

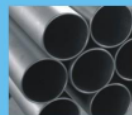


制造精品，追求卓越，持续改进

Manufacturing quality, excellence, continuous improvement, customer satisfaction

严格按照ISO9001：2000质量管理体系有效运作，
为广大客户提供优良的产品和一流的服务。竭诚欢迎广大国内外客商洽谈合作，
共展辉煌的不锈钢事业！

Strict accordance with the ISO9001:2000 quality management system to function effectively,
Providing our customers with excellent products and first class service.
Dried up into a welcome domestic and foreign businessmen to discuss cooperation,
Total exhibition brilliant stainless career!



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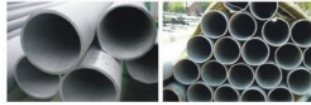
不锈钢无缝管

STAINLESS STEEL SEAMLESS STEEL PIPE

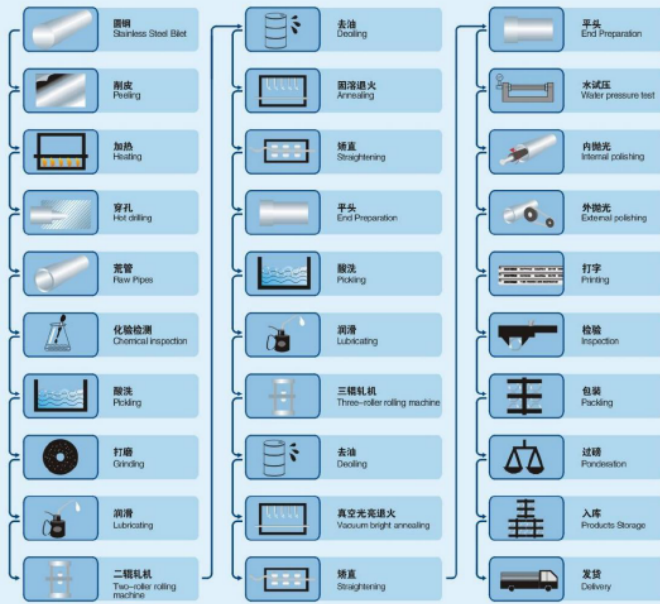
经过多年的磨炼和竞争，坚持走名牌之路，拥有国内最大的冷拔机组和先进的全温控不锈钢固溶退火炉等生产设备。建不锈钢管精品基地、创世界品牌，是我们的发展目标和基本定位。坚持把生产质量上乘、品质优异的产品作为对客户的庄严承诺。我们将依托自有技术优势、研发优势、企业管理优势和人力资源优势等综合竞争优势，打造国内精品不锈钢管生产基地和输出基地，在世界上创出中国不锈钢管企业响亮的民族品牌。

After many years of trials and struggling efforts, taking the road of famous brand, has the nationally largest cold drawing machine unit, advanced full temperature controlled stainless steel solid solution annealing furnace and other production equipment. It is INOXCN's development goal and basic orientation to establish the exquisite stainless steel tube base and create a world famous brand. Providing products of supreme quality is the solemn promise our company has made to customers. Under the support of independent technological advantage, research and development advantage, enterprise management advantage, human resources advantage and other comprehensive competition advantages, INOXCN will build the nationally premium stainless steel tube production base and output base and create a ringing national brand among China's stainless steel tube enterprises.





不锈钢无缝管工艺流程 PROCESS FLOWS



严格控制生产过程质量，保证产品处于行业领先水平，规范推进全方位的质量监控。质量文化已经渗透到研发、生产、销售和服务的每个细节当中，成为一种自觉行为。质量管理体系已全面与国际接轨，带领企业获得多荣誉的同时，更多地给予公司客户真正“上帝”般的消费体验。

We strictly control quality during the production, ensure that the product is at the leading level in the industry and standardize and push forward all-round quality monitoring. The quality culture has been spread into every detail including research, development, production, distribution and service, becoming a conscious behavior. The quality management system has completely kept pace with the world, giving much real godlike consuming experience to customers of our company while leading the enterprise to obtain many honors.



不锈钢焊管 STAINLESS STEEL WELDING PIPE

本厂拥有大型不锈钢焊管和工业流体不锈钢焊接钢管生产线，可根据用户的需要生产GB、ASTM、JIS、DIN、OST等标准，产品行销全国各地，不锈钢焊管产品广泛应用于制药、食品、核电、航空、石油、化工、机械及电力、汽车、航空航天和造船等领域。产品符合中国GB、日本JIS、美国ASTM、英国BS、欧盟DIN等执行标准。

The factory has a large stainless steel pipe stainless steel welded pipe and industrial fluid production lines, can produce GB, ASTM, JIS, DIN, OST and other standards based on the needs of users, product marketing throughout the country, stainless steel welded pipe products are widely used in nuclear power, aviation, petroleum, chemical, mechanical and electrical, automotive, pharmaceutical, food, aerospace and shipbuilding and other fields. Products meet Chinese GB, Japanese JIS, U.S. ASTM, British BS, DIN and other EU performance standards.





不锈钢焊管 STAINLESS STEEL WELDING PIPE

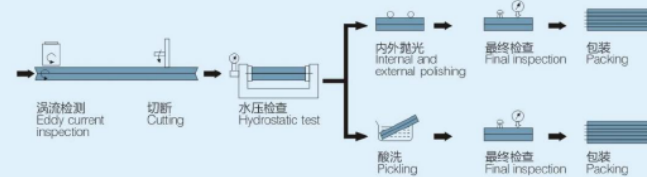
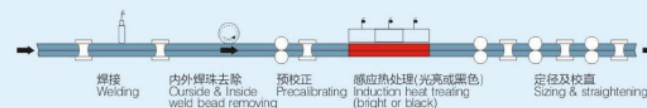
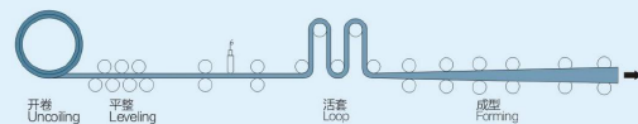
公司以“同样的产品比质量，同样的质量比价格，同样的价格比服务，同样的服务比信誉”为经营理念，竭诚为客户提供质优价廉的不锈钢焊管等特色产品。公司凭借对市场机遇的把握和广大客户的信赖与支持迈出了成功的一步。

Company to "the same product than the quality of the same quality than price, the same price than service, the same service than credibility" business philosophy, dedicated to provide customers with quality and cheap stainless steel pipe and other speciality products. Companies with market opportunities and to seize the trust and support of our customers a step to success.

不锈钢焊管工艺流程 PROCESS FLOWS

主要经营品种有不锈钢焊管、大口径不锈钢焊管、304不锈钢焊管、工业不锈钢焊管、不锈钢焊管厂，品种多样、规格齐全，为客户提供全方位的服务。

Mainly engaged in a variety of stainless steel pipe, large diameter stainless steel pipe, 304 stainless steel pipe, industrial stainless steel pipe, stainless steel pipe plant, variety, complete specifications, to provide customers with a full range of services.



不锈钢焊管 STAINLESS WELDED PIPE



焊接钢管也称焊管，是用钢板或带钢经过卷曲成型后焊接制成的钢管。公司引进焊管生产流水线、制管技术并实行全过程的质量管理工作。产品质量可靠品种齐全，畅销全国各地及配套出口，深受广大用户欢迎和信赖。公司可根据用户的要求，生产 SUS304、301、316、316L、321、202、201、Cr25Ni20Si2S、409L、INONY601、310S(2520)等材质，符合中国 GB、美国 ASTM 等标准的不锈钢焊管。

公司在努力抓好产品质量和供求关系的同时，狠抓内部管理。使得公司在原来全面质量管理的基础上大大提高了企业管理的规范化水平和适应市场环境不断变化的综合能力，紧跟时代潮流。

Welded steel pipe, also known as welded pipe, steel pipe with steel or steel welding forming after curling made. The company introduced the welded pipe production line, pipe technology and the implementation of quality management of the whole process. Reliable product quality variety, popular throughout the country and supporting exports, the majority of users are welcome and trust. According to the user's requirements, production SUS304,301,316,316L, 321,202,201, Cr25Ni20Si2S, 409L, INONY601,310S (2520) and other materials, in line with Chinese GB, American ASTM standards such as stainless steel pipe.

Company efforts to grasp the product quality and supply and demand at the same time, pay close attention to internal management. Allows the company on the basis of the original total quality management on greatly improving the level of standardization of enterprise management and adaptation to the changing market environment overall capacity to keep up with the trend.

产品范围 PRODUCT RANGE

产品范围 Product range	外径 Diameters mm	壁厚 Thickness mm
自动焊接不锈钢管 Longitudinally welded stainless steel & Pipes	Φ 12-Φ 273	0.8-8.00

产品标准 PRODUCT STANDARDS

类别 Category	中国标准	美国标准	国际标准	德国标准
热交换器用管 Heat exchange tubes	GB12771	ASTM-A249	ASTM 312	DIN 11850
流体管 Hydrodynamic transfer pipes	GB12771	ASTM-270	ISO 2037	

为您提供优质的产品和优良的服务

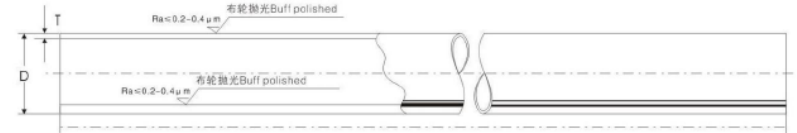
Providing you with high quality products and excellent services

卫生级镜面焊管 SANITARY MIRROR SURFACE STEEL PIPE



本公司现用的高精度多辊冷轧管机，是专业生产不锈钢薄壁无缝(内外镜面)工业流体管的先进生产设备，冷轧后管内径粗糙度 Ra0.8 μm，内径抛光后 Ra0.2-0.4 μm，材质有 304、304L、316、316L、321，符合 GMP 药典要求，可以替代进口产品，广泛用于石化、电力、核能、化肥、锅炉、轻纺、造纸、食品、乳品、酿酒、制药生物工程等，达到中国 GB、国际 ISO、德国 DIN、欧洲 IDF、美国 3A、日本 JIS 标准要求。

The high-precision multi-roller machine currently used by our company is the advanced production equipment that producing stainless thin-wall flitless industrial hydro-pipes. The internal diameter μm, Ra0.8 of roughness, after being cold-rolled. internal diameter μm of Ra0.2-0.4 μm, Grade 304、304L、316、316L、321, behind the polishing, accord with GMP pharmacopoeia request, can substitute the import products, used in petrochemical industry, electricity, nuclear energy, chemical fertilizer, boiler, light textile, papermaking, food, dairy products, make wine, pharmacy bioengineering, etc. Extensively, reach China GB, international ISO, German DIN, European IDF, U.S.A. 3A, Japan JIS standard require.



规格: Φ 19.05X1.25—Φ 154X2
304、304L、316L、321
Specification: Φ 19.05 x 1.25—Φ 154 x 2
304, 304L, 316L, 321

镜面流体管标准 MIRROR-FACE FLUID PIPE STANDARD

ISO	DIN 系列1	DIN 系列2	GB	IDF
Φ 19.1X1.5	Φ 28X1.5	Φ 29X1.5	Φ 25X1.6	Φ 19.1X1.2
Φ 25.4X1.5	Φ 34X1.5	Φ 35X1.5	Φ 32X1.6	Φ 25.4X1.2
Φ 31.8X1.5	Φ 40X1.5	Φ 41X1.5	Φ 38X1.6	Φ 31.8X1.2
Φ 38.1X1.5	Φ 52X1.5	Φ 53X1.5	Φ 45X1.6	Φ 38.1X1.2
Φ 50.8X1.5	Φ 70X2	Φ 70X2	Φ 57X1.6	Φ 50.8X1.2
Φ 63.5X2	Φ 85X2	Φ 85X2	Φ 76X2	Φ 63.5X2
Φ 76X2	Φ 104X2	Φ 104X2	Φ 89X2	Φ 72X2
Φ 101.6X2	Φ 129X2	Φ 129X2	Φ 108X2	Φ 89X2
	Φ 154X2	Φ 154X2	Φ 133X2.9	Φ 101.6X2

SANITARY WELDED PIPE REFERENCE

卫生级焊管参考

(ISO 2037标准) 3A标准 (ISO 2037 STANDARD) 3A STANDARDS

规格 Size	壁厚 Thickness	0.8	1.0	1.2	1.5	1.65	2.0	2.5	3.0
1/2"	Φ 12.7	0.24	0.29	0.34					
5/8"	Φ 15.88	0.30	0.37	0.44	0.54				
3/4"	Φ 19.10		0.45	0.53	0.66	0.72			
1"	Φ 25.4		0.61	0.72	0.89	0.98	1.17		
1 1/4"	Φ 31.81		0.77	0.91	1.13	1.25	1.49		
1 1/2"	Φ 38.1			1.10	1.37	1.50	1.80	2.22	
2"	Φ 50.8			1.52	1.84	2.02	2.43	3.01	
1 1/2"	Φ 63.5			1.86	2.20	2.41	2.90	3.80	4.52
3"	Φ 76.2				2.79	3.06	3.70	4.59	5.47
3 1/2"	Φ 88.9				3.27	3.59	4.34	5.38	6.43
4"	Φ 101.6				3.74	4.11	4.96	6.17	7.40
4 1/2"	Φ 114.3						5.59	6.96	8.32

DIN 11850

规格 Size	壁厚 Thickness	1.0	1.2	1.5	2.0	3.0
DN15	Φ 18	0.42	0.50	0.62		
DN20	Φ 22		0.62	0.77		
DN 25	Φ 28		0.80	1.0		
DN 25	Φ 29		0.83	1.03		
DN 32	Φ 34		0.98	1.21		
DN 32	Φ 35		1.01	1.25		
DN 40	Φ 40		1.16	1.44		
DN 40	Φ 41		1.19	1.48		
DN 50	Φ 52		1.52	1.89	2.60	
DN 50	Φ 53		1.55	1.92		
DN 50	Φ 54			1.96	2.59	
DN 65	Φ 70			2.56	3.39	
DN 80	Φ 85			2.79	3.70	
DN 100	Φ 104			3.38	5.59	
DN 125	Φ 129				6.33	11.16
DN 150	Φ 154				9.43	
DN 200	Φ 204				10.06	15.02
DN 250	Φ 254				12.55	18.76

规格 Size	壁厚 Thickness	0.8	1.0	1.2	1.5	2.0	2.5	3.0	4.0	5.0	6.0	7.0	8.0
12.00		0.22	0.27	0.32	0.38	0.47							
14.00		0.26	0.32	0.38	0.44	0.54							
16.00		0.30	0.37	0.44									
20.00		0.26	0.32	0.38	0.47								
25.00		0.48	0.60	0.71	0.88	1.15							
32.00		0.62	0.77	0.92	1.14	1.49							
40.00				1.16	1.44	1.89							
42.00				1.22	1.51	1.99							
45.00				1.31	1.63	2.14							
48.30				1.41	1.75	2.31							
57.00				1.67	2.07	2.74							
60.30				1.77	2.20	2.91							
63.50				1.86	2.3	3.06							
76.10					2.79	3.70	4.59						
89.00					3.27	4.33	5.37	6.43					
108.00					3.98	5.28	6.57	7.85					
114.30						5.58	6.94	8.30					
127.00						6.23	7.75	9.27					
133.00						6.5	8.13	9.71	12.85	15.94	18.98		
139.80						6.88	8.56	10.24	13.55	16.78	19.98		
141.30						6.94	8.43	10.34	13.68	16.98	20.22		
152.40						7.49	9.34	11.16					
159.00						7.82	9.75	11.66	15.44	19.18	22.87	26.50	30.09
168.30						8.27	10.31	12.33	16.34	20.34	22.91	28.12	31.94
219.18						10.81	13.48	16.14	21.42	26.65	31.83	36.97	42.05
273.05							16.85	20.18	26.81	33.38	39.91	46.38	52.81

理论重量计算公式
Calculation formula of theoretical weight
304 W=0.02491t(D-t)
326L W=0.2507t(D-t)

注：根据本企业生产实际情况而定，壁厚公差10%，可协议商定。
Note: According to the actual circumstances of production, 10% of wall thickness tolerances can be agreed upon protocol.

AUTOMATIC INDUSTRIAL PIPE

全自动工业焊管

规格 Size	壁厚 Thickness	外径 Outside diameter	壁厚、重量 Wall thickness, Weight													
			Sch. 5s			Sch. 10s			Sch. 20s			Sch. 40s				
			in	mm	Kg/m	in	mm	Kg/m	in	mm	Kg/m	in	mm	Kg/m		
DN 15	1/2"	0.840	21.34	0.065	1.65	0.809	0.083	2.11	1.011							
20	3/4"	1.050	26.67	0.065	1.65	1.028	0.083	2.11	1.291							
25	1"	1.315	33.40	0.065	1.65	1.305	0.109	2.77	2.113	0.120	3.05	2.306	0.133	3.38	2.528	
32	1 1/4"	1.660	42.16	0.065	1.65	1.665	0.109	2.77	2.718	0.120	3.05	2.971	0.140	3.56	3.423	
40	1 1/2"	1.900	48.26	0.065	1.65	1.916	0.109	2.77	3.139	0.120	3.05	3.435	0.145	3.68	4.087	
50	2"	2.375	60.33	0.065	1.65	2.412	0.109	2.77	3.927	0.120	3.05	4.352	0.145	3.91	5.495	
65	2 1/2"	2.875	73.03	0.083	2.11	3.728	0.120	3.05	5.317	0.156	3.96	6.813	0.203	5.16	8.724	
80	3"	3.500	88.90	0.083	2.11	4.562	0.120	3.05	6.522	0.156	3.96	8.379	0.216	5.49	11.407	
90	3 1/2"	4.000	101.60	0.083	2.11	5.229	0.120	3.05	7.487	0.156	3.96	9.623	0.226	5.74	13.706	
100	4"	4.500	114.30	0.083	2.11	5.897	0.120	3.05	8.452	0.203	5.16	14.028	0.237	6.02	16.237	
125	5"	5.563	141.30	0.109	2.77	9.559	0.134	3.40	11.679	0.203	5.16	17.499	0.258	6.55	21.988	
150	6"	6.625	168.28	0.109	2.77	11.420	0.134	3.40	13.964	0.216	5.49	22.262	0.280	7.11	28.545	
200	8"	8.625	219.08	0.109	2.77	14.926	0.148	3.76	20.167	0.237	6.02	31.950	0.322	8.18	42.974	
250	10"	10.750	273.05	0.134	3.40	22.838	0.165	4.19	28.062	0.237	6.02	40.043	0.365	9.27	60.911	
300	12"	12.750	323.85	0.156	3.96	31.555	0.180	4.57	36.346	0.237	6.02	47.661	0.375	9.53	74.617	
350	14"	14.000	355.60	0.156	3.96	34.687	0.188	4.78	41.772	0.258	6.55	56.951	0.437	11.10	95.255	
400	16"	16.000	406.40	0.165	4.19	41.980	0.188	4.78	47.821	0.258	6.55	65.240	0.437	11.10	109.301	
450	18"	18.000	457.20	0.165	4.20	47.394	0.203	5.16	58.103	0.322	8.18	91.494	0.563	14.30	157.767	
500	20"	20.000	508.00	0.203	5.16	64.633	0.217	5.50	64.845	0.375	9.53	118.333	0.595	15.10	185.400	
550	22"	22.000	558.00	0.203	5.16	71.060	0.217	5.50	75.695	0.375	9.53	130.203	0.626	15.90	214.709	
600	24"	24.000	609.60	0.216	5.49	82.616	0.285	6.50	97.651	0.375	9.53	142.452	0.689	17.50	258.111	
700	28"	28.000	711.20	0.216	5.49	96.510	0.322	8.18	143.250	0.500	12.7	220.975	0.689	17.50	302.401	
750	30"	30.000	762.00	0.258	6.55	123.260	0.322	8.18	153.601	0.500	12.7	237.046	0.689	17.50	324.546	
800	32"	32.000	812.80				0.322	8.18	163.952	0.500	12.7	253.117	0.689	17.50	346.691	
850	34"	34.000	863.60				0.322	8.18	174.304	0.500	12.7	269.188	0.689	17.50	368.836	
900	36"	36.000	914.40				0.322	8.18	184.655	0.500	12.7	285.259	0.748	19.10	425.967	
1000	40"	40.000	1016.00				0.375	9.53	238.928	0.563	14.3	356.819	1.031	26.20	645.985	



应用领域 PRODUCT APPLICATION

多年来，公司始终坚持质量第一、精益求精的经营理念，产品广泛应用于石化、化肥、核电、锅炉、船舶、环保、航空、造纸、食品及医疗等领域，并可根据用户需要开发新型产品。公司产品质量稳定、货源充足、价格合理、交货及时，本着诚信为本、互惠互利的原则。产品销往全国并出口东南亚、中东、欧美等十几个国家和地区。在国内外市场享有很高的信誉。

For years, the company has always been adhering to the operation concept of quality first and keeping improving. The products are widely applied in such fields as petrochemical industry, fertilizer, nuclear power, boiler, ship, environmental protection, aviation, pulp & paper, food, medicine and etc., and new products can be developed according to user requirements. The products enjoy stable quality, sufficient supply of goods, reasonable price and timely delivery. Based on the principle of sincerity first and mutual benefit, we have sold our products in the whole country and to Southeast Asia, Mid East, Europe, America and other countries and areas, enjoying high reputation in domestic and international markets.



钢种 Steel grades	C	Si	Mn	P	S	Ni	Cr	Mo	其它 Other
1Cr17Ni7	≤0.15	≤1.00	≤2.00	≤0.035	≤0.030	6.00-8.00	16.00-18.00	/	/
0Cr18Ni9	≤0.07	≤1.00	≤2.00	≤0.035	≤0.030	8.00-11.00	17.00-19.00	/	/
00Cr19Ni10	≤0.03	≤1.00	≤2.00	≤0.035	≤0.030	8.00-10.00	18.00-20.00	/	/
00Cr25Ni20	≤0.08	≤1.00	≤2.00	≤0.035	≤0.030	19.00-22.00	24.00-26.00	/	/
0Cr17Ni12Mo2	≤0.08	≤1.00	≤2.00	≤0.035	≤0.030	10.00-14.00	16.00-18.50	2.00-3.00	/
0Cr18Ni12Mo2Ti	≤0.08	≤1.00	≤2.00	≤0.035	≤0.030	11.00-14.00	16.00-19.00	1.80-2.50	TE/C%≤0.70
0Cr17Ni12Mo2	≤0.03	≤1.00	≤2.00	≤0.035	≤0.030	12.00-15.00	16.00-18.00	2.00-3.00	/
0Cr19Ni13Mo3	≤0.08	≤1.00	≤2.00	≤0.035	≤0.030	11.00-15.00	18.00-20.00	3.00-4.00	/
00Cr19Ni13Mo3	≤0.03	≤1.00	≤2.00	≤0.035	≤0.030	11.00-15.00	18.00-20.00	3.00-4.00	/
1Cr18Ni9Ti	≤0.12	≤1.00	≤2.00	≤0.035	≤0.030	8.00-11.00	17.00-19.00	/	TE/C%≤0.02-0.80
0Cr18Ni10Ti	≤0.08	≤1.00	≤2.00	≤0.035	≤0.030	9.00-12.00	17.00-19.00	/	≤ Ti 50%

可供标准 Available Standard

No.	Standards	Designation
01	GB/T14975	结构用不锈钢无缝管 Stainless steel seamless tubes for structures
02	GB/T14976	流体输送用不锈钢无缝管 Stainless steel seamless tubes for fluid transport
03	GB 13296	锅炉、热交换器用不锈钢无缝管 Stainless steel seamless tubes for boiler and heat exchanger
04	GB 9948	石油裂化用无缝钢管 seamless steel tubes for petroleum cracking
05	GB 5310	高压锅炉用无缝钢管 seamless steel tubes and pipes for high pressure boiler
06	GB/T21833	奥氏体铁素体型双相不锈钢无缝管 Austenitic-Ferritic (duplex) grade stainless seamless steel tubes and pipes
07	GB/T12271	流体输送用不锈钢焊接管 Welded Stainless steel pipes for liquid delivery
08	A511	机械用无缝不锈钢管 Spec. for Seamless Stainless Steel Mechanical Tubing
09	A269	一般用途无缝和焊接不锈钢管 Spec. for Seamess and Welded Austenitic Stainless Steel Tubing for General Service
10	A312	无缝、焊接和深度冷加工奥氏体不锈钢管 Spec. for Seamess, Welded, and Hevily Cold Worked Austenitic Stainless Steel Pipes
11	A213	无缝铁素体和奥氏体合金钢锅炉、过热器和热交换器管的标准规范 Spec. for seamless ferritic and austenitic alloy-steel boiler,superheater,and heat-exchanger tubers
12	A376	高温中央电站用无缝奥氏体钢管 Spec. for Seamess Austenitic Steel Pipe for High-Temperature Central-Station Service
13	A789	一般用途无缝、焊接铁素体奥氏体不锈钢管 Spec. for Seamess and Welded Ferritic-Austenitic Stainless Steel Tubing for General Service
14	GOST 9940	热加工耐腐蚀无缝钢管 Seamless hot deformed tubes made of corrosion-resistant steel
15	GOST 9940	冷、温加工耐腐蚀无缝钢管 Seamless cold and warm-deformed tubes made from corrosion-resistant steel
16	G3459	不锈钢钢管 Stainless steel pipes
17	G3483	锅炉与热交换器用不锈钢钢管 Stainless steel boiler and heat exchanger tubes
18	EN10297-2	机械和一般工程用无缝钢管 技术交货条件 第2部分: 不锈钢 Seamless circular steel tubes for mechanical and general engineering purposes – Technical delivery conditions – Part 2: Stainless steel
19	EN10216-5	压力用无缝钢管 交货技术条件 第5部分: 不锈钢管 Seamless steel tubes for pressure purposes – Technical delivery conditions – Part 5: Stainless steel tubes
20	A688	给水加热器用奥氏体不锈钢焊接管 Spec. for Welded Austenitic Stainless Steel Feed-water Heater Tubes



APPROXIMATE CONTRAST FORM OF STAINLESS STEEL NO. BETWEEN CHINA AND PART OF OTHER COUNTRIES
 中国与部分国家的不锈钢号近似对照表

钢号 Grade of steel

钢类 Type	中国 (GB)	美国AISI (ASTM)	日本JIS (Japan)	德国(Germany) DIN17006	规格Specification DIN17007 D---SMM	常用标准 Common Standard
不锈钢 无缝管 Stainless steel seamless pipe	0Cr18Ni9	304/S30400	SUS304	X5CrNi18-10	1.4301	GB/T14975-2002
	00Cr19Ni10	304L/S30403	SUS304L	X2CrNi19-11	1.4306	GB/T14976-2002
	00Cr25Ni20	310S/31008	SUS310S	X12CrNi25-21	1.4845	GB13296-91
	0Cr17Ni12Mo2	316/S31600	SUS316	X5CrNiMo17-12-2	1.4401	国外标准(部分)
	00Cr17Ni14Mo2	316L/S31603	SUS316L	X2CrNiMo18-14-3	1.4435	ASTM A213/A213 M
	0Cr19Ni13Mo3	317/S31700	SUS317	X5CrNiMo11-13-3	1.4449	ASTM A312/A312M
	00Cr19Ni13Mo3	317S/S31703	SUS317L	X2CrNiMo18-16-4	1.4438	JIS G3459
	1Cr18Ni9Ti	321/S32100	SUS321	X12CrNiTi18-9	1.4878	DIN 2462
	0Cr18Ni10Ti			X6CrNiTi18-10	1.4541	
	0Cr18Ni11Nb	347/S34700	SUS347	X12CrNiNb18-10	1.4550	
不锈钢 焊管 Stainless steel welded pipe	0Cr18Ni9	304/S30400	SUS304	X5CrNi18-10	1.4301	GB/T12770-91
	00Cr19Ni10	304L/S30403	SUS304L	X2CrNi19-11	1.4306	GB/T12771-2000
	00Cr25Ni20	310S/31008	SUS310S	X12CrNi25-21	1.4845	HG20537.2-92
	0Cr17Ni12Mo2	316/S31600	SUS316	X5CrNiMo17-12-2	1.4401	HG20537.3-92
	00Cr17Ni14Mo2	316L/S31603	SUS316L	X2CrNiMo18-14-3	1.4435	HG20537.4-92
	0Cr19Ni13Mo3	317/S31700	SUS317	X5CrNiMo11-13-3	1.4449	国外标准(部分)
	00Cr19Ni13Mo3	317S/S31703	SUS317L	X2CrNiMo18-16-4	1.4438	ASTM A312/A312M
	1Cr18Ni9Ti	321/S32100	SUS321	X12CrNiTi18-9	1.4878	ASTM A688/A688M
	0Cr18Ni10Ti			X6CrNiTi18-10	1.4541	JIS G3468
	0Cr18Ni11Nb	347/S34700	SUS347	X12CrNiNb18-10	1.4550	DIN 2462

NATIONAL STANDARD CONTRAST FORM
 国标对照表

国标尺寸 National standard dimensions

公称直径 Nominal diameter	外径 Outside diameter	Sch 5s	Sch 10s	Sch 20s	LG	Sch 20	Sch 30	STD	Sch 40	Sch 60	XS	Sch 80	Sch 100	Sch 120	Sch 140	Sch 160
15	18	1.6	2.1	2.6	-	-	-	-	2.9	-	-	3.6	-	-	-	4.5
20	25	1.6	2.1	2.6	-	-	-	-	2.9	-	-	4.0	-	-	-	5.6
25	32	1.6	2.8	3.2	-	-	-	-	3.2	-	-	4.5	-	-	-	6.3
32	38	1.6	2.8	3.2	-	-	-	-	3.6	-	-	5.0	-	-	-	7.1
40	45	1.6	2.8	3.2	-	-	-	-	3.6	-	-	5.0	-	-	-	7.1
50	57	1.6	2.8	3.6	-	3.2	-	-	4.0	-	-	5.6	-	-	-	8.8
65	76	2.0	3.0	3.6	-	4.5	-	-	5.0	-	-	7.1	-	-	-	10.0
80	89	2.0	3.0	4.0	-	4.5	-	-	5.6	-	-	8.0	-	-	-	11.0
90	-	2.0	3.0	4.0	-	4.5	-	-	5.6	-	-	8.0	-	-	-	12.5
100	108	2.0	3.0	4.0	-	5.0	-	-	5.9	-	-	8.8	-	11.0	-	14.2
125	133	2.9	3.4	5.0	-	5.0	-	-	8.3	-	-	10.0	-	12.5	-	16.0
150	159	2.9	3.4	5.0	-	5.6	-	-	7.1	-	-	11.0	-	14.2	-	17.5
200	219	2.9	4.0	6.3	-	6.3	7.1	-	8.0	10.0	-	12.5	16.0	17.5	20.0	22.2
250	273	3.6	4.0	6.3	-	6.3	8.0	-	8.8	12.5	-	16.0	17.5	22.2	25.0	28.0
300	325	4.0	4.5	6.3	-	6.3	8.8	-	10.0	14.2	-	17.5	22.2	25.0	28.0	32.0
350	377	4.0	5.0	-	8.0	8.0	10.0	10.0	11.0	16.0	13.0	20.0	25.8	28.0	32.0	36.0
400	426	4.0	5.0	-	8.0	8.0	10.0	10.0	12.5	17.5	13.0	22.2	28.5	30.0	36.0	40.0
450	480	4.0	5.0	-	8.0	8.0	11.0	10.0	14.2	20.0	13.0	25.0	30.0	36.0	40.0	45.0
500	529	5.0	5.6	-	8.0	10.0	12.5	10.0	16.0	20.0	13.0	28.0	32.0	40.0	45.0	50.0
550	-	5.0	5.6	-	8.0	-	-	10.0	-	-	13.0	30.0	-	-	-	-
600	630	5.6	6.3	-	8.0	-	-	10.0	17.5	-	13.0	32.0	-	-	-	-
650	-	-	-	-	8.0	-	-	10.0	-	-	13.0	-	-	-	-	-
700	720	-	-	-	8.0	-	-	10.0	-	-	13.0	-	-	-	-	-
750	-	-	-	-	8.0	-	-	10.0	-	-	13.0	-	-	-	-	-
800	820	-	-	-	8.0	-	-	10.0	-	-	13.0	-	-	-	-	-
850	-	-	-	-	8.0	-	-	10.0	-	-	13.0	-	-	-	-	-
900	920	-	-	-	8.0	-	-	10.0	-	-	13.0	-	-	-	-	-
950	-	-	-	-	8.0	-	-	10.0	-	-	13.0	-	-	-	-	-
1000	1020	-	-	-	8.0	-	-	10.0	-	-	13.0	-	-	-	-	-
1050	-	-	-	-	8.0	-	-	10.0	-	-	13.0	-	-	-	-	-
1100	1150	-	-	-	8.0	-	-	10.0	-	-	13.0	-	-	-	-	-
1150	-	-	-	-	8.0	-	-	10.0	-	-	13.0	-	-	-	-	-
1200	1220	-	-	-	8.0	-	-	10.0	-	-	13.0	-	-	-	-	-



JAPANESE STANDARD
CONTRAST FORM

日标对照表

日标尺寸 Japanese standard dimensions

呼び径	外径	呼び厚さ									
		スケツエール5S			スケツエール10S			スケツエール20S			
		厚さ	単位質量kg/m		厚さ	単位質量kg/m		厚さ	単位質量kg/m		
			種類	種類		種類	種類				
A	B	mm	mm	mm	mm	mm	mm	mm	mm	mm	
6	1/8"	10.5	1.0	0.237	0.238	1.2	0.278	0.280	1.5	0.336	0.338
8	1/4"	13.8	1.2	0.377	0.379	1.65	0.499	0.503	2.0	0.588	0.592
10	3/8"	17.3	1.2	0.481	0.484	1.65	0.643	0.647	2.0	0.762	0.767
15	1/2"	21.7	1.65	0.824	0.829	2.1	1.03	1.03	2.5	1.20	1.20
20	3/4"	27.2	1.65	1.05	1.06	2.1	1.31	1.32	2.5	1.54	1.55
25	1"	34.0	1.65	1.33	1.34	2.8	2.18	2.19	3.0	2.32	2.33
32	1 1/4"	42.7	1.65	1.69	1.70	2.8	2.78	2.80	3.0	2.97	2.99
40	1 1/2"	48.6	1.65	1.93	1.94	2.8	3.19	3.21	3.0	3.41	3.43
50	2"	60.5	1.65	2.42	2.43	2.8	4.02	4.05	3.5	4.97	5.00
65	2 1/2"	76.3	2.1	3.88	3.91	3.0	5.48	5.51	3.5	6.35	6.39
80	3"	89.1	2.1	4.55	4.58	3.0	6.43	6.48	4.0	8.48	8.53
90	3 1/2"	101.6	2.1	5.20	5.24	3.0	7.37	7.42	4.0	9.72	9.79
100	4"	114.3	2.1	5.87	5.91	3.0	8.32	8.37	4.0	11.0	11.1
125	5"	139.8	2.8	9.56	9.62	3.4	11.6	11.6	5.0	16.8	16.9
150	6"	165.2	2.8	11.3	1.4	3.4	13.7	13.8	5.0	20.0	20.1
200	8"	216.3	2.8	14.9	15.0	4.0	21.2	21.3	6.5	34.0	34.2
250	10"	267.4	3.4	22.4	22.5	4.0	26.2	26.4	6.5	42.2	42.5
300	12"	318.5	4.0	31.3	31.5	4.5	35.2	35.4	6.5	50.5	50.8
350	14"	355.6	-	-	-	-	-	-	-	-	-
400	16"	406.4	-	-	-	-	-	-	-	-	-
450	18"	457.2	-	-	-	-	-	-	-	-	-
500	20"	508.0	-	-	-	-	-	-	-	-	-
550	22"	558.8	-	-	-	-	-	-	-	-	-
600	24"	609.6	-	-	-	-	-	-	-	-	-
650	26"	660.4	-	-	-	-	-	-	-	-	-

JAPANESE STANDARD
CONTRAST FORM

日标对照表

日标尺寸 Japanese standard dimensions

呼び径	外径	呼び厚さ								
		スケツエール40S			スケツエール80S			スケツエール160S		
		厚さ	単位質量kg/m		厚さ	単位質量kg/m		厚さ	単位質量kg/m	
			種類	種類		種類	種類			
A	B	mm	mm	mm	mm	mm	mm	mm	mm	
6	1/8"	10.5	1.7	0.373	0.375	2.4	0.484	0.487	-	-
8	1/4"	13.8	2.2	0.636	0.640	3.0	0.807	0.812	-	-
10	3/8"	17.3	2.3	0.859	0.863	3.2	1.12	1.13	-	-
15	1/2"	21.7	2.8	1.32	1.33	3.7	1.66	1.67	4.7	1.99
20	3/4"	27.2	2.9	1.76	1.77	3.9	2.26	2.28	5.5	2.97
25	1"	34.0	3.4	2.59	2.61	4.5	3.31	3.33	6.4	4.40
32	1 1/4"	42.7	3.6	3.51	3.53	4.9	4.61	4.64	6.4	5.79
40	1 1/2"	48.6	3.7	4.14	4.16	5.1	5.53	5.56	7.1	7.34
50	2"	60.5	3.9	5.50	5.53	5.5	7.54	7.58	8.7	11.2
65	2 1/2"	76.3	5.2	9.21	9.27	7.0	12.1	12.2	9.5	15.8
80	3"	89.1	5.5	11.5	11.5	7.6	15.4	15.5	11.1	21.6
90	3 1/2"	101.6	5.7	13.6	13.7	8.1	18.9	19.0	12.7	28.1
100	4"	114.3	6.0	16.2	16.3	8.6	22.5	22.8	13.5	33.9
125	5"	139.8	6.6	21.9	22.0	9.5	30.8	31.0	15.9	49.1
150	6"	165.2	7.1	28.0	28.1	11.0	42.3	42.5	18.2	66.6
200	8"	216.3	8.2	42.5	42.8	12.7	64.4	64.8	23.0	111
250	10"	267.4	9.3	59.8	60.2	15.1	94.9	95.5	28.6	170
300	12"	318.5	10.3	79.1	79.6	17.4	131	131	33.3	237
350	14"	355.6	11.1	95.3	95.9	19.0	159	160	35.7	284
400	16"	406.4	12.7	125	125	21.4	205	207	40.5	369
450	18"	457.2	14.3	158	159	23.8	257	259	45.2	464
500	20"	508.0	15.1	185	187	26.2	314	316	50.0	570
550	22"	558.8	15.9	215	215	28.6	378	380	54.0	679
600	24"	609.6	17.5	258	260	31.0	447	450	59.5	815
650	26"	660.4	18.9	302	304	34.0	531	534	64.2	953



AMERICAN STANDARD CONTRAST FORM

美标尺寸对照表

美标尺寸 American standard dimensions

Nominal diameter in inches	External diameter in millimeters	ANSI B36.19 Nominal diameter in inches						ANSI B36.10 Nominal diameter in inches									
		5s	10s	Sched 40S	Sched 80S	10	20	30	Standard								
		mm	Kg/m	mm	Kg/m	mm	Kg/m	mm	Kg/m	mm	Kg/m	mm	Kg/m				
1/8"	10.29	-	-	1.24	0.281	1.73	0.371	2.41	0.467	-	-	-	-	1.73	0.371		
1/4"	13.72	-	-	1.65	0.499	2.24	0.644	3.02	0.809	-	-	-	-	2.24	0.644		
3/8"	17.15	-	-	1.65	0.640	2.31	0.858	3.20	1.118	-	-	-	-	2.31	0.858		
1/2"	21.34	1.65	0.814	2.11	1.016	2.77	1.26	3.73	1.62	-	-	-	-	2.77	1.26		
3/4"	26.67	1.65	1.034	2.11	1.298	2.87	1.68	3.91	2.19	-	-	-	-	2.87	1.68		
1"	33.40	1.65	1.312	2.77	2.125	3.38	2.50	4.55	3.23	-	-	-	-	3.38	2.50		
1 1/4"	42.16	1.65	1.674	2.77	2.732	3.56	3.38	4.85	4.46	-	-	-	-	3.56	3.38		
1 1/2"	48.26	1.65	1.926	2.77	3.155	3.68	4.05	5.08	5.40	-	-	-	-	3.68	4.05		
2"	60.33	1.65	2.424	2.77	3.992	3.91	5.43	5.54	7.47	-	-	-	-	3.91	5.43		
2 1/2"	73.03	2.11	3.747	3.05	5.345	5.16	8.62	7.01	11.40	-	-	-	-	5.16	8.62		
3"	88.90	2.11	4.585	3.05	6.557	5.49	11.28	7.62	15.25	-	-	-	-	5.49	11.28		
3 1/2"	101.60	2.11	5.272	3.05	7.526	5.74	13.56	8.08	18.62	-	-	-	-	5.74	13.56		
4"	114.30	2.11	5.945	3.05	8.496	6.02	16.06	8.56	22.29	-	-	-	-	6.02	16.06		
5"	141.30	2.77	9.639	3.40	11.740	6.55	21.76	9.52	30.92	-	-	-	-	6.55	21.76		
6"	168.30	2.77	11.514	3.40	14.037	7.11	28.23	10.97	42.52	-	-	-	-	7.11	28.23		
8"	219.08	2.77	15.049	3.76	20.334	8.18	42.49	12.7	64.57	-	-	6.35	33.28	7.04	36.80	8.18	42.40
10"	273.05	3.40	23.028	4.19	28.290	9.27	60.24	12.7	81.46	-	-	6.35	41.70	7.8	51.00	9.27	60.24
12"	323.85	3.96	31.806	4.57	36.633	9.52	73.76	12.7	97.36	-	-	6.35	49.68	8.38	65.14	9.52	73.76
14"	355.60	3.98	34.99	4.78	42.102	-	-	-	-	6.35	54.63	7.92	67.98	9.52	81.21	9.52	81.21
16"	406.40	4.19	42.35	4.78	48.220	-	-	-	-	6.35	62.58	7.92	77.90	9.52	93.13	9.52	93.18
18"	457.20	4.19	47.7	4.78	54.300	-	-	-	-	6.35	70.50	7.92	87.80	11.13	122.12	9.52	105.05
20"	508	4.77	60.32	5.53	69.766	-	-	-	-	6.35	78.47	9.52	116.97	12.7	155.00	9.52	116.97
22"	553.8	4.77	-	5.53	-	-	-	-	-	6.35	86.42	9.52	128.89	2.7	170.86	9.52	128.89
24"	609.6	5.54	84.10	6.35	96.215	-	-	-	-	6.35	96.215	9.52	140.80	14.7	209.54	9.52	140.81
26"	660.4	-	-	-	-	-	-	-	-	7.92	127.58	12.7	202.65	-	-	9.52	152.73
28"	711.6	-	-	-	-	-	-	-	-	7.92	137.52	12.7	218.54	15.88	271.94	9.52	164.65
30"	762	6.35	120.59	7.92	147.45	-	-	-	-	7.92	147.45	12.7	234.44	15.88	291.81	9.52	176.57
32"	812.8	-	-	-	-	-	-	-	-	7.92	157.39	12.7	250.33	15.88	311.67	9.52	188.50
34"	863.6	-	-	-	-	-	-	-	-	7.92	167.32	12.7	266.22	15.88	331.54	9.52	200.42
36"	914.4	-	-	-	-	-	-	-	-	7.92	177.26	12.7	282.18	15.88	351.41	9.52	212.34

AMERICAN STANDARD CONTRAST FORM

美标尺寸对照表

美标尺寸 American standard dimensions

Nominal diameter in inches	External diameter in millimeters	ANSI B36.10 Nominal thickness and weight														Double extra Strong XXS					
		40	60	Extra Strong XS	80	100	120	140	160	180	200	220	240	260	280	300	mm	Kg/m			
		mm	Kg/m	mm	Kg/m	mm	Kg/m	mm	Kg/m	mm	Kg/m	mm	Kg/m	mm	Kg/m	mm	Kg/m	mm	Kg/m		
1/8"	10.29	1.73	0.371	-	-	2.41	0.476	2.41	0.476	-	-	-	-	-	-	-	-	-	-		
1/4"	13.72	2.24	0.644	-	-	3.02	0.809	3.02	0.809	-	-	-	-	-	-	-	-	-	-		
3/8"	17.15	2.31	0.858	-	-	3.20	1.118	3.20	1.118	-	-	-	-	-	-	-	-	-	-		
1/2"	21.34	2.77	1.26	-	-	3.73	1.62	3.73	1.62	-	-	-	-	-	-	-	4.78	1.95	7.47	2.54	
3/4"	26.67	2.07	1.68	-	-	3.91	2.19	3.91	2.19	-	-	-	-	-	-	-	5.56	2.89	7.82	3.36	
1"	33.40	3.38	2.50	-	-	4.55	3.23	4.55	3.23	-	-	-	-	-	-	-	6.35	4.23	9.09	5.45	
1 1/4"	42.16	3.56	3.58	-	-	4.85	4.46	4.85	4.46	-	-	-	-	-	-	-	6.35	5.60	9.70	7.75	
1 1/2"	48.26	3.68	4.05	-	-	5.08	5.40	5.08	5.40	-	-	-	-	-	-	-	7.14	7.23	10.16	9.54	
2"	60.33	3.91	5.43	-	-	5.54	7.47	5.54	7.47	-	-	-	-	-	-	-	8.74	11.10	11.07	13.4	
2 1/2"	73.03	5.16	8.02	-	-	7.01	11.40	7.01	11.40	-	-	-	-	-	-	-	9.52	14.90	14.02	20.3	9
3"	88.90	5.49	11.28	-	-	7.62	15.25	7.62	15.25	-	-	-	-	-	-	-	11.13	21.30	15.24	27.6	5
3 1/2"	101.60	5.74	13.56	-	-	8.08	18.62	8.08	18.62	-	-	-	-	-	-	-	-	-	-	-	-
4"	114.30	6.02	16.06	-	-	8.56	22.29	8.56	22.29	-	-	11.13	28.25	-	-	-	13.50	33.50	17.12	40.9	9
5"	141.30	6.55	21.76	-	-	9.52	30.92	9.52	30.92	-	-	12.70	40.20	-	-	-	15.90	49.00	19.05	57.37	
6"	168.30	7.11	28.23	-	-	10.97	42.52	10.97	42.52	-	-	14.30	54.20	-	-	-	18.20	67.40	21.95	79.11	
8"	219.08	8.18	42.49	10.30	53.00	12.7	64.57	12.7	64.57	15.10	75.70	16.20	90.20	20.60	100.80	23.00	111.20	22.22	107.7	6	
10"	273.05	9.27	60.24	12.70	81.46	12.7	81.46	12.7	81.46	15.09	95.84	18.26	114.59	21.44	132.85	25.40	154.97	28.58	172.11	-	-
12"	323.85	10.31	79.71	14.27	108.97	12.7	97.36	17.48	131.81	21.44	159.67	25.40	166.70	28.56	207.87	33.32	238.60	-	-	-	-
14"	355.60	11.13	94.31	15.09	126.51	12.7	107.28	19.05	157.90	23.83	194.64	27.79	224.36	31.75	253.32	35.71	281.49	-	-	-	-
16"	406.40	12.70	123.18	16.66	160.04	12.7	123.18	21.44	203.26	26.19	245.34	30.96	286.33	36.53	332.72	40.49	364.94	-	-	-	-
18"	457.20	14.27	155.920	19.05	205.60	12.7	139.07	23.83	254.24	29.36	309.55	34.92	363.33	39.67	408.21	45.24	459.18	-	-	-	-
20"	508	15.09	183.14	20.62	247.79	12.7	154.97	26.19	310.91	32.54	381.20	38.10	441.06	44.45	507.63	50.01	564.24	-	-	-	-
22"	553.8	15.87	213.80	22.22	293.80	12.7	170.86	28.57	373.27	34.92	450.75	41.27	526.24	47.62	599.76	53.97	671.26	-	-	-	-
24"	609.6	17.48	254.74	24.61	354.82	12.7	186.75	30.98	441.30	38.89	546.84	46.02	639.18	52.37	719.18	59.54	800.74	-	-	-	-
26"	660.4	-	-	-	-	-	-	12.7	292.65	-	-	-	-	-	-	-	-	-	-	-	-
28"	711.6	-	-	-	-	-	-	12.7	318.54	-	-	-	-	-	-	-	-	-	-	-	-
30"	762	-	-	-	-	-	-	12.7	344.44	-	-	-	-	-	-	-	-	-	-	-	-
32"	812.8	17.48	242.17	-	-	-	-	12.7	370.44	-	-	-	-	-	-	-	-	-	-	-	-
34"	863.6	17.48	364.01	-	-	-	-	12.7	396.44	-	-	-	-	-	-	-	-	-	-	-	-
36"	914.4	19.05	420.20	-	-	-	-	12.7	422.44	-	-	-	-	-	-	-	-	-	-	-	-



CONTRAST OF PART STANDARD AT HOME AND ABROAD FOR STAINLESS STEEL SEAMLESS STEEL PIPE (REFERENCE)

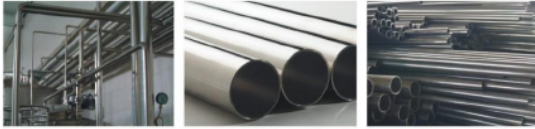
不锈钢无缝钢管国内外部分标准对照(参考)

项目 Item	标准 Standard	GB13296-91	GB/T14976-2000	
牌号 Nameplate number		0Cr18Ni9 00Cr19Ni10 0Cr25Ni20 0Cr17Ni12Mo2 00Cr17Ni14Mo2 0Cr18Ni11Nb	0Cr18Ni9 00Cr19Ni10 0Cr25Ni20 0Cr17Ni12Mo2 00Cr17Ni14Mo2 0Cr18Ni11Nb 1Cr18Ni9Ti 0Cr18Ni10Ti 0Cr18Ni12Mo2Ti 0Cr19Ni13Mo3 00Cr19Ni13Mo3 1Cr18Ni11Ti*	
屈服强度 Yield strength (MPa)		≥ 175; ≥ 205	≥ 175; ≥ 205	
抗拉强度 Tensile strength (MPa)		≥ 480; ≥ 520; ≥ 530	≥ 480; ≥ 520; ≥ 530	
延伸率 Elongation (MPa)		≥ 35; ≥ 40	≥ 35	
压扁试验 Flattening test (mm)		l ≤ 10mm H=1.09l(0.09+1D)	(选项) l ≤ 10mm H=1.09l(0.09+1D) (Optional) l ≤ 10mm H=1.09l(0.09+1D)	
扩口试验 Expanding test		T ≤ 10mm GB/T242 α=60° 扩18%D T ≤ 10mm GB/T242 α=60° Expanding 18%D	(选项) T ≤ 10mm GB/T242 α=60° 扩18%D (Optional) T ≤ 10mm GB/T242 expanding 18%D α=30°、45° 或 60°	
晶粒度 Granularity		***GB/T6394 4-7级 ***GB/T6394 4-7 Grade		
水压试验 Hydraulic test(MPa)		GB241 P=2R/D式中R=α b/4 GB241 P=2R/D in the formula R=α b/4 Pmax=20 GB/T7735A 不可用于水压试验 GB/T7735A Grade can't be applicable for hydraulic pressure	GB241 P=2R/D式中R=40%α b GB241 P=2R/D in the formula R=40%α b 可用超声或涡流探伤代替 Can be replaced by ultrasonic or eddy current flaw detection GB4163 12% 或 GB/T7735A 级 GB4163 12% or GB/T7735A grade	
晶间腐蚀 Crystal corrosion test		GB4334.5	GB4334.5	
无损探伤 Nondestructive flaw detection		GB/T5777 C10级 GB/T5777 C10 grade	经双方协定, 可选做超声 Automatic ultrasonic test to be agreed	
热处理 Heat treatment		要求 Requirements	要求 Requirements	
外径偏差 (mm) Outside diameter deviation	外径 Outside diameter	允许偏差 Permitted error	普通级 Ordinary grade	较高级 Higher grade
			8-30 ± 0.20	6-10 ± 0.20 ± 0.15
			> 30-50 ± 0.30	> 10-30 ± 0.30 ± 0.20
			> 50 ± 0.80%D	> 30-50 ± 0.40 ± 0.30
壁厚偏差 (mm) Error of wall thickness	壁厚 Wall thickness	允许偏差 Permitted error	普通级 Ordinary grade	较高级 Higher grade
			1.0-3.0 ±12%~-10%t	0.5-1 ± 0.15 ± 0.12
			3.0 ± 10%	> 1-3 ± 14%t ± 12%~-10%t
				> 3 ± 12.5%~-10%t ± 10%t
弯曲度 (mm/m) Bending		l ≤ 15mm 1.5 l > 15mm 2.0	l ≤ 15mm 1.5 l > 15mm 2.0	
其它要求 Other requirements		可选做硬度试验 HRC < 90 Hardness test is optional HRC < 90		

CONTRAST OF PART STANDARD AT HOME AND ABROAD FOR STAINLESS STEEL SEAMLESS STEEL PIPE (REFERENCE)

不锈钢无缝钢管国内外部分标准对照(参考)

ASTM A213/A212M		ASTM A312/A312M		JIS G 3459	
TP304 TP316 TP317 TP347 TP309H*	TP304L TP316L TP317L TP310S TP310H* TP321H△	TP304 TP316 TP317 TP310H*	TP304L TP316L TP317L TP310S TP310H* TP321H△	SUS 304TB SUS 316TB SUS 317TB SUS 310TB SUS 321TB SUS 321HTB*	SUS 304LTB SUS 316LTB SUS 317LTB SUS 310LTB SUS 310STB SUS 347TB
≥ 170; ≥ 205		≥ 170; ≥ 205		≥ 177	
≥ 485; ≥ 515		≥ 485; ≥ 515		≥ 481; ≥ 520	
≥ 35		≥ 35		≥ 27; ≥ 35	
H=1.09(0.09+1D)并试验完整性 H=1.09(0.09+1D) and test completeness		H=1.09(0.09+1D)并试验完整性 H=1.09(0.09+1D) and test completeness		H=1.09(0.09+1D)	
内径扩张率为21-68% Expanding rate of inside diameter is 21-68%				α=60° 扩12%D α=60° Expanding 12%D	
D		D		P=2R/D 式中R=α b/4 可用无损探伤代替 P=2R/D in the formula R=α b/4 can be replaced by nondestructive flaw detection	
< 25.4	7	< 88.9	17		
25.4 - < 38.1	10	> 88.9	19		
38.1 - < 50.8	14				
50.8 - < 76.2	17				
76.2 - < 127	24				
≥ 127	31				
ASTM A213 主体(非必需)要求 ASTM A212 E method (supplemental requirement)		ASTM A312 主体(非必需)要求 ASTM A312 E method (supplemental requirement)		JIS G3459 特殊要求 JIS G3459 Special requirement	
ASTM E213 E309 E426 要求 Requirements		ASTM E213 E309 E426 要求 Requirements		JIS G3459 特殊要求 JIS G3459 Special requirement	
外径 Outside diameter	外径偏差 Outside diameter deviation	外径 Outside diameter	允许偏差 Permitted error	外径 Outside diameter	允许偏差 Permitted error
< 25.4	± 0.10	10.3-48.3	+0.40~-0.80	< 60	± 0.25
25.4 - < 38.1	± 0.15	> 48.3-114.3	+0.80~-0.08	≥ 60 - < 80	± 0.30
> 38.1 - < 50.8	± 0.20	> 114.3-219.1	+1.60~-0.80	≥ 80 - < 100	± 0.40
50.8 - < 63.5	± 0.25	> 219.1-457.2	+2.40~-0.80	≥ 100 - < 120	+0.40~-0.60
63.5 - < 76.2	± 0.30	> 457.2-660.4	+3.20~-0.80	≥ 120 - < 150	+0.40~-0.80
76.2 - < 101.6	± 0.38	> 660.4-864	+4.00~-0.08	≥ 150 - < 200	+0.40~-1.20
> 101.6 - < 190.5	± 0.38~-0.64	> 864-1219.2	+4.80~-0.08	≥ 200	+0.40~-1.60
> 190.5 - < 228.6	± 0.38~-1.14				
外径 Outside diameter	壁厚偏差 Error of wall thickness (mm)	外径 Outside diameter	允许偏差 Permitted error	外径 Outside diameter	允许偏差 Permitted error
≤ 38.1	+20%t	+不规定/-12.5%t	+not defined/-12.5%t	≤ 40	D ≥ 40
> 38.1	+22%t			t < 2	+0.40 ±22%t
				t ≥ 2	+20%t
合理的直度 Reasonable straightness		合理的直度 Reasonable straightness		实用性平直 Practical straightness	
HRB < 90		HRB < 90		硬度 HRB < 90(特殊要求) Hardness HRB < 90 (special requirement)	



CONTRAST OF PART STANDARD AT HOME AND ABROAD FOR STAINLESS STEEL PRECISE WELDING PIPE (REFERENCE)

不锈钢精密焊管国内外部分标准对照(参考)

项目 Item	标准 Standard	GB12771-2000	HG20537 2-52	HG20537 3-52	HG20537 4-52
牌号 Plate No.		00Cr19Ni9 00Cr17Ni12Mo2 00Cr18Ni10Ti	00Cr19Ni9 00Cr17Ni12Mo2 00Cr18Ni10Ti	00Cr19Ni9 00Cr17Ni12Mo2 00Cr18Ni10Ti	00Cr19Ni9 00Cr17Ni12Mo2 00Cr18Ni10Ti
规格范围 Specification range(mm)		D≤600	10≤D≤75	D≤325	377≤D≤1020
屈服强度 Yield strength 6.0.2(MPa)		≥180; ≥210	≥175; ≥205	≥175; ≥205	≥175; ≥205
抗拉强度 Tensile strength 6 (MPa)		≥480; ≥520	≥480; ≥520	≥480; ≥520	≥480; ≥520
延伸率 Elongation rate 6.5(MPa)		≥35(焊态 Welding condition ≥25)	≥40; ≥40	≥40	≥40
焊缝纵向弯曲或反平 Horizontal bending or unbending of welding seam		展平 Unbending D≥200	反向展平 Reverse unbending		正弯、反弯、弯芯直径 d=2 Right bending, reverse bending, diameter of bending core
压扁试验 Flattening test		D<200 H=D/3	H=1.09(D/0.9+D)	H=1.09(D/0.9+D)	
扩口 卷边 Tube end expansion, beading			α=60° 扩(expand)20%D		
无损探伤 Nondestructive flow detection			GB/T 7735 B级(grade)	GB/T 7735 A级(grade) 0.3mm以内 0.2mm以内 0.2mm以内 0.2mm以内 GB/T 7735 B级(grade) 0.3mm以内 0.2mm以内 0.2mm以内 0.2mm以内	GB/T 7735 A级(grade) 0.3mm以内 0.2mm以内 0.2mm以内 0.2mm以内 GB/T 7735 B级(grade) 0.3mm以内 0.2mm以内 0.2mm以内 0.2mm以内
压力试验 Hydraulic pressure test		Prmax=10倍设计压力 GB17735 A级 Prmax=10倍设计压力 GB17735 A级 with eddy current flow detection	水压试验 Water pressure test Prmax=10倍设计压力 GB17735 A级 with eddy current flow detection	水压试验 Water pressure test Prmax=10倍设计压力 GB17735 A级 with eddy current flow detection	水压试验 Water pressure test Prmax=10倍设计压力 GB17735 A级 with eddy current flow detection
晶间腐蚀试验 Corrosion test between crystal		GB4334.5	附加要求 Additional requirements GB4334.5	附加要求 Additional requirements GB4334.5	附加要求 Additional requirements GB4334.5
热处理 Heat treatment		要求 Requirements	要求 Requirements	要求 Requirements	要求 Requirements
外径公差 (mm) Outside diameter deviation	公差 Tolerance	外径 Outside diameter	公差 Tolerance	公差 Tolerance	公差 Tolerance
		允差 Permitted error	允差 Permitted error	允差 Permitted error	允差 Permitted error
		允差 Permitted error	允差 Permitted error	允差 Permitted error	允差 Permitted error
		允差 Permitted error	允差 Permitted error	允差 Permitted error	允差 Permitted error
壁厚公差 (mm) Error of wall thickness	公差 Tolerance	壁厚 Wall thickness	公差 Tolerance	公差 Tolerance	公差 Tolerance
		允差 Permitted error	允差 Permitted error	允差 Permitted error	允差 Permitted error
		允差 Permitted error	允差 Permitted error	允差 Permitted error	允差 Permitted error
		允差 Permitted error	允差 Permitted error	允差 Permitted error	允差 Permitted error
不圆度 Error of non-roundness		2.0mm/m-2.5mm/m	1.0mm/m	3mm/m-3m	5mm/m-3m
焊缝余高 Surplus height of welding seam		最大不超过 1.5mm Maximum can't exceed	焊缝余高 Surplus height of welding seam D≤30, ≤0.15 D-50-125 Surplus height of external seam and top of internal seam of metal matrix	焊缝余高 Surplus height of welding seam D≤30, ≤0.15 D-50-125 Surplus height of external seam and top of internal seam of metal matrix	焊缝余高 Surplus height of welding seam D≤30, ≤0.15 D-50-125 Surplus height of external seam and top of internal seam of metal matrix
其它要求 Other requirements		HRB≤90	HRB≤90	HRB≤90	HRB≤90

CONTRAST OF PART STANDARD AT HOME AND ABROAD FOR STAINLESS STEEL PRECISE WELDING PIPE (REFERENCE)

不锈钢精密焊管国内外部分标准对照(参考)

ASTM A312/A321M	ASTM A249/A249M	ASTM A688/A688M	JIS G 3468
TP304 TP304L TP316 TP316L TP321	TP304 TP304L TP316 TP316L TP321	TP304 TP304N TP316L TP304LN	SUS 304TPV SUS 304LTPV SUS 316TPV SUS 316LTPV SUS 321TPV
10.3 ≤ D ≤ 762	D ≤ 1270.4 ≤ 8.1	15.9 < D ≤ 25.4 75 ≤ D ≤ 1200 或更大 D ≤ 0.7 15.9 < D ≤ 25.4 75 ≤ D ≤ 1200 or larger D ≤ 0.7	165.2 ≤ D ≤ 1016
≥ 170; ≥ 205	≥ 170; ≥ 215	≥ 175; ≥ 205; ≥ 240	≥ 175; ≥ 205
≥ 485; ≥ 515	≥ 485; ≥ 515	≥ 485; ≥ 515; ≥ 550	≥ 480; ≥ 520
≥ 35	≥ 35	≥ 35 (纵向) ≥ 25; ≥ 35 (transverse) ≥ 25	≥ 35 (纵向) ≥ 25; ≥ 35 (transverse) ≥ 25
焊缝纵向 焊缝纵向折弯由 ASTM A770 Right bending 焊缝纵向 焊缝纵向折弯由 ASTM A770 Right bending	反向弯曲 (反向) 或展平 Reverse bending (反向) or unfolding H=1.09(D/0.9+D) 并试验良好性 H=1.09(D/0.9+D) and test completeness	同左 Same as the left	同左 Same as the left
特殊要求 Special requirements	特殊要求 Special requirements	特殊要求 Special requirements	特殊要求 Special requirements
水压试验 Hydraulic pressure test	水压试验 Hydraulic pressure test	水压试验 Hydraulic pressure test	水压试验 Hydraulic pressure test
晶间腐蚀试验 Corrosion test between crystal	晶间腐蚀试验 Corrosion test between crystal	晶间腐蚀试验 Corrosion test between crystal	晶间腐蚀试验 Corrosion test between crystal
热处理 Heat treatment	热处理 Heat treatment	热处理 Heat treatment	热处理 Heat treatment
外径公差 (mm) Outside diameter deviation	外径公差 (mm) Outside diameter deviation	外径公差 (mm) Outside diameter deviation	外径公差 (mm) Outside diameter deviation
壁厚公差 (mm) Error of wall thickness	壁厚公差 (mm) Error of wall thickness	壁厚公差 (mm) Error of wall thickness	壁厚公差 (mm) Error of wall thickness
不圆度 Error of non-roundness	不圆度 Error of non-roundness	不圆度 Error of non-roundness	不圆度 Error of non-roundness
焊缝余高 Surplus height of welding seam	焊缝余高 Surplus height of welding seam	焊缝余高 Surplus height of welding seam	焊缝余高 Surplus height of welding seam
其它要求 Other requirements	其它要求 Other requirements	其它要求 Other requirements	其它要求 Other requirements