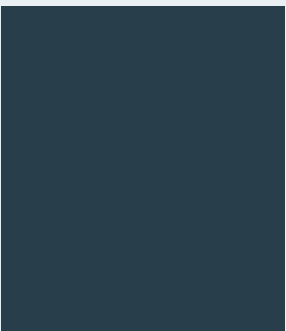






HUAYOU
SPECIAL STEEL



专业无缝钢管服务商

Professional Facilitator of Steel Seamless Pipes

2020年成为中国无缝钢管领先品牌

Become Leading Brands of Chinese Steel Seamless pipes in 2020

2050年成为世界无缝钢管领先品牌

Become Leading Brands of International Steel Seamless Pipes in 2050



2-3

资源篇

- ◆ 合作伙伴

4-21

产品篇

- ◆ 产品介绍
- ◆ 产品参数
- ◆ 产品应用

22-29

质保篇

- ◆ 质量控制
- ◆ 流程总览
- ◆ 用户评价

30-33

制造篇

- ◆ 走进工厂
- ◆ 生产流程
- ◆ 海外工厂

34-35

营销篇

- ◆ 销售业绩

36-38

物流篇

- ◆ 物流实景
- ◆ 国际贸易

Resource

- ◆ Business Partner

Products

- ◆ Product Introduction
- ◆ Product Parameter
- ◆ Product Application

Quality Assurance

- ◆ Quality Control
- ◆ Process Overview
- ◆ User Evaluation

Manufacturing

- ◆ A Close Look At The Mill
- ◆ Production Flow
- ◆ Oversea Factory

Sales

- ◆ Sales Achievements

Logistics

- ◆ Domestic Trade
- ◆ International Trade

公司简介

Company Introduction

无锡市华友特钢有限公司，是科、工、贸一体的集团化企业，系专业无缝钢管服务商。

华友特钢与国内外大型钢管企业建立了战略合作伙伴关系，下设大型现货贸易平台，专业仓储物流平台，外贸加工基地，斯贝歇尔钢管制造有限公司，海外工厂等。产品广泛用于电站锅炉、石油、石化、化工、电力、地质勘探、造船、机械军工等行业。

华友特钢在国内外享有良好的声誉，国内固定客户5000多家，在各行各业均建立了稳定向上的营销渠道。公司50%产品销往全世界各地，参与了国内外大型工程建设，是多国石油公司的指定供应商，华友品牌逐渐国际化。

华友特钢致力于为全球用户提供全方位的无缝钢管解决方案。

Wuxi Huayou Special Steel Co., Ltd, located in the heart of the Yangtze River Delta, with convenient water, land and air transportation network, has a good geographical environment and regional advantages.

Huayou has 558 employees in the list, with over 50 professional technicians. It integrates scientific research, manufacturing and trading efforts, and as a professional supplier of steel seamless pipes. At present, the total annual sales quantity exceeds 500,000 tons, sales amount reaches to four billion RMB, one hundred million RMB of profit and tax, one hundred million USD of exporting exchange. Huayou was honored No.1 private enterprise in 2011 in China by its large trading amount.

At present, HUAYOU has built the strategic partnership with domestic large steel enterprises, which owns huge trading platform, professional warehouse logistics platform, exporting processing base, oversea factory and SP. pipe mills. HUAYOU professionally supplies all kinds of steel seamless pipes with OD from 6mm-914mm and WT from 1.5mm-70mm. We have over 1000 different specification to stock, with GB, ASTM/ASME, API, DIN, EN, JIS, BS and other grades over 80,000 tons, among them, we manufacture and sell by ourselves 100,000tons per year, and build the good business relationship with domestic giant steel enterprises such as BAO STEEL, TPCO, HENGYANG, CHENGDU, BAOTOU and so on. We also build the smooth importing channel with Japan Sumitomo Metal Industries Ltd, German Mannesmann, American Wyman Gordon and other international steel enterprises. We offer different material and items strictly according to the different standards and clients' requirements. Our products are widely used in boiler station, petroleum, petrochemical industry, chemical engineering, electricity, geological exploration, shipbuilding, mechanical military and many other fields.

HUAYOU holds ISO9001-2008 Quality Management System Certification, Special equipment manufacturing license, international attestation such as American API 5L, API 5CT, European PED, and Classification Society certification of ABS、CCS、BV、LR and other countries.

HUAYOU won a good reputation both home and abroad. Our regular clients in domestic over 5000, building a stable sales channel in all kinds of occupations. 50% products sale to all over the world, engage in large-scale construction projects at home and abroad. As a nominated supplier in many different oil company, HUAYOU becomes more and more internationalized.

HUAYOU commits itself to worldwide user to offer the solution way towards to steel seamless pipes.

服务 创新 价值 分享
Cooperation Innovation Service Win-Win

上海宝钢集团有限公司
天津钢管集团股份有限公司
衡阳华菱钢管有限公司
攀钢集团成都无缝钢管有限责任公司
湖北新冶钢有限公司

战略合作伙伴

HUA YOU
SPECIAL STEEL

包头钢铁（集团）有限责任公司
无锡西姆莱斯石油专用管制造有限公司
江苏常宝钢管股份有限公司
江苏诚德钢管股份有限公司
江苏振达钢管集团有限公司

加拿大布莱凯姆
德国蒂森克虏伯公司
日本住友钢铁公司
印度国家电力公司
伊朗国家石油
中国石油天然气集团公司
中国石油化工集团公司
天津市电力公司
杭州锅炉集团股份有限公司
江阴中南重工股份有限公司
浙江东南网架股份有限公司



BAO STEEL
TPCO
HENG YANG
CHENGDU STEEL
HUBEI XIN YE STEEL

Strategic partners

HUA YOU
SPECIAL STEEL

BAOGANG STEEL
WSP
CHANGBAO STEEL
CHENGDE STEEL
ZHENDA STEEL

BRI-CHEM
THYSSENKRUPP
SUMITOMO
NTPC
NIOC
CNPC
SINOPEC
TEPC
HBG
ZNHI
SSC





企业产品介绍 Production Introduction

为全球客户提供理想 超值的无缝钢管产品

Provide the Ideal and Valued Steel Seamless Pipes for World-wide User

工程用无缝钢管
Seamless steel pipes
for project service

低中压锅炉用
无缝钢管
Seamless steel pipes
for low and medium
pressure

高温、高压用
无缝钢管
Seamless steel
pipes for
high temperature
and pressure

低温用无缝钢管
Seamless steel
tubes for
low-temperature
-service

管线钢管
Line pipes

用于酸性工况的
管线钢管
Line pipes used in
sour service environment

油套管
Tubing and Casing

船舶用碳钢和
碳锰钢无缝钢管
Carbon steel and
carbon manganese steel
seamless pipes for
shipbuilding

精密无缝钢管
Steel seamless precision
tubes

机械用无缝钢管
Seamless Carbon and
Alloy Steel Mechancial
Tubing

产品系列：

华友特钢专业生产及供应外径1200mm以下，壁厚130mm以内各种无缝钢管，常年备有1000多个规格的无缝钢管库存，同时与国内外大型钢管企业建立了良好的合作关系。

主要产品为冷拔（精轧）、热轧无缝钢管，产品质量及供应服务能力得到国内外广泛认同。

Production series:

HUAYOU professionally supplies all kinds of steel seamless pipes with OD up to 1200mm and WT up to 130mm. We have over 1000 different specifications for stock, and meanwhile have built a good business relationship with domestic and foreign giant steel enterprises.

Our main products are cold-drawn (precision rolled) and hot-rolled steel seamless pipes, which widely recognized by foreign and domestic owing to its production quality and service capability.

工程用无缝钢管

Seamless steel pipes for project service

标准

ASTM A53/A106/API 5L

Standard

ASTM A53/A106/API 5L

用途

用于输送水、油、气等流体

Application

Conveying water, petroleum, gas and other common fluids

常用材质和牌号

ASTM A53/A106/API 5L GrB

Main steel material and grade

ASTM A53/A106/API 5L GrB

化学成分 Chemical composition

钢类 Product	钢级 Grade	化学成分 Chemical composition , %								
		C	Si	Mn	P	S	Cr	Ni	Mo	其它
优质碳素结构钢 Carbon steel	A53/A106/API 5L GrB	0.28	0.10	0.29/ 1.06	0.030	0.030	0.40	0.40	0.15	Cu 0.40 V 0.08

机械性能 Mechanical properties

钢级 Grade	拉伸性能		
	抗拉强度 Rm MPa	下屈服强度 ReL或Rp0.2 MPa	断后伸长率 (A) %
		不小于	
A53/A106/API 5L GrB	415	245	22

低中压锅炉用无缝钢管

Seamless steel pipes for low and medium pressure-service

标准

GB3087-2008 ASTM A179 ASTM A192

Standard

GB3087-2008 ASTM A179 ASTM A192

用途

用于低中压锅炉（工作压力 5.88MPa，工作温度 < 450℃）的受热面管子、集箱及换热器管子。

Application

For heat-exchange tubes、steaming tubes
(P ≤ 5.88MPa, T < 450℃)

常用材质和牌号

Main steel material and grade

化学成分 Chemical composition

钢类 Product	序号 Item	钢级 Grade	化学成分 Chemical composition , %							
			C	Si	Mn	P	S	Cr	Ni	其它
优质碳素结构钢 Carbon steel	1	10	0.07/ 0.13	0.17/ 0.37	0.35/ 0.65	0.030	0.030	0.15	0.30	Cu 0.25
	2	20	0.17/ 0.23	0.17/ 0.37	0.35/ 0.65	0.030	0.030	0.25	0.30	Cu 0.25
	3	A179	0.06/ 0.18	-	0.27/ 0.63	0.030	0.030	-	-	-
	4	A192	0.06/ 0.18	0.25	0.27/ 0.63	0.030	0.030	-	-	-

机械性能 Mechanical properties

序号	牌号	抗拉强度 Rm MPa	拉伸性能			硬度 Hardness	
			下屈服强度 ReL或Rp0.2 MPa		断后伸长率 (A) %	壁厚/mm	
			壁厚/mm			< 5.1	5.1
			16	> 16		不大于	
1	10	335~475	205	195	24	-	-
2	20	410~530	245	235	20	-	-
3	A179	≥325	180		35	-	-
4	A192	≥325	180		35	77HRB	137HB

高温、高压用无缝钢管

Seamless steel pipes for high temperature and pressure-service

标准

GB5310-2008 GB9948-2006 GB6479-2000
ASTM/ASME A/SA213 ASTM/ASME A/SA335
EN10216-2 ASTM/ASME A/SA312

用途

用于高温、高压锅炉（工作压力 9.8MPa ，
工作温度 > 450 ）的受热面管子、集箱、
省煤器、过热器、再热器等。

常用材质和牌号

Standard

GB5310-2008 GB9948-2006 GB6479-2000 ASTM/
ASME A/SA213 ASTM/ASME A/SA335 EN10216-2
ASTM/ASME A/SA312

Application

Heating-pipelines, containers, coal-saving devices
superheaters and reheaters of high temperature and
high pressure boiler ($P \geq 9.8\text{MPa}$, $T > 450^{\circ}\text{C}$)

Main steel material and grade



化学成分 Chemical composition

钢类	序号	钢号	化学成分 Chemical composition , %								
			C	Si	Mn	P _s	S _s	Cr	Mo	其它	
优质碳素结构钢	1	20G (A106A)	0.17/ 0.23	0.17/ 0.37	0.35/ 0.65	0.025	0.015	-	-	-	
	2	20MnG (A106B)	0.17/ 0.23	0.17/ 0.37	0.70/ 1.00	0.025	0.015	-	-	-	
	3	25MnG (A106C)	0.22/ 0.27	0.17/ 0.37	0.70/ 1.00	0.025	0.015	-	-	-	
合金结构钢	4	15MoG (16Mo3)	0.12/ 0.20	0.17/ 0.37	0.40/ 0.80	0.025	0.015	-	0.25/ 0.35	-	
	5	20MoG	0.15/ 0.25	0.17/ 0.37	0.40/ 0.80	0.025	0.015	-	0.44/ 0.65	-	
	6	12CrMoG	0.08/ 0.15	0.17/ 0.37	0.40/ 0.70	0.025	0.015	0.40/ 0.70	0.40/ 0.55	-	
	7	15CrMoG (13CrMo44) (T12/P12)	0.12/ 0.18	0.17/ 0.37	0.40/ 0.70	0.025	0.015	0.80/ 1.10	0.40/ 0.55	-	
	8	14Cr1MoG (T11/P11)	0.05/ 0.15	0.50/ 1.00	0.30/ 0.60	0.025	0.015	1.00/ 1.50	0.45/ 0.65	-	
	9	12Cr2MoG (10CrMo910) (T22/P22)	0.08/ 0.15	0.50	0.40/ 0.60	0.025	0.015	2.00/ 2.50	0.90/ 1.13	-	
	10	12Cr1MoVG	0.08/ 0.15	0.17/ 0.37	0.40/ 0.70	0.025	0.010	0.90/ 1.20	0.25/ 0.35	V 0.15/0.30	
	11	1Cr5Mo (T5/P5)	0.15	0.50	0.30/ 0.60	0.025	0.015	4.00/ 6.00	0.44/ 0.65	-	
	12	1Cr9Mo1 (T9/P9)	0.15	0.50/ 1.00	0.30/ 0.60	0.025	0.015	8.00/ 10.00	0.90/ 1.10	-	
	13	12Cr2MoWVTiB (R102)	0.08/ 0.15	0.45/ 0.75	0.45/ 0.65	0.025	0.015	1.60/ 2.10	0.50/ 0.65	V 0.28/0.42 Ti 0.08/0.18 B 0.002/0.008 W 0.30/0.55	
	14	07Cr2MoW2VNbB (T23/P23)	0.04/ 0.10	0.50	0.10/ 0.60	0.025	0.10	1.90/ 2.60	0.05/ 0.30	V 0.20/0.30 Al 0.030 B 0.0005/0.006 W 1.45/1.75 Nb 0.02/0.08 N 0.030	
	15	15NiCuMoNb5 (WB36)	0.17	0.25/ 0.50	0.80/ 1.20	0.025	0.015	-	0.25/ 0.50	Ni 1.00/1.30 Al 0.050 Cu 0.50/0.80 Nb 0.015/0.045 N 0.020	
	16	10Cr9Mo1VNbN (T91/P91)	0.08/ 0.12	0.20/ 0.50	0.30/ 0.60	0.020	0.010	8.00/ 9.50	0.85/ 1.05	V 0.18/0.25 N 0.030/0.070 Ni 0.040 Al 0.040 Nb 0.06/0.10	
	17	10Cr9MoW2VNbBN (T92/P92)	0.07/ 0.13	0.50	0.30/ 0.60	0.020	0.010	8.50/ 9.50	0.30/ 0.60	V 0.15/0.25 Al 0.020 Ni 0.040 B 0.001/0.006 W 1.50/2.00 Nb 0.04/0.09 N 0.030/0.070	
不锈钢耐热钢	奥氏体型	18	1Cr18Ni9 (TP304H)	0.15	1.00	2.00	0.035	0.030	170/ 19.0	-	Ni 8.00/11.0
		19	0Cr18Ni11Nb (TP347H)	0.08	1.00	2.00	0.035	0.030	18.0/ 20.0	-	Ni 8.00/11.0 Nb
		20	0Cr25Ni20 (TP310S/310H)	0.08	1.00	2.00	0.035	0.030	24.0/ 26.0	0.75	Ni 19.0/22.0
		21	00Cr17Ni14Mo2 (TP316L)	0.030	1.00	2.00	0.035	0.030	16.0/ 18.0	2.00/ 3.00	Ni 10.0/15.0
		22	0Cr18Ni10Ti (TP321H)	0.08	1.00	2.00	0.035	0.030	17.0/ 20.0	-	Ni 9.0/13.0 Ti 5C%
		23	00Cr19Ni13Mo3 (TP317L)	0.030	1.00	2.00	0.035	0.030	18.0/ 20.0	3.00/ 4.00	Ni 11.0/15.0
	马氏体型	24	1Cr13 (TP410/410S)	0.15	1.00	1.00	0.035	0.030	11.5/ 13.5	-	-
		25	2Cr13 (TP420)	0.16/ 0.25	1.00	1.00	0.035	0.030	12.00/ 14.00	-	-
	奥氏体铁素体型	26	0Cr26Ni5Mo2	0.08	1.00	1.50	0.035	0.030	23/ 28	1.00/ 3.00	Ni 3.00/6.00
27		00Cr25Ni7Mo4N (SAF2507)	0.030	0.80	1.20	0.035	0.020	24.0/ 26.0	3.00/ 5.00	Ni 6.00/8.00 N 0.24/0.32	
28		00Cr22Ni5Mo3N (SAF2205)	0.030	1.00	2.00	0.030	0.020	21.0/ 23.0	2.50/ 3.50	Ni 4.50/6.50 N 0.08/0.20	
29		00Cr23Ni4MoCuN (SAF2304)	0.030	1.00	2.50	0.030	0.020	21.5/ 24.5	0.05/ 0.60	Ni 3.00/5.50 N 0.05/0.20 Cu 0.05/0.60	

高温、高压用无缝钢管

Seamless steel pipes for high temperature and pressure-service

机械性能 Mechanical properties

序号	牌号	拉伸性能				冲击功 (AKV), J		硬度		
		抗拉强度 Rm MPa	下屈服强度或规定非比例延伸强度 ReL或Rp0.2 MPa	断后伸长率 (A) %		纵向	横向	布氏	维氏	洛氏
				纵向	横向			HBW	HV	HRC
		不小于				不大于				
1	20G	410 ~ 550	245	24	22	40	27	-	-	-
2	20MnG	415~560	240	22	20	40	27	-	-	-
3	25MnG	485~640	275	20	18	40	27	-	-	-
4	15CrMoG	440 ~ 640	295	21	19	40	27	170	180	88HRB
5	14Cr1MoG	415 ~ 585	205	21	19	40	27	170	180	88HRB
6	12Cr2MoG	450 ~ 600	280	22	20	40	27	163	170	85HRB
7	12Cr1MoVG	470 ~ 640	255	21	19	40	27	-	-	-
8	1Cr5Mo	415 ~ 585	205	22	20	40	27	179	190	89HRB
9	1Cr9Mo1	415 ~ 585	205	20	18	40	27	179	190	89HRB
10	12Cr2MoWVTiB	540 ~ 735	345	18		40	27	-	-	-
11	07Cr2MoW2VNbB	510	400	22	18	40	27	220	230	97HRB
12	15NiCuMoNb5	620 ~ 780	440	19	17	40	27	-	-	-
13	10Cr9Mo1VNb	585	415	20	16	40	27	250	265	25HRC
14	10Cr9MoW2VNbBN	620	440	20	16	40	27	250	265	25HRC
15	TP304H	520	205	35	-	-	-	-	-	-
16	TP347H	520	205	35	-	-	-	-	-	-
17	TP310S	520	205	40	-	-	-	-	-	-
18	TP316L	480	175	35	-	-	-	-	-	-
19	TP321H	520	205	35	-	-	-	-	-	-
20	TP317L	480	175	35	-	-	-	-	-	-
21	TP410	415	215	20	-	-	-	-	-	-
22	TP420	415	240	20	-	-	-	-	-	-
23	0Cr26Ni5Mo2	590	390	18	-	-	-	-	-	-
24	SAF2507	800	550	15	-	-	-	-	300	32HRC
25	SAF2205	620	450	25	-	-	-	-	290	30HRC
26	SAF2304	690	450	25	-	-	-	-	290	30HRC

典型应用 Typical applications

钢类	序号	钢号	相关标准	性能特点	应用
优质碳素结构钢	1	20G	GB5310 - 2008	该钢具有良好的工艺性能,在530 以下具有满意的抗氧化性能,但在470 -480 高温长期运行过程中,会发生珠光体球化和石墨化。	壁温 425 的蒸汽管道、集箱;壁温 450 的受热面管子及省煤器管等。
合金结构钢	2	15MoG	GB5310 - 2008	成分最简单的低合金热强钢,其热强性和腐蚀稳定性优于碳素钢,而工艺性能仍与碳素钢大致相同。存在的主要问题是,该钢在500 -550 长期运行时会产生珠光体化和石墨化倾向,随其发展会导致钢的蠕变强度和持久强度降低,甚至会导致钢管的脆性断裂。焊接性能良好,焊前需预热,焊后需热处理。	壁温 500 的蒸汽管道、壁温 530 的过热器管等。
	3	12CrMoG	GB5310-2008	属低合金耐热钢,在480 -540 下具有足够的热强性和组织稳定性,综合性能良好,无热脆现象。	壁温 510 的蒸汽管道、壁温 540 的受热面管。
	4	15CrMoG (T12/P12) (13CrMo44)	GB5310 - 2008 ASTM A213/A335 EN10216-2	该钢正火后的组织为铁素体、贝氏体和部分马氏体,回火后的组织为铁素体、贝氏体和回火马氏体,其冷加工性能和焊接性能良好,无石墨化倾向。在520 以下具有较高的持久强度和良好的抗氧化性能,但超过550 以后,蠕变极限将显著降低。长期在550 -550 运行,会发生珠光体球化,使强度下降。	壁温 510 的蒸汽管道、集箱;壁温 540 的受热面管子。
	5	12Cr2MoG (T22/P22)	GB5310 - 2008 ASTM A213/A335	该钢正火后的组织为贝氏体加少量的马氏体,有时会有少量的铁素体。长期在高温下运行,会出现碳化物从铁素体基体中析出并聚集长大。500 的蠕变实验结果表明,在蠕变第一阶段结束时,总伸长率约为0.2%;550 及其以上温度,总伸长率约为1% - 2%;钢的持久塑性较好。	壁温 570 的蒸汽管道、集箱;壁温 580 的过热器、再热器管。
	6	12Cr1MoVG	GB5310 - 2008	该钢属珠光体热强钢。由于钢中加入了少量的钒,可以降低合金元素(如钼、铬)由铁素体向碳化物中转移的速度,弥散分布的钒的碳化物可以强化铁素体基体。该钢在580 时仍具有高的热强性和抗氧化性能,并具有高的持久塑性。工艺性能和焊接性能较好,但对热处理规范的敏感性较大,常出现冲击韧性不均匀现象。在500 - 700 回火时,具有回火脆性现象;长期在高温下运行,会出现珠光体球化以及合金元素向碳化物转移,使热强性能下降。	壁温 550 的蒸汽管道、集箱;壁温 570 的受热面管子。
	7	1Cr5Mo (T5/P5)	GB6479 - 2000 ASTM A213/A335	具有良好的抗氧化性、耐腐蚀性和组织稳定性。热强性较高,且工艺性能良好。	壁温为630 - 650 的再热器管。
	8	1Cr9Mo1 (T9/P9)	ASTM A213/A335	属马氏体型耐热钢。由于钢中含铬量较高,因此抗氧化和抗腐蚀性优于低合金钢,但钢的热强性能低于2.25Cr - 1Mo、12Cr1MoV钢等。焊接性能差,且有空淬现象。	壁温 650 的再热器管。
	9	12Cr2MoWVTiB (R102)	GB5310 - 2008	属贝氏体低合金热强钢。经正火、回火处理后的组织为贝氏体,具有良好的综合力学性能、工艺性能和相当高的持久强度,抗氧化性能较好;组织稳定性好,在620 5000h 运行后,力学性能无明显变化。常用于代替高合金奥氏体铬镍钢。	壁温 600 的过热器、再热器管。
	10	10Cr9Mo1VNb (T91/P91)	GB5310 - 2008 ASTM A213/A335	是美国在9Cr - 1Mo钢基础上添加微量V、Nb,调质Si、Ni和Al添加量后形成的超9Cr钢。该钢高温强度优异,在550 以上,其设计许用应力为T9和2.25Cr - 1Mo钢的两倍。与1Cr19Ni9钢相比,其等强性(持久强度)温度为625 ,抗氧化性和抗蒸汽腐蚀性能与9Cr - 1Mo钢相当。	用于亚临界、超临界锅炉壁温 625 的高温过热器、再热器管;壁温 600 高温集箱和蒸汽管道,也可作为核电热交换器以及石油裂化装置炉管。
	不锈钢耐热钢	11	0Cr18Ni9 (TP304H)	GB5310 - 2008 GB/T14976 - 2002 ASTM A213/A312	具有良好的弯管、焊接性能,耐腐蚀性,高的持久强度和组织稳定性,冷变形能力非常好。使用温度可达650 ,抗氧化温度最高可达850 。
12		0Cr19Ni11Nb (TP347H)	GB5310 - 2008 GB/T14976 - 2002 ASTM A213/A312	是用铌稳定的奥氏体热强钢。具有良好的热强性及抗晶间腐蚀性能,焊接性能良好,在碱、海水和多种酸中都有很好的耐腐蚀性能。	用于大型锅炉过热器管、再热器管、蒸汽管道和石油化工的热交换器管。用于锅炉管中允许的抗氧化温度为750 。
13		0Cr25Ni20 (TP310S/310H)	GB/T14976 - 2002 ASTM A213/A312	高温性能优异,如有抗氧化要求可工作到1093 。当工况为高温时,在通用不锈钢中都是首选。由于含镍、铬较高,从而提高了抗循环氧化的能力,增强了抗硫化能力,更好的高温强度和良好的抗晶间腐蚀能力。	电力工业,冶金工业的各种电炉、锅炉、过热器和换热器管子,以及化工亚硫酸处理装置。
14		00Cr17Ni14Mo2 (316L)	GB/T14976 - 2002 ASTM A213/A312	超低碳奥氏体不锈钢。塑性、韧性及冷变形、焊接工艺性能均良好。由于含碳量低且含有2% - 3%的钼,显著提高了对还原性盐和种无机酸和有机酸、碱、盐类的耐腐蚀性能。同时高温强度和抗氧化性能也很好。	在石油、化工工业中广泛用作耐腐蚀的管道,例如尿素、维尼纶、制药等。锅炉、过热器、换热器管子。
15		0Cr18Ni10Ti (TP321H)	GB/T14976 - 2002 ASTM A213/A312	属用钛稳定的铬镍奥氏体不锈钢。与1Cr18Ni9Ti相比,由于含有较多的镍,因此,奥氏体组织更稳定,并具有高的热强性和持久断裂性能。	用作大型锅炉的再热器、过热器管及蒸汽管道。用于锅炉管的最高允许抗氧化温度为705 。
16		00Cr19Ni13Mo3 (317L)	GB/T14976 - 2002 ASTM A213/A312	低碳耐酸钢,其耐蚀性能优于316L。能耐硫酸、乙酸、蚁酸、柠檬酸。当工作介质为磷酸、氯化物、溴化物和碘化物时,具有抗点蚀的能力。	用于处理硫、纸浆、酸性染料、乙酸基和硝酸盐的混合物漂白液、煤和石油的烟尘等管道、锅炉过热器和换热器管子
17		1Cr13 (TP410/410S)	GB/T14976 - 2002 ASTM A268	良好的韧性、塑性和冷变形能力,在低于750 时抗氧化性能很稳定,可在-40 ~ 540 范围内长期使用。	制造抗水蒸气、碳酸铵液以及540 以下含硫石油腐蚀介质的管材。在化工工业中尚可替代18 - 8Ti 不锈钢用作一般耐腐蚀和高温下使用的管材。
18		2Cr13 (TP420)	GB/T14976 - 2002 ASTM A268 API 5CT L80	耐蚀性良好,在700 以下具有足够的强度、热稳定性和很好的减振性。	用于450 以下承受较高压力的管道、热裂装置和耐硫化氢腐蚀和应力腐蚀开裂的油井套管。
19		0Cr26Ni5Mo2	GB/T14976 - 2002	具有双相组织、抗氧化性、耐点蚀性好,高的强度。	热交换器及蒸发器管,化工用管。
20		00Cr22Ni5Mo3N (SAF2205)	GB/T21833 - 2008 ASTM A790	耐蚀性优越的双相不锈钢,在双相钢中应用最为广泛。	热交换器、蒸发器管,海洋工程、石油、化工用管。

低温用无缝钢管

Seamless steel tubes for low-temperature-service

标准

GB/T18984-2003
 ASTM/ASME A/SA333

Standard

GB/T18984-2003
 ASTM/ASME A/SA333

用途

用于低温压力容器管道

Application

Low-temperature pressure container piping

常用材质和牌号

Main steel material and grade

序号	钢号	化学成分 Chemical composition , %							
		C	Si	Mn	P,	S,	Ni	Mo	V
1	16MnDG	0.12/ 0.20	0.20/ 0.55	1.20/ 1.60	0.025	0.025	-	-	-
2	10MnDG	0.13	0.17/ 0.37	1.35	0.025	0.025	-	-	0.07
3	A333 Gr6	0.30	0.10	0.29/ 1.06	0.025	0.025	-	-	-
4	A333 Gr3	0.19	0.18/ 0.37	0.31/ 0.64	0.025	0.025	3.18/ 3.82	-	-

机械性能 Mechanical properties

序号	牌号或钢级 Grade	拉伸性能				纵向低温冲击功 (AKV), J			
		抗拉强度 Rm MPa	下屈服强度 或规定非比例 延伸强度 ReL或Rp0.2 MPa	断后伸长率 (A) %		10 × 10 × 55	10 × 7.5 × 55	10 × 5 × 55	试验温度
				纵向	横向				
不小于									
1	16MnDG	490 ~ 665	325	30	-	21	18	14	-45
2	10MnDG	400	240	35	-	21	18	14	-45
3	A333 Gr6	415	240	30	16.5	18	14	9	-45
4	A333 Gr3	450	240	30	20	18	14	9	-100

管线钢管

Line pipes

标准

GB/T9711-1999
 API 5L/ISO3183-2007

Standard

GB/T9711-1999
 API 5L/ISO3183-2007

用途

用于石油、天然气工业中的
 气、水、油的输送

Application

Conveying of gas, water and oil in petroleum and
 natural gas industries

常用材质和牌号

Main steel material and grade

化学成分 Chemical composition

产品等级PSL	钢级 Grade	C	Mn	P	S	V	Nb	Ti
PSL1	L245或B	0.28	1.20	0.030	0.030	-	-	-
	L290或X42	0.28	1.30	0.030	0.030	-	-	-
	L320或X46	0.28	1.40	0.030	0.030	-	-	-
	L360或X52	0.28	1.40	0.030	0.030	-	-	-
	L390或X56	0.28	1.40	0.030	0.030	-	-	-
	L415或X60	0.28	1.40	0.030	0.030	-	-	-
	L450或X65	0.28	1.40	0.030	0.030	-	-	-
	L485或X70	0.28	1.40	0.030	0.030	-	-	-
PSL2	L245N或BN	0.24	1.20	0.025	0.015	-	-	0.04
	L290N或X42N	0.24	1.30	0.025	0.015	0.06	0.05	0.04
	L320N或X46N	0.24	1.40	0.025	0.015	0.07	0.05	0.04
	L360N或X52N	0.24	1.40	0.025	0.015	0.10	0.05	0.04
	L390N或X56N	0.24	1.40	0.025	0.015	0.10	0.05	0.04
	L415N或X60N	0.24	1.40	0.025	0.015	0.10	0.05	0.04
	L450Q或X65Q	0.18	1.70	0.025	0.015	-	-	-
	L485Q或X70Q	0.18	1.80	0.025	0.015	-	-	-
	L555Q或X80Q	0.18	1.90	0.025	0.015	-	-	-

机械性能 Mechanical properties

产品等级PSL	钢级 Grade	最小屈服强度 Rt0.5 MPa (psi)	最小抗拉强度 Rm MPa (psi)	最大屈服比 Rt0.5/ Rm	标距长度为50mm (或 2in) 的最小伸长率 Amin (%)
PSL1	L245或B	245 (35500)	415 (60200)	-	API SPEC 5L
	L290或X42	290 (42100)	415 (60200)	-	
	L320或X46	320 (46400)	435 (63100)	-	
	L360或X52	360 (52200)	460 (66700)	-	
	L390或X56	390 (56600)	490 (71100)	-	
	L415或X60	415 (60200)	520 (75400)	-	
	L450或X65	450 (65300)	535 (77600)	-	
	L485或X70	485 (70300)	570 (82700)	-	
PSL2	L245N或BN	245 ~ 450 (35500 ~ 65300)	415 ~ 760 (60200 ~ 110200)	0.93	API SPEC 5L
	L290N或X42N	290 ~ 495 (42100 ~ 71800)	415 ~ 760 (60200 ~ 110200)	0.93	
	L320N或X46N	320 ~ 525 (46400 ~ 76100)	435 ~ 760 (63100 ~ 110200)	0.93	
	L360N或X52N	360 ~ 530 (52200 ~ 76900)	460 ~ 760 (66700 ~ 110200)	0.93	
	L390N或X56N	390 ~ 545 (56600 ~ 79000)	490 ~ 760 (71100 ~ 110200)	0.93	
	L415N或X60N	415 ~ 565 (60200 ~ 81900)	520 ~ 760 (75400 ~ 110200)	0.93	
	L450Q或X65Q	450 ~ 600 (65300 ~ 87000)	535 ~ 760 (77600 ~ 110200)	0.93	
	L485Q或X70Q	485 ~ 635 (70300 ~ 92100)	570 ~ 760 (82700 ~ 110200)	0.93	
	L555Q或X80Q	555 ~ 705 (80500 ~ 102300)	625 ~ 825 (90600 ~ 119700)	0.93	

一切从○开始 一切围绕客户

All start from pipes All focus on clients

用于酸性工况的管线钢管

Line pipes used in sour service environment

标准

GB/T9711.3
 API 5L/ISO3183-2007

Standard

GB/T9711.3
 API 5L/ISO3183-2007

用途

用于酸性环境下石油、天然气的输送

Application

For petrol and gas transportation under sour service environment

常用材质和牌号

Main steel material and grade

钢级 Steel grade	化学成分 Chemical composition , % max								Carbon equivalent % max	
	C	Si	Mn	P	S	V	Nb	Ti	CE _{IW}	CE _{Pcm}
L245NS or BNS	0.14	0.40	1.35	0.020	0.003	-	-	0.04	0.36	0.19
L290NS or X42NS	0.14	0.40	1.35	0.020	0.003	0.05	0.05	0.04	0.36	0.19
L320NS or X46NS	0.14	0.40	1.40	0.020	0.003	0.07	0.05	0.04	0.38	0.20
L360NS or X52NS	0.16	0.45	1.65	0.020	0.003	0.10	0.05	0.04	0.43	0.22
L245QS or BQS	0.14	0.40	1.35	0.020	0.003	0.04	0.04	0.04	0.34	0.19
L290QS or X42QS	0.14	0.40	1.35	0.020	0.003	0.04	0.04	0.04	0.34	0.19
L320QS or X46QS	0.15	0.45	1.40	0.020	0.003	0.05	0.05	0.04	0.36	0.20
L360QS or X52QS	0.16	0.45	1.65	0.020	0.003	0.07	0.05	0.04	0.39	0.20
L390QS or X56QS	0.16	0.45	1.65	0.020	0.003	0.07	0.05	0.04	0.40	0.21
L415QS or X60QS	0.16	0.45	1.65	0.020	0.003	0.08	0.05	0.04	0.41	0.22
L450QS or X65QS	0.16	0.45	1.65	0.020	0.003	0.09	0.05	0.06	0.42	0.22
L485QS or X70QS	0.16	0.45	1.65	0.020	0.003	0.09	0.05	0.06	0.42	0.22

1. For each reduction of 0.01% below the specified maximum for carbon, an increase of 0.05% above the specified maximum for manganese is permissible, up to a maximum increase of 0.20%.

2. Al_{total} 0.060% ; N 0.012% ; Al/N 2:1 (not applicable to titanium-killed or titanium-treated steel) ; Cu 0.35% (if agreed , Cu 0.10%) ; Ni 0.30% ; Cr 0.30% ; Mo 0.15% ; B 0.0005%.

3. The maximum limit for sulfur concentration may be increased to 0.008% for SMLS pipe and , if agreed , to 0.006% for welded pipe.

机械性能 Mechanical properties

Pipe steel; grade	Requirements for the results of tensile tests					
	Yield strength $R_{10.5}$ Mpa(ksi)		Tensile strength R_m Mpa(ksi)		Ratio $R_{10.5}/R_m$	Elongation A %
	minimum	maximum	minimum	maximum	maximum	minimum
L245NS or BNS L245QS or BQS	245 (35 500)	450 (65 300)	415 (60 200)	760 (110 200)	0.93	API SPEC 5L
L290NS or X42NS L290QS or X42QS	290 (42 100)	495 (71 800)	415 (60 200)	760 (110 200)	0.93	API SPEC 5L
L320NS or X46NS L320QS or X46QS	320 (46 400)	525 (76 100)	435 (63 100)	760 (110 200)	0.93	API SPEC 5L
L360NS or X52NS L360QS or X52QS	360 (52 200)	530 (76 900)	460 (66 700)	760 (110 200)	0.93	API SPEC 5L
L390QS or X56QS	390 (56 600)	545 (79 000)	490 (66 700)	760 (110 200)	0.93	API SPEC 5L
L415QS or X60QS	415 (60 200)	565 (81 900)	520 (75 400)	760 (110 200)	0.93	API SPEC 5L
L450QS or X65QS	450 (65 300)	600 (87 000)	535 (77 600)	760 (110 200)	0.93	API SPEC 5L
L485QS or X70QS	485 (70 300)	635 (92 100)	570 (82 700)	760 (110 200)	0.93	API SPEC 5L

硬度 Hardness

	内表inside	外表outside
HRC	22	26
HV	250HV10	275HV10

尺寸公差 Tolerances of dimensions

标准 Standard	外径公差 OD Tolerance		壁厚公差 W T Tolerances	
	管体Pipe body	管端Pipe end		
GB/T9711.3 API SPEC 5L	$\pm 0.5\text{mm}$ 或 $\pm 0.75\%D$ (取较大值)	$\pm 0.5\text{mm}$ 或 $\pm 0.5\%D$ (取较大者)	T 4mm +0.6mm -0.5mm	4mm T 25mm +15%、-12.5%

油套管

Tubing and casing

标准

API Spec 5CT
 ISO 11960

Standard

API Spec 5CT
 ISO 11960

用途

石油天然气工业

Application

Oil and Gas Industry

常用材质和牌号

Main steel material and grade

化学成分 Chemical composition

组别	钢级	类型	碳		锰		钼		铬		镍 max	铜 max	磷 max	硫 max	硅 max
			Min	Max	Min	Max	Min	Max	Min	Max					
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	H40	-	-	-	-	-	-	-	-	-	-	-	0.030	0.030	-
	J55	-	-	-	-	-	-	-	-	-	-	-	0.030	0.030	-
	K55	-	-	-	-	-	-	-	-	-	-	-	0.030	0.030	-
	N80	1	-	-	-	-	-	-	-	-	-	-	0.030	0.030	-
	N80	Q	-	-	-	-	-	-	-	-	-	-	0.030	0.030	-
2	M65	-	-	-	-	-	-	-	-	-	-	-	0.030	0.030	-
	L80	1	-	0.43a	-	1.90	-	-	-	-	0.25	0.35	0.030	0.030	0.45
	L80	9Cr	-	0.15	0.30	0.60	0.90	1.10	8.00	10.0	0.50	0.25	0.020	0.010	1.00
	L80	13Cr	-	0.22	0.25	1.00	-	-	12.0	14.0	0.50	0.25	0.020	0.010	1.00
	C90	1	-	0.35	-	1.20	0.25b	0.85	-	1.50	0.99	-	0.020	0.010	-
	C90	2	-	0.50	-	1.90	-	NL	-	NL	0.99	-	0.030	0.010	-
	C95	-	-	0.45c	-	1.90	-	-	-	-	-	-	0.030	0.030	0.45
	T95	1	-	0.35	-	1.20	0.25d	0.85	0.40	1.50	0.99	-	0.020	0.010	-
	T95	2	-	0.50	-	1.90	-	-	-	-	0.99	-	0.030	0.010	-
3	P110	e	-	-	-	-	-	-	-	-	-	-	0.030e	0.030e	-

组别	钢级	类型	碳		锰		钼		铬		镍 max	铜 max	磷 max	硫 max	硅 max
			Min	Max	Min	Max	Min	Max	Min	Max					
4	Q125	1	-	0.35	-	1.35	-	0.85	-	1.50	0.99	-	0.020	0.010	-
	Q125	2	-	0.35	-	1.00	-	NL	-	NL	0.99	-	0.020	0.020	-
	Q125	3	-	0.50	-	1.90	-	NL	-	NL	0.99	-	0.030	0.010	-
	Q125	4	-	0.50	-	1.90	-	NL	-	NL	0.99	-	0.030	0.020	-

a 若产品采用油淬, 则L80 钢级的碳含量上限可增加到0.50%。
b 若壁厚小于17.78mm, 则C90 钢级1 类的钼含量无下限规定。
c 若产品采用油淬, 则C95 钢级的碳含量上限可增加到0.55%。
d 若壁厚小于17.78mm, 则T95 钢级1 类的钼含量下限可减少到0.15%。
e 对于P110 钢级的电焊管, 磷的含量最大值是0.020%; 硫的含量最大值是0.010%。
NL——不限制, 但所示元素含量在产品分析时应报告。

机械性能 Mechanical properties

组别	钢级	类型	加载下的 总伸长率 %	屈服强度 MPa		抗拉强度 min MPa	硬度 ^a max		规定壁厚 mm	允许硬度 变化 ^b HRC
				Min	Max		Min	Max		
1	2	3	4	5	6	7	8	9	10	11
1	H40	-	0.5	276	552	414	-	-	-	-
	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	M65	-	0.5	448	586	586	22	235	-	-
	L80	-	0.5	552	655	655	23	241	-	-
	L80	9Cr	0.5	552	655	655	23	241	-	-
	L80	13Cr	0.5	552	655	655	23	241	-	-
	C90	1、2	0.5	621	724	689	25.4	255	12.70	3.0
	C90	1、2	0.5	621	724/724	689	25.4	255	12.71 ~ 19.04	4.0
	C90	1、2	0.5	621	724	689	25.4	255	19.05 ~ 25.39	5.0
	C90	1、2	0.5	621	724	689	25.4	255	25.40	6.0
	C95	-	0.5	655	758	724	-	-	-	-
	T95	1、2	0.5	655	758	724	25.4	255	12.70	3.0
	T95	1、2	0.5	655	758	724	25.4	255	12.71 ~ 19.04	4.0
	T95	1、2	0.5	655	758	724	25.4	255	19.05 ~ 25.39	5.0
	T95	1、2	0.5	655	758	724	25.4	255	25.40	6.0
3	P110	-	0.6	758	965	862	-	-	-	-
4	Q125	1-4	0.65	862	1034	931	b	-	12.70	3.0
	Q125	1-4	0.65	862	1034	931	b	-	12.71 ~ 19.04	4.0
	Q125	1-4	0.65	862	1034	931	b	-	19.05	5.0

a 若有争议时, 应采用试验室的洛氏硬度作为仲裁方法。
b 未规定硬度极限, 但按7.8 和7.9 规定限制最大变化量可作为生产控制。

船舶用碳钢和碳锰钢无缝钢管

Carbon steel and carbon manganese steel seamless pipes for shipbuilding

标准
 GB/T5312-2009

Standard
 GB/T5312-2009

用途
 用于船舶锅炉及过热器用I、II
 级耐压管等

Application
 Boiler and Superheater for the ship I, II level
 pressure tubes

常用材质和牌号

Main steel material and grade

化学成分 Chemical composition

钢种	钢级	脱氧方法	化学成分		Mn	S	P	残余元素				
			C	Si				Cr	Mo	Ni	Cu	总量
			不大于					不大于		不大于		
碳钢和 碳锰钢	320	镇静	0.16	0.35	0.40~0.70	0.020	0.025	0.25	0.10	0.30	0.30	0.70
	360		0.17	0.35	0.40~0.80							
	410		0.21	0.35	0.40~1.20							
	460		0.22	0.35	0.80~1.20							
	490		0.23	0.35	0.80~1.50							

机械性能 Mechanical properties

钢级	抗拉强度 σ_b MPa	屈服点 σ_s , MPa	伸长率 δ_5 , %	扩口率和卷边率, %		
				内径/外径		
				不小于	≤ 0.6	$> 0.6 \sim 0.8$
320	320~440	195	25	12	15	19
360	360~480	215	24	12	15	19
410	410~530	235	22	10	12	17
460	460~580	265	21	8	10	15
460	490~610	285	21	8	10	15

精密无缝钢管

Seamless precision steel tubes

标准

GB/T3639-2009
DIN2391
EN10305-1

Standard

GB/T3639-2009
DIN2391
EN10305-1

用途

汽车、油缸等精密机械配件

Application

Precision mechanical sparements for car and cylinder

常用材质和牌号

Main steel material and grade

化学成分 Chemical composition

序号 Item	钢级 Grade	化学成分 Chemical composition , %				
		C max	Si max	Mn	P max	S max
St35/E235	1.0308	0.17	0.35	0.40	0.025	0.025
St45	1.0408	0.21	0.35	0.40	0.025	0.025
St52/E355	1.0580	0.22	0.55	1.60	0.025	0.025

The following alloying elements may be added: Nb 0.03%;Ti 0.03%;V 0.05%;Nb+Ti+V 0.05%.

机械性能 Mechanical properties

钢种		交货状态的最小值 ^{a, b}											
序号	钢级	Cold finished (hard) (BK)		Cold finished (soft) (BKW)		Cold finished and stress-relieved (BKS)			Annealed (GBK)		Normalized(NBK)		
		R _m MPa	A %	R _m MPa	A %	R _m MPa	R _{eH} MPa	A %	R _m MPa	A %	R _m MPa	R _{eH}	A %
1	St35/E235	480	6	420	10	420	315	14	315	25	340~470	235	25
2	St45	580	5	520	8	520	375	12	390	21	440~570	255	21
3	St52/E355	640	4	580	7	580	450 ^f	10	450	22	490~630	355	22

机械用无缝钢管

Seamless carbon and alloy steel mechanical tubing

标准
ASTM A519

Standard
ASTM A519

用途
油缸、机械结构等机械配件

Application
Mechanical sparements for cylinder and struction

常用材质和牌号

Main steel material and grade

化学成分 Chemical composition

钢级 Grade	化学成分 Chemical composition , %						
	C	Mn	Si	P	S	Cr	Mo
1010	0.08-0.13	0.30-0.60	-	0.04	0.05	-	-
1020	0.18-0.23	0.30-0.60	-	0.04	0.05	-	-
1045	0.43-0.50	0.60-0.90	-	0.04	0.05	-	-
4130	0.28-0.33	0.40-0.60	0.15-0.35	0.04	0.04	0.80-1.10	0.15-0.25

机械性能 Mechanical properties

钢级 Grade	Condition	Tensile Strength		Yield Strength		Elongation , %
		ksi	MPa	ksi	MPa	
1020	HR	50	345	32	221	25
	CW	70	483	60	414	5
	SR	65	448	50	345	10
	A	48	331	28	193	30
	N	55	379	34	234	22
1045	HR	75	517	45	310	15
	CW	90	621	80	552	5
	SR	80	552	70	483	8
	A	65	448	35	241	20
	N	75	517	48	331	15
4130	HR	90	621	70	483	20
	SR	105	724	85	586	10
	A	75	517	55	379	30
	N	90	621	60	414	20

应用领域
Application fields



华友质保体系

HUAYOU quality assurance system

公司制定了完善的质量管理制度，确定了合理的质量控制流程和严格的质量规范，配置了完整先进的生产和检测装备，建立了专业敬业的质量管理团队。公司质量活动贯穿于产品的各个过程，确保产品满足用户的要求。

Our company makes a perfect quality management system, which confirm the reasonable quality control process and strict quality standard. We deploy complete and advanced equipments for manufacturing and inspecting, and we build a quality-control team full of professional ability and dedicated attitude.

制造质量保证

Manufacture Quality Assurance



销售质量保证

Sales Quality Assurance



检测设备 Inspection equipment



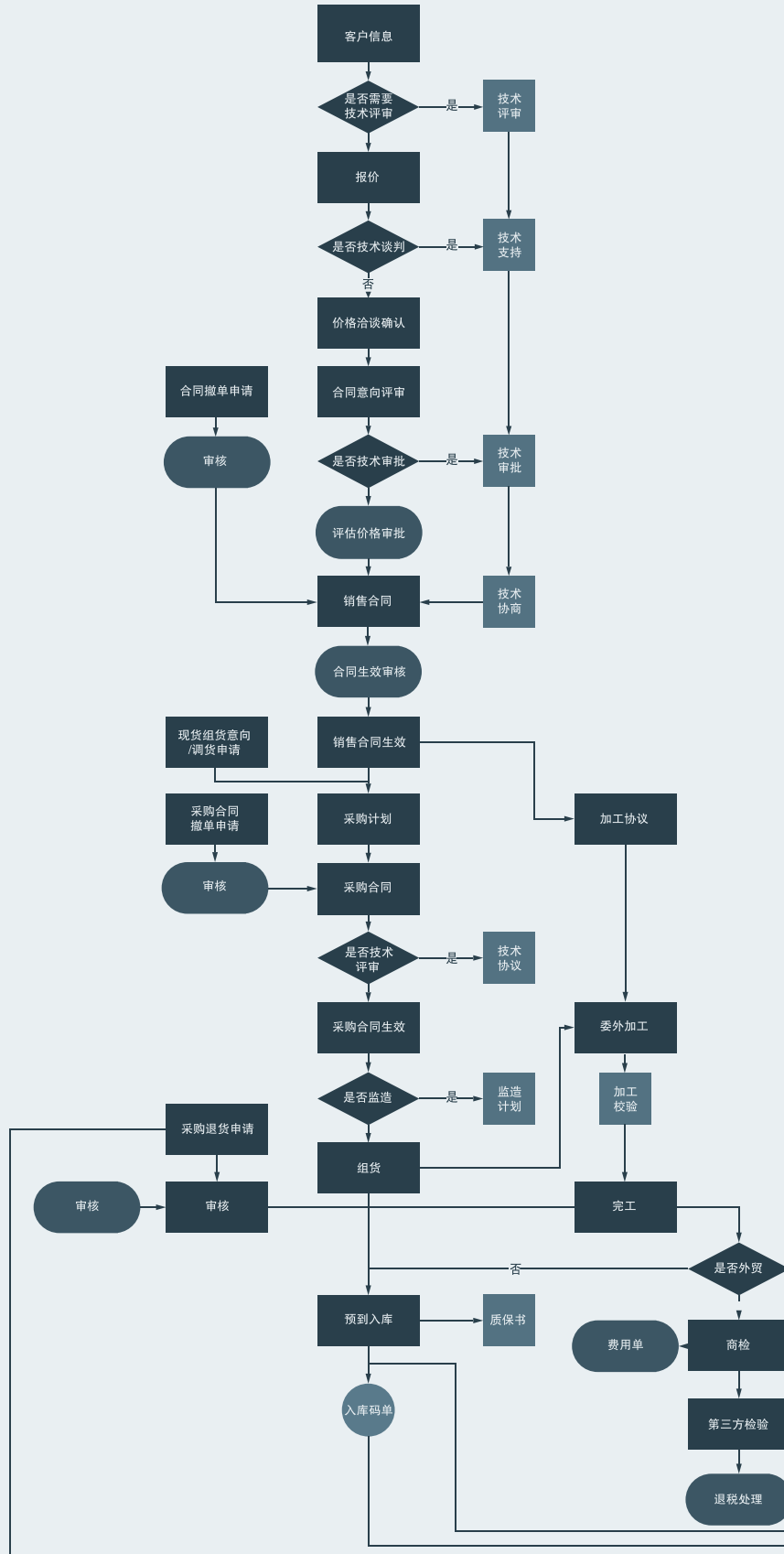
1	2	3
4	5	
6		7
8	9	10

- 1.低温槽 Low-Temperature Groove
- 2.冲击试验机 Impact Testing Machine
- 3.拉伸试验机 (100吨) Tensile Machine(100 MT)
- 4.直读光谱仪 (立式) Direct Reading Spectrometer (Vertical)
- 5.拉伸试验机 (60吨) Tensile Machine(60 MT)
- 6.直读光谱仪 (台式) Direct Reading Spectrometer (Table-top)
- 7.硬度计 Hardness Testing machine
- 8.金相显微镜 Metaloscope
- 9.拉伸试验机 Tensile Machine
- 10.金相显微镜 Metaloscope

品质保证
 Quality Assurance





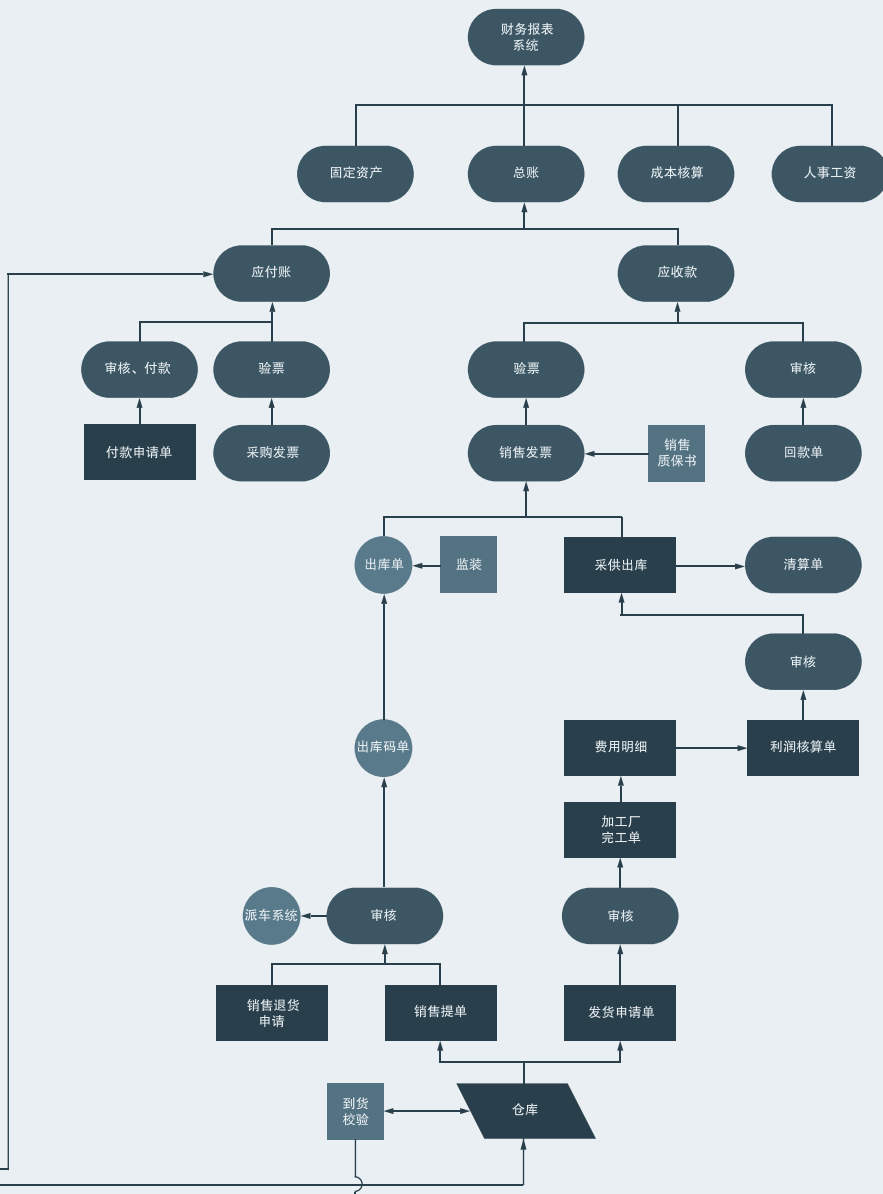


ERP信息化系统

特点：提高生产组织水平；建立标准成本体系；改善设备运行性能，降低设备事故、故障时间，提高产品质量；优化采购过程，提高采购效率，降低采购成本；压缩库存，降低成本，加快资金周转，减少财务收支差错；保障生产能力最大化，体系成本最小化；真正实现按用户需求、计划和控制进行设计和生产；合同的在线质量评审技术；自动的合同处理技术；产品质量判定的自动处理技术；实时动态的合同进程及合同状态跟踪；完备的价格体系设计技术；各类动静态全过程数据为一体的规范、透明的完整闭环反馈系统；充分体现企业的物流、业务流、资金流、信息流、控制流有机集成的管理思想；优化管理模式，实现集中一贯的管理。

ERP information system

Characteristics: Promotion of Manufacturing Level; Establishment of Standard Cost System; Improvement of Properties for Equipments; Lowering Rates of Incidents and Fault Time; Improving Product Quality; Optimization of Purchasing Process; Increase of Purchase Efficiency; Compression of Stock; Acceleration of Capital Turnover; Acceleration of Cash Flow; Decrease of Financial Revenues and Expenditures Errors; Assurance of Manufacturing Capacity; Minimization of System Cost; Realization of Manufacturing and Providing Pipes in Accordance with Different Client's Requirements; Online Evaluation for Quality; Automatic Technique for Dealing with the Order; Integrated Closed Loop Feedback System for Various Static and Dynamic Data of the Whole Process; Completely Reflecting the Management Philosophy with Logistics, Traffic Flow, Capital Flow, Information Flow, Control Flow of our Enterprise. Optimizing the Management Model, and Achieving the Centralized Managements.



用户评价
 Client assessment



用户评价

Client assessment



走进工厂

A close look at the mill

无锡斯贝歇尔钢管制造有限公司，隶属无锡市华友特钢有限公司。拥有热轧、精轧、热扩三条生产线，生产外径6mm-914mm，壁厚1.5mm-70mm的各类无缝钢管。

斯贝生产各类碳钢、合金钢、有色金属、精密钢管，产品可广泛用于机械结构、能源、汽车、建筑、电力等领域。

斯贝拥有热处理炉，全套理化机械性能实验室，通过了ISO9001-2008质量管理体系认证，通过TSG特种设备制造许可证、美国API 5L、API 5CT、欧盟PED等国际认证，并取得了ABS、CCS、BV、LR等多国船级社认证。

斯贝保证了产品的高精度、壁厚宽范围，小批量多品种、快节奏特点，生产、销售处于国内先进水平，尤其在中厚壁合金无缝钢管的生产上处于国内领先，世界先进水平。产品在国内外享有声誉，为各种项目建设，发挥自己的特色制造能量。

Wuxi SP. Steel Tube Manufacturing Co., Ltd, a mill wholly owned by HUAYOU, has a stand team of 380 workers, with over 30 as technicians. It owns three lines—Hot-Rolled Line, Precision-Rolled Line, Hot-Expanded Line, with manufacturing sizes ranging from OD 6mm-914mm and WT 1.5mm-70mm. Our manufacturing annual capacity is 100,000 tons, and the sales amount reaches to six billion RMB.

Wuxi SP. Steel Tube Manufacturing Co., Ltd has a Heat treatment Furnace and a Lab equipped with full set of Chemical and Mechanical Properties. It has achieved many certificates like ISO9001-2008, TSG, API certificates, PED, ABS, CCS, BV, LR, etc.

Hot-rolled production line includes Rotary Heating Furnace, Two-roller Card Punch, ASSEL Three-roller Card Punch, Walking Beam Reheating Furnace, Twelve-frame and Three-roller Reducing Sizing Mill, Walking Beam Cooler, High Precision Two-Roller Flattening Machine, High-Efficiency Cutter, NDE Equipments and so on. We manufacture all kinds of hot-rolled and hot-expand seamless pipes from outside diameter 51 to 121mm, and the wall thickness from 5 to 30mm. Our main production includes carbon steel (alloy steel) mechanical pipes, tubing and casing, boiled tubes, line pipes and so on, which annual capacity reaches to 70,000 tons.

Cold-drawn producing line: LG-60-HI Ring groove cold rolling mill, which produce all kinds of carbon steel, alloy steel, nonferrous metal, precision pipes with OD 6mm~89mm, WT \leq 10mm, Length \leq 18M. These productions are used in hydraulic components, oil-well pump, mechanical project, petrochemical power station boiler equipments, which annual manufacturing capacity reaches to 5000 tons.

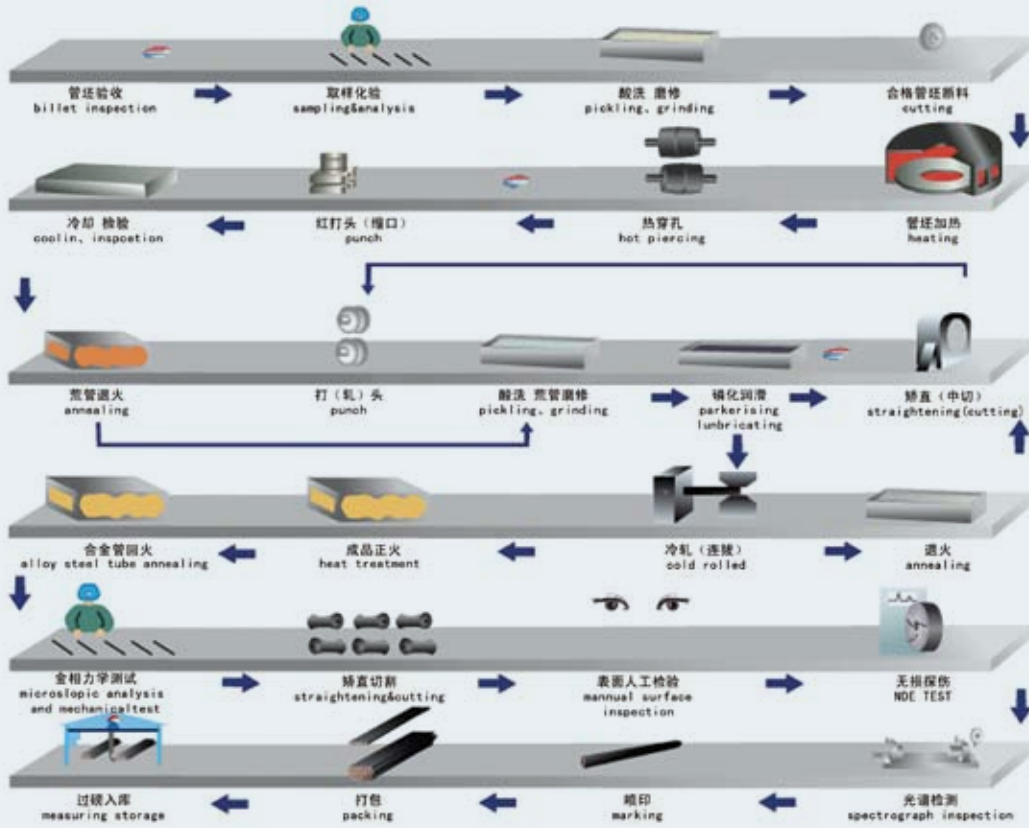
Hot-expansion producing line: this year we add 914 hot-expansion steel seamless producing line and its related NDE inspection equipments, which can produce OD 168mm-914mm, WT 4mm-70mm series steel seamless pipes. The annual manufacturing capacity reaches to 25,000 tons. Productions can be used in mechanical structure, resource, trucks, building, electricity and so on.

Wuxi SP. Steel Tube Manufacturing Co., Ltd has established a good reputation by providing pipes for foreign projects. It excels manufacturing précised and wide range of WT with small quantity and various kinds of material. Consequently, it has been achieving a leading position doe middle& thick WT alloy steel tubes.



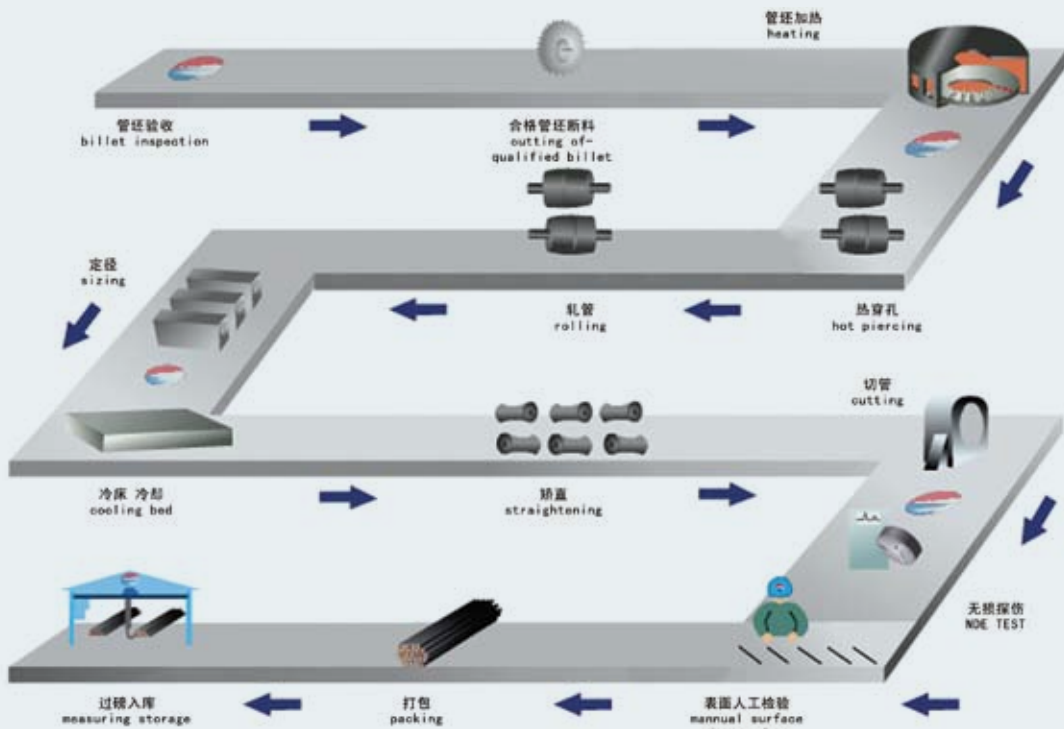
冷拔无缝钢管工艺流程

Cold-drawn seamless steel tubes and pipes process flow



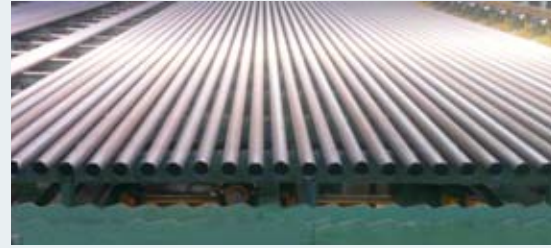
热轧无缝钢管工艺流程

Hot-rolled seamless steel tubes and pipes process flow

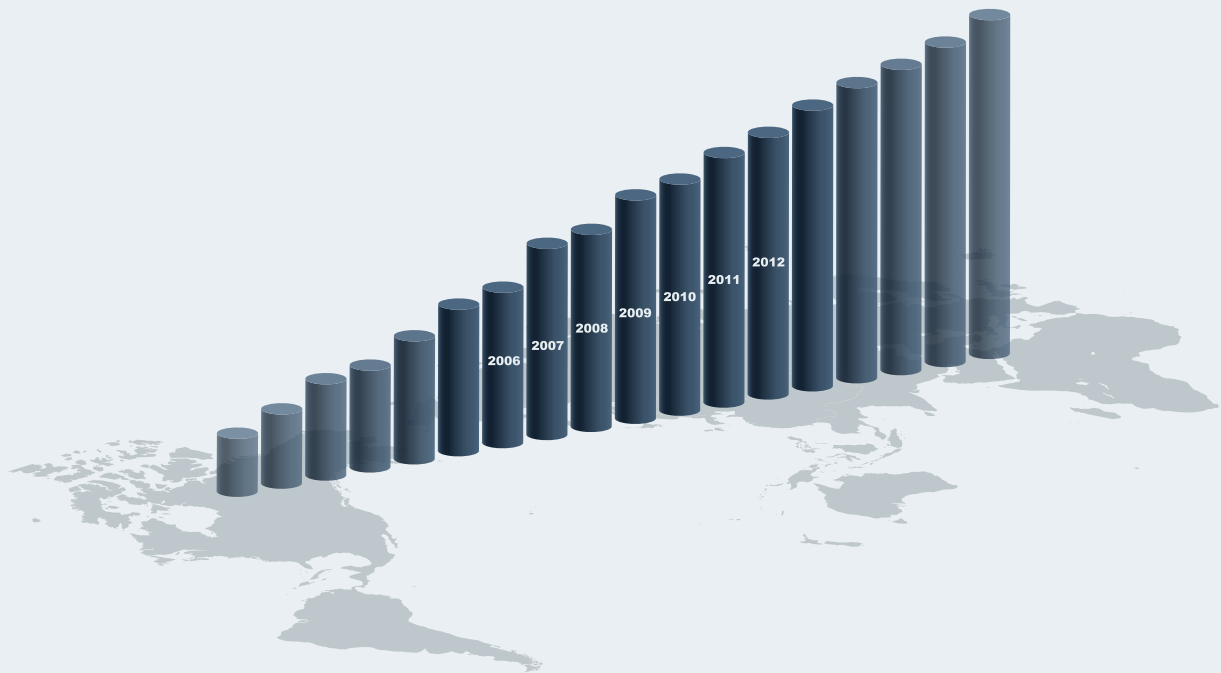




工厂实景
Spot View of the Mill



HUAYOU sales quantity exceeds 500 thousand tons in 2012



客户沟通渠道



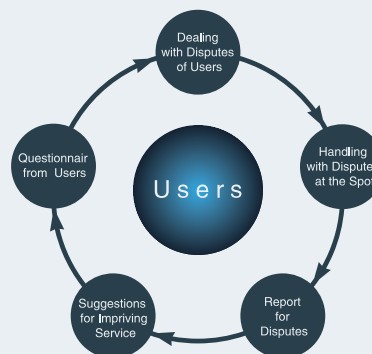
Communicating Channels with Clients



用户服务流程



Service Procedure of Users



业绩表 Achievements

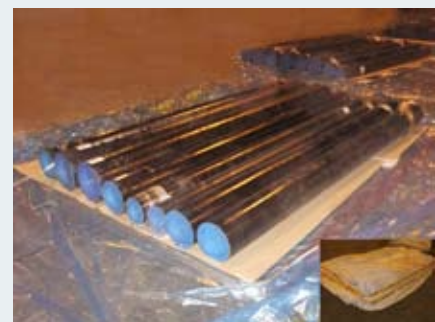
No	Company	Location	Grade	Utilization
1	SUPPLY COMPANY	U.S.A	API 5CT J55 K55 N80 Q80 API 5L Gr.B PSL2 3PP	PETROLEOS DEL ECUADOR NO.PPR.111722
2	INDIA OIL	INDIA	API 5L Gr.B,P22	OIL TUBE
3	EDGEN MURRY	ENGLAND	API 5L,PSL2 A333 Gr.6	OIL TUBE
4	OIL INDUSTRIOS ENGINEERING AND CONSTRUCTION (OIEC) AZAR PROJECT	IRAN	API 5CT N80 K55, P-110,Q125,L80	IRAN OIL PROJECT:AZAR
5	CITICOM COMMERCIAL JOINT STOCK COMPANY	VIETNAM	API 5CT, API 5L Gr.B,P22	OIL TUBE
6	SAMSUNG C&T CORPORATION	KOREA	API 5L Gr.B	BRAZIL NATIONAL ENGINEERING PROJECT
7	TONGDAO SPECIAL STEEL COMPANY	CHINA	ASTM A106 Gr.B,DIN17175 ST45-8	MARINE TUBE
8	HONGCHUAN STEEL	INDONESIA	API 5L	PETROCHEMICAL TUBE
9	SAN MU EQUIPMENT COMPANY	CHINA	GB3087	POLYURETHANE PROJECT TUBE
10	ZHEJIANG SOUTHEAST SPACE FRAME COMPANY	CHINA	20#,20G Q345B Q345C	BEIJING CAPITAL INTERNATIONAL AIRPORT AND OTHER PROJECTS
11	GRSS TUBE	CHINA	A333 Gr.6	BOILER TUBE
12	CHINA MCC17 GROUP CO. LTD	CHINA	20#,20G Q345B Q345C	AFGHANISTAN COOPER PIPELINE ENGINEERING
13	JIANGRUN TUBE	CHINA	GB/T8163 GB3087 GB5310	POWER PLANT TUBE
14	DAMGIX NIGERIA LTD	NIGERIA	API 5CT J55	OIL TUBE
15	TUBOS Y BARRAS HUECAS SA DE CV	MEXICO	API 5L Gr.B /X42 PSL 2	MEXICO OIL TUBE PROJECT
16	ANDA GROUP	CHINA	GB/T8163, GB/T8162	OIL TUBE
17	JIANG BAO STEEL TUBE CO., LTD	CHINA	API 5CT N80, P-110 20# GB/T8163-2008	OIL PIPELINE, OIL COLLAR
18	JIANGYIN JIEDA SHAPED TUBE CO.,LTD	CHINA	GB/T5312 410,320,360 GB/T8163,20,Q345	MARINE TUBE
19	JANGYAN STEEL PIPE	CANADA	API 5CT K55, J55, N80, L80, P110	OIL TUBE
20	BEELA STEEL TUBE	CHINA	37Mn5,N80-Q	OIL TUBE
21	WOPOS HOLDINGS	BRAZIL	API 5L GR.B, X42, P110,S135	OILFIELD TUBE
22	ZHONGNAN HEAVY INDUSTRIES CO.,LTD	CHINA	GB/T8163 GB3087	FITTING TUBE
23	DALIAN FUJIA OIL COMPANY	CHINA	GB5310 GB9948 GB6479 GB/T8163	XYIENE CHEMICAL PROJECTS
24	SU YANG TUBE COMPANY	CHINA	GB5310, API5L,Gr.B/C	SINOPEC FITTING SUPPORTING
25	CHINA ENERGY ENGINEERING GROUP CO., LTD	CHINA	P110,GB5310,P22,P91	POWER PLANT TUBE
26	SALZGITTER MANNESMANN	GERMANY	A106 Gr.B/C,A210,A213	PETROCHEMICAL SPECIAL PIPE



物流实景 Spot View of Logistics



1	2	3	
4	5	6	
7	8	9	10



- 1.管坯 Steel Billet
- 2.车队 Trucks for Transportation
- 3.3PP防腐管 3PP Coating Pipe
- 4.油套管 Oiling Casing Pipe
- 5.管线管 Line Pipe
- 6.港口吊装 Hanging Pipes at the Port
- 7.港口装船 Loading Pipes on Ship Vessel
- 8.钢管装箱 Loading Pipes into Containers
- 9.装箱效果 Overlook after Loading
- 10.空运包装 Package for Airline Transportation

国际贸易 International Trading



华友特钢积极开拓国内外市场

国内，电站锅炉、石油、石化、化工、机械等行业建立了稳定的营销渠道，市场份额不断扩大。

同时，成功实现了贸易层次的战略转型，服务面向全球，产品远销欧、美、非、中东、东南亚等国家和地区，不断深化华友国际化形象。

华友特钢专业专注于以用户需求为导向，为全世界用户提供标准化、个性化的服务。

Exploration of markets both home and abroad

In Domestic market, our share for trading is expanding step by step through the establishment as a regular supplier for Power Station, Petro-Chemical Industry, Mechanical Industry, etc.

At the meantime, HUAYOU succeeds the strategic transformation for trading part by establishing regular relationship with clients all over the world, including Europe, USA, Africa, Middle East, Southeast Asia, etc.

HUAYOU sticks to the conception of providing a standard as well as special service according to clients' different requirements.

