国劳氏船级社(LR)规范-----英国劳氏船级社(LR)
LR Regulations-----Lloyd Register of Shipping

法国船级社(BV)规范-----法国船级社(BV)
BV Regulations-----Bureau Veritas

美国船级社(ABS)规范-----美国船级社(ABS)
ABS Regulations-----American Bureau of Shipping

挪威船级社(DNV)规范-----挪威船级社(DNV)
DNV Regulations-----Det Norske Veritas Approval of Manufacturer

日本船级社(NK)规范-----日本海事协会(NK)
NK Regulations-----Nippon Kaiji Kyokai

韩国船级社(KR)规范-----韩国船级社(KR)
KR Regulations-----Korean Register of Shipping

意大利船级社(RINA)规范-----意大利船级社(RINA)
RINA Regulations-----RINA

用途 Application:

用于船用锅炉与过热器和 I、II、III 级压力管系用管的制造，以及液化气运输和散装化学品船用管的制造。
For manufacture of boilers, superheaters for ships, and I、II、III ranks pressure system pipelines, liquefied petroleum and bulk chemicals.

主要生产钢管钢级、牌号 Main Steel Tube Grade

320、360、410、00Cr17Ni14Mo2、0Cr18Ni9Ti 等 (etc)。

经协商，也可供应其它钢级、牌号的钢管。

Other grade can also be provided after consulting with customers.

化学成分、机械性能 Chemical Composition & Mechanical Properties

类别 Type of Steel	钢级、牌号 Steel Grade	化学成分 Chemical Composition(%)									机械性能 Mechanical Properties		
		C	Si	Mn	P	S	Cr	Mo	Ni	Ti	抗拉强度 (MPa) Tensile Strength	屈服强度 (MPa) Yield Strength	伸长率 (%) Elongation
碳钢和碳锰钢 Carbon & Carbon-Manganese Steel	320	≤0.16	≤0.35	0.40~0.70	≤0.035	≤0.035	≤0.25	≤0.10	≤0.30	/	320~440	≥195	≥25
	360	≤0.17	≤0.35	0.40~0.80	≤0.035	≤0.035	≤0.25	≤0.10	≤0.30	/	360~480	≥215	≥24
	410	≤0.21	≤0.35	0.40~1.20	≤0.035	≤0.035	≤0.25	≤0.10	≤0.30	/	410~530	≥235	≥22
奥氏体不锈钢 Austenite Stainless Steel	00Cr17Ni14Mo2	≤0.030	≤1.00	≤2.00	≤0.030	≤0.030	16.00~18.00	2.00~3.00	12.00~15.00	/	≥480	≥175	≥35
	0Cr18Ni9Ti	≤0.08	≤1.00	≤2.00	≤0.030	≤0.030	17.00~19.00	/	8.00~11.00	5(C%-0.02)~0.08	≥520	≥205	≥35



产品简介 PRODUCTS INTRODUCTION

汽车用管 TUBE FOR AUTOMOBILE

汽车车轴、车桥、轴套管 TUBE FOR AUTOMOBILE

标准 Standard

GB/T 8162 国家标准 National Standard
YB/T 5035 中国冶金部标准 Standard of China Metallurgical Industry
SAE 美国汽车协会标准 Standard of American Society of Automotive Engineers

用途 Application

适用于汽车车轴、车桥、轴套用无缝钢管
It is used for manufacturing auto axle and auto axle bush.

主要牌号 Main Steel Tube Grade

20Mn2、SAE1527、45、45Mn2等(etc)

化学成分、机械性能 Chemical Composition & Mechanical Properties

标准	牌号 Grade	化学成分 Chemical Composition(%)								机械性能 Mechanical Properties		
		C	Si	Mn	P	S	Cr	Ni	Cu	TS	YS	A
YB SAE GB	20Mn2	0.17-0.24	0.17-0.37	1.40-1.80	≤0.035	≤0.035	≤0.25	≤0.25	≤0.20	≥785	≥590	≥10
	SAE1527	0.22-0.29	0.17-0.37	1.20-1.50	≤0.030	≤0.035	≤0.25	≤0.25	≤0.20	≥785	≥635	≥10
	45	0.42-0.50	0.17-0.37	0.50-0.80	≤0.030	≤0.025	≤0.25	≤0.25	≤0.25	≥590	≥335	≥14
	45Mn2	0.42-0.49	0.17-0.37	1.40-1.80	≤0.025	≤0.025	≤0.30	≤0.30	≤0.20	≥885	≥735	≥10



销售网络

SALES NETWORK

产品畅销全国各地, 部分产品已远销东南亚、中东、北美、南美、欧洲、非洲、澳洲等地区, 形成了覆盖全球的市场销售网络。

Our products sell very well throughout the country. Our sales net has covered almost all global areas, such as Southeast Asia, Middle East, North America, South America, Europe, Africa, Oceania and etc.



联系我们 **CONTACT US:**

国际贸易市场 **INTERNATIONAL SALES DEPARTMENT**

北美及大洋洲区域: North-America&Oceania
电话 (TEL): +86-532-86121777 传真 (FAX): +86-532- 83871366
地址: 青岛市市南区中山路百盛商务中心45楼
45F.Parkson Business Inrl Center No.60 Zhongshan Rd.Qingdao.China
Email: sales1@ primacy-group.com

南美区域: South-America
电话 (TEL): +86-10-56629288-801 传真 (FAX): +86-10- 58700580
北京市朝阳区东大桥8号尚都国际中心805室
Rm 805, Shangdu International Center, 8#,Dongdaqiao Road, Chaoyang Distr., Beijing, CHINA.
Email: sales2@ primacy-group.com

欧洲及非洲区域: Europe&Africa
电话 (TEL): +86-10-56629288-501 传真 (FAX): +86-10- 58700580
北京市朝阳区东大桥8号尚都国际中心805室
Rm 805, Shangdu International Center, 8#,Dongdaqiao Road, Chaoyang Distr., Beijing, CHINA.
Email: sales3@ primacy-group.com

亚太区域: Asian-Pacific
电话 (TEL): +86-10-56629288-901 传真 (FAX): +86-10- 58700580
北京市朝阳区东大桥8号尚都国际中心805室
Rm 805, Shangdu International Center, 8#,Dongdaqiao Road, Chaoyang Distr., Beijing, CHINA.
Email: sales4@ primacy-group.com

远东区域: Far East
电话 (TEL): +86-10-56629288-101 传真 (FAX): +86-10- 58700580
北京市朝阳区东大桥8号尚都国际中心805室
Rm 805, Shangdu International Center, 8#,Dongdaqiao Road, Chaoyang Distr., Beijing, CHINA.
Email: sales5@ primacy-group.com

国内贸易市场 **NATIONAL SALES DEPARTMENT**

电话 (TEL): +86-10-56629288-666 传真 (FAX): +86-10- 58700580
北京市朝阳区东大桥8号尚都国际中心805室
Rm 805, Shangdu International Center, 8#,Dongdaqiao Road, Chaoyang Distr., Beijing, CHINA.
Email: sales@primacy-group.com