

Line Pipe



PRODUCT SELECTION GUIDE

Line Pipe

Sustainable

Harmonious

Win-win

COMPANY PROFILE

Jiangsu Changbao Steel Tube Limited Co. is a manufacturing service company specialized in the production of seamless tubes, one of the global dominant manufactures in OCTG industry and small diameter boiler tube , the main products: tubing, casing, line pipe, boiler tube.... , broadly exported to Europe, the Americas, the Middle East, CIS, Southeast Asia, Australia and Africa and other countries and region, the member of www.energyahead.com certified by CNPC, and the excellent supplier for the top 3 boilers manufactures in China.

Changbao was founded in 1958 and was listed on Shengzhen Stock Exchange in Sep 21st,2010(Stock code:002478). We devote to the research, manufacture and service of specialized seamless steel tube which are mainly applied in oil and gas industry, power plant boiler, mechanical process. Over the years, we are the leading company in brand value, productivity and profitability.

We are located in Changzhou City Jiangsu Province of the Yangtze River Delta Developed region, adjacent to Shanghai-Nanjing Expressway and Beijing-Hangzhou Grand Canal, we also have bultin railway line connecting to the Shanghai-Nanjing railway. Changbao has about 2000 employees, including more than 400 professional engineers and technicians. Changbao covers an area of more than 800 thousands square meters.

Equipped with productivity 5 world-class level hot-rolling lines, 8 threading lines, 2 U-tubes lines, we have obvious advantage. The annual production capacity of Changbao seamless steel tube is 750 000 tons, which includes 250000 tons of tubing, 250 000 tons of casing, 180 000 tons of boiler tubes, 10000 tons of supercritical and ultra-supercritical U-tubes, 50000 tons of super length tubes and 10000 tons of mechanical tubes.

We have full set of inspection and research equipment, including the exporting devices such as UT & ET test device, hydro test device, spectrometer, metalloscopy, scanning electron microscopy, etc. We are also qualified by ISO9001, 14001, 18001 management system, the United States API monogram certificate, TUV Certified PED and AD W2000 EU certificate, the Russian GOST certificate, large oil suppliers access certificate and the boiler plant of the three A-Power Group supplier , nuclear power equipment company Shanghai Electric found qualified certificates. etc.

We have acquired the high-tech enterprises, brand-name enterprises in Jiangsu Province, Changzhou City, five-star industrial enterprises, expert workstation and specialized steel tube R&D center were founded and identified as Jiangsu enterprise tech center and remarkable enterprise R&D facility. Several product developed by Changbao win lots of national prizes and patented.

As a manufacturer in energy and machinery industry, we are exploring and studying industry 4.0 to achieve a deep integration of manufacture and internet. We will actively use internet thinking pattern to innovate our administrative pattern, emphasize our service quality to customers, improve relationship with customers. We will also research the intelligence level of our production to lower the cost and improve efficiency of management.

In the coming five years, Changbao will develop based on our “small and beautiful” strategy and international technology develop trending for innovation and revolution, to achieve a healthy, sustainable, distinctive development, to become a remarkable, effective and excellent specialized tubing manufacturer.





LINE PIPE

Line Pipe is mainly used for transportation of gas, water, oil. Sour service pipeline is intended for solving the problem of cracking and leakage caused by insufficient resistance to sulfide stress corrosion cracking and hydrogen induced cracking under acidic service environment when developing in acid oil and gas

STANDARD AND SPECIFICATION OF LINE PIPE

GENERAL STANDARD	
API SPEC 5L	Line Pipe Standard
ISO 3183	Pipeline used for transport system in Oil and Gas industry
GB/T9711	Pipeline used for transport system in Oil and Gas industry
ASME B36.10	Welded and Seamless Pipe
ANSI/NACE MR0175	Material used in H ₂ S Corrosion environment for oil and gas industry
ANSI/NACE TM0177	Stress resistance corrosion cracking test on metal in H ₂ S corrosion environment
ISO 15156	Material used in H ₂ S corrosion environment for oil and gas industry
ASME A53	Welded and Seamless pipe uncoated with hot-dip galvanized
ASME SA-333	Low temperature welded and seamless pipe
SPECIAL REQUIREMENT	
JIS STANDARD / DIN STANDARD / BS etc.	

REQUIREMENT OF ELONGATION PERFORMANCE

Grade	Seamless Steel Pipe									
	Yield Strength Rt0.5/MPa			Tensile Strength Rm/MPa			Yield Ratio			CVN/J
	PSL-1 min	PSL-2		PSL-1 min	PSL-2		PSL-1	PSL-2		
		N, Q	NS, QS		N, Q	NS, QS		N, Q	NS, QS	
L245/B	245	245-450	245-450	415	415-655	415-655	-	≤0.93	≤0.93	≤27
L290/X42	290	290-495	290-495	415	415-655	415-655	-			
L320/X46	320	320-525	320-525	435	435-655	435-655	-			
L360/X52	360	360-530	360-530	460	460-760	460-760	-			
L390/X56	390	390-545	390-545	490	490-760	490-760	-			
L415/X60	415	415-565	415-565	520	520-760	520-760	-			
L450/X65	450	450-600	450-600	535	535-760	535-760	-			
L485/X70	485	485-635	485-635	570	570-760	570-760	-			
L555/X80	555	555-705	555-705		625-825	625-825				≥40

Note: **R**: Rolling, **N**: Normalizing, **Q**: Quenching and Tempering, **S**: Sour Service

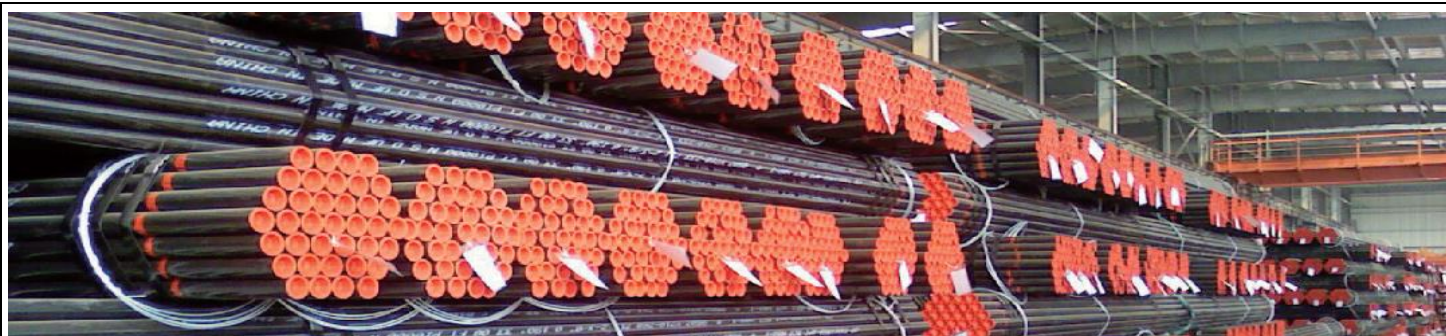
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SIZE RANGE OF OUR PRODUCT

OD	A	15	20	25	32	40	50	65	80	90	100	125	150	200
	B	1/2“	3/4”	1“	1-1/4”	1-1/2"	2"	2-1/2"	3"	3-1/2"	4"	5"	6"	8"
	OD	21.3	26.7	33.4	42.2	48.3	60.3	73.0	88.9	101.6	114.3	141.3	168.3	219.1
WT	SCH10	2.11	2.11	2.77	2.77	2.77	2.77	3.05	3.05	3.05	3.05	3.40	3.40	3.76
	SCH20													6.35
	SCH30	2.41	2.41	2.90	2.97	3.18	3.18	4.78	4.78	4.78	4.78			7.04
	STD	2.70	2.87	3.38	3.56	3.68	3.91	5.16	5.49	5.74	6.02	6.35	7.11	8.18
	SCH40	2.70	2.87	3.38	3.56	3.68	3.91	5.16	5.49	5.74	6.02	6.35	7.11	8.18
	SCH60													10.31
	XS													
	SCH80	3.73	3.91	4.55	4.85	5.08	5.54	7.01	7.62	8.08	8.56	9.53	10.97	12.70
	SCH100													15.09
	SCH120										11.13	12.70	14.27	18.26
	SCH140													20.62
	SCH160	4.78	5.56	6.35	6.35	7.14	8.74	9.53	11.13		13.49	15.88	18.26	23.01
	XXS	7.47	7.82	9.09	9.70	10.15	11.07	14.02	15.25		17.12	19.05	21.95	22.23

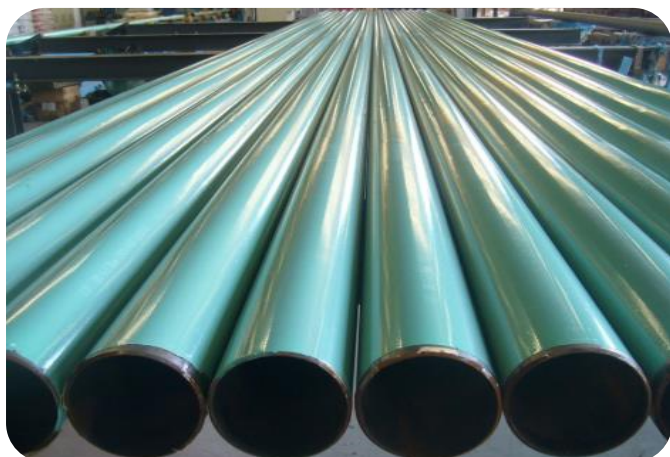


LINE PIPE COATING

CHANGBAO cooperated with the professional partner to provide customer with corrosion resistance coating, mainly product: 2PE/3PE, 2PP/3PP, FBE/Double FBE for internal and external coating. Galvanized coating is also applied according to standard and customers' requirement.

Specification	Type of Corrosion Resistance	OD		Min. Thickness of coating layer				
				EP		Adhesives	Total Thickness of Coating	
				General	Strong		General	Strong
SY/T0315-2005	FBE	DN≤800		≥300μm	≥400μm	----	----	----
Q/CNPC38-2002	Double FBE	DN≤800	Bottom Layer	≥250μm	≥300μm	----	----	----
			Surface Layer	≥370μm	≥500μm	----	----	----
			Total Thickness	≥620μm	≥800μm	----	----	----
GB/T23257-2009	3PE	DN≤100		≥120μm		≥170μm	≥1.8mm	≥2.5mm
		100 < DN≤250					≥2.0mm	≥2.7mm
		250 < DN≤500					≥2.2mm	≥2.9mm
		500 < DN < 800					≥2.5mm	≥3.2mm
		DN≥800					≥3.0mm	≥3.7mm
DIN 30670	2PE/3PE	DN≤100		----	----	----	≥1.8mm	≥2.5mm
		100 < DN≤250		----	----	----	≥2.0mm	≥2.7mm
		250 < DN≤500		----	----	----	≥2.2mm	≥2.9mm
		500 < DN≤800		----	----	----	≥2.5mm	≥3.2mm
		DN > 800		----	----	----	≥3.0mm	≥3.7mm
DIN 30678	2PP/3PP	OD≤100		----	----	----	≥1.8mm	----
		125 < OD≤250		----	----	----	≥2.0mm	----
		305 < OD≤500		----	----	----	≥2.2mm	----
		OD≥600		----	----	----	≥2.5mm	----

Other specification: CNPC / SINOPEC / CNOOC/ PDO/ KOC/ ADNOC



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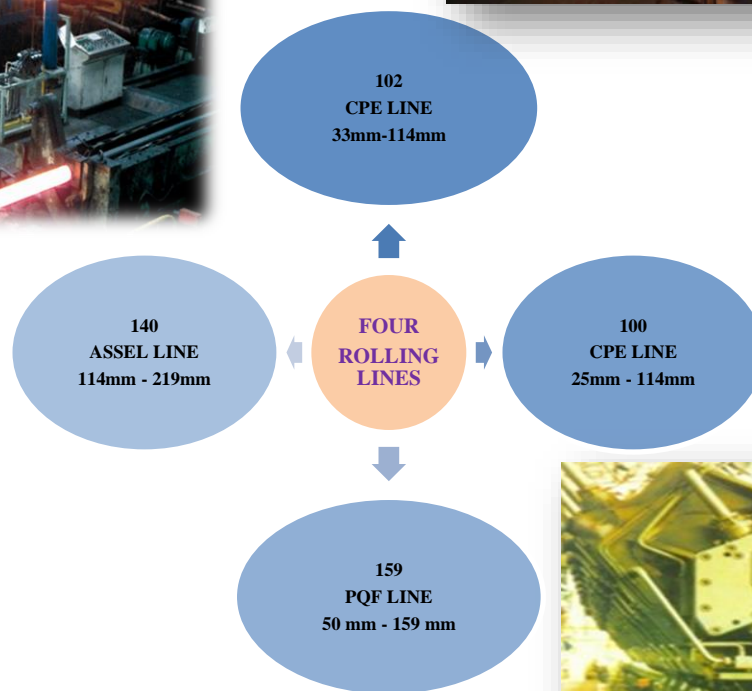
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FACILITY AND EQUIPMENT – ROLLING MILLS





FACILITY AND EQUIPMENT – INSPECTION AND TEST

TYPE OF EQUIPMENT	DESCRIPTION OF THE EQUIPMENT
Online Nondestructive Testing Equipment (Including the thickness measurement)	1 German GE ROTE250VIS Ultrasonic Complex Detection System 4 German GE ROTE180VIS Ultrasonic Complex Detection System 1 German Karl Deutsch Ultrasonic Complex Detection System The machines for defects and imperfections (Longitudinal, transverse, oblique) and full-length 100% cover wall-thickness be measured and recorded)
	3 Ultrasonic water path Flaw Detection Equipment
	2 Electromagnetic Ultrasonic Flaw Detection Equipment
	5 MPI including 1 for full length
	6 Eddy Current Testing NDT Equipment
	6 Fluorescent Powder Flaw Detectors
	5 130MPa Hydrostatic Test Equipment
2 Physical and chemical laboratories	1 High Speed Measure Thick Sys for full-length steel pipe
	Material testing machines
	Impact testing machines (Room Temperature & Lower temperature impact)
	Direct reading spectral instruments (Germany)
	The microstructure of the microscopes (Germany)
1 Corrosion Resistance Laboratory	Brinell instruments , Rockwell hardness testers (B style , C style)
	Cortest integrated 70 channels stress-loop system
	HIC/SSC universal equipment
	Slow strain rate stress corrosion tester
	High pressure autoclave system
	HIC cracking test equipment

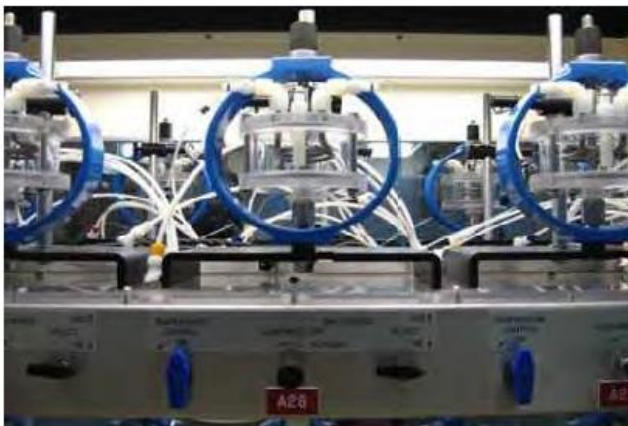


FACILITY AND EQUIPMENT – CORROSION RESISTANCE TEST

Our Corrosion Resistance lab covers an area of 400 square meters, which is more advanced anticorrosion lab at present in domestic steel tube industry. The lab is mainly used for the inspection and research of Changbao steel tube anti-corrosion products. It owns 5 sets (200pcs) of CORTEST stress rings of SSC stress corrosion equipment from USA. There are experienced professional engineers on corrosion, professional testing and sample processing and relative technicians. We will give more input on lab equipment and technicians. We will also communicate and collaborate with domestic universities and oil fields more frequency so as to make the Changbao anti-corrosion lab to be the top ranking lab in domestic steel tube industry.

As per our company present development and requirements of inspecting products, we are completing the inspection of anti-corrosion product property gradually, including SSC, HIC, high temperature and high pressure corrosion and so on. The main inspection contents are as the followings:

- (1) SSC property inspection of anti-H₂S corrosion product
- (2) HIC property inspection of anti-H₂S corrosion product
- (3) The static state of anti-corrosion(CO₂ & H₂S) product/dynamic high temperature, high pressure hook test and electrical chemical test
- (4) Slow Tensile test(next program)
- (5) Anti-collapsing test(next program)



▲ CORTEST stress rings of SSC stress corrosion equipment from USA



▲ HIC test equipment



▲ High temperature, high pressure hook test



CHANGBAO'S INTERNATIONAL SALES NET AND VALUED CUSTOMERS



شركة تنمية نفط عُمان
Petroleum Development Oman



常德龙石油公司 (CHEVRON)



美国西方石油公司 (OXY)



美国EOG能源公司 (EOG)



加拿大塔里曼石油公司 (TALISMAN)



加拿大国家石油公司 (ENCANA)



加拿大HUSKY能源公司 (HUSKY)



法国佩朗科石油公司 (PERENCO)



俄罗斯国家石油公司 (ROSNEFT)



俄罗斯卢克石油公司 (LUKOIL)



俄罗斯天然气公司 (GAZPROM)



We have the energy.



老挝石油公司 (GPOC)



土耳其国家石油公司 (TPAC)



尼日利亚国家石油公司 (NNPC)



巴林塔瓦石油公司 (TATWEER)



叙利亚国家石油公司 (SPC)



斯伦贝谢服务公司 (SCHLUMBERGER)



OPEN JOINT STOCK COMPANY



利比亚阿格石油公司 (AGOC)



Kuwait Oil Company



印度国家石油公司 (OIL INDIA)



印尼国家石油公司 (PERTAMINA)



福斯特惠勒动力机械有限公司 (F&W)

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