BAOSTEEL

Baosteel Tube
Products Catalog

钢管产品
产品手册

www.baosteel.com

宝山钢铁股份有限公司
BAOSHAN IRON & STEEL CO., LTD.

目录 Content

Introduction
简介

宝山钢铁股份有限公司 (简称 " 宝钢股份 ") 是中国最大、最现代化的钢铁联合企业。宝钢股份以其诚信、人才、创新、管理、技术诸方面综合优势，奠定了在国际钢铁市场上世界级钢铁联合企业的地位。《世界钢铁业指南》评定宝钢股份在世界钢铁行业的综合竞争力为前三名，认为也是未来最具发展潜力的钢铁企业。

公司钢管产业拥有 50 年的钢管制造经验，包括中小口径热轧无缝管、特种合金无缝钢管、冷轧和冷拔无缝钢管、中大口径高频电阻焊管、大口径直缝埋弧焊管等产品，集科研、产品开发、加工检验、产品销售于一体，实行从炼铁、炼钢 (转炉、电炉)、热轧钢卷、厚板、条钢到制管及管加工的一贯制质量管理，具有特大型钢铁联合企业综合生产的规模化优势，目前已成为中国包括无缝、焊管的大型精品钢管研发生产基地。

公司以其先进技术、设备、管理、良好的信誉，保证提供高质量的产品和服务，令客户满意。

公司全体员工衷心感谢您对我们产品的关注和使用，竭诚欢迎您对公司产品和服务提出宝贵意见。

如果您所需产品的品种、规格或者特殊要求在本手册中未覆盖，请与我们联系，我们将予以即时答复。

Baoshan Iron & Steel Co., Ltd. ("Baosteel Co., Ltd." for short) is the largest and most modernized integrated steelmaker in China. Baosteel Co., Ltd. has secured its standing as a world class integrated steelmaker in the international steel market with its comprehensive strengths in credit standing, talent, innovation, management and technology, etc. World Steel Dynamics (WSD) ranks Baosteel Co., Ltd. within the top 3 places in terms of comprehensive competitiveness in the global steel industry, and it is believed to be the most promising player in the steel world.

The company's tube sector has 50 years-long experience in steel tube production. Its products include medium and small diameter hot-rolled seamless tube, specially alloyed seamless tube, cold-rolled and cold drawing seamless tube, medium and large diameter high frequency ERW pipe, large diameter SAWL pipe, etc. It integrates R&D, product development, processing and inspection, products sales, etc., implements the throughout-process quality control from iron-making, steel-making (BOF, EAF), hot-rolled coil, heavy plate, bar steel to tube making and processing, is superior in scale with regard to the comprehensive production of the giant steel complex and has become a large-sized premium tube R&D and manufacture base for both seamless tube and welded pipes.

With its leading technologies, equipment, management and favorable reputation, customers are ensured to enjoy the quality products and satisfactory service.

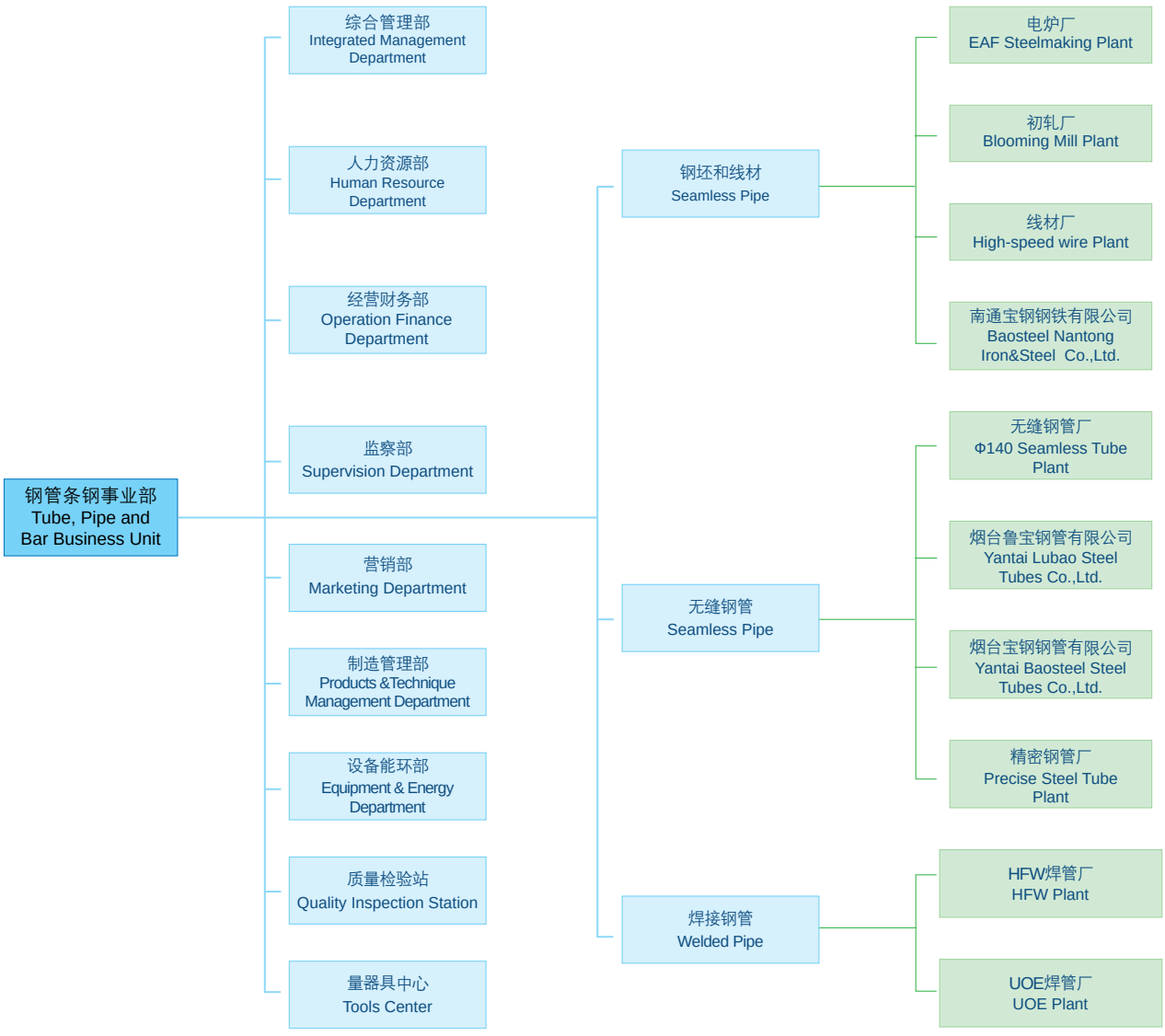
We thank you very much for your attention and use of our products and warmly welcome your comments and suggestions.

We should be glad to give you a prompt response, if you contact us for any things about grade, specification or special requirement beyond this catalog.

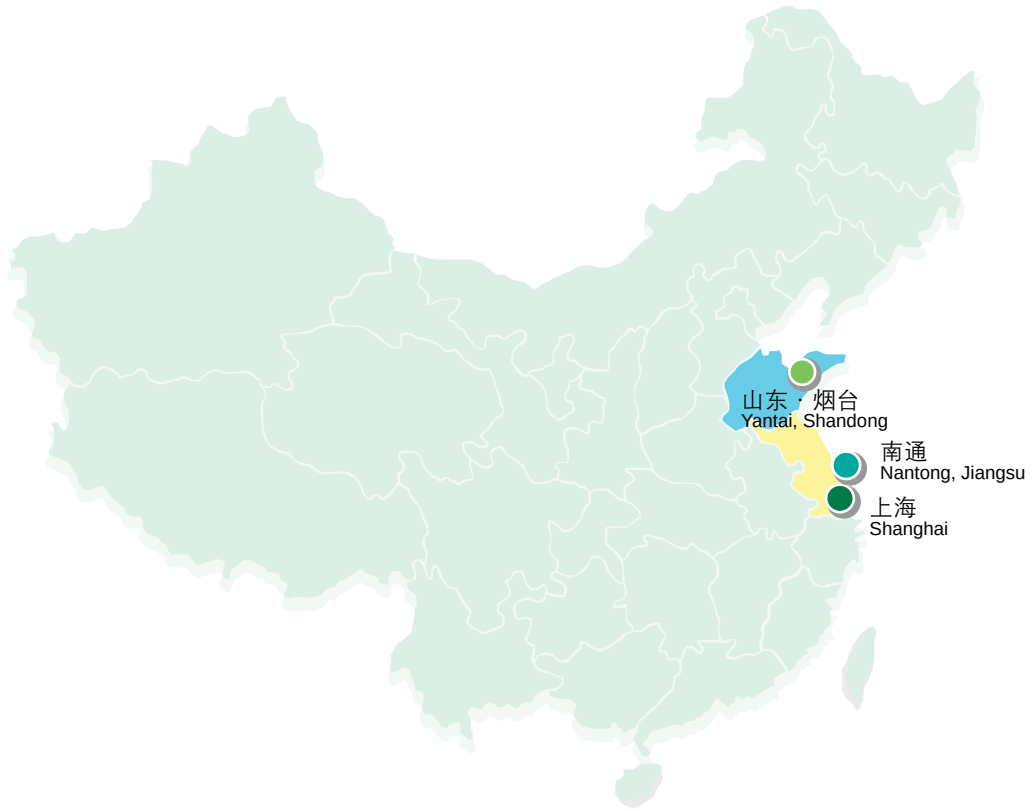
工厂

宝钢钢管组织机构图：

Organization chart of Baosteel steel tube：



Facilities & Sites
工厂及分布



山东 Shandong	南通 Nantong	上海 Shanghai	
• 烟台鲁宝钢管有限公司 Yantai Lubao Steel Tubes Co.,Ltd.	• 南通宝钢钢铁有限公司 Baosteel Nantong Iron & Steel Co.,Ltd.	• 电炉厂 EAF Steelmaking Plant	• HFW焊管厂 HFW Plant
• 烟台宝钢钢管有限公司 Yantai Baosteel Steel Tubes Co.,Ltd.		• 初轧厂 Blooming Mill Plant	• UOE焊管厂 UOE Plant
		• 线材厂 High-speed wire Plant	• 精密钢管厂 Precise Steel Tube Plant
		• 无缝钢管厂 Φ140 Seamless Tube Plant	• 特殊钢事业部钢管厂 Special Steel Business Unit Steel Tube Plant

Facilities & Sites
工厂及分布

宝钢钢管生产机组及规格范围：
Baosteel tube production lines and its product specifications

	机组 Line	坐落位置 Location	成品外径 英寸／毫米 OD of finished product (mm/inch)
			1 (25.4) 2 (50.8) 3 (70.6) 4 (101.6) 5 (127) 6 (152.4) 7 (177.8) 8 (203.2) 10 (254) 15 (381) 20 (508) 25 (635) 30 (762) 40 (1016) 50 (1270) 60 (1524)
热轧无缝 Hot-rolled seamless pipe	**ø140**全浮动连轧管 **ø140** full-floating mandrel	无缝钢管厂（上海） Φ140 Seamless Tube Plant (Shanghai)	1.315 (33.4) — 7 (177.8)
	高精度轧扩管 Accu-Roll & Expander	烟台鲁宝钢管有限公司（烟台） Yantai Lubao Steel Tubes Co.,Ltd. (Yantai)	6 1/4 (158.8) — 12 7/8 (327)
	ø460 PQF（在建） (under construction)	烟台宝钢钢管有限公司（烟台） Yantai Baosteel Steel Tubes Co.,Ltd. (Yantai)	7 (177.8) — 18 (457.2)
	热挤压 Hot extrusion	特殊钢事业部钢管厂（上海） Special Steel Business Unit Steel Tube Plant (Shanghai)	2 (50.8) — 12 4/5 (325.1)
	ø114 Accu-Roll **ø76** 曼式穿孔轧机 **ø114 Accu-Roll** **ø76** Mannesmann piercer	精密钢管厂 Precise Steel Tube Plant	1/6 (42.4) — 5 1/2 (139.7)
冷轧冷拔 Cold-rolled and cold drawing tube	二辊周期式冷轧管机 三辊**AOD**冷轧管机 2-high pilger mill 3-high **AOD** cold reducing mill	特殊钢事业部钢管厂（上海） Special Steel Business Unit Steel Tube Plant (Shanghai)	1/6 (42.4) — 4 1/2 (114.3)
焊管 Welded pipe	**ø610 HFW**	HFW焊管厂(上海) HFWPlant (Shanghai)	8 5/8 (219.08) — 24 (609.6)
	ø1422 UOE	UOE焊管厂(上海) UOE Plant (Shanghai)	20 (508) — 50 (1270)

Quality Assurance
质量保证

公司获得了英国 BSI 公司颁发的 IMS 综合 (质量、安全、环保) 管理体系证书、华夏认证中心 (CCCI) 颁发的 ISO14001 环境管理体系证书以及国家质量监督检验检疫总局颁发的完善计量检测体系证书。

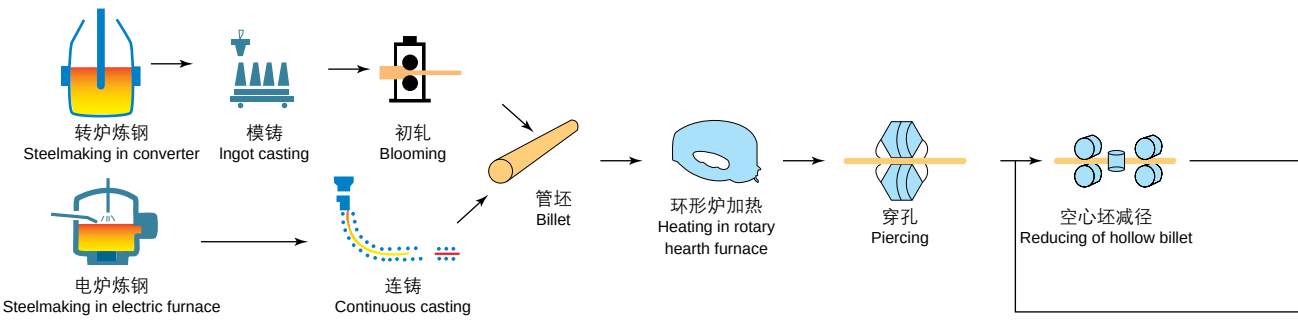
公司钢管产品获得的认可证书主要有 :

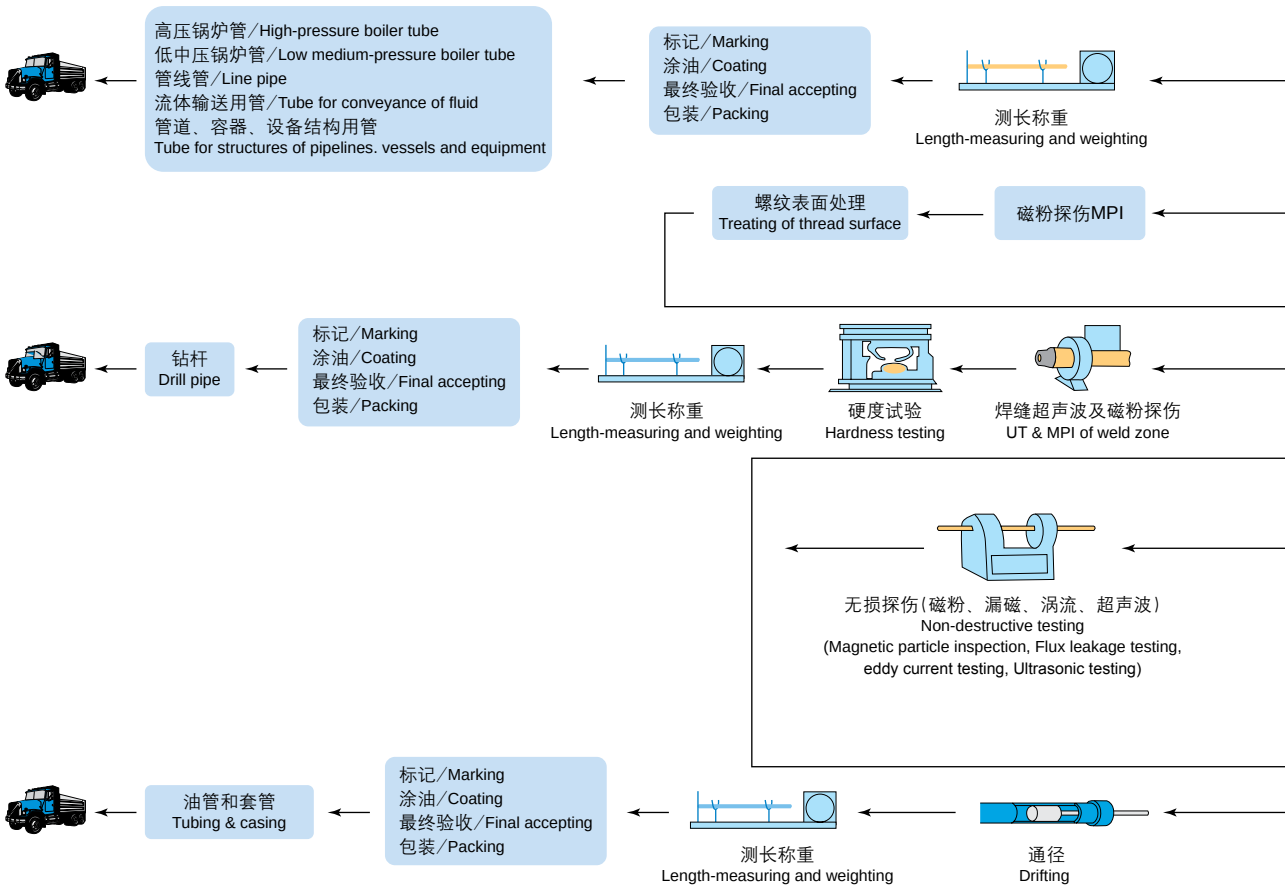
- 油管、套管、钻杆和管线管等油田用管材获得美国石油协会 API 颁发的 5CT、5D、Spec.7、5L 会标使用许可证 ;
- 船用管获得英国 LR、法国 BV、德国 GL、挪威 DNV、韩国 KR 和中国 CCS 等六国船级社的工厂认可和材料认可证书 ;
- 锅炉管和结构管获得德国 TÜV 公司颁发的 TÜV 认证证书和 PED 认证证书 ;
- 结构管获得德国 TÜV 公司颁发的 Ü-Mark 证书。

Baosteel has been granted the IMS certificate for quality, safety, environment by British Standard Institution (BSI), the certificate of ISO14001 Environmental Management System by China Certification Center, Inc., and the certificate for perfecting the measuring and detecting System by the State General Administration of Quality Supervision and Inspection.

And its steel tube and pipe products have got the following certificates:

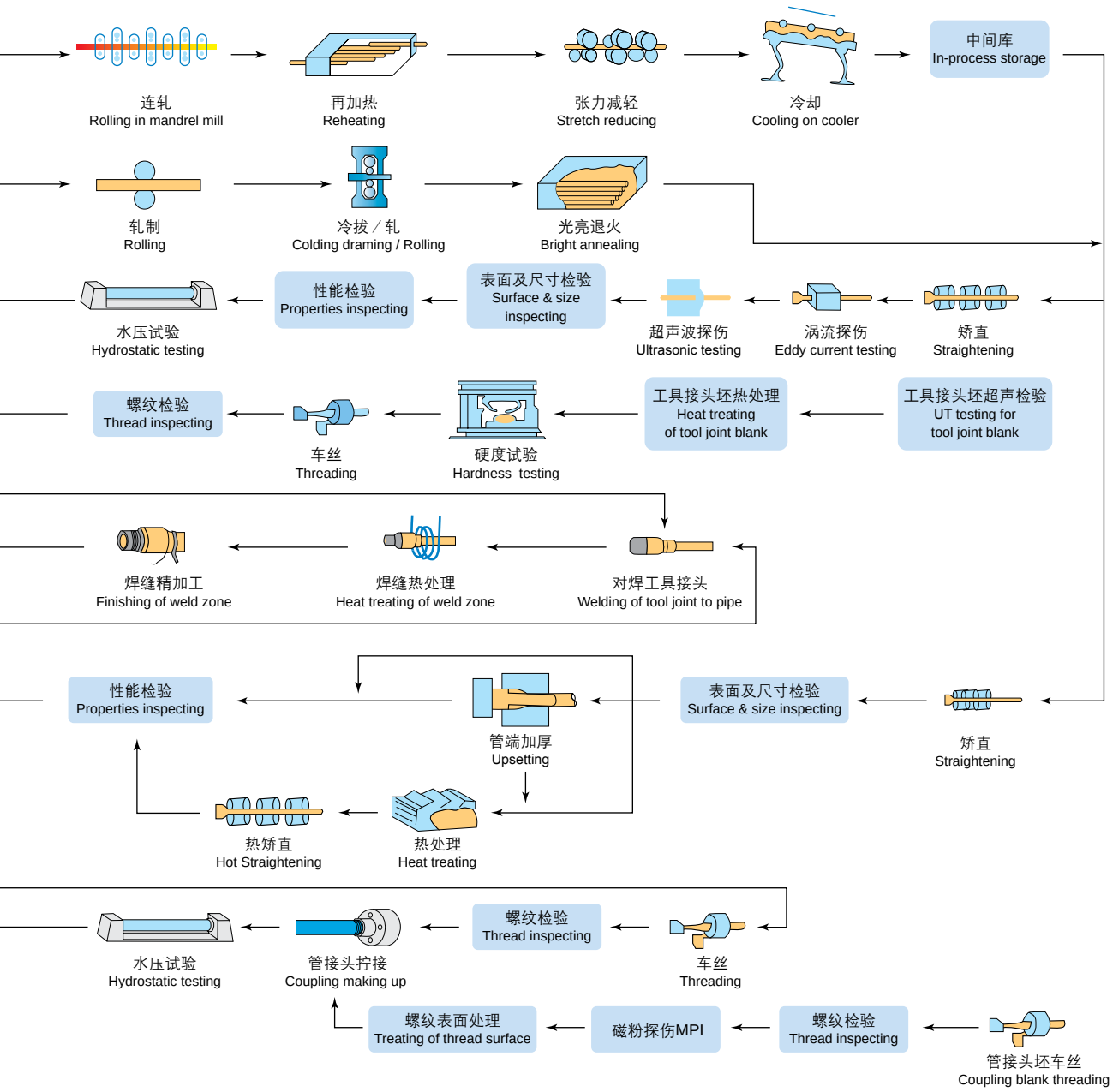
- Certificates of Authority to Use Official Monogram on its tubing, casing, drill pipe (with tool joint) and line pipe complying with API Specification 5CT, 5D, Spec.7 and 5L issued by American Petroleum Institute;
- Certificates of works and material approval given to tubes & pipes for ships by Lloyd's Register of Shipping (LR), Bureau Veritas France (BV), Germanischer Lloyd(GL), DET NORSKE VERITAS(DNV), KOREAN REGISTER OF SHIPPING(KR), and China Classification Society (CCS);
- A certificate according to AD-MERKBLATT W0/TRD100 and a certificate of Quality Assurance System in accordance with the Pressure Equipment Directive 97/23/EC (PED) issued to boiler tube and tube for structural purpose by TÜV SÜDDEUTSCHLAND;
- A Testing Certificate about Initial Type Testing of Construction Products (ÜHP) issued by TÜV.

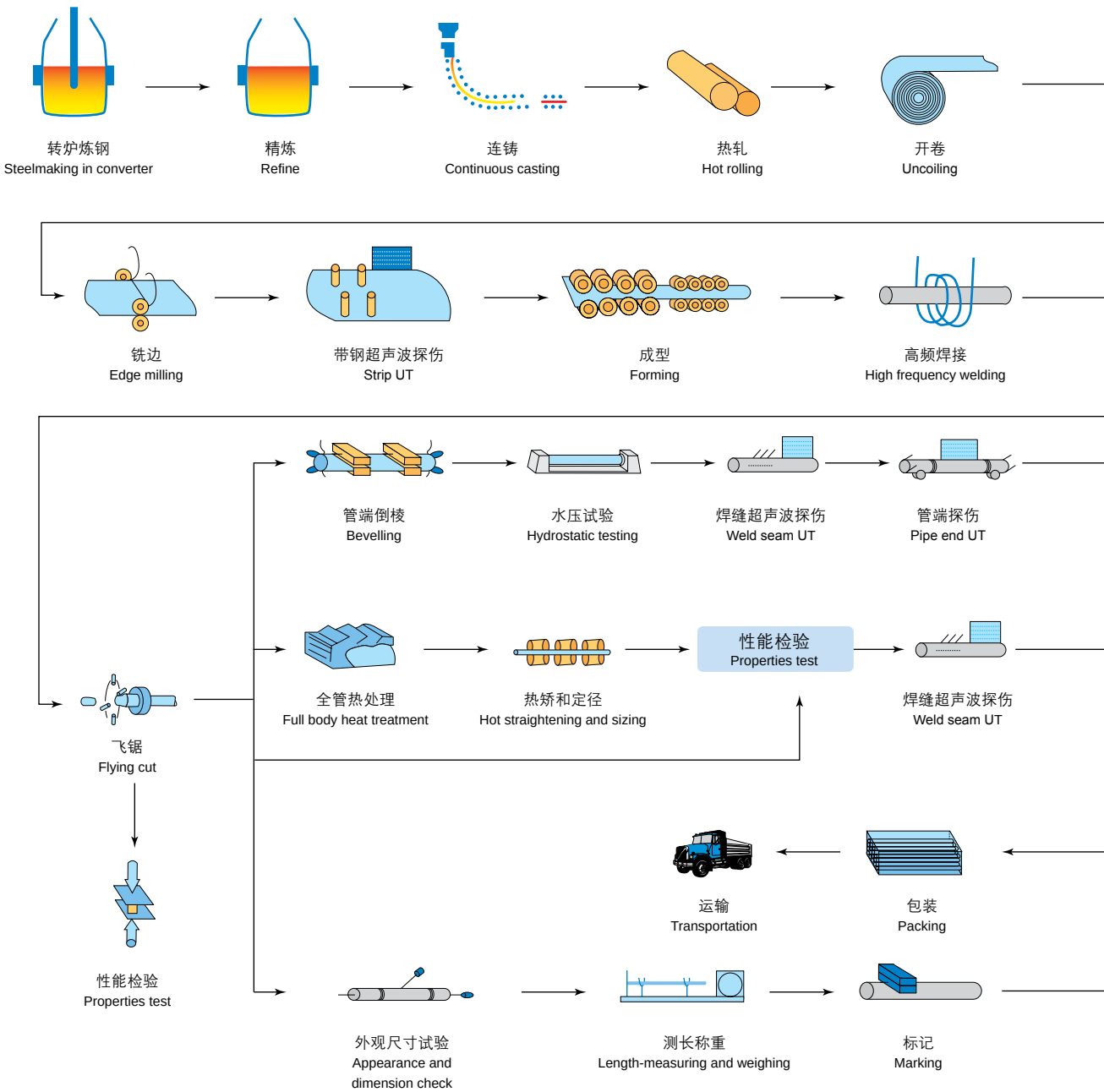

转炉炼钢
Steelmaking in converter
模铸
Ingot casting
初轧
Blooming
电炉炼钢
Steelmaking in electric furnace
连铸
Continuous casting
管坯
Billet
环形炉加热
Heating in rotary hearth furnace
穿孔
Piercing
空心坯减径
Reducing of hollow billet


高压锅炉管/High-pressure boiler tube
低中压锅炉管/Low medium-pressure boiler tube
管线管/Line pipe
流体输送用管/Tube for conveyance of fluid
管道、容器、设备结构用管
Tube for structures of pipelines. vessels and equipment
标记/Marking
涂油/Coating
最终验收/Final accepting
包装/Packing
测长称重
Length-measuring and weighting
螺纹表面处理
Treating of thread surface
磁粉探伤MPI
钻杆
Drill pipe
硬度试验
Hardness testing
焊缝超声波及磁粉探伤
UT & MPI of weld zone
无损探伤(磁粉、漏磁、涡流、超声波)
Non-destructive testing
(Magnetic particle inspection, Flux leakage testing,
eddy current testing, Ultrasonic testing)
油管和套管
Tubing & casing
通径
Drifting

Process Flow Chart/SMLS

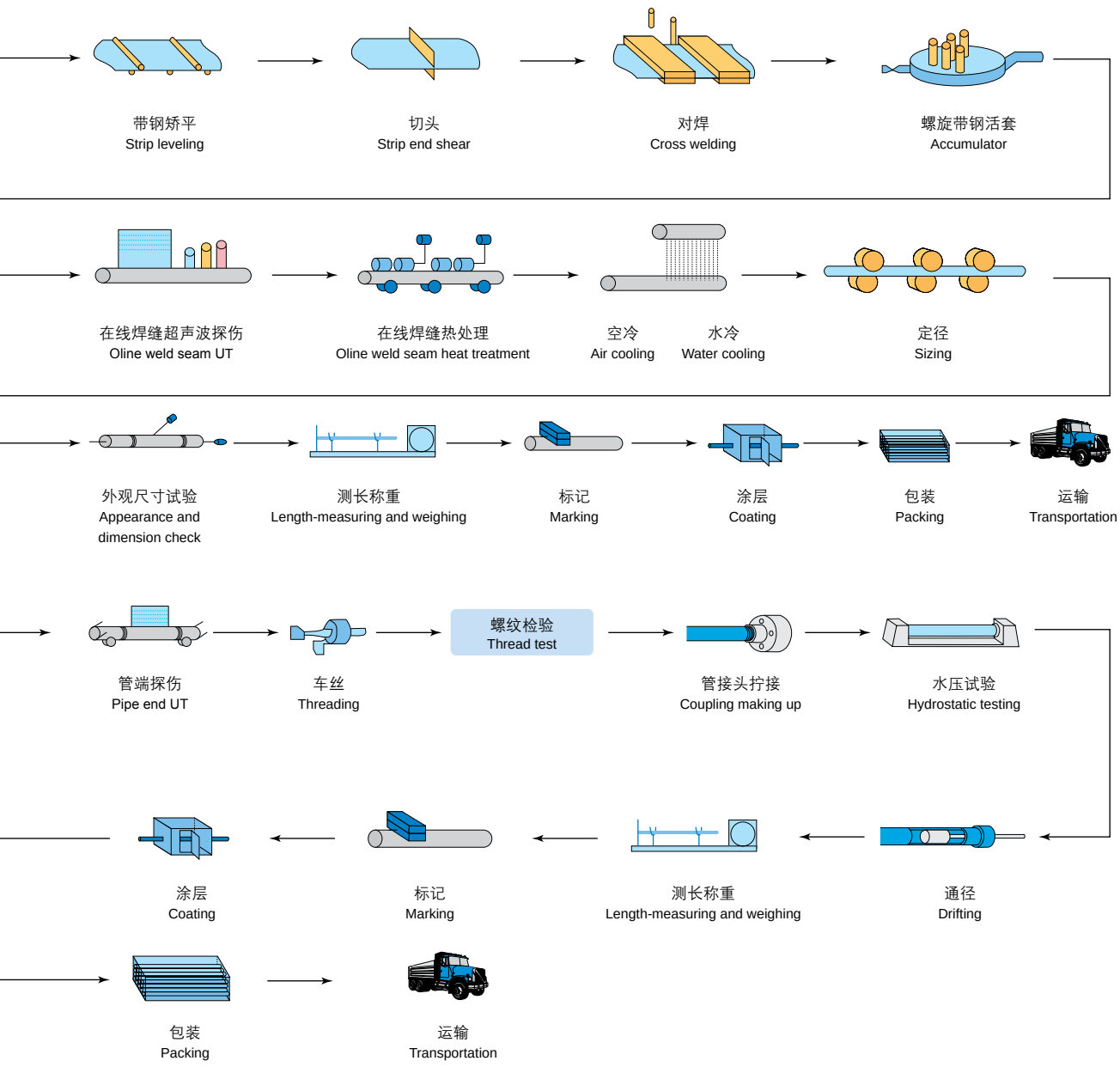
工艺流程 / 无缝钢管

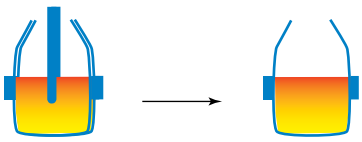



转炉炼钢
Steelmaking in converter
精炼
Refine
连铸
Continuous casting
热轧
Hot rolling
开卷
Uncoiling
铣边
Edge milling
带钢超声波探伤
Strip UT
成型
Forming
高频焊接
High frequency welding
管端倒棱
Bevelling
水压试验
Hydrostatic testing
焊缝超声波探伤
Weld seam UT
管端探伤
Pipe end UT
全管热处理
Full body heat treatment
热矫和定径
Hot straightening and sizing
性能检验
Properties test
焊缝超声波探伤
Weld seam UT
飞锯
Flying cut
运输
Transportation
包装
Packing
性能检验
Properties test
外观尺寸试验
Appearance and dimension check
测长称重
Length-measuring and weighing
标记
Marking

Process Flow Chart/HFW

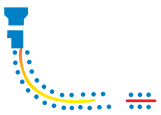
工艺流程 / HFW焊管





转 炉
Basic Oxygen Furnace

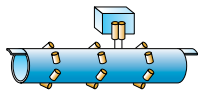
精 炼
Secondary Refining



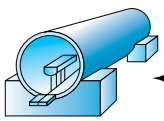
连 铸
Continuous Casting

厚 板
Heavy Plate

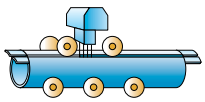
钢板上料
Plate Feeding



预 焊
Continuous Tack Welding

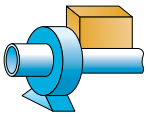


内 焊
Inside Welding



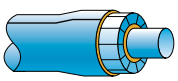
外 焊
Outside Welding

去除引弧板
Tab Removal



焊缝及管端超声探伤
Ultrasonic Inspection

X光检查
X-ray Inspection



钢管扩径
Mechanical Expansion

管端焊缝磨平
Pipe Ends
Weld Grinding

堆放、发货
Delivery

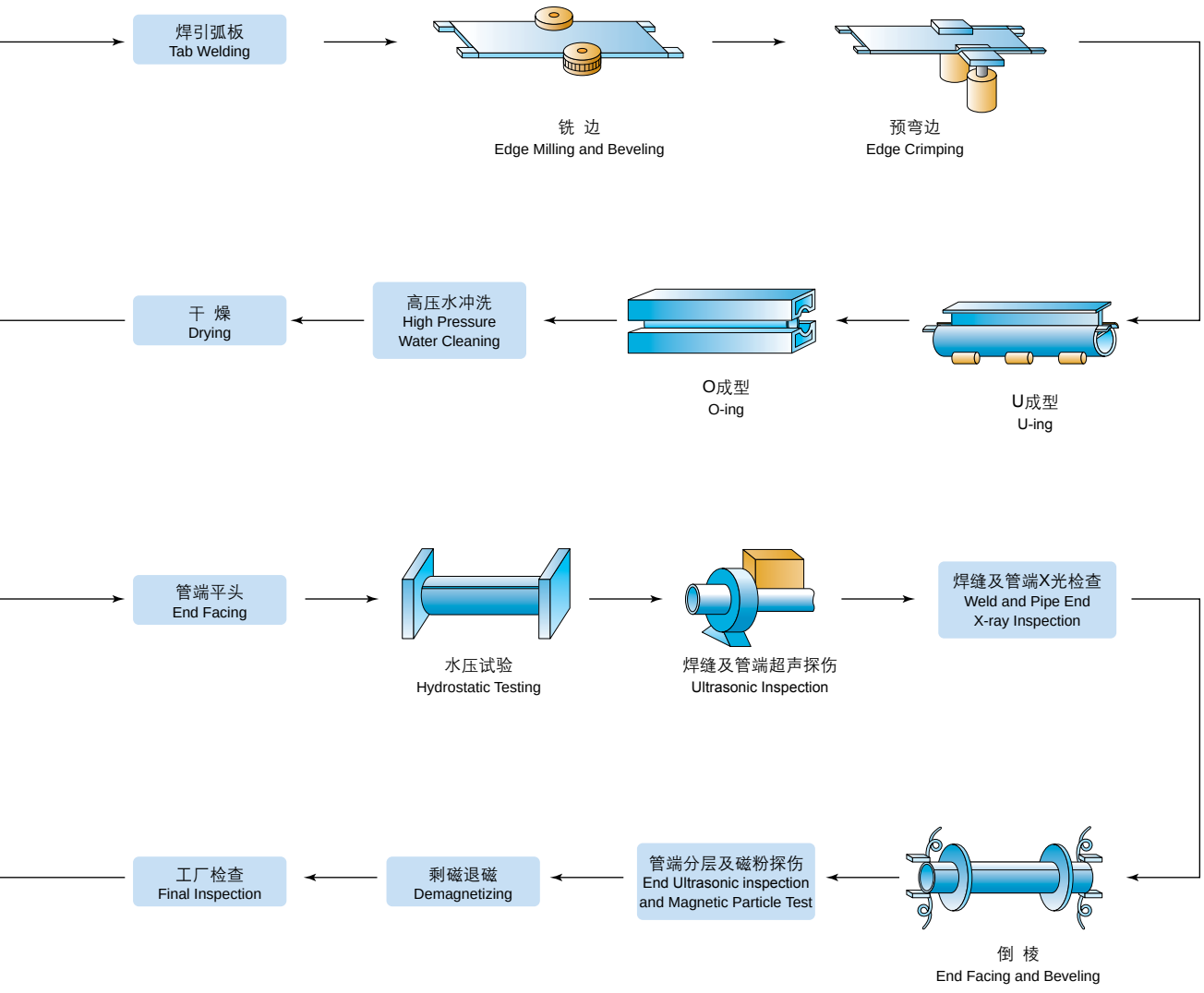
上保护环
Installing bevel
protector

喷 标 记
Marking

称重、测长
Weighing and measuring

Process Flow Chart/UOE

工艺流程 / UOE焊管



Tubing and Casing
油套管

适用标准及供货技术条件　Standards and technical conditions for supply

API SPEC 5CT
ISO13680
宝钢股份相关供货技术条件 Relevant technical specifications of Baosteel Co., Ltd.

用途 Uses:

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 for extracting oil or gas from wells, while casing for sidewall.

规格 Dimension:

油管规格 Dimension of Tubing:

代号 Label				外径 Outside diameter D mm	单位长度名义重量a,b Nominal linear mass			壁厚 Wall thickness t mm	
1	2				不加厚带螺纹和接箍 Non-upset T&C kg/m	外加厚带螺纹和接箍 Ex-upset T&C kg/m	整体接头 Integral joint kg/m		J55
	不加厚带螺纹和接箍 Non-upset T&C	外加厚带螺纹和接箍 Ex-upset T&C	整体接头 Integral joint						
2-3/8	4.00	-	-	60.32	5.95	-	-	4.24	PN
	4.60	4.70	-	60.32	6.85	6.99	-	4.83	PNUTS
	5.10	-	-	60.32	7.60	-	-	5.54	S
	5.80	5.95	-	60.32	8.63	8.85	-	6.45	-
	6.60	-	-	60.32	9.82	-	-	7.49	-
	7.35	7.45	-	60.32	10.94	11.09	-	8.53	-
2-7/8	6.40	6.50	-	73.02	9.52	9.67	-	5.51	PNUTS
	7.80	7.90	-	73.02	11.61	11.76	-	7.01	-
	8.60	8.70	-	73.02	12.80	12.95	-	7.82	-
	9.35	9.45	-	73.02	13.91	14.06	-	8.64	-
	10.50	-	-	73.02	15.63	-	-	9.96	-
	11.50	-	-	73.02	17.11	-	-	11.18	-
3-1/2	7.70	-	-	88.90	11.46	-	-	5.49	PNS
	9.20	9.30	-	88.90	13.69	13.84	-	6.45	PNUTS
	10.20	-	-	88.90	15.18	-	-	7.34	PNTS
	12.70	12.95	-	88.90	18.90	19.27	-	9.52	-
	14.30	-	-	88.90	21.28	-	-	10.92	-
	15.50	-	-	88.90	23.07	-	-	12.09	-
	17.00	-	-	88.90	25.30	-	-	13.46	-

端部加工形式 / Type of end finish											
钢级 / Grade											
L80-1	L80-9Cr	L80-13Cr	BG80S(SS)、BG80(S)-3Cr	N80 1、Q类	C90	BG90S(SS)、BG90(S)-3Cr	T95	BG95S(SS)、BG95(S)-3Cr	BG95-13Cr	P110	BG110S(SS)、BG110-3Cr
PN	PN	PN	PN	PN	PN	PN	PN	PN		-	-
PNUTS	PNUTS	PNUTS	PNUTS	PNUTS	PNUTS	PNUTS	PNUTS	PNUTS		PNUTS	PNUTS
S	S	S	S	S	S	S	S	S		S	S
PNUTS	PNUTS	PNUTS	PNUTS	PNUTS	PNUTS	PNUTS	PNUTS	PNUTS	PNUTS	PNUTS	PNUTS
P	P	P	P	-	P	P	P	P	P	-	-
PU	PU	PU	PU	-	PU	PU	PU	PU	PU	-	-
PNUTS	PNUTS	PNUTS	PNUTS	PNUTS	PNUTS	PNUTS	PNUTS	PNUTS	PNUTS	PNUTS	PNUTS
PNUTS	PNUTS	PNUTS	PNUTS	PNUTS	PNUTS	PNUTS	PNUTS	PNUTS	PNUTS	PNUTS	PNUTS
PNUTS	PNUTS	PNUTS	PNUTS	PNUTS	PNUTS	PNUTS	PNUTS	PNUTS	PNUTS	PNUTS	PNUTS
PU	PU	PU	PU	-	PU	PU	PU	PU	PU	-	-
P	P	P	P	-	P	P	P	P	P	-	-
P	P	P	P	-	P	P	P	P	P	-	-
PNS	PNS	PNS	PNS	PNS	PNS	PNS	PNS	PNS	PNS	-	-
PNUTS	PNUTS	PNUTS	PNUTS	PNUTS	PNUTS	PNUTS	PNUTS	PNUTS	PNUTS	PNUTS	PNUTS
PNTS	PNTS	PNTS	PNTS	PNTS	PNTS	PNTS	PNTS	PNTS	PNTS	-	-
PNUTS	PNUTS	PNUTS	PNUTS	PNUTS	PNUTS	PNUTS	PNUTS	PNUTS	PNUTS	PNUTS	PNUTS
PT	PT	PT	PT	-	PT	PT	PT	PT	PT	-	-
PT	PT	PT	PT	-	PT	PT	PT	PT	PT	-	-
P	P	P	P	-	P	P	P	P	P	-	-

规格 Dimension:

油管规格 Dimension of Tubing:

代号 Label				外径 Outside diameter D mm	单位长度名义重量a,b Nominal linear mass			壁厚 Wall thickness t mm	
1	2				不加厚带螺纹和接箍 Non-upset T&C kg/m	外加厚带螺纹和接箍 Ex-upset T&C kg/m	整体接头 Integral joint kg/m		J55
	不加厚带螺纹和接箍 Non-upset T&C	外加厚带螺纹和接箍 Ex-upset T&C	整体接头 Integral joint						
4	9.50	-	-	101.60	14.14	-	-	5.74	PNT
	10.70	11.00	-	101.60	-	16.37	-	6.65	PUT
	13.20	-	-	101.60	19.64	-	-	8.38	-
	14.80	-	-	101.60	22.04	-	-	9.65	-
	16.10	-	-	101.60	23.96	-	-	10.54	-
	18.90	-	-	101.60	28.13	-	-	12.70	-
	22.20	-	-	101.60	33.04	-	-	15.49	-
4-1/2	10.50	-	-	114.30	15.64	-	-	5.69	PNUTS
	11.60	-	-	114.30	17.28	-	-	6.36	PNUTS
	12.60	12.75	-	114.30	18.75	18.97	-	6.88	PNUTS
	13.50	-	-	114.30	20.11	-	-	7.37	-
	15.20	-	-	114.30	22.62	-	-	8.56	-
	17.00	-	-	114.30	25.30	-	-	9.65	-
	18.90	-	-	114.30	28.13	-	-	10.92	-
	21.50	-	-	114.30	32.00	-	-	12.70	-
	23.70	-	-	114.30	35.27	-	-	14.22	-
	26.10	-	-	114.30	38.84	-	-	16.00	-

注： P - 平端；N - 不加厚带螺纹和接箍；U - 外加厚带螺纹和接箍；T - 宝钢特殊螺纹油管；S - SUPERMAX油管。
所示带螺纹和接箍的单位长度名义重量（第2~4栏）仅供参考。马氏体铬钢（L80 9Cr和13Cr）的密度不同于碳钢。因此，表中给出的重量对马氏体铬钢来说不是精确值。可采用重量校正系数0.989。不加厚油管供货时带标准接箍或特殊倒角接箍。外加厚油管供货时带标准接箍、特殊倒角接箍或特殊间隙接箍。

Note: P - plain end; N - non-upset T&C; U - Ex-upset T&C; T - oil tubing with Baosteel premium connection; S - SUPERMAX premium connection tubing
The unit length nominal linear masses, threads and coupling (col. 2~4) are shown for reference only. The densities of martensite chromium steels (L80 types 9Cr and 13Cr) are different from carbon steels. Therefore, the masses values shown above are not accurate to martensite chromium steels. A mass correction factor of 0.989 may be used. Non-upset tubing is available with regular couplings or special bevel couplings. External-upset tubing is available with regular, special-bevel, or special clearance couplings.

端部加工形式 / Type of end finish											
钢级 / Grade											
L80-1	L80-9Cr	L80-13Cr	BG80S(SS)、BG80(S)-3Cr	N80 1、Q类	C90	BG90S(SS)、BG90(S)-3Cr	T95	BG95S(SS)、BG95(S)-3Cr	BG95-13Cr	P110	BG110S(SS)、BG110-3Cr
PNT	PNT	PNT	PNT	PNT	PNT	PNT	PNT	PNT	PNT	-	-
PUT	PUT	PUT	PUT	PUT	PUT	PUT	PUT	PUT	PUT	-	-
P	P	P	P	-	P	P	P	P	P	-	-
PS	PS	PS	PS	-	PS	PS	PS	PS	PS	-	-
P	P	P	P	-	P	P	P	P	P	-	-
P	P	P	P	-	P	P	P	P	P	-	-
P	P	P	P	-	P	P	P	P	P	-	-
PNUTS	PNUTS	PNUTS	PNUTS	PNUTS	PNUTS	PNUTS	PNUTS	PNUTS	PNUTS	-	-
PNUTS	PNUTS	PNUTS	PNUTS	PNUTS	PNUTS	PNUTS	PNUTS	PNUTS	PNUTS	-	-
PNUTS	PNUTS	PNUTS	PNUTS	PNUTS	PNUTS	PNUTS	PNUTS	PNUTS	PNUTS	-	-
PTS	PTS	PTS	PTS	-	PTS	PTS	PTS	PTS	PTS	-	-
PTS	PTS	PTS	PTS	-	PTS	PTS	PTS	PTS	PTS	-	-
PT	PT	PT	PT	-	PT	PT	PT	PT	PT	-	-
PT	PT	PT	PT	-	PT	PT	PT	PT	PT	-	-
P	P	P	P	-	P	P	P	P	P	-	-
P	P	P	P	-	P	P	P	P	P	-	-
P	P	P	P	-	P	P	P	P	P	-	-

套管规格 Dimension of Casing:

代号a Label		外径 Outside diameter		单位重量（带螺纹和接箍）Nominal linear mass[b,c] T&C kg/m	壁厚 Wall thickness										
1	2	in	mm		in	mm	J55 K55	M65	L80-1	L80-9Cr	L80-13Cr	C95	N80 1、Q类	BG80T(TT)	BG80S(SS)、BG80(S)-3Cr	C90 T95
4	12.4	4.000	101.6		0.307	7.80	X	X	X	X	X	X	X	X	X	X
4-1/8							X	X	X	X	X	X	X	X	X	X
4-1/2	9.50	4.500	114.30	14.14	0.205	5.21	PS	PS	-	-	-	-	-	-	-	-
	10.50	4.500	114.30	15.63	0.224	5.69	PSB	PSB	-	-	-	-	-	-	-	-
	11.60	4.500	114.30	17.26	0.250	6.35	PSLB	PLB	PLB	PLB	PLB	PLB	PLB	PLB	PLB	PLB
	13.50	4.500	114.30	20.09	0.290	7.37	-	PLB	PLB	PLB	PLB	PLB	PLB	PLB	PLB	PLB
	15.10	4.500	114.30	22.47	0.337	8.56	-	-	-	-	-	-	-	-	-	-
5	11.50	5.000	127.00	17.11	0.220	5.59	PS	PS	-	-	-	-	-	-	-	-
	13.00	5.000	127.00	19.35	0.253	6.43	PSLB	PSLB	-	-	-	-	-	-	-	-
	15.00	5.000	127.00	22.32	0.296	7.52	PSLBC	PLBC	PLBC	PLBC	PLBC	PLBC	PLBC	PLBC	PLBC	PLBC
	18.00	5.000	127.00	26.79	0.362	9.19	-	PLBC	PLBC	PLBC	PLBC	PLBC	PLBC	PLBC	PLBC	PLBC
	21.40	5.000	127.00	31.85	0.437	11.10	-	PLBC	PLBC	PLBC	PLBC	PLBC	PLBC	PLBC	PLBC	PLBC
	23.20	5.000	127.00	34.53	0.478	12.14	-	-	PLBC	PLBC	PLBC	PLBC	PLBC	PLBC	PLBC	PLBC
	24.10	5.000	127.00	35.86	0.500	12.70	-	-	PLBC	PLBC	PLBC	PLBC	PLBC	PLBC	PLBC	PLBC
5-1/2	14.00	5.500	139.70	20.83	0.244	6.20	PS	PS	-	-	-	-	-	-	-	-
	15.50	5.500	139.70	23.07	0.275	6.98	PSLBC	PSLBC	-	-	-	-	-	-	-	-
	17.00	5.500	139.70	25.30	0.304	7.72	PSLBC	PLBC	PLBC	PLBC	PLBC	PLBC	PLBC	PLBC	PLBC	PLBC
	20.00	5.500	139.70	29.76	0.361	9.17	-	PLBC	PLBC	PLBC	PLBC	PLBC	PLBC	PLBC	PLBC	PLBC
	23.00	5.500	139.70	34.23	0.415	10.54	-	PLBC	PLBC	PLBC	PLBC	PLBC	PLBC	PLBC	PLBC	PLBC
	26.80	5.500	139.70	39.88	0.500	12.70	-	-	-	-	-	-	-	-	-	P
	29.70	5.500	139.70	44.20	0.562	14.27	-	-	-	-	-	-	-	-	-	P
	32.60	5.500	139.70	48.51	0.625	15.88	-	-	-	-	-	-	-	-	-	P
	35.30	5.500	139.70	52.53	0.687	17.45	-	-	-	-	-	-	-	-	-	P
	38.00	5.500	139.70	56.55	0.750	19.05	-	-	-	-	-	-	-	-	-	P
	40.50	5.500	139.70	60.27	0.812	20.62	-	-	-	-	-	-	-	-	-	P
	43.10	5.500	139.70	64.14	0.875	22.22	-	-	-	-	-	-	-	-	-	P

	钢级 Grade											
	BG90S(SS)、BG90(S)-3Cr	BG90T(TT)、BG90TS	BG95S(SS)、BG95(S)-3C	BG95T(TT)、BG95T	P110	BG110T(S)	BG110S(SS)、BG110-3Cr	Q125	BG125T(TT)	BG140	BG140T(TT)	BG150
	X		X	X	X	X	X	X	X	X	X	X
	X		X	X	X	X	X	X	X	X	X	X
	-		-	-	-	-	-	-	-	-	-	-
	-		-	-	-	-	-	-	-	-	-	-
	PLB		PLB	PLB	PLB	PLB	PLB	-	-	-	-	-
	PLB		PLB	PLB	PLB	PLB	PLB	-	-	-	-	-
	-		-	-	PLB	PLB	PLB	PLB	PLB	PLB	PLB	PLB
	-		-	-	-	-	-	-	-	-	-	-
	-		-	-	-	-	-	-	-	-	-	-
	PLBC		PLBC	PLBC	PLBC	PLBC	PLBC	-	-	-	-	-
	PLBC		PLBC	PLBC	PLBC	PLBC	PLBC	PLBC	PLBC	PLBC	PLBC	PLBC
	PLBC		PLBC	PLBC	PLBC	PLBC	PLBC	PLBC	PLBC	PLBC	PLBC	PLBC
	PLBC	PLBC	PLBC	PLBC	PLBC	PLBC	PLBC	PLBC	PLBC	PLBC	PLBC	PLBC
	PLBC	PLBC	PLBC	PLBC	PLBC	PLBC	PLBC	PLBC	PLBC	PLBC	PLBC	PLBC
	-	-	-	-	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-	-	-	-	-
	PLBC	PLBC	PLBC	PLBC	PLBC	PLBC	PLBC	-	-	-	-	-
	PLBC	PLBC	PLBC	PLBC	PLBC	PLBC	PLBC	-	-	-	-	-
	PLBC	PLBC	PLBC	PLBC	PLBC	PLBC	PLBC	PLBC	PLBC	PLBC	PLBC	PLBC
	P	P	P	P	-	-	-	-	-	-	-	-
	P	P	P	P	-	-	-	-	-	-	-	-
	P	P	P	P	-	-	-	-	-	-	-	-
	P	P	P	P	-	-	-	-	-	-	-	-
	P	P	P	P	-	-	-	-	-	-	-	-
	P	P	P	P	-	-	-	-	-	-	-	-
	P	P	P	P	-	-	-	-	-	-	-	-

套管规格 Dimension of Casing:

代号a Label		外径 Outside diameter		单位重量(带螺纹和接箍) Nominal linear mass[b,c] T&C kg/m	壁厚 Wall thickness											
1	2	in	mm		in	mm	J55 K55	M65	L80-1	L80-9Cr	L80-13Cr	C95	N80 1、Q类	BG80T(TT)	BG80S(SS)、BG80(S)-3Cr	C90 T95
6-5/8	20.00	6.625	168.28	29.76	0.288	7.32	PSLB	PSLB	-	-	-	-	-	-	-	-
	24.00	6.625	168.28	35.72	0.352	8.94	PSLBC	PLBC	PLBC	-	-	PLBC	PLBC	PLBC	PLBC	PLBC
	28.00	6.625	168.28	41.67	0.417	10.59	-	PLBC	PLBC	-	-	PLBC	PLBC	PLBC	PLBC	PLBC
	32.00	6.625	168.28	47.62	0.475	12.06	-	-	PLBC	-	-	PLBC	PLBC	PLBC	PLBC	PLBC
7	20.00	7.000	177.80	29.76	0.272	6.91	PS	PS	-	-	-	-	-	-	-	-
	23.00	7.000	177.80	34.23	0.317	8.05	PSLBC	PLBC	PLBC	-	-	PLBC	PLBC	PLBC	PLBC	PLBC
	26.00	7.000	177.80	38.69	0.362	9.19	PSLBC	PLBC	PLBC	-	-	PLBC	PLBC	PLBC	PLBC	PLBC
	29.00	7.000	177.80	43.16	0.408	10.36	-	PLBC	PLBC	-	-	PLBC	PLBC	PLBC	PLBC	PLBC
	32.00	7.000	177.80	47.62	0.453	11.51	-	PLBC	PLBC	-	-	PLBC	PLBC	PLBC	PLBC	PLBC
	35.00	7.000	177.80	52.09	0.498	12.65	-	-	PLBC	-	-	PLBC	PLBC	PLBC	PLBC	PLBC
	38.00	7.000	177.80	56.55	0.540	13.72	-	-	PLBC	-	-	PLBC	PLBC	PLBC	PLBC	PLBC
	42.70	7.000	177.80	63.54	0.625	15.88	-	-	-	-	-	-	-	-	-	P
	46.40	7.000	177.80	69.05	0.687	17.45	-	-	-	-	-	-	-	-	-	P
	50.10	7.000	177.80	74.56	0.750	19.05	-	-	-	-	-	-	-	-	-	P
	53.60	7.000	177.80	79.77	0.812	20.62	-	-	-	-	-	-	-	-	-	P
	57.10	7.000	177.80	84.97	0.875	22.22	-	-	-	-	-	-	-	-	-	P
7-5/8	26.40	7.625	193.68	39.29	0.328	8.33	PSLB	PSLB	PLB	-	-	PLB	PLB	PLB	PLB	PLB
	29.70	7.625	193.68	44.20	0.375	9.52	-	PLB	PLB	-	-	PLB	PLB	PLB	PLB	PLB
	33.70	7.625	193.68	50.15	0.430	10.92	-	PLB	PLB	-	-	PLB	PLB	PLB	PLB	PLB
	39.00	7.625	193.68	58.04	0.500	12.70	-	-	PLB	-	-	PLB	PLB	PLB	PLB	PLB
	42.80	7.625	193.68	63.69	0.562	14.27	-	-	PLB	-	-	PLB	PLB	PLB	PLB	PLB
	45.30	7.625	193.68	67.41	0.595	15.11	-	-	PLB	-	-	PLB	PLB	PLB	PLB	PLB
	47.10	7.625	193.68	70.09	0.625	15.88	-	-	PLB	-	-	PLB	PLB	PLB	PLB	PLB
	51.20	7.625	193.68	76.19	0.687	17.45	-	-	-	-	-	-	-	-	-	P
	55.30	7.625	193.68	82.30	0.750	19.05	-	-	-	-	-	-	-	-	-	P
7-3/4	46.10	7.750	196.85	68.60	0.595	15.11	-	-	P	-	-	P	P	P	P	P

钢级 Grade											
BG90S(SS)、BG90(S)-3Cr	BG90T(TT)、BG90TS	BG95S(SS)、BG95(S)-3C	BG95T(TT)、BG95T	P110	BG110T(S)	BG110S(SS)、BG110-3Cr	Q125	BG125T(TT)	BG140	BG140T(TT)	BG150
-	-	-	-	-	-	-	-	-	-	-	-
PLBC	PLBC	PLBC	PLBC	PLBC	PLBC	PLBC	-	-	-	-	-
PLBC	PLBC	PLBC	PLBC	PLBC	PLBC	PLBC	-	-	-	-	-
PLBC	PLBC	PLBC	PLBC	PLBC	PLBC	PLBC	PLBC	PLBC	PLBC	PLBC	PLBC
-	-	-	-	-	-	-	-	-	-	-	-
PLBC	PLBC	PLBC	PLBC	-	-	-	-	-	-	-	-
PLBC	PLBC	PLBC	PLBC	PLBC	PLBC	PLBC	-	-	-	-	-
PLBC	PLBC	PLBC	PLBC	PLBC	PLBC	PLBC	-	-	-	-	-
PLBC	PLBC	PLBC	PLBC	PLBC	PLBC	PLBC	-	-	-	-	-
PLBC	PLBC	PLBC	PLBC	PLBC	PLBC	PLBC	PLBC	PLBC	PLBC	PLBC	PLBC
PLBC	PLBC	PLBC	PLBC	PLBC	PLBC	PLBC	PLBC	PLBC	PLBC	PLBC	PLBC
P	P	P	P	-	-	-	-	-	-	-	-
P	P	P	P	-	-	-	-	-	-	-	-
P	P	P	P	-	-	-	-	-	-	-	-
P	P	P	P	-	-	-	-	-	-	-	-
P	P	P	P	-	-	-	-	-	-	-	-
PLB	PLB	PLB	PLB	-	-	-	-	-	-	-	-
PLB	PLB	PLB	PLB	PLB	PLB	PLB	-	-	-	-	-
PLB	PLB	PLB	PLB	PLB	PLB	PLB	-	-	-	-	-
PLB	PLB	PLB	PLB	PLB	PLB	PLB	PLB	PLB	PLB	PLB	PLB
PLB	PLB	PLB	PLB	PLB	PLB	PLB	PLB	PLB	PLB	PLB	PLB
PLB	PLB	PLB	PLB	PLB	PLB	PLB	PLB	PLB	PLB	PLB	PLB
PLB	PLB	PLB	PLB	PLB	PLB	PLB	PLB	PLB	PLB	PLB	PLB
P	P	P	P	-	-	-	-	-	-	-	-
P	P	P	P	-	-	-	-	-	-	-	-
P	P	P	P	P	P	P	P	P	P	P	P

套管规格 Dimension of Casing:

代号a Label		外径 Outside diameter		单位重量（带螺纹和接箍）Nominal linear mass[b,c] T&C kg/m	壁厚 Wall thickness											
1	2	in	mm		in	mm	J55 K55	M65	L80-1	L80-9Cr	L80-13Cr	C95	N80 1、Q类	BG80T(TT)	BG80S(SS)、BG80(S)-3Cr	C90 T95
	24.00	8.625	219.08	35.72	0.264	6.71	PS	PS	-	-	-	-	-	-	-	-
	28.00	8.625	219.08	41.67	0.304	7.72	-	PS	-	-	-	-	-	-	-	-
	32.00	8.625	219.08	47.62	0.352	8.94	PSLB	PSLB	-	-	-	-	-	-	-	-
8-5/8	36.00	8.625	219.08	53.57	0.400	10.16	PSLB	PSLB	PLB	-	-	PLB	PLB	PLB	PLB	PLB
	40.00	8.625	219.08	59.53	0.450	11.43	-	PLB	PLB	-	-	PLB	PLB	PLB	PLB	PLB
	44.00	8.625	219.08	65.48	0.500	12.70	-	-	PLB	-	-	PLB	PLB	PLB	PLB	PLB
	49.00	8.625	219.08	72.92	0.557	14.15	-	-	PLB	-	-	PLB	PLB	PLB	PLB	PLB
	36.00	9.625	244.48	53.57	0.352	8.94	PSLB	PSLB	-	-	-	-	-	-	-	-
	40.00	9.625	244.48	59.53	0.395	10.03	PSLB	PSLB	PLB	-	-	PLB	PLB	PLB	PLB	PLB
	43.50	9.625	244.48	64.73	0.435	11.05	-	PLB	PLB	-	-	PLB	PLB	PLB	PLB	PLB
	47.00	9.625	244.48	69.94	0.472	11.99	-	PLB	PLB	-	-	PLB	PLB	PLB	PLB	PLB
	53.50	9.625	244.48	79.62	0.545	13.84	-	-	PLB	-	-	PLB	PLB	PLB	PLB	PLB
9-5/8	58.40	9.625	244.48	86.91	0.595	15.11	-	-	PLB	-	-	PLB	PLB	PLB	PLB	PLB
	59.40	9.625	244.48	88.40	0.609	15.47	-	-	-	-	-	-	-	-	-	P
	64.90	9.625	244.48	96.58	0.672	17.07	-		-	-	-	-	-	-	-	P
	70.30	9.625	244.48	104.62	0.734	18.64	-	-	-	-	-	-	-	-	-	P
	75.60	9.625	244.48	112.50	0.797	20.24	-	-	-	-	-	-	-	-	-	P
	40.50	10.750	273.05	60.27	0.350	8.89	PSB	PSB	-	-	-	-	-	-	-	-
	45.50	10.750	273.05	67.71	0.400	10.16	PSB	PSB	-	-	-	-	-	-	-	-
	51.00	10.750	273.05	75.90	0.450	11.43	PSB	PSB	PSB	-	-	PSB	PSB	PSB	PSB	PSB
	55.50	10.750	273.05	82.59	0.495	12.57	-	PSB	PSB	-	-	PSB	PSB	PSB	PSB	PSB
10-3/4	60.70	10.750	273.05	90.33	0.545	13.84	-	-	-	-	-	-	-	-	-	PSB
	65.70	10.750	273.05	97.77	0.595	15.11	-	-	-	-	-	-	-	-	-	PSB
	73.20	10.750	273.05	108.93	0.672	17.07	-	-	-	-	-	-	-	-	-	P
	79.20	10.750	273.05	117.86	0.734	18.64	-	-	-	-	-	-	-	-	-	P
	85.30	10.750	273.05	126.94	0.797	20.24	-	-	-	-	-	-	-	-	-	P

	钢级 Grade											
	BG90S(SS)、BG90(S)-3Cr	BG90T(TT)、BG90TS	BG95S(SS)、BG95(S)-3C	BG95T(TT)、BG95T	P110	BG110T(S)	BG110S(SS) BG110-3Cr	Q125	BG125T(TT)	BG140	BG140T(TT)	BG150
	-	-	-	-	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-	-	-	-	-
	PLB	PLB	PLB	PLB	-	-	-	-	-	-	-	-
	PLB	PLB	PLB	PLB	PLB	PLB	PLB	-	-	-	-	-
	PLB	PLB	PLB	PLB	PLB	PLB	PLB					
	PLB	PLB	PLB	PLB	PLB	PLB	PLB	PLB	PLB	PLB	PLB	PLB
	-	-	-	-	-	-	-	-	-	-	-	-
	PLB	PLB	PLB	PLB	-	-	-	-	-	-	-	-
	PLB	PLB	PLB	PLB	PLB	PLB	PLB	-	-	-	-	-
	PLB	PLB	PLB	PLB	PLB	PLB	PLB	PLB	PLB	PLB	PLB	PLB
	PLB	PLB	PLB	PLB	PLB	PLB	PLB	PLB	PLB	PLB	PLB	PLB
	PLB	PLB	PLB	PLB	PLB	PLB	PLB	PLB	PLB	PLB	PLB	PLB
	P	P	P	P	-	-	-	-	-	-	-	-
	P	P	P	P	-	-	-	-	-	-	-	-
	P	P	P	P	-	-	-	-	-	-	-	-
	P	P	P	P	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-	-	-	-	-
	PSB	PSB	PSB	PSB	PSB	PSB	PSB	-	-	-	-	-
	PSB	PSB	PSB	PSB	PSB	PSB	PSB	-	-	-	-	-
	PSB	PSB	PSB	PSB	PSB	PSB	PSB	PSB	PSB	PSB	PSB	PSB
	PSB	PSB	PSB	PSB	PSB	PSB	PSB	PSB	PSB	PSB	PSB	PSB
	P	P	P	P	-	-	-	-	-	-	-	-
	P	P	P	P	-	-	-	-	-	-	-	-
	P	P	P	P	-	-	-	-	-	-	-	-

套管规格 Dimension of Casing:

代号a Label		外径 Outside diameter		单位重量（带螺纹和接箍）Nominal linear mass[b,c] T&C kg/m	壁厚 Wall thickness										
1	2	in	mm		in	mm	J55 K55	M65	L80-1	L80-9Cr	L80-13Cr	C95	N80 1、Q类	BG80T(TT)	BG80S(SS)、BG80(S)-3Cr	C90 T95
13-3/8	54.50	13.375	339.72	81.10	0.380	9.65	PSB	PSB	-	-	-	-	-	-	-	-
	61.00	13.375	339.72	90.78	0.430	10.92	PSB	PSB	-	-	-	-	-	-	-	-
	68.00	13.375	339.72	101.19	0.480	12.19	PSB	PSB	PSB	-	-	PSB	PSB	-	-	-
	72.00	13.375	339.72	107.15	0.514	13.06	-	-	PSB	-	-	PSB	PSB	-	-	-
16	75.00	16.000	406.40	111.61	0.438	11.13	PSB	-	-	-	-	-	-	-	-	-
	84.00	16.000	406.40	125.01	0.495	12.57	PSB	-	-	-	-	-	-	-	-	-
	109.00	16.000	406.40	162.21	0.656	16.66	P	-	-	-	-	-	-	-	-	-
18-5/8	87.50	18.625	473.08	130.21	0.435	11.05	PSB	-	-	-	-	-	-	-	-	-
20	94.00	20.000	508.00	139.89	0.438	11.13	PSLB	-	-	-	-	-	-	-	-	-
	106.50	20.000	508.00	158.49	0.500	12.70	PSLB	-	-	-	-	-	-	-	-	-
	133.00	20.000	508.00	197.93	0.635	16.13	PSLB	-	-	-	-	-	-	-	-	-

注： P - 平端；S - 短圆螺纹；L - 长圆螺纹；B - 偏梯形螺纹；C - 宝钢特殊螺纹套管；X - 宝钢直连型套管。

1. 碳代号供订货时参考。
2. 所示单位长度名义重量（带螺纹和接箍）（第2栏）仅供参考。
3. 马氏体铬钢（L80 9Cr和13Cr）的密度不同于碳钢。因此，所示重量对马氏体铬钢来说不是精确值。可采用重量校正系数0.989。

Note: P - plain end; S - short round thread; L - long round thread; B - buttress thread; C - oil casing with Baosteel premium connection; X - Baosteel Extreme-line casing .

a. Label are for informaion and assistance in ordering.

b. Nominal linear masses, threaded and coupled are shown for information only.

c. The densities of martensitic chromium steels (L80 types 9Cr and 13Cr) are different from carbon steels. The masses shown are therefore not accurate for matensitic chromium steels. A mass correction factor of 0.989 may be used.

接箍 Coupling:

1、标准接箍 Standard Coupling
2、特殊间隙接箍 Special Clearance Coupling
3、特殊倒角接箍 Special Bevel Coupling
4、改进型带密封环接箍 / API Modified Seal-Ring Coupling(SR 13)
5、组合接箍或异径接箍 / Combination Coupling or Reducing 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 kinds of size, thread or their combination of tubing and casing are supplied.

	钢级 Grade											
	BG90S(SS)、BG90(S)-3Cr	BG90T(TT)、BG90TS	BG95S(SS)、BG95(S)-3C	BG95T(TT)、BG95T	P110	BG110T(S)	BG110S(SS)、BG110-3Cr	Q125	BG125T(TT)	BG140	BG140T(TT)	BG150
	-	-	-	-	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-	-	-	-	-
	-	-	-	-	PSB	-	-	-	-	-	-	-
	-	-	-	-	PSB	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-	-	-	-	-

长度 Lengths:

	范围1/Range 1	范围2/Range 2	范围3/Range 3
油管/Tubing	6.10~7.32	8.53~9.75	11.58~12.80
套管/Casing	4.88~7.62	7.62~10.36	10.36~14.63
短节/Pup joint	0.5~6		

机械性能 Mechanical Properties:

钢级 Grade		类型 Type	加载下的总伸长率 Total elongation under Load	屈服强度 Yield strength MPa		抗拉强度 Tehsile strength MPa	硬度[a] Hardness max		规定壁厚 Specified wall thickness mm	允许硬度变化[b] Allowable hardness variation
			%	min	max	min	HRC	HBW		HRC
API系列 API Series	J55	-	0.5	379	552	517	-	-	-	-
	K55	-	0.5	379	552	655	-	-	-	-
	N80	1	0.5	552	758	689	-	-	-	-
		Q	0.5	552	758	689	-	-	-	-
	M65	-	0.5	448	586	586	22	235	-	-
	L80	1	0.5	552	655	655	23	241	-	-
		9Cr	0.5	552	655	655	23	241	-	-
		13Cr	0.5	552	655	655	23	241	-	-
	C90	1、2	0.5	621	724	689	25.4	255	≤12.70	3.0
		1、2	0.5	621	724	689	25.4	255	12.71~19.04	4.0
		1、2	0.5	621	724	689	25.4	255	19.05~25.39	5.0
		1、2	0.5	621	724	689	25.4	255	≥25.4	6.0
	C95	-	0.5	655	758	724	-	-	-	-
	T95	1、2	0.5	655	758	724	25.4	255	≤12.70	3.0
		1、2	0.5	655	758	724	25.4	255	12.71~19.04	4.0
		1、2	0.5	655	758	724	25.4	255	19.05~25.39	5.0
		1、2	0.5	655	758	724	25.4	255	≥25.40	6.0
	P110	-	0.6	758	965	862	-	-	-	-
	Q125	全部/All	0.65	862	1034	931	b	-	≤12.70	3.0
		全部/All	0.65	862	1034	931	b	-	12.71~19.04	4.0
		全部/All	0.65	862	1034	931	b	-	≥19.05	5.0

机械性能 Mechanical Properties:

钢级 Grade		类型 Type	加载下的总伸长率 Total elongation under Load	屈服强度 Yield strength MPa		抗拉强度 Tehsile strength MPa	硬度[a] Hardness max		规定壁厚 Specified wall thickness mm	允许硬度变化[b] Allowable hardness variation
			%	min	max	min	HRC	HBW		HRC
BG抗腐蚀系列 BG anti-corrosion series	BG80S,BG80SS,BG80S-3Cr	-	0.5	552	655	655	23	241	-	-
	BG90S,BG90SS,BG90S-3Cr	-	0.5	621	724	689	25.4	255	⩽12.7	3.0
		-	0.5	621	724	689	25.4	255	12.71~19.04	4.0
		-	0.5	621	724	689	25.4	255	19.05~25.39	5.0
		-	0.5	621	724	689	25.4	255	⩾25.40	6.0
	BG95S,BG95SS,BG95S-3Cr	-	0.5	655	758	724	25.4	255	⩽12.70	3.0
		-	0.5	655	758	724	25.4	255	12.71~19.04	4.0
		-	0.5	655	758	724	25.4	255	19.05~25.39	5.0
		-	0.5	655	758	724	25.4	255	⩾25.40	6.0
	BG95-13Cr	-	0.5	655	758	724	25.4	255	-	-
	BG110-3Cr	-	0.6	758	965	862	-	-	-	-
	BG110S,BG110SS	-	0.6	758	862	800	30	294	-	-
BG抗挤、高抗挤、抗挤抗硫系列 BG anti-collapse, high anti-collapse, anti-collapse and sulfate resistant series	BG80T，BG80TT	1	0.5	552	758	689	-	-	-	-
	BG90T，BG90TT	1	0.5	621	724	689	-	-	-	-
	BG95T，BG95TT		0.5	655	758	724	-	-	-	-
	BG110T，BG110TT	-	0.6	758	965	862	-	-	-	-
	BG125T，BG125TT	-	0.65	862	1034	931	-	-	-	-
	BG140T，BG140TT		0.7	965	1172	1034	-	-	-	-
	BG90TS		0.5	621	724	689	-	-	-	-
	BG95TS		0.5	655	758	700	-	-	-	-
	BG110TS		0.6	758	965	800	-	-	-	-
BG超高强度系列 BG ultra strength series	BG140	-	0.7	965	1172	1034	-	-	-	-
	BG150	-	0.7	1034	1206	1103	-	-	-	-

注： a、若有争议时，应采用试验室的洛氏硬度作为仲裁方法。

b、未规定硬度极限，但按7.8 和7.9 规定限制最大变化量可作为生产控制。

Note: a. In case of disputes, laboratory Rockwell C hardness testing shall be used as the referee method.

b. No hardness limits one specified,but the maximum variation is restricted as a manufacturing control in accordance with 7.8 and 7.9.

Drill Pipe
钻杆

适用标准及供货技术条件 Standards and technical conditions for supply

API SPEC 5D

API SPEC 7

宝钢股份相关供货技术条件 Relevant technical specification of Baosteel Co., Ltd.

用途 Uses:

用于钻井 For Well Drilling

尺寸公差 Tolerances on Dimensions:

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

规格 Dimension:

规格外径 Size designation	公称重量 Calculated weight	工具接头型号 Tool joint designation	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(see note)
in			1b/ft	kg/m		in	mm	
2 3/8"	6.65	NC26,BGDS26	6.26	9.32	E.X.G.S	0.280	7.11	EU
2 7/8"	10.40	NC31,BGDS31	9.72	14.48	E.X.G.S	0.362	9.19	EU
3 1/2"	13.30	NC38,BGDS38	12.31	18.34	E.X.G.S	0.368	9.35	EU
3 1/2"	15.50	NC38,BGDS38,NC40,BGDS40	14.63	21.79	E.X.G.S	0.449	11.40	EU
4"	14.00	NC40,BGDS40,NC46,BGDS46	12.93	19.26	E.X.G.S	0.330	8.38	IU, EU
4 1/2"	16.60	NC46,BGDS46,NC50,BGDS50	14.98	22.31	E.X.G.S	0.337	8.56	EU, IEU
4 1/2"	20.00	NC46,BGDS46,NC50,BGDS50	18.69	27.84	E.X.G.S	0.430	10.92	EU, IEU
5"	19.50	NC50,BGDS50,NC52,BGDS52	17.93	26.71	E.X.G.S	0.362	9.19	IEU
5"	25.60	NC50,BGDS50,5$^{1}/_{2}$FH,BGDS55	24.03	35.79	E.X.G.S	0.500	12.70	IEU
5 1/2"	21.90	5 1/2FH,BGDS55	19.81	29.51	E.X.G.S	0.361	9.17	IEU
5 1/2"	24.70	5 1/2FH,BGDS55	22.54	33.57	E.X.G.S	0.415	10.54	IEU
6 5/8"	25.20	6 5/8FH,BGDS65	22.19	33.0	E.X.G.S	0.330	8.38	IEU
6 5/8"	27.70	6 5/8FH,BGDS65	24.21	41.0	E.X.G.S	0.362	9.19	IEU

注： 1、EU - 外加厚；IEU - 内外加厚；IU - 内加厚；
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; IU - Internal Upset.
2. Threads of tool joints are right-hand or left-hand.
3. Threads are cooper-plated or phosphated.

化学成分 Chemical Composition (%):

钢级 Grade	化学成分/Chemical composition	
	P	S
E75	＜0.015	＜0.003
X95	＜0.015	＜0.003
G105	＜0.015	＜0.003
S135	＜0.015	＜0.003
工具接头/Tool joint	＜0.015	＜0.003

机械性能 Mechanical Properties:

	钢级 Grade	屈服强度 Yield strength				抗拉强度 Tensile strength		伸长率(%) Elongation	硬度 Hardness		全尺寸纵向夏氏冲击功 Full size charpy impact test (J)	
		最低/min		最高/max		最低/min					最低/min	
		Psi	MPa	Psi	MPa	Psi	MPa		HBW	HRC	平均值 Average	单个值 Single
管体 Pipe body	E75	75000	517	105000	724	100000	689	$625000A^{0.2}/U^{0.9}$	-	-	80	65
	X95	95000	655	125000	862	105000	724		-	-	80	65
	G105	105000	724	135000	931	115000	793		-	-	80	65
	S135	135000	931	165000	1138	145000	1000		-	-	80	65
焊缝 Weld zone	工具接头 Tool Joint	120000	827.4	-	-	140000	965.3	⩾13%	⩾285	-	80	65
	E75	75000	517	-	-	100000	689		-	⩽37	40	27
	X95	88000	609	-	-	103000	712		-	⩽37	40	27
	G105	95000	655	-	-	105000	724		-	⩽37	40	27
	S135	105000	724	-	-	115000	793		-	⩽37	40	27

Tube for Perforating Gun
射孔枪管

标准 Standard:

Q/BQB 232　　宝钢企业标准 Baosteel Corporation Standard

用途 Uses:

用于制造油气井射孔枪枪体

For manufacture of perforating gun body

规格 Dimension:

外径/Outside diameter mm	壁厚/Wall thickness mm
60.30	5.00
68.00	5.50、6.3
73.00	5.51、7.82、9.19
82.50	9.00
83.00	9.00
88.90	6.45、7.10、8.00、8.80、9.19、10.00、12.00
95.00	8.00、10.00
96.00	10.00
101.60	7.00、9.00、9.50、10.00、11.00
108.00	8.00
114.30	8.50、9.50、10.00、11.10、12.50、13.00
127.00	9.50、11.00、12.50
159.00	12.00、12.50、13.00
178.00	12.00

化学成分 Chemical Composition (%):

牌号/Grade	C	Si	Mn	P	S	Cr	Mo
32CrMo4	0.29~0.36	0.17~0.37	0.50~0.80	≤0.015	≤0.010	0.90~1.20	0.20~0.30
27MnCrMoVNb	0.24~0.30	0.20~0.40	≤1.5	≤0.015	≤0.010	0.90~1.20	0.4~0.8

机械性能 Mechanical Properties:

牌号 Grade	规定总延伸强度 Specified total elongation strength $R_{t0.6}$, MPa	抗拉强度 R_m, Mpa	断后伸长率 A, %	冲击功[a] A_{kv}, J					
				纵向试样尺寸 Longitudinal sample dimension mm			横向试样尺寸 Transverse sample dimension mm		
				10×10	10×7.5	10×5	10×10	10×7.5	10×5
	不小于 not less than								
32CrMo4	724	793	14	57	46	32	32	26	18
27MnCrMoVNb	1034	1103	17	60	50	35	60	50	35

注： a 当外径＜ 73.03mm 时，不作冲击试验；当 73.03 ≤外径＜101.6mm 时，作纵向冲击试验；当外径≥ 101.6mm 时，作横向冲击试验。试验温度为 0°C。3 个冲击试样的平均值应不小于表中的规定值，仅允许 1 个冲击试样的吸收功小于规定值，但不应低于规定值的三分之二。

Note: a No impact test when OD<73.03mm; longitudinal impact test when 73.03 ≤ OD ＜101.6mm; transverse impact test when OD ≥ 101.6mm. The testing temperature is 0°C. The average value of 3 impact samples shall not be lower than the specified value in the table, and only the absorbed energy of 1 impact sample can be lower than the specified value, but not lower than 2/3 of the specified value.

长度 Length: 8-12m

Insulating Tubing
隔热油管

标准 Standard:

Q/BQB 234　　宝钢企业标准 Baosteel Corporation Standard

用途 Uses:

用于油田的稠油热采

For producing viscous oil

规格 Dimension:

名称 Name	外径 Outside diameter mm	壁厚 Wall thickness mm	钢级 Grade	管端形式 Type of end	长度/Length m	
					Ⅰ类长度 Length class Ⅰ	Ⅱ类长度 Length class Ⅱ
外层管 Outer tube	114.30	6.35	N80-Q、BG80H、BG110H	平端/NUE	9.5	9.1
	114.30	6.88	N80-Q、BG80H、BG110H	平端/NUE	9.6	9.2
内层管 Inner tube	73.02	5.51	N80-Q、BG80H、BG110H	外加厚/EUE	9.4	9.0
	88.90	6.45	N80-Q、BG80H、BG110H	平端/NUE	9.5	9.1
接箍料 Coupling section	127.00	12.70	P110、BG80H、BG110H	平端/NUE	8.0~12.0	
	132.08	15.00	P110、BG80H、BG110H	平端/NUE		
	141.30	15.00	P110、BG80H、BG110H	平端/NUE		

化学成分 Chemical Composition (%):

钢级 Grade	化学成分/Chemical composition:				
	C	Si	Mn	P	S
N80	0.23-0.26	0.20-0.30	1.40-1.60	≤0.020	≤0.015
BG80H	0.12-0.17	0.15-0.35	0.4-0.6	≤0.015	≤0.010
BG110H	0.15-0.20	0.15-0.35	0.4-0.6	≤0.015	≤0.010

机械性能 Mechanical Properties:

名称 Name	钢级 Grade	屈服强度 Yield strength				抗拉强度 Tensile strength		伸长率 Elongation
		最低/min		最高/max		最低/min		最低/min
		Psi	MPa	Psi	MPa	Psi	MPa	%
外层管 Outer tube	N80	80,000	552	110,000	758	100,00	689	15.0
内层管 Inner tube	N80	80,000	552	110,000	758	100,00	689	13.5
外层管 Outer tube	BG80H	80,000	552	110,000	758	100,000	689	15
内层管 Inner tube	BG110H	110,000	758	140,000	965	125,000	862	11
外层管 Outer tube	BG80H	80,000	552	110,000	758	100,000	689	15
内层管 Inner tube	BG110H	110,000	758	140,000	965	125,000	862	11

长度 Lengths:

名称 Name	范围/Range mm
外层管/Outer tube	9000-9600
内层管/Inner tube	9000-9600

Boiler Tube
锅炉管

标准 Standard:

美国机械工程师协会标准 American society of mechanical engineers
ASME SA-106、ASME SA-192M、ASME SA-209M、ASME SA-210M、ASME SA-213M、ASME SA-335M
美国材料试验协会标准 American Society for Testing and Materials
ASTM A 106M、ASTM A 192M、ASTM A 210M、ASTM A 213M、ASTM A 335M
欧盟标准 European Standards
EN 10216-2
德国工业标准 Deutsche industrie normen
DIN 17175
中国国家标准 Chineses National Standards
GB 3087、GB 5310、GB 6479、GB 9948、GB/T 13296
日本工业标准 Japaneses industrial standards
JIS G 3456、JIS G 3461、JIS G 3462

用途 Uses:

用于锅炉水冷壁、省煤器、再热器、过热器和蒸气管道的制造。
For manufacture wall panel, economizer, reheater, superheater and steam pipeline of boilers

主要产品及用途 Main Products and Applications:

钢种 Steel Grade	标准 Standard			应用 Applications
	GB (China)	ASME (U.S.A)	DIN/EN (Euro)	
碳钢 Carbon steel	10 20 20G 20MnG 25MnG	SA-106B SA-192 SA-210A1 SA-106C SA-210C	P265GH P195GH P235GH St35.8 St45.8	省煤器 水冷壁管 Economizer tube Water wall tube
Mo合金钢 Mo Steel	15MoG 20MoG	SA-209T1 SA-209T1a SA-209T1b	15Mo3 16Mo3	水冷壁管 过热器 再热器 Water wall tube Superheater tube Reheater tube
Cr-Mo合金钢 Cr-Mo Steel	12CrMoG 12Cr2MoG 12Cr1MoVG 15CrMoG 10Cr9MoVNb	SA-213 T11 SA-213 T22 SA-213 T24 SA-213 T91	12Cr1MoV 14MoV63 10CrMo910 X10CrMoVNb91 10CrMo5-5、13CrMo4-5	过热器 再热器 Superheater tube Reheater tube
Cr-Mo-W合金钢 Cr-Mo-W steel	12Cr2MoWVTiB	SA-213 T23 SA-214 T911 SA-213 T92 SA-213 T122		过热器 再热器 Superheater tube Reheater tube
奥氏体不锈钢 Austenitic Stainless steel	–	TP304 TP304H TP321 TP321H TP347 TP347H TP316 TP316H S30432 TP310HCbN	–	过热器 再热器 Superheater tube Reheater tube

化学成分 Chemical Composition (%):

钢级 Grade		C	Si	Mn	S	P	Cr	Mo	V	Ti	B	W	Ni	Al	Nb	N	其他 Others
标准 Standard	钢种 Steel grade				max												
GB 3087	10	0.07-0.13	0.17-0.37	0.35-0.65	0.020	0.025	≤0.15	-	-	-	-	-	-				
	20	0.17-0.23	0.17-0.37	0.35-0.65	0.020	0.025	≤0.25	-	-	-	-	-	-				
DIN 17175	St35.8	≤0.17	0.10-0.35	0.40-0.80	0.020	0.025	-	-	-	-	-	-	-				
	St45.8	≤0.21	0.10-0.35	0.40-1.20	0.020	0.025	-	-	-	-	-	-	-				
	15Mo3	0.12-0.20	0.10-0.35	0.40-0.80	0.020	0.025	-	0.25-0.35	-	-	-	-	-				
	13CrMo44	0.10-0.18	0.10-0.35	0.40-0.70	0.020	0.025	0.70-1.10	0.45-0.65	-	-	-	-	-				
	10CrMo910	0.08-0.15	≤0.50	0.40-0.70	0.020	0.025	2.00-2.50	0.90-1.20	-	-	-	-	-				
	14MoV63	0.10-0.18	0.10-0.35	0.40-0.70	0.020	0.025	0.30-0.60	0.50-0.70	0.22-0.32	-	-	-	-				
	12Cr1MoV	0.08-0.15	0.17-0.37	0.40-0.70	0.020	0.025	0.90-1.20	0.25-0.35	0.15-0.30	-	-	-	-				
GB 5310	20G	0.17-0.23	0.17-0.37	0.35-0.65	0.020	0.025	-	-	-	-	-	-	-				
	20MnG	0.17-0.24	0.17-0.37	0.70-1.00	0.020	0.025	-	-	-	-	-	-	-				
	25MnG	0.22-0.27	0.17-0.37	0.70-1.00	0.020	0.025	-	-	-	-	-	-	-				
	15MoG	0.12-0.20	0.17-0.37	0.40-0.80	0.020	0.025	-	0.25-0.35	-	-	-	-	-				
	20MoG	0.15-0.25	0.17-0.37	0.40-0.80	0.020	0.025	-	0.44-0.65	-	-	-	-	-				
	12CrMoG	0.08-0.15	0.17-0.37	0.40-0.70	0.020	0.025	0.40-0.70	0.40-0.55	-	-	-	-	-				
	15CrMoG	0.12-0.18	0.17-0.37	0.40-0.70	0.020	0.025	0.80-1.10	0.40-0.55	-	-	-	-	-				
	12Cr2MoG	0.08-0.15	≤0.50	0.40-0.70	0.020	0.025	2.00-2.50	0.90-1.20	-	-	-	-	-				
	12Cr1MoVG	0.08-0.15	0.17-0.37	0.40-0.70	0.020	0.025	0.90-1.20	0.25-0.35	0.15-0.30	-	-	-	-				

化学成分 Chemical Composition (%):

钢级 Grade		C	Si	Mn	S	P	Cr	Mo	V	Ti	B	W	Ni	Al	Nb	N	其他 Others
标准 Standard	钢种 Steel grade				max												
GB 5310	12Cr2MoWVTiB	0.08-0.15	0.45-0.75	0.45-0.65	0.020	0.025	1.60-2.10	0.50-0.65	0.28-0.42	0.08-0.18	0.002-0.008	0.30-0.55	-				
	10Cr9Mo1VNb	0.08-0.15	0.20-0.50	0.30-0.60	0.010	0.020	8.00-9.50	0.85-1.05	0.18-0.25	-	-	-	⩽0.040	⩽0.040	0.06-0.10	0.03-0.07	
	1Cr18Ni9	0.04-0.10	⩽1.00	⩽2.00	0.03	0.035	17.0-19.0		9.00-13.00	-	-	-	0.18-0.25				
	1Cr19Ni11Nb	0.04-0.10	⩽1.00	⩽2.00	0.03	0.03	17.0-20.0			-	-	-					Nb+Ta⩾0.8-1.0%
ASTM A 106M ASME SA-106	A 106B SA-106B	⩽0.30	⩾0.10	0.29-1.06	0.020	0.025	-		-	-	-	-	-				
	A 106C SA-106C	⩽0.35	⩾0.10	0.29-1.06	0.020	0.025			-	-	-	-	-				
ASTM A 192M ASME SA-192M	A 192 SA-192	0.06-0.18	⩽0.25	0.27-0.63	0.020	0.025	-	-	-	-	-	-	-				
ASTM A 209M ASME SA-209M	A 209T1 SA-209T1	0.10-0.20	0.10-0.50	0.30-0.80	0.020	0.025		0.44-0.65	-	-	-	-	-				
	A 209T1b SA-209T1b	⩽0.14	0.10-0.50	0.30-0.80	0.020	0.025		0.44-0.65		-	-	-	-				
	A 209T1a SA-209T1a	0.15-0.25	0.10-0.50	0.30-0.80	0.020	0.025		0.44-0.65		-	-	-	-				
ASTM A 210M ASME SA-210M	A 210A1 SA-210A1	⩽0.27	⩾0.10	⩽0.93	0.020	0.025											
	A 210C SA-210C	⩽0.35	⩾0.10	0.29-1.06	0.020	0.025	-	-	-	-	-	-	-				
ASTM A 213M ASME SA-213M	A 213 T2 SA-213 T2	0.10-0.20	0.10-0.30	0.30-0.61	0.020	0.025	0.50-0.81	0.44-0.65	-	-	-	-	-				
	A 213 T11 SA-213 T11	0.05-0.15	0.50-1.00	0.30-0.60	0.020	0.025	1.00-1.50	0.44-0.65	-	-	-	-	-				
	A 213 T12 SA-213 T12	⩽0.15	⩽0.50	0.30-0.61	0.020	0.025	0.80-1.25	0.44-0.65	-	-	-	-	-				
	A 213 T22 SA-213 T22	0.05-0.15	⩽0.50	0.30-0.60	0.020	0.025	1.90-2.60	0.87-1.13	-	-	-	-	-				
	A 213 T23 SA-213 T23	0.04-0.10	⩽0.50	0.10-0.60	0.010	0.025	1.90-2.60	0.05-0.30	0.20-0.30	-	0.0005-0.006	1.45-1.75	-	⩽0.03	0.02-0.08	⩽0.03	
	A 213 T24 SA-213 T24	0.05-0.10	0.15-0.45	0.30-0.70	0.020	0.025	2.20-2.60	0.70-1.10	0.20-0.30	0.06-0.10	0.0015-0.0020	-	-	⩽0.02		⩽0.012	
	A 213 T91 SA-213 T91	0.08-0.12	0.20-0.50	0.30-0.60	0.010	0.020	8.00-9.50	0.85-1.05	0.18-0.25	-	-	-	⩽0.40	⩽0.40	0.06-0.10	0.03-0.07	
	A213 T911 SA-213 T911	0.09-0.13	0.10-0.50	0.30-0.60	0.020	0.025	8.50-10.50	0.90-1.10	0.18-0.25	-	0.0003-0.006	0.90-1.10	⩽0.40	⩽0.40	0.06-0.10	0.04-0.09	

化学成分 Chemical Composition (%):

钢级 Grade		C	Si	Mn	S	P	Cr	Mo	V	Ti	B	W	Ni	Al	Nb	N	其他 Others
标准 Standard	钢种 Steel Grade				max												
ASTM A 213M ASME SA-213M	A 213 T92 SA-213 T92	0.07-0.13	≤0.50	0.30-0.60	0.010	0.020	8.50-9.50	0.30-0.60	0.15-0.25		0.001-0.006	1.50-2.00	≤0.40	≤0.40	0.04-0.09	0.03-0.07	
	A 213 T122 SA-213 T122	0.07-0.14	≤0.50	≤0.70	0.010	0.020	10.00-12.50	0.25-0.60	0.15-0.30	-	0.0005-0.005	1.50-2.50	≤0.50	≤0.04	0.04-0.10	0.040-0.100	
	TP304H	0.04-0.10	≤0.75	≤2.0	0.030	0.040	18.00-20.00			-	-	-	8.00-11.00				
	TP321H	0.04-0.10	≤0.75	≤2.0	0.030	0.040	17.00-20.00			4*C%-0.60	-	-	9.00-13.00				
	TP347H	0.04-0.10	≤0.75	≤2.0	0.030	0.040	17.00-20.00	-	-	-	-	-	9.00-13.00				Nb+Ta≥8*C%-1.00
	S30432	0.07-0.13	≤0.30	≤1.0	0.040	0.010	17.00-20.00	-	-	-	0.001-0.010	-	7.50-10.5	0.003-0.030	0.30-0.60	0.05-0.12	Cu 2.50-3.50
	TP310HCbN	0.04-0.10	≤0.75	≤2.0	0.030	0.030	24.00-26.00		-	-	-	-	17.0-23.0		0.20-0.60	0.15-0.35	
EN 10216-2	P195GH	≤0.13	≤0.35	≤0.70	0.020	0.025	≤0.30	≤0.08	≤0.02	≤0.040	-	-	≤0.30	≥0.02	≤0.01		Cr+Cu+Mo+Ni≤0.70
	P235GH	≤0.16	≤0.35	≤1.20	0.020	0.025	≤0.30	≤0.08	≤0.02	≤0.040			≤0.30	≥0.02	≤0.01		Cr+Cu+Mo+Ni≤0.70
	P265GH	≤0.20	≤0.40	≤1.40	0.020	0.025	≤0.30	≤0.08	≤0.02	≤0.040			≤0.30	≥0.02	≤0.01		Cr+Cu+Mo+Ni≤0.70
	16Mo3	0.12-0.20	≤0.35	0.40-0.90	0.020	0.025	≤0.30	0.25-0.35					≤0.30	≤0.04			Cu≤0.30
	10CrMo5-5	≤0.15	0.50-1.00	0.30-0.60	0.020	0.025	1.00-1.50	0.45-0.65					≤0.30	≤0.04			Cu≤0.30
	13CrMo4-5	0.10-0.17	≤0.35	0.40-0.70	0.020	0.025	0.70-1.15	0.40-0.60					≤0.30	≤0.04			Cu≤0.30
	10CrMo9-10	0.08-0.14	≤0.50	0.30-0.70	0.020	0.025	2.00-2.50	0.90-1.10					≤0.30	≤0.04			Cu≤0.30
	X10CrMo VNb9-1	0.08-0.12	0.20-0.50	0.30-0.60	0.010	0.020	8.00-9.50	0.85-1.05	0.18-0.25				≤0.40	≤0.04	0.06-0.10	0.03-0.070	Cu≤0.30
JIS G 3461	STB 340	≤0.18	≤0.35	0.30-0.60	0.020	0.025											
	STB 410	≤0.32	≤0.35	0.30-0.80	0.020	0.025											
	STB 510	≤0.25	≤0.35	1.00-1.50	0.020	0.025											
JIS G 3462	STBA 12	0.10-0.20	0.10-0.50	0.30-0.80	0.020	0.025		0.45-0.65									
	STBA 13	0.15-0.25	0.10-0.50	0.30-0.80	0.020	0.025		0.45-0.65									
	STBA 20	0.10-0.20	0.10-0.50	0.30-0.80	0.020	0.025	0.50-0.80	0.45-0.65									

化学成分 Chemical Composition (%):

钢级 Grade		C	Si	Mn	S	P	Cr	Mo	V	Ti	B	W	Ni	Al	Nb	N	其他 Others
标准 Standard	钢种 Steel grade				max												
JIS G 3462	STBA 22	≤0.15	≤0.50	0.30-0.60	0.020	0.025	0.80-1.25	0.45-0.65									
	STBA 23	≤0.15	0.50-1.00	0.30-0.60	0.020	0.025	1.00-1.50	0.45-0.65									
	STBA 24	≤0.15	≤0.50	0.30-0.60	0.020	0.025	1.90-2.60	0.87-1.13									
	STBA 26	≤0.15	0.25-1.00	0.30-0.60	0.020	0.025	8.00-10.0	0.90-1.10									
JIS G 3463	SUS304HTB	0.04-0.10	≤2.00	≤ 0.75	0.020	0.025	18.00-20.00	-	-	-	-	-	8.00-11.00				
	SUS321HTB	0.04-0.10	≤2.00	≤ 0.75	0.020	0.025	17.00-20.00	-	-	4*C%-0.60		-	9.00-13.0				
GB 13296	0Cr18Ni9	0.070	≤1.00	≤2.00	0.030	0.035	17.00-19.00		-	-	-	-	8.00-11.0				
	1Cr18Ni9	≤0.15	≤1.00	≤2.00	0.030	0.035	17.00-19.00				-	-	8.00-11.0				
	00Cr19Ni10	≤0.03	≤1.00	≤2.00	0.030	0.035	18.00-20.00						8.00-12.0				
	2Cr23Ni13	≤0.20	≤1.00	≤2.00	0.030	0.035	22.0-24.0						12.0-15.0				
	0Cr23Ni13	≤0.08	≤1.00	≤2.00	0.030	0.035	22.0-24.0						12.0-15.0				
	2Cr25Ni20	≤0.25	≤1.00	≤2.00	0.030	0.035	22.0-24.0						19.0-22.0				
	0Cr25Ni20	≤0.08	≤1.00	≤2.00	0.030	0.035	24.0-26.0						19.0-22.0				
	0Cr17Ni12Mo2	≤0.08	≤1.00	≤2.00	0.030	0.035	16.0-18.5	2.0-3.0					10.0-14.0				
	1Cr17Ni12Mo2	0.04-0.1	≤0.75	≤2.00	0.030	0.035	16.0-18.0	2.0-3.0					11.0-14.0				

化学成分 Chemical Composition (%):

钢级 Grade		C	Si	Mn	S	P	Cr	Mo	V	Ti	B	W	Ni	Al	Nb	N	其他 Others
标准 Standard	钢种 Steel grade				max												
GB 13296	00Cr17Ni14Mo2	≤0.03	≤1.00	≤2.00	0.030	0.035	16.0-18.0	2.0-3.0					12.0-15.0				
	0Cr19Ni13Mo3	≤0.08	≤1.00	≤2.00	0.030	0.035	18.0-20.0	3.0-4.0					11.0-15.0				
	00Cr19Ni13Mo3	≤0.03	≤1.00	≤2.00	0.030	0.035	18.0-20.0	3.0-4.0					11.0-15.0				
	1Cr18Ni9Ti	0.04-0.1	≤1.00	≤2.00	0.030	0.035	17.0-19.0			5*(C-0.02)-0.80			8.0-11.0				
	0Cr18Ni10Ti	≤0.08	≤1.00	≤2.00	0.030	0.035	17.0-19.0			≥5*C			9.0-12.0				
	1Cr18Ni11Ti	0.04-0.1	≤0.75	≤2.00	0.030	0.035	17.0-20.0			4*C-0.60			9.0-13.0				
	0Cr18Ni11Nb	≤0.08	≤1.00	≤2.00	0.030	0.035	17.0-19.0						9.0-13.0				
	1Cr19Ni11Nb	0.04-0.1	≤0.75	≤2.00	0.030	0.035	17.0-20.0						9.0-13.0				
	0Cr18Ni13Si4	≤0.08	3.0-5.0	≤2.00	0.030	0.035	15.0-20.0						11.0-15.0				
	0Cr18Ni12Mo2Ti	≤0.08	≤1.00	≤2.00	0.030	0.035	16.0-19.0	1.8-2.50		5*C-0.70			11.0-14.0				
	1Cr18Ni12Mo2Ti	≤0.12	≤1.00	≤2.00	0.030	0.035	16.0-19.0	1.8-2.50		5*(C-0.02)-0.80			11.0-14.0				
	1Cr18Ni12Mo3Ti	≤0.12	≤1.00	≤2.00	0.030	0.035	16.0-19.0	2.5-3.50		5*(C-0.02)-0.80			11.0-14.0				
	0Cr18Ni12Mo3Ti	≤0.08	≤1.00	≤2.00	0.030	0.035	16.0-19.0	2.5-3.50		5*C-0.70			11.0-14.0				

注：经协商，也可供应其它牌号的钢管。

Note: Grades other than the a.m. chart can be made available through consultations.

产品性能 Mechanical Properties:

标准 Standard	牌号 Grade	抗拉强度(MPa) Tensile strength	屈服强度(MPa) 不小于 Yield point not less than	伸长率(%) 不小于 Elongation not less than	冲击功(J) 不小于 Impact not less than	硬度 不大于 Hardness not more than
GB 3087	10	333~490	196	24	-	-
	20	392~588	245(t<15mm) 225(t≥15mm)	20	-	-
DIN 17175	St35.8	360-480	235(t≤16mm) 225(t>16mm)	25	-	-
	St45.8	410-530	255(t≤16mm) 245(t>16mm)	21	-	-
	15Mo3	450-600	270	22	-	-
	13CrMo44	440-590	290	22	-	-
	10CrMo910	450-600	280	20	-	-
	14MoV63	460-610	320	20	55	-
	12Cr1MoV	470-640	255	21	41	-
GB 5310	20G	410-550	245	24	35	-
	25MnG	≥485	275	20	35	-
	15MoG	450-600	270	22	35	-
	20MoG	≥415	220	22	35	-
	12CrMoG	410-560	205	21	35	-
	12 Cr2MoG	450-600	280	20	35	-
	12 Cr1MoVG	470-640	255	21	35	-
	12Cr2MoWVTiB	540-735	345	18	35	-
	10Cr9Mo1VNb	≥585	415	20	35	
	1Cr18Ni9	≥520	206	35		
	1Cr19Ni11Nb	≥520	206	35		
ASTM A 106M ASME SA-106	A 106B/SA-106B	≥415	240	30	-	-
	A 106C/SA-106C	≥485	275	30	-	
ASTM A 192M ASME SA-192M	A 192/SA-192	≥325	180	35	-	77HRB(137HBW)
ASTM A 209M ASME SA-209M	A 209T1/SA-209T1	≥380	205		-	80HRB(146HBW)
	A 209T1b/SA-209T1b	≥365	195		-	77HRB(137HBW)
	A 209T1a/SA-209T1a	≥415	220		-	81HRB(153HBW)
ASTM A 210M ASME SA-210M	A 210A1/SA-210A1	≥415	255		-	79HRB(143HBW)
	A 210C/SA-210C	≥485	275		-	89HRB(179HBW)
ASTM A 213M ASME SA-213M	A 213 T2/SA-213 T2	≥415	205		-	85HRB(163HBW)
	A 213 T11/SA-213 T11	≥415	205		-	85HRB(163HBW)
	A 213 T22/SA-213 T22	≥415	205		-	85HRB(163HBW)
	A 213 T23/SA-213 T23	≥510	400	20	-	97HRB(220HBW)
	A 213 T24/SA-213 T24	≥585	415	20		25HRC(250HBW)
	A 213 T91/SA-213 T91	≥585	415	20		25HRC(250HBW)
	A 213 T911/SA-213 T911	≥620	440	20		25HRC(250HBW)
	A 213 T92/SA-213 T92	≥620	440	20	-	25HRC(250HBW)
	A 213 T122/SA-213 T122	≥620	400	20	-	25HRC(250HBW)
	TP304H	≥515	205	35	-	90HRB(192HBW)
	TP316H	≥515	205	35		90HRB(192HBW)
	TP321H	≥515	205	35		90HRB(192HBW)
	TP347H	≥515	205	35		90HRB(192HBW)
	S30432	≥590	235	35		95HRB(219HBW)
	TP310HCbN	≥655	295	30		100HRB(256HBW)

产品性能 Mechanical Properties:

标准 Standard	牌号 Grade	抗拉强度(MPa) Tensile strength	屈服强度(MPa) 不小于 Yield point not less than	伸长率(%) 不小于 Elongation not less than	冲击功(J) 不小于 Impact not less than	硬度 不大于 Hardness not more than
EN 10216-2	P195GH	320-440	195	27		
	P235GH	360-500	235	25		
	P265GH	410-570	265	23		
	16Mo3	450-600	280	22		
	10CrMo5-5	410-560	275	22		
	13CrMo4-5	440-590	290	22		
	10CrMo9-10	480-630	280	22		
	X10CrMoVNb9-1	630-830	450	19	41	
JIS G 3461	STB 340	⩾340	175	35		
	STB 410	⩾410	255	25		
	STB 510	⩾510	295	25		
JIS G 3462	STBA 12	⩾382	206			
	STBA 13	⩾412	206			
	STBA 20	⩾412	206			
	STBA 22	⩾412	206			
	STBA 23	⩾412	206			
	STBA 24	⩾412	206			
	STBA 26	⩾412	206			
JIS G 3463	SUS 304HTB	⩾520	206	35		
	SUS 316HTB	⩾520	206	35		
	SUS 321HTB	⩾520	206	35		
	SUS 347HTB	⩾520	206	35		
GB 13296	0Cr18Ni9	⩾520	205	35		
	1Cr18Ni9	⩾520	205	35		
	00Cr19Ni10	⩾480	175	35		
	2Cr23Ni13	⩾520	205	35		
	0Cr23Ni13	⩾520	205	35		
	2Cr25Ni20	⩾520	205	35		
	0Cr25Ni20	⩾520	205	35		
	0Cr17Ni12Mo2	⩾520	205	35		
	1Cr17Ni12Mo2	⩾520	205	35		
	00Cr17Ni14Mo2	⩾480	175	40		
	0Cr19Ni13Mo3	⩾520	205	35		
	00Cr19Ni13Mo3	⩾480	175	35		
	1Cr18Ni9Ti	⩾520	205	40		
	0Cr18Ni10Ti	⩾520	205	35		
	1Cr18Ni11Ti	⩾520	205	35		
	0Cr18Ni11Nb	⩾520	205	35		
	1Cr19Ni11Nb	⩾520	205	35		
	0Cr18Ni13Si4	⩾520	205	35		
	0Cr18Ni12Mo2Ti	⩾530	205	35		
	1Cr18Ni12Mo2Ti	⩾540	215	35		
	1Cr18Ni12Mo3Ti	⩾530	205	35		
	0Cr18Ni12Mo3Ti	⩾540	215	35		

Special Products 特殊产品

内螺纹管 (Inner-ribbed Tube)

产品使用于制造电站锅炉水冷壁，能有效消除钢管内壁蒸汽膜，提高炉壁热效率。

产品用冷拔方法制造，使钢管内壁形成特殊几何尺寸的内壁螺旋筋。成品采用保护气体热处理，使钢管具有稳定的性能和良好的表面质量。

产品可按用户设计要求订货。

It is used as a water wall tube loaded with a highly heated flux and is also expected to find broadened other uses in the viewpoint of its energy saving effect and higher safety against the overheating damage.

This has a groove on its inside surface which functions to raise thermal efficiency by distrubing the fluid within the tube,featuring an extremely high thermal conduction property.

可提供的钢种及规格范围 Steel Grade & Dimension:

标准 Standard	钢种 Grade	规格范围 Specification		
		外径 Outside diameter mm	壁厚 Wall thickness mm	螺纹头数 Number of rib
GB/T 20409-2006	20G、25MnG、15CrMoG	ø22-83	4.5-13	4-14

Pipe & Tube for Ship
船用管

船规 Classification of Ships:

中国船级社规范 CCS Rules for Classification and Construction of Ships

英国劳氏船级社规范 LR Rules and Regulations for Classification of Ships

法国BV船级社规范 BV Rules for Classification of Ships

挪威船级社规范 DNV Rules for Classification of Ships

德国船级社规范 GL Rules for Classification and Construction

标准 Standard:

GB/T 5312 中国国家标准 China National Standard

用途 Uses:

用于船用锅炉、过热器及耐压力系管道的制造

For manufacture of boiler, superheaters for ships, and pressure system pipelines

化学成分 Chemical Composition (%):

标准 Standard	成分 Type of steel	钢级 Grade	C	Si	Mn	P	S	残余元素/Residual element				
								Cr	Mo	Ni	Cu	总量/Total
GB/T 5312	碳钢和碳锰钢 Carbon & Carbon-Manganese	320	≤0.16	≤0.35	0.40-0.78	≤0.035	≤0.035	≤0.25	≤0.10	≤0.30	≤0.30	≤0.70
		360	≤0.17	≤0.35	0.40-0.80	≤0.035	≤0.035					
		410	≤0.21	≤0.35	0.40-1.20	≤0.035	≤0.035					
		460	≤0.22	≤0.35	0.80-1.40	≤0.035	≤0.035					
		490	≤0.23	≤0.35	0.80-1.50	≤0.035	≤0.035					
中国船级社规范 CCS	1Cr0.5Mo	440	0.10-0.18	0.10-0.35	0.40-0.70	≤0.035	≤0.035	0.70-1.10	0.45-0.65	≤0.30	≤0.25	Sn≤0.03 Al≤0.02
	2.25Cr1Mo	410	0.08-0.15	0.10-0.35	0.40-0.70	≤0.035	≤0.035	2.00-2.50	0.90-1.20			
		490										

注1: 其它船规另行协商。

注2: 经协商,也可供应其他牌号的钢管。

Note1: Other classification of ships can also be provided after consulting with customers.

Note2: Grades other than the a.m. chart can be made available through consultations.

力学性能 Mechanical Properties:

标准 Standard	类别 Type of steel	钢级 Grade	抗拉强度 Tensile strength σ_b MPa	屈服点 Yield point σ_s MPa	伸长率 Elongation δ_5 %
				不小于 not less than	
GB/T 5312	碳钢和碳锰钢 Carbon & Carbon-Mangnese	320	320-440	195	25
		360	360-480	215	24
		410	410-530	235	22
		460	460-580	265	21
		490	490-610	285	21
中国船级社规范 CCS	1Cr0.5Mo	440	440-590	275	22
	2.25Cr1Mo	410	410-560	135	20
		490	490-640	275	16

注: 其它船规另行协商。

Note: Other classification of ships can also be provided after consulting with customers.

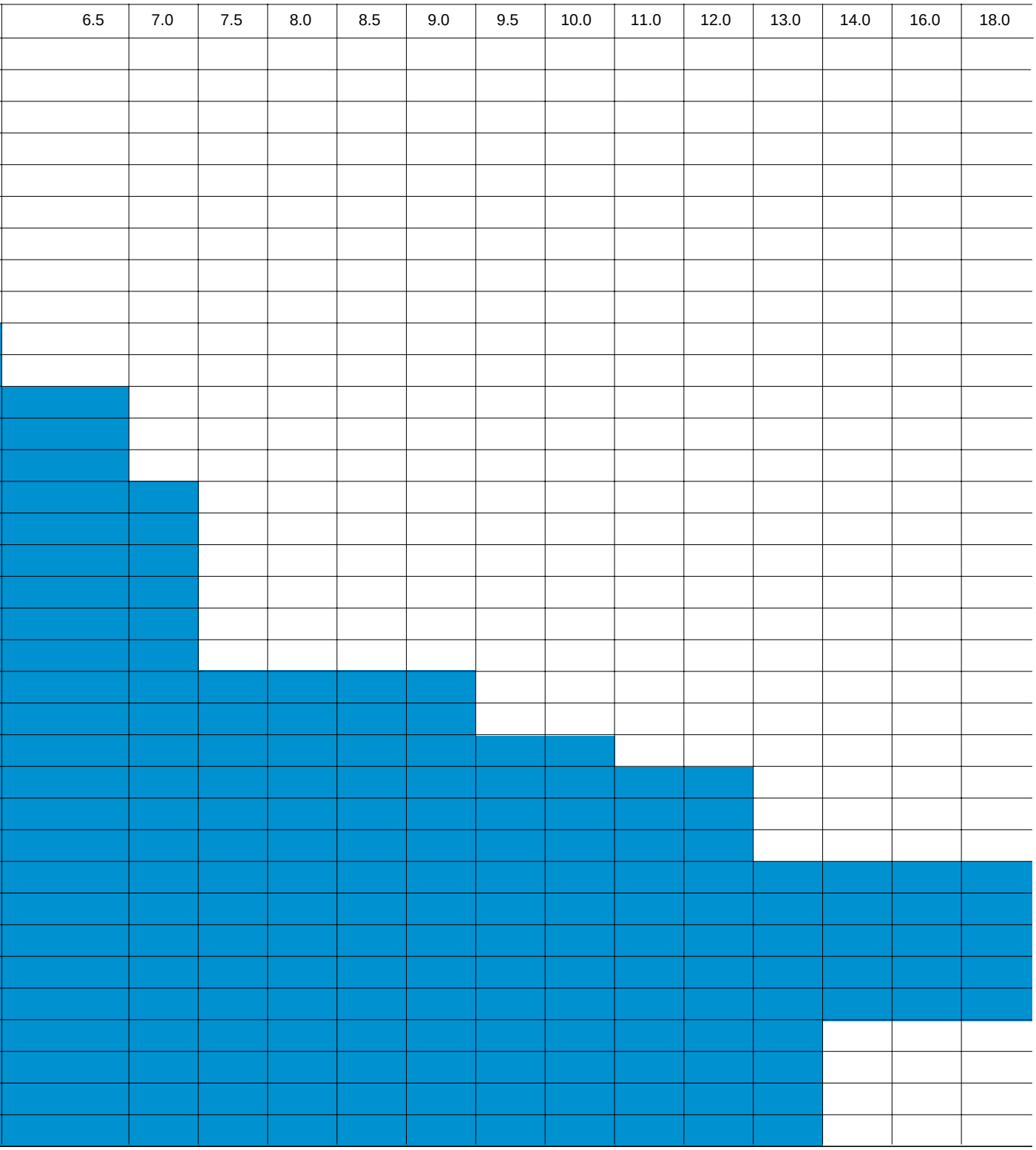
产品规格 Available Dimension Range:

冷拔(冷轧)规格表 Cold Finished Seamless Steel Tube and Pipe:

外径 Outside diameter / mm	1.2	1.5	2.0	2.5	2.8	3.0	3.2	3.5	4.0	4.5	5.0	5.5	6.0
8.0	■	■	■										
10.0	■	■	■	■	■	■	■	■					
12.0	■	■	■	■	■	■	■	■					
14.0	■	■	■	■	■	■	■	■					
16.0	■	■	■	■	■	■	■	■	■	■			
19.0	■	■	■	■	■	■	■	■	■	■			
22.0	■	■	■	■	■	■	■	■	■	■	■		
24.0	■	■	■	■	■	■	■	■	■	■	■		
25.0	■	■	■	■	■	■	■	■	■	■	■		
28.0	■	■	■	■	■	■	■	■	■	■	■	■	■
29.0	■	■	■	■	■	■	■	■	■	■	■	■	■
30.0	■	■	■	■	■	■	■	■	■	■	■	■	■
32.0	■	■	■	■	■	■	■	■	■	■	■	■	■
35.0		■	■	■	■	■	■	■	■	■	■	■	■
38.0		■	■	■	■	■	■	■	■	■	■	■	■
40.0			■	■	■	■	■	■	■	■	■	■	■
42.0			■	■	■	■	■	■	■	■	■	■	■
45.0			■	■	■	■	■	■	■	■	■	■	■
48.0			■	■	■	■	■	■	■	■	■	■	■
50.0			■	■	■	■	■	■	■	■	■	■	■
51.0			■	■	■	■	■	■	■	■	■	■	■
54.0			■	■	■	■	■	■	■	■	■	■	■
57.0			■	■	■	■	■	■	■	■	■	■	■
60.0			■	■	■	■	■	■	■	■	■	■	■
63.5					■	■	■	■	■	■	■	■	■
68.0					■	■	■	■	■	■	■	■	■
70.0					■	■	■	■	■	■	■	■	■
73.0									■	■	■	■	■
76.0									■	■	■	■	■
83.0									■	■	■	■	■
89.0									■	■	■	■	■
95.0										■	■	■	■
102.0										■	■	■	■
108.0										■	■	■	■
114.0										■	■	■	■

壁厚 Wall thickness

mm



产品规格 Available Dimension Range:

热轧规格表 Hot-rolled Steel Tube and Pipe:

外径 Outside diameter																
mm	2.0	2.5	2.8	3.0	3.2	3.5	4.0	4.5	5.0	5.5	6.0	6.5	7.0	7.5	8.0	8.5
22.0	■	■	■	■	■	■	■	■								
24.0	■	■	■	■	■	■	■	■								
25.0	■	■	■	■	■	■	■	■	■	■						
28.0			■	■	■	■	■	■	■	■						
29.0			■	■	■	■	■	■	■	■						
30.0			■	■	■	■	■	■	■	■	■					
32.0			■	■	■	■	■	■	■	■	■	■	■			
35.0			■	■	■	■	■	■	■	■	■	■	■			
38.0			■	■	■	■	■	■	■	■	■	■	■			
40.0			■	■	■	■	■	■	■	■	■	■	■			
42.0			■	■	■	■	■	■	■	■	■	■	■	■	■	
45.0			■	■	■	■	■	■	■	■	■	■	■	■	■	■
48.0			■	■	■	■	■	■	■	■	■	■	■	■	■	■
50.0			■	■	■	■	■	■	■	■	■	■	■	■	■	■
51.0			■	■	■	■	■	■	■	■	■	■	■	■	■	■
54.0			■	■	■	■	■	■	■	■	■	■	■	■	■	■
57.0				■	■	■	■	■	■	■	■	■	■	■	■	■
60.0				■	■	■	■	■	■	■	■	■	■	■	■	■
63.5				■	■	■	■	■	■	■	■	■	■	■	■	■
68.0				■	■	■	■	■	■	■	■	■	■	■	■	■
70.0				■	■	■	■	■	■	■	■	■	■	■	■	■
73.0				■	■	■	■	■	■	■	■	■	■	■	■	■
76.0				■	■	■	■	■	■	■	■	■	■	■	■	■
83.0					■	■	■	■	■	■	■	■	■	■	■	■
89.0					■	■	■	■	■	■	■	■	■	■	■	■
95.0						■	■	■	■	■	■	■	■	■	■	■
102.0						■	■	■	■	■	■	■	■	■	■	■
108.0						■	■	■	■	■	■	■	■	■	■	■
114.0						■	■	■	■	■	■	■	■	■	■	■
121.0							■	■	■	■	■	■	■	■	■	■
127.0							■	■	■	■	■	■	■	■	■	■
133.0							■	■	■	■	■	■	■	■	■	■
140.0							■	■	■	■	■	■	■	■	■	■
146.0								■	■	■	■	■	■	■	■	■
152.0								■	■	■	■	■	■	■	■	■
159.0								■	■	■	■	■	■	■	■	■
168.0									■	■	■	■	■	■	■	■
180.0											■	■	■	■	■	■
194.0											■	■	■	■	■	■
203.0											■	■	■	■	■	■
219.0											■	■	■	■	■	■
245.0											■	■	■	■	■	■
273.0											■	■	■	■	■	■
299.0											■	■	■	■	■	■
325.0											■	■	■	■	■	■

壁厚 Wall thickness
mm

9.0	9.5	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0	18.0	19.0	20.0	21.0	22.0	23.0	24.0	25.0

Line Pipe
管线管

标准 Standard:

API SPEC 5L　ISO 3183　GB/T 9711.1　GB/T 9711.2　GB/T 9711.3

用途 Uses:

用于石油、天然气工业中的气、水、油输送

For conveying gas, water and oil either in the oil or natural gas industries

化学分析 Chemical Analysis(%):

标准 Standard	钢管种类 Type of pipe	等级 Class	钢级 Grade	C max	Si max	Mn max	P max	S max	V max	Nb max	Ti max
API SPEC 5L ISO 3183	无缝管 SMLS	PLS1	L245 B	0.28	-	1.20	0.030	0.030	-	-	-
			L290 X42	0.28	-	1.30	0.030	0.030	-	-	-
			L320 X46	0.28	-	1.40	0.030	0.030	-	-	-
			L360 X52	0.28	-	1.40	0.030	0.030	-	-	-
			L390 X56	0.28	-	1.40	0.030	0.030	-	-	-
			L415 X60	0.28	-	1.40	0.030	0.030	-	-	-
			L450 X65	0.28	-	1.40	0.030	0.030	-	-	-
			L485 X70	0.28	-	1.40	0.030	0.030	-	-	-
		PLS2	L245N BN	0.24	0.40	1.20	0.025	0.015	-	-	0.04
			L290N X42N	0.24	0.40	1.20	0.025	0.015	0.06	0.05	0.04
			L320N X46N	0.24	0.40	1.40	0.025	0.015	0.07	0.05	0.04
			L360N X52N	0.24	0.45	1.40	0.025	0.015	0.10	0.05	0.04
			L390N X56N	0.24	0.45	1.40	0.025	0.015	0.10	0.05	0.04
			L415N X60N	0.24	0.45	1.40	0.025	0.015	0.10	0.05	0.04
	焊管 WELD	PLS1	L245 B	0.26	-	1.20	-	0.030	0.03	-	-
			L290 X42	0.26	-	1.30	-	0.030	0.03	-	-
			L320 X46	0.26	-	1.40	-	0.030	0.03	-	-
			L360 X52	0.26	-	1.40	-	0.030	0.03	-	-
			L390 X56	0.26	-	1.40	-	0.030	0.03	-	-
			L415 X60	0.26	-	1.40	-	0.030	0.03	-	-
			L450 X65	0.26	-	1.45	-	0.030	0.03	-	-
			L485 X70	0.26	-	1.65	-	0.030	0.03	-	-
		PLS2	L245M BM	0.22	0.45	1.20	0.025	0.015	0.05	0.05	0.04
			L290M X42M	0.22	0.45	1.30	0.025	0.015	0.05	0.05	0.04
			L320M X46M	0.22	0.45	1.30	0.025	0.015	0.05	0.05	0.04
			L360M X52M	0.22	0.45	1.40	0.025	0.015	-	-	-
			L390M X56M	0.22	0.45	1.40	0.025	0.015	-	-	-
			L415M X60M	0.12	0.45	1.60	0.025	0.015	-	-	-
			L450M X65M	0.12	0.45	1.60	0.025	0.015	-	-	-
			L485M X70M	0.12	0.45	1.70	0.025	0.015	-	-	-
			L555M X80M	0.12	0.45	1.85	0.025	0.015	-	-	-
GB/T 9711.1	无缝管 SMLS	-	L245	0.27	-	1.15	0.030	0.030	-	-	-
			L290	0.29	-	1.25	0.030	0.030	-	-	-
			L320, L360	0.31	-	1.35	0.030	0.030	-	-	-
			L390, L415	0.26	-	1.35	0.030	0.030	-	-	-

化学分析 Chemical Analysis(%):

标准 Standard	钢管种类 Type of pipe	等级 Class	钢级 Grade	C max	Si max	Mn max	P max	S max	V max	Nb max	Ti max
GB/T 9711.1	焊管 WELD	-	L245	0.26	-	1.15	0.030	0.030	-	-	-
			L290	0.28	-	1.25	0.030	0.030	-	-	-
			L320, L360	0.30	-	1.25	0.030	0.030	-	-	-
			L390, L415	0.26	-	1.35	0.030	0.030	-	-	-
			L450	0.26	-	1.40	0.030	0.030	-	-	-
			L485	0.23	-	1.60	0.030	0.030	-	-	-
			L555	0.18	-	1.80	0.030	0.030	-	-	-
GB/T 9711.2	无缝管 SMLS	-	L245NB	0.16	0.40	1.10	0.025	0.020	-	-	-
			L290NB	0.17	0.40	1.20	0.025	0.020	0.05	0.05	0.04
			L360NB	0.20	0.45	1.60	0.025	0.020	0.10	0.05	0.04
			L415NB	0.21	0.45	1.60	0.025	0.020	0.15	0.05	0.04
	焊管 WELD	-	L245MB	0.16	0.45	1.50	0.025	0.020	0.04	0.04	-
			L290MB	0.16	0.45	1.50	0.025	0.020	0.04	0.04	-
			L360MB	0.16	0.45	1.60	0.025	0.020	0.05	0.05	0.04
			L415MB	0.16	0.45	1.60	0.025	0.020	0.08	0.05	0.06
			L450MB	0.16	0.45	1.60	0.025	0.020	0.10	0.05	0.06
			L485MB	0.16	0.45	1.70	0.025	0.020	0.10	0.06	0.06
			L555MB	0.16	0.45	1.80	0.025	0.020	0.10	0.06	0.06
GB/T 9711.3	无缝管 SMLS	非酸性环境 Non-sour service	L245NC	0.14	0.40	1.35	0.020	0.010	-	-	-
			L290NC	0.14	0.40	1.35	0.020	0.010	0.05	0.05	0.04
			L360NC	0.16	0.45	1.65	0.020	0.010	0.10	0.05	0.04
		酸性环境 sour service	L245NCS	0.14	0.40	1.35	0.020	0.003	-	-	-
			L290NCS	0.14	0.40	1.35	0.020	0.003	0.05	0.05	0.04
			L360NCS	0.16	0.45	1.65	0.020	0.003	0.10	0.05	0.04
	焊管 WELD	非酸性环境 Non-sour service	L290MC	0.12	0.40	1.35	0.020	0.010	0.04	0.04	0.04
			L360MC	0.12	0.45	1.65	0.020	0.010	0.05	0.05	0.04
			L415MC	0.12	0.45	1.65	0.020	0.010	0.08	0.06	0.06
			L450MC	0.12	0.45	1.65	0.020	0.010	0.10	0.06	0.06
			L485MC	0.12	0.45	1.75	0.020	0.010	0.10	0.06	0.06
			L555MC	0.14	0.45	1.85	0.020	0.010	0.10	0.06	0.06
		酸性环境 sour service	L290MCS	0.10	0.40	1.25	0.020	0.002	0.04	0.04	0.04
			L360MCS	0.10	0.45	1.45	0.020	0.002	0.05	0.05	0.04
			L415MCS	0.10	0.45	1.45	0.020	0.002	0.08	0.06	0.06
			L450MCS L485MCS	0.10	0.45	1.55	0.020	0.002	0.10	0.06	0.06

注： PSL2 最大碳当量 CE(IIW) 为 0.43%。

Note: CE (IIW) 0.43% Max. for PSL2.

机械性能 Mechanical Properties:

标准 Standard	等级 Class	钢级 Grade		屈服强度 Yield strength not less than (MPa)	抗拉强度 Tensile strength (MPa)	延伸率 Elongation (%)	屈强比 Y.S./T.S.
API SPEC 5L ISO 3183	PLS1	L245 B	min	245	415	b	-
		L290 X42	min	290	415	b	-
		L320 X46	min	320	435	b	-
		L360 X52	min	360	460	b	-
		L390 X56	min	390	490	b	-
		L415 X60	min	415	520	b	-
		L450 X65	min	450	535	b	-
		L485 X70	min	485	570	b	-
	PLS2	L245N BN	Min	245	415	b	-
		L245M BM	Max	450	760	b	0.93
		L290N X42N	Min	290	415	b	-
		L290M X42M	Max	495	760	b	0.93
		L320N X46N	Min	320	435	b	-
		L320M X46M	Max	525	760	b	0.93
		L360N X52N	Min	360	760	b	-
		L360M X52M	Max	530	760	b	0.93
		L390N X56N	Min	390	490	b	-
		L390M X56M	Max	545	760	b	0.93
		L415N X60N	Min	415	520	b	-
		L415M X60M	Max	565	760	b	0.93
		L450M X65M	Min	450	535	b	-
			Max	600	760	b	0.93
		L485M X70M	Min	485	570	b	-
			Max	635	760	b	0.93
		L555M X80M	Min	555	625	b	-
			Max	705	825	b	0.93
GB/T 9711.1	-	L245	Min	245	415	21	-
		L290	Min	290	415	21	-
		L320	Min	320	435	20	-
		L360	Min	360	460	19	-
		L390	Min	390	490	18	-
		L415	Min	415	520	17	-
		L450	Min	450	535	17	-
		L485	Min	485	570	16	-
		L555	Min	555	625	15	-
			Max	-	825	-	-

机械性能 Mechanical Properties:

标准 Standard	等级 Class	钢级 Grade		屈服强度 Yield strength not less than (MPa)	抗拉强度 Tensile strength (MPa)	延伸率 Elongation (%)	屈强比 Y.S./T.S.
GB/T 9711.2	-	L245NB	Min	245	415	22	-
			Max	440	-	-	0.80
		L245MB	Min	245	415	22	-
			Max	440	-	-	0.85
		L290NB	Min	290	415	21	-
			Max	440	-	-	0.80
		L290MB	Min	290	415	21	-
			Max	440	-	-	0.85
		L360NB L360MB	Min	360	460	20	-
			Max	510	-	-	0.85
		L415NB L415MB	Min	415	520	18	-
			Max	565	-	-	0.85
		L450MB	Min	450	535	18	-
			Max	570	-	-	0.87
		L485MB	Min	485	570	18	-
			Max	605	-	-	0.90
		L555MB	Min	555	625	18	-
			Max	675	-	-	0.90
GB/T 9711.3	-	L245NC L245NCS	Min	245	415	22	-
			Max	440	-	-	0.90
		L290NC、L290NCS L290MC、L290MCS	Min	290	415	21	-
			Max	440	-	-	0.90
		L360NC、L360NCS L360MC、L360MCS	Min	360	460	20	-
			Max	510	-	-	0.90
		L415MC L415MCS	Min	415	520	18	-
			Max	565	-	-	0.92
		L450MC L450MCS	Min	450	535	18	-
			Max	570	-	-	0.92
		L485MC L485MCS	Min	485	570	18	-
			Max	605	-	-	0.92
		L555MC	Min	555	625	18	-
			Max	675	-	-	0.92

注： a: 焊缝抗拉强度不低于上述抗拉强度最小值。
b: 延伸率最小值计算公式 : $Af=1940*A^{0.2}/U^{0.9}$

Note: a: Tensile strength for the weld shall be not less than the minimum tensile strength.
b: The minimum elongation using the following equation: $Af=1940*A^{0.2}/U^{0.9}$

韧性 Toughness:

标准 Standard	钢级 Grade	管体最小横向冲击功(1)、(2)、(3) Transverse minimum Impact of Pipe body (J)					焊缝最小横向冲击功(1)、(2)、(3) Transverse minimum Impact of Weld (J)	
		D≤508	508mm<D≤762mm	762mm<D≤914mm	914mm<D≤1219mm	1219mm<D≤1422mm	D<1422mm	D=1422mm
API SPEC 5L	≤L415 X60	27(20)	27(20)	40(30)	40(30)	40(30)	27(20)	40(30)
	>L415 X60 ≤L450 X65	27(20)	27(20)	40(30)	40(30)	54(40)	27(20)	40(30)
	>L450 X65 ≤L485 X70	27(20)	27(20)	40(30)	40(30)	54(40)	27(20)	40(30)
	>L485 X70 ≤L555 X80	40(30)	40(30)	40(30)	40(30)	54(40)	27(20)	40(30)

注： (1) 表中所列值适用于全尺寸标准试样。
(2) 括号内为冲击功单值最小值，括号外为冲击功平均值。
(3) 试验温度为 0°C。

Note: (1)The values in the table be suitable for the full size standard sample.
(2)The value inside bracket is the minimum single value,outside bracket is the average value.
(3)Test Temperature : 0°C.

韧性 Toughness:

标准 Standard	钢级 Grade	管体最小横向冲击功(1)、(2) Transverse minimum Impact of Pipe body (J)									焊缝最小横向冲击功(1)、(2) Transverse minimum Impact of Weld (J)
		D≤510	510mm<D≤610mm	610mm<D≤720mm	720mm<D≤820mm	820mm<D≤920mm	920mm<D≤1020mm	1020mm<D≤1120mm	1120mm<D≤1220mm	1220mm<D≤1420mm	D<1422
GB/T 9711.1(3)	L555	68(27)	68(27)	68(27)	68(27)	68(27)	68(27)	68(27)	68(27)	68(27)	-
GB/T 9711.2(3)	L245NB L245MB	40(30)			40(30)					40(30)	40(30)
	L290NB L290MB									42(32)	
	L360NB L360MB										
	L415NB L415MB										
	L450MB				40(30)			42(32)	43(32)	47(35)	
	L485MB	40(30)	41(31)	45(34)	48(36)	51(38)	53(40)	56(42)	58(44)	63(47)	
	L555MB	48(36)	55(41)	61(46)	62(50)	72(54)	77(58)	82(62)	87(65)	96(72)	

韧性 Toughness:

标准 Standard	钢级 Grade	管体最小横向冲击功[1]、[2] Transverse minimum Impact of Pipe body (J)									焊缝最小横向冲击功[1]、[2] Transverse minimum Impact of Weld (J)
		D≤510	510mm＜D≤610mm	610mm＜D≤720mm	720mm＜D≤820mm	820mm＜D≤920mm	920mm＜D≤1020mm	1020mm＜D≤1120mm	1120mm＜D≤1220mm	1220mm＜D≤1420mm	D＜1422
GB/T 9711.3[4]	L245NC L245NCS	40(30)			40(30)					40(30)	40(30)
	L290NC L290NCS L290MC L290MCS									42(32)	
	L360NC L360NCS L360MC L360MCS										
	L415MC L415MCS				40(30)	41(31)	44(33)	46(35)	48(36)	51(38)	
	L450MC L450MCS			41(31)	43(32)	46(35)	48(36)	51(38)	53(40)	57(43)	

注： (1) 表中所列值适用于全尺寸标准试样。
(2) 括号内为冲击功单值最小值，括号外为冲击功平均值。
(3) 试验温度为 0°C。
(4) 试验温度为 -10°C 或协议更低温度。

Note: (1)The values in the table be suitable for the full size standard sample.
(2)The value inside bracket is the minimum single value,outside bracket is the average value.
(3)Test Temperature : 0°C
(4)Test Temperature : -10°C or a lower temperature by agreement.

规格 Dimension:

API SPEC 5L 规格系列 Dimension: Range acc. API SPEC 5L

名义尺寸 Nominal size	外径 Outside diameter		壁厚 Wall thickness		平端管米重 Plain-end weight	
NPS	inch	mm	inch	mm	lb/ft	kg
1.315	1.315	33.4	0.133	3.40	1.68	2.52
1.315	1.315	33.4	0.179	4.50	2.17	3.21
1.66	1.660	42.2	0.140	3.60	2.27	3.43
1.66	1.660	42.2	0.191	4.90	3.00	4.51
1.9	1.900	48.3	0.145	3.70	2.72	4.07
1.9	1.900	48.3	0.200	5.10	3.63	5.43
1.9	1.900	48.3	0.400	10.20	6.41	9.58
2 3/8	2.375	60.3	0.141	3.60	3.37	5.03
2 3/8	2.375	60.3	0.154	3.90	3.66	5.42
2 3/8	2.375	60.3	0.172	4.40	4.05	6.07
2 3/8	2.375	60.3	0.188	4.80	4.40	6.57
2 3/8	2.375	60.3	0.218	5.50	5.03	7.43
2 3/8	2.375	60.3	0.250	6.40	5.68	8.51
2 3/8	2.375	60.3	0.281	7.10	6.29	9.31
2 3/8	2.375	60.3	0.436	11.10	9.04	13.47
2 7/8	2.875	73.0	0.141	3.60	4.12	6.16
2 7/8	2.875	73.0	0.156	4.00	4.53	6.81
2 7/8	2.875	73.0	0.172	4.40	4.97	7.44
2 7/8	2.875	73.0	0.188	4.80	5.40	8.07
2 7/8	2.875	73.0	0.203	5.20	5.80	8.69
2 7/8	2.875	73.0	0.216	5.50	6.14	9.16
2 7/8	2.875	73.0	0.250	6.40	7.02	10.51
2 7/8	2.875	73.0	0.276	7.00	7.67	11.39
2 7/8	2.875	73.0	0.552	14.00	13.71	20.37
3 1/2	3.500	88.9	0.141	3.60	5.06	7.57
3 1/2	3.500	88.9	0.156	4.00	5.58	8.37
3 1/2	3.500	88.9	0.172	4.40	6.12	9.17
3 1/2	3.500	88.9	0.188	4.80	6.66	9.95
3 1/2	3.500	88.9	0.216	5.50	7.58	11.31
3 1/2	3.500	88.9	0.250	6.40	8.69	13.02
3 1/2	3.500	88.9	0.281	7.10	9.67	14.32
3 1/2	3.500	88.9	0.300	7.60	10.26	15.24
3 1/2	3.500	88.9	0.600	15.20	18.60	27.63
4	4.000	101.6	0.156	4.00	6.41	9.63
4	4.000	101.6	0.172	4.40	7.04	10.55
4	4.000	101.6	0.188	4.80	7.66	11.46
4	4.000	101.6	0.226	5.70	9.12	13.48
4	4.000	101.6	0.250	6.40	10.02	15.02
4	4.000	101.6	0.281	7.10	11.17	16.55
4	4.000	101.6	0.318	8.10	12.52	18.68

规格 Dimension:

API SPEC 5L 规格系列 Dimension: Range acc. API SPEC 5L

名义尺寸 Nominal size	外径 Outside diameter		壁厚 Wall thickness		平端管米重 Plain-end weight	
NPS	inch	mm	inch	mm	lb/ft	kg
4 1/2	4.500	114.3	0.156	4.00	7.24	10.88
4 1/2	4.500	114.3	0.172	4.40	7.96	11.92
4 1/2	4.500	114.3	0.188	4.80	8.67	12.96
4 1/2	4.500	114.3	0.203	5.20	9.32	13.99
4 1/2	4.500	114.3	0.219	5.60	10.02	15.01
4 1/2	4.500	114.3	0.237	6.00	10.80	16.02
4 1/2	4.500	114.3	0.250	6.40	11.36	17.03
4 1/2	4.500	114.3	0.281	7.10	12.67	18.77
4 1/2	4.500	114.3	0.312	7.90	13.97	20.73
4 1/2	4.500	114.3	0.337	8.60	15.00	22.42
4 1/2	4.500	114.3	0.438	11.10	19.02	28.25
4 1/2	4.500	114.3	0.531	13.50	22.53	33.56
4 1/2	4.500	114.3	0.674	17.10	27.57	40.99
5 9/16	5.563	141.3	0.188	4.80	10.80	16.16
5 9/16	5.563	141.3	0.219	5.60	12.51	18.74
5 9/16	5.563	141.3	0.258	6.60	14.63	21.92
5 9/16	5.563	141.3	0.281	7.10	15.87	23.50
5 9/16	5.563	141.3	0.312	7.90	17.51	25.99
5 9/16	5.563	141.3	0.344	8.70	19.19	28.45
5 9/16	5.563	141.3	0.375	9.50	20.80	30.88
5 9/16	5.563	141.3	0.500	12.70	27.06	40.28
5 9/16	5.563	141.3	0.625	15.90	32.99	49.17
6 5/8	6.625	168.3	0.203	5.20	13.94	20.91
6 5/8	6.625	168.3	0.219	5.60	15.00	22.47
6 5/8	6.625	168.3	0.250	6.40	17.04	25.55
6 5/8	6.625	168.3	0.280	7.10	18.99	28.22
6 5/8	6.625	168.3	0.312	7.90	21.06	31.25
6 5/8	6.625	168.3	0.344	8.70	23.10	34.24
6 5/8	6.625	168.3	0.375	9.50	25.05	37.20
6 5/8	6.625	168.3	0.432	11.00	28.60	42.67
6 5/8	6.625	168.3	0.500	12.70	32.74	48.73
6 5/8	6.625	168.3	0.562	14.30	36.43	54.31
6 5/8	6.625	168.3	0.625	15.90	40.09	59.76
6 5/8	6.625	168.3	0.719	18.30	45.39	67.69
6 5/8	6.625	168.3	0.750	19.10	47.10	70.27
6 5/8	6.625	168.3	0.864	21.90	53.21	79.06
6 5/8	6.625	168.3	0.875	22.20	53.78	79.98
8 5/8	8.625	219.1	0.156	4.00	14.12	21.22
8 5/8	8.625	219.1	0.188	4.80	16.96	25.37
8 5/8	8.625	219.1	0.203	5.20	18.28	27.43

规格 Dimension:

API SPEC 5L 规格系列 Dimension: Range acc. API SPEC 5L

名义尺寸 Nominal size	外径 Outside diameter		壁厚 Wall thickness		平端管米重 Plain-end weight	
NPS	inch	mm	inch	mm	lb/ft	kg
8 5/8	8.625	219.1	0.219	5.60	19.68	29.48
8 5/8	8.625	219.1	0.250	6.40	22.38	33.57
8 5/8	8.625	219.1	0.277	7.00	24.72	36.61
8 5/8	8.625	219.1	0.312	7.90	27.73	41.14
8 5/8	8.625	219.1	0.322	8.20	28.58	42.65
8 5/8	8.625	219.1	0.344	8.70	30.45	45.14
8 5/8	8.625	219.1	0.375	9.50	33.07	49.10
8 5/8	8.625	219.1	0.438	11.10	38.33	56.94
8 5/8	8.625	219.1	0.500	12.70	43.43	64.64
8 5/8	8.625	219.1	0.562	14.30	48.44	72.22
8 5/8	8.625	219.1	0.625	15.90	53.45	79.67
8 5/8	8.625	219.1	0.719	18.30	60.77	90.62
8 5/8	8.625	219.1	0.750	19.10	63.14	94.20
8 5/8	8.625	219.1	0.812	20.60	67.82	100.84
8 5/8	8.625	219.1	0.875	22.20	72.49	107.79
8 5/8	8.625	219.1	1.000	25.40	81.51	121.33
10 3/4	10.750	273.1	0.156	4.00	17.67	26.54
10 3/4	10.750	273.1	0.188	4.80	21.23	31.76
10 3/4	10.750	273.1	0.203	5.20	22.89	34.35
10 3/4	10.750	273.1	0.219	5.60	24.65	36.94
10 3/4	10.750	273.1	0.250	6.40	28.06	42.09
10 3/4	10.750	273.1	0.279	7.10	31.23	46.57
10 3/4	10.750	273.1	0.307	7.80	34.27	51.03
10 3/4	10.750	273.1	0.344	8.70	38.27	56.72
10 3/4	10.750	273.1	0.365	9.30	40.52	60.50
10 3/4	10.750	273.1	0.438	11.10	48.28	71.72
10 3/4	10.750	273.1	0.500	12.70	54.79	81.55
10 3/4	10.750	273.1	0.562	14.30	61.21	91.26
10 3/4	10.750	273.1	0.625	15.90	67.65	100.85
10 3/4	10.750	273.1	0.719	18.30	77.10	114.99
10 3/4	10.750	273.1	0.812	20.60	86.26	128.27
10 3/4	10.750	273.1	0.875	22.20	92.37	137.36
12 3/4	12.750	323.9	0.203	5.20	27.23	40.87
12 3/4	12.750	323.9	0.219	5.60	29.34	43.96
12 3/4	12.750	323.9	0.250	6.40	33.41	50.11
12 3/4	12.750	323.9	0.281	7.10	37.46	55.47
12 3/4	12.750	323.9	0.312	7.90	41.48	61.56
12 3/4	12.750	323.9	0.330	8.40	43.81	65.35
12 3/4	12.750	323.9	0.344	8.70	45.62	67.62
12 3/4	12.750	323.9	0.375	9.50	49.61	73.65

规格 Dimension:

API SPEC 5L 规格系列 Dimension: Range acc. API SPEC 5L

名义尺寸 Nominal size	外径 Outside diameter		壁厚 Wall thickness		平端管米重 Plain-end weight	
NPS	inch	mm	inch	mm	lb/ft	kg
12 3/4	12.750	323.9	0.406	10.30	53.57	79.65
12 3/4	12.750	323.9	0.438	11.10	57.65	85.62
12 3/4	12.750	323.9	0.500	12.70	65.48	97.46
12 3/4	12.750	323.9	0.562	14.30	73.22	109.18
12 3/4	12.750	323.9	0.625	15.90	81.01	120.76
12 3/4	12.750	323.9	0.688	17.50	88.71	132.23
12 3/4	12.750	323.9	0.750	19.10	96.21	143.56
12 3/4	12.750	323.9	0.812	20.60	103.63	154.08
12 3/4	12.750	323.9	0.875	22.20	111.08	165.17
14	14.000	355.6	0.203	5.20	29.94	44.93
14	14.000	355.6	0.210	5.30	30.96	45.78
14	14.000	355.6	0.219	5.60	32.26	48.33
14	14.000	355.6	0.250	6.40	36.75	55.11
14	14.000	355.6	0.281	7.10	41.21	61.02
14	14.000	355.6	0.312	7.90	45.65	67.74
14	14.000	355.6	0.344	8.70	50.22	74.42
14	14.000	355.6	0.375	9.50	54.62	81.08
14	14.000	355.6	0.406	10.30	59.00	87.71
14	14.000	355.6	0.438	11.10	63.50	94.30
14	14.000	355.6	0.469	11.90	67.84	100.86
14	14.000	355.6	0.500	12.70	72.16	107.39
14	14.000	355.6	0.562	14.30	80.73	120.36
14	14.000	355.6	0.625	15.90	89.36	133.19
16	16.000	406.4	0.203	5.20	34.28	51.45
16	16.000	406.4	0.219	5.60	36.95	55.35
16	16.000	406.4	0.250	6.40	42.09	63.13
16	16.000	406.4	0.281	7.10	47.22	69.91
16	16.000	406.4	0.312	7.90	52.32	77.63
16	16.000	406.4	0.344	8.70	57.57	85.32
16	16.000	406.4	0.375	9.50	62.64	92.98
16	16.000	406.4	0.406	10.30	67.68	100.61
16	16.000	406.4	0.438	11.10	72.86	108.20
16	16.000	406.4	0.469	11.90	77.87	115.77
16	16.000	406.4	0.500	12.70	82.85	123.30
16	16.000	406.4	0.562	14.30	92.75	138.27
16	16.000	406.4	0.625	15.90	102.72	153.11
16	16.000	406.4	0.688	17.50	112.62	167.83
18	18.000	457.0	0.250	6.40	47.44	71.12
18	18.000	457.0	0.281	7.10	53.23	78.77
18	18.000	457.0	0.312	7.90	58.99	87.49

规格 Dimension:

API SPEC 5L 规格系列 Dimension: Range acc. API SPEC 5L

名义尺寸 Nominal size	外径 Outside diameter		壁厚 Wall thickness		平端管米重 Plain-end weight	
NPS	inch	mm	inch	mm	lb/ft	kg
18	18.000	457.0	0.344	8.70	64.93	96.18
18	18.000	457.0	0.375	9.50	70.65	104.84
18	18.000	457.0	0.406	10.30	76.36	113.46
18	18.000	457.0	0.438	11.10	82.23	122.05
18	18.000	457.0	0.469	11.90	87.89	130.62
18	18.000	457.0	0.500	12.70	93.54	139.15
18	18.000	457.0	0.562	14.30	104.76	156.11
18	18.000	457.0	0.625	15.90	116.09	172.95
18	18.000	457.0	0.688	17.50	127.32	189.67
18	18.000	457.0	0.750	19.10	138.30	206.25
20	20.000	508.0	0.250	6.40	52.78	79.16
20	20.000	508.0	0.281	7.10	59.23	87.70
20	20.000	508.0	0.312	7.90	65.66	97.43
20	20.000	508.0	0.344	8.70	72.28	107.12
20	20.000	508.0	0.375	9.50	78.67	116.78
20	20.000	508.0	0.406	10.30	85.04	126.41
20	20.000	508.0	0.438	11.10	91.59	136.01
20	20.000	508.0	0.469	11.90	97.92	145.58
20	20.000	508.0	0.500	12.70	104.23	155.12
20	20.000	508.0	0.562	14.30	116.78	174.10
20	20.000	508.0	0.625	15.90	129.45	192.95
20	20.000	508.0	0.688	17.90	142.03	216.34
20	20.000	508.0	0.750	19.10	154.34	230.27
20	20.000	508.0	0.812	20.60	166.56	247.60
20	20.000	508.0	0.875	22.20	178.89	265.95
20	20.000	508.0	0.938	23.80	191.14	284.18
20	20.000	508.0	1.000	25.40	203.11	302.28
22	22.000	559.0	0.250	6.40	58.13	87.21
22	22.000	559.0	0.281	7.10	65.24	96.63
22	22.000	559.0	0.312	7.90	72.34	107.36
22	22.000	559.0	0.344	8.70	79.64	118.06
22	22.000	559.0	0.375	9.50	86.69	128.73
22	22.000	559.0	0.406	10.30	93.72	139.37
22	22.000	559.0	0.438	11.10	100.96	149.97
22	22.000	559.0	0.469	11.90	107.95	160.55
22	22.000	559.0	0.500	12.70	114.92	171.09
22	22.000	559.0	0.562	14.30	128.79	192.08
22	22.000	559.0	0.625	15.90	142.81	212.95
22	22.000	559.0	0.688	17.50	156.74	233.68
22	22.000	559.0	0.750	19.10	170.37	254.30

规格 Dimension:

API SPEC 5L 规格系列 Dimension: Range acc. API SPEC 5L

名义尺寸 Nominal size	外径 Outside diameter		壁厚 Wall thickness		平端管米重 Plain-end weight	
NPS	inch	mm	inch	mm	lb/ft	kg
22	22.000	559.0	0.812	20.60	183.92	273.51
22	22.000	559.0	0.875	22.20	197.60	293.87
22	22.000	559.0	0.938	23.80	211.19	314.11
22	22.000	559.0	1.000	25.40	224.49	334.23
22	22.000	559.0	1.062	27.00	237.70	354.22
22	22.000	559.0	1.125	28.60	251.05	374.08
24	24.000	610.0	0.250	6.40	63.47	95.26
24	24.000	610.0	0.281	7.10	71.25	105.56
24	24.000	610.0	0.312	7.90	79.01	117.30
24	24.000	610.0	0.344	8.70	86.99	129.00
24	24.000	610.0	0.375	9.50	94.71	140.68
24	24.000	610.0	0.406	10.30	102.40	152.32
24	24.000	610.0	0.438	11.10	110.32	163.93
24	24.000	610.0	0.469	11.90	117.98	175.51
24	24.000	610.0	0.500	12.70	125.61	187.06
24	24.000	610.0	0.562	14.30	140.81	210.07
24	24.000	610.0	0.625	15.90	156.17	232.94
24	24.000	610.0	0.688	17.50	171.45	255.69
24	24.000	610.0	0.750	19.10	186.41	278.32
24	24.000	610.0	0.812	20.60	201.28	299.41
24	24.000	610.0	0.875	22.20	216.31	321.79
24	24.000	610.0	0.938	23.80	231.25	344.05
24	24.000	610.0	1.000	25.40	245.87	366.17
24	24.000	610.0	1.062	27.00	260.41	388.17
24	24.000	610.0	1.125	28.60	275.10	410.05
24	24.000	610.0	1.188	30.20	289.71	431.80
24	24.000	610.0	1.250	31.80	304.00	453.42
26	26.000	660.0	0.250	6.40	68.82	103.15
26	26.000	660.0	0.281	7.10	77.26	114.31
26	26.000	660.0	0.312	7.90	85.68	127.04
26	26.000	660.0	0.344	8.70	94.35	139.73
26	26.000	660.0	0.375	9.50	102.72	152.39
26	26.000	660.0	0.406	10.30	111.08	165.02
26	26.000	660.0	0.438	11.10	119.69	177.62
26	26.000	660.0	0.469	11.90	128.00	190.19
26	26.000	660.0	0.500	12.70	136.30	202.72
26	26.000	660.0	0.562	14.30	152.83	227.70
26	26.000	660.0	0.625	15.90	169.54	252.55
26	26.000	660.0	0.688	17.50	186.16	277.27
26	26.000	660.0	0.750	19.10	202.44	301.87

规格 Dimension:

API SPEC 5L 规格系列 Dimension: Range acc. API SPEC 5L

名义尺寸 Nominal size	外径 Outside diameter		壁厚 Wall thickness		平端管米重 Plain-end weight	
NPS	inch	mm	inch	mm	lb/ft	kg
26	26.000	660.0	0.812	20.60	218.64	324.81
26	26.000	660.0	0.875	22.20	235.01	349.16
26	26.000	660.0	0.938	23.80	251.30	373.39
26	26.000	660.0	1.000	25.40	267.25	397.49
28	28.000	711.0	0.250	6.40	74.16	111.20
28	28.000	711.0	0.281	7.10	83.26	123.24
28	28.000	711.0	0.312	7.90	92.35	136.97
28	28.000	711.0	0.344	8.70	101.70	150.67
28	28.000	711.0	0.375	9.50	110.74	164.34
28	28.000	711.0	0.406	10.30	119.76	177.98
28	28.000	711.0	0.438	11.10	129.05	191.58
28	28.000	711.0	0.469	11.90	138.03	205.15
28	28.000	711.0	0.500	12.70	146.99	218.69
28	28.000	711.0	0.562	14.30	164.84	245.68
28	28.000	711.0	0.625	15.90	182.90	272.54
28	28.000	711.0	0.688	17.50	200.87	299.28
28	28.000	711.0	0.750	19.10	218.48	325.89
28	28.000	711.0	0.812	20.60	236.00	350.72
28	28.000	711.0	0.875	22.20	253.72	377.08
28	28.000	711.0	0.938	23.80	271.36	403.32
28	28.000	711.0	1.000	25.40	288.63	429.44
30	30.000	762.0	0.250	6.40	79.51	119.25
30	30.000	762.0	0.281	7.10	89.27	132.17
30	30.000	762.0	0.312	7.90	99.02	146.91
30	30.000	762.0	0.344	8.70	109.06	161.61
30	30.000	762.0	0.375	9.50	118.76	176.29
30	30.000	762.0	0.406	10.30	128.44	190.93
30	30.000	762.0	0.438	11.10	138.42	205.54
30	30.000	762.0	0.469	11.90	148.06	220.12
30	30.000	762.0	0.500	12.70	157.68	234.67
30	30.000	762.0	0.562	14.30	176.86	263.67
30	30.000	762.0	0.625	15.90	196.26	292.54
30	30.000	762.0	0.688	17.50	215.58	321.29
30	30.000	762.0	0.750	19.10	234.51	349.91
30	30.000	762.0	0.812	20.60	253.36	376.63
30	30.000	762.0	0.875	22.20	272.43	405.00
30	30.000	762.0	0.938	23.80	291.41	433.26
30	30.000	762.0	1.000	25.40	310.01	461.38
30	30.000	762.0	1.062	27.00	328.53	489.38
30	30.000	762.0	1.125	28.60	347.26	517.25

规格 Dimension:

API SPEC 5L 规格系列 Dimension: Range acc. API SPEC 5L

名义尺寸 Nominal size	外径 Outside diameter		壁厚 Wall thickness		平端管米重 Plain-end weight	
NPS	inch	mm	inch	mm	lb/ft	kg
30	30.000	762.0	1.188	30.20	365.90	544.99
30	30.000	762.0	1.250	31.80	384.17	572.61
32	32.000	813.0	0.250	6.40	84.85	127.30
32	32.000	813.0	0.281	7.10	95.28	141.10
32	32.000	813.0	0.312	7.90	105.69	156.84
32	32.000	813.0	0.344	8.70	116.41	172.56
32	32.000	813.0	0.375	9.50	126.78	188.24
32	32.000	813.0	0.406	10.30	137.12	203.88
32	32.000	813.0	0.438	11.10	147.78	219.50
32	32.000	813.0	0.469	11.90	158.08	235.09
32	32.000	813.0	0.500	12.70	168.37	250.64
32	32.000	813.0	0.562	14.30	188.87	281.65
32	32.000	813.0	0.625	15.90	209.62	312.54
32	32.000	813.0	0.688	17.50	230.29	343.30
32	32.000	813.0	0.750	19.10	250.55	373.93
32	32.000	813.0	0.812	20.60	270.72	402.54
32	32.000	813.0	0.875	22.20	291.14	432.93
32	32.000	813.0	0.938	23.80	311.47	463.19
32	32.000	813.0	1.000	25.40	331.39	493.32
32	32.000	813.0	1.062	27.00	351.23	523.33
32	32.000	813.0	1.125	28.60	371.31	553.22
32	32.000	813.0	1.188	30.20	391.30	582.98
32	32.000	813.0	1.250	31.80	410.90	612.61
34	34.000	864.0	0.250	6.40	90.20	135.35
34	34.000	864.0	0.281	7.10	101.29	150.03
34	34.000	864.0	0.312	7.90	112.36	166.78
34	34.000	864.0	0.344	8.70	123.77	183.50
34	34.000	864.0	0.375	9.50	134.79	200.18
34	34.000	864.0	0.406	10.30	145.80	216.84
34	34.000	864.0	0.438	11.10	157.14	233.46
34	34.000	864.0	0.469	11.90	168.11	250.05
34	34.000	864.0	0.500	12.70	179.06	266.61
34	34.000	864.0	0.562	14.30	200.89	299.64
34	34.000	864.0	0.625	15.90	222.99	332.53
34	34.000	864.0	0.688	17.50	245.00	365.31
34	34.000	864.0	0.750	19.10	266.58	397.95
34	34.000	864.0	0.812	20.60	288.08	428.44
34	34.000	864.0	0.875	22.20	309.84	460.85
34	34.000	864.0	0.938	23.80	331.52	493.12
34	34.000	864.0	1.000	25.40	352.77	525.27

规格 Dimension:

API SPEC 5L 规格系列 Dimension: Range acc. API SPEC 5L

名义尺寸 Nominal size	外径 Outside diameter		壁厚 Wall thickness		平端管米重 Plain-end weight	
NPS	inch	mm	inch	mm	lb/ft	kg
34	34.000	864.0	1.062	27.00	373.94	557.29
34	34.000	864.0	1.125	28.60	395.36	589.19
34	34.000	864.0	1.188	30.20	416.70	620.96
34	34.000	864.0	1.250	31.80	437.62	652.60
36	36.000	914.0	0.250	6.40	95.54	143.24
36	36.000	914.0	0.281	7.10	107.30	158.79
36	36.000	914.0	0.312	7.90	119.03	176.52
36	36.000	914.0	0.344	8.70	131.12	194.22
36	36.000	914.0	0.375	9.50	142.81	211.90
36	36.000	914.0	0.406	10.30	154.48	229.54
36	36.000	914.0	0.438	11.10	166.51	247.15
36	36.000	914.0	0.469	11.90	178.14	264.72
36	36.000	914.0	0.500	12.70	189.75	282.27
36	36.000	914.0	0.562	14.30	212.90	317.27
36	36.000	914.0	0.625	15.90	236.35	352.14
36	36.000	914.0	0.688	17.50	259.71	386.88
36	36.000	914.0	0.750	19.10	282.62	421.50
36	36.000	914.0	0.812	20.60	305.44	453.84
36	36.000	914.0	0.875	22.20	328.55	488.22
36	36.000	914.0	0.938	23.80	351.57	522.47
36	36.000	914.0	1.000	25.40	374.15	556.59
36	36.000	914.0	1.062	27.00	396.64	590.58
36	36.000	914.0	1.125	28.60	419.42	624.45
36	36.000	914.0	1.188	30.20	442.10	658.19
36	36.000	914.0	1.250	31.80	464.35	691.81
38	38.000	965.0	0.344	8.70	138.47	205.17
38	38.000	965.0	0.375	9.50	150.83	223.84
38	38.000	965.0	0.406	10.30	163.16	242.49
38	38.000	965.0	0.438	11.10	175.87	261.11
38	38.000	965.0	0.469	11.90	188.17	279.69
38	38.000	965.0	0.500	12.70	200.44	298.24
38	38.000	965.0	0.562	14.30	224.92	335.25
38	38.000	965.0	0.625	15.90	249.71	372.14
38	38.000	965.0	0.688	17.50	274.42	408.89
38	38.000	965.0	0.750	19.10	298.65	445.52
38	38.000	965.0	0.812	20.60	322.80	479.75
38	38.000	965.0	0.875	22.20	347.26	516.14
38	38.000	965.0	0.938	23.80	371.63	552.40
38	38.000	965.0	1.000	25.40	395.53	588.53
38	38.000	965.0	1.062	27.00	419.35	624.54

规格 Dimension:

API SPEC 5L 规格系列 Dimension: Range acc. API SPEC 5L

名义尺寸 Nominal size	外径 Outside diameter		壁厚 Wall thickness		平端管米重 Plain-end weight	
NPS	inch	mm	inch	mm	lb/ft	kg
38	38.000	965.0	1.125	28.60	443.47	660.42
38	38.000	965.0	1.188	30.20	467.50	696.18
38	38.000	965.0	1.250	31.80	491.07	731.80
40	40.000	1016.0	0.344	8.70	145.83	216.11
40	40.000	1016.0	0.375	9.50	158.85	235.79
40	40.000	1016.0	0.406	10.30	171.84	255.45
40	40.000	1016.0	0.438	11.10	185.24	275.07
40	40.000	1016.0	0.469	11.90	198.19	294.66
40	40.000	1016.0	0.500	12.70	211.13	314.22
40	40.000	1016.0	0.562	14.30	236.93	353.24
40	40.000	1016.0	0.625	15.90	263.07	392.13
40	40.000	1016.0	0.688	17.50	289.13	430.90
40	40.000	1016.0	0.750	19.10	314.69	469.55
40	40.000	1016.0	0.812	20.60	340.16	505.66
40	40.000	1016.0	0.875	22.20	365.97	544.06
40	40.000	1016.0	0.938	23.80	391.68	582.33
40	40.000	1016.0	1.000	25.40	416.91	620.48
40	40.000	1016.0	1.062	27.00	442.05	658.50
40	40.000	1016.0	1.125	28.60	467.52	696.39
40	40.000	1016.0	1.188	30.20	492.90	734.16
40	40.000	1016.0	1.250	31.80	517.80	771.80
42	42.000	1067.0	0.375	9.50	166.86	247.74
42	42.000	1067.0	0.406	10.30	180.52	268.40
42	42.000	1067.0	0.438	11.10	194.60	289.03
42	42.000	1067.0	0.469	11.90	208.22	309.62
42	42.000	1067.0	0.500	12.70	221.82	330.19
42	42.000	1067.0	0.562	14.30	248.95	371.22
42	42.000	1067.0	0.625	15.90	276.44	412.13
42	42.000	1067.0	0.688	17.50	303.84	452.91
42	42.000	1067.0	0.750	19.10	330.72	493.57
42	42.000	1067.0	0.812	20.60	357.52	531.57
42	42.000	1067.0	0.875	22.20	384.67	571.98
42	42.000	1067.0	0.938	23.80	411.74	612.26
42	42.000	1067.0	1.000	25.40	438.29	652.42
42	42.000	1067.0	1.062	27.00	464.76	692.45
42	42.000	1067.0	1.125	28.60	491.57	732.36
42	42.000	1067.0	1.188	30.20	518.30	772.14
42	42.000	1067.0	1.250	31.80	544.52	811.79
44	44.000	1118.0	0.375	9.50	174.88	259.69
44	44.000	1118.0	0.406	10.30	189.20	281.35

规格 Dimension:

API SPEC 5L 规格系列 Dimension: Range acc. API SPEC 5L

名义尺寸 Nominal size	外径 Outside diameter		壁厚 Wall thickness		平端管米重 Plain-end weight	
NPS	inch	mm	inch	mm	lb/ft	kg
44	44.000	1118.0	0.438	11.10	203.97	302.99
44	44.000	1118.0	0.469	11.90	218.25	324.59
44	44.000	1118.0	0.500	12.70	232.51	346.16
44	44.000	1118.0	0.562	14.30	260.97	389.21
44	44.000	1118.0	0.625	15.90	289.80	432.13
44	44.000	1118.0	0.688	17.50	318.55	474.92
44	44.000	1118.0	0.750	19.10	346.76	517.59
44	44.000	1118.0	0.812	20.60	374.88	557.47
44	44.000	1118.0	0.875	22.20	403.38	599.90
44	44.000	1118.0	0.938	23.80	431.79	642.19
44	44.000	1118.0	1.000	25.40	459.67	684.37
44	44.000	1118.0	1.062	27.00	487.47	726.41
44	44.000	1118.0	1.125	28.60	515.63	768.33
44	44.000	1118.0	1.188	30.20	543.70	810.12
44	44.000	1118.0	1.250	31.80	571.25	851.79
46	46.000	1168.0	0.375	9.50	182.90	271.40
46	46.000	1168.0	0.406	10.30	197.88	294.05
46	46.000	1168.0	0.438	11.10	213.33	316.67
46	46.000	1168.0	0.469	11.90	228.27	339.26
46	46.000	1168.0	0.500	12.70	243.20	361.82
46	46.000	1168.0	0.562	14.30	272.98	406.84
46	46.000	1168.0	0.625	15.90	303.16	451.73
46	46.000	1168.0	0.688	17.50	333.26	496.50
46	46.000	1168.0	0.750	19.10	362.79	541.14
46	46.000	1168.0	0.812	20.60	392.24	582.87
46	46.000	1168.0	0.875	22.20	422.09	627.27
46	46.000	1168.0	0.938	23.80	451.85	671.54
46	46.000	1168.0	1.000	25.40	481.05	715.68
46	46.000	1168.0	1.062	27.00	510.17	759.70
46	46.000	1168.0	1.125	28.60	539.68	803.59
46	46.000	1168.0	1.188	30.20	569.10	847.36
46	46.000	1168.0	1.250	31.80	597.97	890.99
48	48.000	1219.0	0.406	10.30	206.56	307.01
48	48.000	1219.0	0.438	11.10	222.70	330.63
48	48.000	1219.0	0.469	11.90	238.30	354.23
48	48.000	1219.0	0.500	12.70	253.89	377.79
48	48.000	1219.0	0.562	14.30	285.00	424.82
48	48.000	1219.0	0.625	15.90	316.52	471.73
48	48.000	1219.0	0.688	17.50	347.97	518.51
48	48.000	1219.0	0.750	19.10	378.83	565.16

规格 Dimension:

API SPEC 5L 规格系列 Dimension: Range acc. API SPEC 5L

名义尺寸 Nominal size	外径 Outside diameter		壁厚 Wall thickness		平端管米重 Plain-end weight	
NPS	inch	mm	inch	mm	lb/ft	kg
48	48.000	1219.0	0.812	20.60	409.61	608.78
48	48.000	1219.0	0.875	22.20	440.80	655.19
48	48.000	1219.0	0.938	23.80	471.90	701.47
48	48.000	1219.0	1.000	25.40	502.43	747.63
48	48.000	1219.0	1.062	27.00	532.88	793.66
48	48.000	1219.0	1.125	28.60	563.73	839.56
48	48.000	1219.0	1.188	30.20	594.50	885.34
48	48.000	1219.0	1.250	31.80	624.70	930.99
52	52.000	1321.0	0.406	10.30	223.93	332.92
52	52.000	1321.0	0.438	11.10	241.42	358.55
52	52.000	1321.0	0.469	11.90	258.36	384.16
52	52.000	1321.0	0.500	12.70	275.27	409.74
52	52.000	1321.0	0.562	14.30	309.03	460.79
52	52.000	1321.0	0.625	15.90	343.25	511.72
52	52.000	1321.0	0.688	17.50	377.39	562.53
52	52.000	1321.0	0.750	19.10	410.90	613.20
52	52.000	1321.0	0.812	20.60	444.33	660.60
52	52.000	1321.0	0.875	22.20	478.21	711.03
52	52.000	1321.0	0.938	23.80	512.01	761.34
52	52.000	1321.0	1.000	25.40	545.19	811.52
52	52.000	1321.0	1.062	27.00	578.29	861.57
52	52.000	1321.0	1.125	28.60	611.84	911.50
52	52.000	1321.0	1.188	30.20	645.30	961.30
52	52.000	1321.0	1.250	31.80	678.15	1010.98
56	56.000	1422.0	0.406	10.30	241.29	358.57
56	56.000	1422.0	0.438	11.10	260.15	386.20
56	56.000	1422.0	0.469	11.90	278.41	413.80
56	56.000	1422.0	0.500	12.70	296.65	441.37
56	56.000	1422.0	0.562	14.30	333.06	496.41
56	56.000	1422.0	0.625	15.90	369.97	551.32
56	56.000	1422.0	0.688	17.50	406.80	606.11
56	56.000	1422.0	0.750	19.10	442.97	660.77
56	56.000	1422.0	0.812	20.60	479.05	711.91
56	56.000	1422.0	0.875	22.20	515.63	766.32
56	56.000	1422.0	0.938	23.80	552.12	820.61
56	56.000	1422.0	1.000	25.40	587.95	874.78
56	56.000	1422.0	1.062	27.00	623.70	928.82
56	56.000	1422.0	1.125	28.60	659.94	982.73
56	56.000	1422.0	1.188	30.20	696.10	1036.52
56	56.000	1422.0	1.250	31.80	731.60	1090.18

规格 Dimension:

ASME B 36.10M 规格系列 Dimension: Range acc. ASME B 36.10M

名义尺寸 Nominal size	外径 Outside diameter		壁厚 Wall thickness		平端管米重 Plain-end weight	
NPS	inch	mm	inch	mm	lb/ft	kg
1	1.315	33.4	0.133	3.38	1.68	2.50
1	1.315	33.4	0.179	4.55	2.17	3.24
1	1.315	33.4	0.250	6.35	2.85	4.24
1 1/4	1.660	42.2	0.140	3.56	2.27	3.39
1 1/4	1.660	42.2	0.191	4.85	3.00	4.47
1 1/4	1.660	42.2	0.250	6.35	3.77	5.61
1 1/2	1.900	48.3	0.145	3.68	2.72	4.05
1 1/2	1.900	48.3	0.200	5.08	3.63	5.41
1 1/2	1.900	48.3	0.281	7.14	4.86	7.25
1 1/2	1.900	48.3	0.400	10.15	6.41	9.55
2	2.375	60.3	0.141	3.58	3.37	5.01
2	2.375	60.3	0.154	3.91	3.66	5.44
2	2.375	60.3	0.172	4.37	4.05	6.03
2	2.375	60.3	0.188	4.78	4.40	6.54
2	2.375	60.3	0.218	5.54	5.03	7.48
2	2.375	60.3	0.250	6.35	5.68	8.45
2	2.375	60.3	0.281	7.14	6.29	9.36
2	2.375	60.3	0.344	8.74	7.47	11.11
2	2.375	60.3	0.436	11.07	9.04	13.44
2 1/2	2.875	73.0	0.141	3.58	4.12	6.13
2 1/2	2.875	73.0	0.156	3.96	4.53	6.74
2 1/2	2.875	73.0	0.172	4.37	4.97	7.40
2 1/2	2.875	73.0	0.188	4.78	5.40	8.04
2 1/2	2.875	73.0	0.203	5.16	5.80	8.63
2 1/2	2.875	73.0	0.216	5.49	6.14	9.14
2 1/2	2.875	73.0	0.250	6.35	7.02	10.44
2 1/2	2.875	73.0	0.276	7.01	7.67	11.41
2 1/2	2.875	73.0	0.375	9.53	10.02	14.92
2 1/2	2.875	73.0	0.552	14.02	13.71	20.39
3	3.500	88.9	0.141	3.58	5.06	7.53
3	3.500	88.9	0.156	3.96	5.58	8.30
3	3.500	88.9	0.172	4.37	6.12	9.11
3	3.500	88.9	0.188	4.78	6.66	9.92
3	3.500	88.9	0.216	5.49	7.58	11.29
3	3.500	88.9	0.250	6.35	8.69	12.93
3	3.500	88.9	0.281	7.14	9.67	14.40
3	3.500	88.9	0.300	7.62	10.26	15.27
3	3.500	88.9	0.438	11.13	14.34	21.35
3	3.500	88.9	0.600	15.24	18.60	27.68
3 1/2	4.000	101.6	0.156	3.96	6.41	9.54
3 1/2	4.000	101.6	0.172	4.37	7.04	10.48
3 1/2	4.000	101.6	0.188	4.78	7.66	11.41
3 1/2	4.000	101.6	0.226	5.74	9.12	13.57

规格 Dimension:

ASME B 36.10M 规格系列 Dimension: Range acc. ASME B 36.10M

名义尺寸 Nominal size	外径 Outside diameter		壁厚 Wall thickness		平端管米重 Plain-end weight	
NPS	inch	mm	inch	mm	lb/ft	kg
3 1/2	4.000	101.6	0.250	6.35	10.02	14.92
3 1/2	4.000	101.6	0.281	7.14	11.17	16.63
3 1/2	4.000	101.6	0.318	8.08	12.52	18.64
4	4.500	114.3	0.156	3.96	7.24	10.78
4	4.500	114.3	0.172	4.37	7.96	11.85
4	4.500	114.3	0.188	4.78	8.67	12.91
4	4.500	114.3	0.203	5.16	9.32	13.89
4	4.500	114.3	0.219	5.56	10.02	14.91
4	4.500	114.3	0.237	6.02	10.80	16.08
4	4.500	114.3	0.250	6.35	11.36	16.91
4	4.500	114.3	0.281	7.14	12.67	18.87
4	4.500	114.3	0.312	7.92	13.97	20.78
4	4.500	114.3	0.337	8.56	15.00	22.32
4	4.500	114.3	0.438	11.13	19.02	28.32
4	4.500	114.3	0.531	13.49	22.53	33.54
4	4.500	114.3	0.674	17.12	27.57	41.03
5	5.563	141.3	0.188	4.78	10.80	16.09
5	5.563	141.3	0.219	5.56	12.51	18.61
5	5.563	141.3	0.258	6.55	14.63	21.77
5	5.563	141.3	0.281	7.14	15.87	23.62
5	5.563	141.3	0.312	7.92	17.51	26.05
5	5.563	141.3	0.344	8.74	19.19	28.57
5	5.563	141.3	0.375	9.53	20.80	30.97
5	5.563	141.3	0.500	12.70	27.06	40.28
5	5.563	141.3	0.625	15.88	32.99	49.12
5	5.563	141.3	0.750	19.05	38.59	57.43
6	6.625	168.3	0.203	5.16	13.94	20.76
6	6.625	168.3	0.219	5.56	15.00	22.31
6	6.625	168.3	0.250	6.35	17.04	25.36
6	6.625	168.3	0.280	7.11	18.99	28.26
6	6.625	168.3	0.312	7.92	21.06	31.33
6	6.625	168.3	0.344	8.74	23.10	34.39
6	6.625	168.3	0.375	9.53	25.05	37.31
6	6.625	168.3	0.432	10.97	28.60	42.56
6	6.625	168.3	0.500	12.70	32.74	48.73
6	6.625	168.3	0.562	14.27	36.43	54.21
6	6.625	168.3	0.625	15.88	40.09	59.69
6	6.625	168.3	0.719	18.26	45.39	67.57
6	6.625	168.3	0.750	19.05	47.10	70.12
6	6.625	168.3	0.864	21.95	53.21	79.22
6	6.625	168.3	0.875	22.23	53.78	80.08
8	8.625	219.1	0.156	3.96	14.12	21.01
8	8.625	219.1	0.188	4.78	16.96	25.26

规格 Dimension:

ASME B 36.10M 规格系列 Dimension: Range acc. ASME B 36.10M

名义尺寸 Nominal size	外径 Outside diameter		壁厚 Wall thickness		平端管米重 Plain-end weight	
NPS	inch	mm	inch	mm	lb/ft	kg
8	8.625	219.1	0.203	5.16	18.28	27.22
8	8.625	219.1	0.219	5.56	19.68	29.28
8	8.625	219.1	0.250	6.35	22.38	33.32
8	8.625	219.1	0.277	7.04	24.72	36.82
8	8.625	219.1	0.312	7.92	27.73	41.25
8	8.625	219.1	0.322	8.18	28.58	42.55
8	8.625	219.1	0.344	8.74	30.45	45.34
8	8.625	219.1	0.375	9.53	33.07	49.25
8	8.625	219.1	0.406	10.31	35.67	53.09
8	8.625	219.1	0.438	11.13	38.33	57.08
8	8.625	219.1	0.500	12.70	43.43	64.64
8	8.625	219.1	0.562	14.27	48.44	72.08
8	8.625	219.1	0.594	15.09	51.00	75.92
8	8.625	219.1	0.625	15.88	53.45	79.59
8	8.625	219.1	0.719	18.26	60.77	90.44
8	8.625	219.1	0.750	19.05	63.14	93.98
8	8.625	219.1	0.812	20.62	67.82	100.93
8	8.625	219.1	0.875	22.23	72.49	107.93
8	8.625	219.1	0.906	23.01	74.76	111.27
8	8.625	219.1	1.000	25.40	81.51	121.33
10	10.750	273.0	0.156	3.96	17.67	26.27
10	10.750	273.0	0.165	4.19	18.67	27.78
10	10.750	273.0	0.188	4.78	21.23	31.62
10	10.750	273.0	0.203	5.16	22.89	34.08
10	10.750	273.0	0.219	5.56	24.65	36.67
10	10.750	273.0	0.250	6.35	28.06	41.76
10	10.750	273.0	0.279	7.09	31.23	46.49
10	10.750	273.0	0.307	7.80	34.27	51.01
10	10.750	273.0	0.344	8.74	38.27	56.96
10	10.750	273.0	0.365	9.27	40.52	60.29
10	10.750	273.0	0.438	11.13	48.28	71.88
10	10.750	273.0	0.500	12.70	54.79	81.53
10	10.750	273.0	0.562	14.27	61.21	91.05
10	10.750	273.0	0.594	15.09	64.49	95.98
10	10.750	273.0	0.625	15.88	67.65	100.69
10	10.750	273.0	0.719	18.26	77.10	114.71
10	10.750	273.0	0.812	20.62	86.26	128.34
10	10.750	273.0	0.844	21.44	89.38	133.01
10	10.750	273.0	0.875	22.23	92.37	137.48
12	12.750	323.8	0.203	5.16	27.23	40.55
12	12.750	323.8	0.219	5.56	29.34	43.64
12	12.750	323.8	0.250	6.35	33.41	49.71
12	12.750	323.8	0.281	7.14	37.46	55.76

规格 Dimension:

ASME B 36.10M 规格系列 Dimension: Range acc. ASME B 36.10M

名义尺寸 Nominal size	外径 Outside diameter		壁厚 Wall thickness		平端管米重 Plain-end weight	
NPS	inch	mm	inch	mm	lb/ft	kg
12	12.750	323.8	0.312	7.92	41.48	61.70
12	12.750	323.8	0.330	8.38	43.81	65.19
12	12.750	323.8	0.344	8.74	45.62	67.91
12	12.750	323.8	0.375	9.53	49.61	73.86
12	12.750	323.8	0.406	10.31	53.57	79.71
12	12.750	323.8	0.438	11.13	57.65	85.82
12	12.750	323.8	0.500	12.70	65.48	97.44
12	12.750	323.8	0.562	14.27	73.22	108.93
12	12.750	323.8	0.625	15.88	81.01	120.59
12	12.750	323.8	0.688	17.48	88.71	132.05
12	12.750	323.8	0.750	19.05	96.21	143.17
12	12.750	323.8	0.812	20.62	103.63	154.17
12	12.750	323.8	0.844	21.44	107.42	159.87
12	12.750	323.8	0.875	22.23	111.08	165.33
14	14.000	355.6	0.203	5.16	29.94	44.59
14	14.000	355.6	0.210	5.33	30.96	46.04
14	14.000	355.6	0.219	5.56	32.26	48.00
14	14.000	355.6	0.250	6.35	36.75	54.69
14	14.000	355.6	0.281	7.14	41.21	61.36
14	14.000	355.6	0.312	7.92	45.65	67.91
14	14.000	355.6	0.344	8.74	50.22	74.76
14	14.000	355.6	0.375	9.53	54.62	81.33
14	14.000	355.6	0.406	10.31	59.00	87.79
14	14.000	355.6	0.438	11.13	63.50	94.55
14	14.000	355.6	0.469	11.91	67.84	100.95
14	14.000	355.6	0.500	12.70	72.16	107.40
14	14.000	355.6	0.562	14.27	80.73	120.12
14	14.000	355.6	0.594	15.09	85.13	126.72
14	14.000	355.6	0.625	15.88	89.36	133.04
16	16.000	406.4	0.203	5.16	34.28	51.06
16	16.000	406.4	0.219	5.56	36.95	54.96
16	16.000	406.4	0.250	6.35	42.09	62.65
16	16.000	406.4	0.281	7.14	47.22	70.30
16	16.000	406.4	0.312	7.92	52.32	77.83
16	16.000	406.4	0.344	8.74	57.57	85.71
16	16.000	406.4	0.375	9.53	62.64	93.27
16	16.000	406.4	0.406	10.31	67.68	100.71
16	16.000	406.4	0.438	11.13	72.86	108.49
16	16.000	406.4	0.469	11.91	77.87	115.87
16	16.000	406.4	0.500	12.70	82.85	123.31
16	16.000	406.4	0.562	14.27	92.75	138.00
16	16.000	406.4	0.625	15.88	102.72	152.94
16	16.000	406.4	0.656	16.66	107.60	160.13

规格 Dimension:

ASME B 36.10M 规格系列 Dimension: Range acc. ASME B 36.10M

名义尺寸 Nominal size	外径 Outside diameter		壁厚 Wall thickness		平端管米重 Plain-end weight	
NPS	inch	mm	inch	mm	lb/ft	kg
16	16.000	406.4	0.688	17.48	112.62	167.66
18	18.000	457.0	0.250	6.35	47.44	70.57
18	18.000	457.0	0.281	7.14	53.23	79.21
18	18.000	457.0	0.312	7.92	58.99	87.71
18	18.000	457.0	0.344	8.74	64.93	96.62
18	18.000	457.0	0.375	9.53	70.65	105.17
18	18.000	457.0	0.406	10.31	76.36	113.58
18	18.000	457.0	0.438	11.13	82.23	122.38
18	18.000	457.0	0.469	11.91	87.89	130.73
18	18.000	457.0	0.500	12.70	93.54	139.16
18	18.000	457.0	0.562	14.27	104.76	155.81
18	18.000	457.0	0.625	15.88	116.09	172.75
18	18.000	457.0	0.688	17.48	127.32	189.47
18	18.000	457.0	0.750	19.05	138.30	205.75
20	20.000	508.0	0.250	6.35	52.78	78.56
20	20.000	508.0	0.281	7.14	59.23	88.19
20	20.000	508.0	0.312	7.92	65.66	97.68
20	20.000	508.0	0.344	8.74	72.28	107.61
20	20.000	508.0	0.375	9.53	78.67	117.15
20	20.000	508.0	0.406	10.31	85.04	126.54
20	20.000	508.0	0.438	11.13	91.59	136.38
20	20.000	508.0	0.469	11.91	97.92	145.71
20	20.000	508.0	0.500	12.70	104.23	155.13
20	20.000	508.0	0.562	14.27	116.78	173.75
20	20.000	508.0	0.594	15.09	123.23	183.43
20	20.000	508.0	0.625	15.88	129.45	192.73
20	20.000	508.0	0.688	17.48	142.03	211.45
20	20.000	508.0	0.750	19.05	154.34	229.71
20	20.000	508.0	0.812	20.62	166.56	247.84
20	20.000	508.0	0.875	22.23	178.89	266.31
20	20.000	508.0	0.938	23.83	191.14	284.54
20	20.000	508.0	1.000	25.40	203.11	302.30
22	22.000	559.0	0.250	6.35	58.13	86.55
22	22.000	559.0	0.281	7.14	65.24	97.17
22	22.000	559.0	0.312	7.92	72.34	107.64
22	22.000	559.0	0.344	8.74	79.64	118.60
22	22.000	559.0	0.375	9.53	86.69	129.14
22	22.000	559.0	0.406	10.31	93.72	139.51
22	22.000	559.0	0.438	11.13	100.96	150.38
22	22.000	559.0	0.469	11.91	107.95	160.69
22	22.000	559.0	0.500	12.70	114.92	171.10
22	22.000	559.0	0.562	14.27	128.79	191.70
22	22.000	559.0	0.625	15.88	142.81	212.70

规格 Dimension:

ASME B 36.10M 规格系列 Dimension: Range acc. ASME B 36.10M

名义尺寸 Nominal size	外径 Outside diameter		壁厚 Wall thickness		平端管米重 Plain-end weight	
NPS	inch	mm	inch	mm	lb/ft	kg
22	22.000	559.0	0.688	17.48	156.74	233.44
22	22.000	559.0	0.750	19.05	170.37	253.67
22	22.000	559.0	0.812	20.62	183.92	273.78
22	22.000	559.0	0.875	22.23	197.60	294.27
22	22.000	559.0	0.938	23.83	211.19	314.51
22	22.000	559.0	1.000	25.40	224.49	334.25
24	24.000	610.0	0.250	6.35	63.47	94.53
24	24.000	610.0	0.281	7.14	71.25	106.15
24	24.000	610.0	0.312	7.92	79.01	117.60
24	24.000	610.0	0.344	8.74	86.99	129.60
24	24.000	610.0	0.375	9.53	94.71	141.12
24	24.000	610.0	0.406	10.31	102.40	152.48
24	24.000	610.0	0.438	11.13	110.32	164.38
24	24.000	610.0	0.469	11.91	117.98	175.67
24	24.000	610.0	0.500	12.70	125.61	187.07
24	24.000	610.0	0.562	14.27	140.81	209.65
24	24.000	610.0	0.625	15.88	156.17	232.67
24	24.000	610.0	0.688	17.48	171.45	255.43
24	24.000	610.0	0.750	19.05	186.41	277.63
24	24.000	610.0	0.812	20.62	201.28	299.71
24	24.000	610.0	0.875	22.23	216.31	322.23
24	24.000	610.0	0.938	23.83	231.25	344.48
24	24.000	610.0	0.969	24.61	238.57	355.28
24	24.000	610.0	1.000	25.40	245.87	366.19
24	24.000	610.0	1.062	26.97	260.41	387.79
24	24.000	610.0	1.125	28.58	275.10	409.80
24	24.000	610.0	1.188	30.18	289.71	431.55
24	24.000	610.0	1.219	30.96	296.86	442.11
24	24.000	610.0	1.250	31.75	304.00	452.77
26	26.000	660.0	0.250	6.35	68.82	102.36
26	26.000	660.0	0.281	7.14	77.26	114.96
26	26.000	660.0	0.312	7.92	85.68	127.36
26	26.000	660.0	0.344	8.74	94.35	140.37
26	26.000	660.0	0.375	9.53	102.72	152.88
26	26.000	660.0	0.406	10.31	111.08	165.19
26	26.000	660.0	0.438	11.13	119.69	178.10
26	26.000	660.0	0.469	11.91	128.00	190.36
26	26.000	660.0	0.500	12.70	136.30	202.74
26	26.000	660.0	0.562	14.27	152.83	227.25
26	26.000	660.0	0.625	15.88	169.54	252.25
26	26.000	660.0	0.688	17.48	186.16	276.98
26	26.000	660.0	0.750	19.05	202.44	301.12
26	26.000	660.0	0.812	20.62	218.64	325.14

规格 Dimension:

ASME B 36.10M 规格系列 Dimension: Range acc. ASME B 36.10M

名义尺寸 Nominal size	外径 Outside diameter		壁厚 Wall thickness		平端管米重 Plain-end weight	
NPS	inch	mm	inch	mm	lb/ft	kg
26	26.000	660.0	0.875	22.23	235.01	349.64
26	26.000	660.0	0.938	23.83	251.30	373.87
26	26.000	660.0	1.000	25.40	267.25	397.51
28	28.000	711.0	0.250	6.35	74.16	110.35
28	28.000	711.0	0.281	7.14	83.26	123.94
28	28.000	711.0	0.312	7.92	92.35	137.32
28	28.000	711.0	0.344	8.74	101.70	151.37
28	28.000	711.0	0.375	9.53	110.74	164.86
28	28.000	711.0	0.406	10.31	119.76	178.16
28	28.000	711.0	0.438	11.13	129.05	192.10
28	28.000	711.0	0.469	11.91	138.03	205.34
28	28.000	711.0	0.500	12.70	146.99	218.71
28	28.000	711.0	0.562	14.27	164.84	245.19
28	28.000	711.0	0.625	15.88	182.90	272.23
28	28.000	711.0	0.688	17.48	200.87	298.96
28	28.000	28.000	0.750	19.05	218.48	325.08
28	28.000	28.000	0.812	20.62	236.00	351.07
28	28.000	28.000	0.875	22.23	253.72	377.60
28	28.000	28.000	0.938	23.83	271.36	403.84
28	28.000	28.000	1.000	25.40	288.63	429.46
30	30.000	30.000	0.250	6.35	79.51	118.34
30	30.000	30.000	0.281	7.14	89.27	132.92
30	30.000	30.000	0.312	7.92	99.02	147.29
30	30.000	30.000	0.344	8.74	109.06	162.36
30	30.000	30.000	0.375	9.53	118.76	176.85
30	30.000	30.000	0.406	10.31	128.44	191.12
30	30.000	30.000	0.438	11.13	138.42	206.10
30	30.000	30.000	0.469	11.91	148.06	220.32
30	30.000	30.000	0.500	12.70	157.68	234.68
30	30.000	30.000	0.562	14.27	176.86	263.14
30	30.000	30.000	0.625	15.88	196.26	292.20
30	30.000	30.000	0.688	17.48	215.58	320.95
30	30.000	30.000	0.750	19.05	234.51	349.04
30	30.000	30.000	0.812	20.62	253.36	377.01
30	30.000	30.000	0.875	22.23	272.43	405.56
30	30.000	30.000	0.938	23.83	291.41	433.81
30	30.000	30.000	1.000	25.40	310.01	461.41
30	30.000	30.000	1.062	26.97	328.53	488.88
30	30.000	30.000	1.125	28.58	347.26	516.93
30	30.000	30.000	1.188	30.18	365.90	544.68
30	30.000	30.000	1.250	31.75	384.17	571.79
32	32.000	32.000	0.250	6.35	84.85	126.32
32	32.000	32.000	0.281	7.14	95.28	141.90

规格 Dimension:

ASME B 36.10M 规格系列 Dimension: Range acc. ASME B 36.10M

名义尺寸 Nominal size	外径 Outside diameter		壁厚 Wall thickness		平端管米重 Plain-end weight	
NPS	inch	mm	inch	mm	lb/ft	kg
32	32.000	813.0	0.312	7.92	105.69	157.25
32	32.000	813.0	0.344	8.74	116.41	173.35
32	32.000	813.0	0.375	9.53	126.78	188.83
32	32.000	813.0	0.406	10.31	137.12	204.09
32	32.000	813.0	0.438	11.13	147.78	220.10
32	32.000	813.0	0.469	11.91	158.08	235.29
32	32.000	813.0	0.500	12.70	168.37	250.65
32	32.000	813.0	0.562	14.27	188.87	281.09
32	32.000	813.0	0.625	15.88	209.62	312.17
32	32.000	813.0	0.688	17.48	230.29	342.94
32	32.000	813.0	0.750	19.05	250.55	373.00
32	32.000	813.0	0.812	20.62	270.72	402.94
32	32.000	813.0	0.875	22.23	291.14	433.52
32	32.000	813.0	0.938	23.83	311.47	463.78
32	32.000	813.0	1.000	25.40	331.39	493.35
32	32.000	813.0	1.062	26.97	351.23	522.80
32	32.000	813.0	1.125	28.58	371.31	552.88
32	32.000	813.0	1.188	30.18	391.30	582.64
32	32.000	813.0	1.250	31.75	410.90	611.72
34	34.000	864.0	0.250	6.35	90.20	134.31
34	34.000	864.0	0.281	7.14	101.29	150.88
34	34.000	864.0	0.312	7.92	112.36	167.21
34	34.000	864.0	0.344	8.74	123.77	184.34
34	34.000	864.0	0.375	9.53	134.79	200.82
34	34.000	864.0	0.406	10.31	145.80	217.06
34	34.000	864.0	0.438	11.13	157.14	234.10
34	34.000	864.0	0.469	11.91	168.11	250.27
34	34.000	864.0	0.500	12.70	179.06	266.63
34	34.000	864.0	0.562	14.27	200.89	299.04
34	34.000	864.0	0.625	15.88	222.99	332.14
34	34.000	864.0	0.688	17.48	245.00	364.92
34	34.000	864.0	0.750	19.05	266.58	396.96
34	34.000	864.0	0.812	20.62	288.08	428.88
34	34.000	864.0	0.875	22.23	309.84	461.48
34	34.000	864.0	0.938	23.83	331.52	493.75
34	34.000	864.0	1.000	25.40	352.77	525.30
34	34.000	864.0	1.062	26.97	373.94	556.73
34	34.000	864.0	1.125	28.58	395.36	588.83
34	34.000	864.0	1.188	30.18	416.70	620.60
34	34.000	864.0	1.250	31.75	437.62	651.65
36	36.000	914.0	0.250	6.35	95.54	142.14
36	36.000	914.0	0.281	7.14	107.30	159.68
36	36.000	914.0	0.312	7.92	119.03	176.97

规格 Dimension:

ASME B 36.10M 规格系列 Dimension: Range acc. ASME B 36.10M

名义尺寸 Nominal size	外径 Outside diameter		壁厚 Wall thickness		平端管米重 Plain-end weight	
NPS	inch	mm	inch	mm	lb/ft	kg
36	36.000	914.0	0.344	8.74	131.12	195.12
36	36.000	914.0	0.375	9.53	142.81	212.57
36	36.000	914.0	0.406	10.31	154.48	229.77
36	36.000	914.0	0.438	11.13	166.51	247.82
36	36.000	914.0	0.469	11.91	178.14	264.96
36	36.000	914.0	0.500	12.70	189.75	282.29
36	36.000	914.0	0.562	14.27	212.90	316.63
36	36.000	914.0	0.625	15.88	236.35	351.73
36	36.000	914.0	0.688	17.48	259.71	386.47
36	36.000	914.0	0.750	19.05	282.62	420.45
36	36.000	914.0	0.812	20.62	305.44	454.30
36	36.000	914.0	0.875	22.23	328.55	488.89
36	36.000	914.0	0.938	23.83	351.57	523.14
36	36.000	914.0	1.000	25.40	374.15	556.62
36	36.000	914.0	1.062	26.97	396.64	589.98
36	36.000	914.0	1.125	28.58	419.42	624.07
36	36.000	914.0	1.188	30.18	442.10	657.81
36	36.000	914.0	1.250	31.75	464.35	690.80
38	38.000	965.0	0.312	7.92	125.70	186.94
38	38.000	965.0	0.344	8.74	138.47	206.11
38	38.000	965.0	0.375	9.53	150.83	224.56
38	38.000	965.0	0.406	10.31	163.16	242.74
38	38.000	965.0	0.438	11.13	175.87	261.82
38	38.000	965.0	0.469	11.91	188.17	279.94
38	38.000	965.0	0.500	12.70	200.44	298.26
38	38.000	965.0	0.562	14.27	224.92	334.58
38	38.000	965.0	0.625	15.88	249.71	371.70
38	38.000	965.0	0.688	17.48	274.42	408.46
38	38.000	965.0	0.750	19.05	298.65	444.41
38	38.000	965.0	0.812	20.62	322.80	480.24
38	38.000	965.0	0.875	22.23	347.26	516.85
38	38.000	965.0	0.938	23.83	371.63	553.11
38	38.000	965.0	1.000	25.40	395.53	588.57
38	38.000	965.0	1.062	26.97	419.35	623.90
38	38.000	965.0	1.125	28.58	443.47	660.01
38	38.000	965.0	1.188	30.18	467.50	695.77
38	38.000	965.0	1.250	31.75	491.07	730.74
40	40.000	1016.0	0.312	7.92	132.37	196.90
40	40.000	1016.0	0.344	8.74	145.83	217.11
40	40.000	1016.0	0.375	9.53	158.85	236.54
40	40.000	1016.0	0.406	10.31	171.84	255.71
40	40.000	1016.0	0.438	11.13	185.24	275.82
40	40.000	1016.0	0.469	11.91	198.19	294.92

规格 Dimension:

ASME B 36.10M 规格系列 Dimension: Range acc. ASME B 36.10M

名义尺寸 Nominal size	外径 Outside diameter		壁厚 Wall thickness		平端管米重 Plain-end weight	
NPS	inch	mm	inch	mm	lb/ft	kg
40	40.000	1016.0	0.500	12.70	211.13	314.23
40	40.000	1016.0	0.562	14.27	236.93	352.53
40	40.000	1016.0	0.625	15.88	263.07	391.67
40	40.000	1016.0	0.688	17.48	289.13	430.45
40	40.000	1016.0	0.750	19.05	314.69	468.37
40	40.000	1016.0	0.812	20.62	340.16	506.17
40	40.000	1016.0	0.875	22.23	365.97	544.81
40	40.000	1016.0	0.938	23.83	391.68	583.08
40	40.000	1016.0	1.000	25.40	416.91	620.51
40	40.000	1016.0	1.062	26.97	442.05	657.82
40	40.000	1016.0	1.125	28.58	467.52	695.96
40	40.000	1016.0	1.188	30.18	492.90	733.73
40	40.000	1016.0	1.250	31.75	517.80	770.67
42	42.000	1067.0	0.344	8.74	153.18	228.10
42	42.000	1067.0	0.375	9.53	166.86	248.53
42	42.000	1067.0	0.406	10.31	180.52	268.67
42	42.000	1067.0	0.438	11.13	194.60	289.82
42	42.000	1067.0	0.469	11.91	208.22	309.90
42	42.000	1067.0	0.500	12.70	221.82	330.21
42	42.000	1067.0	0.562	14.27	248.95	370.48
42	42.000	1067.0	0.625	15.88	276.44	411.64
42	42.000	1067.0	0.688	17.48	303.84	452.43
42	42.000	1067.0	0.750	19.05	330.72	492.33
42	42.000	1067.0	0.812	20.62	357.52	532.11
42	42.000	1067.0	0.875	22.23	384.67	572.77
42	42.000	1067.0	0.938	23.83	411.74	613.05
42	42.000	1067.0	1.000	25.40	438.29	652.46
42	42.000	1067.0	1.062	26.97	464.76	691.75
42	42.000	1067.0	1.125	28.58	491.57	731.91
42	42.000	1067.0	1.188	30.18	518.30	771.69
42	42.000	1067.0	1.250	31.75	544.52	810.60
44	44.000	1118.0	0.344	8.74	160.54	239.09
44	44.000	1118.0	0.375	9.53	174.88	260.52
44	44.000	1118.0	0.406	10.31	189.20	281.64
44	44.000	1118.0	0.438	11.13	203.97	303.82
44	44.000	1118.0	0.469	11.91	218.25	324.88
44	44.000	1118.0	0.500	12.70	232.51	346.18
44	44.000	1118.0	0.562	14.27	260.97	388.42
44	44.000	1118.0	0.625	15.88	289.80	431.62
44	44.000	1118.0	0.688	17.48	318.55	474.42
44	44.000	1118.0	0.750	19.05	346.76	516.29
44	44.000	1118.0	0.812	20.62	374.88	558.04
44	44.000	1118.0	0.875	22.23	403.38	600.73

规格 Dimension:

ASME B 36.10M 规格系列 Dimension: Range acc. ASME B 36.10M

名义尺寸 Nominal size	外径 Outside diameter		壁厚 Wall thickness		平端管米重 Plain-end weight	
NPS	inch	mm	inch	mm	lb/ft	kg
44	44.000	1118.0	0.938	23.83	431.79	643.03
44	44.000	1118.0	1.000	25.40	459.67	684.41
44	44.000	1118.0	1.062	26.97	487.47	725.67
44	44.000	1118.0	1.125	28.58	515.63	767.85
44	44.000	1118.0	1.188	30.18	543.70	809.65
44	44.000	1118.0	1.250	31.75	571.25	850.54
46	46.000	1168.0	0.344	8.74	167.89	249.87
46	46.000	1168.0	0.375	9.53	182.90	272.27
46	46.000	1168.0	0.406	10.31	197.88	294.35
46	46.000	1168.0	0.438	11.13	213.33	317.54
46	46.000	1168.0	0.469	11.91	228.27	339.56
46	46.000	1168.0	0.500	12.70	243.20	361.84
46	46.000	1168.0	0.562	14.27	272.98	406.02
46	46.000	1168.0	0.625	15.88	303.16	451.20
46	46.000	1168.0	0.688	17.48	333.26	495.97
46	46.000	1168.0	0.750	19.05	362.79	539.78
46	46.000	1168.0	0.812	20.62	392.24	583.47
46	46.000	1168.0	0.875	22.23	422.09	628.14
46	46.000	1168.0	0.938	23.83	451.85	672.41
46	46.000	1168.0	1.000	25.40	481.05	715.73
46	46.000	1168.0	1.062	26.97	510.17	758.92
46	46.000	1168.0	1.125	28.58	539.68	803.09
46	46.000	1168.0	1.188	30.18	569.10	846.86
46	46.000	1168.0	1.250	31.75	597.97	889.69
48	48.000	1219.0	0.344	8.74	175.25	260.86
48	48.000	1219.0	0.375	9.53	190.92	284.25
48	48.000	1219.0	0.406	10.31	206.56	307.32
48	48.000	1219.0	0.438	11.13	222.70	331.54
48	48.000	1219.0	0.469	11.91	238.30	354.54
48	48.000	1219.0	0.500	12.70	253.89	377.81
48	48.000	1219.0	0.562	14.27	285.00	423.97
48	48.000	1219.0	0.625	15.88	316.52	471.17
48	48.000	1219.0	0.688	17.48	347.97	517.95
48	48.000	1219.0	0.750	19.05	378.83	563.74
48	48.000	1219.0	0.812	20.62	409.61	609.40
48	48.000	1219.0	0.875	22.23	440.80	656.10
48	48.000	1219.0	0.938	23.83	471.90	702.38
48	48.000	1219.0	1.000	25.40	502.43	747.67
48	48.000	1219.0	1.062	26.97	532.88	792.84
48	48.000	1219.0	1.125	28.58	563.73	839.04
48	48.000	1219.0	1.188	30.18	594.50	884.82
48	48.000	1219.0	1.250	31.75	624.70	929.62
52	52.000	1321.0	0.375	9.53	206.95	308.23

规格 Dimension:

ASME B 36.10M 规格系列 Dimension: Range acc. ASME B 36.10M

名义尺寸 Nominal size	外径 Outside diameter		壁厚 Wall thickness		平端管米重 Plain-end weight	
NPS	inch	mm	inch	mm	lb/ft	kg
52	52.000	1321.0	0.406	10.31	223.93	333.26
52	52.000	1321.0	0.438	11.13	241.42	359.54
52	52.000	1321.0	0.469	11.91	258.36	384.50
52	52.000	1321.0	0.500	12.70	275.27	409.76
52	52.000	1321.0	0.562	14.27	309.03	459.86
52	52.000	1321.0	0.625	15.88	343.25	511.12
52	52.000	1321.0	0.688	17.48	377.39	561.93
52	52.000	1321.0	0.750	19.05	410.90	611.66
52	52.000	1321.0	0.812	20.62	444.33	661.27
52	52.000	1321.0	0.875	22.23	478.21	712.02
52	52.000	1321.0	0.938	23.83	512.01	762.33
52	52.000	1321.0	1.000	25.40	545.19	811.57
52	52.000	1321.0	1.062	26.97	578.29	860.69
52	52.000	1321.0	1.125	28.58	611.84	910.93
52	52.000	1321.0	1.188	30.18	645.30	960.74
52	52.000	1321.0	1.250	31.75	678.15	1009.49
56	56.000	1422.0	0.375	9.53	222.99	331.96
56	56.000	1422.0	0.406	10.31	241.29	358.94
56	56.000	1422.0	0.438	11.13	260.15	387.26
56	56.000	1422.0	0.469	11.91	278.41	414.17
56	56.000	1422.0	0.500	12.70	296.65	441.39
56	56.000	1422.0	0.562	14.27	333.06	495.41
56	56.000	1422.0	0.625	15.88	369.97	550.67
56	56.000	1422.0	0.688	17.48	406.80	605.46
56	56.000	1422.0	0.750	19.05	442.97	659.11
56	56.000	1422.0	0.812	20.62	479.05	712.63
56	56.000	1422.0	0.875	22.23	515.63	767.39
56	56.000	1422.0	0.938	23.83	552.12	821.68
56	56.000	1422.0	1.000	25.40	587.95	874.83
56	56.000	1422.0	1.062	26.97	623.70	927.86
56	56.000	1422.0	1.125	28.58	659.94	982.12
56	56.000	1422.0	1.188	30.18	696.10	1035.91
56	56.000	1422.0	1.250	31.75	731.60	1088.57

结构用管
Tube for structures

标准 Standard:

GB/T 8162　　中国国家标准 China National Standard
Q/BQB 203　　宝钢企业标准 Baosteel Corporation Standard
DIN 1629　　德国工业标准 Deutsche Industrie Normen

用途 Uses:

用于制造管道、容器、设备、管件及钢结构
For manufacture of pipelines,vessels,equipment,pipe fittings and steel structures

化学成分 Chemical Composition (%):

标准 Standard	牌号 Grade	C	Si	Mn	P	S	Cr	Ni	Cu	V
GB/T 8162	10	0.07-0.13	0.17-0.37	0.35-0.65	≤0.025	≤0.020	≤0.15	≤0.30	≤0.25	-
	20	0.17-0.23	0.17-0.37	0.35-0.65	≤0.025	≤0.020	≤0.25	≤0.30	≤0.25	-
	35	0.32-0.39	0.17-0.37	0.50-0.80	≤0.025	≤0.020	≤0.25	≤0.30	≤0.25	-
	45	0.42-0.50	0.17-0.37	0.50-0.80	≤0.025	≤0.020	≤0.25	≤0.30	≤0.25	-
	Q345A	≤0.20	≤0.55	1.00-1.60	≤0.025	≤0.020	≤0.30	≤0.30	≤0.30	-
	Q345B	≤0.20	≤0.55	1.00-1.60	≤0.025	≤0.020	≤0.30	≤0.30	≤0.30	-
	Q345C	≤0.20	≤0.55	1.00-1.60	≤0.025	≤0.020	≤0.30	≤0.30	≤0.30	0.02-0.15
	Q345D	≤0.18	≤0.55	1.00-1.60	≤0.025	≤0.020	≤0.30	≤0.30	≤0.30	0.02-0.15
	Q345E	≤0.18	≤0.55	1.00-1.60	≤0.025	≤0.020	≤0.30	≤0.30	≤0.30	0.02-0.15
Q/BQB 203 DIN 1629	St37.0	≤0.17	0.17-0.37	0.35-0.65	≤0.025	≤0.020	≤0.25	≤0.25	≤0.25	-
	St44.0	≤0.21	0.17-0.37	0.50-0.80	≤0.025	≤0.020	≤0.25	≤0.25	≤0.25	-
	St55	0.33-0.41	0.17-0.37	0.50-0.80	≤0.025	≤0.020	≤0.25	≤0.25	≤0.25	-
	St52.0	≤0.22	≤0.55	≤1.60	≤0.025	≤0.020	≤0.25	≤0.25	≤0.25	-
	CK45	0.42-0.50	0.17-0.37	0.50-0.80	≤0.025	≤0.020	≤0.25	≤0.25	≤0.25	-

注： 经协商，也可供应其它牌号的钢管。
Note: Grades other than the a.m. chart can be made available through consultations.

机械性能 Mechanical Properties:

标准 Standard	钢级 Grade	抗拉强度(MPa) Tensile strength	屈服强度(MPa) 不小于 Yield strength not less than		伸长率(%) 不小于 Elongation not less than	冲击实验 Impact test	
			≤16mm	＞16-30mm		温度(℃) Temperature	吸收功(KV/J) Absorbed energy
GB/T 8162	10	≥335	205	195	24	-	-
	20	≥410	245	235	20	-	-
	35	≥510	305	295	17	-	-
	45	≥590	335	325	14	-	-
	Q345A	470-630	345	325	20	-	-
	Q345B	470-630	345	325	20	20	34
	Q345C	470-630	345	325	21	0	34
	Q345D	470-630	345	325	21	-20	34
	Q345E	470-630	345	325	21	-40	27
Q/BQB 203 DIN 1629	-	-	≤16mm	＞16mm	-	-	-
	St37.0	350-480	235	225	25	-	-
	St44.0	420-550	275	265	21	-	-
	St55	540-645	295	285	17	-	-
	St52.0	500-650	355	345	21	-	-
	CK45	590-730	335	325	14	-	-

流体输送用管
Tube for Conveyance of Fluid

标准 Standard:

GB/T 8163 中国国家标准 China National Standard
ASTM A 53M 美国材料与测试协会标准 Standard of American Society for Testing & Materials
ASTM A 106M 美国材料与测试协会标准 Srandard of American Society for Testing & Materials
JIS G 3454 JIS G 3455 JIS G 3456 日本工业标准 Japanese Industrial Standard

用途 Uses:

用于石油、天然气输送以及其他流体输送
For conveying oil, gas and other fluids

化学成分 Chemical Composition (%):

标准 Standard	牌号 Grade	C	Si	Mn	P	S	Ni	Cr	Cu	Mo	V
GB/T 8163	10	0.07-0.13	0.07-0.37	0.35-0.65	≤0.035	≤0.035	≤0.30	≤0.15	≤0.25	-	-
	20	0.17-0.23	0.17-0.37	0.35-0.65	≤0.035	≤0.035	≤0.30	≤0.25	≤0.25	-	-
	Q345A	≤0.20	≤0.55	1.00-1.60	≤0.045	≤0.045	≤0.30	≤0.30	≤0.30	-	-
	Q345B	≤0.20	≤0.55	1.00-1.60	≤0.040	≤0.040	≤0.30	≤0.30	≤0.30	-	-
	Q345C	≤0.20	≤0.55	1.00-1.60	≤0.035	≤0.035	≤0.30	≤0.30	≤0.30	-	0.02-0.15
	Q345D	≤0.18	≤0.55	1.00-1.60	≤0.030	≤0.030	≤0.30	≤0.30	≤0.30	-	0.02-0.15
	Q345E	≤0.18	≤0.5	1.00-1.60	≤0.025	≤0.025	≤0.30	≤0.30	≤0.30	-	0.02-0.15
ASTM A 53M	A	≤0.25	-	≤0.95	≤0.05	≤0.045	≤0.40	≤0.40	≤0.40	≤0.15	≤0.08
	B	≤0.30	-	≤1.20	≤0.05	≤0.045	≤0.40	≤0.40	≤0.40	≤0.15	≤0.08
ASTM A 106M	A	≤0.25	≥0.10	0.27-0.93	≤0.035	≤0.035	≤0.40	≤0.40	≤0.40	≤0.15	≤0.08
	B	≤0.30	≥0.10	0.29-1.06	≤0.035	≤0.035	≤0.40	≤0.40	≤0.40	≤0.15	≤0.08
	C	≤0.35	≥0.10	0.29-1.06	≤0.035	≤0.035	≤0.40	≤0.40	≤0.40	≤0.15	≤0.08

化学成分 Chemical Composition (%):

标准 Standard	牌号 Grade	C	Si	Mn	P	S	Ni	Cr	Cu	Mo	V
JIS G 3454	STPG 370	≤0.25	≤0.35	0.30-0.90	≤0.040	≤0.040	-	-	-	-	-
	STPG 410	≤0.30	≤0.35	0.30-1.00	≤0.040	≤0.040	-	-	-	-	-
JIS G 3455	STS 370	≤0.25	0.10-0.35	0.30-1.10	≤0.035	≤0.035	-	-	-	-	-
	STS 410	≤0.30	0.10-0.35	0.30-1.40	≤0.035	≤0.035	-	-	-	-	-
	STS 480	≤0.33	0.10-0.35	0.30-1.50	≤0.035	≤0.035	-	-	-	-	-
JIS G 3456	STPT 370	≤0.25	0.10-0.35	0.30-0.90	≤0.035	≤0.035	-	-	-	-	-
	STPT 410	≤0.30	0.10-0.35	0.30-1.00	≤0.035	≤0.035	-	-	-	-	-
	STPT 480	≤0.33	0.10-0.35	0.30-1.00	≤0.035	≤0.035	-	-	-	-	-

注： 经协商，也可供应其它牌号的钢管。

Note: Grades other than the a.m. chart can be made available through consultations.

机械性能 Mechanical Properties:

标准 Standard	牌号 Grade	抗拉强度 Tensile strength (MPa)	屈服强度 Yield strength (MPa)		伸长率 Elongation (%)	冲击实验 Impact test	
			≥16mm	>16mm		温度(℃) Temperature	吸收功(KV/J) Absorbed energy
GB/T 8163	10	335-475	≥205	≥195	≥24	-	-
	20	410-530	≥245	≥235	≥20	-	-
	Q345A	470-630	345	325	20	-	-
	Q345B	470-630	345	325	20	20	34
	Q345C	470-630	345	325	21	0	34
	Q345D	470-630	345	325	21	-20	34
	Q345E	470-630	345	325	21	-40	27
ASTM A 53M	A	≥330	≥205		查ASTM A53的表3 See table 3 of ASTM A 53	-	-
	B	≥415	≥240				
ASTM A 106M	A	≥330	≥205		查ASTM A106的表4 See table 4 of ASTM A 106	-	-
	B	≥415	≥240				
	C	≥485	≥275				
JIS G 3454	STPG 370	≥215	≥370		查JIS G 3454的表3-2 See table 3-2 of JIS G 3454	-	-
	STPG 410	≥245	≥410				
JIS G 3455	STS 370	≥215	≥370		查JIS G 3455的表3-2 See table 3-2 of JIS G 3455	-	-
	STS 410	≥245	≥410				
	STS 480	≥275	≥480				
JIS G 3456	STPT 370	≥215	≥370		查JIS G 3456的表3-2 See table 3-2 of JIS G 3456	-	-
	STPT 410	≥245	≥410				
	STPT 480	≥275	≥480				

地质钻探用管
Tube for Geological Drilling

标准 Standard:

Q/BQB 230 宝钢企业标准 Baosteel Corporation Standard
YB 235 中国冶金工业标准 Standard of China Metallurgical Industry
YB/T 5052 中国冶金工业标准 Standard of China Metallurgical Industry

用途 Uses:

用于地质钻探
For geological drilling

化学成分 Chemical Composition (%):

标准 Standard	牌号 Material	钢级 Grade	C	Si	Mn	P	S	Mo	V	B
YB 235 YB/T 5052	45MnB	DZ40	0.42-0.49	0.20-0.40	1.10-1.40	≤0.040	≤0.040	-	-	0.001-0.0035
	50Mn		0.48-0.56	0.17-0.37	0.70-1.00	≤0.040	≤0.040	-	-	-
	40Mn2	DZ50	0.37-0.44	0.20-0.40	1.40-1.80	≤0.040	≤0.040	-	-	-
	40Mn2Si		0.37-0.45	0.40-0.70	1.30-1.80	≤0.040	≤0.040	-	-	-
	45MnMoB	DZ60	0.41-0.49	0.17-0.37	0.90-1.20	≤0.040	≤0.040	0.20-0.30	-	0.001-0.005

标准 Standard	钢级 Grade	C	Si	Mn	Mo	P	S	Cu	Cr	Ni
Q/BQB 230	STM-R780	0.38-0.45	0.15-0.35	1.55-1.85	0.15-0.25	≤0.025	≤0.020	≤0.20	≤0.30	≤0.30

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
YB235	DZ40	min	373	637	14
	DZ50	min	490	686	12
	DZ60	min	588	765	12
YB/T 5052	DZ40	min	392	637	14
	DZ50	min	490	686	12
	DZ60	min	588	765	12
Q/BQB 230	STM-R780	min	520	780	15

气瓶用无缝钢管
Seamless Steel Tubes for Gas Cylinder

标准 Standard:

GB 18248　　中国国家标准 China National Standard

用途 Uses:

气瓶制造

For manufacturing gas cylinder

化学成分 Chemical Composition (%):

采用标准 Standard	牌号 Grade	C	Si	Mn	P	S	Cr	Mo	V	Ni	Cu
GB 18248	37Mn	0.34-0.40	0.10-0.30	1.35-1.75	≤0.020	≤0.020	≤0.30	-	-	≤0.30	≤0.20
	30CrMo	0.26-0.34	0.17-0.37	0.40-0.70	≤0.020	≤0.020	0.80-1.10	0.15-0.25	-	≤0.30	≤0.20
	34Mn2V	0.30-0.37	0.17-0.37	1.40-1.75	≤0.020	≤0.020	≤0.30	-	0.07-0.12	≤0.30	≤0.20
	35CrMo	0.32-0.40	0.17-0.37	0.40-0.70	≤0.020	≤0.020	0.80-1.10	0.15-0.25	-	≤0.30	≤0.20
	34CrMo4	0.30-0.37	≤0.40	0.60-0.90	≤0.020	≤0.020	0.90-1.20	0.15-0.30	-	≤0.30	≤0.20
	30CrMnSiA	0.28-0.34	0.90-1.20	0.80-1.10	≤0.020	≤0.020	0.80-1.10	≤0.10	-	≤0.30	≤0.20

机械性能 Mechanical Properties:

标准 Standard	钢级 Grade	抗拉强度(MPa) Tensile strength	屈服强度(MPa) Yield strength	伸长率(%) Elongation	冲击功(J) Impact energy	
					温度(℃) Temperature	吸收功(KV/J) Absorbed energy
		不小于/not less than				
GB 18248	37Mn	750	630	16	-50	27
	30CrMo	930	785	12	-50	27
	34Mn2V	745	530	16	-20	27
	35CrMo	980	835	12	-50	27
	34CrMo4	980	835	12	-50	27
	30CrMnSiA	1080	885	10	室温 Room temperature	27

注： 经协商，也可供应其它牌号的钢管。

Note: Grades other than the a.m. chart can be made available through consultations.

汽车用无缝钢管
Seamless Steel Tubes for Automobile

标准 Standard:

YB/T 5035　　中国冶金工业标准 Standard of China Metallurgical Industry
GB/T 8162　　中国国家标准 China National Standard
MAL 010　　宝钢供货技术要求 Baosteel Delivery Technical Requirement

用途 Uses:

用于汽车车轴、轴套
For manufacturing auto axle and housing

化学成分 Chemical Composition (%):

标准 Standard	钢级 Grade	C	Si	Mn	P	S	Cr	Ni	Cu
YB/T 5035	45	0.42～0.50	0.17～0.37	0.50～0.80	≤0.030	≤0.025	≤0.25	≤0.25	≤0.25
	45Mn2	0.42～0.49	0.17～0.37	1.40～1.80	≤0.025	≤0.025	≤0.30	≤0.30	≤0.20
MAL 010	25MnCr	0.20～0.28	0.15～0.35	1.20～1.70	≤0.035	≤0.040	0.30～0.60	≤0.20	≤0.30
GB/T 8162	20Mn2	0.17～0.24	0.17～0.37	1.40～1.80	≤0.035	≤0.035	≤0.25	≤0.25	≤0.20

注： 经协商,也可供应其它牌号的钢管。
Note: Grades other than the a.m. chart can be made available through consultations.

机械性能 Mechanical Properties:

标准 Standard	钢级 Grade	抗拉强度(MPa) Tensile strength	屈服强度(MPa) Yield strength	延伸率 (%) Elongation	布氏硬度 HBW
		不小于/not less than			
YB/T 5035	45	590	335	14	-
	45Mn2	885	735	10	217～269
MAL 010	25MnCr	600~785	350	16	-
GB/T 8162	20Mn2	785	590	10	-

液压支柱用无缝钢管
Seamless Steel Tubes for Hydraulic Prop

标准 Standard:

GB/T 17396　　中国国家标准 China National Standard

用途 Uses:

煤矿液压支架和支柱的缸、柱,也可用于其它的液压缸、柱用。
For manufacturing cylinder and piston of hydraulic props for coal mine or other purposes

化学成分 Chemical Composition (%):

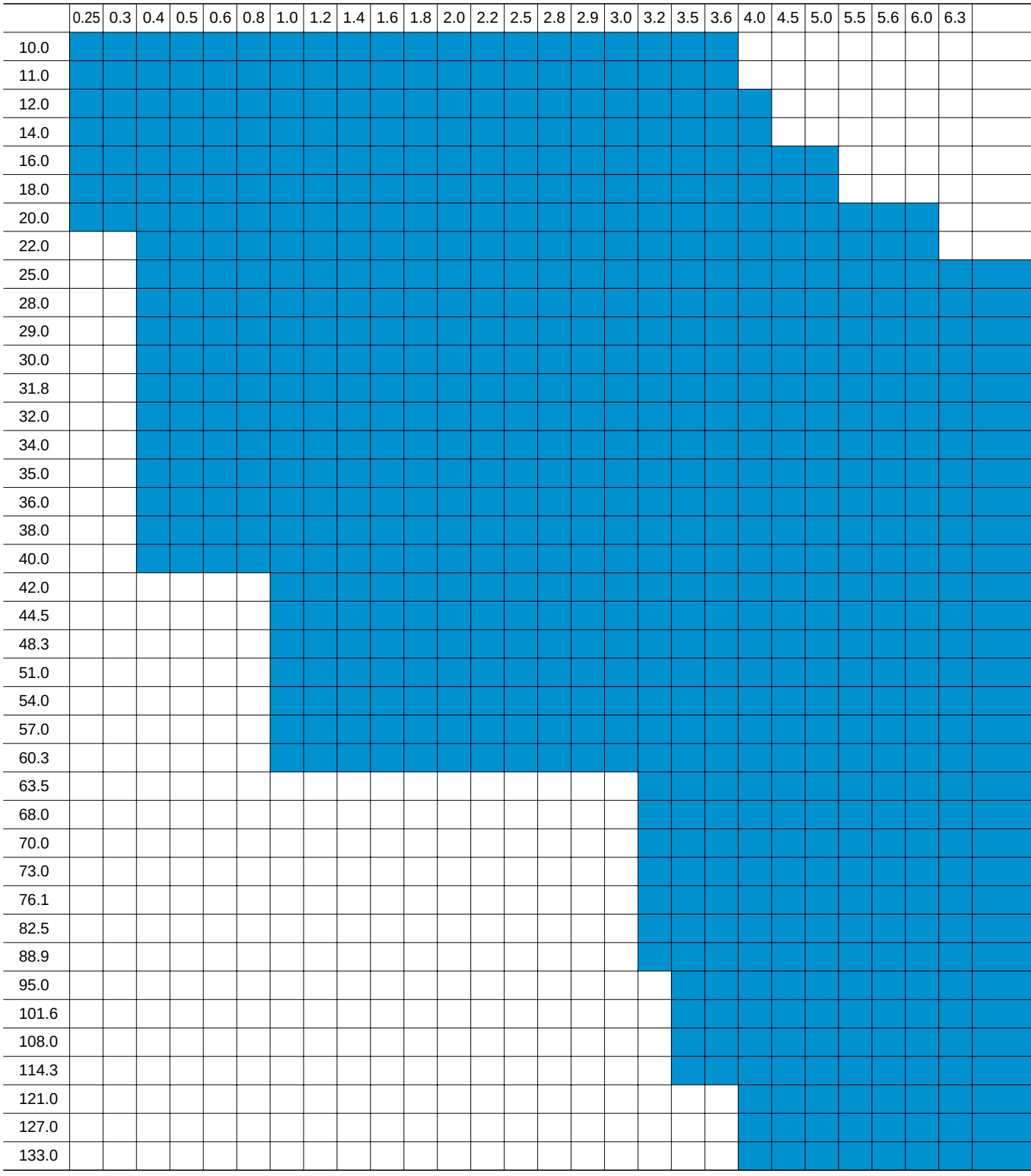
钢级 Grade	C	Si	Mn	P	S	Cr	Ni	Cu
20	0.17~0.24	0.17~0.37	0.35~0.65	≤0.020	≤0.015	≤0.25	≤0.25	≤0.20
35	0.32~0.40	0.17~0.37	0.50~0.80	≤0.025	≤0.025	≤0.25	≤0.25	≤0.20
40	0.42~0.50	0.17~0.37	0.50~0.80	≤0.025	≤0.025	≤0.25	≤0.25	≤0.20
27SiMn	0.24~0.32	1.10~1.40	1.10~1.40	≤0.025	≤0.020	≤0.25	≤0.25	≤0.25

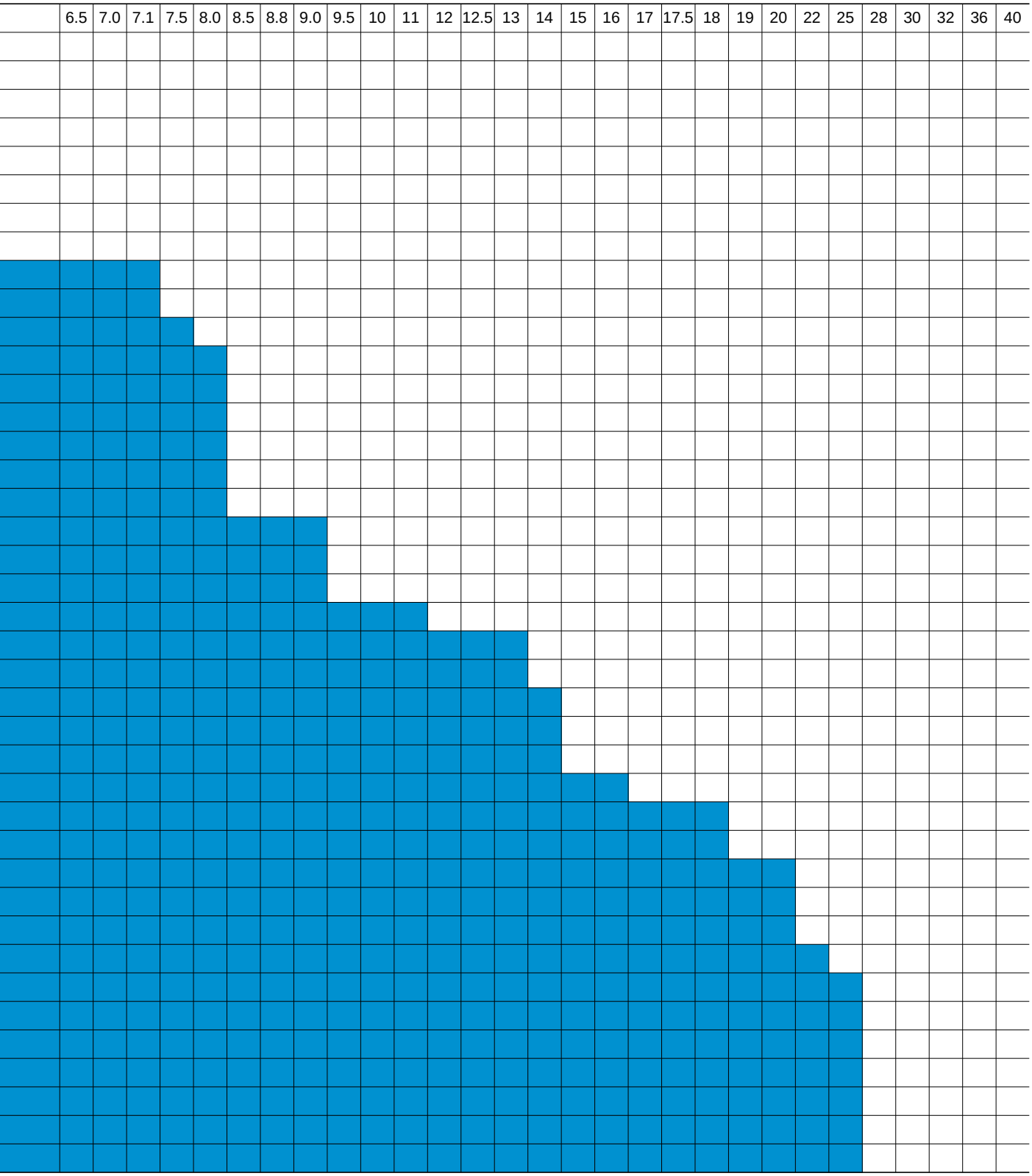
机械性能 Mechanical Properties:

钢级 Grade	试样热处理工艺 Test piece with heat treatment	抗拉强度 (MPa) Tensile strength	屈服强度 (MPa) Yield strength	伸长率 (%) Elongation	冲击功(J) A_{KU2} Impact energy
		不小于/not less than			
20 35 45	-	400 510 590	245 305 335	20 17 14	-
27SiMn	920℃ ±20℃ 水淬/Water quench 450℃ ±50℃ 回火/Temper 冷却剂：油或水/Cooling: oil or water	980	835	12	39

规格 Dimension:

规格表：管道、容器、设备用管 Dimension: Pipe and Tube for Pipeline, Vessel and Equipment

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规格 Dimension:

规格表：管道、容器、设备用管 Dimension: Pipe and Tube for Pipeline, Vessel and Equipment

	0.25	0.3	0.4	0.5	0.6	0.8	1.0	1.2	1.4	1.6	1.8	2.0	2.2	2.5	2.8	2.9	3.0	3.2	3.5	3.6	4.0	4.5	5.0	5.5	5.6	6.0	6.3
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153.7																						■	■	■	■	■	■
159.0																						■	■	■	■	■	■
168.3																							■	■	■	■	■
177.8																							■	■	■	■	■
180.0																							■	■	■	■	■
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219.1																					■	■	■	■	■	■	■
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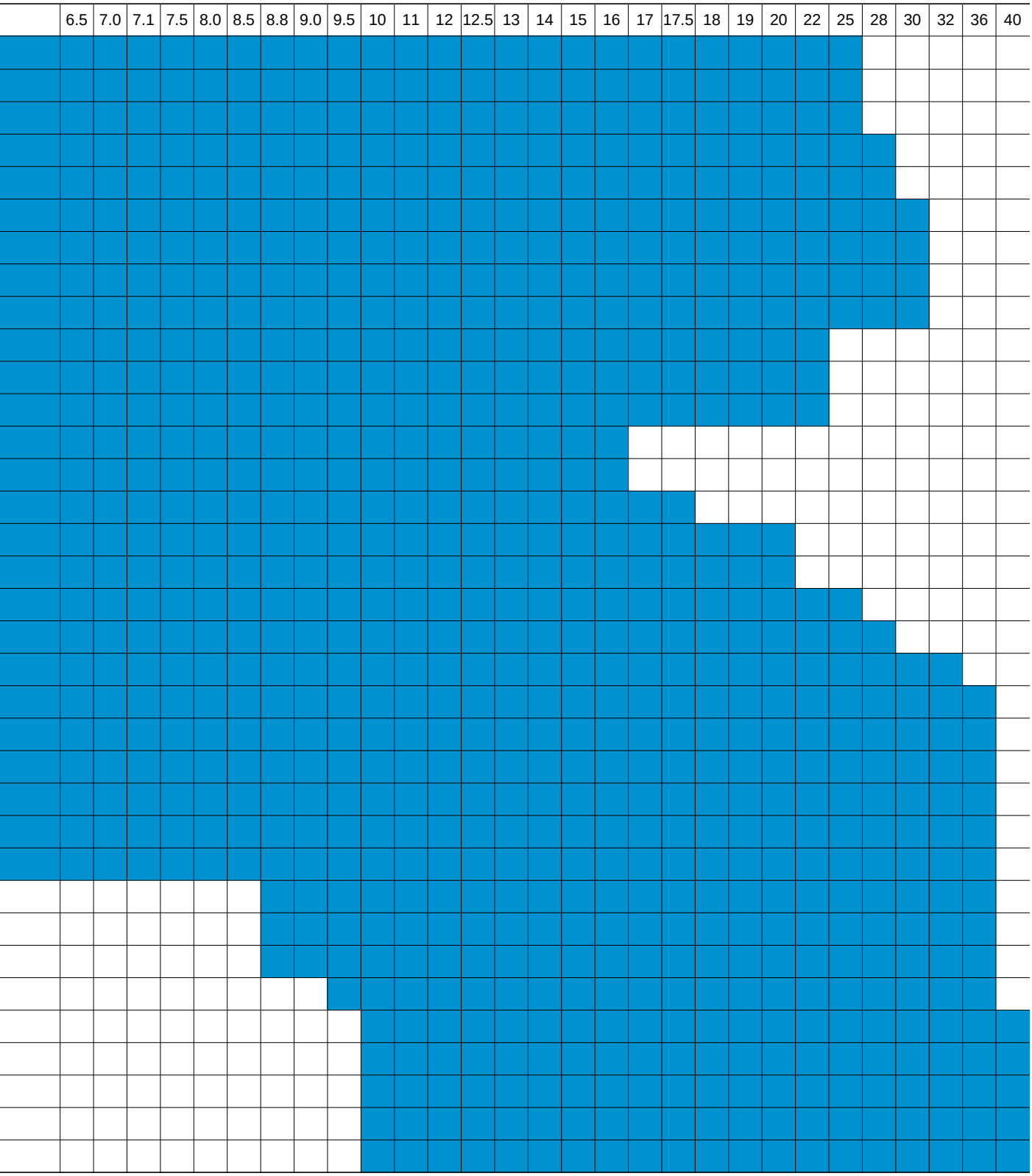
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