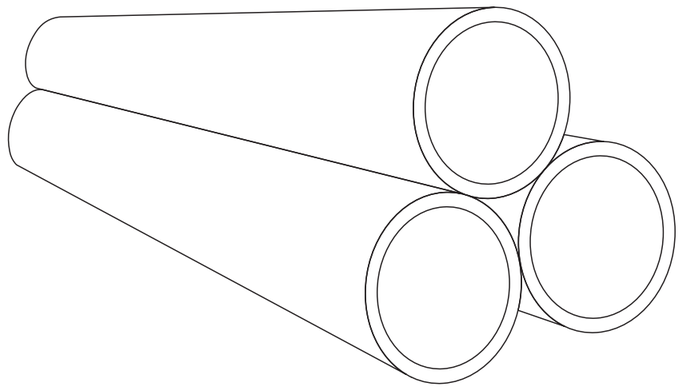

SEAMLESS STEEL PIPE CASING & TUBING

CATALOG

BALING STEEL

HUNAN BALING STEEL CO.,LTD.

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A Introduction

Company Profile

Hunan Baling Steel Co.,Ltd.specializing in the production of steel pipes and fittings cater to a range of international standards: GB,DIN,API,ASTM/ASME,GOST,EN,and JIS etc,committed to provide high-quality steel products and services to the world.Our products include seamless steel pipes,welded steel pipes,stainless steel pipes,and various pipe fittings.Meanwhile,we provide customization services to meet the different requirements of customers.Baling steel has unique geographical advantages,located China (Hunan) Pilot Free Trade Zone,totally connected the word,providing customers with a one-stop solution.

Hunan Baling Steel Co.,Ltd has a capacity to produce full range and a wide variety of quality seamless steel pipes including struture tubes, liquid pipes, boiler tubes, hydraulic pillar tubes, casing, line pipe, drill pipes, petroleum cracking tubes, and owns 3 sets of cold drawn seamless steel pipe production line, which can product pipes with diameter from 10.29mm to 114.3mm, and 2 sets of hot-rolledseamless steel pipe production line, which can product pipes with diameter from 114.3mm to 457.20mm,and 3 sets of hot-expanded seamless steel pipe production line, which can product pipes with diameter from 219.08mm to 914.40mm, besides, we have 4 continuous rolling equipments, which can product pipes with diameter from 60.3mm to 406.40mm. The steel products are widely used in aviation, aerospace, national defense equipment, oil exploration, engineering machinery, automobiles, railway rolling stock, new energy and other industries and fields. Its exporting markets cover over 100 global main regions and countries with ten million tons Iron and steel capability.

So far, Hunan Baling Steel Co.,Ltd is the predecessor of branch of China's oil pipeline and gas pipeline science research institute, as the most authoritative pipeline engineering research institute, consists of eight backbone institute and line pipe bureau postdoctoral research stations, oil and gas pipe is "safe" the main body of the national engineering laboratory on units, is China technology center and plumbing contractor as well as steel products supplier branch of China welding association director branch pipe welding unit, and a large number of sophisticated equipment and high-end talent in pipeline engineering materials, pipe welding technology, piping, special tools and pipeline construction technology, pipeline corrosion protection technology, piping nondestructive testing technology, pipeline safety evaluation, pipe information standard eight fields a leading domestic level, undertake and fulfill the country and provincial key technology research projects more than 200 items, has a number of national patent results at home and abroad, and key pipeline engineering application widely.

Quality Assurance

Nowadays, Hunan Baling Steel Co.,Ltd has been granted a number of acceptance certificates issued by several international and domestic institutions. Such as:

Official API Monogram(API)

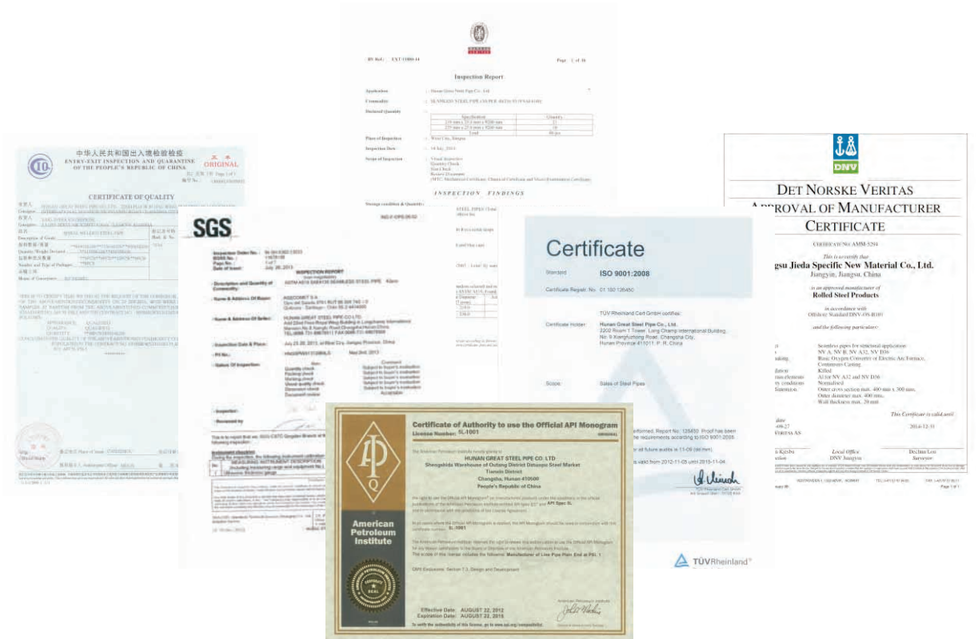
Quality Management System (ISO 9001)

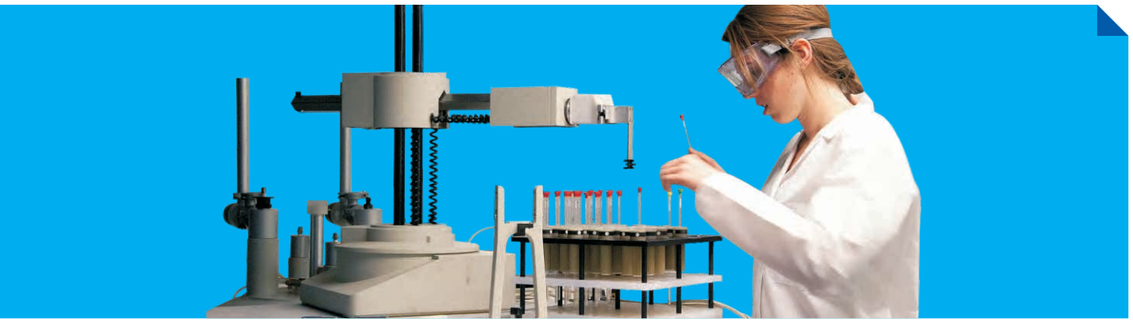
Det Norske Veritas (DNV)

Bureav Veritas (BV)

Societe Generale de Surveillance S.A. (SGS)

Certificate Of Quality (CIQ)





Inspection Centre

Hunan Baling Steel Co.,Ltd have quality inspection center to provide testing services to the production process and finished products. The laboratory has 14 sets of test equipment, including Flatting test units, Hydraulic test unit and the Ultrasonic flaw detection units used in the production workshop at the scene. It could detect 31 kinds of projects, including the metal material and coating material physical and chemical properties. A total of 8 kinds of standard to be used and standard software. Inspection and Quarantine has become a technology center in Liaoning Anshan Branch of metallic materials under the testing room.

Chemical Analysis

Main purpose of chemical analysis to determine whether the batch product accord with standard of the grade of steel products, and to the analysis of the results should be taken as the basis of the judgement of the batch product.Chemical composition analysis instrument is mainly used direct reading spectrometer, carbon sulfur analyzer to finish a lot of online product production testing tasks.

Hardness Test

The main purpose of the hardness test is to determine the applicability of the steel pipe, or steel pipefor a specific purpose by hardening or softening effect, Methods is including brinell, rockwell and vickers hardness index to measure the hardness.

Hydraulic Tester

Checking the quality of pipe connection leak test, check the vacuum pipe system maintain the performance of the vacuum test and based on the fire safety considerations for the leakage test, etc.

Metallurgical Micriscope

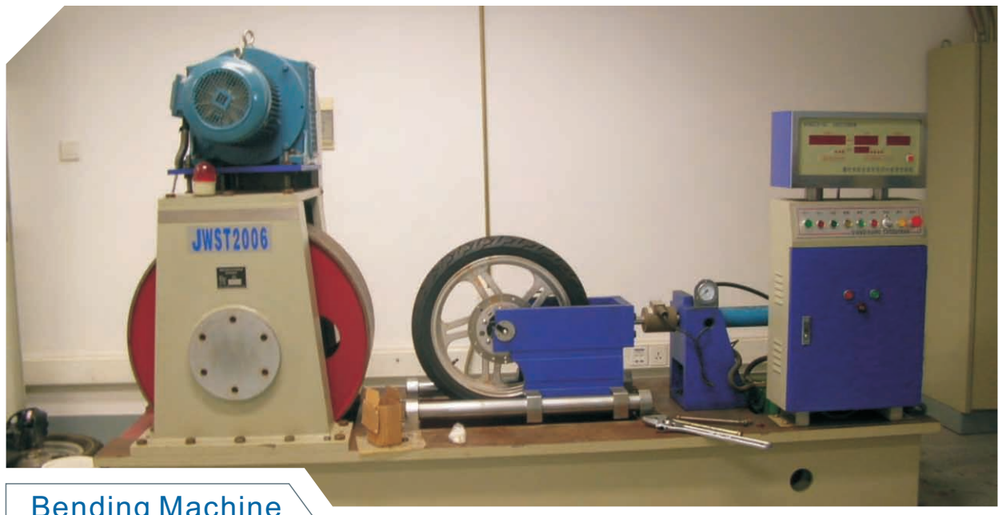
Test metal organization, such as rolling, forging and heat treatment processing leads to changes in microstructure, grain size inspection or the distribution of non-metallic inclusion and other groups, such as size and material damage judgment, etc.

Ultrasonic Flaw Detector

Ultrasonic flaw detection has high detection sensitivity, to crack in the steel pipe straight defects such as sensitive, also can detect non-metallic inclusions such as volume type of defect.

Impact Test Machine

Low temperature and impact test of low temperature tank, with impact testing machine is a kind of form a complete set of low temperature environment for the sample to a special test equipment, widely used in petroleum chemical industry, metallurgy, boiler, pressure vessel, steel, steel, metal, casting, pumps, valves, fasteners, vehicle, machinery manufacturing, aerospace and scientific research industry sectors such as physical and chemical test in low temperature.



Bending Machine

This machine test special plug lead and folding strength of wire.The sample test is fixed on the fixture, and add a certain load, test fixture swinging, examine the break rate after a certain number of times, or until all bolt can't electricity to check its total number of swing.The function of automatic counting, bending specimen is no electricity to break, and can automatically stop the operation.

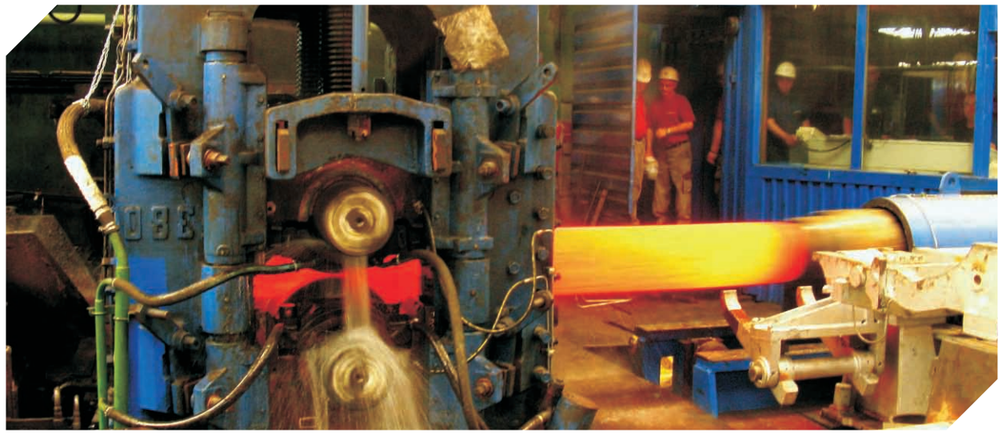
Factory & Production Line

At present, Hunan Baling Steel Co.,Ltd owns 3 sets of hot-rolled seamless steel pipe production line and 2 sets of hot-expanded seamless steel pipe production line with annual production capacity of 200,000 tons, the size range is from 73mm to 630mm. Its physical and chemical labs cab conduct various physical and chemical tests and experiments for steel pipes, and are equipped with eddy current flaw detectors, leakage fault detection and ultrasonic crack detectors etc. For high, medium and low pressure seamless steel pipes and petroleum casing pipes with a full range of inspection measures, capable to meet various standard test and inspection requirements for steel pipes.

◎ No.1 Production Line: φ140 Accu-Roll Mills
OD (68-168mm)

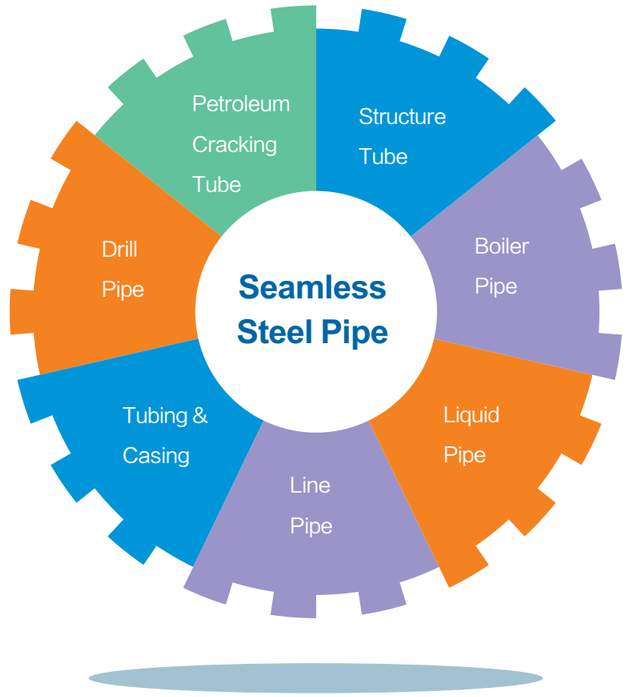
◎ No.2 Production Line: φ100 Plugs Mills
OD (89-133mm)

◎ No.3 Production Line: φ273 Accu-Roll Mills
OD (140-340mm)



B Production

Classfication



Seamless Steel Pipe

Seamless (SMLS) pipe is formed by drawing a solid billet over a piercing rod to create the hollow shell. As the manufacturing process does not include any welding,and by hot rolled, cold-rolled or cold process. seamless pipes are perceived to be stronger and more reliable. A large number of used pipes is conveying fluids, such as transport oil, natural gas, gas, water pipes and some solid materials, and so on. Compared to other steel and solid steel bar, the same torsional strength in bending, lighter, is an economic cross-section steel, widely used in the manufacture of structural parts and mechanical parts, such as drill pipe, automotive drive shafts, bicycle rack and construction using steel scaffolding.

Production Equipment

Hunan Baling Steel Co.,Ltd owns 3 sets of hot -rolled seamless steel pipe production line and 2 sets of cold drawn seamless steel pipe production line with annual production capacity of 200,000 tons, the size range is from 73mm to 630mm. The continuous mandrel rolling process and the push bench process in the size range from approx. 21 to 178 mm outside diameter. The multi-stand plug mill (MPM) with controlled (constrained) floating mandrel bar and the plug mill process in the size range from approx. 140 to 406 mm outside diameter. The cross roll piercing and pilger rolling process in the size range from approx. 250 to 660 mm outside diameter.

Piercing Mill

That of conical-roler features as quick-roling and uniform tubularbile thickness, easily adjustable available for feeding angle and toe angle, roller-saving available, PLC control system, outstanding domes-tically by itssuper precosion and high automatization.

Slight-stretch Reducing Mill

Respective-power-transmission of three rollers, fiexible adjustment, char-actenize as high-precised of outer-diameter and superior surface finishing.

Rotating Heat Furnace

Single or dual-feeding available, fueled by LEG, automated furance-temperature, furnace-pressure and furnace flow, domestical-topping controlling performance.

Straigherner

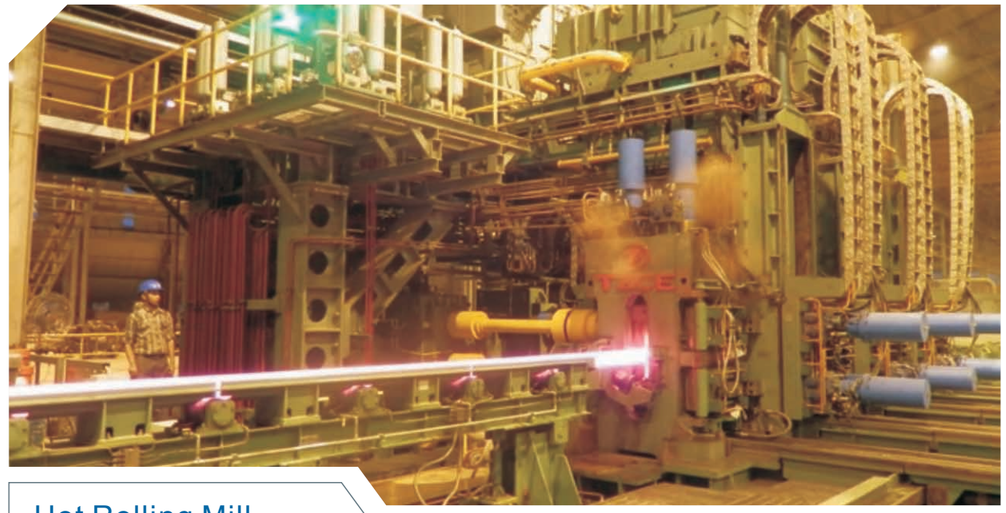
Six Trollers, eight colums, perfect rigid, automated presed and automated angular adjustment, hydraulic lock system, features as easily and flexibly operating and high precision.

Re Heating Furance

Online reheating furance ensures the mechanical property of seamless pipe. We can produce seamless pipe with steel grade N80.X60 etc.

Cooling Bed

Stepwise cooling bed, lifted by motor-transmitted, hydraulical-controlled translating, cooling sectioned as 27*28m, dual-feeding available.



Hot Rolling Mill

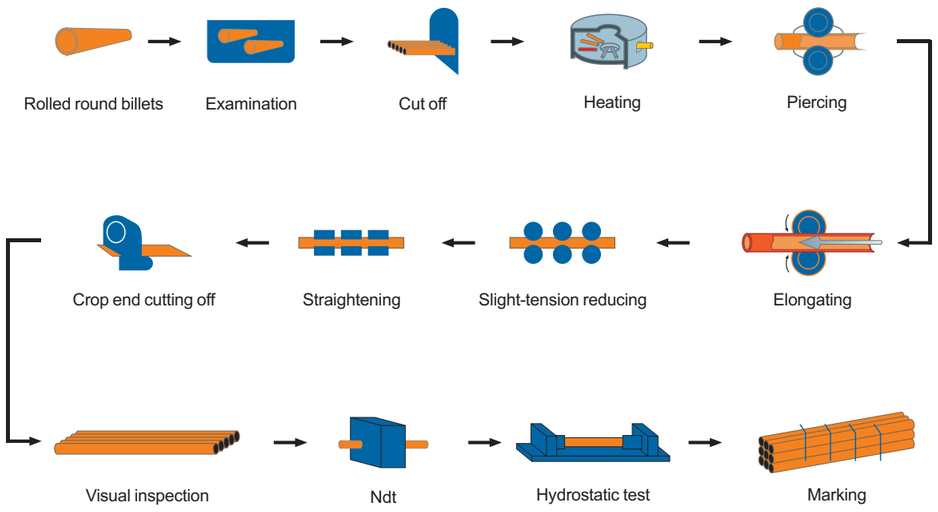
Conical roller, big disk, fiexible adjustment, hydraulic-controlled lock system and balance system, easy andreliable operation, max pierced billet out diameters 300mm, max length is 14m, designed by “DEYANG ERZHONG”, and manufactured by “ Angang Group machine manufacturing company”; ranking top class for its design, manufactur and control.

Tube Cutter

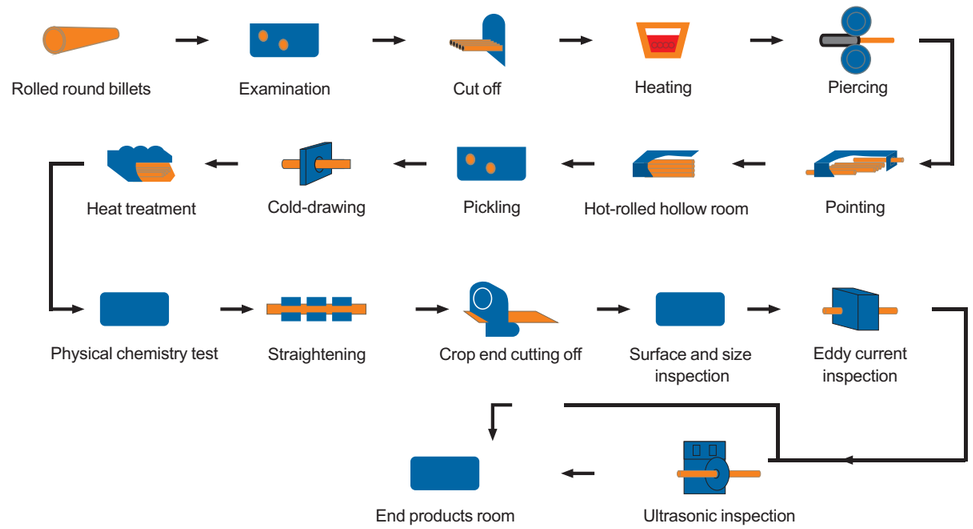
High-perfermance tube cutter supplied by Yingcheng Huaxing Tool Machine Limited Company, sysfeaturs as high-speed and well-finished cut.

Process

Hot Rolled Process of Seamless Steel Pipe



Cold Drawn Process of Seamless Steel Pipe



Hot Rolled

Round Pipe Billet → Heating → Punching → Three-Roller Skew Rolling, Continuous Rolling or Extruding → Pipe Detaching → Micro Tension Sizing or Reducing → Cooling → Straightening → Hydrostatic Test or Inspection → Marking → Warehousing

Cold Drawn

Round Pipe Billet → Heating → Punching → Pipe Head Treatment → Annealing → Acid Pickling → Coating Oil (Copper Plating) → Multi-pass Cold Drawing or Cold Rolling → Pipe Billet→ Heat Treatment → Straightening → Hydrostatic Test or Inspection → Marking → Warehousing

Hot Rolling

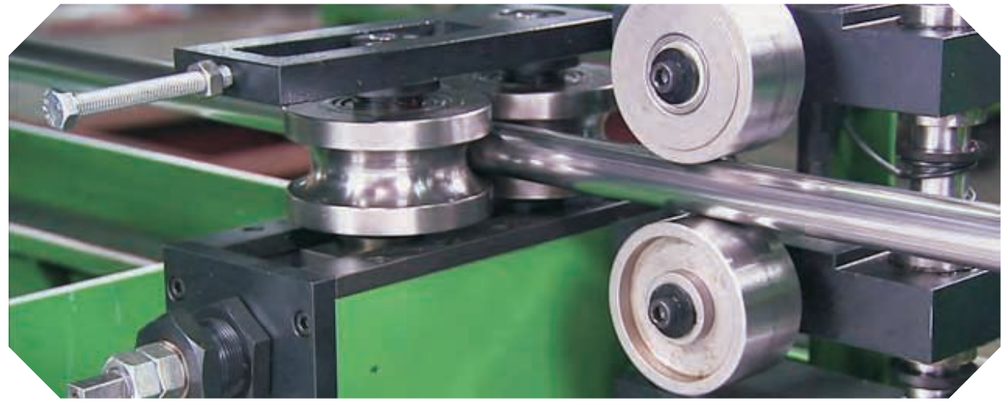
During the production of special hot rolled steel profiles by hot rolling the input billet or slab is formed into lengths up to 70 m using two oppositely rotating cylindrical rolls. The hot rolled steel shapes of this forming technique are used in a multitude of industrial applications. Hot rolled special profiles offer innovative solutions whether it be for automotive, materials handling, railroad or thicker flange and web thickness structural steel shapes use. Finished hot rolled steel shapes are roller straightened and sheared into production lengths or sawn into fixed lengths according to customer wishes.

Cold Drawing

The process of cold drawing is a procedure by which steel profiles are formed in order to achieve complex cross sections of excellent precision in these cold drawn steel shapes. After careful pre-treatment and de-scaling, the special profile bars are drawn through a forming die. This operation can be repeated up to three or four times. Cold drawing of hot rolled and hot extruded special pre-shape steel profiles tightens the cross-sectional tolerances, thus leading to significant improvement in dimensional accuracy and surface quality. Cold drawn steel special profiles offer the same precision achieved by machining but without the waste.

Hot Extruding

During hot extrusion a round steel billet is pre-heated and, after leaving the furnace, is pushed through a forming die into a profile bar using a ram with an extrusion force of 2,200 ton. Hot extrusion offers substantial advantages in comparison to hot rolling forging or machining. Hot extrusion can be used to make complex profile shapes even using metals which are difficult to form. In addition, small lot sizes can be produced economically.



Cold Rolling Cold Forming Roll Forming

Roll forming can be described as a continuous bending operation done at room temperature in which sheet or strip metal is plastically deformed along a linear axis. Tandem sets of rolls (known as roll stations) shape the metal stock in a series of progressive stages until the desired cross-sectional configuration is obtained by cold rolling.Roll forming is ideal for producing parts with long lengths or in large quantities. It can also produce multiple length parts from the same set of tooling. Virtually any material that can be cold formed by sheet forming techniques can be roll formed.

Tube For Structural Purposes

Standard: GB/T8162-1999, ASTM A53, ASTM A106, ASTM A500-98, ASTM A501-98, ASTM A519-98, JIS G3441-1994, JIS G3444-1994, BS EN 10210-1

Application: Used in the general structure and the mechanism, including construction, machinery, transportation, aviation, petroleum mining and each kind of structural tubes



Dimensional Tolerances

Pipe types	Pipe Szie(mm)		Tolerances
Hot rolled	OD	<50	±0.50mm
		⩾50	±1%
	WT	<4	±12.5%
		⩾4~20	+15%，-12.5%
		>20	±12.5%
Cold drawn	OD	6~10	±0.20mm
		10~30	±0.40mm
		30~50	±0.45
		>50	±1%
	WT	⩽1	±0.15mm
		>1~3	+15%，-10%
		>3	+12.5%，-10%

Chemical Composition and Mechanical Properties

Standard	Grade	Chemical composition(%)					Mechanical properties		
		C	Si	Mn	P	S	Tensile Strength (Mpa)	Yield Strength (Mpa)	Elongation (%)
Dn1629	St37	⩽0.17	–	–	⩽0.04	⩽0.04	350-480	⩾235	⩾25
	St44	⩽0.21	–	–	⩽0.04	⩽0.04	420-550	⩾275	⩾21
	St52	⩽0.22	⩽0.55	⩽1.60	⩽0.04	⩽0.035	500-650	⩾355	⩾21

Boiler Pipe

Standard: GB3087-1999, ASTM A179, ASTM A106, JIS G3454

Application: Used for manufacturing superheated pipelines, the steam pipe, boiling water tube, flue tube, small flue tube, etc.of low, mediam pressure boiler, the general industry boiler



Out Diameter Torlerances

Standard	Out Diameter	Tolerance
Gb3087	⩽180	± 1.0%(min: ±0.5mm)
Gb5310	⩽50	±0.5mm
	>50	±1.0%

Wall Thickness Tolerances

Standard	Wall Thickness(mm)	Tolerance
Gb3087	3-20	+15%,12.5%
	>20	±12.5%
Gb5310	<3.5	+15%,-10%
	3.5-20	+15%,-10%
	>20	±10%

Chemical Composition and Mechanical Properties

Standard	Grade	Chemical composition(%)					Mechanical properties		
		C	Si	Mn	P	S	Tensile Strength (Mpa)	Yield Strength (Mpa)	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

Seamless Steel Tubes for Liquid Service

Standard: GB/T8163-1999, ASTM A53-98, JIS G3452-1998, JIS G3454-1998, ASTM A106, DIN 1629-1984

Application: For conveying of petroleum, gas and other fluids



Tolerance on Dimensions

Pipe types	Pipe Szie(mm)		Tolerances
Hot rolled	OD	All	±1% (min ±0.50mm)
	WT	All	+15%, -12.5%
Cold drawn	OD	6～10	±0.20mm
		10～30	±0.40mm
		30～50	±0.45mm
		>50	±1%
	WT	⩽1	±0.15mm
		>1～3	+15% -10%
		>3	+12.5% -10%

Chemical Composition and Mechanical Properties

Standard	Grade	Chemical composition								Mechanical Properties		
		C	Si	Mn	P	S	Cr	Ni	Cu	Tensile Strength (Mpa)	Yield Strength (Mpa)	Elongation (%)
GB/ T8163	10	0.07-0.14	0.17-0.37	0.35-0.65	⩽0.035	⩽0.035	⩽0.15	⩽0.25	⩽0.25	335-457	⩾205	⩾24
	20	0.17-0.24	0.17-0.37	0.35-0.65	⩽0.035	⩽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	⩽0.045	-	-	-	490-665	⩾325	⩾21

Line Pipe

Standard: API 5L
Application: For gas, water, transportation in Petroleum and natural gas industries



Tolerance on Dimensions

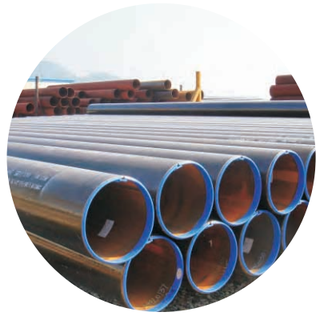
Standard	Out Diameter		Wall Thickness
API 5L	Tolerance		Tolerance
	D<60.3	+0.41mm, -0.80mm	+15.0%, -12.5%
	D⩾60.3	+0.75%D, -0.75%D	

Standard	Grade	Chemical Components				Tensile Strength(min)	Yield Strength(min)
		C	Mn	P	S	Mpa	Mpa
API 5L PSL2	B	0.24	1.20	0.025	0.015	414	241
	X42	0.24	1.30	0.025	0.015	414	290
	X46	0.24	1.40	0.025	0.015	434	317
	X52	0.24	1.40	0.025	0.015	455	359
	X56	0.24	1.40	0.025	0.015	490	386
	X60	0.24	1.40	0.025	0.015	517	414
	X65	0.24	1.40	0.025	0.015	531	448
	X70	0.24	1.40	0.025	0.015	565	483
	X80	0.24	1.40	0.025	0.015	621	552

Standard	Grade	Chemical Components				Tensile Strength(min)	Yield Strength(min)
		C	Mn	P	S	Mpa	Mpa
API 5L PSL1	A	0.22	0.90	0.030	0.030	331	207
	B	0.28	1.20	0.030	0.030	414	241
	X42	0.28	1.30	0.030	0.030	414	290
	X46	0.28	1.40	0.030	0.030	434	317
	X52	0.28	1.40	0.030	0.030	455	359
	X56	0.28	1.40	0.030	0.030	490	386
	X60	0.28	1.40	0.030	0.030	517	414
	X65	0.28	1.40	0.030	0.030	531	448
	X70	0.28	1.40	0.030	0.030	565	483

Tubing & Casing

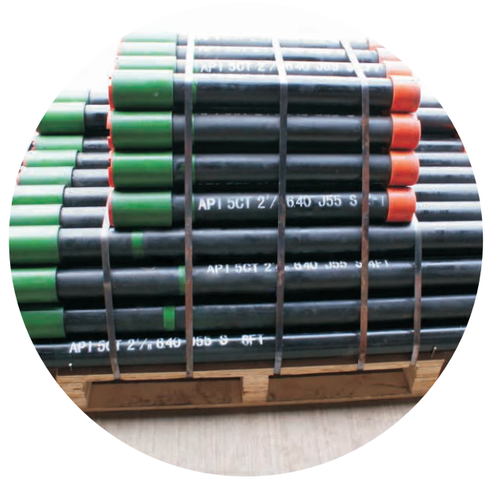
Standard: API 5CT
Application: Used in the oil well extracting the petroleum or the natural gas


Dimensions

Label				D Outside diameter mm	Wall thickness t mm	C Type of end-finish						
1	2					H40	J55	L80	N80 1? Q?	C90	T95	P110
	NU T&C	EU T&C	IJ									
1	2	3	4	5	9	10	11	12	13	14	15	16
1.9	2.75	2.9	2.76	48.26	3.68	PNUI	PNUI	PNUI	PNUI	PNUI	PNUI	–
1.9	3.65	3.73	-	48.26	5.08	PU	PU	PU	PU	PU	PU	PU
1.9	4.42	-	-	48.26	6.35	-	-	P	-	P	P	-
2 3/8	4	-	-	60.32	4.24	PU	PN	PN	PN	PN	PN	-
2 3/8	4.6	4.7	-	60.32	4.83	PNU	PNU	PNU	PNU	PNU	PNU	PNU
2 3/8	5.8	5.95	-	60.32	6.45	-	-	PNU	PNU	PNU	PNU	PNU
2 3/8	6.6	-	-	60.32	7.49	-	-	P	-	P	P	-
2 3/8	7.35	7.45	-	60.32	8.53	-	-	PU	-	PU	PU	-
2 7/8	6.4	6.5	-	73.02	5.51	PNU	PNU	PNU	PNU	PNU	PNU	PNU
2 7/8	7.8	7.9	-	73.02	7.01	-	-	PNU	PNU	PNU	PNU	PNU
2 7/8	8.6	8.7	-	73.02	7.82	-	-	PNU	PNU	PNU	PNU	PNU
2 7/8	9.35	9.45	-	73.02	8.64	-	-	PU	-	PU	PU	-
2 7/8	10.5	-	-	73.02	9.96	-	-	P	-	P	P	-
3 1/2	7.7	-	-	88.9	5.49	PN	PN	PN	PN	PN	PN	-
3 1/2	9.2	9.3	-	88.9	6.45	PNU	PNU	PNU	PNU	PNU	PNU	PNU
3 1/2	10.2	-	-	88.9	7.34	PN	PN	PN	PN	PN	PN	-
3 1/2	12.7	12.95	-	88.9	9.52	-	-	PNU	PNU	PNU	PNU	PNU
3 1/2	14.3	-	-	88.9	10.92	-	-	P	-	P	P	-
3 1/2	15.5	-	-	88.9	12.09	-	-	P	-	P	P	-
4	9.5	-	-	101.6	5.74	PN	PN	PN	PN	PN	PN	-
4	10.7	11	-	101.6	6.65	PU	PU	PU	PU	PU	PU	-
4	13.2	-	-	101.6	8.38	-	-	P	-	P	P	-
4	16.1	-	-	101.6	10.54	-	-	P	-	P	P	-
4 1/2	2.6	12.75	-	114.3	6.88	PNU	PNU	PNU	PNU	PNU	PNU	-
4 1/2	15.2	-	-	114.3	8.56	-	-	P	-	P	P	-

API 5CT Casing




Mechanical Properties

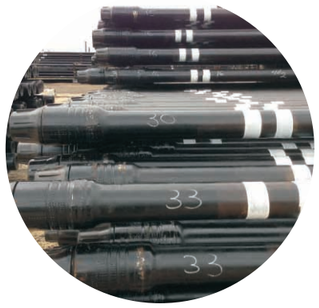
Group	Grade	Type	Total elongation under load %	Yield strength Mpa		Tensile strength min Mpa	Hardness max	
				min	max		HRC	HBW
1	2	3	4	5	6	7	8	9
1	J55	-	0.5	379	552	517	-	-
	K55	-	0.5	379	552	655	-	-
	N80	1	0.5	552	758	689	-	-
	N80	Q	0.5	552	758	689	-	-
2	L80	1	0.5	552	655	655	23	241
	L80	9Cr	0.5	552	655	655	23	241
	L80	13Cr	0.5	552	655	655	23	241
	C90	1?2	0.5	621	724	689	25.4	255
	C95	-	0.5	655	758	724	-	-
	T95	1?2	0.5	655	758	724	25.4	255
3	P110	-	0.6	758	965	862	-	-
4	Q125	All	0.65	862	1034	931	-	-

Dimensions

Labels		Outside diameter D	Nominal linear mass T&C	Wall thickness t	J55	N80	L80	C90	P110	Q125
		mm	kg/m	mm	K55	1?Q?		T95		
1	2	3	4	5	6	7	8	9	10	11
4 1/2	9.5	114.3	14.14	5.21	PS	-	-	-	-	-
4 1/2	10.5	114.3	15.63	5.69	PSB	-	-	-	-	-
4 1/2	11.6	114.3	17.26	6.35	PSLB	PLB	PLB	PLB	PLB	-
4 1/2	13.5	114.3	20.09	7.37	-	PLB	PLB	PLB	PLB	-
4 1/2	15.1	114.3	22.47	8.56	-	-	-	-	PLB	PLB
5	11.5	127	17.11	5.59	PS	-	-	-	-	-
5	13	127	19.35	6.43	PSLB	-	-	-	-	-
5	15	127	22.32	7.52	PSLBE	PLBE	PLBE	PLBE	PLBE	-
5	18	127	26.79	9.19	-	PLBE	PLBE	PLBE	PLBE	PLBE
5	21.4	127	31.85	11.1	-	PLB	PLB	PLB	PLB	PLB
5	23.2	127	34.53	12.14	-	PLB	PLB	PLB	PLB	PLB
5	24.1	127	35.86	12.7	-	PLB	PLB	PLB	PLB	PLB
5 1/2	14	139.7	20.83	6.2	PS	-	-	-	-	-
5 1/2	15.5	139.7	23.07	6.98	PSLBE	-	-	-	-	-
5 1/2	17	139.7	25.3	7.72	PSLBE	PLBE	PLBE	PLBE	PLBE	-
5 1/2	20	139.7	29.76	9.17	-	PLBE	PLBE	PLBE	PLBE	-
5 1/2	23	139.7	34.23	10.54	-	PLBE	PLBE	PLBE	PLBE	PLBE
5 1/2	26.8	139.7	39.88	12.7	-	-	-	P	-	-
5 1/2	29.7	139.7	44.2	14.27	-	-	-	P	-	-
5 1/2	32.6	139.7	48.51	15.88	-	-	-	P	-	-
5 1/2	35.3	139.7	52.53	17.45	-	-	-	P	-	-
5 1/2	38	139.7	56.55	19.05	-	-	-	P	-	-
5 1/2	40.5	139.7	60.27	20.62	-	-	-	P	-	-
5 1/2	43.1	139.7	64.14	22.22	-	-	-	P	-	-
6 5/8	20	168.28	29.76	7.32	PSLB	-	-	-	-	-
6 5/8	24	168.28	35.72	8.94	PSLBE	PLBE	PLBE	PLBE	PLBE	-
6 5/8	28	168.28	41.67	10.59	-	PLBE	PLBE	PLBE	PLBE	-
6 5/8	32	168.28	47.62	12.06	-	PLBE	PLBE	PLBE	PLBE	PLBE
7	17	177.8	25.3	5.87	-	-	-	-	-	-
7	20	177.8	29.76	6.91	PS	-	-	-	-	-
7	23	177.8	34.23	8.05	PSLBE	PLBE	PLBE	PLBE	-	-
7	26	177.8	38.69	9.19	PSLBE	PLBE	PLBE	PLBE	PLBE	-
7	29	177.8	43.16	10.36	-	PLBE	PLBE	PLBE	PLBE	-
7	32	177.8	47.62	11.51	-	PLBE	PLBE	PLBE	PLBE	-
7	35	177.8	52.09	12.65	-	PLBE	PLBE	PLBE	PLBE	PLBE
7	38	177.8	56.55	13.72	-	PLBE	PLBE	PLBE	PLBE	PLBE
7	42.7	177.8	63.54	15.88	-	-	-	P	-	-
7	46.4	177.8	69.05	17.45	-	-	-	P	-	-
7	50	177.8	74.56	19.05	-	-	-	P	-	-
7	53.6	177.8	79.77	20.62	-	-	-	P	-	-
7	57.1	177.8	84.97	22.22	-	-	-	P	-	-
7 5/8	24	193.68	35.72	7.62	-	-	-	-	-	-
7 5/8	26.4	193.68	39.29	8.33	PSLBE	PLBE	PLBE	PLBE	-	-
7 5/8	29.7	193.68	44.2	9.52	-	PLBE	PLBE	PLBE	PLBE	-
7 5/8	33.7	193.68	50.15	10.92	-	PLBE	PLBE	PLBE	PLBE	-
7 5/8	39	193.68	58.04	12.7	-	PLBE	PLBE	PLBE	PLBE	PLBE
7 5/8	42.8	193.68	63.69	14.27	-	PLB	PLB	PLB	PLB	PLB
7 5/8	45.3	193.68	67.41	15.11	-	PLB	PLB	PLB	PLB	PLB
7 5/8	47.1	193.68	70.09	15.88	-	PLB	PLB	PLB	PLB	PLB
7 5/8	51	193.68	76.19	17.45	-	-	-	P	-	-
7 5/8	55.3	193.68	82.3	19.05	-	-	-	P	-	-
										-

Labels		Outside diameter D	Nominal linear mass T&C	Wall thickness t	J55	N80	L80	C90	P110	Q125
		mm	kg/m	mm	K55	1?Q?		T95		
1	2	3	4	5	6	7	8	9	10	11
8 5/8	24	219.08	35.72	6.71	PS	-	-	-	-	-
8 5/8	28	219.08	41.67	7.72	-	-	-	-	-	-
8 5/8	32	219.08	47.62	8.94	PSLBE	-	-	-	-	-
8 5/8	36	219.08	53.57	10.16	PSLBE	PLBE	PLBE	PLBE	-	-
8 5/8	40	219.08	59.53	11.43	-	PLBE	PLBE	PLBE	PLBE	
8 5/8	44	219.08	65.48	12.7	-	PLBE	PLBE	PLBE	PLBE	
8 5/8	49	219.08	72.92	14.15	-	PLBE	PLBE	PLBE	PLBE	PLBE
9 5/8	32	244.48	48.07	7.92	-	-	-	-	-	-
9 5/8	36	244.48	53.57	8.94	PSLB	-	-	-	-	-
9 5/8	40	244.48	59.53	10.03	PSLBE	PLBE	PLBE	PLBE	-	-
9 5/8	43.5	244.48	64.73	11.05	-	PLBE	PLBE	PLBE	PLBE	-
9 5/8	47	244.48	69.94	11.99	-	PLBE	PLBE	PLBE	PLBE	PLBE
9 5/8	53.5	244.48	79.62	13.84	-	PLBE	PLBE	PLBE	PLBE	PLBE
9 5/8	58.4	244.48	86.91	15.11	-	PLB	PLB	PLB	PLB	PLB
9 5/8	59	244.48	88.4	15.47	-	-	-	P	-	-
9 5/8	64.9	244.48	96.58	17.07	-	-	-	P	-	-
9 5/8	70.3	244.48	104.62	18.64	-	-	-	P	-	-
9 5/8	75.6	244.48	112.5	20.24	-	-	-	P	-	-
10 3/4	32.75	273.05	48.74	7.09	-	-	-	-	-	-
10 3/4	40.5	273.05	60.27	8.89	PSB	-	-	-	-	-
10 3/4	45.5	273.05	67.71	10.16	PSBE	-	-	-	-	-
10 3/4	51	273.05	75.9	11.43	PSBE	PSBE	PSBE	PSBE	PSBE	-
10 3/4	55	273.05	82.59	12.57	-	PSBE	PSBE	PSBE	PSBE	-
10 3/4	60.7	273.05	90.33	13.84	-	-	-	PSBE	PSBE	PSBE
10 3/4	65.7	273.05	97.77	15.11	-	-	-	PSB	PSB	PSB
10 3/4	73.2	273.05	108.93	17.07	-	-	-	P	-	-
10 3/4	79.2	273.05	117.86	18.64	-	-	-	P	-	-
10 3/4	85.3	273.05	126.94	20.24				P		
11 3/4	42	298.45	62.5	8.46	-	-	-	-	-	-
11 3/4	47	298.45	69.94	9.53	PSB	-	-	-	-	-
11 3/4	54	298.45	80.36	11.05	PSB	-	-	-	-	-
11 3/4	60	298.45	89.29	12.42	PSB	PSB	PSB	PSB	PSB	PSB
11 3/4	65	298.45	96.73	13.56	-	P	P	P	P	P
11 3/4	71	298.45	105.66	14.78	-	P	P	P	P	P
13 3/8	48	339.72	71.43	8.38	-	-	-	-	-	-
13 3/8	54.5	339.72	81.1	9.65	PSB	-	-	-	-	-
13 3/8	61	339.72	90.78	10.92	PSB	-	-	-	-	-
13 3/8	68	339.72	101.19	12.19	PSB	PSB	PSB	PSB	PSB	-
13 3/8	72	339.72	107.15	13.06	-	PSB	PSB	PSB	PSB	PSB
16	65	406.4	96.73	9.53	-	-	-	-	-	-
16	75	406.4	111.61	11.13	PSB	-	-	-	-	-
16	84	406.4	125.01	12.57	PSB	-	-	-	-	-
16	109	406.4	162.21	16.66	P	P	P	-	P	P
18 5/8	87.5	473.08	130.21	11.05	PSB	-	-	-	-	-
20	94	508	139.89	11.13	PSLB	-	-	-	-	-
20	106.5	508	158.49	12.7	PSLB	-	-	-	-	-
20	133	508	197.93	16.13	PSLB	-	-	-	-	-

P——Plain end; S——Short round thread;L——Long round thread;B——Buttress thread;E——Extreme line.



Mechanical Properties

Group	Grade	Type	Total elongation under load %	Yield strength Mpa		Tensile strength min Mpa	Hardness max	
				min	max		HRC	HBW
1	2	3	4	5	6	7	8	9
1	J55	-	0.5	379	552	517	-	-
	K55	-	0.5	379	552	655	-	-
	N80	1	0.5	552	758	689	-	-
	N80	Q	0.5	552	758	689	-	-
2	L80	1	0.5	552	655	655	23	241
	L80	9Cr	0.5	552	655	655	23	241
	L80	13Cr	0.5	552	655	655	23	241
	C90	1?2	0.5	621	724	689	25.4	255
	C95	-	0.5	655	758	724	-	-
	T95	1?2	0.5	655	758	724	25.4	255
3	P110	-	0.6	758	965	862	-	-
4	Q125	All	0.65	862	1034	931	-	-

Dimensions and Tolerances

Item		Tolerance	
Out Diameter	Pipe Body	OD≤101.60mm±0.79mm	
		OD≥114.30mm	1.0%OD
			-0.5%OD
	Coupling	±1%OD	
Wall Thickness		−12.5$t	
Weight	Single Lengths	+6.5%	
		−3.5%	
	Carload Lots	−1.75%	

Lengths

Item	R1 (Range)	R2 (Range)	R3(Range)
Tubing	6.10-7.32m	8.53-9.75m	11.58-12.80m

Chemical Composition

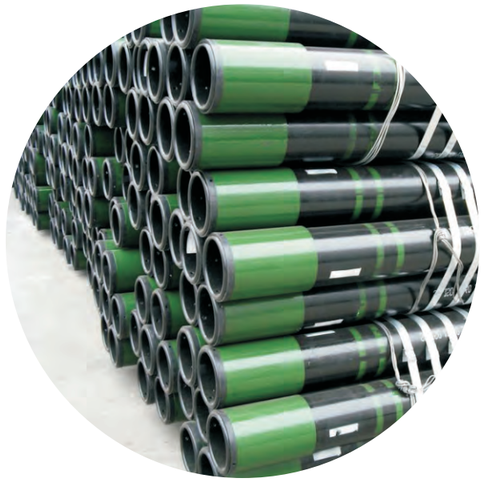
Grade	Chemical Composition(%)								
	C(max)	Mn(max)	Mo(max)	Cr(max)	Ni(max)	Cu(max)	P(max)	S(max)	Si(max)
J55	-	-	-	-	-	-	0.030	0.030	-
K55	-	-	-	-	-	-	0.030	0.030	-
N80	-	-	-	-	-	-	0.030	0.030	-
L80-1	0.43	1.90	-	-	0.25	0.35	0.030	0.030	0.45
C90-1	0.35	1.00	0.75	1.20	0.99	-	0.020	0.010	-
C90-2	0.50	1.90	N.L	N.L	0.99	-	0.030	0.010	-
C95	0.45	1.90	-	-	-	-	0.030	0.030	0.045
T95-1	0.35	1.20	0.85	1.50	0.99	-	0.020	0.010	-
T95-2	0.50	1.90	-	-	-	-	0.030	0.010	-
P110	-	-	-	-	-	-	0.030	0.030	-
M65	-	-	-	-	-	-	0.020	0.010	-
BG80S	-	-	-	-	-	-	0.020	0.010	-
BG80T	-	-	-	-	-	-	0.030	0.030	-
BG110T	-	-	-	-	-	-	0.030	0.030	-

Mechanical Properties

Grade	Yield Strength				Tensile Strength		Hardness		Allowable Hardness
	Min		Max		Min		Max		
	Psi	Mpa	Psi	Mpa	Psi	Mpa	HRC	HBW	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	125.000	724	25.4	255	3.0
P110	110.000	758	140.000	965	100.000	862	-	-	-
M65	65.000	448	85.000	586	85.000	586	22	235	-
BG80S	83.000	570	99.000	680	100.000	689	23	241	-
BG80T	80.000	552	110.000	758	100.000	689	-	-	-
BG110T	110.000	758	140.000	965	125.000	862	-	-	-

Drill Pipe

Standard: API 5D
Application: For well drilling



Tolerance on Dimensions

Item		Wall Thickness
Pipe Body	OD≤101.6mm	+0.79mm
	OD≥114.3mm	+1% -0.5%
	Single Lengths	-12.5%
Weight		+6.5% -3.5%

Chemical Composition and Mechanical Properties

Grade	Chemical Components		Mechanical Properties	
	P	S	Yield Strength(Mpa)	Tensile Strength(Mpa)
E-75	≤0.020	≤0.015	517-724	≥689
X-95	≤0.020	≤0.015	655-862	≥724
G-105	≤0.020	≤0.015	724-931	≥793
S-135	≤0.020	≤0.015	931-1138	≥1000

Petroleum Cracking Tube

Standard:GB9948-1988
Application: For manufacturing of furnace tubes, heat exchangers and pipelines in refineries

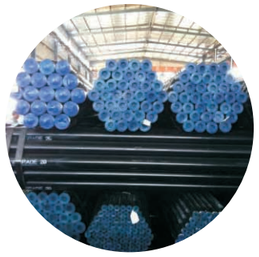
Tolerance on Dimensions

Pipe types	Pipe Szie(mm)		Tolerances
Hot rolled	OD	⩽159	±1.0%
	WT	>159	±1.20%
Cold drawn	OD	⩽20	±12.5%
		>20	±10.0%
		⩽30	±0.20mm
		30-50	±0.30mm
	WT	>50	±0.8%
		⩽3	+12% -10%
		>3	±10%

Chemical Composition and Mechanical Properties

Grade	Chemical composition								Mechanical Properties		
	C	Mn	Si	Cr	Mo	Ni	S	P	Tensile Strength (Mpa)	Yield Strength (Mpa)	Elongation (%)
10	0.07-0.14	0.35-0.65	0.17-0.37	⩽0.15	–	⩽0.25	⩽0.035	⩽0.035	330-490	⩾205	⩾24
20	0.17-0.24	0.35-0.65	0.17-0.37	⩽0.25	–	⩽0.25	⩽0.035	⩽0.035	410-550	⩾245	⩾21
12CrMo	0.08-0.15	0.40-0.70	0.17-0.37	0.40-0.70	0.40-0.55	⩽0.30	⩽0.035	⩽0.035	410-560	⩾205	⩾21
15CrMo	0.12-0.18	0.40-0.70	0.17-0.37	0.80-1.10	0.40-0.55	⩽0.30	⩽0.035	⩽0.035	440-640	⩾235	⩾21
1Cr2Mo	⩽0.15	0.30-0.60	0.50-1.00	2.15-2.85	0.40-0.65	-	⩽0.035	⩽0.035	⩾390	⩾175	⩾22
1Cr5Mo	⩽0.15	⩽0.60	⩽0.60	4.00-6.00	0.45-0.60	⩽0.60	⩽0.035	⩽0.035	⩾390	⩾195	⩾22

Standard of Seamless Steel Pipe



GB Standard

Product Name	Executive Standard	Grade
Seamless Steel Pipe for Structural Purpose	GB/T8162-2008	Carbon and Alloy Structural Steel
Seamless Steel Pipe for Liuid Service	GB/T8163-2008	10, 20,16Mn
Seamless Steel Tubes for Low and Medium Boiler	GB3087-1999	10, 20
Seamless Steel Tubes for High Pressure Boiler	GB5310-1995	20G, 20MnG, 12CrMoVG, 15CrMoG
Seamless Carbon Steel Marine Tubes	GB/T5312-1999	320, 360, 410
Highp-pressure Seamless Steel Tubes for Chemical Fertilizer Equipments	GB6479-2000	10, 20, 12CrMoG, 15CrMo

ASTM Standard

Product Name	Executive Standard	Grade
Black and Hot-Dipped Zinc-Coated Steel Pipes Welded and Seamless	ASTM A53	A, B
Seamless Carbon Steel for High Temperature Service	ASTM A106	A, B
Seamless Cold-Drawn Low-Carbon Steel Heat Exchanger and Condenser Tubes	ASTM A179	Low Carbon Steel
Seamless Carbon Steel Boiler Tubes for High Pressure	ASTM A192	Low Carbon Steel
Seamless Ferritic Alloy Steel Pipe for High-Temperature Service	ASTM A335	P5, P11, P12, P22
Seamless Medium-Carbon and Alloy Steel Boiler and Superheater Tubes	ASTM A210	A1, C
Seamless Ferritic and Austenitic Alloy Steel Boiler, Superheater and Heat-Exchanger Tubes	ASTM A213	T5, T11, T12, T22
Seamless Carbon and Alloy Steel for Mechanical Tubing	ASTM A519	Carbon Steel, Alloy Steel

API Standard

Product Name	Executive Standard	Grade
Spectification for Casing and Tubing	API Spec 5CT	J55, K55, N80, L80,C90, C95, T95, P110, M65
Specification for Line Pipe	API Spec 5L	A,B X42, X46, X52, X56, X60, X65,. X70

DIN Standard

Product Name	Executive Standard	Grade
Seamless Steel Tube for Elevated Temperature	DN 17175	ST35, ST45, ST52, 13CrMo44
Cold Drawn Seamless Precision Pipe	DIN 2391	St35, St45, St52
Seamless Circular unalloyed Steel Tubes Subject to Special Requirments	DIN 1629	St37, St45, St52

Dimensional Tolerances of Seamless Steel Pipe

Pipe types	Pipe Szie(mm)		Tolerances
Hot rolled	OD	<50	±0.50mm
		⩾50	±1%
	WT	<4	±12.5%
		⩾4~20	+15%，-12.5%
		>20	±12.5%
Cold drawn	OD	6~10	±0.20mm
		10~30	±0.40mm
		30~50	±0.45
		>50	±1%
	WT	⩽1	±0.15mm
		>1~3	+15%，-10%
		>3	+12.5%，-10%

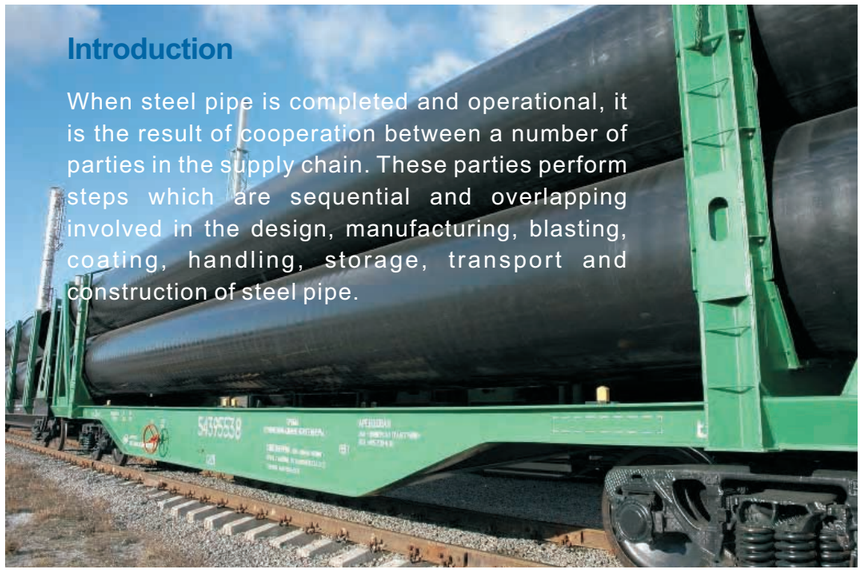
Specifications of Seamless Steel Pipe

Out Diameter	Wall Thickness (mm)																										
mm	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	35
73	■	■	■	■	■	■	■	■	■																	
76.1	■	■	■	■	■	■	■	■	■																	
82.5	■	■	■	■	■	■	■	■	■	■																
88.9	■	■	■	■	■	■	■	■	■	■	■															
101.6	■	■	■	■	■	■	■	■	■	■	■															
114.3	■	■	■	■	■	■	■	■	■	■	■															
127	■	■	■	■	■	■	■	■	■	■	■	■	■													
139.7	■	■	■	■	■	■	■	■	■	■	■	■	■													
152.4	■	■	■	■	■	■	■	■	■	■	■	■	■													
159	■	■	■	■	■	■	■	■	■	■	■	■	■													
168.3	■	■	■	■	■	■	■	■	■	■	■	■	■													
177.8		■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■						
193.7			■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	
203			■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	
219.1			■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	
244.5			■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
273			■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
298.5				■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	
323.8				■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	
339.7				■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	
355.6				■	■	■	■	■	■	■	■															
406.4				■	■	■	■	■	■	■	■															
457.2				■	■	■	■	■	■	■	■															
473.1				■	■	■	■	■	■	■	■															
508					■	■	■	■	■																	
530					■	■	■	■	■																	
558.8					■	■	■	■	■																	
609.6					■	■	■	■	■																	
630					■	■	■	■	■																	

C Logistics

Introduction

When steel pipe is completed and operational, it is the result of cooperation between a number of parties in the supply chain. These parties perform steps which are sequential and overlapping involved in the design, manufacturing, blasting, coating, handling, storage, transport and construction of steel pipe.



Pipe Protection

Pipe-end protection is advisable in case the pipe-ends are bevelled at the pipe manufacturer. In the case of overseas transport, there is an especially increased risk of damaged pipe-ends. This is caused by extra handling procedures in ports and shifting of the pipes onboard vessels.

Pipe Transport

Pipes need to be transported between parties involved in the supply chain. This is done by truck, train and/or vessel.

Pipe Handling

Pipes are handled multiple times in the supply chain, for example in ports and storage yards. By handling we mean lifting of pipes and loading to or unloading from trailers, train wagons or vessels. Most damages to pipe ends, surfaces and coatings occur during handling procedures due to a combination of inadequate equipment and poor personnel awareness.

Pipe Storage

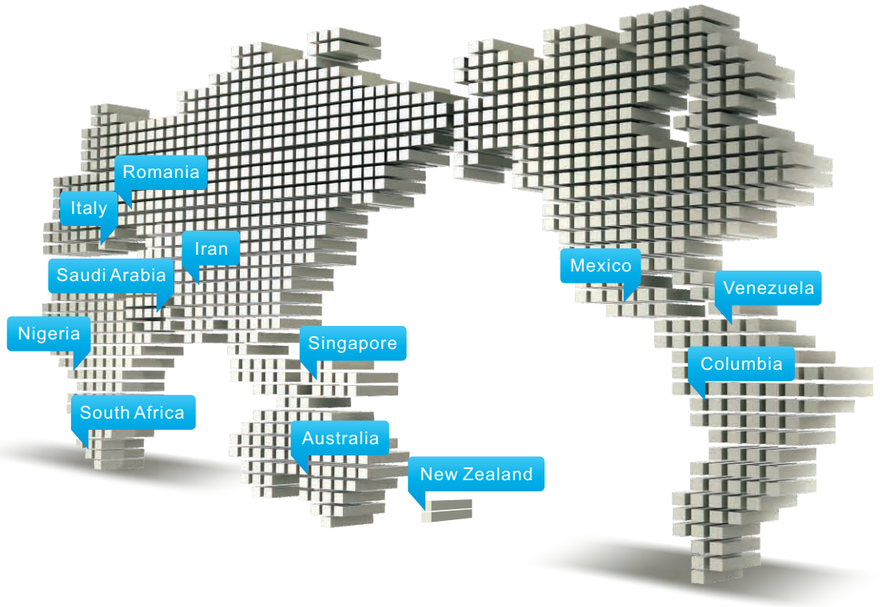
Pipes are stored a number of times before they reach their destination. During storage the pipe coating is among other things subject to high pressure, ultra-violet (UV) degradation, design of bottom support, and contamination. In this paragraph the impact of these influences on the pipe coating is examined.

D Import & Export

Oversea Agents

Steel pipe from Hunan Baling Steel Co.,Ltd is not only in domestic, but also exported to all over the world, so far, we have 12 agents distributed in different regions of the world.

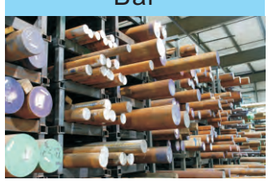
Asia:	Singapore	
Africa:	South Africa	Nigeria
Europe:	Italy	Romania
Australia:	Australia	New Zealand
Middle East:	Saudi Arabia	Iran
North America:	Mexico	
South America:	Venezuela	Columbia



Material Resources

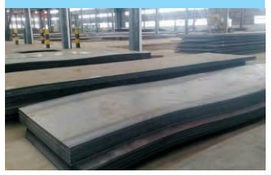
Raw Materials

Bar



With the features of high level purity, precise chemical composition control, high reduction ratio, high dimensional accuracy and excellent surface quality, the products are mainly used to manufacture the axle shaft, gas cylinder and plastic mould, etc.

Heavy plate



Heavy plates are mainly used in shipbuilding, offshore platform, boiler, pressure vessel, pipeline, high building, bridge and heavy duty trucks, etc.

HR steel sheet

With the excellent properties such as high strength, good toughness, easy machinability and good weldability, Baosteel"s hot-rolled steel products are widely used in ship, automobile, bridge, building, machinery and pressure vessel and other industrial applications.

CR steel sheet

CR steel sheets have good processability, with good flatness and excellent surface, are available with different thickness and width combinations; are mainly used to manufacture the high value-added products in automotive and appliance, beverage packaging, electronic, electrcial moor and building etc.

Carbon steel

Carbon steel is steel where the main interstitial alloying constituent is carbon in the range of 0.12-2.0%. Suitable for nominal pressure PN ⩽ 32.0MPa, temperature -30-425 ℃ water, steam, air, hydrogen, ammonia, nitrogen and petroleum products, and other media.

Alloy steel

Alloy steel is often subdivided into two groups: high alloy steels and low alloy steels. The difference between the two is defined somewhat arbitrarily. However, most agree that any steel that is alloyed with more than eight percent of its weight being other elements beside iron and carbon, is high alloy steel.

Stainless steel

Stainless steel does not readily corrode, rust or stain with water as ordinary steel does, but despite the name it is not fully stain-proof, most notably under low oxygen, high salinity, or poor circulation environments. It is also called corrosion-resistant steel or CRES when the alloy type and grade are not detailed, particularly in the aviation industry.

Black steel

Black steel is a term given to steel pipe with a black oxide scale on the surface. This black oxide scale is formed when the pipe is forged and is typically sealed with a protective oil to prevent corrosion. Because of this oxide scale and protective film, black steel pipe requires little maintenance and is used for a wide variety of applications, including in water, steam, air and gas services.

E Projects

Oil & Gas

- ◎ Refineries
- ◎ Petrochemical Plants
- ◎ Offshore Facilities
- ◎ Pipelines

Power / Alternative Energy

- ◎ Thermal and Hydroelectric Power
- ◎ Waste-to-Energy Plants
- ◎ Transmission Lines
- ◎ Substations

Water Supply / Sewage

- ◎ Dams
- ◎ Transmission Pipelines
- ◎ Irrigation Canals
- ◎ Pumping Stations

Industrial Process

- ◎ Steel Mills
- ◎ Pharmaceutical Plants
- ◎ Chemical Plants
- ◎ Mining

Bridge construction

Environmental project

Mineral exploration

Offshore engineering

Gas exploration

Hydraylic system

Oil refinery

Pipeline for NICO

Hydroelectricity

Industrial exhaust

Shipbuilding

Sweage treatment

Liquefeild gas

Marine engineering

Thermal power plants

West- east gas pipeline

Achievement List Of Main Projects

YEAR	COUNTRY	PROUCT NAME	STANDARD / GRADE	SPECIFICATION	QUANTITY
2014	Puerto Rico	CASING	API 5CT.K55	3-1/2* 6.45	1250MT
2014	Turkey	SEAMLESS	ASTM A53 GR.B	3/4"*3.91	652MT
2014	Yemen	SEAMLESS	API 5L, X52 PSL2	6"*7.11	1548MT
2014	Greece	SEAMLESS	ASTM A335 P5,P9	14"*11.13	1060MT
2014	Nigeria	SEAMLESS	API 5L GR.B (PSL1)	20"*SCH80	2556MT
2014	Ecuador	SEAMLESS	ASTM A53 GR.B	10"*9.27	526MT
2013	Belgium	SEAMLESS	API 5L, GR.B	323.8*9.53	15623 METERS
2013	Benin	SEAMLESS	API 5L L245 (PSL2)	168.3*10.97	756MT
2013	Iran	SEAMLESS	API 5L, X52 PSL2	273 & 323*12.7 & 6.35	1487.2 MT
2013	Iran	SEAMLESS	API 5L, X52 PSL2	762*9.53	689MT
2013	Saudi Arabia	SEAMLESS	ASTM A53 GR.B	610*9.53	1704MT
2013	Croatia	SEAMLESS	ASTM A106 GR.B	60.3*SCH40	930MT
2013	Angola	SEAMLESS	ASTM A53 GR.B	457*SCH80	25631 METERS
2012	Iraq	SEAMLESS	API 5L, GR.B	114.3*6.02	1854MT
2012	Colombia	SEAMLESS	API 5L, GR.B	508*SCH80 219*3.5	1052MT
2012	Spain	SEAMLESS	API 5L, X52	219.1*SCH40	2410MT
2012	Ireland	SEAMLESS	ASTM A106 GR.B	1"-6"*sch40/80	930MT

YEAR	COUNTRY	PROUCT NAME	STANDARD / GRADE	SPECIFICATION	QUANTITY
2012	Gabon	SEAMLESS	API 5L X60 PSL2	18"*9.53	16987 METERS
2012	Colombia	SEAMLESS	API 5L, GR.B	508*sch80/sch120	817MT
2012	Saudi Arabia	SEAMLESS	API 5L, L245	21.3-406.4	1690MT
2011	Kuwait	SEAMLESS	API 5L GR.B (PSL2)	60.3-323.8*5.54-12.7	1086MT
2011	Qatar	SEAMLESS	API 5L GR.B (PSL2)	406.4*12.7	1006MT
2011	Brazil	SEAMLESS	API 5L, X52	6"*7.11 8"*8.18	63522 METERS
2010	Brazil	SEAMLESS	SAE 1020BK	159.5, 190*5	1680 METERS
2009	Iran	SEAMLESS/ALLOY	ASTM A106 A335 P22 P91	609,457,635*25,30,55	537MT
2008	Colombia	SEAMLESS	ASTM A53/A106,API 5L GR.B	114.3*6	41005 METERS
2008	Srilanka	SEAMLESS	ASTM A106 GR.B	114-273*6.02-9.27	8280 METERS
2007	Singapore	SEAMLESS	EN10210 S355JR	323.8*10 / 355.6*16	2568 METERS
2007	Indonesia	SEAMLESS	ASTM A106 GR.B	3",12" x sch40	1620PCS
2006	Swizerland	SMLS	API 5L, X52 PSL2	12"*12.7&14"*14.2mm	1200MT
2004	Brazil	SEAMLESS	API 5L, GR.B	168.3*sch80	3600 METERS
2004	Zealand	SEAMLESS	API 5L, GR.B	17mm-273mm	4458 METERS
2004	Iraq	SEAMLESS	API 5L, GR.B	21.3-168.3	12000 METERS
2003	Kenya	SEAMLESS	API 5L, GR.B PSL1	21.3-323.8	823MT
2003	India	SEAMLESS	ST52	58,90,122*7.5,8	278MT

F Clients

- SHELL OIL COMPANY
- SINOPEC GROUP
- PEMEX
- TOTAL S.A
- PETROBRAS
- AMOCO CORPORATION
- TERPEL

BP

STRABAG SE

HOCHTIEF SOLUTIONS AG

AECON GROUP INC

BROOKFIELD MULTIPLEX

ISOLUX CORSAN

CNOCC

CNPC

GAZPROM

AGL ENERGY

YPF

EXXONMOBIL

PDVSA

EGPC

QATAR PETROLEUM(QP)

STATOIL

SONATRACH

ECOPETROL

SALINE WATER CONVERSION

NATIONAL IRANIAN OIL

APA GROUP

ORIGIN ENERGY LIMITED

SONANGOL GROUP

NEE ZEALAND OIL & GAS

WOODSIDE PETROLEUM

SASOL

SUDAPET

PETROECUADOR

Contact

Organization Framework