



BRAPEGAS



BRAPEGAS

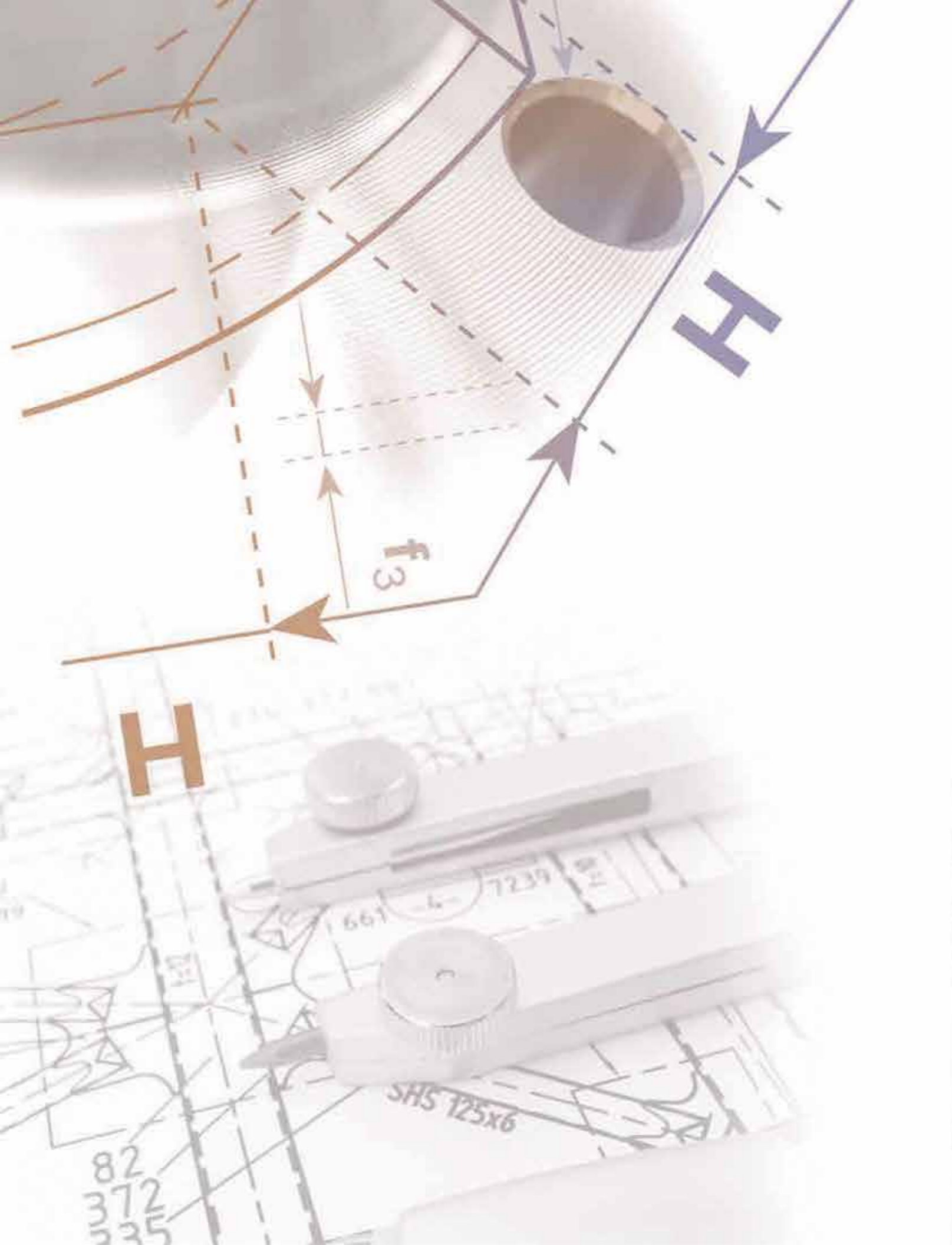
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BRAPEGAS

A B O U T U S

Our philosophy

At Brapegas, we have one simple goal: We want to understand our client's needs and offer the best solutions to meet those needs. We achieve this goal by excelling in three basic areas: quality, customer service and employee development.

In terms of quality, Brapegas follows the concept of continuous improvement of products as outlined in ISO 9001-2008. In addition, our standards are consistent with ISO 14001 and the 2004 Environmental Management System. We are certified with AP15FCT, AP15L, CPD, AD 2000, and PED, as well as shipping class certifications DNV, LA, BV and CSS.

Our commitment to quality is also reflected in our dedication to research and development. Our research center is 3,000 square meters, and we utilize 300 engineers and technicians with specialties in a wide variety of disciplines. This includes five senior engineers who are professors, two special term academicians from the Chinese Academy of Engineering, and 20 senior engineers. Our team is able to conduct research using any of the 50 propriety pieces of equipment we have designed.

Brapegas is also proud to have participated in China's Torch Program, which is run by the Ministry of Science and Technology.

The program is one of the most successful in the world in terms of providing financing and other support for entrepreneurial companies.

As a result, we have worked on many high-end municipal projects, and we also now hold many intellectual patents. In addition, we were the first entrepreneurial enterprise established in the province of Jiangsu.

Regarding customer service, we create a partnership with you and are available to you before, during and after the production process. In addition, we are always analyzing our customer service processes so we can continually improve them.

We provide complete supply chain management, including ordering a contrast review, support from manufacture to delivery, and prompt attention to any claims you may file.

You might be surprised to see employee development on our list of priorities, but our employees have been our top priority since day one. The employees are the very foundation of the company, and if they are happy and feel they have opportunities for advancement, they will produce exceptional work for our customers. It's that simple.

Who we are

Brapegas is one of the world's premiere manufacturers of seamless pipe. The company was founded in 2003, and is headquartered in Yangzhou, China. Our annual production capacity is 700,000 tons of seamless steel pipes and tubes, ranging from 19 mm to 1067 mm in OD and from 2.5 mm to 50 mm in WT.

We produce the following types of pipe: carbon-steel, micro-alloy steel, chrome molybdenum, chrome-nickel super alloy, and stainless steel. Our pipes can be used in low temperature, high temperature and corrosive (high sulfur) environments.

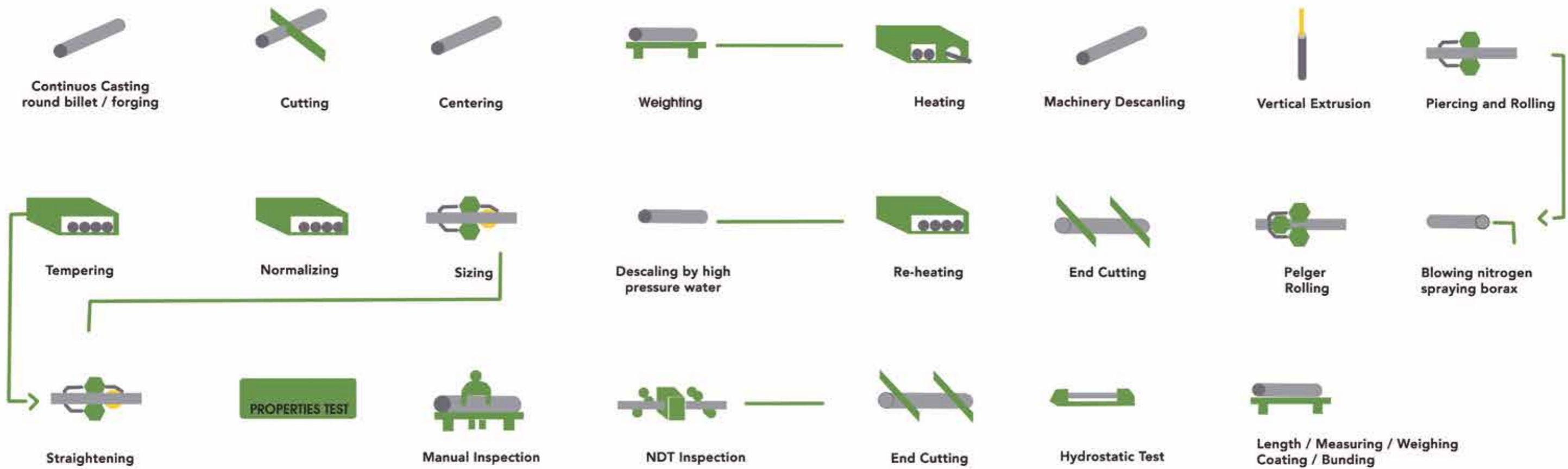
Brapegas products are widely used in the following industries: ultra supercritical power generation, oil and gas, transportation, chemical, ocean engineering, and machine manufacturing.



BRAPEGAS

Φ720 LARGE

DIAMETER PROCESS



PRODUCTION EQUIPMENTS



Large-scale combined roll-piercing mill



Pelger rolling mill



Pelger rolling mill



Re-heating furnace



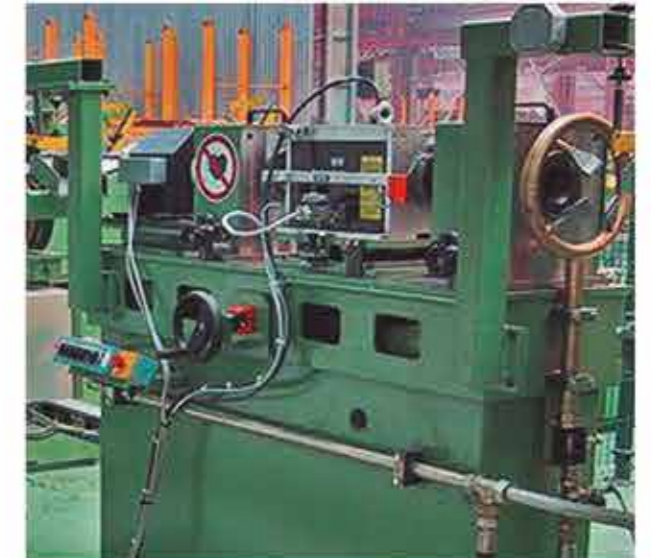
Ring heating furnace



Heat treatment furnace



Hydrostatic Test Machine



Joint inspection unit of ultrasonic eddy current

SALES NETWORK



OUR CUSTOMERS

PetroChina, Sinopec, CNOOC, IOC, SONCO, KOC, CRCC, Oman Oil, ENOC, Harbin Electric, Shanghai Electric, DEC, Hyundai, BHEL, L&T, ThyssenKrupp, Daewoo, Alstom, PDVSA and Suncor.

LINE PIPE

STANDARD
API Spec 5L
GB/T9711-2011

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

GRADE

Standard	Grade	Remarks
API5L PSL1	B, X42, X46, X52, X56, X60, X, 65, X70	
API5L PSL2	BN, X42N, X46N, X52N, X56N, X60N, X65Q, X70Q, X80Q, X90Q, X100Q	
API5L PSL2 H	BNS, BQS, X42NS, X42QS, X46NS, X46QS, X52NS, X25QS, X56QS, X60QS, X65QS, X70QS	
API5L PSL2 J	BNO, BQO, X42NO, X42QO, X46NO, X46QO, X52NO, X52QO, X56QO, X60QO, X65QO, X70QO, X80QO, X90QO, X100QO	
GB/T9711	L245N, L290N, L320N, L360N, L390N, L475N, L450Q, L485Q, L555Q	

SIZE

DN	INCH	ASME	NOMINAL WALL THICKNESS													
			SCH10	SCH20	SCH30	STD	SCH40	SCH50	XS	SCH80	SCH100	SCH120	SCH140	SCH160	XXS	
15	1/2"	21.3	2.11		2.41	2.77	2.77		3.73	3.73					4.78	7.47
20	3/4"	26.7	2.11		2.41	2.87	2.87		3.91	3.91					5.56	7.82
25	1"	33.4	2.77		2.9	3.38	3.38		4.55	4.55					6.35	9.09
32	1 1/4"	42.2	2.77		2.97	3.56	3.56		4.85	4.85					6.35	9.7
40	1 1/2"	48.3	2.77		3.18	3.68	3.68		5.08	5.08					7.14	10.15
50	2"	60.3	2.77		3.18	3.91	3.91		5.54	5.54					8.74	11.07
65	2 1/2"	73	3.05		4.78	5.16	5.16		7.01	7.01					9.53	14.02
80	3"	88.9	3.05		4.78	5.49	5.49		7.62	7.62					11.13	15.25
90	3 1/2"	101.6	3.05		4.78	5.74	5.74		8.08	8.08						
100	4"	114.3	3.05		4.78	6.02	6.02		8.56	8.56			11.13		13.48	17.12
125	5"	141.3	3.4			6.55	6.55		9.53	9.53			12.7		15.88	19.05
150	6"	168.3	3.4			7.11	7.11		10.97	10.97			14.27		18.26	21.95
200	8"	219.1	3.78	6.35	7.04	8.18	8.18	10.31	12.7	12.7	15.09	18.26	20.82	23.01	22.23	

NOMINAL PIPE SIZE	OUT-SIDE DIAMETER	NOMINAL WALL THICKNESS														
		273	4.19	6.35	7.8	9.27	9.27	12.7	12.7	15.09	18.26	21.44	25.4	28.58	25.4	
250	10"															
300	12"	323.8	4.57	6.35	8.38	9.53	10.31	14.27	12.7	17.48	21.44	25.4	28.58	33.32	25.4	
350	14"	355.6	6.35	7.92	9.53	9.53	11.13	15.09	12.7	19.05	23.83	27.79	31.75	35.71		
400	16"	406.4	6.35	7.92	9.53	9.53	12.7	16.66	12.7	21.44	26.19	30.96	36.53	40.19		
450	18"	457.2	6.35	7.92	11.13	9.53	14.27	19.05	12.7	23.83	39.36	34.93	39.67	45.24		
500	20"	508	6.35	9.53	12.7	9.53	15.09	20.62	12.7	16.19	32.54	38.1	44.45	50.01		
550	22"	558.8	6.35	9.53	12.7	9.53		22.23	12.7	28.58	34.93	41.28	47.63	53.98		
600	24"	609.6	6.35	9.53	14.27	9.53	17.48	24.61	12.7	30.96	38.89	46.02	52.37	59.54		
650	26"	660.4	7.92	12.7		9.53			12.7							
700	28"	711.2	7.92	12.7	15.88	9.53			12.7							
750	30"	762	7.92	12.7	15.88	9.53			12.7							
800	32"	812.8	7.92	12.7	15.88	9.53	17.48		12.7							
850	34"	863.6	7.92	12.7	15.88	9.53	17.48		12.7							
900	36"	914.4	7.92	12.7	15.88	9.53	19.05		12.7							
950	38"	965.2				9.53			12.7							
1000	40"	1016				9.53			12.7							
1050	42"	1066.8														

NOTE:
Other sizes can be provided after consulting with customers.

ACID RESISTANCE OF LINE PIPE

BOILER PIPE FOR POWER & ENERGY

STANDARD
API SPEC SL Annex H
GB/T9711 I-tFOOOO

USES

High quality acid-resistant pipe can be used to contain H1S, CO2, H2S + CO2, chloride ions and other corrosive environments. The use of clean steel production and parathion low residual elements effectively control the oxidation-prone and other alloying elements in steel and improve performance at the same time. This ensures the strength and toughness of the steel, corrosion resistance, mechanical properties, hardness, fracture toughness, fatigue resistance and solder-ability. The characteristics of crack have special qualities with applications for ground transportation pipelines as well as transportation and seabed pipelines.

GRADE

Standard	Grade
API SPEC 5L Annex H	BNS, BQS, Z42NS, X42QS, X46NS, X46QS, X52NS, X53QS, X56QS, X60QS, X65QS, X70QS
GB/T9711	L245NS, L290NA, L360NS, L245QS, L290QS, L320QS, L360QS, L390QS, L485QS, L485QSL555QS

ANTI-CORROSION TEST

Anti-corrosion Test	Test methods	Severan options	Sample size	Threshold stress	Test temp	Test objectives
	NACE TM0284-2011		100 x 20 x T	-	96	CSR ≤ 2% CLR ≤ 5%
	NACE TM0177-2005		3.81	SYMS x 72%	720	No fracture
			6.35	SYMS x 80%	720	No fracture
	NACE TM0177-2005			SYMS x 80%	720	No fracture

STANDARD
ASME SA53\SA106\SA 179\SA192\SA210
ASME SA213\SA333\SA335
EN1021s-2
DIN17175
JIS G 3461\3462
GB5310-tF0000
GB3087

USES

For manufacturing water wall tubes, superheater tubes, reheater tubes, headers and pipelines of boilers.

GRADE

Standard	Grade
GB3087	10, 20
GB5310	20G, 20MnG, 25MnG, 15CrMoG, 12Cr1MoVG, 12Cr2MoG, 12Cr2MoWVTiB, 10Cr9MoW2VNbBN
ASME SA53	SA53A, SA 53B
ASME SA106	SA106B, SA106C
ASME SA179	SA179
ASME SA192	SA192
ASME SA210	SA210A1, SA210C
ASME SA213	T11, T12, T22, T23, T91
ASME SA333	Grade 1, Grade 6
ASME SA335	P5, Pg, P11, P12, P22, P23, P36,P91, P92
DIN17175	ST35.8, ST45.8, 15Mo3, 13CrMo44, 10CrMo9-10
EN10216-2	P195GH, P235GH, P265GH, 16Mo3, 13CrMo4-5, 10CrMo9-10, X10CrMoVNb9-1, X10cRWMoVNb9-2, 15NiCuMoNb5-6-4
JIS G 3461	STB340, STB410, STB510
JIS G 3462	STBA 12, STBA 13, STBA 20, STBA 23, STBA 24, STBA 26





GAS CYLINDER

SIZE RANGE

inch	mm	2	2.8	3.6	4.5	5.5	7.1	9.5	12.5	13	14-16	17-19	20-25	31-60	61-70	81-90	91-130
0.840	21.3																
1.050	26.7																
1.315	33.4																
1.660	42.2																
1.900	48.3																
2.375	60.3																
2.875	73.0																
3.500	88.9																
4.000	101.6																
4.500	114.3																
5.563	141.3																
6.625	168.3																
8.625	219.1																
10.750	273.0																
12.750	323.9																
14.000	355.6																
16.000	406.4																
18.000	457.2																
20.000	508.0																
22.000	558.8																
24.000	609.6																
26.000	660.4																
28.000	711.2																
30.000	762.0																
32.000	813.0																
34.000	864.0																
36.000	914.0																
38.000	965.0																

Note: Other size can be provided after consulting with customers.

STANDARD
 GB18248
 GB28884-
 ASME SA372
 ASTM A519

USES
 For manufacturing gas cylinders

GRADE

Standard	Grade
GB18248	37Mn, 34Mn2V, 30CrMo, 35CrMo, 34CrMo4
GB28884	30CrMoE(4130X), 42CrMoE(4142)
ASME SA372	Grade G/H/J Class 55/65/70
ASTM A519	4130, 4140

SIZE

inch	mm	2	2.8	3.6	4.5	5.5	7.1	9.5	12.5	13	14-16	17-19	20-25	31-60
0.840	21.3													
1.050	26.7													
1.315	33.4													
1.660	42.2													
1.900	48.3													
2.375	60.3													
2.875	73.0													
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16.000	406.4													
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22.000	558.8													
24.000	609.6													
26.000	660.4													
28.000	711.2													
30.000	762.0													
32.000	813.0													
34.000	864.0													
36.000	914.0													
38.000	965.0													

HOT - ROLLED

SEAMLESS PIPES FOR MECHANICAL APPLICATIONS

OCTG

STANDARD
T8162-
N10210/10297
ASTM A519 -

USES
for manufacture of pipelines, cylinders, equipment

GRADE

Standard	Grade
GB/T8162	10, 20, 45, Q235/Q295/Q345/Q390/Q420/Q490, 30CrMo, 35CrMo, 42CrMo
EN10210	S235JRH, S275J0H, S275J2H, S355J0H, S355J2H
EN10297	E235, E275, E315, E355, E470, E420J2, 30CrMo4, 34CrMo4, 42CeMo4
ASTM A519	1010, 1016, 1018, 1020, 1026, 1030, 1518, 1524, 1541, 4130, 4140

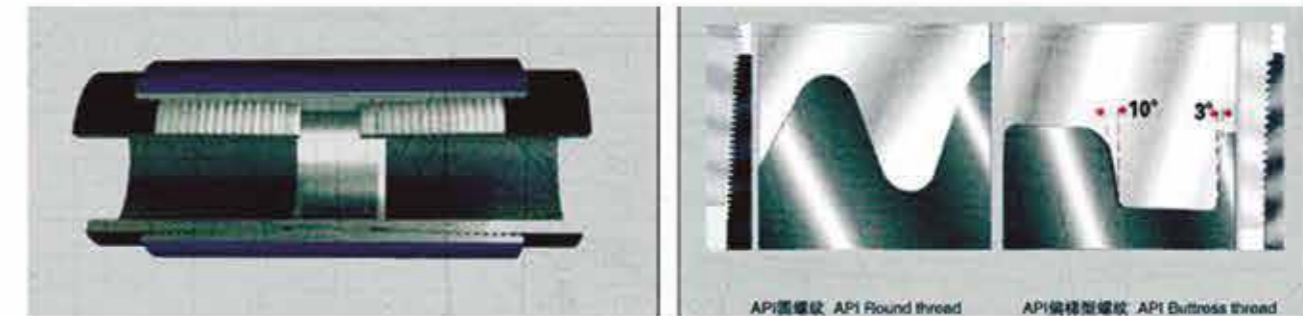
SIZE

inch	mm	2"	2.6"	3.4"	4.0"	5.0"	7.1"	8.6"	12.5"	13"	14-16"	17-19"	20-28"	31-60"	61-70"	81-90"	91-100"
0.840	21.3																
1.050	26.7																
1.315	33.4																
1.660	42.2																
1.900	48.3																
2.375	60.3																
2.875	73.0																
3.500	88.9																
4.000	101.6																
4.500	114.3																
5.563	141.3																
6.025	153.0																
6.625	168.3																
8.625	219.1																
10.750	273.0																
12.750	323.9																
14.000	355.6																
16.000	406.4																
18.000	457.2																
20.000	508.0																
22.000	558.8																
24.000	609.6																
26.000	660.4																
28.000	711.2																
30.000	762.0																
32.000	813.0																
34.000	864.0																
36.000	914.0																
38.000	965.0																

Note:
Other size can be provided after consulting with customers.

STANDARD
API SPEC SCT

USES
Tubing is used to extract petroleum and natural gas from a well.
Casing serves as the walls of a well



GRADE

Standard	Grade
API SCT	J55, K55, L80-1, N80Q, P110

SIZE - SIZE OD TUBING

Size	Linear Mass lb/ft		Outside diameter		wall thickness		Type of end-finish					
	Nominal	Exact	in	mm	in	mm	Grade					
							T&O	T&C	J-55	L-80-1	N-801	C-90
2 3/8"	4	--	2.375	60.33	0.167	4.24	PN	PN	PN	PN	PN	--
	4.6	4.7	2.375	60.33	0.19	4.83	PNU	PNU	PNU	PNU	PNU	PNU
	5.8	5.95	2.375	60.33	0.254	6.45	--	PNU	PNU	PNU	PNU	PNU
	6.6	--	2.375	60.33	0.295	7.49	--	P	--	P	P	--
	7.35	7.45	2.375	60.33	0.336	8.53	--	PU	--	PU	PU	--
2 7/8"	6.4	6.5	2.875	73.03	0.217	5.51	PNU	PNU	PNU	PNU	PNU	PNU
	7.8	7.9	2.875	73.03	0.276	7.01	--	PNU	PNU	PNU	PNU	PNU
	8.6	8.7	2.875	73.03	0.308	7.82	--	PNU	PNU	PNU	PNU	PNU
	9.35	9.45	2.875	73.03	0.34	8.64	--	PU	--	PU	PU	--
	10.5	--	2.875	73.03	0.392	9.96	--	P	--	P	P	--
11.5	--	2.875	73.03	0.44	11.18	--	P	--	P	P	--	

Size	Type of end-finish												
	Linear Mass lb/ft		Outside diameter		wall thickness		Grade						
	Non-upset	Ex. upset	In	mm	In	mm	J-55	L-80-1	N-801	C-90	T-95	P-110	
	T&C	T&C											
3 1/2"	7.7	--	3.5	88.9	0.216	5.49	PN	PN	PN	PN	PN	--	
	9.2	9.3	3.5	88.9	0.254	6.45	PNU	PNU	PNU	PNU	PNU	PNU	
	10.2	--	3.5	88.9	0.289	7.34	PN	PN	PN	PN	PN	--	
	12.7	12.95	3.5	88.9	0.375	9.52	--	PNU	PNU	PNU	PNU	PNU	
	14.3	--	3.5	88.9	0.43	10.92	--	P	--	P	P	--	
	15.5	--	3.5	88.9	0.478	12.09	--	P	--	P	P	--	
	17	--	3.5	88.9	0.53	13.46	--	P	--	P	P	--	
4"	9.5	--	4	101.6	0.226	5.74	PN	PN	PN	PN	PN	PU	
	--	11	4	101.6	0.282	6.65	PU	PU	PU	PU	PU	PU	
	13.2	--	4	101.6	0.33	8.38	--	P	--	P	P	--	
	16.1	--	4	101.6	0.415	10.54	--	P	--	P	P	--	
	18.9	--	4	101.6	0.5	12.7	--	P	--	P	P	--	
22.2	--	4	101.6	0.61	15.49	--	P	--	P	P	--		
4 1/2"	12.6	12.75	4.5	114.3	0.271	6.88	PNU	PNU	PNU	PNU	PNU	PNU	
	15.2	--	4.5	114.3	0.337	8.56	--	P	--	P	P	--	
	17	--	4.5	114.3	0.38	9.65	--	P	--	P	P	--	
	18.9	--	4.5	114.3	0.43	10.92	--	P	--	P	P	--	
	21.5	--	4.5	114.3	0.5	12.7	--	P	--	P	P	--	
	23.7	--	4.5	114.3	0.56	14.22	--	P	--	P	P	--	
26.1	--	4.5	114.3	0.63	16	--	P	--	P	P	--		

NON-UPSET T&C
EX- UPSET T&C
P-PLAN END
N-NON-UPSET THREADED AND COUPLED
U-UPSET THREADED AND COUPLED

SIZE OF CASING

Size	Type of end-finish												
	Linear Mass lb/ft		Outside diameter		wall thickness		Grade						
	lb/ft		In	mm	In	mm	J-55	L-80-1	N-801	C-90	P-110		
4 1/2"	9.5		4.5	114.3	0.205	5.21	PS	--	--	--	--		
	10.5		4.5	114.3	0.224	5.69	PSB	--	--	--	--		
	11.6		4.5	114.3	0.25	6.35	PSLB	PLB	PLB	PLB	PLB		
	13.5		4.5	114.3	0.29	7.37	--	PLB	PLB	PLB	PLB		
	15.1		4.5	114.3	0.337	8.56	--	--	--	--	PLB		
5"	11.5		5	127	0.22	5.59	PS	--	--	--	--		
	13		5	127	0.253	6.43	PSLB	--	--	--	--		
	15		5	127	0.296	7.52	PSLB	PLB	PLB	PLB	PLB		
	18		5	127	0.362	9.19	--	PLB	PLB	PLB	PLB		
	21.4		5	127	0.437	11.1	--	PLB	PLB	PLB	PLB		
	23.2		5	127	0.478	12.14	--	PLB	PLB	PLB	PLB		
24.1		5	127	0.5	12.7	--	PLB	PLB	PLB	PLB			

SIZE OF CASING

Size	Type of end-finish												
	Linear Mass lb/ft	Outside diameter		wall thickness		Grade							
		lb/ft	In	mm	In	mm	J-55	L-80-1	N-801	C-90	P-110		
5 1/2"	14	5.5	139.7	0.244	6.2	PS	--	--	--	--			
	15.5	5.5	139.7	0.275	6.98	PSLB	--	--	--	--			
	17	5.5	139.7	0.304	7.72	PSLB	PLB	PLB	PLB	PLB			
	20	5.5	139.7	0.361	9.17	--	PLB	PLB	PLB	PLB			
	23	5.5	139.7	0.415	10.54	--	PLB	PLB	PLB	PLB			
	26.8	5.5	139.7	0.5	12.7	--	--	--	P	--			
	29.7	5.5	139.7	0.562	14.27	--	--	--	P	--			
	32.6	5.5	139.7	0.625	15.87	--	--	--	P	--			
	35.3	5.5	139.7	0.687	17.45	--	--	--	P	--			
	38	5.5	139.7	0.75	19.05	--	--	--	P	--			
	40.5	5.5	139.7	0.812	20.62	--	--	--	P	--			
	43.1	5.5	139.7	0.875	22.23	--	--	--	P	--			
	6 5/8"	20	6.625	168.28	0.288	7.32	PSLB	--	--	--	--		
24		6.625	168.28	0.352	8.94	PSLB	PLB	PLB	PLB	PLB			
28		6.625	168.28	0.417	10.59	--	PLB	PLB	PLB	PLB			
32		6.625	168.28	0.475	12.06	--	PLB	PLB	PLB	PLB			
17		7	177.8	0.231	5.87	--	--	--	--	--			
20		7	177.8	0.272	6.91	PS	--	--	--	--			
23		7	177.8	0.317	8.05	PSLB	PLB	PLB	PLB	--			
26		7	177.8	0.362	9.19	PSLB	PLB	PLB	PLB	PLB			
29		7	177.8	0.408	10.36	--	PLB	PLB	PLB	PLB			
32		7	177.8	0.453	11.51	--	PLB	PLB	PLB	PLB			
7"	35	7	177.8	0.498	12.65	--	PLB	PLB	PLB	PLB			
	38	7	177.8	0.54	13.72	--	PLB	PLB	PLB	PLB			
	42.7	7	177.8	0.625	15.87	--	--	--	P	--			
	46.4	7	177.8	0.687	17.45	--	--	--	P	--			
	50.1	7	177.8	0.75	19.05	--	--	--	P	--			
	53.6	7	177.8	0.812	20.62	--	--	--	P	--			
	57.1	7	177.8	0.875	22.23	--	--	--	P	--			
	24	7.625	193.68	0.3	7.62	--	--	--	--	--			
	26.4	7.625	193.68	0.328	8.33	PSLB	PLB	PLB	PLB	PLB			
	29.7	7.625	193.68	0.375	9.53	--	PLB	PLB	PLB	PLB			
33.7	7.625	193.68	0.43	10.92	--	PLB	PLB	PLB	PLB				
39	7.625	193.68	0.5	12.7	--	PLB	PLB	PLB	PLB				
42.8	7.625	193.68	0.562	14.27	--	PLB	PLB	PLB	PLB				
45.3	7.625	193.68	0.595	15.11	--	PLB	PLB	PLB	PLB				
47.1	7.625	193.68	0.625	15.88	--	PLB	PLB	PLB	PLB				
51.2	7.625	193.68	0.687	17.45	--	--	--	P	--				
55.3	7.75	193.68	0.75	19.05	--	--	--	P	--				
7 3/4"	46.1	8.625	219.08	0.595	15.11	--	P	P	P	P			
8 5/8"	24	8.625	219.08	0.264	6.71	PS	--	--	--	--			
	28	8.625	219.08	0.304	7.72	--	--	--	--	--			
	32	8.625	219.08	0.352	8.94	PSLB	--	--	--	--			
	36	8.625	219.08	0.4	10.16	PSLB	PLB	PLB	PLB	PLB			
	8.625	219.08	0.45	11.43	--	PL	PLB	PLB	PLB	--			
	44	8.625	219.08	0.5	12.7	--	PLB	PLB	PLB	PLB			
49	9.625	244.28	0.557	14.15	--	PLB	PLB	PLB	--				

PIPE & TUBE FOR SHIPS

Size	Linear Mass lb/ft	Outside diameter		Wall thickness		Type of end finish				
		Grade								
		In	mm	In	mm	J-55	L-60-1	N-80-1	C-90	P-110
9 5/8"	32.3	9.625	244.48	0.312	7.92	--	--	--	--	--
	36	9.625	244.48	0.352	8.94	PSLB	--	--	--	--
	40	9.625	244.48	0.395	10.03	PSLB	PLB	PLB	PLB	PLB
	43.5	9.625	244.48	0.435	11.05	--	PLB	PLB	PLB	PLB
	47	9.625	244.48	0.472	11.99	--	PLB	PLB	PLB	PLB
	53.5	9.625	244.48	0.545	13.84	--	PLB	PLB	PLB	PLB
	58.4	9.625	244.48	0.595	15.11	--	PLB	PLB	PLB	--
	59.4	9.625	244.48	0.609	15.57	--	--	--	P	--
	64.9	9.625	244.48	0.672	17.07	--	--	--	P	--
	70.3	9.625	244.48	0.734	18.64	--	--	--	P	--
75.6	9.625	244.48	0.797	20.24	--	--	--	P	--	
10 3/4"	32.75	10.75	273.05	0.279	7.09	--	--	--	--	--
	40.5	10.75	273.05	0.35	8.89	PSB	--	--	--	--
	45.5	10.75	273.05	0.4	10.16	PSB	--	--	--	--
	51	10.75	273.05	0.45	11.43	PSB	PSB	PSB	PSB	PSB
	55.5	10.75	273.05	0.468	12.57	--	PSB	PSB	PSB	PSB
	60.7	10.75	273.05	0.545	13.84	--	--	--	PSB	PSB
	65.7	10.75	273.05	0.595	15.11	--	--	--	PSB	PSB
	73.2	10.75	273.05	0.672	17.07	--	--	--	P	--
	79.2	10.75	273.05	0.734	18.64	--	--	--	P	--
	85.3	10.75	273.05	0.797	20.24	--	--	--	P	--
11 3/4"	42	11.375	298.45	0.333	8.46	--	--	--	--	--
	47	11.375	298.45	0.375	9.53	PSB	--	--	--	--
	54	11.375	298.45	0.435	11.05	PSB	--	--	--	--
	65	11.375	298.45	0.534	13.56	--	P	P	P	P
	71	11.375	298.45	0.582	14.78	--	P	P	P	P
13 3/8"	48	13.375	339.73	0.33	8.38	--	--	--	--	--
	54.5	13.375	339.73	0.38	9.65	PSB	--	--	--	--
	61	13.375	339.73	0.43	10.92	PSB	--	--	--	--
	68	13.375	339.73	0.48	13.19	PSB	PSB	PSB	PSB	PSB
	72	13.375	339.73	0.514	13.06	--	PSB	PSB	PSB	PSB
16"	65	16	406.4	0.375	9.53	--	--	--	--	--
	75	16	406.4	0.438	11.13	PSB	--	--	--	--
	84	16	406.4	0.495	13.75	PSB	--	--	--	--
	109	16	406.4	0.656	16.66	P	P	P	P	P
18 5/8"	87.5	18.625	473.08	0.435	11.05	PSB	PLB	PLB	PLB	PLB
20"	94	20	508	0.438	11.13	PSLB	--	--	--	--
	106.5	20	508	0.5	12.7	PSLB	--	--	--	--
	133	20	508	0.635	16.13	PSLB	--	--	--	--

CLASSIFICATION OF SHIPS:

DNV/ BV KR
STANDARD
GB/ T5312
CHINA NATIONAL STANDARD

USES

For manufacturing boilers, superheaters and pressure system pipelines

GRADE

Standard	Grade
GB5312	320, 360, 410, 460, 490

CLASSIFICATION OF SHIPS

Classification of ships
DNV, LR, BV, KR, N, K

SIZE

OD	mm	WT mm														
		2	2.6	3.6	4.6	5.5	7.1	9.5	12.5	13	14-16	17-19	20-25	31-60		
0.840	21.3															
1.050	26.7															
1.315	33.4															
1.660	42.2															
1.900	48.3															
2.375	60.3															
2.875	73.0															
3.500	88.9															
4.000	101.6															
4.500	114.3															
5.563	141.3															
6.625	168.3															
8.625	219.1															
10.750	273.0															
12.750	323.9															
14.000	355.6															
18.000	406.4															
18.000	457.2															
20.000	508.0															
22.000	558.8															
24.000	609.6															
26.000	660.4															
28.000	711.2															

Note: Other size can be provided after consulting with customers.

