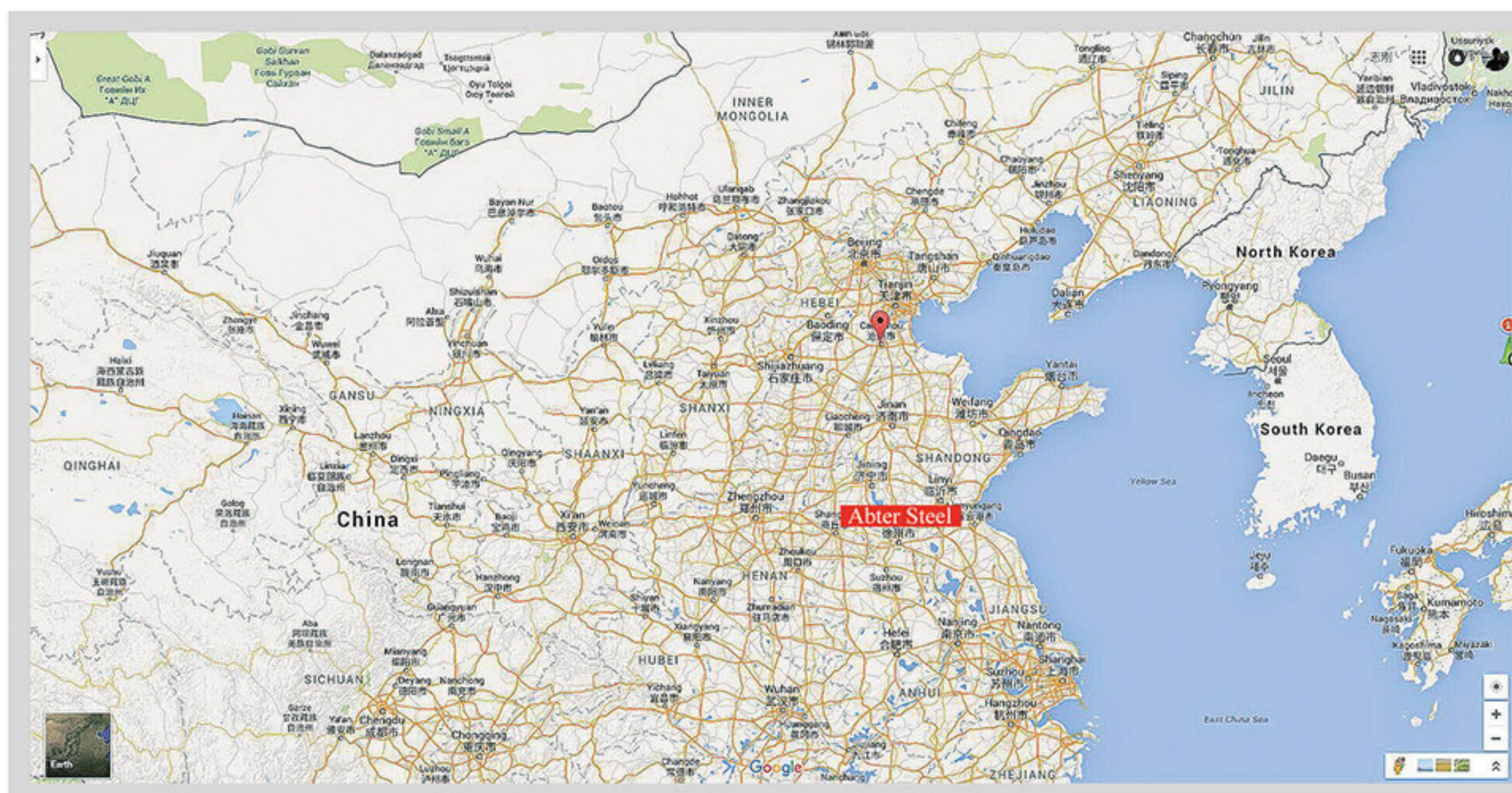




HEBEI ABTER STEEL GROUP
HEBEI ABTER STEEL PIPE CO.,LTD

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Cangzhou City, Hebei Province, China
Tel:+86-0317-8986625 Email: Info@hebei-tube.com Web:www.abtersteel.com

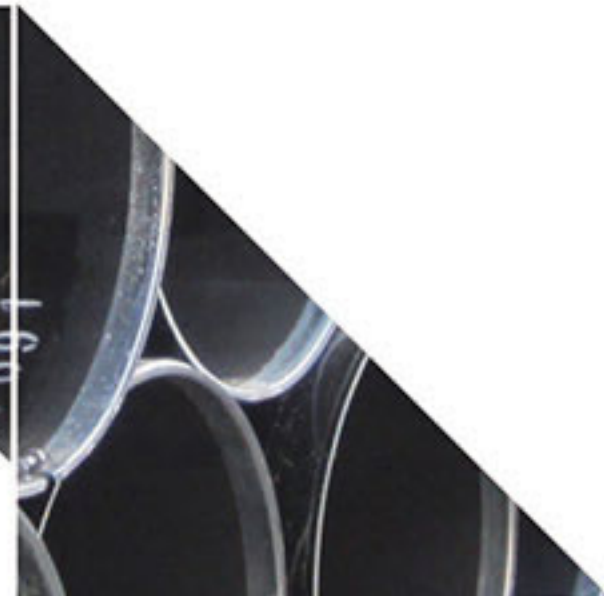
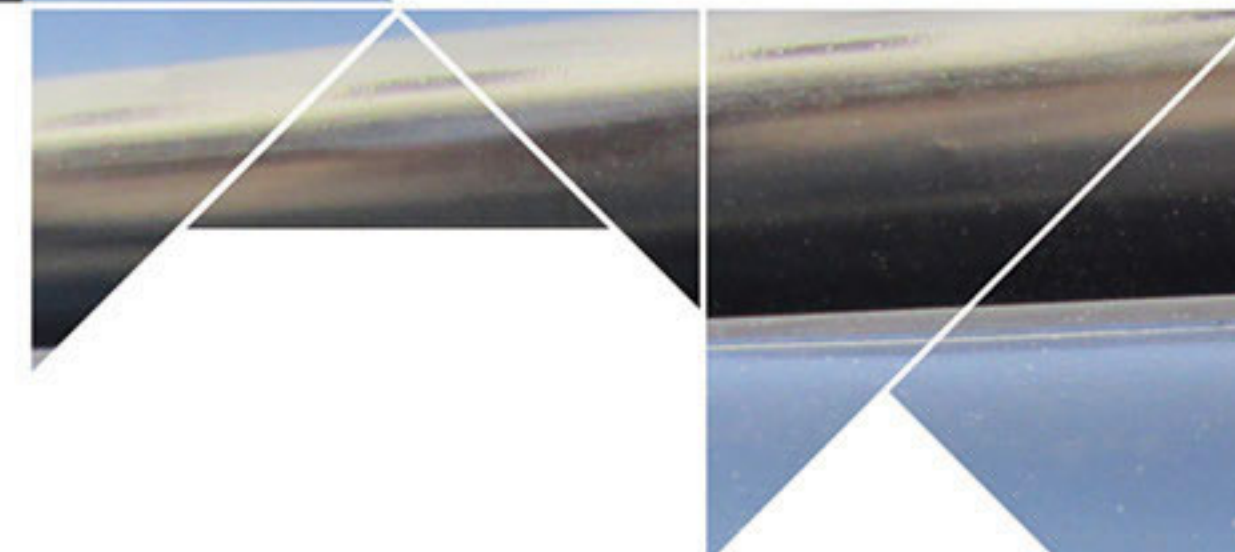
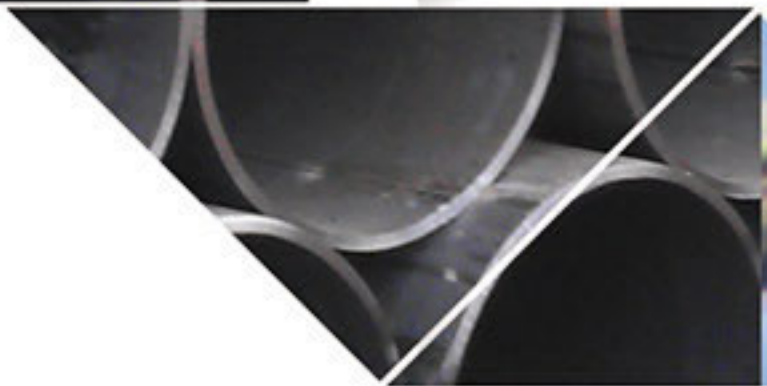
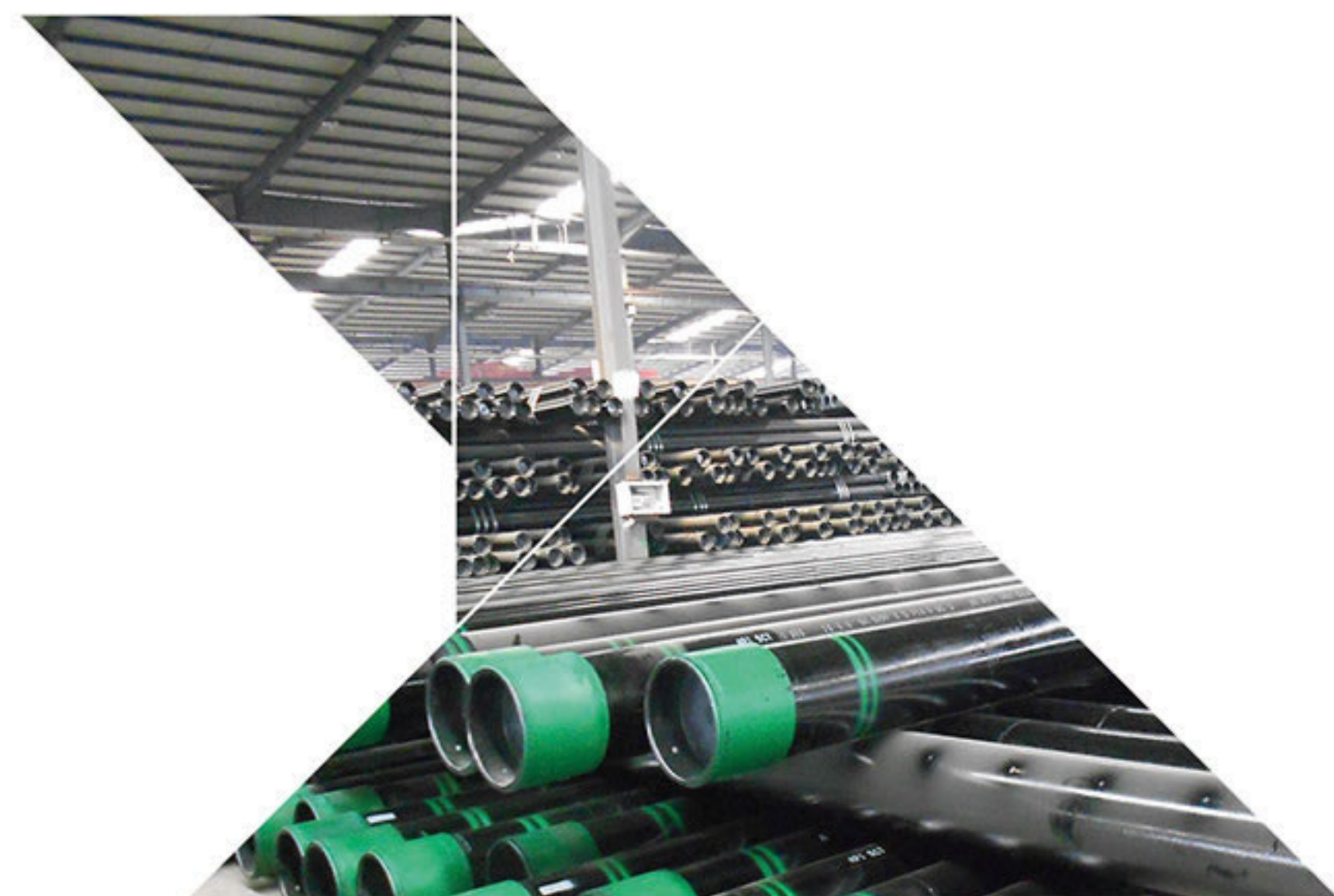




To Create "Sunny Ecosphere" of Steel Trade Industry

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HEBEI ABTER STEEL GROUP

Approved by Hebei Entry-Exit Inspection and Quarantine Bureau and has 5 manufacture bases in China, ABTER STEEL GROUP is a group company which integrates production, sales and service of steel pipes. The company not only provides active online transaction but also integrates four resources including supply chain, quality control and warehouse logistics as well as provides the customers with sufficient information transparency, so as to reduce the purchasing cost of the customers, promote the efficiency of commodity circulation and share interests with the customers. Setting "exploration and innovation, mutual aid and win-win, and striving to be the "good helper" of steel users" as its mission, the company is committed to create "sunny ecosphere" of steel trade industry to make steel trade more efficient and sunny and ultimately realize win-win cooperation with industrial users.

ABTER STEEL GROUP is committed to create a "seamless transaction platform" which integrates customization, spot goods supermarket, quality control, warehouse logistics and supporting services. The company holds following advantages after years of development:

1. As the direct sales window of steel factory, the company can provide the customers with high quality products with preferable price. Meanwhile, the diversified steel products allows for integrative purchase and full services for the customers to save enterprise cost.
2. Our group has the warehouse covering an area of 5,0000 square meters where abundant steel pipes are stored on long-term basis to meet the emergency need of foreign customers and domestic programs. Additionally, our group has developed many professionals who are very familiar with steel trades, know the situation of each key warehouse in China explicitly and get in wide and deep touch with warehouse logistics institutions across China.

COMPANY PROFILE

3. Based on the belief that safety and quality makes the achievement of future, Hebei Entry-Exit Inspection and Quarantine Bureau not only strictly controls the quality of products from the five steel plants but also goes to the plant and supervises the production process and production equipment safety from time to time for the purpose of ensuring the interests of the customers at the source.

4. Our group has a wholly-owned international logistics company-Hebei Haichuan International Logistics Agency Limited, which possesses professional transportation team and maintains long-term cooperation with various large shipping companies to minimize the transportation cost for the customers and deliver their goods to the destination safely and timely as well as realize simpler and more reliable steel transportation.

We have exported to more than thirty countries and regions all over the world. The company has extensive marketing network for different fields such as automobile, household appliances, petrochemical, manufacture of machinery, energy, transportation, metalwork, aeronautics and astronautics, nuclear power and electronic instruments. By providing refined services based on the requirement of enterprises in steel industry for reduced purchasing cost and improved decision accuracy and by means of resource integration, ABTER STEEL GROUP has been widely recognized in the industry. We have exported to more than thirty countries and regions all over the world. The company has extensive marketing network for different fields such as automobile, household appliances, petrochemical, manufacture of machinery, energy, transportation, metalwork, aeronautics and astronautics, nuclear power and electronic instruments.

HEBEI ABTER STEEL PIPE CO.,LTD

As one of the subsidiary companies under Abter Steel Group, Hebei Abter Steel Pipe Co.,Ltd is a large enterprise for high performance-price ratio welded and seamless steel pipes covering various steel grades. We have set up extensive international sales network covering Middle East, Southeast Asia, South Africa, Europe, the Americas etc. with powerful financial strength, advanced managerial concept, excellent marketing service, strict quality control system and the whole scientific method, Abter has become to one of the major exporters of OCTG and line pipe for crude oil and natural gas delivery in China. And with the professional "Can-do" approach, Abter Steel is well acclaimed by the Client at home and abroad.

The range of our products:

Seamless steel pipe(OD:13.72-1426mm, WT:1.25-160mm)

ERW steel pipe (OD:6-610mm, WT:max26.5mm)

SSAW steel pipe(OD219.1-3220mm, WT:max26mm)

LSAW steel pipe(OD340-1820mm, WT :max 160mm)

The rules of our company(4B):

1. Best price: Abter believes in customers' satisfaction due to money saving
2. Best quality: Abter believes in durability of equipment
3. Best leadtime: Abter respects to the time schedule planned by the esteemed customers
4. Best reliability: Abter believes in providing high quality products and reliable after sales services.

Welcome to contact or visit us for further information ,we sincerely hope to establish long-term cooperation



HEBEI HAICHUAN INTERNATIONAL FORWARDERS LIMITED

Founded on August 8, 2008, HEBEI HAICHUAN INTERNATIONAL FORWARDERS LIMITED is a company subordinated to HEBEI ABTER STEEL GROUP. Holding abundant logistics knowledge and experienced professionals, the company mainly handles businesses related to international transportation such as international shipping, international air transport, commodity inspection, customs declaration, storage and cargo insurance. The company provides domestic and foreign importers, exporters and manufacturers with safe, rapid and quality global logistics and supply chain services by adhering to the "integrity-based and service-oriented" philosophy. Relying on its "window" advantage, the company has established good and close long-term cooperative relationship with various world-renowned shipping companies (OOCL, MAERSK, EVERGREEN, PIL, WANHAI, MSC, YANGMING, CMA, HANJIN, COSCO, etc.) Its international networks spread all over Europe, America, Africa, Australia, Japan, Southeast Asia and Middle East and provide customs clearance, transshipment, freight collect, home service and imported goods transportation at various main ports all over the world. We will do our best to provide most professional and intimate services for every customer. Making it as our mission to protect the interests of the customers, we will truly repay every customer with sincerity and high efficiency, and control every risk practically, soundly and broadly.





CULTURE

OPERATION TARGET:

To create "sunny ecosphere" of steel trade industry

ADMINISTRATION MODE:

Human-oriented, standardized and digitalized administration

CORE VALUE:

Gratitude, diligent, realistic, persistent

SERVICE CONCEPT:

Customer first, reputation first

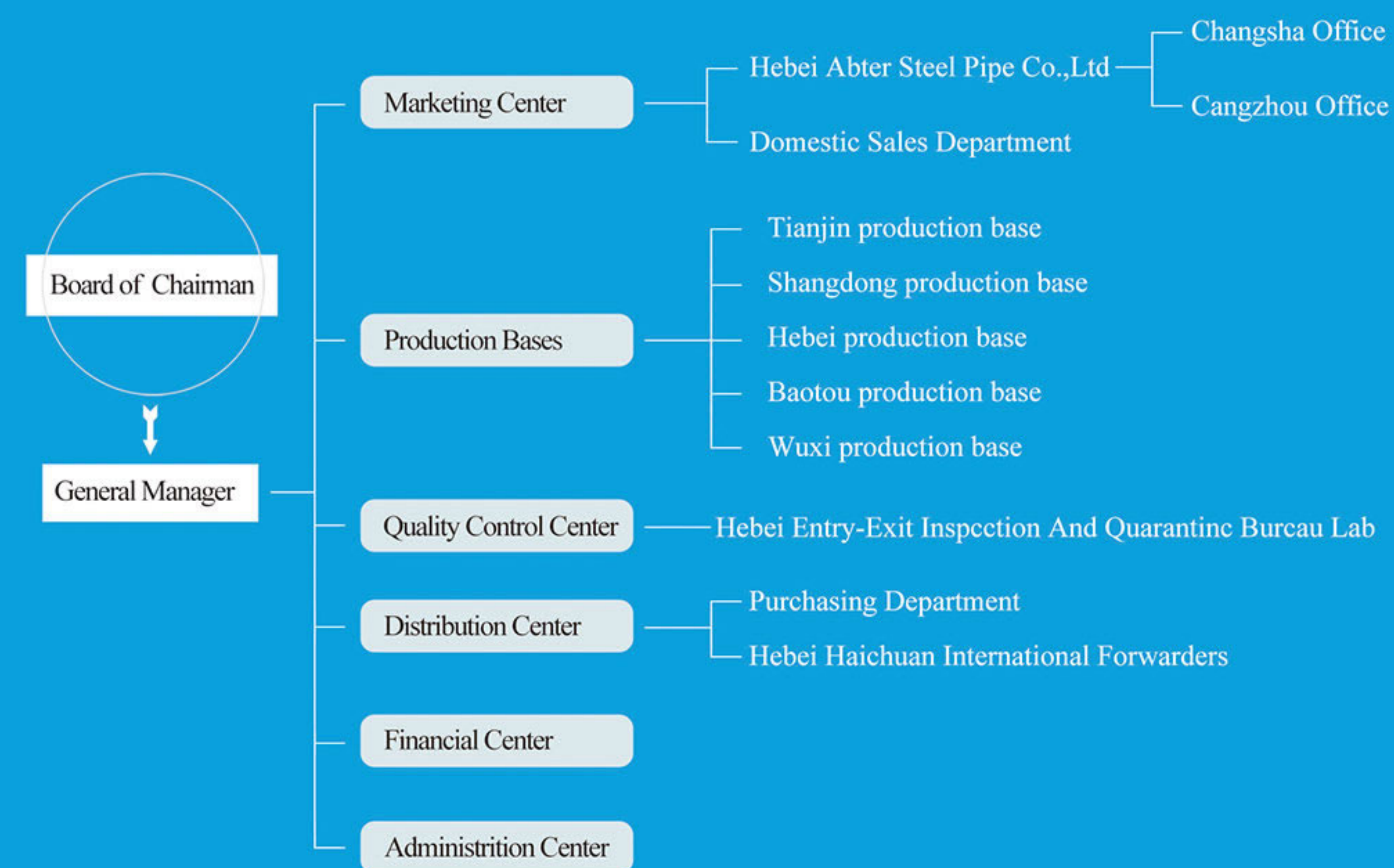
QUALITY CONCEPT:

Development depends on quality, while quality comes from details

ACTION NORM:

Actively and efficiently

ORGANIZATION FRAME



SEAMLESS STEEL PIPE EQUIPMENTS FOR PRODUCING



Rotating heat furnace
Single-or dual-feeding available ,fueled by lpg, automated furnace- temperature. Furnace-pressure and furnace flow ,domestical-topping controlling performance



Piercing mill
The punching machine can be adjusted automatically and locked hydraulically , this unit features in stable punching process, uniform hair canal wall thickness etc.This Machine is advanced at home.



Accu-rolling mill
Conical Roller ,big disk,flexible adjustment,hydraulic-controlled lock system and balance system ,easy and reliable operation



Slight-tensioned reducing mill
Respective-power-transmission of three rollers ,flexible adjustment, char-artenize as high-precised of outer -diameter and superior surface funishing



Straightener
Six trollers ,eight columns, perfect rigid ,automated presed and automated angular adjustment, hydralic lock system , features as easil and flexibly operating and high precision



Leakage magnetic flow detector
Tube inner and external and inside defect detection available



Pipe cutter
High-performace tube cutter, sysfeatures as high-speed and well finished cutting



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



Hydrostatic testing machine
With plc touch screen operating system, could print-out testing pressure automatically. it features simple construction, strong bearing member, high productivity, wide product specification range, and adjustable testing head, making it suitable for testing pressures on steel tubes of various lengths.



Production line advantages:
Walking beam furnace with its hearth longitudinal division and horizontal, partition, the furnace temperature is automatically controlled in each section, with even temperature, so the performance properties are uniform and stable.
we use water quenching with outside pouring and inside spraying. Water flowing rate and pressure can be adjusted within a large range to meet different material and different size cooling requirement. The pipes have good surface condition and precise dimension after high pressure water descaling and hot sizing. Supporting equipment: Walking beam quenching furnace, Walking beam tempering furnace, UT&EMI combination test machine from GE & FOERSTER, Six-rollers straightener from BRONX

SEAMLESS STEEL PIPE PRODUCTION STANDARDS

TUBE FOR STRUCTURES

Standard: DIN 1629

Deutsche industrie Normen

Uses: For manufacture pipelines, vessels, equipment, pipe fittings and steel structures

Chemical Composition(%)

Standard	Grade	C	Si	Mn	P	S	Cr	Ni	Cu	V
DIN1629	St37.0	≤0.17	0.17-0.37	0.35-0.65	≤0.025	≤0.020	≤0.25	≤0.25	≤0.25	-
	St44.0	≤0.21	0.17-0.37	0.50-0.80	≤0.025	≤0.020	≤0.25	≤0.25	≤0.25	-
	St55	0.33-0.41	0.17-0.37	0.50-0.80	≤0.025	≤0.020	≤0.25	≤0.25	≤0.25	-
	St52.0	≤0.22	≤0.55	≤1.60	≤0.025	≤0.020	≤0.25	≤0.25	≤0.25	-
	CK45	0.42-0.50	0.17-0.37	0.50-0.80	≤0.025	≤0.020	≤0.25	≤0.25	≤0.25	-

Note: other grades than the a.m. Chart can be made available is through consultations

Mechanicals Properties

standard	Grade	Tensile strength(Mpa)	Yield strength not less than(Mpa)		Elongation not less than(%)	Impact test	
			≤16mm	> 16mm		temperature(°C)	Absorbed every (KV/J)
DIN1629	St37.0	350-480	235	225	25	-	-
	St44.0	420-550	275	265	21	-	-
	St55	540-645	295	285	17	-	-
	St52.0	500-650	355	345	21	-	-
	CK45	590-730	335	325	14	-	-

Chemical Analysis(%)

Standard	Type of pipe	Class	Grade	C	Si	Mn	P	S	S	Nb	Ti
				max	max	max	max	max	max	max	max
API 5L	SMLS	PSL1	L245B	0.28	-	1.20	0.030	0.030	0.030	-	-
			L290*42	0.28	-	1.30	0.030	0.030	0.030	-	-
			L320*46	0.28	-	1.40	0.030	0.030	0.030	-	-
			L360*52	0.28	-	1.40	0.030	0.030	0.030	-	-
			L390*56	0.28	-	1.40	0.030	0.030	0.030	-	-
			L415*60	0.28	-	1.40	0.030	0.030	0.030	-	-
			L450*65	0.28	-	1.40	0.030	0.030	0.030	-	-
			L485*70	0.28	-	1.40	0.030	0.030	0.030	-	-
		PSL2	L245N BN	0.24	0.40	1.20	0.025	0.015	0.015	-	0.04
			L290N*42N	0.24	0.40	1.20	0.025	0.015	0.015	0.05	0.04
			L320N*46N	0.24	0.40	1.40	0.025	0.015	0.015	0.05	0.04
			L360N*52N	0.24	0.45	1.40	0.025	0.015	0.015	0.05	0.04
			L390N*56N	0.24	0.45	1.40	0.025	0.015	0.015	0.05	0.04
			L415N*60N	0.24	0.45	1.40	0.025	0.015	0.015	0.05	0.04

TECHNICAL PARAMETERS OF LINE PIPE

Standard: API5L

Uses: For conveying gas,water,and oil and natural gas industries

Mechanical Propertles

Standard	Class	Grade		Yield strength not less than(Mpa)	Tensile strength (Mpa)	Elongation (%)	Y.S./T.S. (%)
API 5L	PSL1	L245B	min	245	415	b	-
		L290*42	min	290	415	b	-
		L320*46	min	320	435	b	-
		L360*52	min	360	460	b	-
		L390*56	min	390	490	b	-
		L415*60	min	415	520	b	-
		L450*65	min	450	535	b	-
		L485*70	min	485	570	b	-
	PSL2	L245N BN	min	245	415	b	-
		L245M BM	max	450	760	b	0.93
		L290N*42N	min	290	415	b	-
		L290M*42M	max	495	760	b	0.93
		L320N*46N	min	320	435	b	-
		L320M*46M	max	525	760	b	0.93
		L360N*52N	min	360	760	b	-
		L360M*52M	max	530	760	b	0.93
		L390N*56N	min	390	490	b	-
		L390M*56M	max	545	760	b	0.93
		L415N*60N	min	415	520	b	-
		L415M*60M	max	565	760	b	0.93
		L450M*65M	min	450	535	b	-
		L450M*65M	max	600	760	b	0.93
		L485M*70M	min	485	570	b	-
		L485M*70M	max	635	760	b	0.93
		L555M*80M	min	555	625	b	-
		L555M*80M	max	705	825	b	0.93

SEAMLESS STEEL PIPE PRODUCTION STANDARDS

TECHNICAL PARAMETERS OF BOILER TUBE

Standard:

American Society Of Mechanical Engineers
ASME SA-106/ASME SA-192M/ASME SA-209M
ASME SA-210M/ASME SA-213M
Deutsche Industrie Normen / DIN17175
Japanese Industrie Standard/JIS G 3461

Uses: For manufacture wall panel, economizer, reheater ,superheater and steam pipeline of boilers

Tolerances on Dimensions Outside Diameter Tolerance

Standard	Outside Diameter (mm)	Tolerance
DIN 17175	≤100	±0.75%(min. ±0.5mm)
	> 100	±0.90%
ASME SA-192M ASMESA-209M ASME SA-210M ASME SA-213M JIS G 3461	≤101.6	±0.4-0.8mm
	> 101.6~190.5	±0.4-1.2mm
ASME SA-106	≤48.3	±0.40mm
	>48.3~114.3	±0.79
	>114.3	+1.5-0.79mm

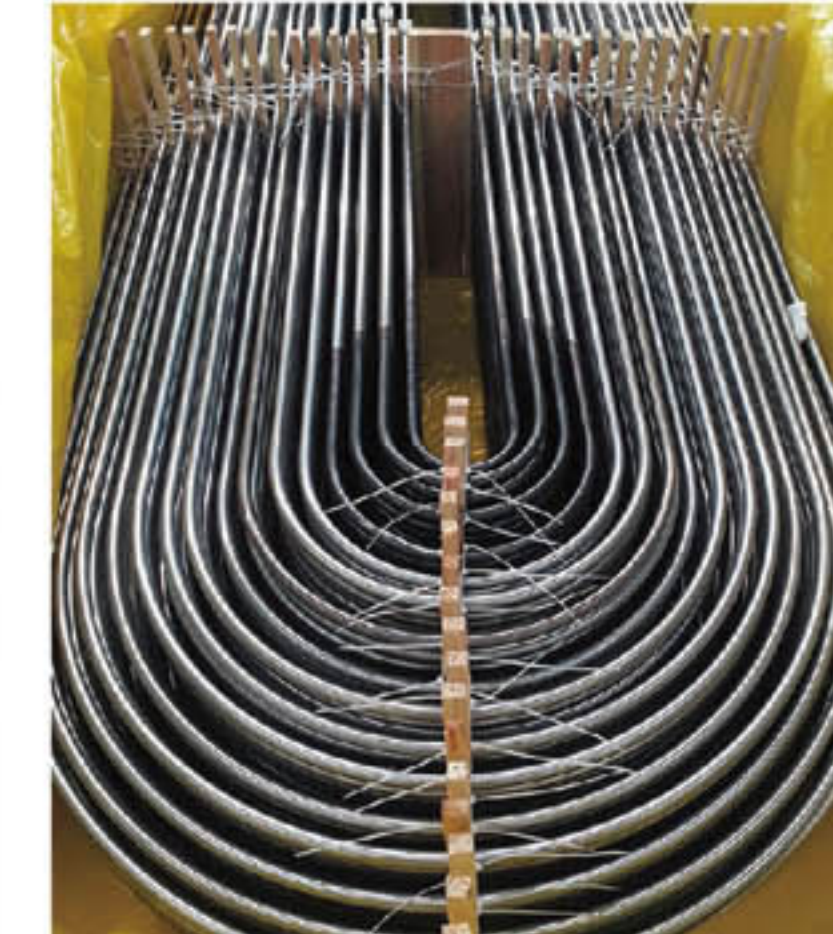
Wall Thickness Tolerance

Standard	Outside Diameter da (mm)	Wall Thickness S (mm)	Tolerance
DIN 17175	≤130	$S \leq 2S_n$	±15%,-10%
		$2S_n < S \leq 4S_n$	±12.5%,-10%
		$S > 4S_n$	±9%
	> 130	$S \leq 0.05da$	+17.5%,-12.5%
		$0.05da < S \leq 0.11da$	±12.5%
ASMESA-192M ASMESA-209M ASMESA-210M ASMESA-213M JIS G 3461 ASME SA-106	-	2.41-3.8 >3.8-4.6 >4.6 -	+35%,-0% +33%,-0% +28%,-0% ±12.5%

Note: "Sn" is standard wall thickness.

Mechanical Properties

Standard	Grade	Tensile strength(MPa)	Yield strength not less than(MPa)		Elongation not less than (%)	Impact not less than (J)	Hardness noe less than
			≤16mm	> 16mm			
DIN17175	St35.8	360-480	235	225	25	-	-
	St45.8	410-530	255	245	21	-	-
	15Mo3	450-600	270		22	-	-
	13CrMo44	440-590	270		22	-	-
	10CrMo910	450-600	280		20	-	-
	14MoV63	460-610	320		20	-	-
	12Cr1MoV	470-640	255		21	55	-
ASME SA-192M	SA-192	≥325	180		35	-	-
ASME SA-106M	SA-106B	≥415	240		SEE TABLE	-	-
	SA-106C	≥485	275			-	79HRB(143HB)
ASME SA-210M	SA-210A1	≥415	255			-	89HRB(179HB)
	SA-210C	≥485	275			-	81HRB(153HB)
ASME SA-209M	SA-209T1a	≥415	220			-	85HRB(163HB)
ASME SA-213M	SA-213T2	≥415	205			-	85HRB(163HB)
	SA-213T11	≥415	205			-	85HRB(163HB)
	SA-213T12	≥415	220			-	85HRB(163HB)
	SA-213T22	≥415	205			-	85HRB(163HB)
	SA-213T23	≥510	400			-	97HRB(220HB)
	SA-213T91	≥585	415			-	25HRC(250HB)
JIS G 3461	STB 340	≥340	175		-	-	
	STB410	≥410	255		-	-	



Chemical Composition(%)

Standard	Grade	C	Si	Mn	P	S	Cr	Mo	V	Ti	B	W	Nb
DIN 17175	St35.8	≤0.17	0.10 - 0.35	0.40 - 0.80	≤0.025	≤0.020	-	-	-	-	-	-	-
	St45.8	≤0.21	0.10 - 0.35	0.40 - 1.20	≤0.025	≤0.020	-	-	-	-	-	-	-
	15Mo3	0.12 - 0.20	0.10 - 0.35	0.40 - 0.80	≤0.025	≤0.020	-	0.25 - 0.35	-	-	-	-	-
	13CrMo44	0.10 - 0.18	0.10 - 0.35	0.40 - 0.70	≤0.025	≤0.020	0.70 - 1.10	0.45 - 0.65	-	-	-	-	-
	10CrMo910	0.08 - 0.15	≤0.50	0.40 - 0.70	≤0.025	≤0.020	2.00 - 2.50	0.90 - 1.20	-	-	-	-	-
	14MoV63	0.10 - 0.18	0.10 - 0.35	0.40 - 0.70	≤0.025	≤0.020	0.30 - 0.60	0.50 - 0.70	0.22 - 0.32	-	-	-	-
	12Cr1MoV	0.08 - 0.15	0.17 - 0.37	0.40 - 0.70	≤0.025	≤0.020	0.90 - 1.20	0.25 - 0.35	0.15 - 0.30	-	-	-	-
ASME SA-192M	SA-192	0.06 - 0.18	≤0.25	0.27 - 0.63	≤0.025	≤0.020	-	-	-	-	-	-	-
ASME SA-106	SA-106B	≤0.30	≥0.10	0.29 - 1.06	≤0.025	≤0.020	-	-	-	-	-	-	-
	SA-106C	≤0.35	≥0.10	0.29 - 1.06	≤0.025	≤0.020	-	-	-	-	-	-	-
ASME SA-209M	SA-209T1a	0.15 - 0.25	0.10 - 0.50	0.30 - 0.80	≤0.025	≤0.020	-	0.44 - 0.65	-	-	-	-	-
ASME SA-210M	SA-210A1	≤0.27	≥0.10	≤0.93	≤0.025	≤0.020	-	-	-	-	-	-	-
	SA-210C	≤0.35	≥0.10	0.29 - 1.06	≤0.025	≤0.020	-	-	-	-	-	-	-
ASME SA-213M	SA-213T11	0.05 - 0.15	0.50 - 1.00	0.30 - 0.60	≤0.025	≤0.020	1.00 - 1.50	0.44 - 0.65	-	-	-	-	-
	SA-213T22	0.05 - 0.15	≤0.50	0.30 - 0.60	≤0.025	≤0.020	1.90 - 2.60	0.87 - 1.13	-	-	-	-	-
	SA-213T91	0.08 - 0.12	0.20 - 0.5	0.30 - 0.60	≤0.025	≤0.010	8.00 - 9.50	0.85 - 1.05	0.18 - 0.25	Ni	Al	N	0.06 - 0.10
										≤0.40	≤0.40	0.030 - 0.070	
	SA-213T23	0.04 - 0.10	0.5	0.10 - 0.60	≤0.025	≤0.010	1.90 - 2.60	0.05 - 0.30	0.20 - 0.30	AlNi	0.0005 - 0.006	1.45 - 1.75	0.02 - 0.08
										≤0.030			
	SA-213T2	0.10 - 0.20	0.10 - 0.30	0.30 - 0.61	≤0.025	≤0.020	0.50 - 0.81	0.44 - 0.65	-	-	-	-	-
	SA-213T12	0.05 - 0.15	≤0.50	0.30 - 0.61	≤0.025	≤0.020	0.80 - 1.25	0.44 - 0.65	-	-	-	-	-
JIS G 3461	STB 340	≤0.18	≤0.35	0.30 - 0.60	≤0.025	≤0.020	-	-	-	-	-	-	-
	STB 410	≤0.32	≤0.35	0.30 - 0.80	≤0.025	≤0.020	-	-	-	-	-	-	-

SEAMLESS STEEL PIPE PRODUCTION STANDARDS

TUBE FOR CONVEYANCE OF FLUID

Standard: ASTM A 53M standard of American Society for Testing & Materials

ASTM A106M Standard of American Society for Testing & Materials.

JIS G 3454 JIS G 3455 JIS G 3456 Japanese Industrial Standard.

Uses: for conveying oil, gas and other fluid.

Chemical Composition(%)

Standard	Grade	C	Si	Mn	P	S	Ni	Cr	Cu	Mo	V
ASTM A 53M	A	≤0.25	-	≤0.95	≤0.05	≤0.045	≤0.40	≤0.40	≤0.40	≤0.15	≤0.08
	B	≤0.30	-	≤1.20	≤0.05	≤0.045	≤0.40	≤0.40	≤0.40	≤0.15	≤0.08
ASTM A 106M	A	≤0.25	≥0.10	0.27-0.93	≤0.035	≤0.035	≤0.40	≤0.40	≤0.40	≤0.15	≤0.08
	B	≤0.30	≥0.10	0.29-1.06	≤0.035	≤0.035	≤0.40	≤0.40	≤0.40	≤0.15	≤0.08
	C	≤0.35	≥0.10	0.29-1.06	≤0.035	≤0.035	≤0.40	≤0.40	≤0.40	≤0.15	≤0.08

Chemical Composition(%)

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

Note: Other grade than the a.m. Chart can be available is through consultations.

Mechanical Properties

Standard	Grade	Tensile Strength (Mpa)	Yield Strength (Mpa)	Elongation (%)	Impact test	
					Temperature (°C)	Absorbed energy (KV/J)
ASTM A53M	A	≥330	≥205	See table 3 of ASTM A53	-	-
	B	≥415	≥240			
ASTM A 106M	A	≥330	≥205	See table 3 of ASTM A53	-	-
	B	≥415	≥240			
	C	≥485	≥275			
JIS G 3454	STPG 370	≥370	≥215	See table 3-2 of JIS G 3454	-	-
	STPG 410	≥410	≥245			
JIS G 3455	STS370	≥370	≥215	See table 3-2 of JIS G 3455	-	-
	STS410	≥410	≥245			
	STS 480	≥480	≥275			
JIS G 3456	STPT 370	≥370	≥215	See table 3-2 of JIS G 3456	-	-
	STPT 410	≥410	≥245			
	STPT 480	≥480	≥275			

ASTM A333 SEAMLESS AND WELDED STEEL PIPE FOR LOW-TEMPERATURE SERVICE

ASTM A 333 Impact temperature

Grade	°F	°C
Grade 1	-50	-45
Grade 3	-150	-100
Grade 4	-150	-100
Grade 6	-50	-45
Grade 7	-100	-75
Grade 8	-320	-195
Grade 9	-100	-75
Grade 10	-75	-60

ASTM A333 Mechanical properties

Standard	Grade	Tensile Strength (Rm) (MPa)	Yield Strength (ReH) (MPa)	Elongation A%	
				Longitudinal impact	Transverse impact
ASTM A333	Grade 1	≥380	≥205	≥35	≥25
	Grade 3	≥450	≥240	≥30	≥20
	Grade 4	≥415	≥240	≥30	≥16.5
	Grade 6	≥415	≥240	≥30	≥16.5
	Grade 7	≥450	≥240	≥30	≥22
	Grade 8	≥690	≥515	≥22	
	Grade 9	≥435	≥315	≥28	
	Grade 10	≥550	≥450	≥22	
	Grade 11	≥450	≥240	≥18	



ASTM A333 Chemical Composition

Standard	Grade	Chemical Composition%										
		C	Si	Mn	P	S	Cr	Ni	Cu	Mo	V	Al
ASTM A333	Grade 1	≤0.30		0.40-1.06	≤0.025	≤0.025						
	Grade 3	≤0.19	0.18-0.37	0.31-0.64	≤0.025	≤0.025		3.18-3.82				
	Grade 4	≤0.12	0.18-0.37	0.50-1.05	≤0.025	≤0.025	0.44-1.01	0.47-0.98	0.40-0.75			0.04-0.30
	Grade 6	≤0.30	≥0.10	0.29-1.06	≤0.025	≤0.025						
	Grade 7	≤0.19	0.13-0.32	≤0.90	≤0.025	≤0.025		2.03-2.57				
	Grade 8	≤0.13	0.13-0.32	≤0.90	≤0.025	≤0.025		8.40-9.60				
	Grade 9	≤0.20		0.40-1.06	≤0.025	≤0.025		1.60-2.24	0.75-1.25			
	Grade 10	≤0.20	0.10-0.35	1.15-1.50	≤0.03	≤0.015	≤0.15	≤0.25	≤0.015	≤0.50	≤0.12	≤0.06
	Grade 11	≤0.10	≤0.35	≤0.6	≤0.025	≤0.025	≤0.50	35.0-37.0		≤0.50		

SEAMLESS STEEL PIPE PRODUCTION STANDARDS

ENROPEAM STANDARD

EN10297-1 Seamless circular steel tubes for mechanical and general engineering purposes

Non-alloy steel tube

Chemical Composition(%)

Steel Grade		C		Si		Mn		P	S	Other Elements
Steel Name	Steel No.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	
E235	1.0308	-	0.17	-	0.35	-	1.2	0.03	0.035	
E275	1.0225	-	0.21	-	0.35	-	1.4	0.03	0.035	
E315	1.0236	-	0.21	-	0.3	-	1.5	0.03	0.035	
E355a	1.058	-	0.22	-	0.55	-	1.6	0.03	0.035	
E470	1.0536	0.16	0.22	0.1	0.5	1.3	1.7	0.03	0.035	Al:min,0.010; N:max,0.02 Nb:max,0.07; V:0.08-0.15
C22E	1.1151	0.17	0.24	-	0.4	0.4	0.7	0.035	0.035	b
C35E	1.1181	0.32	0.39	-	0.4	0.5	0.8	0.035	0.035	b
C45E	1.1191	0.42	0.5	-	0.4	0.5	0.8	0.035	0.035	b
C60E	1.1221	0.57	0.65	-	0.4	0.6	0.9	0.035	0.035	b
38Mn6	1.1127	0.34	0.42	0.15	0.35	1.4	1.65	0.035	0.035	b

a: Additions of Nb,V and Ti are permitted at the discretion of the manufacturer,the content of these elements shall be reported.

b: Cr:max. 0.40%;Mo:max.0.10%;Ni:max.0.40%;Cr+Mo+Ni max.0.63%

Mechanical Properties

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

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

Alloy steel tube

Chemical Composition

Steel Grade	C		Si		Mn		P	S	Cr	Ni		Mo		Al	Cu	N	Nb	Ti	V	
	Min.	Max.	Min.	Max.	Min.	Max.	Max.	Max.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Max.	Max.	Max.	Min.	Max.
E275k2	-	0.2	-	0.4	0.5	1.4	0.03	0.03	0.3	-	0.1	-	0.3	0.02	0.35	0.015	0.05	0.03	-	0.05
E355K2	-	0.2	-	0.5	0.9	1.65	0.03	0.03	0.3	-	0.1	-	0.5	0.02	0.35	0.015	0.05	0.05	-	0.12
E420J2	0.16	0.22	0.1	0.50	1.3	1.7	0.03	0.035	0.3	-	0.08	-	0.4	0.01	0.3	0.02	0.07b	0.05	0.08	0.15b
E460K2	-	0.2	-	0.6	1	1.7	0.03	0.03	0.3	-	0.1	-	0.8	0.02	0.7	0.025	0.05b	0.05	-	0.20b
E590K2	0.16	0.22	0.1	0.5	1.3	1.7	0.03	0.035	0.3	-	0.08	-	0.4	0.01	0.3	0.02	0.07b	0.05	0.08	0.15b
E730K2	-	0.2	-	0.5	1.4	1.7	0.025	0.025	0.3	0.3	0.45	0.3	0.7	0.02	0.2	0.02	0.05	0.05	-	0.12
Steel Grade	C		Si		Mn		P	S	Cr	Ni		Mo		Al	Cu					
	Min.	Max.	Min.	Max.	Min.	Max.	Max.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Max.					
41Cr4	0.38	0.45	-	0.4	0.6	0.9	0.035	0.035	0.9	1.2	-	0.3	-	-	-	-	-	-	-	-
25 CrMo4	0.22	0.29	-	0.4	0.6	0.9	0.035	0.035	0.9	1.2	0.15	0.3	-	-	-	-	-	-	-	-
30 CrMo4	0.27	0.34	-	0.35	0.35	0.6	0.035	0.035	0.8	1.15	0.15	0.3	-	-	-	-	-	-	-	-
42 CrMo4	0.38	0.45	-	0.4	0.6	0.9	0.035	0.035	0.9	1.2	0.15	0.3	-	-	-	-	-	-	-	-
36 CrMo4	0.32	0.4	-	0.4	0.5	0.8	0.035	0.035	0.9	1.2	0.15	0.5	0.9	1.2	-	-	-	-	-	-
30 CrMo4	0.26	0.34	-	0.4	0.3	0.6	0.035	0.035	1.8	2.2	0.3	0.3	1.8	2.2	-	-	-	-	-	-
41Ni CrMo7-3-2	0.38	0.44	-	0.3	0.6	0.9	0.025	0.025	0.7	0.9	0.15		1.65	2	0.25	-	-	-	-	-

a. If sufficient other N-binding elements are present the minimum total Al content does not apply.

b. Nb+V=0.2%Max

Mechanical Properties

Steel Grade	Elongation A%										Impact properties	
	Yield Strength(ReH)Mpa					Tensile Strength (Rm) Mpa					Elongation A%	
	For T in mm					For T in mm					Minimum average absorbed energy, KJ min,at a test temperature of-20°C	
	≤ 16	> 16	> 40	> 65	> 80	≤ 16	> 16	> 40	> 65	> 80	l	t
E275K2	275	265	255	245	235	410	410	410	380	380	22	20
E355K2	355	345	335	315	295	490	490	470	470	470	20	18
E420J2	420	400	390	370	360	600	560	530	500	500	19	17
E460K2	460	440	430	410	390	550	550	550	520	520	19	17
E590K2	590	540	480	455	420	700	650	570	520	520	16	14
E730K2	730	670	620	580	540	790	750	700	680	680	15	13

Steel Grade	Yield Strength(ReH)Mpa				Tensile Strength (Rm) Mpa				Elongation A%							
	For T in mm				For T in mm				8		> 8 ≤ 20		> 20 ≤ 50		> 50 ≤ 80	
	≤ 8	> 8	> 20	> 50	≤ 8	> 8	> 20	> 50	l	t	l	t	l	t	l	t
41Cr4	800	660	560	-	1000	900	800	-	11	9	12	10	14	12	-	-
25CrMo4	700	600	450	400	900	800	700	650	12	10	14	12	15	13	16	14
30CrMo4	750	630	520	480	950	850	750	700	12	10	13	11	14	12	15	13
34CrMo4	800	650	550	500	1000	900	800	750	11	9	12	10	14	12	15	13
42CrMo4	900	750	650	550	1100	1000	900	800	10	8	11	9	12	10	13	11
36CrMo4	900	800	700	600	1100	1000	900	800	10	8	11	9	12	10	13	11
30CrMo4	1050	1050	900	800	1250	1250	1100	1000	9	7	9	7	10	8	11	9
41NiCrMo7-3-2	950	870	800	750	1150	1050	1000	900	9	7	10	8	11	9	12	10

Note:l=longitudinal; t=transverse

SEAMLESS STEEL PIPE

Standard: EN10210-1

Hot finished structural hollow sections of Non-alloy and fine grain steels

Main steel tube grade:

S235 JRH S275JOH S275 J2H S355JOH S355J2H S355K2H

Table A.1---chemical composition---Cast analysis for product thickness≤120mm

Steel grade		Type of deoxidation ^a	% By mass, maximum						
Steel name	Steel number		Special thickness(mm)		Si	Mn	p	S	N ^{bc}
			≤40	>40 ≤120					
S235JRH	1.0039	FN	0.17	0.2	-	1.4	0.04	0.04	0.009
S275JOH	1.0149	FN	0.2	0.22	-	1.5	0.035	0.035	0.009
S275J2H	1.0138	FF	0.2	0.22	-	1.5	0.03	0.03	-
S355JOH	1.0547	FN	0.22	0.22	0.55	1.6	0.035	0.035	0.009
S355J2H	1.0576	FF	0.22	0.22	0.55	1.6	0.03	0.03	-
S355K2H	1.0512	FF	0.22	0.22	0.55	1.6	0.03	0.03	-

^aThe deoxidation methods are designated as follows:

FN:Rimming steel not permitted.

FF:Fully killed steel containing nitrogen binding elements in amounts sufficient to bind available nitrogen

(e.g.min 0.020% total Al, or 0.015% soluble Al).

^bIt is permissible to exceed the specified values provided that for each increase of 0.001%N the P max. Content is also reduced by 0.005 %.The N content of the cost analysis, however, shall not be more than 0.012%.

^cThe maximum value for nitrogen does not apply if the chemical composition shows a minimum total Al content of 0.020% with a minimum Al/N ratio of 2:1, or if sufficient other N-binding elements are present. The N-binding elements shall be recorded in the inspection document.

Table A.2-Maximum carbon equivalent value(CEV) based on cast analysis^a

Steel grade		Maximum CEV in % for specified thickness in mm			
Steel name	Steel number	≤16	>16,≤40	>40,≤65	>65,≤120
S235JRH	1.0039	0.37	0.39	0.41	0.44
S275JOH	1.0149	0.41	0.43	0.45	0.48
S275J2H	1.0138	0.41	0.43	0.45	0.48
S355JOH	1.0547	0.45	0.47	0.5	0.53
S355J2H	1.0576	0.45	0.47	0.5	0.53
S355K2H	1.0512	0.45	0.47	0.5	0.53

^aSee 6.5.2, Option 1.2.

Table A.3-Mechanical properties of non-alloy structural steel hollow section.

Steel grade		Minimum yield strength ReH (Mpa)						Tensile strength Rm (Mpa)			Minimum elongation A ^{ab} (%)				Minimum Impact energykv ^d (J)		
Steel name	Steel number	Specified thickness mm						Specified thickness mm			Specified thickness mm				At test temperature of		
		≤16	>16,≤40	>40,≤63	>63,≤80	>80,≤100	>100,≤120	≤3	>3,≤100	>100,≤120	≤40	>40,≤63	>63,≤100	>100,≤120	-20℃	0℃	20℃
S235JRH ^c	1.0089	235	225	215	215	215	195	360-510	360-510	350-500	26	25	24	22	-	-	27
S275JOH ^c	1.0149	275	265	255	245	235	225	430-580	410-560	400-540	23	22	21	19	-	27	-
S275J2H	1.0138														27	-	-
S355JOH ^c	1.0547														27	-	-
S355J2H	1.0576	355	345	335	325	315	295	510-680	470-630	450-600	22	21	20	18	40	-	-
S355K2H	1.0512																

a Longitudinal values. Transverse values are 2% lower.

b For thickness<3mm.see9.2.2.

c The impact properties are verified only when option 1.3 is specified.

d For impact properties for reduced section test pieces see6.6.2.

e This value corresponds to 27 J at-30℃(see EN 1993-1-1).

Standard: EN 10210-1

Hot finished structural hollow sections of non-alloy and fine grain steels

Main steel tube grade:

S235 JRH S275JOH S275J2H S355JOH S355J2H S355K2H

Table B.1-chemical composition-Cast analyses for product thickness≤65mm

Steel grade		Type of deoxidation ^a	Sub group ^b	%By mass													
Steel name	Steel number			C	Si	Mn	P	S	Nb	V	Al total ^c	Ti	Cr	Ni	Mo	Cu ^d	N
S275NH	1.0493	GF	QS	0,20	0,40	0,50	0,035	0,030	0,050	0,08	0,20	0,03	0,30	0,30	0,10	0,35	0,015
S275NLH	1.0497					1,40	0,030	0,025									
S355NH	1.0539	GF	QS	0,20	0,50	0,90	0,035	0,030	0,050	0,12	0,20	0,03	0,30	0,50	0,10	0,35	0,020
S355NLH	1.0549					1,65	0,030	0,025									
S420NH	1.875	GF	QS	0,22	0,60	1,00	0,035	0,030	0,050	0,20	0,20	0,03	0,30	0,80	0,10	0,70	0,025
S420NLH	1.8751					1,70	0,030	0,025									
S460NH	1.8953	GF	QS	0,22	0,60	1,00	0,035	0,030	0,050	0,20	0,20	0,03	0,30	0,80	0,10	0,70	0,025
S460NLH	1.8956					1,70	0,030	0,025									

a. the deoxidation method is designated as follows:

GF=fully killed steel containing nitrogen binding elements in amounts sufficient to bind the available nitrogen and having a fine grain structure.

b. QS=quality steel. SS= special steel.

c. If sufficient N-binding elements are present, the minimum total Al content does not apply.

d. If the copper content is greater than 0,30% then the nickel content shall be at least half of the copper content.

Table B.2-Maximum carbon equivalent value based on cast analysis

Steel grade		Maximum CEV for specified thicknesses mm	
Steel name	Steel number	≤16	>16≤65
S275NH	1.0493	0,40	0,40
S275NLH	1.0497		
S355NH	1.0539	0,43	0,45
S355NLH	1.0549		
S420NH	1.875	0,50	0,52
S420NLH	1.8751		
S460NH	1.8953	0,53	0,55
S460NLH	1.8956		



Table B.3 – Mechanical properties of fine grain structural steel hollow sections

Steel grade		Minimum yield strength Mpa			Tensile strength Mpa at specified thickness≤ 65mm	Minimum elongation^% at specified thickness≤65mm		Minimum impact energy Kv ^a	
Steel name	Steel number	Specified thickness mm				Longitudinal	Transverse	At test temperature of	
		≤16	> 16 ≤40	>40 ≤65				-50℃	-20℃
S275NH	1.0493	275	265	255	370-510	24	22	-	40 ^b
S275NLH	1.0497							27	-
S355NH	1.0539	355	345	335	470-630	22	20	-	40 ^b
S355NLH	1.0549							27	-
S420NH	1.875	420	400	390	520-680	19	17	-	40 ^b
S420NLH	1.8751							27	-
S460NH	1.8953	460	440	430	540-720	17	15	-	40 ^b
S460NLH	1.8956							27	-

^aFor impact properties for reduced section test pieces,see 6.6.2

^bThis value corresponds to 27J at-30℃(see EN 1993-1-1).

SEAMLESS STEEL PIPE

TUBE FOR PRESSURE PURPOSES

Standard:

EN10216-1 EN10216-2

Application:

It is available to manufacture pipeline, vessel, equipment, pipe fittings and steel structure.

Main Steel Grade:

P195TR1、P195TR2、P235TR1、P235TR2、P265TR1、T265TR2、P195GH、P235GH、P265GH、13CrMo4-5、10CrMo9-10

Chemical Composition

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

Mechanical Properties

Standard	Steel Grade	Mechanical Properties			
		Tensile Strength (Mpa)	Yield Strength(Mpa)	Elongation (%)	Impact Energy (J)
EN10216-1	P195TR1	320-440	≥195	≥27	\
	P195TR2	320-440	≥195	≥27	≥40
	P235TR1	360-500	≥235	≥25	\
	P235TR2	360-500	≥235	≥25	≥40
	P265TR1	410-570	≥265	≥21	\
	P265TR2	410-570	≥265	≥21	≥40
EN10216-2	P195GH	320-440	≥195	≥27	≥40
	P235GH	360-500	≥235	≥25	≥40
	P265GH	410-570	≥265	≥23	≥40
	13CrMo4-5	440-590	≥290	≥22	≥40
	10CrMo9-10	480-630	≥280	≥22	≥40

MECHANICAL TUBE

Standard: ASTM A519-03--- Standard of American Society for Testing & Materials SAE--- Standard of American Society of Automotive Engineers

Application: It is used for machine. automobile and other mechanical accessory purposes.

Steel Grade	Chemical Composition limits,%						
	C	Mn	P max	S max	Si	Cr	Mo
MT 1010	0.05-0.15	0.30-0.60	0.04	0.05	/	/	/
MT 1015	0.10-0.20	0.30-0.60	0.04	0.05	/	/	/
MTX 1015	0.10-0.20	0.60-0.90	0.04	0.05	/	/	/
MT 1020	0.15-0.25	0.30-0.60	0.04	0.05	/	/	/
MTX 1020	0.15-0.25	0.70-1.00	0.04	0.05	/	/	/
1008	0.1	0.30-0.50	0.04	0.05	/	/	/
1010	0.08-0.13	0.30-0.60	0.04	0.05	/	/	/
1012	0.10-0.15	0.30-0.60	0.04	0.05	/	/	/
1015	0.13-0.18	0.30-0.60	0.04	0.05	/	/	/
1016	0.13-0.18	0.60-0.90	0.04	0.05	/	/	/
1017	0.15-0.20	0.30-0.60	0.04	0.05	/	/	/
1018	0.15-0.20	0.60-0.90	0.04	0.05	/	/	/
1019	0.15-0.20	0.70-1.00	0.04	0.05	/	/	/
1020	0.18-0.23	0.30-0.60	0.04	0.05	/	/	/
1021	0.18-0.23	0.60-0.90	0.04	0.05	/	/	/
1022	0.18-0.23	0.70-1.00	0.04	0.05	/	/	/
1025	0.22-0.28	0.30-0.60	0.04	0.05	/	/	/
1026	0.22-0.28	0.60-0.90	0.04	0.05	/	/	/
1030	0.28-0.34	0.60-0.90	0.04	0.05	/	/	/
1035	0.32-0.38	0.60-0.90	0.04	0.05	/	/	/
1040	0.37-0.44	0.60-0.90	0.04	0.05	/	/	/
1045	0.43-0.50	0.60-0.90	0.04	0.05	/	/	/
1050	0.48-0.55	0.60-0.90	0.04	0.05	/	/	/
1518	0.15-0.21	1.10-1.40	0.04	0.05	/	/	/
1524	0.19-0.25	1.35-1.65	0.04	0.05	/	/	/
1541	0.36-0.44	1.35-1.65	0.04	0.05	/	/	/
4118	0.18-0.23	0.70-0.90	0.04	0.04	0.15-0.35	0.40-0.60	0.08-0.15
4130	0.28-0.33	0.40-0.60	0.04	0.04	0.15-0.35	0.80-1.10	0.15-0.25
4135	0.33-0.38	0.70-0.90	0.04	0.04	0.15-0.35	0.80-1.10	0.15-0.25
4137	0.35-0.40	0.70-0.90	0.04	0.04	0.15-0.35	0.80-1.10	0.15-0.25

GAS CYLINDER PIPE

Standard: JIS G3429、GB13447、GB/T 18248、ASME SA-372

Uses: For producing gas cylinder

SN.	Grade	Chemical Composition %										
		C	Si	Mn	P	S	P+S	Cr	Mo	V	Ni	Cu
1	37Mn	0.34-0.40	0.10-0.30	1.35-1.75	≤0.02	≤0.02	≤0.03	≤0.30		-	≤0.30	≤0.20
2	34Mn2V	0.30-0.37	0.17-0.37	1.40-1.75	≤0.02	≤0.02	≤0.03	≤0.30		0.07-0.12	≤0.30	≤0.20
3	30CrMo	0.26-0.34	0.17-0.37	0.40-0.70	≤0.02	≤0.02	≤0.03	0.80-1.10	0.15-0.25	-	≤0.30	≤0.20
4	35CrMo	0.32-0.40	0.17-0.37	0.40-0.70	≤0.02	≤0.02	≤0.03	0.80-1.10	0.15-0.25	-	≤0.30	≤0.20
5	34CrMo4	0.30-0.37	≤0.40	0.60-0.90	≤0.02	≤0.02	≤0.03	0.90-1.20	0.15-0.30	-	≤0.30	≤0.20
6	30CrMnSiA	0.28-0.34	0.90-1.20	0.80-1.10	≤0.02	≤0.02	≤0.03	0.80-1.10	≤0.10	-	≤0.30	≤0.20
7	STH11	≤0.50	0.10-0.35	≤1.80	≤0.035	≤0.035					≤0.25	
8	STH12	0.30-0.41	0.10-0.35	1.35-1.70	≤0.030	≤0.030					≤0.25	
9	STH12	0.25-0.35	0.15-0.35	0.40-0.90	≤0.030	≤0.030		0.80-1.20	0.15-0.30			
10	STH22	0.33-0.38	0.15-0.35	0.40-0.90	≤0.030	≤0.030		0.80-1.20	0.15-0.30			

Notes: Standards and agreement are also acceptable

GALVANIZED PIPE



Outer diameter: 1/2"-32"
 Wall thickness: 2.77mm-33mm
 Length range: Minimum 10m
 Standard: GB, ANSI, ASME, ASTM, JIS, DIN, BS, EN
 Steel Grade: Q195/Q215/Q235/Q345/10#/20#/ASTMA106 GRB
 Packaging: Plastic Cap, in bundle
 Zinc content: 170-550g Per M²



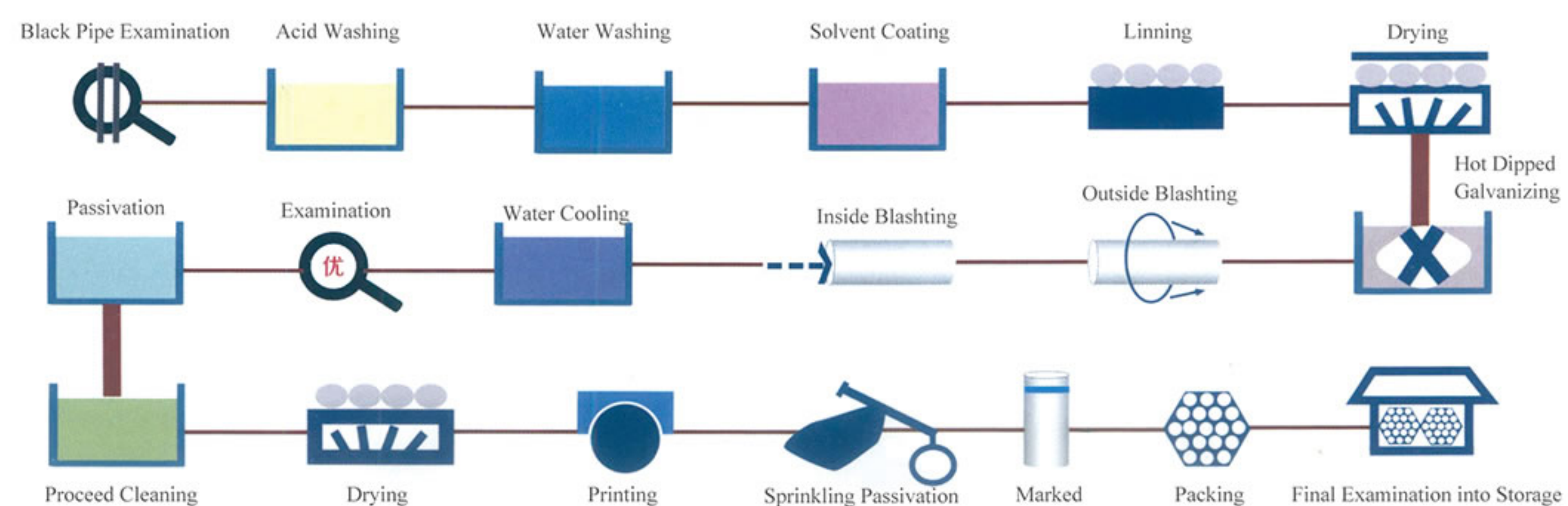
3LPE PIPES



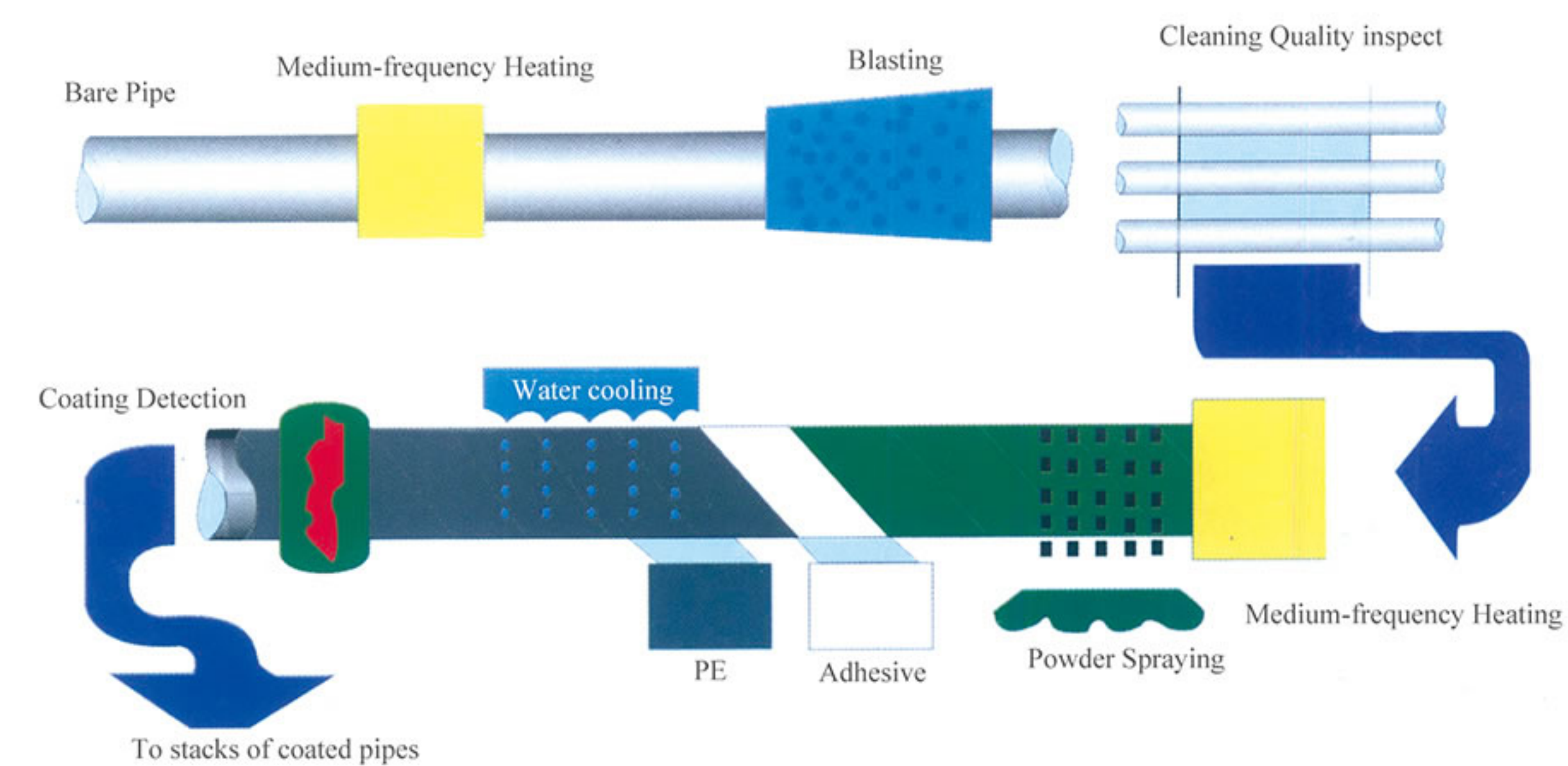
Outer diameter: 1/2"-32"
 Wall thickness: 2.77mm-33mm
 Length range: Minimum 10m
 3LPE Standard: DIN30670 SY/T0413-2002
 3LPE Thickness: 1.8mm 3mm 2.5mm 3mm 4mm etc.



PROCESS FLOW CHART



PROCESS FLOW CHART



TESTING EQUIPMENTS



DM2500M Metallographic microscope



MAXXLMFO4 Direct-reading spectrograph



MH2000 Carbon sulfur analyzer



SHT4605 Universal testing machine



HRS-ISO Rockwell hardness tester

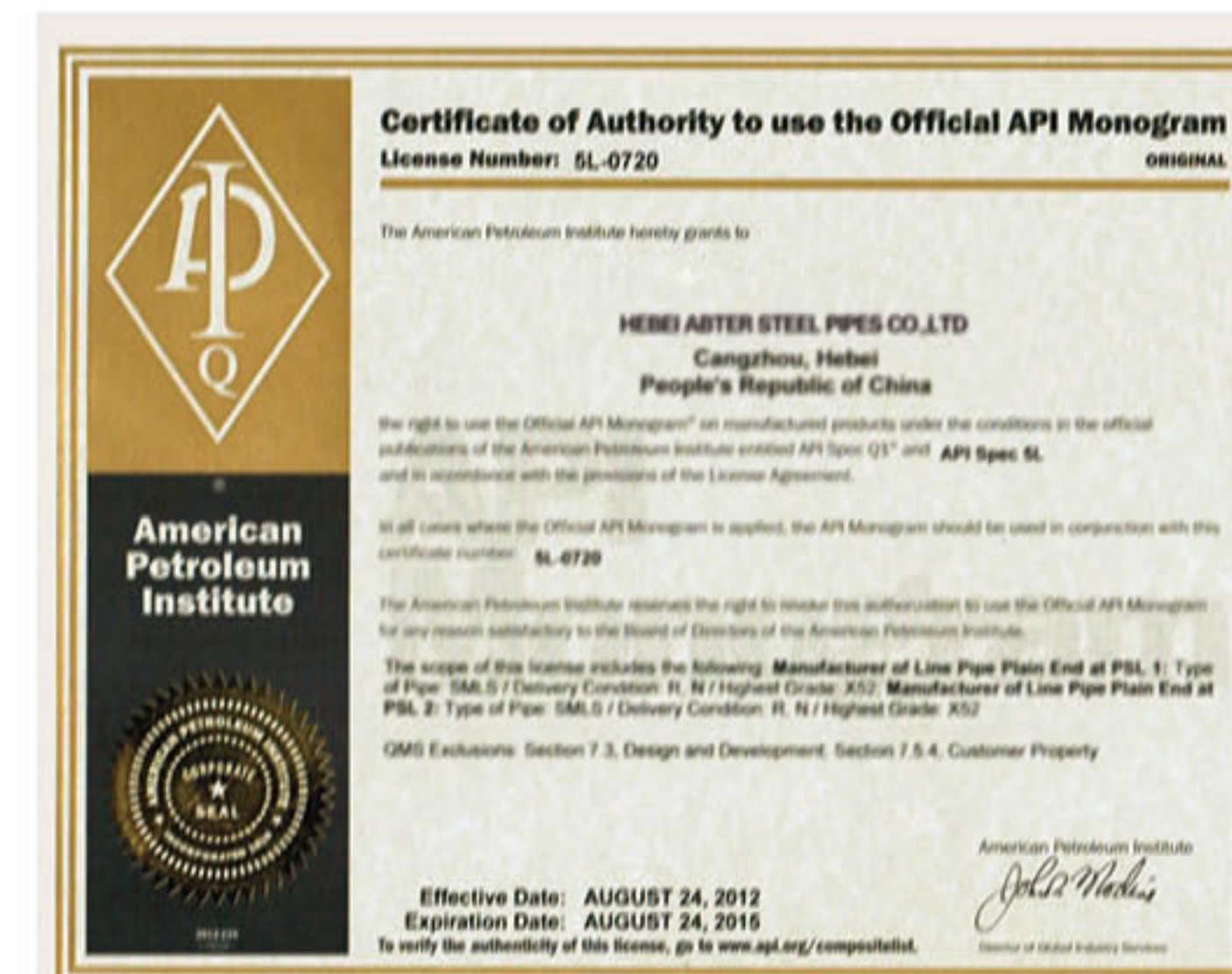


20°C-60°C Impact testing machine

QUALITY MANAGEMENT

And so she was approved by famous oil companies such as Shell, Mobil, Total, Petro China, Sinopec, CNOOC, NPDC, PAVISA, TPOC etc.

Abter Steel insists on his operation concept with "to seek the survival at his quality" and Management objective with "to focus on customers". It develops the system and products certification as the propelling force and implements the quality policy by deepening the total quality management, process approach, continuous improvement of his product application and enhancement of the customers' satisfaction. It improves the product's stable quality by quality performance indicators to each individual person and standardization quality management.



MARKETING AND CUSTOMERS

