

# Hunan Standard Steel



#### ▲ Oversea Network

Singapore: 7 Neythal Road Singapore 628574  
Korea: 12-5, Dasan-ro, Saha-gu, Busan, Korea 604-827  
Dalian: B1906, Kerren International Mansion ETDZ , Dalian  
City,P.R.China  
Suzhou: No.405 Suhong East Road,Sushou Industrial  
Park,Suzhou, 215026, PRC

#### ▲ Domestic Factory

Liaoning Province:Tiexi Road, Baita District,Liaoyang  
City,Liaoning Province,P.R.China 111000  
Hebei Province:Jiefang East Road,CangzhouCity,Hebei  
Province,P.R.China 061000  
Shandong Province:Luxing Road.Huanglou Town, Qingzhou City,  
Shandong Province,P.R.China 262517  
Jiangsu Province:Lakeshore Zone in wuxi, Jiangsu Province  
Hudai Industrial Park Vibration Hu Road 214081

#### ▲ Head Office

Add:22nd floor,West International Centre,Yuelu  
District,Changsha,Hunan,China 410205  
Tel:0086-731-88787781  
Fax:0086-731-84788292  
Web:[www.husteel-group.com](http://www.husteel-group.com)  
Email:[info@husteel-group.com](mailto:info@husteel-group.com)

**Member of husteel  
Industry Group**



**QUALITY DECIDES THE FUTURE**

## CONTENTS

<b>Company Profile</b>	<b>01</b>	<b>Inspection Center</b>	<b>05</b>	<b>Facility</b>	<b>09</b>	<b>Production</b>	<b>13</b>
Introduction	01	Quality Policy	05	Production Equipment	09	Production Process	13
Growth and Development	01	Quality Control	06	Coating	10	Product Range	17
Production Scales	02	Quality Assurance	07	Workshop for Pipe Fittings	11	Seamless Steel Pipe	19
Company Culture	02	Inspection Equipment	08			Tubing & Casing	22
Why Choose Us	03					ERW Steel Pipe	28
						LSAW Steel Pipe	30
						SSAW Steel Pipe	32
						Pipe Fittings	36
<b>Logistics Operation</b>	<b>38</b>	<b>Marketing &amp; Resources</b>	<b>41</b>	<b>Project Reference</b>	<b>45</b>	<b>Follow Us</b>	<b>53</b>
Pipe Protection	39	Oversea Agents	41	Project Distribution	47	End User	53
Pipe Handling	39	Materials	43	Project List	49	Organization Structure	55
Pipe Transport	40			Project Operation	51	Contacts	56
Pipe Storage	40						



Hunan Standard Steel Co.,Ltd is a subsidiary of Husteel Industry Group, which is a collection of shipbuilding, coastal engineering, steel investment, the development of mining, metallurgical smelting, steel production and sales of multinational multi-project, multi-domain engineering design and construction as a whole, more goods and services across the region. Hunan Standard Steel Co.,Ltd was founded in 2014 as a joint venture by Singapore, Malaysia, South Korea and DMH Investment Corporation aimed to put the brand of Hunan Standard Steel Co.,Ltd to the international stage by the ways of the financial strength, technical strength and scientific research strength and good international sales system. Hunan Standard Steel Co.,Ltd became joint-venture stock company registered capital of 20 million in 2014, foreign stocks accounted for 70% of China accounted for 30% of the shares of the joint venture for a period of fifty years.

## Growth and Development



So far, Hunan Standard Steel Co.,Ltd. in order to ensure business development, has more than 200 acres of steel distribution center in Tianjin, Jiangsu and other places, the annual inventory of all kinds of material and seamless steel pipe 50,000 tons, to meet foreign customer and emergency needs of domestic projects. With years of operation, the company continued to promote, has formed a sound, strong supply system and network marketing system. 2014 certified company by 5A enterprise quality and reliable products sell well in South America, Africa, the Middle East, Southeast Asia, Australia, America and other countries, praised by users in 2015, the company improved the 15 global oil companies, 19 natural gas companies, 12 shipyards fixed providers registered for the Chinese manufacturer worldwide to promote the brand has made great efforts, but the head office inject 200 million stake in the Danish DEMS rig Asia's only co-operation, it started to become Europe into the world's outstanding enterprises. The total staff in Hunan Standard Steel Co.,Ltd have been trying to forge ahead, hard work ahead, and strive for Chinese brands. Hunan Standard Steel Co.,Ltd. is currently the main focus of work in the steel manufacturing, high-tech industry and international trade. The major products are hot-rolled steel coil, hot rolled steel, hot-rolled heavy rail, plate, cold rolled coil, galvanized sheet, tin plate, cold rolled oriented and non-oriented silicon steel, painted steel, high-speed wire hundreds of varieties. Division specializing in the production of high-tech, high value-added steel products. In the automotive steel, shipbuilding steel, oil and gas exploitation and transportation of steel, appliance steel, stainless steel, special steel and high-grade construction steel materials and other fields, Hunan Standard Steel Co., Ltd. is as in China's major steel supply market suppliers, while products exported to Japan, Korea, Europe and America more than forty countries and regions.

## Production Scales

Production line from Group is located in North of China, mainly engaged in the manufacture and sale of steel, seamless steel pipe production, electric resistance welded steel pipe, steel pipe submerged two-sided spiral welded steel pipe, with an annual output of various types of steel pipe 200,000 tons; at the same time also operates oil and gas pipelines, marine equipment, pipe fittings, industrial automation systems, shore drilling platforms, power station equipment, their parts and components related services. A number of services in steel pipe production line products production: raw materials including two plate and pipe billet production base; steel pipe manufacturing plant containing two and two welded steel pipe seamless steel pipe plant, a professional logistics companies below four a transport team; in addition, the structure of some of the products mainly include beams, angles, H-beam, in addition, the Group also involves following the development of related industries, such as the Group investment (overseas



Department, domestic commerce, hotel marketing company), real estate projects, shipbuilding, equipment base, electrically controlled valve factory.

Now the scale of steel production at around 10 million tons, the main product structure plate pipe, rod and wire, supplemented by stainless steel products being developed. Brand of Hunan Standard Steel Co.,Ltd like auto sheet, shipbuilding plate, home appliance plate, steel, tubing and other high-end products in the domestic market share in the forefront, but also high-quality tool and mould steel, high-performance bearing steel, spring steel, steel cord and aviation steel major aerospace supplier. Hunan Standard Steel Co.,Ltd has a fully functional e-commerce platform, and establishment of a modern steel processing center in Shanghai, Hangzhou, Guangzhou, Tianjin, Qingdao, Chongqing, Shenyang and other places, can respond quickly to customer needs, provide users with a full range of value-added services. With the new round of development strategy, Hunan Standard Steel Co.,Ltd is speeding up the integration of the operation of the focus on the development of the market impact, the need to invest in a strategic restructuring of the steel industry in China, with top international steel products to compete with the quality of steel to raise the overall competitiveness of the steel industry.



## Company Culture

Hunan Standard Steel Co.,Ltd is in the record "to become the world's most enterprise in resource integration and product competitiveness," to sharing value with employee as principles, to help customers realize the integrated design, construction, procurement, inspection and other full-service perfect, even constantly build brand of Hunan Standard Steel branding as goal. Faced with customers, Hunan Standard Steel will uphold the "integrity, professional, aggressive" business philosophy, committed to providing world-class products with services. Customer-centric, all to enhance the customer experience a sense of principle, improve customer satisfaction at the core, will become strategic targets of Hunan Standard Steel.

Faced with employees, Hunan Standard Steel is commitment of employees share the wealth and enterprises, to provide long-term five-year development plan for each employee. Employees sweat does not flow in vain, every employee will be paid stamp Standard steel constant development.

QUALITY DECIDES OUR FUTURE! Companies focus on talent, focus on the customer, depending on each employee for each customer for the company's future, employees and customers to determine the company's future, let us usher in a new era for Chinese enterprises in the world dreams come true struggle.

## Why Choose Us >>>

### Operation Advantages

- Select the right suppliers to perform the order
- Supporting sales to get the order
- Deliver the order products on schedule
- Deliver with required quality
- Provide logistics service
- Provide whole manufacturing date records(MDRs)

### Project Supporting Advantages

- Review the project technical specifications for inquiries
- Prepare the project TDS(Technical Data Sheet) for pricing
- Estimate the feasibility of the manufacturing
- Allocate the proper qualified suppliers for the inquiry
- Estimate the delivery time and schedule
- Estimate the shipping price and duration,vessel types
- Provide the mill's qualification documents if required
- Prepare full tender documents including MPS,ITP,WPS,Painting procedures
- Review the prices

### Quality Management Advantages

- Pre-qualified raw material suppliers in place
- Pre-qualified manufacturers in place
- Handover meeting to make operation team fully understand requirements
- Specific quality plan,ITP,MPS,Procedures etc in place
- Production Kick off meeting to the mill fully understand the requirements
- Experienced Engineer to assist the mill on technical issue

- Qualified QC inspectors full time supervision
- Specific WIs,Forms,Records in place
- QC Daily detail report
- Standard in-process QC chart in place
- Change orders registering system
- Material re-test and heat No.tracking system
- NCR control system
- 3rd party inspection if needed
- Final inspection before release
- Stowage plan before loading
- Loading survey report after loading

### Production Control Advantages

- Prepare MPS
- Supplier manufacture apacity evaluation
- Specific working scope and standards
- Technical specification declaration for kick off meeting
- Production plan and schedule
- Shop drawing detailing
- Monitor progress
- Technical support for mill manufacturing
- Detail shop drawing
- Packaging method developing
- Variation control
- Manufacturing contract
- New supplier development
- New products R&D



## Quality Policy

Hunan Standard Steel Co.,Ltd is committed to comply with the requirement of the established Quality Management System(QMS) in accordance with the requirement of API Specification Q1 and ISO 9001:2008 Standard and strive for continually improve QMS effectiveness and customer satisfaction through competitiveness and efficiency in manufacturing of steel pipe and steel related services.



### Health, Safety and Environment Policy

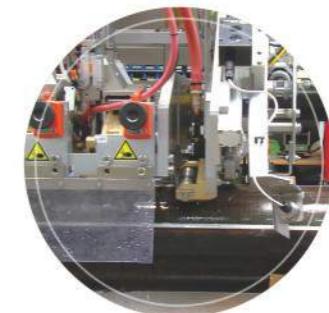
The company shall constantly strive to

- Cultivate good corporate governance and corporate social responsibility.
- Comply with relevant regulatory requirements and industrial practices.
- Employ and encourage safe working environment to reduce work accidents.
- Actively upgrade human resources through continuous training and development programs.
- Promote environment by preservation by minimizing hazardous industrial waste and effective energy conservation.

## Quality Control

To make sure that every pipe leaving our plant conforms to the high standard we guarantee to our customers, our quality control department will follow seven steps to confirm the quality of our product.

1. To detect any area of lamination on the material and dimensional flaws, a manual ultrasonic inspection will be performed on the hot rolled coils before use.
2. To determine the chemical composition and mechanical properties of the skelp, mill tests are run by our quality control inspectors before they are fed to the machine.
3. An ultrasonic examination is run on the formed and welded strip to check for any laminations around the parent metal, defects in the welded seam or heat affected areas.
4. A primary visual and dimensional inspection focusing on the weld bead and the surface condition of the base metal is carried out after cleaning.
5. To further ensure the quality of the weld, a fluoroscopic X-Ray test is carried out to look for possible weak spots. This test is captured on film and can be provided on request.
6. A hydrostatic testing machine will subject the pipe to further analysis identification.
7. Finally, a radiographic X-Ray inspection will take place on both ends of the pipe before a final mill examination.



## Quality Assurance

### Third Party Approvals

- American Bureau Of Shipping
- Bureau Veritas
- Det Norske Veritas
- Germanischer Lloyd
- Lloyd's Register
- Ped



### Destructive Testing Includes

- Tensile Tests
- Impact Tests
- Bend Tests
- Hardness Tests
- Intercrystalline Corrosion Test
- Pitting Corrosion Test
- Metallurgical Tests

### Non-destructive Testing Includes

- Eddy Current Testing
- Ultrasonic Testing
- Hydro Testing
- X-ray Testing
- Positive Material Identification Testing



## Inspection Equipment



Impact Testing Machine



Broaching Press



Spectrograph



Tensile Testing Machine



Vickers Hardness Tester



Polishing Machine



Spectrophotometer



Pointing Machine



Melt Flow Rate Instrument



Anchor Pattern Depth



Indentation Hardness



Chemical Analysis



Ultrasonic\_pipeline\_test



Indentation Hardness



Tube End Cutting Machine



Ultrasonic Flaw Detector

## Equipment Base

### Production Equipment

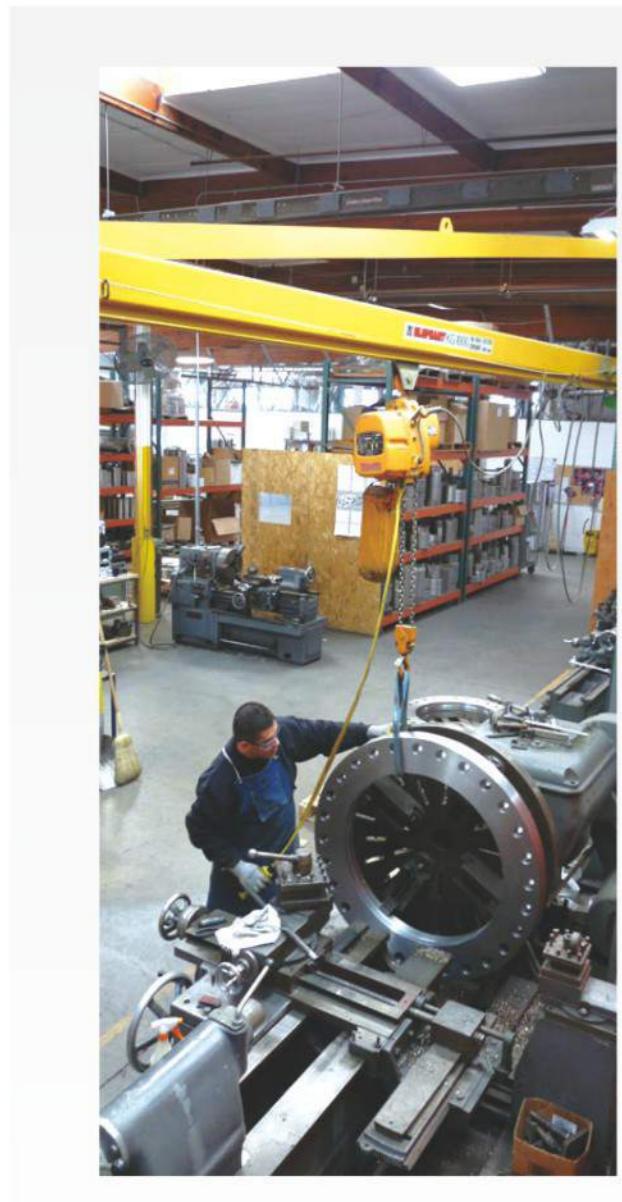


### Coating

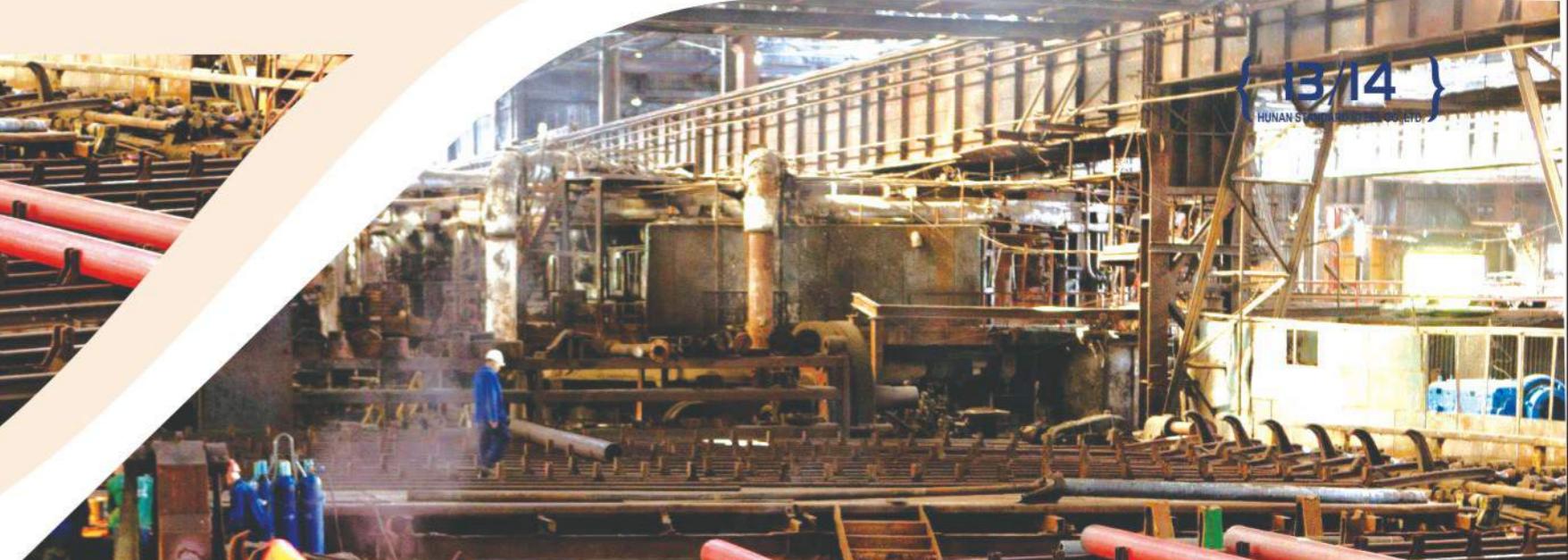


PE coating extrusion system of big bore steel pipe is one of JINHU mainly equipments. Two types include coating type and wrapping type, wrapping type divided into upper wrapping type and side wrapping type. As per customer's requirement, equipment can be fixed put, drop put or several extruders combine together for use. Coating type steel pipe get through the die tooling and then coating, mainning fit for 600mm below steel pipe coating, have the merits of convenient use, coating well-distributed, surface smooth and bright and low cost. Straight line transportation and wrap coating, different size steel pipe coating with different type of die tooling. Side wrapping type with die tooling beneath steel pipe, PE and adhesive rollers nether, adhesive and PE extruder are set up vertically.

## Workshop for Pipe Fittings

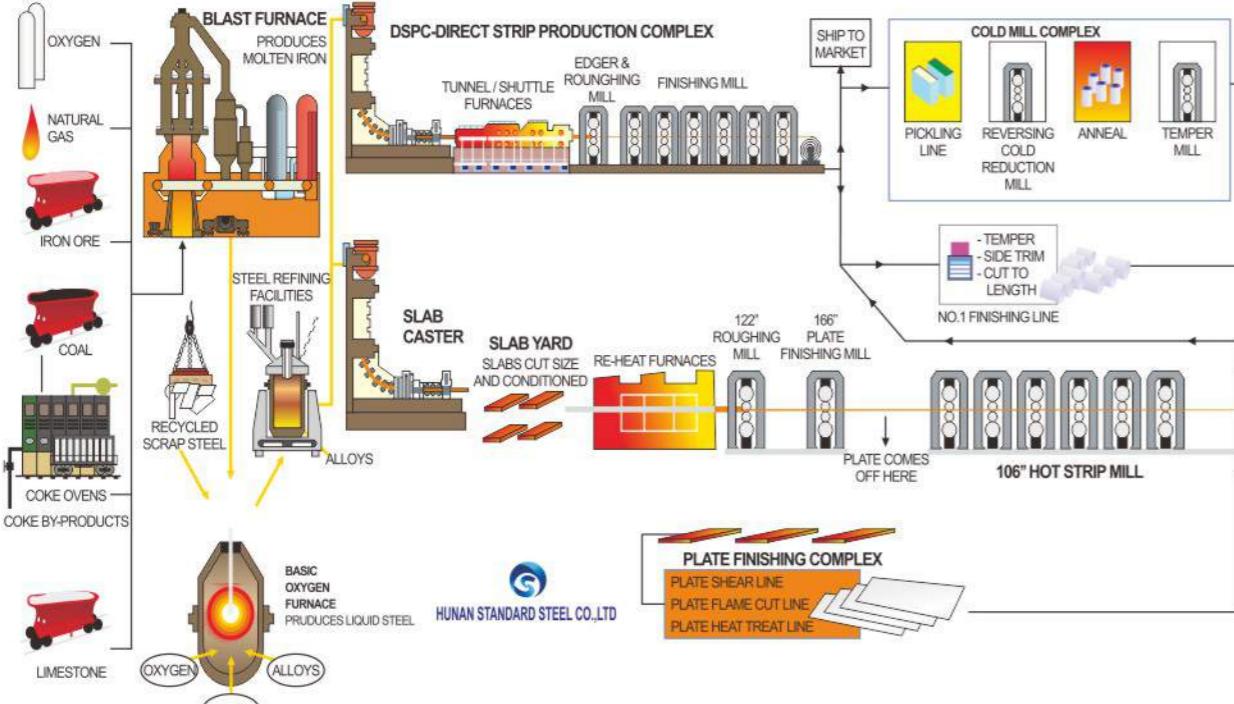


# Production

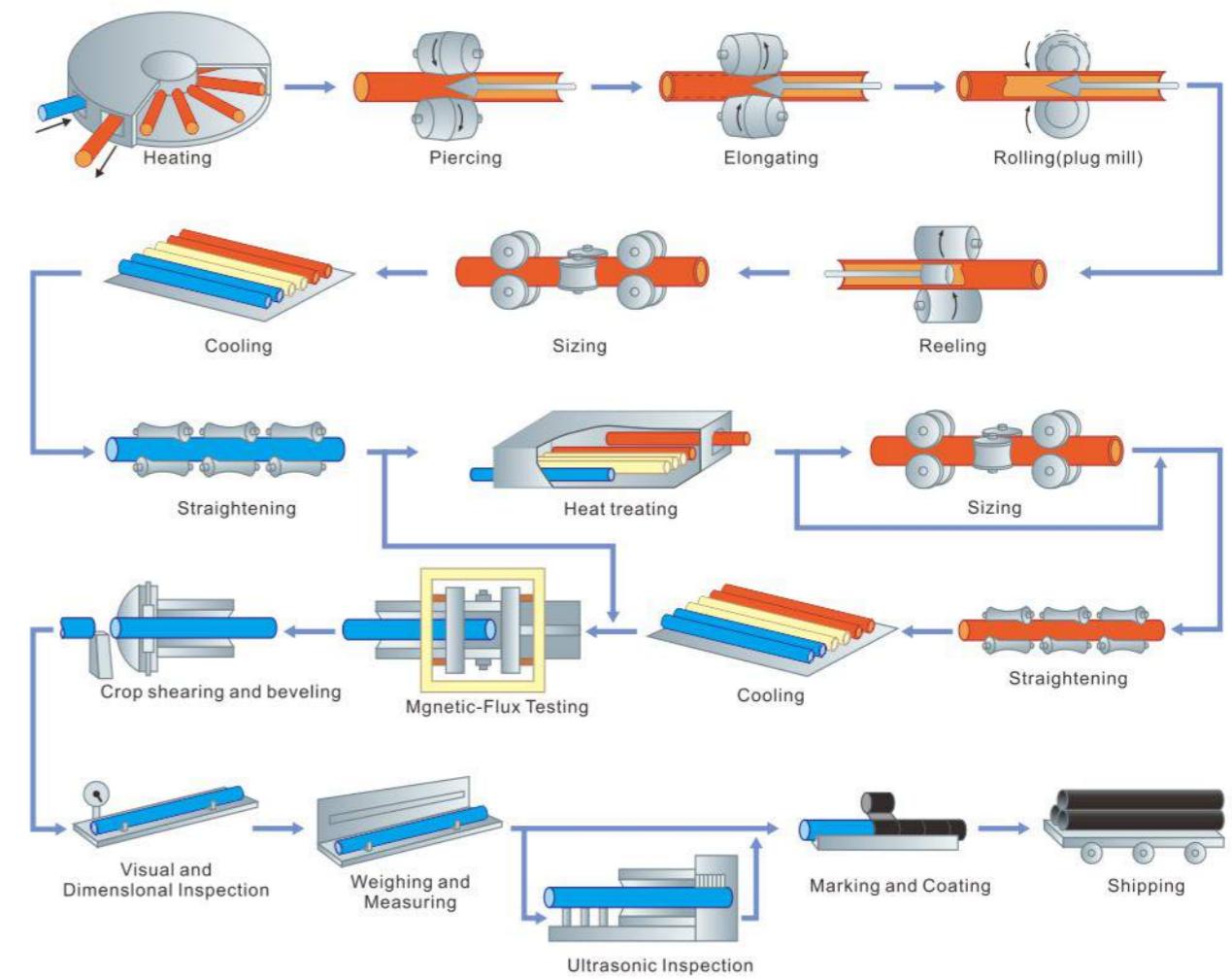


## Production Process Flow Chart

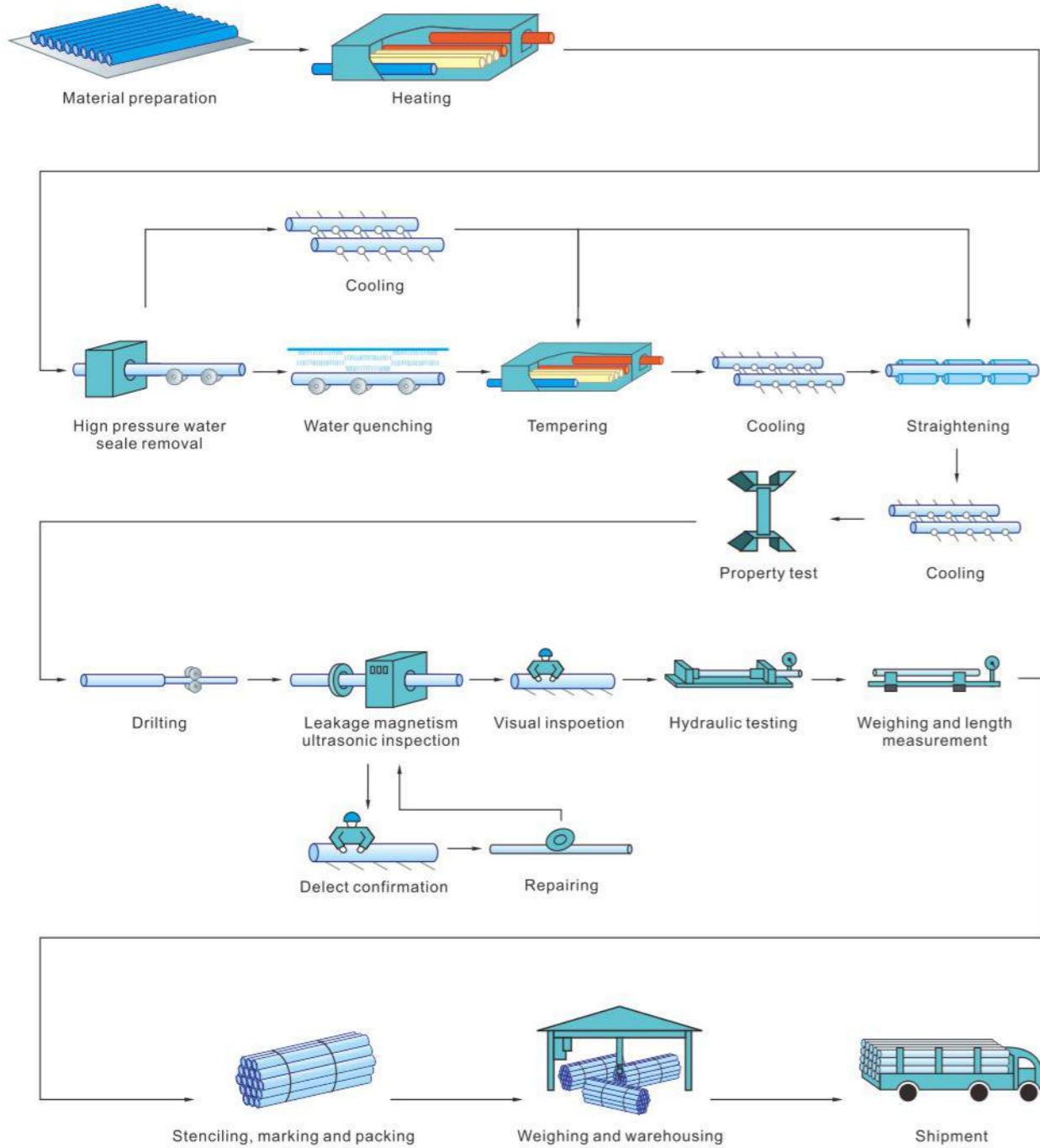
### Steel Making Process



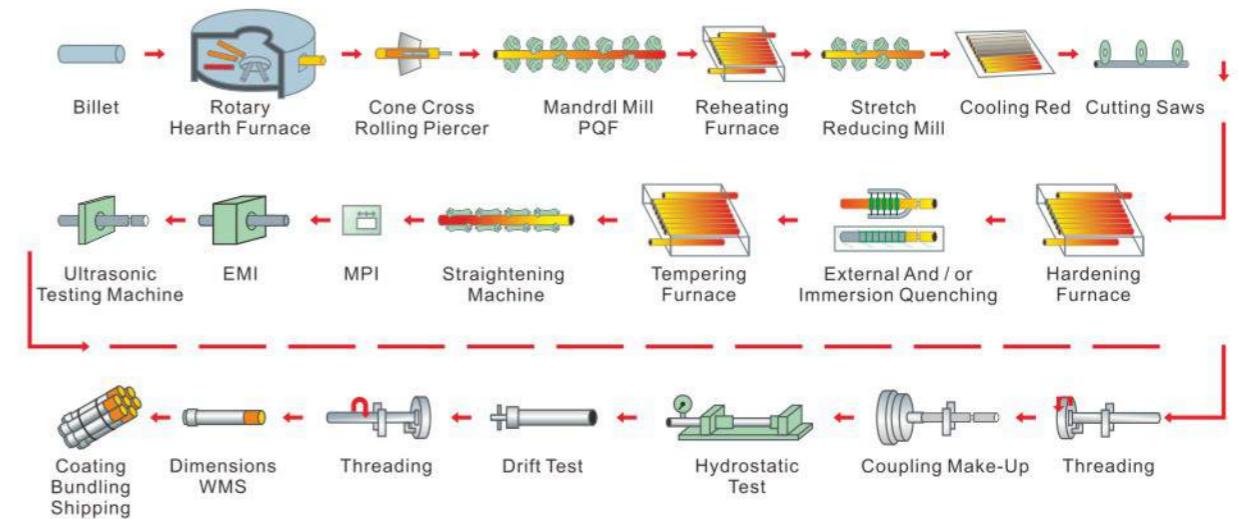
### Tube Manufacturing Process



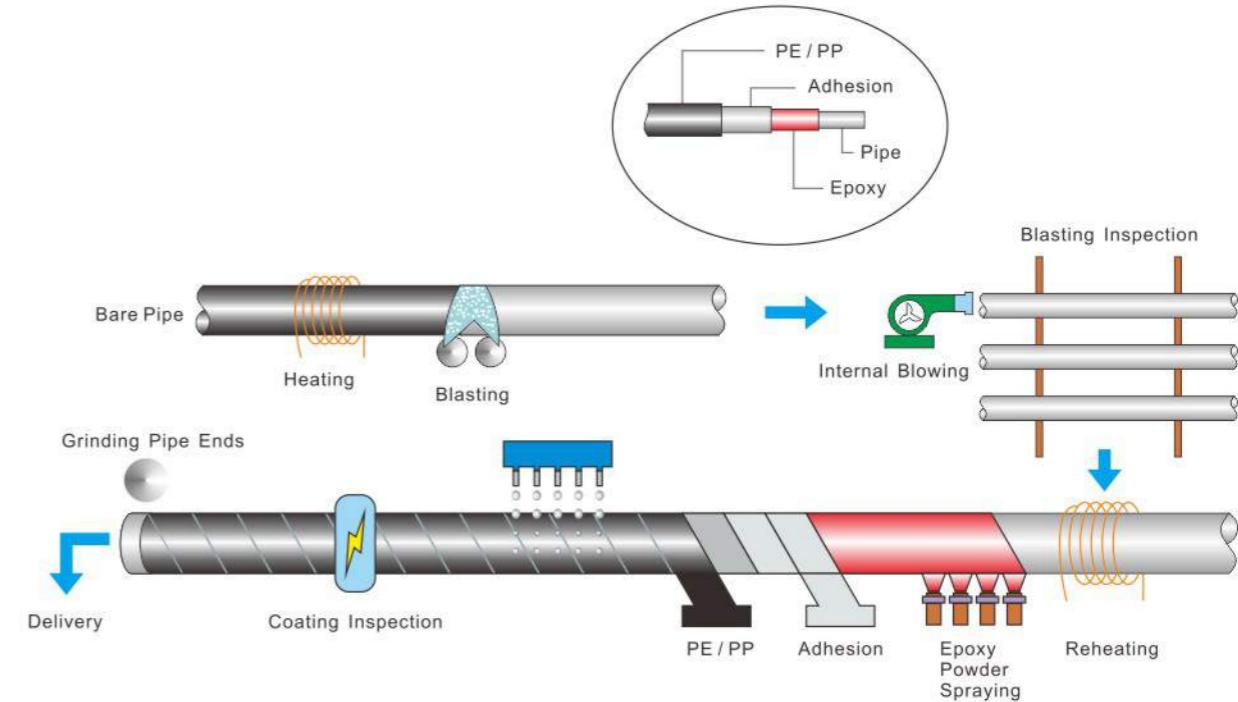
## Heat Treatment Process



## Tube Finishing Process



## Coating Process





## Product Range

Seamless  
Steel  
Pipe

Tubing  
&  
Casing

ERW Steel Pipe  
LSAW Steel Pipe  
SSAW Steel Pipe

Flange  
Elbow  
Tee  
Reducer

## SEAMLESS STEEL PIPE

### Types

Types		Uses	
Structure Purposes		General structure and mechanical	
Liquid Services		Petroleum, gas and other fluids conveying	
Low and Medium Pressure		Steam and boiler manufacturing	
Hydraulic Pillar Service		Hydraulic support	
Auto Semi-shaft Casing		Auto semi-shaft casing	
Line Pipe		Oil and gas conveying	
Tubing and Casing		Oil and gas conveying	
Drill Pipes		Well drilling	
Geological Drilling Pipes		Geological drilling	
Petroleum Cracking Tubes		Furnace tubes, heat exchangers	



### Standard

Standard	Grade		Chemical Composition(%)													
	Steel Name	Steel Number	C	Si	Mn	P	S	Cr	Mo	Ni	Al	Cu	Nb	Ti	V	Cr+Cu +Mo+Ni
EN 10216-1	P195TR1	1.0107	<0.13	<0.35	<0.70	<0.025	<0.020	<0.30	<0.08	<0.30	-	<0.30	<0.010	<0.04	<0.02	<0.70
	P195TR2	1.0108	<0.13	<0.35	<0.70	<0.025	<0.020	<0.30	<0.08	<0.30	0.02	<0.30	<0.010	<0.04	<0.02	<0.70
	P235TR1	1.0254	<0.16	<0.35	<1.20	<0.025	<0.020	<0.30	<0.08	<0.30	-	<0.30	<0.010	<0.04	<0.02	<0.70
	P235TR2	1.0255	<0.16	<0.35	<1.20	<0.025	<0.020	<0.30	<0.08	<0.30	0.02	<0.30	<0.010	<0.04	<0.02	<0.70
	P265TR1	1.0258	<0.20	<0.40	<1.40	<0.025	<0.020	<0.30	<0.08	<0.30	-	<0.30	<0.010	<0.04	<0.02	<0.70
	P265TR2	1.0259	<0.20	<0.40	<1.40	<0.025	<0.020	<0.30	<0.08	<0.30	0.02	<0.30	<0.010	<0.04	<0.02	<0.70

Standard	Grade		Yield Strength( Mpa)			Tensile Strength (Mpa)	Elongation(%)		Impact Properties(KV J)		
	Steel Name	Steel Number	WT< 16	16<WT<40	40<WT<60		Longitudinal	Transverse	0°C	-10°C	0°C
EN 10216-1	P195TR1	1.0107	≥ 195	≥ 185	≥ 175	320-440	≥ 27	≥ 25	-	-	-
	P195TR2	1.0108	≥ 195	≥ 185	≥ 175	320-440	≥ 27	≥ 25	≥ 40	≥ 28	≥ 27
	P235TR1	1.0254	≥ 235	≥ 225	≥ 215	360-550	≥ 25	≥ 23	-	-	-
	P235TR2	1.0255	≥ 235	≥ 225	≥ 215	360-550	≥ 25	≥ 23	≥ 40	≥ 28	≥ 27
	P265TR1	1.0258	≥ 265	≥ 255	≥ 245	410-570	≥ 21	≥ 19	-	-	-
	P265TR2	1.0259	≥ 265	≥ 255	≥ 245	410-570	≥ 21	≥ 19	≥ 40	≥ 28	≥ 27

Standard	Grade	Chemical Components (%)							Mechanical Properties			
		C	Si	Mn	P	S	Mo	Cr	V	Tensile Strength(Mpa)	Yield Strength(Mpa)	Elongation (%)
ASTM A53	A	≤ 0.25	/	≤ 0.95	≤ 0.05	≤ 0.06	≤ 0.15	≤ 0.40	≤ 0.08	≥ 330	≥ 205	≥ 29.5
	B	≤ 0.30	/	≤ 1.2	≤ 0.05	≤ 0.06	≤ 0.15	≤ 0.40	≤ 0.08	≥ 415	≥ 240	≥ 29.5
ASTM A106	A	≤ 0.25	≤ 0.10	0.27-0.93	≤ 0.035	≤ 0.035	≤ 0.15	≤ 0.40	≤ 0.08	≥ 415	≥ 240	≥ 30
	B	≤ 0.30	≤ 0.10	0.29-1.06	≤ 0.035	≤ 0.035	≤ 0.15	≤ 0.40	≤ 0.08	≥ 485	≥ 275	≥ 30
ASTM A179	A179	0.06-0.18	/	0.27-0.63	≤ 0.035	≤ 0.035	/	/	/	≥ 325	≥ 180	≥ 35
ASTM A192	A192	0.06-0.18	≤ 0.25	0.27-0.63	≤ 0.035	≤ 0.035	/	/	/	≥ 325	≥ 180	≥ 35

Standard	Grade	Chemical Components(%) (max)				Tensile Strength(min)	Yield Strength(min)
		C	Mn	P	S		
API 5L PSL1	A	0.22	0.90	0.030	0.030	335	210
	B	0.28	1.20	0.030	0.030	415	245
	X42	0.28	1.30	0.030	0.030	415	290
	X46	0.28	1.40	0.030	0.030	435	320
	X52	0.28	1.40	0.030	0.030	460	360
	X56	0.28	1.40	0.030	0.030	490	390
API 5L PSL2	X60	0.28	1.40	0.030	0.030	520	415
	X65	0.28	1.40	0.030	0.030	535	450
	X70	0.28	1.40	0.030	0.030	570	485
	B	0.24	1.20	0.025	0.015	415-655	245-450
	X42	0.24	1.20	0.025	0.015	415-655	290-495
	X46	0.24	1.40	0.025	0.015	435-655	320-525
	X52	0.24	1.40	0.025	0.015	460-760	360-530
	X56	0.24	1.40	0.025	0.015	490-760	390-545
	X60	0.24	1.40	0.025	0.015	520-760	415-565
	X65	0.18	1.70	0.025	0.015	535-760	450-600
	X70	0.18	1.80	0.025	0.015	570-760	485-635
	X80	0.18	1.90	0.025	0.015	625-825	555-705

## API 5CT TUBING

### Dimension Tolerances

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



### Specifications

Out Diameter mm	Wall Thickness (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																										

### Dimension

Label 1	Label 2			Outside diameter mm	Wall thickness mm	C Type of end-finish						
	NU T&C	EU T&C	IJ			H40	J55	L80	N80	C90	T95	P110
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	PNU	PNU	PNU	PNU	PNU	-	PU
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	-</			

## 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	
	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	0.5	621	724	689	25.4	255	
	C95	-	0.5	655	758	724	-	-	
	T95	1	0.5	655	758	724	25.4	255	
	P110	-	0.6	758	965	862	-	-	
3	Q125	All	0.65	862	1034	931	-	-	

### Dimension

Labels	Outside diameter	Nominal linear mass T&C	Wall thickness	J55	N80	L80	C90	P110	Q125
	mm	kg/m	mm	K55	N80Q		T95		
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	PSLB	PLBE	PLBE	PLBE	PLBE
5	18	127	26.79	9.19	-	PLBE	PLBE	PLBE	PLBE
5	21.4	127	31.85	11.1	-	PLB	PLB	PLB	PLB
5	23.2	127	34.53	12.14	-	PLB	PLB	PLB	PLB
5	24.1	127	35.86	12.7	-	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	PSLB	-	-	-	-
5 1/2	17	139.7	25.3	7.72	PSLB	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
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	PSLB	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
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	PSLB	PLBE	PLBE	PLBE	PLBE
7	26	177.8	38.69	9.19	PSLB	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
7	38	177.8	56.55	13.72	-	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	PSLB	PLBE	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	-	PLB	PLB	PLB	PLB
7 5/8	42.8	193.68	63.69	14.27	-	PLB	PLB	PLB	PLB
7 5/8	45.3	193.68	67.41	15.11	-	PLB	PLB	PLB	PLB
7 5/8	47.1	193.68	70.09	15.88	-	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	-	-



## Mechanical Properties

Labels		Outside diameter	Nominal linear mass T&C	Wall thickness	J55	N80	L80	C90	P110	Q125
		mm	kg/m	mm	K55	N80Q	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	-	-
10 3/4	55	273.05	82.59	12.57	-	PSBE	PSBE	PSBE	-	-
10 3/4	60.7	273.05	90.33	13.84	-	-	PSBE	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	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.

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	0.5	621	724	689	25.4	255
	C95	-	0.5	655	758	724	-	-
	T95	1	0.5	655	758	724	25.4	255
3	P110	-	0.6	758	965	862	-	-
4	Q125	All	0.65	862	1034	931	-	-



## Dimension and Tolerances

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



## ERW STEEL PIPE

### Length

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		
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	-	-	-	



### Specifications

Wall Thickness Out Diameter	Inch	mm	Inch	mm	Inch	mm	Inch	mm	Inch	mm	Inch	mm	Inch	mm	Inch	mm	Inch	mm	Inch	mm
Inch	8 5/8	219.1	10 3/4	273.1	11 2/3	343	12 3/4	323.9	14	355.6	16	406	18	457	20	508	22	559	24	610
0.157	4																			
0.173	4.4																			
0.205	5.2																			
0.22	5.6																			
0.25	6.4																			
0.28	7.1																			
0.312	7.9																			
0.344	8.7																			
0.375	9.5																			
0.406	10.3																			
0.5	12.7																			
0.562	14.3																			
0.625	15.9																			
0.688	17.5																			
0.75	19.1																			

### Tolerance

Standard	Out Diameter	Tolerance of Pipe End		Tolerance of Pipe Body
		+/-	mm	
	219.1~273.1	+1.6	mm	-0.4mm
	274.0~320	+2.4	mm	-0.8mm
API 5L	323.9~457	+2.4	mm	-0.8mm
	508	+2.4	mm	-0.8mm
	559~610	+2.4	mm	-0.8mm



## LSAW STEEL PIPE



## Specifications

### Tolerance

Standard	Grade	Out Diameter	Wall Thickness
API 5L	/	219.1~457	+15%, -12.5%
	B	508~610	+17.5%, -12.5%
	X42-X80	508~610	+19.5%, -8%

Out Diameter	Wall Thickness(mm)																
	Inch	mm	6.4	7.1	7.9	9.53	12.7	14.3	15.9	19.1	22.2	25.4	28.6	31.8	34.9	38.1	41.3
16	406.4																
18	457																
20	508																
22	559																
24	610																
26	660																
28	711																
30	762																
32	813																
34	864																
36	914																
38	965																
40	1016																
42	1067																
44	1118																
46	1168																
48	1219																
52	1321																
56	1422																

### Chemical Analysis and Mechanical Properties

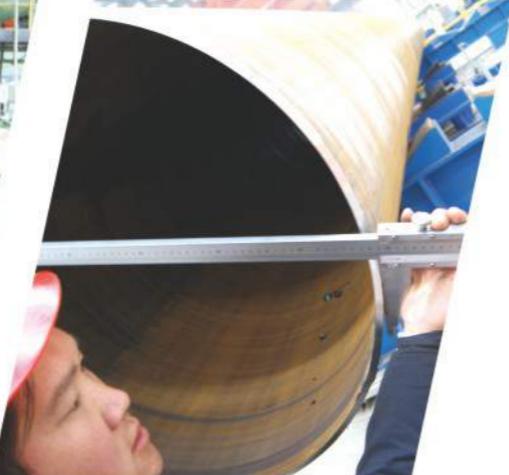
Standard	Class	Grade	Chemical Analysis(%) (max)				Mechanical Properties	
			C	Mn	P	S	Tensile Strength (min) (Mpa)	Yield Strength (min)(Mpa)
API 5L	PSL1	B	0.26	1.20	0.030	0.030	415	245
		X42	0.26	1.30	0.030	0.030	415	290
		X46	0.26	1.40	0.030	0.030	435	320
		X52	0.26	1.40	0.030	0.030	460	360
		X56	0.26	1.40	0.030	0.030	490	390
		X60	0.26	1.40	0.030	0.030	520	415
		X65	0.26	1.45	0.030	0.030	535	450
		X70	0.26	1.65	0.030	0.030	570	485
API 5L	PSL2	B	0.22	1.20	0.025	0.015	415-655	245-450
		X42	0.22	1.30	0.025	0.015	415-655	290-495
		X46	0.22	1.30	0.025	0.015	435-655	320-525
		X52	0.22	1.40	0.025	0.015	460-760	360-530
		X56	0.22	1.40	0.025	0.015	490-760	390-545
		X60	0.12	1.60	0.025	0.015	420-760	415-565
		X65	0.12	1.60	0.025	0.015	535-760	450-600
		X70	0.12	1.70	0.025	0.015	570-760	485-635
AS 1163:2009	C250,C250L0	0.12	0.05	0.50	0.03	0.03	250	320
	C350,C350L0	0.20	0.45	1.60	0.03	0.03	350	430
	C450,C450L0	0.20	0.45	1.70	0.03	0.03	450	500

### Tolerance

Types	Standard					
	SY/T5040-2000	SY/T5037-2000	SY/T9711.1-1977	ASTM A252	AWWA C200-97	API 5L PSL1
Tube end OD deviation	± 0.5%D	± 0.5%D	-0.79mm~+2.38mm	<± 0.1%T	<± 0.1%T	± 1.6mm
Wall thickness	± 10.0%T	D<508mm, ±12.5%T	-8%T~+19.5%T	<-12.5%T	-8%T~+19.5%T	5.0mm<T<15.0mm, ±0.11%T



## SSAW STEEL PIPE



## Specifications

## Chemical Composition and Mechanical Properties

Standard	Grade	Chemical Composition(max)%					Mechanical Properties(min)	
		C	Mn	Si	S	P	Yield Strength(Mpa)	Tensile Strength(Mpa)
GB/T 700-2006	A	0.22	1.4	0.35	0.050	0.045	235	370
	B	0.2	1.4	0.35	0.045	0.045	235	370
	C	0.17	1.4	0.35	0.040	0.040	235	370
	D	0.17	1.4	0.35	0.035	0.035	235	370
GB/T 1591-2009	A	0.2	1.7	0.5	0.035	0.035	345	470
	B	0.2	1.7	0.5	0.030	0.030	345	470
	C	0.2	1.7	0.5	0.030	0.030	345	470
BS En10025	S235JR	0.17	1.4	-	0.035	0.035	235	360
	S275JR	0.21	1.5	-	0.035	0.035	275	410
	S355JR	0.24	1.6	-	0.035	0.035	355	470
DIN 17100	ST37-2	0.2	-	-	0.050	0.050	225	340
	ST44-2	0.21	-	-	0.050	0.050	265	410
	ST52-3	0.2	1.6	0.55	0.040	0.040	345	490
JIS G3101	SS400	-	-	-	0.050	0.050	235	400
	SS490	-	-	-	0.050	0.050	275	490
API 5L PSL1	A	0.22	0.9	-	0.03	0.03	210	335
	B	0.26	1.2	-	0.03	0.03	245	415
	X42	0.26	1.3	-	0.03	0.03	290	415
	X46	0.26	1.4	-	0.03	0.03	320	435
	X52	0.26	1.4	-	0.03	0.03	360	460
	X56	0.26	1.1	-	0.03	0.03	390	490
	X60	0.26	1.4	-	0.03	0.03	415	520
	X65	0.26	1.45	-	0.03	0.03	450	535
	X70	0.26	1.65	-	0.03	0.03	585	570



## Standard and Classification

Classification	Standard	Main Products
Steel Pipe for Fluid Service	GB/T 14291	Welded pipe for mine fluid service
	GB/T 3091	Welded pipe for low pressure fluid service
	SY/T 5037	Spirally submerged arc welded steel pipe for pipelines for low pressure fluid service
	ASTM A53	Black and hot-hipped galvanized welded and seamless steel pipe
	BS EN10217-2	Welded steel tubes for pressure purposes - delivery technical conditions - part2: Electric welded non-alloy and alloy steel tubes with specified elevated temperature properties
	BS EN10217-5	Welded steel tubes for pressure purposes - delivery technical conditions - part5: submerged arc welded non-alloy and alloy steel tubes with specified elevated temperature properties
	GB/T 13793	Longitudinally electric resistance welded steel pipe
Steel Pipe for Ordinary Structure	SY/T 5040	Spirally submerged arc welded steel pipe piles
	ASTM A252	Welded and seamless steel pipe piles
	BS EN10219-1	Cold formed welded structural hollow sections of non-alloy and fine grain steels - part1: Technical deliver conditions
	BS EN10219-2	Cold formed welded structural hollow sections of non-alloy and fine grain steels - part2: tolerances dimensions and sectional properties
	GB/T 9711.1	Steel pipe for pipeline transportation system of petroleum and natural gas industries(Class A steel pipe)
Line Pipe	GB/T 9711.2	Steel pipe for pipeline transportation system of petroleum and natural gas industries(Class B steel pipe)
	API 5L PSL1/PSL2	Line pipe
	API 5CT / ISO 11960 PSL1	Steel pipe for use as casing or tubing for wells of petroleum and natural gas industries



## Tolerance

Standard	Tolerance of Pipe Body		Tolerance of Pipe End		Tolerance of Wall Thickness	
	Out Diameter	Tolerance	Out Diameter	Tolerance	OD < 73	-12.5% ~ +20%
GB/T3091	OD < 48.3mm	≤ ±0.5	OD < 48.3mm	-	≤ ±10%	
	48.3<OD < 273.1mm	≤ ±1.0%	48.3<OD < 273.1mm	-		
	273.1<OD < 508mm	≤ ±0.75%	273.1<OD < 508mm	-0.8~+2.4		
GB/T9711.1	OD>508mm	≤ ±1.0%	OD>508mm	-0.8~+3.2	OD < 73	
	OD < 48.3mm	-0.79~-+0.41	-	-		
	60.3<OD < 457mm	≤ ±0.75%	OD < 273.1mm	-0.4~-+1.59	88.9 < OD < 457	-12.5% ~ +15%
	508<OD < 941mm	≤ ±1.0%	OD > 323.9	-0.79~-+2.38	OD > 508	-10.0% ~ +17.5%
GB/T9711.2	OD>941mm	≤ ±1.0%	-	-	WT > 25mm	
	60<OD < 610mm	±0.75%D~±3mm	60<OD < 610mm	±0.5%D~±1.6mm		
	610<OD < 1430mm	±0.5%D~±4mm	610<OD < 1430mm	±0.5%D~±1.6mm		
SY/T5037	OD>1430mm	-	OD>1430mm	-	WT > 25mm	
	OD<508mm	≤ ±0.75%	OD<508mm	≤ ±0.75%	OD<508mm	≤ ±12.5%
	OD ≥ 508mm	≤ ±1.00%	OD ≥ 508mm	≤ ±0.50%	OD ≥ 508mm	≤ ±10.0%
API 5L PSL1/PSL2	OD<60.3	-0.8mm~-+0.4mm	OD < 168.3	-0.4mm~-+1.6mm	WT < 5.0	≤ ±0.5
	60.3 < OD < 168.3	≤ ±0.75%	168.3<OD < 610	≤ ±1.6mm	5.0 < WT < 15.0	≤ ±0.1T
	168.3<OD < 610	≤ ±0.75%	610<OD < 1422	≤ ±1.6mm	T > 15.0	≤ ±1.5
	610<OD < 1422	≤ ±4.0mm	OD>1422	-	-	-
API 5CT	OD>1422	-	-	-	-	-
	OD<114.3	≤ ±0.79mm	OD<114.3	≤ ±0.79mm	≤ -12.5%	
ASTM A53	OD ≥ 114.3	-0.5%~-1.0%	OD ≥ 114.3	-0.5%~-1.0%		
	≤ ±1.0%	≤ ±1.0%	≤ ±1.0%	≤ ±1.0%	≤ -12.5%	
ASTM A252	≤ ±1.0%	≤ ±1.0%	≤ ±1.0%	≤ ±1.0%	≤ -12.5%	

## Chemical Analysis and Mechanical Properties

Standard	Grade	Chemical Analysis(%) (max)					Mechanical Properties	
		C	Si	Mn	P	S	Tensile Strength (min)(Mpa)	Yield Strength (min)(Mpa)
AS 1163:2009	C250,C250L0	0.12	0.05	0.50	0.03	0.03	250	320
	C350,C350L0	0.20	0.45	1.60	0.03	0.03	350	430
	C450,C450L0	0.20	0.45	1.70	0.03	0.03	450	500

## PIPE FITTINGS



Standard	Grade	Chemical Composition(max)%					Mechanical Properties(min)	
		C	Si	Mn	P	S	Yield Strength(Mpa)	Tensile Strength(Mpa)
API 5CT	h40	-	-	-	-	0.030	417	417
	J55	-	-	-	-	0.030	517	517
	K55	-	-	-	-	0.300	655	655
API 5L PSL1	A	0.22	-	0.90	0.030	0.030	335	335
	B	0.26	-	1.20	0.030	0.030	415	415
	X42	0.26	-	1.30	0.030	0.030	415	415
	X46	0.26	-	1.40	0.030	0.030	435	435
	X52	0.26	-	1.40	0.030	0.030	460	460
	X56	0.26	-	1.40	0.030	0.030	490	490
	X60	0.26	-	1.40	0.030	0.030	520	520
	X65	0.26	-	1.45	0.030	0.030	535	535
	X70	0.26	-	1.65	0.030	0.030	570	570
	B	0.22	0.45	1.20	0.025	0.015	415	415
API 5L PSL2	X42	0.22	0.45	1.30	0.025	0.015	415	415
	X46	0.22	0.45	1.40	0.025	0.015	435	435
	X52	0.22	0.45	1.40	0.025	0.015	460	460
	X56	0.22	0.45	1.40	0.025	0.015	490	490
	X60	0.12	0.45	1.60	0.025	0.015	520	520
	X65	0.12	0.45	1.60	0.025	0.015	535	535
	X70	0.12	0.45	1.70	0.025	0.015	570	570
	X80	0.12	0.45	1.85	0.025	0.015	625	625
	L210	-	-	0.90	0.030	0.030	335	335
	L245	-	-	1.15	0.030	0.030	415	415
GB/T 9711.1	L290	-	-	1.25	0.030	0.030	415	415
	L320	-	-	1.25	0.030	0.030	435	435
	L360	-	-	1.25	0.030	0.030	460	460
	L390	-	-	1.35	0.030	0.030	490	490
	L415	0.26	-	1.35	0.030	0.030	520	520
	L450	0.26	-	1.40	0.030	0.030	535	535
	L485	0.23	-	1.60	0.030	0.030	570	570
GB/T3091/ SY/T5037	Q195	0.12	0.30	0.50	0.035	0.040	315	315
	Q215B	0.15	0.35	1.20	0.045	0.045	335	335
	Q235B	0.20	0.35	1.40	0.045	0.045	370	370
	Q345B	0.20	0.50	1.70	0.035	0.035	470	470
ASTM A53	A	0.25	0.10	0.95	0.050	0.045	330	330
	B	0.30	0.10	1.20	0.050	0.045	415	415
ASTM A252	1	-	-	-	0.050	-	345	345
	2	-	-	-	0.050	-	414	414
EN10217-1	3	-	-	-	0.050	-	455	455
	P195TR1	0.13	0.35	0.70	0.025	0.020	320	320
	P195TR2	0.13	0.35	0.70	0.025	0.020	320	320
	P235TR1	0.16	0.35	1.20	0.025	0.020	360	360
	P235TR2	0.16	0.35	1.20	0.025	0.020	360	360
EN10217-2	P265TR1	0.20	0.40	1.40	0.025	0.020	410	410
	P265TR2	0.20	0.40	1.40	0.025	0.020	410	410
	P195GH	0.13	0.35	0.70	0.025	0.020	320	320
EN10217-5	P235GH	0.16	0.35	1.20	0.025	0.020	360	360
	P265GH	0.20	0.40	1.40	0.025	0.020	410	410
EN10219-1	P235GRH	0.16	0.35	1.20	0.025	0.020	360	360
	S235JRH	0.17	-	1.40	0.040	0.040	360	360
	S275JRH	0.20	-	1.50	0.035	0.035	410	410
	S275J2H	0.20	-	1.50	0.030	0.030	410	410
	S355JRH	0.22	0.55	1.60	0.035	0.035	470	470
	S355J2H	0.22	0.55	1.60	0.030	0.030	470	470
	S355K2H	0.22	0.55	1.60	0.030	0.030	470	470



### Tee

Pattern	Weld	Seamless
Nominal size	1/2"-48" (DN15-DN1200)	1/2"-20" (DN15-DN500)
Bend radius	SCH5S-SCH160 ,XXS	SCH5-SCH160

### Flange

Pattern	Socket Weld , Slip On , Blind ,Screwed , Ring Joint,Weld Neck , Long Weld Neck , Reducing , Spectacle
Size	1/2"-60" (DN15-DN3000)
Pressure class	Class150-Class2500
Facing	RF / FM / M / T G / RF / FF / RTJ
Type	WN SO SW TH BL RF FF MF RJT PL PJ/PR BL(S)

### Reducer

Pattern	Weld	Seamless
Size	1/2"-48" (DN15-DN1200)	1/2"-20" (DN15-DN500)

### Elbow

Seamless elbow	1/2"-24" DN15-DN600.
Welded elbow	4"-72", DN150-DN1800.
Wall thickness	Sch10, Sch20, Sch30, Std, Sch40, Sch60, Xs, Sch80, Sch100, Sch120, Sch140, Sch160, Xxs, Std, Sch5s, Sch20s, Sch40s, Sch80s.



## ASME B36.10M

Nominal Pipe Size		Outside Diameter (NPS)	Nominal Wall Thickness																		
A	B		MM	IN	MM	MM	MM	MM	MM	MM	MM	MM	MM	MM	MM	MM	MM	MM	MM	MM	
8	1/4	13.7	0.540	-	1.65	2.24	3.02	-	1.65	-	1.85	2.24	2.24	-	3.02	3.02	-	-	-	-	
10	3/8	17.1	0.675	-	1.65	2.31	3.2	-	1.65	-	1.85	2.31	2.31	-	3.2	3.2	-	-	-	-	
15	1/2	21.3	0.840	1.65	2.11	2.77	3.73	1.65	2.11	-	2.41	2.77	2.77	-	3.73	3.73	-	-	4.78	7.47	
20	3/4	26.7	1.05	1.65	2.11	2.87	3.91	1.65	2.11	-	2.41	2.87	2.87	-	3.91	3.91	-	-	5.56	7.82	
25	1	33.4	1.32	1.65	2.77	3.38	4.55	1.65	2.77	-	2.9	3.38	3.38	-	4.55	4.55	-	-	6.35	9.09	
32	1 1/4	42.2	1.66	1.65	2.77	3.56	4.85	1.65	2.77	-	2.97	3.56	3.56	-	4.85	4.85	-	-	6.35	9.7	
40	1 1/2	48.3	1.9	1.65	2.77	3.68	5.08	1.65	2.77	-	3.18	3.68	3.68	-	5.08	5.08	-	-	7.14	10.15	
50	2	60.3	2.38	1.65	2.77	3.91	5.54	1.65	2.77	-	3.18	3.91	3.91	-	5.54	5.54	-	-	8.74	11.07	
65	2 1/2	73	2.88	2.11	3.05	5.16	7.01	2.11	3.05	-	4.78	5.16	5.16	-	7.01	7.01	-	-	9.53	14.02	
80	3	88.9	3.5	2.11	3.05	5.49	7.62	2.11	3.05	-	4.78	5.49	5.49	-	7.62	7.62	-	-	11.13	15.24	
90	3 1/2	101.6	4	2.11	3.05	5.74	8.08	2.11	3.05	-	4.78	5.72	5.74	-	8.08	8.08	-	-	-	-	
100	4	114.3	4.5	2.11	3.05	6.02	8.56	2.11	3.05	-	4.78	6.02	6.02	-	8.56	8.56	-	11.13	-	13.49 17.12	
125	5	141.3	5.56	2.77	3.4	6.55	9.53	2.77	3.4	-	-	6.55	6.55	-	9.53	9.53	-	12.7	-	15.88 19.05	
150	6	168.3	6.62	2.77	3.4	7.11	10.97	2.77	3.4	-	-	7.11	7.11	-	10.97	10.97	-	14.27	-	18.26 21.95	
200	8	219.1	8.62	2.77	3.76	8.18	12.7	2.77	3.76	6.35	7.04	8.18	8.18	10.31	12.7	12.7	15.09	18.26	20.62	23.01 22.23	
250	10	273.0	10.75	3.40	4.19	9.27	12.7	3.40	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	
300	12	323.8	12.75	3.96	4.57	9.53	12.7	3.96	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	14	3.96	4.78	9.53	12.7	3.96	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	16	4.19	4.78	9.53	12.7	4.19	6.35	7.92	9.53	9.53	12.7	16.66	12.7	21.44	26.19	30.96	36.56	40.49	-
450	18	457	18	4.19	4.78	9.53	12.7	4.19	6.35	7.92	11.13	9.53	14.27	19.05	12.7	23.83	29.36	34.93	39.67	45.24	-
500	20	508	20	4.78	5.54	9.53	12.7	4.78	6.35	9.53	12.7	9.53	15.09	20.62	12.7	26.19	32.54	38.1	44.45	50.01	-
550	22	559	22	4.78	5.54	9.53	12.7	4.78	6.35	9.53	12.7	9.53	-	22.23	12.7	28.58	34.93	41.28	47.63	53.98	-
600	24	610	24	5.54	6.35	9.53	12.7	5.54	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	26	-	-	-	-	-	7.92	12.7	-	9.53	-	-	12.7	-	-	-	-	-	
700	28	711	28	-	-	-	-	-	7.92	12.7	15.88	9.53	-	-	12.7	-	-	-	-	-	
750	30	762	30	6.35	7.92	9.53	12.7	6.35	7.92	12.7	15.88	9.53	-	-	12.7	-	-	-	-	-	
800	32	813	32	-	-	-	-	-	7.92	12.7	15.88	9.53	17.48	-	12.7	-	-	-	-	-	
850	34	864	34	-	-	-	-	-	7.92	12.7	15.88	9.53	17.48	-	12.7	-	-	-	-	-	
900	36	914	36	-	-	-	-	-	7.92	12.7	15.88	9.53	19.05	-	12.7	-	-	-	-	-	
950	38	965	38	-	-	-	-	-	-	-	-	-	-	-	12.7	-	-	-	-	-	
1000	40	1016	40	-	-	-	-	-	-	-	-	-	-	-	12.7	-	-	-	-	-	
1050	42	1067	42	-	-	-	-	-	-	-	-	-	-	-	12.7	-	-	-	-	-	
1100	44	1118	44	-	-	-	-	-	-	-	-	-	-	-	12.7	-	-	-	-	-	
1150	46	1168	46	-	-	-	-	-	-	-	-	-	-	-	12.7	-	-	-	-	-	
1200	48	1219	48	-	-	-	-	-	-	-	-	-	-	-	12.7	-	-	-	-	-	

## Logistics Operation





Hunan Standard Steel Logistics offers customers a wide range of third-party logistics services for raw, semi-finished and finished metal products. We have many years of experience handling international metal logistics and can offer a full suite of services. Our logistics will enhance customers' competitiveness and growth opportunities by providing superior solutions and services in a cost effective manner.

Hunan Standard Steel Logistics is a registered international freight forwarder with assets in place to help process and move your material. As requested by our customers, we can provide a wide range of services to streamline international supply chains. Our services include:

1. Advising on importing and exporting including freight providers, ports of loading and discharge, consular fees, special documentation, insurance costs and freight handling.
2. Preparing and filing required export documentation such as the bill of lading and routing appropriate documents to the seller, the buyer or a paying bank.
3. Advising on the most appropriate mode of cargo transport and making arrangements to pack and load the cargo.
4. Reserving the necessary cargo space on a vessel, train or truck.
5. Making arrangements with overseas customs brokers to ensure that the goods and documents comply with customs regulations.



Pipe Protection



Pipe Handling



Pipe Storage



Pipe Transport

## Marketing & Resources

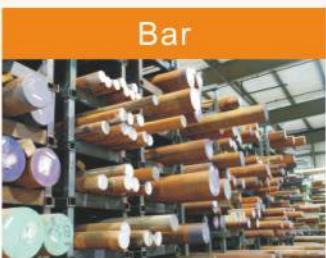
### Oversea Agents

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





## 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.



**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  $P_N \leq 32.0\text{MPa}$ , temperature -30-425 °C water, steam, air, hydrogen, ammonia, nitrogen and petroleum products, and other media.



**Heavy plate**

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



**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.



**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.



**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.



**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, electrical motor and building etc.



**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.

## Project Reference



### Oil & Gas

Refineries  
Petrochemical Plants  
Offshore Facilities  
Pipelines



### Power / Alternative Energy

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



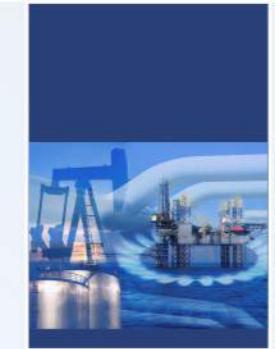
### Water Supply / Sewage

Dams  
Transmission Pipelines  
Irrigation Canals  
Pumping Stations



### Industrial Process

Steel Mills  
Pharmaceutical Plants  
Chemical Plants  
Mining



{ 45/46 }

HUNAN STANDARD PIPE CO., LTD.

## Project Distribution

### Europe

#### Romania

Project Title	Drilling Romania Project
Description	CASING (THREAD,COUPLING)
Material	API 5CT.K55/N80
Specification	13-3/8, 9-5/8, 7, 3-1/2* 12.19, 11.99, 10.36, 6.45
Purchase Time	05/12/2017
Completion Date	08/05/2017

#### Poland

Project Title	Petro Poland Project
Description	ERW (VARNISH)
Material	ASTM A53 GR.B
Specification	60.3, 73, 88.9*5.54-7.62
Purchase Time	02/01/2017
Completion Date	05/23/2017

### Africa

#### Tunisia

Project Title	Drilling Tunisia Project
Description	LSAW
Material	API 5L GR.B
Specification	16**9.53&20**16.6mm
Purchase Time	01/12/2017
Completion Date	03/05/2017

#### Morocco

Project Title	Petromaroc Project
Description	SMLS
Material	API 5L PSL1 GR.B
Specification	168.3*5.4
Purchase Time	07/03/2017
Completion Date	12/17/2017

### Latin-America

#### Mexico

Project Title	Petro Mexico Project
Description	LSAW
Material	API 5L, GR.B
Specification	30", 36"
Purchase Time	04/15/2017
Completion Date	07/25/2017

#### Colombia

Project Title	Crockett Civil Project
Description	ERW (3LPE)
Material	API 5L,GR.B/X42 PSL2
Specification	88.9MM,273mm
Purchase Time	06/20/2017
Completion Date	07/18/2017

### Australia

#### Australia

Project Title	BlueScope Project
Description	Hollow Section
Material	ASTM A500
Specification	125*75,125*125,150*150
Purchase Time	05/15/2017
Completion Date	07/25/2017

#### New Zealand

Project Title	Pacific Project
Description	SMLS
Material	ASTM A53/A106,API 5L GR.B
Specification	114.3*6
Purchase Time	01/22/2017
Completion Date	04/22/2017

### Middle-East

#### Bahrain

Project Title	Petro Bahrain Project
Description	ERW, SMLS
Material	API 5L GR.B
Specification	325*SCH80, 219.1*9.53
Purchase Time	06/11/2017
Completion Date	08/05/2017

#### Iran

Project Title	Industrial Iran Project
Description	SMLS
Material	API 5L GR.B
Specification	20**SCH80
Purchase Time	03/14/2017
Completion Date	09/15/2017

### Asia

#### Singapore

Project Title	Focal Marine Project
Description	SMLS
Material	API 5L. GR.B
Specification	219.1*10
Purchase Time	05/21/2017
Completion Date	07/15/2017

#### Philippines

Project Title	Fil-Crew Marine Project
Description	SSAW
Material	API 5L X60
Specification	20" SCH80
Purchase Time	09/26/2015
Completion Date	11/12/2015

## Project List

Area	Project Title	Description	Material	Specification	Operation Time
Czech	Oil & Gas Czech Project	SEAMLESS	API 5L, X52 PSL2	273 & 323*12.7 & 6.35	05/11/2017—06/30/2017
Slovakia	Emed Metal Project	ALLOY	ASTM A335 P5,P9	8"-14"	04/23/2016—05/30/2016
Hungary	Mining Hungary Project	LSAW / SEAMLESS (VARNISH)	"API 5L GR.B (PSL1)"	1219.2*13.75/ 323.8*10.3	01/15/2016—02/22/2016
Germany	Raffinerie Refinery Project	ERW (VARNISH)	ASTM A53 GR.B	73, 88.9*7.01, 7.62	01/01/2016—02/10/2016
Netherlands	Constar Structures Project	LSAW/ERW/SSAW	API 5L, GR.B	6"-36"	10/02/2015—12/13/2015
Italy	Wastewater Treatment Italy Project	ERW (VARNISH)	ASTM A53 GR.B	60.3, 73, 168.3*5.54-7.11	07/16/2015—08/05/2015
Spain	Gulf Offshore Project	SEAMLESS	"API 5L GR.B (PSL2)"	60.3-323.8*5.54-12.7	12/25/2014—02/11/2015
Romania	Nedcon Marine Project	LSAW / SSAW	API 5L X52 PSL1	16"-48"	06/03/2014—07/28/2014
Belgium	Exmar Offshore Project	ERW (3PE)	ASTM A106 GR.B	355.6*7.1/7.9	06/14/2014—07/13/2014
Serbia	Beco Structures Project	ERW (3PE)	API 5L GR.B	219*3.5	12/21/2013—01/15/2014
Brazil	Racional Structure Project	SEAMLESS/ALLOY	A335 P22	609,457,635*25,30,55	01/12/2017—03/25/2017
Brazil	Abreu Refinery Project	ERW	API 5L ,GR.B	609*12	01/21/2016—02/10/2016
Venezuela	Refinery Venezuela Project	SSAW	A252, GR.2	508*12.5	12/01/2015—01/11/2016
Costa Rica	Solar Power Project	SSAW	A252, GR.2	609,812*7.5	11/20/2015—12/25/2015
Argentina	Oil Argentina Project	EFW	ASTM A672 CLASS22	508*12	08/23/2015—10/05/2015
Peru	Drilling Peru Project	ERW	API 5L. GR.B	323*6.35	09/25/2014—11/09/2014
Peru	Petrex Drilling Project	SEAMLESS	EN10210 S355JR	323.8*10 / 355.6*16	06/22/2014—08/18/2014
Peru	Sierra Minning Project	ERW	API 5L. GR.B	273*6.3 / 219*6.3	06/19/2013—08/11/2013
Bolivia	Pipeline Bolivia Project	LSAW	ASTM A572 GR.50	600*6.35mm	03/25/2013—05/06/2013
Colombia	Mining Colombia Project	ERW	API 5L. GR.B	14" / 24"*SCH80	12/26/2013—02/01/2013
Saudi Arabia	Industrial Saudi Arabia Project	Casing	API 5CT J55	610*12mm	07/12/2016—09/08/2016
Iran	Dolphin Marine Project	SMLS	ASTM A53 GR.B	10"*9.27	06/15/2016—07/22/2016
Kuwait	Steel Structures Project	SMLS	API 5L, GR.B	323.8*9.53	04/14/2016—06/04/2016
Saudi Arabia	Gas Hydrocarbon Project	ERW	API 5L, X56 PSL1	101.6*4.75	03/29/2016—05/01/2016
Kuwait	Petro Kuwait Project	SSAW	ASTMA252/API 5L GRB	46" 48" 62" STD	08/15/2015—10/15/2015
Yemen	Gas Yemen Project	SSAW	API 5L PSL2 X65	24"*6	06/14/2015—08/16/2015
Turkey	Oil & Gas Turkey Project	SSAW	API 5L, X65	20"*8mm	03/15/2015—06/25/2015
Oman	Galfar Structures Project	ERW	API 5L. GR.B	273*6.3 / 219*6.3	10/10/2014—12/15/2014
Syria	Roots Steel Project	ERW	API 5L GR.B/X65 PSL2	14" / 24"*SCH80	05/01/2014—12/03/2014
Egypt	Nsf Structure Project	SMLS	API 5L X60 PSL2	21.3-406.4	11/02/2014—11/25/2014

Area	Project Title	Description	Material	Specification	Operation Time
Ethiopia	Geo Drilling Project	SMLS	API 5L PSL1 GR.B	273*6.0	09/25/2016—11/05/2016
Kenya	Drilling Kenya Project	ERW / SMLS	API 5L, GR.B	ERW4"-14" SMLS6-12"	09/11/2016—10/22/2016
Kenya	Almak Drilling Project	SSAW	ASTM A53 GR.B	406.4*9	05/21/2016—07/01/2016
Kenya	Norken Civil Project	LSAW	API 5L PSL1 GR.B	46" 48" SCH80	04/05/2016—05/26/2016
Ghana	Structure Civil Project	SMLS	ASTMA53/A106/API 5L GRB	114.3*6,219*10	01/22/2016—03/22/2016
Madagascar	Maettra Construction Project	SSAW	API 5L, X52 PSL2	762*10	06/12/2015—08/22/2015
Benin	Bennett Agriculture Project	SMLS	API 5L, X42 PSL1	101.6*10	04/22/2015—07/15/2015
Kenya	Tarmal Structure Project	LSAW	API 5L X42,X46	24" 11mm	07/12/2013—10/14/2014
Zambia	Suntech Power Project	ERW	API 5L. GR.B	73-406.4*5.16-7.53	07/15/2014—09/17/2014
Uganda	Electricity Energy Project	SMLS	API 5L. GR.B	219.1*10	02/11/2014—03/02/2014
Australia	Environmental Project	SMLS	ASTM A106 GR.B	114-273*6.02-9.27	01/02/2017—04/05/2017
New Zealand	Ward Industrial Project	SMLS	EN10210 S355JR	323.8*10 / 355.6*16	12/05/2015—01/26/2016
New Zealand	Allied Industrial Project	ERW	ASTM A53 GR.B	10"*10.75 18"*9.53	08/22/2016—12/24/2016
Australia	Ausgeothermal Mining Project	SMLS	API 5L. X60	406.4*12.7	07/12/2015—11/15/2015
Australia	Kane Construction Project	SMLS	API 5L, X52 PSL2	21.3-323.8	02/26/2015—04/09/2015
Australia	Adco Construction Project	SSAW	API 5L X60	20" SCH80	09/02/2014—10/08/2014
New Zealand	Energy Service Project	ERW	API 5L X52 PSL1	141.3*9.53mm	04/01/2014—05/05/2014
New Zealand	Bay Agriculture Project	SSAW	API 5L, GR.B	660*15	12/01/2013—01/05/2014
New Zealand	Pepanz Exploration Project	SEAMLESS	API 5L, GR.B	168.3*sch80	08/01/2013—09/25/2013
Australia	AWE Exploration Project	SEAMLESS	API 5L, GR.B	17mm-273mm	04/12/2013—08/06/2013
Singapore	MMA Offshore Project	ERW	API 5L, X56 PSL1	101.6*4.75	10/01/2016—01/10/2017
Philippines	Fil-Crew Marine Project	SSAW	API 5L X60	20" SCH80	09/26/2015—11/12/2015
Pakistan	Pepcac Explortation Project	SSAW	API 5L PSL1 X52	6" 8" 12" SCH40 SCH80	08/21/2015—10/05/2015
Brunei	Evenproducts Agriculture Project	SMLS	API 5L, X52	219.1*SCH40	01/09/2015—02/22/2015
Kazakhstan	Petro Project	SMLS	ASTM A106 GR.B	1"-6"*sch40/80	10/01/2014—11/13/2014
Indonesia	Clock Spring Pipeline Project	SSAW	API 5L. GR.B	609.6*11	08/05/2014—10/15/2014
Indonesia	Apical Refinery Project	SMLS	ASTM A106 GR.B	3",12" x sch80	06/15/2013—09/22/2013
Thailand	Ritta Civil Project	ERW	API 5L. GR.B	273*6.3 / 219*6.3	03/11/2013—05/08/2013
Malaysia	Ytl Civil Project	ERW	API 5L GR.B / X65 PSL2	14" / 24"*SCH80	01/14/2013—02/20/2013
Thailand	Unithai Shipping Project	SMLS	API 5L X60 PSL2	21.3-406.4	11/15/2011—01/05/2012

# Project Operation



## End User



## Contact

