

# TOBO International Trading (Shanghai) Co.,Ltd

## TOBO Pipeline Equipment (Shanghai ) Co., Ltd

SMLS PIPE  
WELD PIPES MANUFACTURE

1. 公司概况

2. 技术装备





## TOBOGROUP

**TOBO International Trading (Shanghai) Co.,Ltd** Tobo Pipeline equipments(Shanghai) Co., Ltd .is located in Shanghai,we are one of the biggest manufacturers Pipeline products in China .

Our company was established in 1998, the plant covers 55, 000 square meters and a construction area of 6, 800 square meters, existing 160 workers and 15 technicians. Now, it owns a number of advanced pipe production equipments, metal, forging, machining, cold forming, hot extrusion, such as heat treatment process, producing 6, 000 tons of pipe fittings. Company with a variety of detection devices, such as nondestructive testing, chemical analysis, metallographic examination, physical experiments. The technical is very strength, our main products contain fittings( elbow, tee, flanges, cap, reducer, bend ) forged socket welding fittings and threaded fittings,

pipe ( SMLS WELD ERW , hot-dipped galvanized, electrical galvanized) and the materials of the products contain stainless steel ,duplex-stainless steel alloy steel.

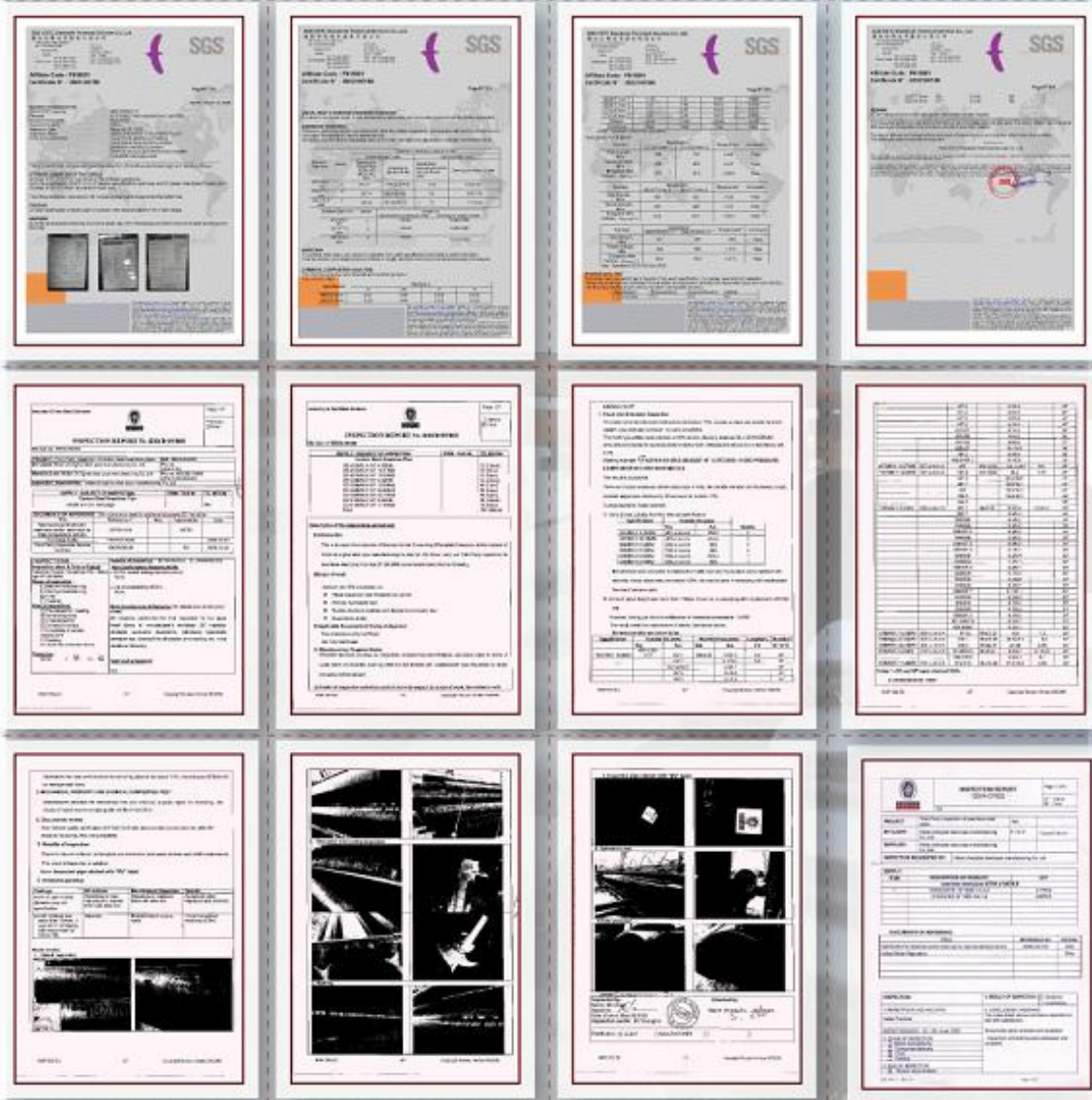
In order to comply with the global modernization services development trends and eliminating the varieties distress of the global enterprise's purchase in the consumables, which especially TOBO in products. We coordinate the pressure pipe manufacturer which with the scale of production, quality control and high cost performance (has passed ISO 9001 quality series attestation, ccs, DNV,PED/97/23/EC,AD2000-WO, special equipment manufacturing license,ASME-SA182,) through a variety of effective assort mechanism to make up the shortage of supply and Post-processing of VAT enterprise, and to supply high quality pipe fittings, because of the superior quality and good service, we have established long term business cooperation with more than 30 countries and areas,which covers Europe, Africa, South America, North America, Middle East, Taiwan and South East Asia and so on.

With many years effort and support from our valuable customers, these products have obtained a big market share in the world. Our business principle is "Superior quality, Competitive price, Timely delivery and Considerate service " Standing to the principle of "Enterprises focus on the core business", we will actively promotes the globalization of business strategy approach, using advanced supply chain management technology to service for clients with higher quality and more competitiveness ' s products. At the same time, we sincerely reply your inquiry, honesty waiting for your visiting and wish to have cooperation with you at the any time. We welcome all the customers to contact us for more information. We assure you, with our technical knowledge and experience, our company will be one of your Stable, Continue business partners in China!



# 检验报告

## Test Report



**TOBO**  
GROUP  
www.tobo-group.com

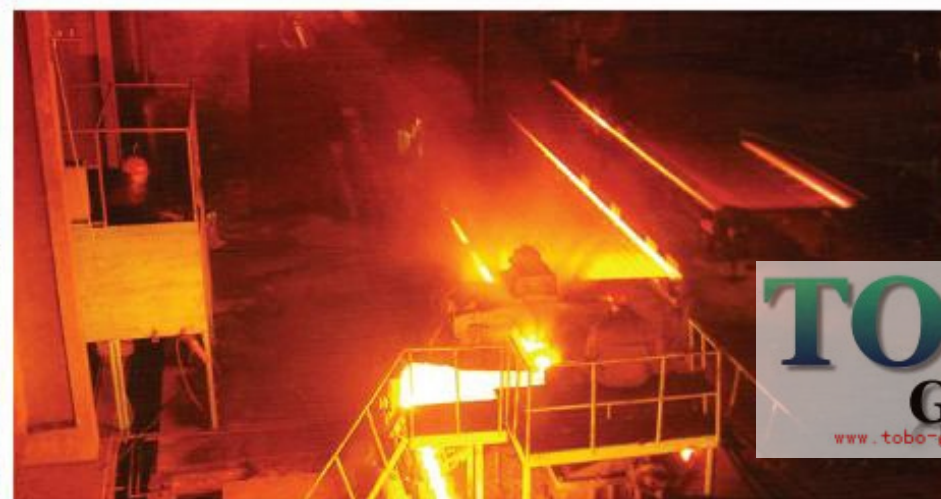


**TOBO**  
GROUP



生产设备

Production Equipment



生产中的无缝管车间  
seamless workshop in processing

**TOBO**  
GROUP

[www.tobo-group.com](http://www.tobo-group.com)



生产中的无缝管车间  
seamless workshop in processing



**TOBO**  
GROUP



# 生产设备

Production Equipment



TOBO  
GROUP

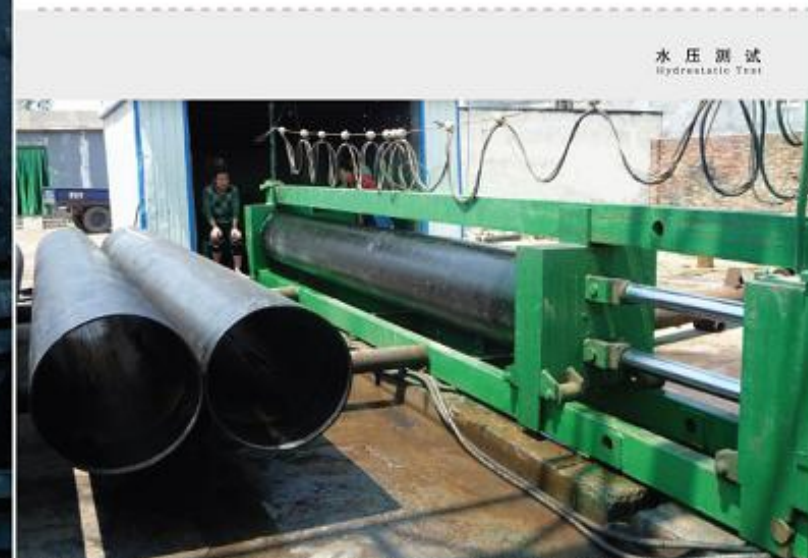
[www.tobo-group.com](http://www.tobo-group.com)



热扩生产线  
The Hot-expanded Production Line



斜体加热炉  
The Heat Furnace Of Seamless Steel Pipe



水压测试  
Hydrostatic Test



TOBO  
GROUP



# 检测设备

## DETECTING EQUIPMENT

公司理化检测中心拥有国内一流的现代化检测设备，可对材料进行全面的理化性能检测，为生产、科研提供有力的科技保障。

With first-class modern inspection equipments in china,physical and chemical inspection center can carry out a full-range of inspections for physical and chemical properties to provide strong technical guarantee for production and scientific research.

**TOBO**  
GROUP  
[www.tobo-group.com](http://www.tobo-group.com)



材料试验机



光谱磨样机



**TOBO**  
GROUP



优质产品

Quality Production

**TOBO**  
GROUP  
[www.tobo-group.com](http://www.tobo-group.com)



**TOBO**  
GROUP



优质产品

Quality Production

**TOBO**  
GROUP  
[www.tobo-group.com](http://www.tobo-group.com)



**TOBO**  
GROUP



## 各种标准无缝钢管的化学成分及力学性能

All Kinds of Standards of Seamless Steel Pipe  
Chemical Composition and Mechanical Properties

### 1. 输送流体用无缝钢管 SEAMLESS STEEL PIPE FOR LIQUID CONVEYANCE

Usage: Applicable to transport liquid, gas, oil, etc

产品名称Items	中国 China Standard	钢号Steel Grade	美国 America Standard	钢号Steel Grade	德国German Standard	钢号Steel Grade	日本Japan Standard	钢号Steel Grade
输送流体用无缝钢管 Seamless Steel Tube For Liquid Conveyance	GB/T8163-2008	10# 20# Q345B	ASTM A 53/A106	Gr.A Gr.B	DIN1629 DIN2448 DIN17175	ST37 ST44 ST52	JIS G3462	STD G410

Standard: GB/T8163-2008, ASTM A 53/A106, DIN1629, DIN2448, DIN17175, EN10204, EN10216, JIS G3462

Steel Grade: 10#, 20#, Q345B, A53/A106 A/B, ST37, ST35.8, ST44, ST45.8, ST52, STD G410

Outer Diameter: 3"—48" (89mm—1220mm)

Wall Thickness: SCH10—SCH100 (4mm—40mm)

Length: Random Length, Fixed Length, SRL, DRL

Chemical composition 化学成分:

Standards	Grade	C	Si	Mn	P≤	S≤	Cu≤	Ni≤	Cr≤	Mo≤	V≤
GB/T	10	0.07-0.14	0.17-0.37	0.35-0.65	0.035	0.035	0.25	0.25	0.15	/	/
	20	0.17-0.24	0.17-0.37	0.35-0.65	0.035	0.035	0.25	0.25	0.25	/	/
	35	0.32-0.39	0.17-0.37	0.50-0.80	0.035	0.035	0.25	0.25	0.25	/	/
	45	0.42-0.50	0.17-0.37	0.50-0.80	0.035	0.035	0.25	0.30	0.25	/	/
	Q345B	0.12-0.20	0.20-0.55	1.20-1.60	0.045	0.045	0.25	0.25	0.25	/	/
DIN	St35	≤0.18	0.15-0.35	0.35-0.65	0.035	0.035	0.25	0.25	0.25	/	/
	St45	≤0.25	0.15-0.35	0.50-0.80	0.035	0.035	0.25	0.25	0.25	/	/
	St55	0.33-0.41	0.15-0.35	0.50-0.80	0.035	0.035	0.25	0.25	0.25	/	/
	St52	≤0.20	≤0.55	≤1.50	0.035	0.035	0.25	0.25	0.25	/	/
ASTM A53	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 A106	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

Mechanical properties 机械性能:

Standards标准	Grade钢号	T.S.抗拉强度(MPa)	Y.S.屈服强度(MPa)		Elongation伸长率(%)≥
			<16mm	16-30mm	
GB/T	10	335	205	195	24
	20	390	245	235	20
	35	510	305	295	17
	45	590	335	325	14
	Q345B	490	325	315	21
DIN			>16mm	>16mm	
	ST35	345-460	225	225	25
	ST45	440-550	245	245	21

Standards标准	Grade钢号	T.S.抗拉强度(MPa)	Y.S.屈服强度(MPa)		Elongation伸长率(%)≥
			<16mm	16-30mm	
GB/T	ST55	540-645	295	285	17
	ST52	490-630	355	345	22
	ST45	590-730	335	325	14
ASTM A53	A	330	205		20
	B	415	240		
ASTM A106	A	330	205		35 (longitudinal 纵向)
	B	415	240		30 (longitudinal 纵向)
	C	485	275		30 (longitudinal 纵向)

Dimension Tolerances 尺寸公差:

Standards 标准	Outer Diameter Tolerance 外径公差		Thickness Tolerance 壁厚公差	
GB/T	D<50	±0.50mm	S<4mm	±12.5%
	D≥50	±1%	4-20mm	+15/-12.5%
DIN	D<50	±0.50mm	S≤2 · Sn	+15/-10%
	D≥50	±1%	2 · Sn<S≤4 · Sn	+12.5/-10%
			S>4 · Sn	±9%
ASTM A53	D<48.3	±0.4/-0.79mm	±12.5%	
	D≥48.3	±1%		
ASTM A106	D<48.3	±0.4/-0.79mm	±12.5%	
	D48.3-114.3	±0.79mm		
	D≥114.3	±1.59/-0.79mm		

### 2. API 5L管线管 API 5L Line Pipe

It is widely used in conveying gas, water, and oil in both the oil and natural gas industries.

Standard: API SPEC 5L PSL 1

Steel Grade: GR.B, X42, X52, X60

Outer Diameter: 4"—36" (114mm—914mm)

Wall Thickness: SCH10—SCH100 (4mm—40mm)

Length: Random Length, Fixed Length, SRL, DRL

Standard 标准	Steel grade 钢号	Chemical composition 化学成分 %								
		C	Mn	P	S	Si	V	Nb	Ti	CEpcm
API 5L PSL 1	L210 or A	≤0.22	≤0.90	≤0.030	≤0.030	-	-	-	-	≤0.25
	L245 or B	≤0.28	≤1.20	≤0.030	≤0.030	-	-	-	-	≤0.25
	L290 or X42	≤0.28	≤1.30	≤0.030	≤0.030	-	-	-	-	≤0.25
	L320 or X46	≤0.28	≤1.40	≤0.030	≤0.030	-	-	-	-	≤0.25
	L360 or X52	≤0.28	≤1.40	≤0.030	≤0.030	-	-	-	-	≤0.25



# 各种标准无缝钢管的化学成分及力学性能

All Kinds of Standards of Seamless Steel Pipe  
Chemical Composition and Mechanical Properties

Standard 标准	Steel grade 钢号	Chemical composition 化学成分 %								
		C	Mn	P	S	Si	V	Nb	Ti	CEpcm
API 5L PSL 1	L390 or X56	≤0.28	≤1.40	≤0.030	≤0.030	-	-	-	-	≤0.25
	L415 or X60	≤0.28	≤1.40	≤0.030	≤0.030	-	-	-	-	≤0.25

Mechanical properties 机械性能:

Standard 标准	Steel grade 钢号	Yield Strength (min) 屈服强度 Mpa	Tensile Strength(min) 抗拉强度 Mpa
API 5L PSL 1	L210 or A	210	335
	L245 or B	245	415
	L290 or X42	290	415
	L320 or X46	320	435
	L360 or X52	360	460
	L390 or X56	390	490
	L415 or X60	415	520

## 3. 锅炉用无缝钢管 Seamless Steel Pipe for Low/medium & High Pressure Boiler

中低压锅炉管用于中低压锅炉(工作压力一般大于 5.88Mpa, 工作温度在 450℃以下)的受热面管子、集装箱及蒸汽管道  
For manufacturing, heating-pipelines, containers, steaming pipelines of low/medium pressure boilers (P<5.88Mpa, T<450℃)  
高压锅炉管用于高压锅炉(工作压力一般在 9.8Mpa 以上, 工作温度在 450℃~650℃之间)的受热面管子、集装箱、省煤器、过热器、再热器等  
It is used for heating-pipelines, containers, coal-saving devices superheaters and reheaters of high pressure boilers (P>9.8Mpa, 450℃<T<650℃)

Standard: GB/T3087-2008, GB/T5310-2008, DIN 17175, EN10216-2

Steel Grade: 10#, 20#, 20G, 20MnG

Outer Diameter: 4"-24" (114mm-610mm)

Wall Thickness: SCH10-SCH100 (4mm-40mm)

Length: Random Length, Fixed Length, SRL, DRL

Chemical Composition & Mechanical Properties 化学成分和机械性能:

Standard 标准	Grade 钢号	Chemical Composition 化学成分 (%)						
		C	Mn	Si	Cr	Ni	Cu	P / S
GB3087	10	0.07 - 0.14	0.35 - 0.65	0.17 - 0.37	≤0.15	≤0.30	≤0.20	≤0.030
	20	0.17 - 0.24	0.35 - 0.65	0.17 - 0.37	≤0.25	≤0.25	≤0.20	≤0.030
Mechanical Properties 机械性能	Tensile Strength 抗拉强度 (Mpa)			Yield Strength 屈服点 (Mpa)			Elongation 伸长率 (%)	
	10	335 - 475			≥195			≥24
	20	410 - 550			≥245			≥20

Standard 标准	Grade 钢号	Chemical Composition 化学成分 (%)					
		C	Mn	Si	Cr	Mo	P / S
GB5310	20G	0.17 - 0.24	0.35 - 0.65	0.17 - 0.37	≤0.25	≤0.15	≤0.030
	20MnG	0.17 - 0.24	0.70 - 1.00	0.17 - 0.37	≤0.25	≤0.15	≤0.030
Mechanical Properties 机械性能	Tensile Strength 抗拉强度 (Mpa)			Yield Strength 屈服点 (Mpa)			Elongation 伸长率 (%)
	20G	410 - 550			≥245		≥24
	20MnG	≥415			≥240		≥22

## 4. 结构及其他用途无缝钢管 Structural Pipe And Other Use Seamless Pipe

Application:

Widely used in mechanical processing, oil and gas industry, transportation and construction industry.

Standard: GB/T8162-2008

Steel Grade: 20#, 35#, 45#, Q345A, Q345B, Q345C

Outer Diameter: 3"-48" (89mm-1220mm)

Wall Thickness: SCH10-SCH100 (4mm-40mm)

Length: Random Length, Fixed Length, SRL, DRL

Process: Hot rolled and hot expanded

Test: Chemical Component Analysis, Mechanical Properties (Ultimate tensile strength, Yield strength, Elongation), Technical Properties (Flattening Test, Bending Test, Blow Test, Impact Test, Exterior Size Inspection, Hydrostatic Test, X-ray Test)

Third Party Inspection: SGS, BV, Lloyds etc.

## 5. ERW 焊管 ERW Welded Steel Pipe

Application:

Widely used in mechanical processing, petrochemical, transportation and construction industry

Standard: GB/T3091-2008, API SPEC 5L, ASTM, JIS, DIN, ISO

Steel Grade: Q215, Q235, Q345B, A, B, X42, X52, X60(L245 L415), SS400

Outer Diameter: 8"-26" (219MM-660MM)

Wall Thickness: 5.0MM-20MM

Process: Electrical Resistance Weld

Length: 3M-12.2M

## 6. 螺旋钢管 Spiral Steel Pipe

螺旋钢管 Spiral Steel Pipe	外径 O. D	219MM-2220MM
	壁厚 W.T	6MM-18MM
	标准 Standard	SY/T5037-2008, GB9711.1, GB9711.2, API 5L
	材质 Material	Q235B/Q345B/L245/L290/L360/L415/L485/20# API 5L B/X42/X52/X60/X70
应用 Application		It is widely used in many common fluid engineering such as petroleum, coal gas, natural gas, water pipeline, and heating power.

## 7. 防腐钢管 Anti-corrosion Steel Pipe

Application:

The external coating is mainly used for anti-corrosion protection for liquid pipes before burying, and internal drag-reducing coating is mainly used to reduce the investment and maintenance costs.

External Corrosion Protection for steel pipes: Single-layer FBE Coating, Two-layer FBE Coating(2FBE), Two-layer PE/PP Coating (2PE/2PP), Three-layer PE/PP Coating(3PE/3PP), Epoxy coal asphalt coatings, Polyurethane heat preservation etc.

Internal Corrosion Protection for Steel Pipes: IPN8710 high polymer anti-corrosion coatings and cement mortar lining etc.





**TOBO International Trading (Shanghai) Co.,Ltd**

**TOBO Pipeline Equipment (Shanghai) Co., Ltd**

No.208,Lvdi Road,Baihe Twon,Qingpu District,Shanghai,China

TEL:0086-21-31261985

FAX:0086-21-39510185

E-MAIL: [info@tobo-group.com](mailto:info@tobo-group.com)

WEB:[www.tobo-group.com](http://www.tobo-group.com)