油套管
TUBING AND CASING

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

用途: Application:
油管用于油井中抽取石油或天然气。
套管用作油气井的井壁。
Tubing is used to extracting petroleum and natural gas from a well.
Casing serves as walls of a well.

油管规格：Size of Tubing:

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

注： 1、P---平端；N--不加厚、U---外加厚、T&C---车螺纹带接箍、I---整体接头。
Note: 1、P-Plain-end;N-Non upset; U- Upset; T&C--Threaded and coupled; I--Integrate connector

产品简介 PRODUCTS INTRODUCTION

API 5CT标准 API 5CT STANDARD

套管规格: Size of Casing:

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

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API 5CT标准 API 5CT STANDARD

套管规格: Size of Casing:

尺寸代号 Size Designation	重量代号 Weight Designation	外径 Outside Diameter		壁厚 Wall Thickness		端部加工形式 Type of End Finish 钢级Grade							
		In	m m	In	mm	J55 K55	L80-1	N80	C90	C95	T95	P110	M65
8 5/8″	24.00	8.625	219.08	0.264	6.71	PS	-	-	-	-	-	-	-
	28.00	8.625	219.08	0.304	7.72	-	-	-	-	-	-	-	-
	32.00	8.625	219.08	0.352	8.94	PSLB	-	-	-	-	-	-	-
	36.00	8.625	219.08	0.400	10.16	PSLB	PLB	PLB	PLB	PLB	PLB	PLB	-
	40.00	8.625	219.08	0.450	11.43	-	PLB	PLB	PLB	PLB	PLB	PLB	PLB
	44.00	8.625	219.08	0.500	12.70	-	PLB	PLB	PLB	PLB	PLB	PLB	PLB
	49.00	8.625	219.08	0.557	14.15	-	PLB	PLB	PLB	PLB	PLB	PLB	PLB
9 5/8″	32.30	9.625	244.48	0.312	7.92	-	-	-	-	-	-	-	-
	36.00	9.625	244.48	0.352	8.94	PSLB	-	-	-	-	-	-	PSLB
	40.00	9.625	244.48	0.395	10.03	PSLB	PLB	PLB	PLB	PLB	PLB		PSLB
	43.50	9.625	244.48	0.435	11.05	-	PLB	PLB	PLB	PLB	PLB	PLB	PLB
	47.00	9.625	244.48	0.472	11.99	-	PLB	PLB	PLB	PLB	PLB	PLB	PLB
	53.50	9.625	244.48	0.545	13.84	-	PLB	PLB	PLB	PLB	PLB	PLB	-
	58.40	9.625	244.48	0.595	15.11	-	PLB	PLB	PLB	PLB	PLB	PLB	-
	59.40	9.625	244.48	0.609	15.47	-	-	-	P	-	P	-	-
	64.90	9.625	244.48	0.672	17.07	-	-	-	P	-	P	-	-
	70.30	9.625	244.48	0.734	18.64	-	-	-	P	-	P	-	-
	75.60	9.625	244.48	0.797	20.24	-	-	-	P	-	P	-	-
10 3/4″	32.75	10.750	273.05	0.279	7.09	-	-	-	-	-	-	-	-
	40.50	10.750	273.05	0.350	8.89	PSB	-	-	-	-	-	-	PSB
	45.50	10.750	273.05	0.400	10.16	PSB	-	-	-	-	-	-	PSB
	51.00	10.750	273.05	0.450	11.43	Possible	PSB	PSB	PSB	PSB	PSB	PSB	PSB
	55.50	10.750	273.05	0.495	12.57	-	PSB	PSB	PSB	PSB	PSB	PSB	PSB
	60.70	10.750	273.05	0.545	13.84	-	-	-	PSB	-	PSB	PSB	-
	65.70	10.750	273.05	0.595	15.11	-	-	-	PSB	-	PSB	PSB	-
	73.20	10.750	273.05	0.672	17.07	-	-	-	P	-	P	-	-
	79.20	10.750	273.05	0.734	18.64	-	-	-	P	-	P	-	-
	85.30	10.750	273.05	0.797	20.24	-	-	-	P	-	P	-	-
11 3/4″	42.00	11.750	298.45	0.333	8.46	-	-	-	-	-	-	-	-
	47.00	11.750	298.45	0.375	9.53	PSB	-	-	-	-	-	-	PSB
	54.00	11.750	298.45	0.435	11.05	PSB	-	-	-	-	-	-	PSB
	60.00	11.750	298.45	0.489	12.42	Possible	PSB	PSB	PSB	PSB	PSB	PSB	PSB
	65.00	11.750	298.45	0.534	13.56	-	P	P	P	P	P	P	-
	71.00	11.750	298.45	0.582	14.78	-	P	P	P	P	P	P	-
13 3/8″	48.00	13.375	339.72	0.330	8.38	-	-	-	-	-	-	-	-
	54.50	13.375	339.72	0.380	9.65	PSB	-	-	-	-	-	-	PSB
	61.00	13.375	339.72	0.430	10.92	PSB	-	-	-	-	-	-	PSB
	68.00	13.375	339.72	0.480	12.19	Possible	PSB	PSB	PSB	PSB	PSB	PSB	PSB
	72.00	13.375	339.72	0.514	13.06	-	PSB	PSB	PSB	PSB	PSB	PSB	-

注： P---平端；S--短圆螺纹、L---长圆螺纹、B---偏梯形螺纹；

Note: P-Plain end;S-Short round thread;L--Long round thread; B--Buttress thread;

接箍: Coupling:

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

短节或连接管Pup Joint or Connector:

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

尺寸偏差: Dimensions and Tolerances:

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

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

螺纹参数允许偏差Thread Parameter Tolerances:

品种规格 Type and Size			锥度 Taper mm/m	螺矩Pitch mm		齿高 Height mm	螺纹角度 Angle 度 deg.	螺纹长度a Length L4 (外螺纹 External Thread)	管端倒角 Chamfer on End of Pipe 度 deg.	紧密矩a Standoff	
				每英寸 Per Inch	累计 Accu-mulative					管体螺纹 Pipe Thread	接箍螺纹 Coupling Thread
圆螺纹油管 Round Thread Tubing 2 3/8″~4 1/2″	10	牙/英寸 Threads per inch	+5.208 -2.600	±0.076	±0.152	+0.051 -0.102	11/2 11/2	11/2P	+5 -0	±1 1/2P	±1 1/2P
	8	牙/英寸 Threads per inch	+5.208 -2.600	±0.076	±0.152	+0.051 -0.102	11/2	1P	+5 -0	±1P	±1P
圆螺纹套管 Round Thread Casing 4″~7″			+5.208 -2.600	±0.076	±0.152	+0.051 -0.102	11/2	1P	+5 -0	±1P	±1P
偏梯形螺纹套管 Buttress Thread Casing 4 1/2″~7″	接箍 Coupling		+4.50 -2.50	±0.051	±0.102	±0.025	-	-	+5 -0	+1 1/2P -0	+0 -1 1/2P
		完整螺纹 Perfect thread	+3.50 -1.50								
		不完整螺纹 Imperfect thread length	+4.50 -1.50								

注a：p—螺矩
Note a: p—Pitch.

产品简介 PRODUCTS INTRODUCTION

API 5CT标准 API 5CT STANDARD

化学成分: Chemical Composition:

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

机械性能: Mechanical Properties:

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

长度: Lengths:

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

钻杆
DRILL PIPE

标准: Standard:
API SPEC 5D

用途: Application:
用于钻井
For well drilling

规格: Size:

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

注：1、EU-外加厚、IEU-内外加厚；2、工具接头螺纹有右旋螺纹和左旋螺纹两种；3、螺纹镀铜或磷化。
Note : 1、EU-External Upset;IEU-Internal&External Upset;
2、Threads of tool joint are right-hand or left-hand;
3、Threads are copper-plated phosphorulized.

尺寸公差Tolerance on Dimension:
外径、壁厚、重量允许偏差 Outside Diameter,Wall Thickness and Weight Tolerances

项目Item		允许偏差Tolerance
管体 Pipe Body	外径Outside Diameter	D≤101.6mm±0.79mm D≥114.3mm $^{+0.1\%}_{-0.5\%}$
	壁厚 Wall Thickness	-12.5%
重量 Weight	单根 Single Lengths	$^{+6.5\%}_{-3.5\%}$

产品简介 PRODUCTS INTRODUCTION

API 5D标准 API 5D STANDARD

螺纹参数允许偏差: Thread Parameter Tolerance:

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

化学成分: Chemical Composition:

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

机械性能: Mechanical Properties:

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

产品简介 PRODUCTS INTRODUCTION

API 5L标准 API 5L STANDARD

管线管
PIPELINE



标准: Standard:
API SPEC 5L、ISO3183、GB/T9711

用途: Application:
用于石油、天然气工业中的气、水、油输送

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

机械性能 Mechanical Properties:

标准 Standard	钢 级 Grade	屈服强度(MPa) Yieldst rengh		抗拉强度(MPa) Tensile Strength		延伸率(%) Elongation	冲击功(J) Impact Energy
API SPEC 5L ISO 3183 GB/T 9711		PSL1				查API SPEC 5L 表3 See table 3 of API SPEC 5L	
	A25 / L175	≥172		≥310			
	A / L210	≥207		≥331			
	B / L245	≥241		≥414			
	X42 / L290	≥290		≥414			
	X46 / L320	≥317		≥434			
	X52 / L360	≥359		≥455			
	X56 / L390	≥386		≥490			
	X60 / L415	≥414		≥517			
	X65 / L450	≥448		≥531			
	X70 / L485	≥483		≥565			
	PSL2						
		Min	Max	Min	Max		Min
	B / L245	241	448	441	758		41(27)
	X42 / L290	290	496	414	758		41(27)
	X46 / L320	317	524	434	758		41(27)
	X52 / L360	359	531	455	758		41(27)
	X56 / L390	386	544	490	758		41(27)
	X60 / L415	414	565	517	758		41(27)
	X65 / L450	448	600	531	758		41(27)
	X70 / L485	483	621	565	758		41(27)
	X80 / L555	552	690	621	827		101(68)

化学成分 Chemical Composition(%)

标准 Standard	钢 级 Grade	C	Mn	P		S
		Max	Max	Min	Max	Max
API SPEC 5L ISO 3183 GB/T 9711	PSL1					
	A25 / L175	0.21	0.60		0.030	0.030
	A25P / L175P	0.21	0.60	0.45	0.080	0.030
	A / L210	0.22	0.90		0.030	0.030
	B / L245	0.28	1.20		0.030	0.030
	X42 / L290	0.28	1.30		0.030	0.030
	X46/L320、X52/L360、X56/390	0.28	1.40		0.030	0.030
	X60/L415、X65/L450、X70/L485	0.28	1.40		0.030	0.030
	PSL2					
	B / L245	0.24	1.20		0.025	0.015
	X42 / L290	0.24	1.30		0.025	0.015
	X46/L320、X52/L360、X56/L390	0.24	1.40		0.025	0.015
	X60/L415、X65/L450、X70/L485	0.24	1.40		0.025	0.015

标准 Standard:

EN10297-1

机械和通用工程用途的无缝圆形钢管

SEAMLESS CIRCULAR STEEL TUBES FOR MECHANICAL AND GENERAL ENGINEERING PURPOSES.

非合金钢管NON- ALLOY STEEL TUBE

化学成分: Chemical Composition:

钢 级 Steel Grade		C		Si		Mn		P	S	其它元素 Other elements
Steel Name	Steel No.	min.	max.	min.	max.	min.	max.	min.	max.	
E235	1.0308	-	0.17	-	0.35	-	1.20	0.030	0.035	
E275	1.0225	-	0.21	-	0.35	-	1.40	0.030	0.035	
E315	1.0236	-	0.21	-	0.30	-	1.50	0.030	0.035	
E355 a	1.0580	-	0.22	-	0.55	-	1.60	0.030	0.035	
E470	1.0536	0.16	0.22	0.10	0.50	1.30	1.70	0.030	0.035	Al: min. 0.010; N: max. 0.020; Nb: max. 0.07; V: 0.08~0.15
C22E	1.1151	0.17	0.24	-	0.40	0.40	0.70	0.035	0.035	b
C35E	1.1181	0.32	0.39	-	0.40	0.50	0.80	0.035	0.035	b
C45E	1.1191	0.42	0.50	-	0.40	0.50	0.80	0.035	0.035	b
C60E	1.1221	0.57	0.65	-	0.40	0.60	0.90	0.035	0.035	b
38Mn6	1.1127	0.34	0.42	0.15	0.35	1.40	1.65	0.035	0.035	b

a: 制造商可根据需要添加铌、钒和钛元素，但这些元素的成分含量应注明。
Additions of Nb, V andTi are permitted at the discretionof the manufacturer, the contentof these elements shall be reported.
b: Cr: max. 0.40%; Mo: max. 0.10%;Ni: max. 0.40%; Cr +Mo +Ni max.0.63%

机械性能: Mechanical Properties:

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

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

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

产品简介 PRODUCTS INTRODUCTION

EN 标准 EUROPEAN STANDARD

标准 Standard:

EN10297-1

机械和通用工程用途的无缝圆形钢管

SEAMLESS CIRCULAR STEEL TUBES FOR MECHANICAL AND GENERAL ENGINEERING PURPOSES.

合金钢管 ALLOY STEEL TUBE

化学成分: Chemical Composition:

钢级 Steel Grade	C		Si		Mn		P	S	Cr		Mo		Ni		Al [a]	Cu	N	Nb	Ti	V	
	min.	max.	min.	max.	min.	max.	max.	max.	max.	min.	max.	min.	max.	min.	max.	max.	max.	max.	max.	min.	Max.
E275K2	-	0.20	-	0.40	0.50	1.40	0.030	0.030	0.30	-	0.10	-	0.30	0.020	0.35	0.015	0.05	0.03	-	0.05	
E355K2	-	0.20	-	0.50	0.90	1.65	0.030	0.030	0.30	-	0.10	-	0.50	0.020	0.35	0.015	0.05	0.05	-	0.12	
E420J2	0.16	0.22	0.10	0.50	1.30	1.70	0.030	0.035	0.30	-	0.08	-	0.40	0.010	0.30	0.020	0.07b	0.05	0.08	0.15b	
E460K2	-	0.20	-	0.60	1.00	1.70	0.030	0.030	0.30	-	0.10	-	0.80	0.020	0.70	0.025	0.05b	0.05	-	0.20b	
E590K2	0.16	0.22	0.10	0.50	1.30	1.70	0.030	0.035	0.30	-	0.08	-	0.40	0.010	0.30	0.020	0.07b	0.05	0.08	0.15b	
E730K2	-	0.20	-	0.50	1.40	1.70	0.025	0.025	0.30	0.30	0.45	0.30	0.70	0.020	0.20	0.020	0.05	0.05	-	0.12	
钢级 Steel Grade	C		Si		Mn		P	S	Cr		Mo		Ni		Cu						
	min.	max.	min.	max.	min.	max.	max.	max.	min.	max.	min.	max.	min.	max.	Max.						
41Cr4	0.38	0.45	-	0.40	0.60	0.90	0.035	0.035	0.90	1.20	-		-	-	-	-	-	-	-	-	
25CrMo4	0.22	0.29	-	0.40	0.60	0.90	0.035	0.035	0.90	1.20	0.15	0.30	-	-	-	-	-	-	-	-	
30CrMo4	0.27	0.34	-	0.35	0.35	0.60	0.035	0.035	0.80	1.15	0.15	0.30	-	-	-	-	-	-	-	-	
34CrMo4	0.30	0.37	-	0.40	0.60	0.90	0.035	0.035	0.90	1.20	0.15	0.30	-	-	-	-	-	-	-	-	
42CrMo4	0.38	0.45	-	0.40	0.60	0.90	0.035	0.035	0.90	1.20	0.15	0.30	-	-	-	-	-	-	-	-	
36CrNiMo4	0.32	0.40	-	0.40	0.50	0.80	0.035	0.035	0.90	1.20	0.15	0.30	0.90	1.20	-	-	-	-	-	-	
30CrNiMo8	0.26	0.34	-	0.40	0.30	0.60	0.035	0.035	1.80	2.20	0.30	0.50	1.80	2.20	-	-	-	-	-	-	
41NiCrMo7-3-2	0.38	0.44	-	0.30	0.60	0.90	0.025	0.025	0.70	0.90	0.15	0.30	1.65	2.00	0.25	-	-	-	-	-	

a: 如有充足的其它氮粘合物出现，最小铝含量就不适用。
If sufficient other N-binding elements are present the minimum total Al content does not apply.
b: 铌和钒总含量最大值为0.20%。 Nb +V =0.20% Max.

机械性能: Mechanical Properties:

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

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

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

EN 标准 EUROPEAN STANDARD

标准 Standard:

EN10210-1

非合金结构钢和细晶粒结构钢制热成型空心型材

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

主要生产牌号 Main steel tube grade:

S235JRH S275J0H S275J2H S355J0H S355J2H S355K2H

化学成分: Chemical Composition:

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

机械性能: Mechanical Properties:

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

管道、压力容器、锅炉钢管
TUBE FOR PRESSURE PURPOSES

标准 Standard

EN 10216-1
EN 10216-2

用途 Application

适用于制造管道、容器、设备、管件及钢结构
It is available to manufanture pipeline,vessel,equipment,pipe fittings and steel structure.

主要生产钢管牌号 Main Steel Grad supplied

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

化学成分: Chemical Composition:

标准 Standard	牌号 Steel Grad	化学成分Chemical Composition%												
		C	Si	Mn	P	S	Cr	Mo	Ni	Al	Cu	Nb	Ti	V
EN10216-1	P195TR1	≤0.13	≤0.35	≤0.70	≤0.025	≤0.02	≤0.30	≤0.08	≤0.30	\	≤0.30	≤0.01	≤0.04	≤0.02
	P195TR2	≤0.13	≤0.35	≤0.70	≤0.025	≤0.02	≤0.30	≤0.08	≤0.30	≥0.02	≤0.30	≤0.01	≤0.04	≤0.02
	P235TR1	≤0.16	≤0.35	≤1.20	≤0.025	≤0.02	≤0.30	≤0.08	≤0.30	\	≤0.30	≤0.01	≤0.04	≤0.02
	P235TR2	≤0.16	≤0.35	≤1.20	≤0.025	≤0.02	≤0.30	≤0.08	≤0.30	≥0.02	≤0.30	≤0.01	≤0.04	≤0.02
	P265TR1	≤0.20	≤0.40	≤1.40	≤0.025	≤0.02	≤0.30	≤0.08	≤0.30	\	≤0.30	≤0.01	≤0.04	≤0.02
	P265TR2	≤0.20	≤0.40	≤1.40	≤0.025	≤0.02	≤0.30	≤0.08	≤0.30	≥0.02	≤0.30	≤0.01	≤0.04	≤0.02
EN10216-2	P195GH	≤0.13	≤0.35	≤0.70	≤0.025	≤0.020	≤0.03	≤0.08	≤0.30	≥0.02	≤0.30	≤0.01	≤0.04	≤0.02
	P235GH	≤0.16	≤0.35	≤1.20	≤0.025	≤0.020	≤0.03	≤0.08	≤0.30	≥0.02	≤0.30	≤0.01	≤0.04	≤0.02
	P265GH	≤0.20	≤0.40	≤1.40	≤0.025	≤0.020	≤0.03	≤0.08	≤0.30	≥0.02	≤0.30	≤0.01	≤0.04	≤0.02
	13CrMo4-5	0.10-0.17	≤0.35	0.40-0.70	≤0.025	≤0.020	0.70-1.15	0.40-0.60	≤0.30	≤0.04	≤0.30	\	\	\
	10CrMo9-10	0.08-0.14	≤0.50	0.30-.070	≤0.025	≤0.020	2.00-2.50	0.90-1.10	≤0.30	≤0.04	≤0.30	\	\	\

机械性能: Mechanical Properties:

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

机械结构管
MECHANICAL TUBE

标准 Standard:

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

用途 Application:

机械、汽车及其它零部件用无缝钢管
It is used for machine,automobile and other mechanical accessory purposes .

化学成分: Chemical Composition:

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



锅炉、过热器和换热器管
BOILER TUBE

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



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

主要生产钢管牌号 Main Steel Tube Grade:
A213T11、A213T12、A213T22等（etc）
经协商，也可供应其它牌号的钢管。
Other grade can also be provided after consulting with customers.

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

标准 Standard	牌号 Grade	化学成分 Chemical Composition(%)									机械性能 Mechanical Properties		
		C	Si	Mn	P、S	Cr	Mo	V	Cu	Ni	抗拉强度(MPa) Tensile Strength	屈服强度(MPa) Yield Strength	伸长率(%) Elongation
ASTM A213	T11	0.05~0.15	0.50~1.00	0.30~0.60	≤0.025	1.00~1.50	0.44~0.65	/	/	/	≥415	≥170	≥30
	T12	0.05~0.15	≤0.50	0.30~0.61	≤0.025	0.80~1.25	044~0.65	/	/	/	≥415	≥205	≥30
	T22	0.05~0.15	≤0.50	0.30~0.60	≤0.025	1.90~2.60	0.87~1.13	/	/	/	≥415	≥205	≥30

锅炉、过热器管
BOILER TUBE

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



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

主要生产钢管牌号 Main Steel Tube Grade:
A210A1、A210C等（etc）
经协商，也可供应其它牌号的钢管。
Other grade can also be provided after consulting with customers.

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

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

产品简介 PRODUCTS INTRODUCTION

ASME/ASTM 标准 ASME/ASTM STANDARD

锅炉管
BOILER TUBE



标准 Standard:

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

用途 Application:

适用于高压用最小壁厚的无缝碳素钢锅炉及过热器用钢管。

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

主要生产钢管牌号 Main Steel Tube Grade:

A192

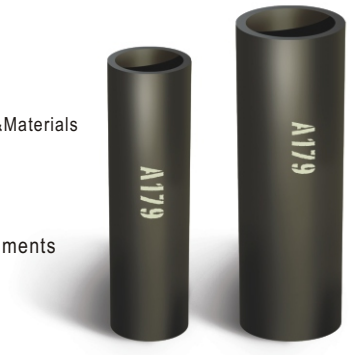
经协商，也可供应其它牌号的钢管。

Other grade can also be provided after consulting with customers.

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

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

换热器、冷凝器管
BOILER TUBE



标准 Standard:

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

用途 Application:

适用于管式换热器、冷凝器及类似传热设备用钢管。

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

主要生产钢管牌号 Main Steel Tube Grade: A179

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

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

产品简介 PRODUCTS INTRODUCTION

ASME/ASTM 标准 ASME/ASTM STANDARD

管道管
TUBE FOR PIPELINES



标准 Standard:

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

用途 Application:

适用于弯曲、卷边及类似的成形加工。
It is used for the machining for bending, border--coiling and similar shape forming.

主要生产钢管牌号 Main Steel Tube Grade:

A106A、A106B、A106C
经协商，也可供应其它牌号的钢管。
Other grade can also be provided after consulting with customers.

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

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

一般用途管
BLACK STEEL PIPE



标准 Standard:

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

用途 Application:

适用于作受力及承压件,也可以用于一般用途的蒸汽、水、气体及空气管线。
It is applied as pressed and forced parts and as pipeline for steam,water,gas and atmosphere delivery.

主要生产钢管牌号 Main Steel Tube Grade:

A53A、A53B等（etc）。
经协商，也可供应其它牌号的钢管。
Other grade can also be provided after consulting with customers.

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

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

不锈钢管
STAINLESS STEEL PIPE

标准 Standard:

ASTM A312/A312M 05a----------美国材料和试验协会标准Standard of American Society for Testing & Materials
ASTM A269 04----------美国材料和试验协会标准Standard of American Society for Testing & Materials

用途 Application:

ASTM A269 04适用于一般耐腐蚀和低温或高温环境
ASTM A269 04 is used for general corrosive and low-or high-temperature condition service.
ASTM A312/A312M 05a 适用于高温和一般的腐蚀环境
ASTM A312/A312M 05a is used for high-temperature and general corrosive condition service.

主要生产钢管牌号Main Steel Tube Grade:

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

化学成分: Chemical Composition:

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

机械性能: Mechanical Properties:

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

压力管道、高压管道、高温管道用碳素钢管

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

标准 Standard:

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

用途 Application:

JIS G3454适用于在350℃以下使用的压力管道用碳素钢管；
It is usd as Carbon Steel Pipe for Pressure Pipeline in the condition under 350℃ temperature.

JIS G3455 适用于在350℃以下使用的工作压力高的管道用碳素钢管；
It is usd as Carbon Steel Pipe for the pipeline which in the temperature less than 350℃ and high working pressure.

JIS G3456适用于在超过350℃下使用的管道用碳素钢管。
It is usd as Carbon Steel Pipeline in the condition that over 350℃ .

主要生产钢管牌号 Main Steel Tube Grade:

STPG370 STS 370 STPT370

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

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



产品简介 PRODUCTS INTRODUCTION

JIS 标准 JIS STANDARDS

机械管
MECHANICAL TUBE

标准 Standard:

JIS G3445

用途 Application:

适用于机械、汽车、自行车、家具、器具及其他机械零件用碳素钢管

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

主要生产钢管牌号 Main Steel Tube Grade:

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

化学成分: Chemical Composition:

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

机械性能: Mechanical Properties:

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

高压容器、气瓶管
TUBES FOR HIGH PRESSURE GAS CYLINDER

标准 Standard:

JIS G3429

用途 Application:

使用于制造高压容器用无缝钢管

It is used to manufacture high pressure gas cylinder.

主要生产钢管牌号 Main Steel Tube Grade:

STH11 STH12 STH21 STH22 STH31

化学成分: Chemical Composition:

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

锅炉、换热器用钢管
BOILER AND HEAT EXCHANGER STEEL TUBE

标准 Standard:
JIS G3461
JIS G3462

用途 Application:
适用于锅炉和管内外热交换器钢管
It is used for boiler and heat exchanger inside & outside tube.

主要生产钢管牌号 Main Steel Tube Grade:
STB340、STB410、STB510、STBA12、STBA13、STBA20、STBA22、STBA24

化学成分: Chemical Composition:

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

机械性能: Mechanical Properties:

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

产品简介 PRODUCTS INTRODUCTION

DIN 标准 DIN STANDARDS

管道、容器、设备结构用管
STEEL PIPE FOR PIPELINE、VESSEL AND EQUIPMENT STRUCTURE



标准 Standard:

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

用途 Application:

适用于制造管道、容器、设备、管件及钢结构。

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

主要生产钢管牌号 Main Steel Tube Grade:

St37.0、 St44.0、St52.0

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

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

锅炉管
BOILER TUBE



标准 Standard:

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

用途 Application:

适用于锅炉行业用管道。

It is used for the pipelines of boiler industry.

主要生产钢管牌号 Main Steel Tube Grade:

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

经协商，也可供应其它牌号的钢管。

Other grade can also be provided after consulting with customers.

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

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

耐腐蚀专用管
PIPE FOR CORROSION RESISTANT

(1) 抗硫（S、H_2S）腐蚀专用管07Cr2AlMo
SULFUR CORROSION(S、H_2S)RESISTANT STEEL PIPE TO 07Cr2AlMo

标准 Standard:

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

用途Application:

用于H_2S和Cl^-应力腐蚀环境下的压力容器管束专用无缝钢管。
It is used for the special pipes for pressure vessel in the condition of H_2S and Cl^-stress corraded



主要生产钢管牌号 Main Steel Tube Grade:

07Cr2AlMo

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

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

(2) 抗海水（Cl^-）腐蚀专用管 09CrMoAl
SEA WATER CORROSION(Cl^-)RESISTANT SPECIAL PIPE TO 09CrMoAl

标准 Standard:

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

用途Application:

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



主要生产钢管牌号 Main Steel Tube Grade:

09CrMoAl

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

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

异型管、波纹管、螺纹管
SPECIAL-SHAPE PIPES

(1)换热器管束用U型无缝钢管
U-SHAPED SEAMLESS STEEL TUBES FOR TUBE-BUNDLE HEAT EXCHANGER



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

用途 Application:
用于锅炉低中高压换热器及石化行业用换热器。
For heat exchanger of low/ medium/high boilers and petrochemical industry.

主要生产钢管牌号 Main Steel Tube Grade:
10、20、20G、15CrMoG、12Cr1MoVG、07Cr2AlMo、09CrMoAl、1Cr18Ni9Ti、0Cr18Ni9等(etc)。

化学成分、机械性能 Chemical Composition & Mechanical Properties
参照相应的国家标准或国外标准。
To reference corresponding National Standard or Foreign Standard.

(2)换热器用波纹管、螺旋槽管
CORRUGA TED&HELICAL GROOVE SEAMLESS STEEL TUBES FOR HEAT EXCHANGER



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

用途 Application:
用于石油化工行业换热器。
For heat exchanger of petrochemical industry.

主要生产钢管牌号 Main Steel Tube Grade:
10、20、20G、1Cr18Ni9Ti、0Cr18Ni9、09CrMoAl、07Cr2AlMo等(etc)。
经协商，也可供应其它牌号的钢管。
Other grades can also be provided after consulting with customers.

化学成分、机械性能 Chemical Composition & Mechanical Properties
参照相应的国家标准或国外标准。
To reference corresponding National Standard or Foreign Standard.

特殊合金钢管
SPECIAL ALLOY STEEL PIPE

合金管 09MnD
ALLOY STEEL PIPE TO 09MnD

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

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



主要生产钢管牌号 Main Steel Tube Grade:
09MnD

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

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

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

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

用途 Application:
广泛应用于电厂和炼油厂在制造高含硫烟气中工作的省煤器、空气预热器、热交换器和蒸发器等用以抵御含硫烟气结露腐蚀。

It is widely applied in power industries,refinery industries,It′s used for coal-saving machine,air-warm-up machine,heat exchanger and evaporator,etc that in the condition that with much sulfur smoke in the air, because it can resist the corrosion of sulfured smoke and gas.



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

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

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

锅炉管
BOILER TUBE

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

标准 Standard:
GB3087----------国家标准 National Standard

用途 Application:
用于中低压锅炉（工作压力一般不大于5.88MPa，工作温度在450℃以下）的受热面管子、集箱及蒸汽管道。
For manufacturing heating-pipelines,containers,steaming pipelines of low or medium pressure boilers(P≤5.88MPa,T≤450℃)

主要生产钢管牌号 Main Steel Tube Grade:
10、20
经协商，也可供应其它牌号的钢管。
Other grade can also be provided after consulting with customers.

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

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



锅炉用无缝钢管
SEAMLESS STEEL TUBES AND PIPES FOR BOILER

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

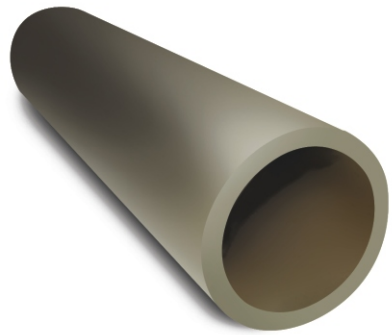
标准 Standard:
GB5310----------国家标准 National Standard

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

主要生产钢管牌号 Main Steel Tube Grade:
20G、20MnG、15MoG、15CrMoG、12Cr2MoG、12Cr1MoVG等（etc）。
经协商，也可供应其它牌号的钢管。
Other grade can also be provided after consulting with customers.

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

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



产品简介 PRODUCTS INTRODUCTION

GB 标准 NATIONAL STANDARDS

石油裂化管
TUBES FOR PETROLEUM CRACKING

标准 Standard:

GB9948----------国家标准 National Standard

用途 Application:

适用于石油精炼厂的炉管、热交换器管和管道用无缝钢管。

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



主要生产钢管牌号 Main Steel Tube Grade:

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

经协商，也可供应其它牌号的钢管。

Other grade can also be provided after consulting with customers.

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

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

化肥管
TUBES FOR CHEMICAL FERTILIZER EQUIPMENTS

标准 Standard:

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

用途 Application:

用于高压化肥设备和管道用优质碳素钢、低合金钢和合金钢无缝钢管。

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



主要生产钢管牌号 Main Steel Tube Grade:

20 16Mn/Q345等(etc)

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

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

产品简介 PRODUCTS INTRODUCTION

GB 标准 NATIONAL STANDARDS

机械结构管
STRUCTURAL TUBE

标准 Standard:

GB/T8162----------国家标准 National Standard

用途 Application:

适用于一般结构，机械结构用无缝钢管。

For common structures and mechanical structures



主要生产钢管牌号 Main Steel Tube Grade:

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

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

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

输送流体管
TUBE FOR CONVEYANCE OF FLUID

标准 Standard:

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

用途 Application:

用于石油、天然气输送以及其它一般流体输送。

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



主要生产钢管牌号 Main Steel Tube Grade:

10、20、Q345等（etc）。

经协商，也可供应其它牌号的钢管。

Other grade can also be provided after consulting with customers.

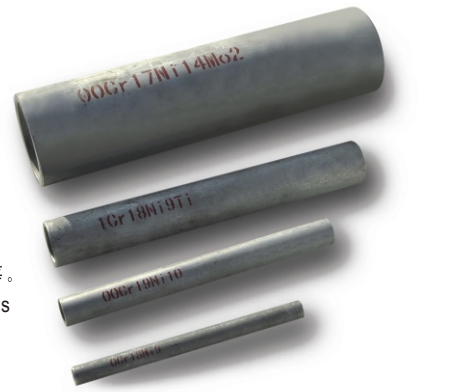
化学成分、机械性能
Chemical Composition & Mechanical Properties

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

产品简介 PRODUCTS INTRODUCTION

GB 标准 NATIONAL STANDARDS

不锈钢管
STAINLESS STEEL PIPE



标准 Standard:

GB/T14975----------国家标准 National Standard
GB/T14976----------国家标准 National Standard
GB13296----------国家标准 National Standard

用途 Application:

用于机械结构、流体管道、锅炉过热器、热交换器、冷凝器、催化管等。
For manufacture of mechanical structure、fluid tubes、superheaters of boiler、heat exchangers、condenser、catalytic tubes etc.

主要生产钢管牌号 Main Steel Tube Grade:

0Cr18Ni9、0Cr25Ni20、0Cr18Ni10Ti、00Cr17Ni14Mo2、0Cr18Ni12Mo2Ti、1Cr18Ni9Ti等（etc）。
经协商，也可供应其它牌号的钢管。
Other grade can also be provided after consulting with customers.

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

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

精密钢管
PRECISION TUBE



标准 Standard:

GB/T3639----------国家标准 National Standard
GB/T8713----------国家标准 National Standard

用途 Application:

用于机械结构、液压设备、液压和气动缸筒的制造。
For manufacture of mechanical structure、hydraulic pressure equipment、hydraulic pressure and cylinder.

主要生产钢管牌号 Main Steel Tube Grade:

10、20、35、45等（etc）。
经协商，也可供应其它牌号的钢管。Other grade can also be provided after consulting with customers.

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

化学成分参照相应的国家标准或国外标准。
Chemical composition reference for corresponding national standard or foreign standard.

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

液压支柱管
TUBE FOR HYDRAULIC PILLAR SERVICE

标准 Standard:
GB/T17396

用途 Application:
使用于制造煤矿液压支架和支柱用无缝钢管
It is used for hydraulic pillars for manufacturing colliery.

主要生产钢管牌号 Main Steel Tube Grade:
20、35、45、27SiMn

化学成分: Chemical Composition

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

机械性能: Mechanical Properties:

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

气瓶管
TUBE FOR GAS CYLINDER

标准 Standard:
GB 18248

用途 Application:
使用于制造高压气瓶用无缝钢管
It is used for manufacturing high pressure gas cylinder.

主要生产钢管牌号 Main Steel Tube Grade:
37Mn 34Mn2V 30CrMo 35CrMo

化学成分: Chemical Composition

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

机械性能: Mechanical Properties:

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

石油天然气工业管线钢管
PIPELINE FOR PETROLEUM AND NATURAL GAS

标准 Standard
GB/T 9711　国家标准 National Standard
ISO 3183　国际标准 International Standard

用途 Application
用于石油、天然气工业中的气、水、油输送。
It is used for conveying gas, water, and petroleum for oil and natural gas industries.

主要牌号 Main Steel Tube Grade
L245、L290、L320、L360、L390、L415、L450等(etc)

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

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

产品简介 PRODUCTS INTRODUCTION

船用标准 STANDARDS FOR SHIP

船用管
PIPE FOR SHIP-BUILDING

标准 Standard:

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

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

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

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

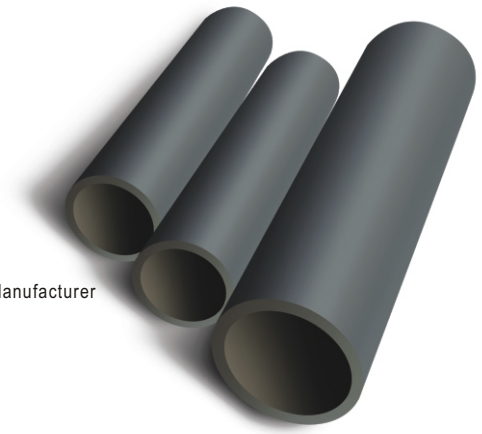
美国船级社(ABS)规范----------美国船级社(ABS)
ABS Regulations----------American Bureau of Shipping

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

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

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

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



用途 Application:

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

主要生产钢管钢级、牌号Main Steel Tube Grade

320、360、410、00Cr17Ni14Mo2、0Cr18Ni9Ti等（etc）。
经协商，也可供应其它钢级、牌号的钢管。
Other grade can also be provided after consulting with customers.

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

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

产品简介 PRODUCTS INTRODUCTION

汽车用管 TUBE FOR AUTOMOBILE

汽车车轴、车桥、轴套管
TUBE FOR AUTOMOBILE

标准 Standard

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

用途 Application

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

主要牌号 Main Steel Tube Grade

20Mn2、SAE1527、45、45Mn2等(etc)

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

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

