

目 录

CONTENT

公司简介.....	1
COMPANY PROFILE	
资质证书.....	2
QUALIFICATION CERTIFICATE	
设备清单及生产能力.....	3
EQUIPMENT LIST AND CAPACITY	
工艺流程.....	4
TECHNOLOGICAL PROCESS	
生产检验及品质保证.....	5
PRODUCTION TEST & QUALITY ASSURANCE	
产品.....	6
PRODUCTS	
产品技术参数.....	7
PRODUCTS TECHNICAL DATA	
生产钢种.....	8
LIST OF MATERIAL	
实验室设备.....	9
LABORATORY EQUIPMENT	

SECTION 1 公司简介 COMPANY PROFILE

公司注册地址为嘉兴市海盐县，位于我国极富开发价值的“黄金海岸带”杭州湾北侧，连接浙江嘉兴与宁波的杭州湾跨海大桥，交通十分便利，近邻上海、杭州、苏州、宁波，距四城市均在 100 公里左右。

The company registered address is Haiyan Jiaxing Zhejiang Province, which is located in China's most open Value "Gold Coast" , on the north side of Hangzhou Bay; connected with the world longest bridge --Hangzhou Bay Sea-Crossing Bridge. The largest highway hub is located here too. Ground traffic is very convenient, near to Shanghai, Hangzhou, Suzhou, Ningbo, distance from the above cities is all same about 100 kilometers.

公司专业生产冷轧冷拔高精度无缝不锈钢管。拥有一整套冷轧冷拔联合加工生产线，真空光亮退火炉、涡流探伤、外抛光、焊接、超声波、水压试验等先进工艺与设备。

Company specialized in the production of cold drawn precision seamless steel tube. Have a set of cold drawing combined processing production line, vacuum bright annealing furnace、eddy current testing、polishing、welding、ultrasonic、hydrostatic testing and other advanced technology and equipment.

主要生产：高精度小口径 $\leq 42\text{mm}$ 无缝焊接不锈钢 BA 直管（盘管）、AP 管、超长无缝不锈钢盘管等。具体执行标准：GB/T14976-2002、GB13296-91、ASTM A213、ASTM A269、ASTM A312、ASTM A270-03a 等。

Main products: high precision small diameter $\leq 42\text{mm}$ seamless welded stainless steel BA pipe (coil)、AP tube、long seamless stainless steel pipe. Specific executive standard: GB/T14976-2002, GB13296-91, ASTM A213, ASTM A269, ASTM A312, ASTM A270-03a etc..

月产 BA 无缝直管 100,000m

Monthly production of BA seamless tube: 100,000m

月产焊接油引拉直管 50,000m

Monthly production of oil drawing straight tube: 50,000m



SECTION 2 资质证书 QUALIFICATION CERTIFICATE

Haiyan Klean Tubing Co., Ltd.
West, North Xinqiao Road, Development Zone, Wuyuan,
Haiyan, Jiaxing City, Zhejiang Province 314300, P. R. China



Date 日期: 2012-08-31

Letter of Conformance to ISO/TS 16949:2009 ISO/TS 16949:2009 符合性证明

Dear Sirs,
尊敬的客户:

We are pleased to announce that your company has achieved compliance to the requirements of the Technical Specification, ISO/TS 16949:2009 – Third edition for following scope:

敝司高兴地宣布, 贵公司已通过审核, 证明满足了 ISO/TS 16949:2009 第三版的技术规格要求, 认证范围如下:

**Manufacturing of Stainless Steel Tube for Automobile
- without product design and development -**
汽车用不锈钢管的加工
-不含产品的设计和开发-

TÜV Rheinland conducted the certification audit in the company, during 18th – 20th June 2012. After the completion of follow-up actions on audit findings, the audit documentation has subsequently been reviewed and cleared by the certification office.

TÜV 德国莱茵公司在 2012 年 06 月 18 日至 20 日于贵司进行认证审核。审核结果的跟踪行动完成之后, 审核文档随后已被认证机构审查和清除。

A certificate to TS 16949:2009 cannot be issued at the moment as the site cannot yet demonstrate the required 12 months of performance data. According to the "Rules for achieving IATF recognition – Third Edition – 1 October 2008", as an interim measure, this "Letter of Conformance" is issued to certify, that, **Haiyan Klean Tubing Co., Ltd.** conform to the requirements of the Technical Specification, ISO/TS 16949:2009 – Third Edition. This letter is valid until 29 August 2013.

因贵司审核的场地暂未能符合运作绩效至少十二个月的要求, 现阶段未能获颁发证书。根据 "IATF 认可法则 - 第三版 - 2008 年 10 月 1 日" 的临时措施, 海盐县科琳钢管有限公司获发此符合性证明, 证明满足了 ISO/TS 16949:2009 第三版的技术规格要求。此证明函有效期至 2013 年 08 月 29 日。

Should you need any further information, please do not hesitate to contact us. We thank you for your support to TÜV Rheinland Group.

阁下若有进一步的查询, 欢迎与我们联系。我们感谢您对 TÜV 德国莱茵集团的支持。

祝 商祺!
Best regards,

TÜV CERT Certification Body of
TÜV Rheinland Cert GmbH



TÜV Rheinland (China) Ltd.
Unit 707, AVIC Bldg.,
No. 10B, Central Road,
East 3rd Ring Road,
Chaoyang District, Beijing,
100022, P. R. China
www.chn.tuv.com

莱茵检测认证服务(中国)有限公司
北京市朝阳区东三环中路
乙10号艾维克大厦707室
邮编 100022
www.chn.tuv.com

Tel: 86 10 6566 6660
Fax: 86 10 6566 6667
E-mail: info@bj.chn.tuv.com

电话: 86 10 6566 6660
传真: 86 10 6566 6667
E-mail: info@bj.chn.tuv.com

Certificate

Standard **ISO 9001:2008**

Certificate Registr. No. 01 100 126560

TÜV Rheinland Cert GmbH certifies:

Certificate Holder: **Haiyan Klean Tubing Co., Ltd.**
West, North Xinqiao Road, Development Zone, Wuyuan,
Haiyan, Jiaxing City, Zhejiang Province 314300, P. R. China

Scope: Manufacturing of Stainless Steel Tubes

An audit was performed, Report No. 126560. Proof has been
furnished that the requirements according to ISO 9001:2008
are fulfilled.
The due date for all future audits is 20-06 (dd.mm).

Validity: The certificate is valid from 2012-08-30 until 2015-08-29.

2012-08-30



TÜV Rheinland Cert GmbH
Am Grauen Stein · 51105 Köln



DGA-ZM-58-95-00

www.tuv.com

 **TÜVRheinland®**
Precisely Right.

认证证书

标准 **ISO 9001:2008**

证书登记号码 01 100 126560

TÜV Rheinland Cert GmbH 兹证明：

证书持有者：海盐县科琳钢管有限公司
中华人民共和国浙江省嘉兴市海盐县武原街道开发区新桥北路西侧
邮编：314300

认证范围：不锈钢管的加工

通过审核，审核报告号码为 126560。
证明满足了 ISO 9001:2008 标准的要求。

将来所有审核到期日为 20-06（日日/月月）

有效期：证书有效期从 2012-08-30 至 2015-08-29



2012-08-30

TÜV Rheinland Cert GmbH
Am Grauen Stein • 51105 Köln



DGA-ZM-58-95-00

www.tuv.com

 **TÜVRheinland®**
Precisely Right.

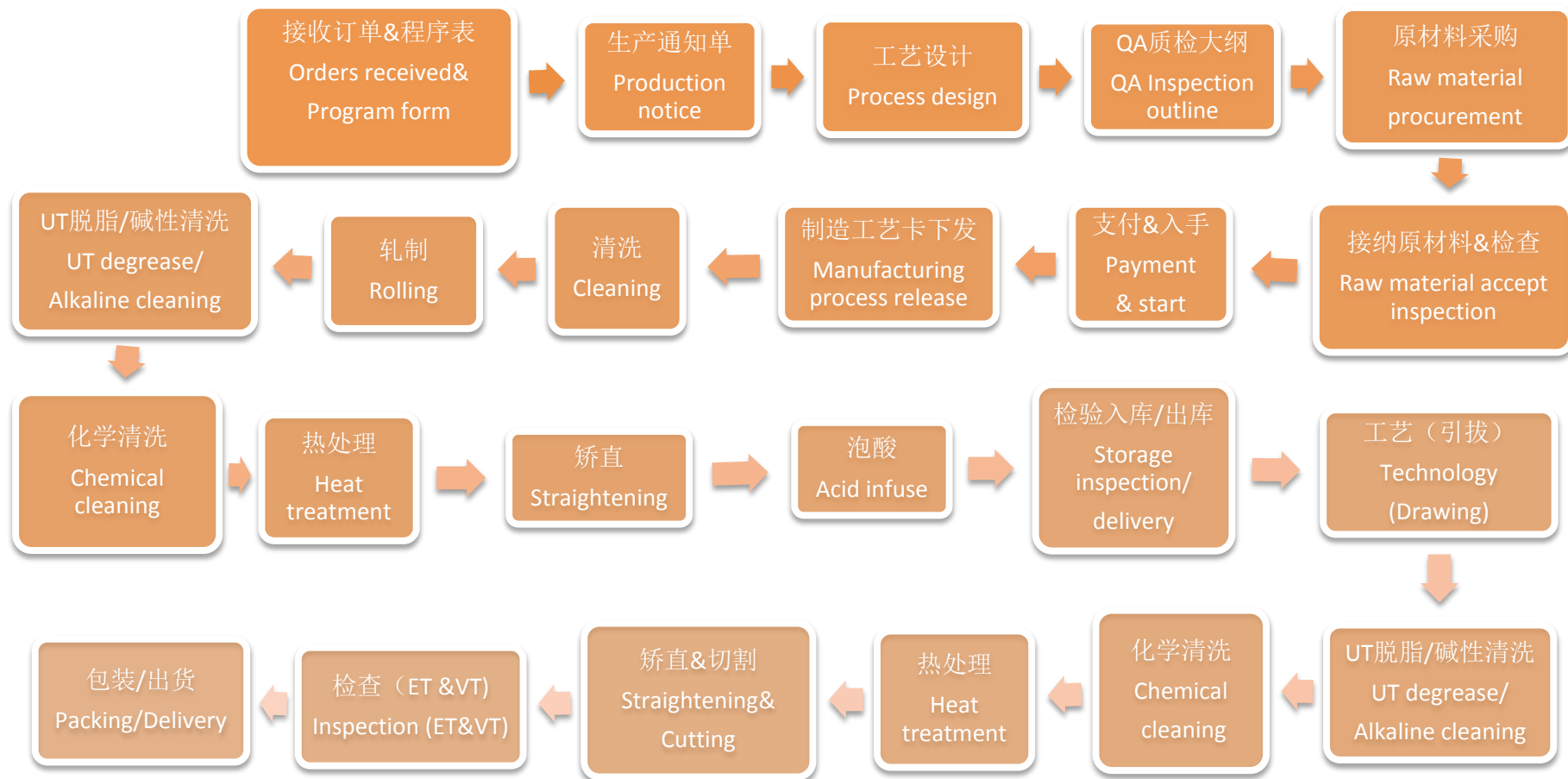
SECTION 3 设备清单及生产能力

EQUIPMENT LIST AND CAPACITY

序号 No.	设备名称 EQUIPMENT NAME	设备型号 TYPE	数量 QTY (SET)	生产范围 SIZE RANGE	单月产能 MONTHLY CAPACITY
1	二辊冷轧管机 COLD PILGER MACHINE	LG-20-H	5	OD: MM	50 TONS
2	三辊冷轧管机 COLD PILGER MACHINE	LD-40	1	OD: 15-38MM	25 TONS
		LD-20*2	2	OD: 8-20MM	15 TONS
		LD-12*4	4	OD: 6-12MM	10 TONS
3	油引拔生产线 OIL DRAWING PRODUCTION LINE	自主研发 MADE BY OURSELVES	8		80,000PCS*6000mm
4	去油清洗设备 DEGREASING & WASHING EQUIPMENT	YSX-3-25X	1	ULTRASONIC CLEANER	100 TONS
		自主研发 MADE BY OURSELVES	1	CHEMICAL CLEANING	100TONS
		URS2000	1	SOLVENT RECYCLER	100 TONS
5	退火炉 ANNEALING FURNACE	NGI-150-11Q	1	OD: 4.0-50MM	80 TONS
6	光亮炉 BRIGHTNESS FURNACE	自主设计制造，温度记录，炉内测温系统 INDEPENDENT DESIGN AND MANUFACTURE, TEMPERATURE RECORD AND TEST SYSTEM FOR FURNACE INSIDE	1	OD:4.0---12.7 MM	制造中 MANUFACTURING
7	矫直机 STRAIGHTENING MACHINE	XD12-16	1	OD:6.35-16M M	60TONS
8	矫直机 STRAIGHTENING MACHINE	FW56-30	1	OD: 15.88-50MM	60 TONS
9	研磨设备 GRINDING EQUIPMENT	2M5005-2B	1 SET	OD: 6-42MM	40 TONS
10	切割机 CUTTING EQUIPMENT	MC275B	6	OD: 4.0-50MM	80 TONS
11	涡流探伤机 ET TEST EQUIPMENT	ETM-76	1	OD: 6-76MM	60 TONS
12	立式带锯床 VERTICAL BAND SAWING MACHINE	S-360	1	OD: 4.0-50MM	N/A
13	电动单梁起重机 CRANE	LX3-10	6	3 TONS	N/A

14	手持式合金分析仪 ALLOY ANALYZER	X-MET5000	1	ALL	2000PCS
15	UT 探伤机 UT TEST MACHINE		1		订购中 ORDER IN

SECTION 4 工艺流程 TECHNOLOGICAL PROCESS



SECTION 5 生产检验及品质保证

PRODUCTION TEST & QUALITY ASSURANCE

Testing and Inspection 产品检测

Standard 标准	Tests chemical analysis-1) 化学分析	Tensile Test -2) 拉伸测试	Hardness Test-3) 硬度测试	Flattening Test -4) 压扁测试	Flaring Test -5) 扩口测试	Corrosion Test -6) 腐蚀测试	Hydrostatic Test -7) 水压测试
EN 10216-5 TC1	S	S	S	S	S	S	A
ASTM A269	S	S	S	S	S	S	A
ASTM A213	S	S	S	S	S	S	A
ASTM A789	S	S	S	S	S	S	A

★ S= Sampling / S 表示抽检

★ A= According to customer requirements 根据客户要求

Each material PMI tested

每根原材料都要经过 PMI 检测

Chemical analysis of two tubes from each heat

同一炉号，抽取 2 个样品进行化学分析

Tensile test of two samples from each lot

每一批号，抽取 2 个样品进行拉伸测试

Hardness test of two samples from each lot

每一批号，抽取 2 个样品进行硬度测试

Flattening test of two samples from each lot

每一批号，抽取 2 个样品进行压扁测试

Flaring test of two samples from each lot

每一批号，抽取 2 个样品进行扩口测试

Corrosion test based on requirement of client

根据客户要求，可以进行腐蚀测试

Hydrostatic test is replaced by Eddy current test at option

可以选择用涡流探伤代替水压测试

Salt Fog Corrosion Resistance Test, Movement and Static Hydraulic Test and other Test are available on request.

可以根据客户的要求进行盐雾试验，动/静液压试验等其他特殊试验

Tolerance 公差

Hydraulic tubing – metric sizes

Size OD (mm)	Tolerance OD (mm)	Wall thickness (%)
6-30	+/- 0.08	+/-10
32-40	+/- 0.15	+/-10
42	+/- 0.20	+/-10

Instrumentation tubing- Inch size

Size OD (mm)	Tolerance OD (mm)	Wall thickness (%)
6.35-25.4	+/- 0.08	+/-10
25.4-38.1	+/- 0.15	+/-10

★ Special requirements of tolerance available on request.

可以根据特殊公差要求进行生产

喷码机 Inkjet printer



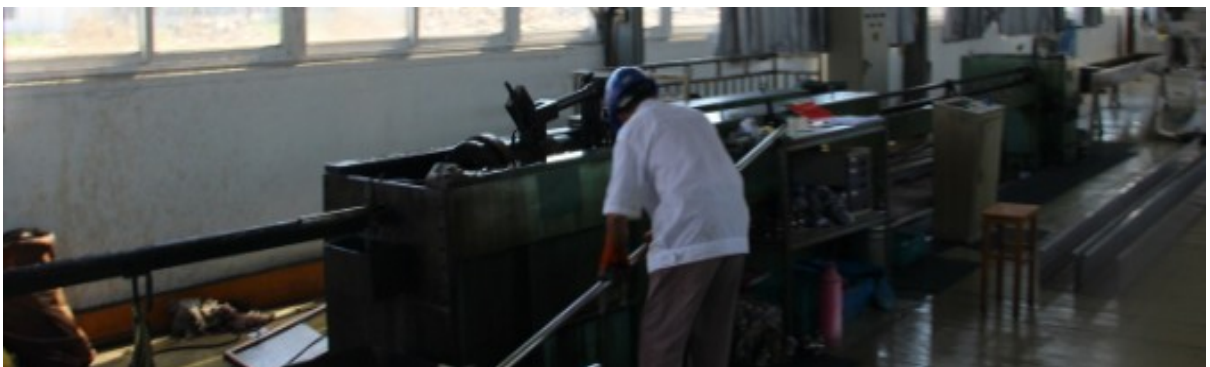
光亮退火炉 Bright annealing furnace



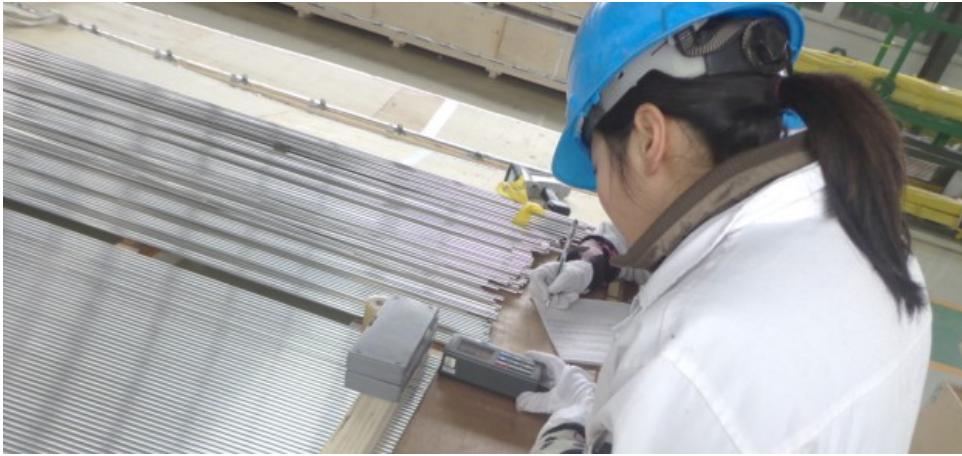
涡流探伤机 Eddy current test machine



轧机 Rolling machine



粗糙度检验 Roughness test



化学成分分析 Chemical constituent analysis



SECTION 6 产品 Products



SECTION 7 产品技术参数 Products technical data

7.1 不锈钢无缝直管 Stainless steel seamless straight pipes

Size Range 典型尺寸

Hydraulic tubing-metric sizes

Outside Diameter (OD) mm	Wall Thickness (WT) mm	Weight Kg/m
6	1.0	0.125
	1.5	0.169
8	1.0	0.175
	1.5	0.244
	2.0	0.301
10	1.0	0.226
	1.5	0.320
	2.0	0.401
12	1.0	0.276
	1.5	0.395
	2.0	0.501
14	1.0	0.326
	1.5	0.470
	2.0	0.602
15	1.0	0.351
	1.5	0.508
	2.0	0.652
16	1.0	0.376
	1.5	0.545
	2.0	0.702
	2.5	0.846
	3.0	0.978
18	1.0	0.426
	1.5	0.620
	2.0	0.802
	2.5	0.971
20	1.5	0.696
	2.0	0.903
	2.5	1.097
	3.0	1.279
	4.0	1.604
22	1.5	0.771
	2.0	1.003
25	1.5	0.884
	2.0	1.153
	2.5	1.410
	3.0	1.655
28	1.5	0.997
	2.0	1.304
	2.5	1.598
30	2.0	1.404
	2.5	1.724
	3.0	2.031
38	2.0	1.805
	3.0	2.632
	4.0	3.410
	5.0	4.137
42	2.0	2.006
	3.0	2.933

Instrumentation tubing- Inch size

Outside Diameter (OD) mm	Wall Thickness (WT) mm	Inch size	Weight Kg/m
6.35	0.71	1/4" x0.028"	0.100
	0.89	x0.035"	0.122
	1.24	x0.049"	0.159
	1.65	x0.065"	0.194
7.94	0.71	5/16" x0.028"	0.129
	0.89	x0.035"	0.157
	1.24	x0.049"	0.208
	1.65	x0.065"	0.260
9.53	0.89	3/8" x0.035"	0.193
	1.24	x0.049"	0.258
	1.65	x0.065"	0.326
	2.11	x0.083"	0.393
12.7	0.89	1/2" x0.035"	0.264
	1.24	x0.049"	0.356
	1.65	x0.065"	0.457
	2.11	x0.083"	0.560
15.88	0.89	5/8" x0.035"	0.334
	1.24	x0.049"	0.455
	1.65	x0.065"	0.589
	2.11	x0.083"	0.728
19.05	0.89	3/4" x0.035"	0.405
	1.24	x0.049"	0.554
	1.65	x0.065"	0.720
	2.11	x0.083"	0.896
	2.41	x0.095"	1.005
	2.77	x0.109"	1.131
25.4	0.89	1" x0.035"	0.547
	1.24	x0.049"	0.751
	1.65	x0.065"	0.982
	2.11	x0.083"	1.232
	2.41	x0.095"	1.389
	2.77	x0.109"	1.572
	3.048	x0.120"	1.708
31.75	1.24	1 1/4" x0.049"	0.948
	1.65	x0.065"	1.245
	2.11	x0.083"	1.568
	2.41	x0.095"	1.773
	2.77	x0.109"	2.012
	3.048	x0.120"	2.193
38.1	1.24	1 1/2" x0.049"	1.146
	1.65	x0.065"	1.508
	2.11	x0.083"	1.904
	2.41	x0.095"	2.156
	2.77	x0.109"	2.453
	3.048	x0.120"	2.678

7.2 不锈钢盘管 Stainless coil pipeline

Size Range 典型尺寸

Hydraulic tubing-metric sizes

Outside Diameter (OD) mm	Wall Thickness (WT) mm	Weight Kg/m
6	1.0	0.125
	1.5	0.169
8	1.0	0.175
	1.5	0.244
	2.0	0.301
10	1.0	0.226
	1.5	0.320
	2.0	0.401
12	1.0	0.276
	1.5	0.395
	2.0	0.501
14	1.0	0.326
	1.5	0.470
	2.0	0.602
15	1.0	0.351
	1.5	0.508
	2.0	0.652
16	1.0	0.376
	1.5	0.545
	2.0	0.702
	2.5	0.846
18	3.0	0.978
	1.0	0.426
	1.5	0.620
	2.0	0.802
	2.5	0.971

Instrumentation tubing- Inch size

Outside Diameter (OD) mm	Wall Thickness (WT) mm	Inch size	Weight Kg/m
6.35	0.71	1/4" x0.028"	0.100
	0.89	x0.035"	0.122
	1.24	x0.049"	0.159
	1.65	x0.065"	0.194
7.94	0.71	5/16" x0.028"	0.129
	0.89	x0.035"	0.157
	1.24	x0.049"	0.208
	1.65	x0.065"	0.260
9.53	0.89	3/8" x0.035"	0.193
	1.24	x0.049"	0.258
	1.65	x0.065"	0.326
	2.11	x0.083"	0.393
12.7	0.89	1/2" x0.035"	0.264
	1.24	x0.049"	0.356
	1.65	x0.065"	0.457
	2.11	x0.083"	0.560
15.88	0.89	5/8" x0.035"	0.334
	1.24	x0.049"	0.455
	1.65	x0.065"	0.589
	2.11	x0.083"	0.728
19.05	0.89	3/4" x0.035"	0.405
	1.24	x0.049"	0.554
	1.65	x0.065"	0.720
	2.11	x0.083"	0.896
	2.41	x0.095"	1.005
	2.77	x0.109"	1.131

Main type

主要交货状态有:

BA (Bright Annealing) / 光亮退火

EP(Electronic Polishing) / 电解抛光

OD and ID Polished / 内外表面抛光

AP(Annealed and Pickled) / 酸洗退火

Other grades available on request

根据需要, 也可以生产其他钢种

Special requirements of chemical composition available on request (e.g, Mo.:2.5% above)

根据需要, 可以生产对化学成分有特殊要求的产品

SECTION 8 生产钢种 List of Material

Austenitic stainless steels 奥氏体不锈钢

ASTM	UNS	EN Number
ASTM 304/304L	UNS S30400/S30403	EN 1.4301/1.4306/1.0307
ASTM 316/316L	UNS S31600/S31603	EN 1.4401/1.4404/1.4435
ASTM 321/321H	UNS S32100/S32109	EN 1.4541/1.4940
ASTM 316Ti	UNS S31635	EN 1.4571
ASTM 347/347H	UNS S34700/S34709	EN 1.4550/1.4912

Duplex stainless steels 双相不锈钢

ASTM	UNS	EN Number
-	UNS S31500	-
-	UNS S31803/S32205	EN 4.4462
-	UNS S32304	EN 4.4362
-	UNS S32750	EN 1.4410

Specifications 生产标准

ASTM A269 Standard Specification for Seamless and Welded Austenitic Stainless Steel Tubing for General Service

一般用途的无缝和焊接不锈钢管标准规范

ASTM A213 Standard Specification for Seamless Ferritic and Austenitic Alloy-Steel Boiler, Super heater, and Heat-Exchanger Tubes

无缝铁素体和奥氏体合金钢锅炉、过热器和热交换器的标准规范。

ASTM A789 Standard Specification for Seamless and Welded Ferritic/Austenitic Stainless Steel Tubing for General Service

一般用途无缝和焊接铁素体和奥氏体不锈钢管标准规范

EN10216-5 Seamless Steel Tubes for Pressure Purposes Technical Delivery Conditions.

承压用无缝钢管交货技术条件

Equivalent JIS, DIN and GB Specifications are available by agreement.

根据协议，可以按照同等的 JIS 规范、DIN 规范和国家标准进行生产。

SECTION 9 实验室设备 LABORATORY EQUIPMENT

序号 No.	设备名称 EQUIPMENT NAME	设备型号 TYPE	试验名称 TEST ITEM	数量 QTY (SET)
1	万能试验机 Universal testing machine	WAW-600F60T, 液压伺服 Hydraulic servo	拉伸实验 Tensile test	1
2	拉伸试样标距机 Tensile specimen gauge machine	UM-5/10N	试块打标 Sample stamp	1
3	低温冲击装置 Low temperature impact device	JBDW-300Y	低温冲击 Low temperature impact	1
4	缺口拉床 Notch broaching machine	IHP-2	试块加工 Sample handling	1
5	冲击试样缺口检验投影仪 Impact specimen notch test projector	CP-50	缺口检验 Charpy-V notch test	1
6	布氏硬度计 Brinell hardness tester	MHB-3000	硬度试验 Hardness test	1
7	维氏硬度计 Vickers hardness tester	HVS-10Z	小规格钢管硬度试验 Small tube hardness test	1
8	洛氏硬度计 Rockwell hardness tester	HRS-150	硬度试验 Hardness test	1
9	金相高倍显微镜 Metallographic phase magnifying power microscope	4XC-MS	金相试验 Metallographic phase test	1
10	金相试样切割机 Metallographic phase sample cutting machine	QG-1	金相试验 Metallographic phase test	1
11	金相试样预磨机 Metallographic phase sample Pre-grinding machine	YM-2A	金相试验 Metallographic phase test	1
12	金相试样抛光机 Metallographic phase sample Polishing machine	PG-2B	金相试验 Metallographic phase test	1
13	盐雾试验箱 Salt spray test box		盐雾实验 Salt spray test	订购中 Order in
14	1L 带回流冷凝器的磨口锥形烧瓶 1L Grinding mouth Erlenmeyer flask with reflux condenser		晶间腐蚀 Intergranular corrosion	订购中 Order in
15	加热装置 Heat device		晶间腐蚀 Intergranular corrosion	订购中 Order in
16	循环腐蚀试验箱 Cyclic corrosion test box		循环腐蚀试验 Cyclic corrosion test	订购中 Order in
17	高压脉冲试验装置 Pulsed high voltage test device		脉冲实验 Pulse test	订购中 Order in
18	爆破试验装置 Blasting test device		爆破实验 Blasting test	订购中 Order in
19	光谱仪 Optical spectrometer			订购中 Order in