

Seamless Solutions, Stainless Excellence — Crafting Precision in Stainless Steel Piping for a Seamless Future

无缝解决方案，不锈钢卓越——精雕细琢不锈钢管道，打造无缝未来



0577-86862022



www.flkgy.com



info@flk-group.com



No. 589 Third RD Binhai Industrial Valve
Area Longwan Wenzhou Zhenjiang China



富林克管业有限公司

Fulinke Pipe Industry Co., Ltd.

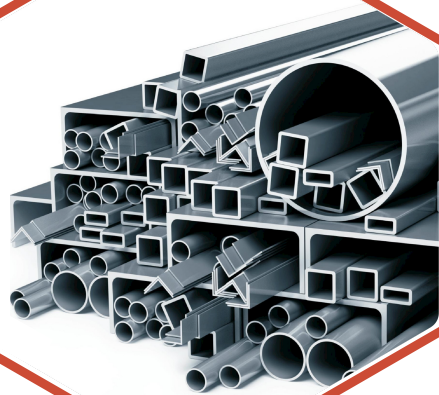
不锈钢钢管专业制造商

Professional manufacturer of stainless steel pipes

关于我们

company 企业文化
culture

ABOUT US



FLK PIPELINE Co., Ltd is located in Wenzhou, Zhejiang, the most famous stainless steel base in China. There is the most complete stainless steel one-stop industrial chain, which also provides us with extremely competitive prerequisites. Our stainless steel seamless tubes and pipes are exported all over the world and used in various industries.

Our factory is equipped with the most advanced manufacturing machinery and equipment, testing equipment and technology to ensure that every product meets the highest standards. We pay attention to quality control, from the selection of raw materials to the packaging of finished products, strict monitoring and testing. In addition, we have a dedicated team of employees who not only have rich experience and expertise, but also work hard to ensure that our products are consistently of excellent quality and delivered in time. We not only care about product quality, but also are committed to sustainable development. We have taken a series of measures to reduce our impact on the environment. We use renewable energy, optimize waste recycling and use environmentally friendly production processes.

**Integrity
dedication
hard work
striving for the
first place**

**诚信 敬业 艰苦
奋斗 争第一**

**INTEGRITYMANAGEMENT
CREATES GOOD PRODUCTS**

**诚信经营
创造好产品**



PRODUCTION EQUIPMENT

生产设备



富林克管业一贯努力建设创新环境，营造创新氛围，引进竞争机制，增强员工创新意识，不断提高员工创新能力。企业重视信息导向，将新知识高科技应用于产品改造与技术革新，研发能力日益增强，新产品、新工艺层出不穷，企业活力充沛，生机无限。于此同时，创新不仅仅停留在产品层次，因为我们深深懂得产品只是客户需求的一部分，绝不是全部!因此，我们致力于管理制度改革与服务模式更新，规范管理制度，重视项目的每一个环节与细节。从产品研发、设计、生产、销售到服务的整个过程中，富林克人都充满了创新性，并不断追求更富有挑战性和创造性的工作。

Fulinke Pipe Industry has always strived to build an innovative environment, create an innovative atmosphere, introduce a competitive mechanism, enhance employees' innovation awareness, and continuously improve employees' innovation capabilities. Enterprises attach great importance to information orientation, apply new knowledge and high technology to product transformation and technological innovation, their research and development capabilities are increasingly enhanced, new products and new processes emerge in an endless stream, and enterprises are full of vitality and unlimited vitality. At the same time, innovation does not only stop at the product level, because we deeply understand that products are only part of customer needs, by no means all! Therefore, we are committed to the reform of management systems and the update of service models, standardize management systems, and pay attention to every aspect of the project. links and details. Throughout the entire process from product development, design, production, sales to service, Fulinke people are full of innovation and constantly pursue more challenging and creative work.



Product specifications:

6mm --530mm X1mm --40mm,
special specifications and materials can be customized!

technical standard:

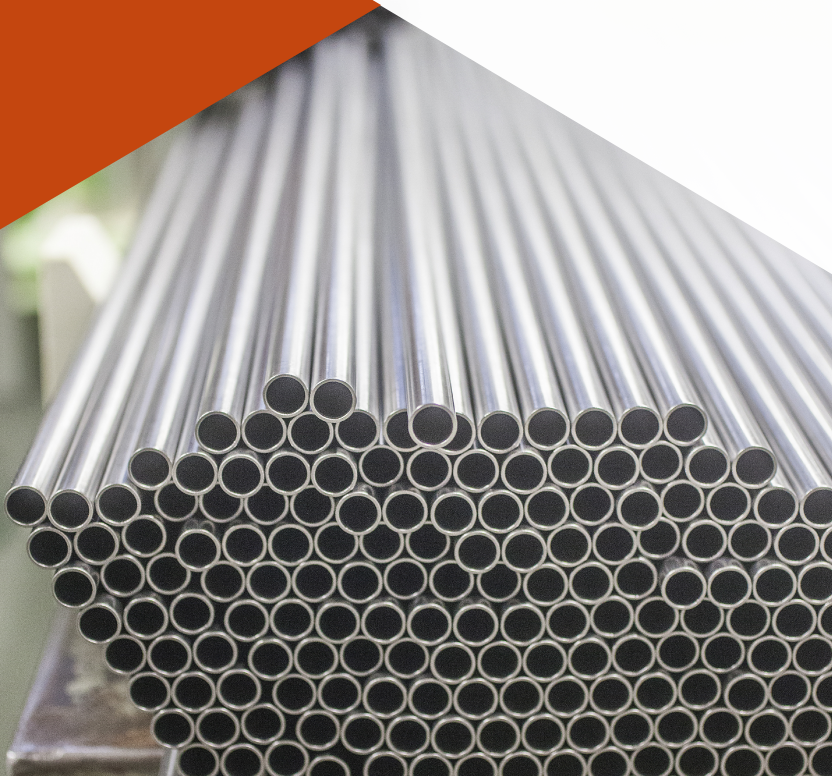
(For structure, fluid transportation, boiler heat exchanger, petroleum cracking) G B14975-2002, G B14976-2002, G B13296-91GB2270-80, GB9948-88.ASTM/ASMEA213, ASTM/SMEA312, ASTM/ASNE A269 , JIS G3459.IS G3463, JIS G 3448, D IN 17458. Comparison table of commonly used stainless steel grades and stainless steel standard grades in various countries

产品规格:

6mm --530m m Xim m --40m m，特殊规格和材质可订做!

技术标准

(结构用、流体输送用、锅炉热交换器用、石油裂化用)G B14975-2002、G B14976-2002、G B13296-91GB2270-80、GB9948-88.ASTM/ASMEA213、ASTM/SMEA312、ASTM/ASNE A269、JIS G3459.IS G3463、JIS G 3448、D IN 17458。常用不锈钢牌号与各国不锈钢标准牌号对照表



OUR COMPANY PRO

我们的公司简介



材质标准

MATERIAL STANDARD

中国与部分国家的不锈钢号近似对照表

钢类 Type	钢号 Grade of steel					规格 Specification D---SMM	常用标准 Common Standard	钢类 Type	钢号 Grade of steel					规格 Specification D---SMM	常用标准 Common Standard
	中国 (GB)	美国AISI (ASTM)	日本JIS (Japan)	德国(Germany)					中国 (GB)	美国AISI (ASTM)	日本JIS (Japan)	德国(Germany)			
				DIN17006	DIN17007							DIN17006	DIN17007		
不锈钢无缝管 Stainless steel seamless pipe	0Cr18Ni9	304/S30400	SUS304	X5CrNi18-10	1.4301	φ 6-630 0.5-28mm	GB/T14975-2002	不锈钢焊管 Stainless steel welded pipe	0Cr18Ni9	304/S30400	SUS304	X5CrNi18-10	1.4301	φ 19-1000 1-20mm	GB/T12770-91
	00Cr19Ni10	304L/S30403	SUS304L	X2CrNi19-11	1.4306		GB/T14976-2002		00Cr19Ni10	304L/S30403	SUS304L	X2CrNi19-11	1.4306		GB/T12771-2000
	00Cr25Ni20	310S/S31008	SUS310S	X12CrNi25-21	1.4845		GB13296-91		00Cr25Ni20	310S/S31008	SUS310S	X12CrNi25-21	1.4845		HG20537.2-92
	0Cr17Ni12Mo2	316/S31600	SUS316	X5CrNiMo17-12-2	1.4401		国外标准(部分)		0Cr17Ni12Mo2	316/S31600	SUS316	X5CrNiMo17-12-2	1.4401		HG20537.3-92
	00Cr17Ni14Mo2	316L/S31603	SUS316L	X2CrNiMo16-14-3	1.4435		ASTM A213/A213 M		00Cr17Ni14Mo2	316L/S31603	SUS316L	X2CrNiMo16-14-3	1.4435		HG20537.4-92
	0Cr19Ni13Mo3	317/S31700	SUS317	X5CrNiMo17-13-3	1.4449		ASTM A312/A312M		0Cr19Ni13Mo3	317/S31700	SUS317	X5CrNiMo17-13-3	1.4449		国外标准(部分)
	00Cr19Ni13Mo3	317S/S31703	SUS317L	X2CrNiMo16-14-3	1.4438		JIS G3459		00Cr19Ni13Mo3	317S/S31703	SUS317L	X2CrNiMo16-14-3	1.4438		ASTM A312/A312M
	1Cr18Ni9Ti	321/S32100	SUS321	X12CrNiTi18-9	1.4878		DIN 2462		1Cr18Ni9Ti	321/S32100	SUS321	X12CrNiTi18-9	1.4878		ASTM A688/A688M
	0Cr18Ni10Ti			X8CrNiTi18-10	1.4541				0Cr18Ni10Ti			X8CrNiTi18-10	1.4541		JIS G3468
	0Cr18Ni11Nb	347/S34700	SUS347	X12CrNiNb18-10	1.4550				0Cr18Ni11Nb	347/S34700	SUS347	X12CrNiNb18-10	1.4550		DIN 2462

主要钢种和典型钢号
Main Steel Types And Typica

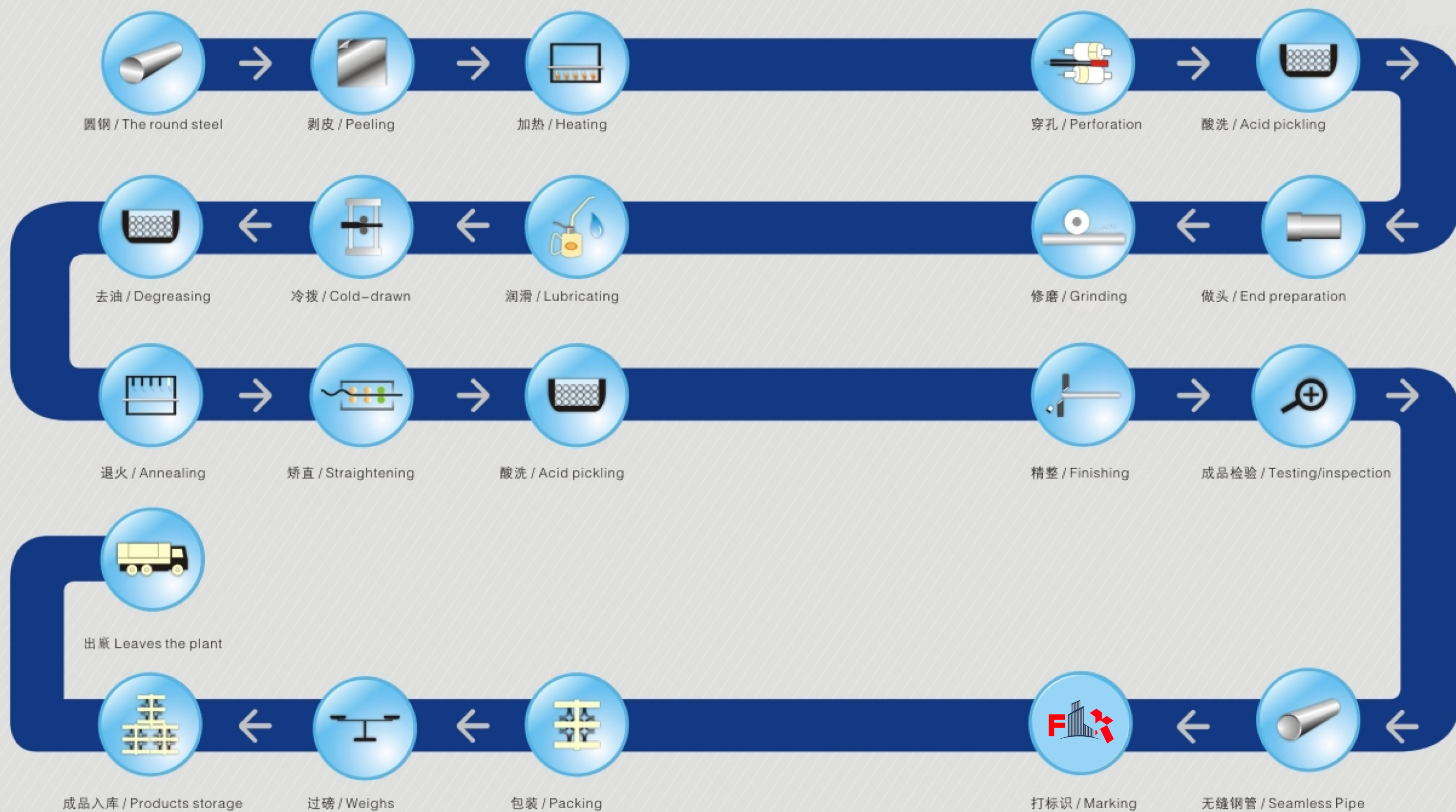
序号 Item No	钢种 Steel grades	典型钢号 (AISI) Typical steel codes
1	奥氏体不锈钢 Austenite	301, 310S, 304, 316, 316L, 316Ti, 317, 317, 321, 347H, 904L
2	铁素体不锈钢 Ferrite	430
3	双相不锈钢 Bio-phase	S31803 S2205



TECHNICAL FLOW
工艺流程



TECHNICAL FLOW
工艺流程



COMPANY
VISION

"Fulinke Pipe Industry Co, Ltd. our vision is to be a global leader in delivering exceptional stainless steel products. We aspire to transcend geographical boundaries and become the preferred choice for customers worldwide. Through innovation, quality craftsmanship, and a commitment to sustainability, we aim to not only meet but exceed the diverse needs of our global clientele. Together, we envision a future where our stainless steel solutions contribute to the advancement of industries and the well-being of communities across the globe."

BUSINESS
MAP



“富林科管业有限公司的愿景是成为提供卓越不锈钢产品的全球领导者。我们渴望超越地域界限，成为全球客户的首选。通过创新、优质工艺和对可持续发展的承诺，我们的目标是：只满足甚至超越我们全球客户的多样化需求。我们共同展望未来，我们的不锈钢解决方案将为全球行业的进步和社区的福祉做出贡献。”



国内国际尺寸偏差对照
Comparison Between Domestic
And International Size Deviations

标准 (specification)	尺寸 (size)	尺寸 Size	外径 允许偏差 Permissible Variation		尺寸 Size	厚度 允许偏差 Permissible Variation		尺寸 Size	长度 允许偏差 Permissible Variation	
			普通	高						
GB/T14975-2002			+0.30/-0.30	± 0.02	S ≤ 3	(+.-)14%	± 12.5%S	D > 50.8	L1	0-20
	> 30-50		+0.40/-0.40	± 0.30	S > 3				L2	0-10
			(+.-)0.9%D	± 0.8%D			± 10%S		L3	0-5
GB/T14976-2002	[6,10]	+0.20/-0.20	± 0.15	(1.0,3)	± 14%S	± 12.5%S	L1		0-20	
	(10,30)	+0.30/-0.30	± 0.20	S > 3			L2		0-10	
	(30,50)	+0.40/-0.40	± 0.30	≤ 38	(12%/-10%)S	± 10%S	L3		0-5	
	D > 50	(+.-)0.9%	± 0.8%D	S > 3						
GB13296-2007	6-30	+0.15/-0.20			± 20%S		D ≥ 50.8			
	(30,50)	+0.30/-0.30		D ≤ 38.1	(+12%-10%)					
	D > 50	(+.-)0.75%			± 22%S					
ASTMA213	D < 25.4	+0.10/-0.10		D > 38.1	+20%/-0	+22%/-0	D ≥ 50.8	+3/-0		
	[25.4,38.1]	+0.15/-0.15								
	(38.1,50.8)	+0.20/-0.20								
	[50.8,63.5]	+0.25/-0.25						+5/-0		
	[63.5,76.2]	+0.30/-0.30								
	[76.2,101.6]	+0.38/-0.38								
	(101.6,190.5)	+0.38/-0.64								
	(190.5,228.6]	+0.38/-1.14								
ASTMA269	D < 12.7	+0.13/-0.13		S < 2 S ≥ 2	(+.-)15%					+3.2/-0
	[12.7,38.1]									
	[38.1,88.9)	+0.25/-0.25			(+.-)10%		+4.8/-0			
	[88.9,139.7)	+0.38/-0.38								
	[139.7,203.2]	+0.76/-0.76								
ASTMA312	203.3-304.8	± 1.01					10.29~73.03 +20%~12.5% 88.90~762.00 t/D ≤ 5% +20%~12.5% 88.90~762.00 t/D ≤ 5% +15%~12.5% > 508.00 t/D 焊接管式更大所有比例 +17.5%~12.5		+6/-0	
	203.2-355.6	± 1.26								
	[10.29,49.26]	+0.40/-0.80								
	(49.26,114.30]	+0.08/-0.80								
	(114.30,219.08]	+1.6/-0.80								
	(219.08,457.20]	+2.4/-0.80								
	(457.20,508.00, 558.80,609.60]	+3.2/-0.80								
	(609.60,762.00]	± 4.0/-0.80								
JISG3459	D < 30	+0.30/-0.30					(+.-)20			
	D ≥ 30	+1%/-1%				(+.-)10%				

国内国际尺寸偏差对照
Comparison Between Domestic
And International Size Deviations

标准 (specification)	尺寸 (size)	尺寸 Size	外径 允许偏差 Permissible Variation	尺寸 Size	厚度 允许偏差 Permissible Variation	尺寸 Size	长度 允许偏差 Permissible Variation
JISG 3463	D < 40	+0.25/-0.25	D < 40:S < 2	+0.40/-0	D ≤ 50:L ≤ 7	+7/-0	
	[40,50)				D < 50:L > 7	长度每增加3m或其零数在上面的正允许偏差加上3mm 最大15mm	
	[50,60)						
	[60,80)	+0.30/-0.30					
	[80,100)			+0.40/-0.40			
	[100,120)				+0.40/-0.60		
	[120,160)	+0.40/0.80	D > 50:L ≤ 7			+10/-0	
	[160,200)		+0.40/1.20	D > 50:L > 7		与D < 50:L ≥ 7m 内容相同	
	D ≥ 200				+0.40/-1.60		
DIN17456 DIN17458	D2	(+.-)1.0%(+.-)0.5min	T3	(+.-)10% 0.2min	D ≤ 40:L 1m	+1/-0	
	D3	(+.-)0.75%(+.-)0.3min			T4	(+.-)7.5% 0.15min	D ≤ 40:L:(1-2)m
			D ≤ 40:L:(2-3)m	+3/-0			
			D ≤ 40:L:(3-4)m	+4/-0			
			D ≤ 40:L:(4-8)m	+5/-0			
	D4	(+.-)5%(+.-)0.1min	40 < D < 168				
L ≤ 6m			+5/-0				
ASTMA511 TABLE4	D < 12.7	+0.13/-0.13		(±)15%		+3.2/-0	
	[12.7,38.1)						
	[38.1,88.9)						
	[88.9,139.7)						
	[139.7,203.2]						
	[203.2,219.8)						
	[219.8,323.85]						
ASTMA511 TABLE4	D ≤ 76.2	+0.56/-0.58	S ≤ 2.77	(+.-)16.5%		+4.76/-0	
			2.77 < S ≤ 4.37	(+.-)15%			
			4.37 < S ≤ 5.16	(+.-)14%			
			S > 5.16	(+.-)12.5%			
	(76.2 139.7]	+0.79/-0.79	S ≤ 2.77	(+.-)16.5%			
			2.77 < S ≤ 4.37	(+.-)15%			
			4.37 < S ≤ 5.16	(+.-)14%			
			S > 5.16	(+.-)12.5%			
	(139.7 203.2]	+1.19/-1.19	4.37 < S ≤ 5.16	(+.-)14%			
S > 5.16			(+.-)12.5%				



国标尺寸对照表

National Standard Contrast Form

公称通径 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	-	-	6.3	-	-	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	-	-	-	-	-

美标尺寸对照表

American Standard Contrast Form

Nominal diameter in inches	Extra Strong in inches	ANSI B36.19								ANSI B36.10								ANSI B36.10																	
		Nominal diameter in inches																Nominal thickness and weight																	
		5s		10s		Sched.40S		Sched.80S		10		20		30		Standard		40		60		Extra Strong XS		80		100		120		140		160		Outside Strong OS	
		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	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	-	-	1.24	0.281	1.73	0.371	2.41	0.467	-	-	-	-	-	-	1.73	0.371	1.73	0.371	-	-	2.41	0.476	2.41	0.476	-	-	-	-	-	-	-	-	-	
1/4"	13.72	-	-	1.65	0.499	2.24	0.644	3.02	0.809	-	-	-	-	-	-	2.24	0.644	2.24	0.644	-	-	3.02	0.809	3.02	0.809	-	-	-	-	-	-	-	-	-	
3/8"	17.15	-	-	1.65	0.640	2.31	0.858	3.20	1.118	-	-	-	-	-	-	2.31	0.858	2.31	0.858	-	-	3.20	1.118	3.20	1.118	-	-	-	-	-	-	-	-	-	
1/2"	21.34	1.65	0.814	2.11	1.016	2.77	1.26	3.73	1.62	-	-	-	-	-	-	2.77	1.26	2.77	1.26	-	-	3.73	1.62	3.73	1.62	-	-	-	-	-	-	4.78	1.95	7.47	2.54
3/4"	26.67	1.65	1.034	2.11	1.298	2.87	1.68	3.91	2.19	-	-	-	-	-	-	2.87	1.68	2.07	1.68	-	-	3.91	2.19	3.91	2.19	-	-	-	-	-	-	5.56	2.89	7.82	3.36
1"	33.40	1.65	1.312	2.77	2.125	3.38	2.50	4.55	3.23	-	-	-	-	-	-	3.38	2.50	3.38	2.50	-	-	4.55	3.23	4.55	3.23	-	-	-	-	-	-	8.35	4.23	9.09	5.45
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	3.56	3.56	-	-	4.85	4.46	4.85	4.46	-	-	-	-	-	-	6.35	5.60	9.70	7.75
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	3.68	4.05	-	-	5.08	5.40	5.08	5.40	-	-	-	-	-	-	7.14	7.23	10.16	9.54
2"	60.33	1.65	2.424	2.77	3.992	3.91	5.43	5.54	7.47	-	-	-	-	-	-	3.91	5.43	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	2.11	3.747	3.05	5.345	5.16	8.62	7.01	11.40	-	-	-	-	-	-	5.16	8.62	5.16	8.02	-	-	7.01	11.40	7.01	11.40	-	-	-	-	-	-	9.52	14.90	14.02	20.3
3"	88.90	2.11	4.585	3.05	6.557	5.49	11.28	7.62	15.25	-	-	-	-	-	-	5.49	11.28	5.49	11.28	-	-	7.62	15.25	7.62	15.25	-	-	-	-	-	-	11.13	21.90	15.24	27.6
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	5.74	13.56	-	-	8.08	18.62	8.08	18.62	-	-	-	-	-	-	-	-	-	-
4"	114.30	2.11	5.945	3.05	8.496	6.02	16.06	8.56	22.29	-	-	-	-	-	-	6.02	16.06	6.02	16.06	-	-	8.56	22.29	8.56	22.29	-	-	11.13	28.25	-	-	13.50	33.50	17.12	40.9
5"	141.30	2.77	9.639	3.40	11.740	6.55	21.76	9.52	30.92	-	-	-	-	-	-	6.55	21.76	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	2.77	11.514	3.40	14.037	7.11	28.23	10.97	42.52	-	-	-	-	-	-	7.11	28.23	7.11	38.23	-	-	10.97	42.52	10.97	42.52	-	-	14.30	54.20	-	-	18.20	67.40	21.95	79.11
8"	219.08	2.77	15.048	3.76	20.334	8.18	42.49	12.7	64.57	-	-	6.35	33.28	7.04	36.80	8.18	42.40	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
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	9.27	80.24	12.70	81.46	12.7	81.46	15.09	95.84	18.26	114.59	21.44	132.85	25.40	154.97	28.56	172.11	-	-
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	10.31	79.71	14.27	106.97	12.7	97.36	17.48	131.81	21.44	158.67	25.40	186.70	28.58	207.87	33.32	238.60	-	-
14"	355.60	3.98	34.99	4.78	42.102	-	-	-	-	6.35	54.63	7.92	67.96	9.52	81.21	9.52	81.21	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	4.19	42.35	4.78	48.220	-	-	-	-	6.35	62.58	7.92	77.90	9.52	93.13	9.52	93.18	12.70	123.18	16.66	160.04	12.7	123.18	21.44	203.26	26.19	245.34	30.96	296.33	36.53	332.72	40.49	364.94	-	-
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	14.27	155.90	19.05	205.60	12.7	139.07	23.83	254.24	29.36	309.55	34.92	383.33	39.67	408.21	45.24	459.18	-	-
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	15.09	183.14	20.62	247.79	12.7	154.97	26.19	310.91	32.54	381.20	38.10	441.08	44.45	507.63	50.01	564.24	-	-
22"	553.8	4.77	-	5.53	-	-	-	-	-	6.35	86.42	9.52	128.89	2.7	170.86	9.52	128.89	15.67	211.80	22.22	293.60	12.7	170.86	28.57	373.27	34.92	450.75	41.27	526.24	47.62	599.76	53.97	671.28	-	-
24"	609.6	5.54	84.10	6.35	96.215	-	-	-	-	6.35	96.215	9.52	140.93	14.7	209.54	9.52	140.81	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	-	-	-	-	-	-	-	-	7.92	127.58	12.7	202.65	-	-	9.52	152.73	-	-	-	-	12.7	202.65	-	-	-	-	-	-	-	-	-	-	-	-
28"	711.6	-	-	-	-	-	-	-	-	7.92	137.52	12.7	218.54	15.88	271.94	9.52	164.65	-	-	-	-	12.7	218.54	-	-	-	-	-	-	-	-	-	-	-	-
30"	762	6.35	120.58	7.92	147.45	-	-	-	-	7.92	147.45	12.7	234.44	15.88	291.81	9.52	176.57	-	-	-	-	12.7	234.44	-	-	-	-	-	-	-	-	-	-	-	-
32"	812.8	-	-	-	-	-	-	-	-	7.92	157.39	12.7	250.33	15.88	311.67	9.52	188.50	17.48	242.17	-	-	12.7	250.33	-	-	-	-	-	-	-	-	-	-	-	-
34"	863.6	-	-	-	-	-	-	-	-	7.92	167.32	12.7	266.22	15.88	331.54	9.52	200.42	17.48	264.01	-	-	12.7	255.22	-	-	-	-	-	-	-	-	-	-	-	-
36"	914.4	-	-	-	-	-	-	-	-	7.92	177.26	12.7	282.18	15.88	351.41	9.52	212.34	19.05	320.25	-	-	12.7	282.12	-	-	-	-	-	-	-	-	-	-	-	-



国标尺寸对照表

National Standard Contrast Form

公称通径 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	-	-	6.3	-	-	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	-	-	-	-	-

美标尺寸对照表

American Standard Contrast Form

Nominal diameter in inches	Extra Strong in inches	ANSI B36.19								ANSI B36.10								ANSI B36.10																	
		Nominal diameter in inches																Nominal thickness and weight																	
		5s		10s		Sched.40S		Sched.80S		10		20		30		Standard		40		60		Extra Strong XS		80		100		120		140		160		Outside Strong OS	
		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	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	1.73	0.371	-	-	2.41	0.476	2.41	0.476	-	-	-	-	-	-	-	-		
1/4"	13.72	-	-	1.65	0.499	2.24	0.644	3.02	0.809	-	-	-	-	-	-	2.24	0.644	2.24	0.644	-	-	3.02	0.809	3.02	0.809	-	-	-	-	-	-	-	-		
3/8"	17.15	-	-	1.65	0.640	2.31	0.858	3.20	1.118	-	-	-	-	-	-	2.31	0.858	2.31	0.858	-	-	3.20	1.118	3.20	1.118	-	-	-	-	-	-	-	-		
1/2"	21.34	1.65	0.814	2.11	1.016	2.77	1.26	3.73	1.62	-	-	-	-	-	-	2.77	1.26	2.77	1.26	-	-	3.73	1.62	3.73	1.62	-	-	-	-	-	-	4.78	1.95	7.47	2.54
3/4"	26.67	1.65	1.034	2.11	1.298	2.87	1.68	3.91	2.19	-	-	-	-	-	-	2.87	1.68	2.07	1.68	-	-	3.91	2.19	3.91	2.19	-	-	-	-	-	-	5.56	2.89	7.82	3.36
1"	33.40	1.65	1.312	2.77	2.125	3.38	2.50	4.55	3.23	-	-	-	-	-	-	3.38	2.50	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	1.65	1.674	2.77	2.732	3.56	3.38	4.85	4.46	-	-	-	-	-	-	3.56	3.38	3.56	3.56	-	-	4.85	4.46	4.85	4.46	-	-	-	-	-	-	6.35	5.60	9.70	7.75
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	3.68	4.05	-	-	5.08	5.40	5.08	5.40	-	-	-	-	-	-	7.14	7.23	10.16	9.54
2"	60.33	1.65	2.424	2.77	3.992	3.91	5.43	5.54	7.47	-	-	-	-	-	-	3.91	5.43	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	2.11	3.747	3.05	5.345	5.16	8.62	7.01	11.40	-	-	-	-	-	-	5.16	8.62	5.16	8.02	-	-	7.01	11.40	7.01	11.40	-	-	-	-	-	-	9.52	14.90	14.02	26.3
3"	88.90	2.11	4.585	3.05	6.557	5.49	11.28	7.62	15.25	-	-	-	-	-	-	5.49	11.28	5.49	11.38	-	-	7.62	15.25	7.62	15.25	-	-	-	-	-	-	11.13	21.90	15.24	27.6
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	5.74	13.56	-	-	8.08	18.62	8.08	18.62	-	-	-	-	-	-	-	-	-	
4"	114.30	2.11	5.945	3.05	8.496	6.02	16.06	8.56	22.29	-	-	-	-	-	-	6.02	16.06	6.02	16.06	-	-	8.56	22.29	8.56	22.29	-	-	11.13	28.25	-	-	13.50	33.50	17.12	40.9
5"	141.30	2.77	9.639	3.40	11.740	6.55	21.76	9.52	30.92	-	-	-	-	-	-	6.55	21.76	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	2.77	11.514	3.40	14.037	7.11	28.23	10.97	42.52	-	-	-	-	-	-	7.11	28.23	7.11	38.23	-	-	10.97	42.52	10.97	42.52	-	-	14.30	54.20	-	-	18.20	67.40	21.95	79.11
8"	219.08	2.77	15.048	3.76	20.334	8.18	42.49	12.7	64.57	-	-	6.35	33.28	7.04	36.80	8.18	42.40	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
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	9.27	80.24	12.70	81.46	12.7	81.46	15.09	95.84	18.26	114.59	21.44	132.85	25.40	154.97	28.56	172.11	-	-
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	10.31	79.71	14.27	106.97	12.7	97.36	17.48	131.81	21.44	158.67	25.40	186.70	28.59	207.87	33.32	238.60	-	-
14"	355.60	3.98	34.99	4.78	42.102	-	-	-	-	6.35	54.63	7.92	67.96	9.52	81.21	9.52	81.21	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	4.19	42.35	4.78	48.220	-	-	-	-	6.35	62.58	7.92	77.90	9.52	93.13	9.52	93.18	12.70	123.18	16.66	160.04	12.7	123.18	21.44	203.26	26.19	245.34	30.96	296.33	36.53	332.72	40.49	364.94	-	-
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	14.27	155.90	19.05	205.60	12.7	139.07	23.83	254.24	29.36	309.55	34.92	383.33	39.67	408.21	45.24	459.18	-	-
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	15.09	183.14	20.62	247.79	12.7	154.97	26.19	310.91	32.54	381.20	38.10	441.08	44.45	507.63	50.01	564.24	-	-
22"	553.8	4.77	-	5.53	-	-	-	-	-	6.35	86.42	9.52	128.89	2.7	170.86	9.52	128.89	15.67	211.80	22.22	293.60	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	5.54	84.10	6.35	96.215	-	-	-	-	6.35	96.215	9.52	140.80	14.7	209.54	9.52	140.81	17.48	254.74	24.61	354.62	12.7	186.75	30.98	441.30	38.89	464.84	46.02	639.18	52.37	719.18	59.54	800.74	-	-
26"	660.4	-	-	-	-	-	-	-	-	7.92	127.58	12.7	202.65	-	-	9.52	152.73	-	-	-	-	12.7	202.65	-	-	-	-	-	-	-	-	-	-	-	-
28"	711.6	-	-	-	-	-	-	-	-	7.92	137.52	12.7	218.54	15.88	271.94	9.52	164.65	-	-	-	-	12.7	218.54	-	-	-	-	-	-	-	-	-	-	-	-
30"	762	6.35	120.58	7.92	147.45	-	-	-	-	7.92	147.45	12.7	234.44	15.88	291.81	9.52	176.57	-	-	-	-	12.7	234.44	-	-	-	-	-	-	-	-	-	-	-	-
32"	812.8	-	-	-	-	-	-	-	-	7.92	157.39	12.7	250.33	15.88	311.67	9.52	188.50	17.48	242.17	-	-	12.7	250.33	-	-	-	-	-	-	-	-	-	-	-	-
34"	863.6	-	-	-	-	-	-	-	-	7.92	167.32	12.7	266.22	15.88	331.54	9.52	200.42	17.48	264.01	-	-	12.7	256.22	-	-	-	-	-	-	-	-	-	-	-	-
36"	914.4	-	-	-	-	-	-	-	-	7.92	177.26	12.7	282.18	15.88	351.41	9.52	212.34	19.05	320.21	-	-	12.7	282.18	-	-	-	-	-	-	-	-	-	-	-	-



常用牌号不锈钢管化学成分对照表（二）

Comparison table of chemical components of stainless steel tubes of commonly-used steel grades (2)

序号	牌号	标准号	化学成分											
			C (Max)	Si (Max)	Mn (Max)	P (Max)	S (Max)	Ni	Cr	Mo	Ti (Min)	Nb	N (Max)	Cu
6	00Cr17Ni14Mo2	GB/T14976 GB 13296	0.030	1.00	2.00	0.035	0.030	12.0 – 15.0	16.0 – 18.0	2.0 – 3.0				
	TP316L	ASTM A312	0.035	1.00	2.00	0.045	0.030	10.0 – 14.0	16.0 – 18.0	2.0 – 3.0				
		ASTM A213												
		ASTM A269												
	MT316L	ASTM A511				0.040		10.0 – 15.0						
	SUS316LTB	JIS G3459	0.030	1.00	2.00	0.045	0.030	12.0 – 16.0	16.0 – 18.0	2.0 – 3.0				
JIS G3463		0.040												
1.4404 X20NiMo17-12-2	EN 10297	0.030	1.00	2.00	0.045	0.015	10.0 – 14.5	16.5 – 18.5	2.0 – 2.5			0.11		
	EN 10216				0.040		10.0 – 13.0							
7	904L N08904	ASTM B677	0.02	1.00	2.00	0.045	0.035	23.0 – 28.0	19.0 – 23.0	4.0 – 5.0				1.0–2.0
8	1Cr18Ni9Ti	GB/T14976	0.12	1.00	2.00	0.035	0.030	8.0 – 11.0	17.0 – 19.0		5(C%–0.02 – 0.08)			
		GB 13296												
9	0Cr18Ni10Ti	GB/T14976	0.08	1.00	2.00	0.035	0.030	9.0 – 12.0	17.0 – 19.0		5C%			
		GB 13296												
	TP321	ASTM A312	0.08	1.00	2.00	0.045	0.030	9.0 – 12.0	17.0 – 19.0		5C% – 0.70%		0.10	
		ASTM A213												
		ASTM A269												
	MT321	ASTM A511				0.040		9.0 – 13.0	17.0 – 20.0		5C% – 0.60%			
SUS321TB	JIS G3459	0.08	1.00	2.00	0.045	0.030	9.0 – 13.0	17.0 – 19.0		5C%				
	JIS G3463				0.040									
1.4541 X6CrNiTi18–10	EN 10297	0.08	1.00	2.00	0.045	0.015	9.0 – 12.0	17.0 – 19.0		5C% – 0.70				
	EN 10216				0.040									
10	1Cr18Ni11Ti	GB 13296	0.04 – 0.10	0.75	2.00	0.030	0.030	9.0 – 12.0	17.0 – 20.0		5C% – 0.70			
		GB 5310					0.015	9.0 – 13.0						
	TP321H	ASTM A312	0.04 – 0.10	1.00	2.00	0.045	0.030	9.0 – 12.0	17.0 – 19.0		4C% – 0.60		0.10	
		ASTM A213												
	SUS321HTP	JIS G3459	0.04 – 0.10	0.75	2.00	0.030	0.030	9.0 – 13.0	17.0 – 20.0		4C% – 0.60			
		JIS G3463												
1.4940 X7CrNi18–10	EN 10216	0.04 – 0.08	1.00	2.00	0.040	0.015	9.0 – 13.0	17.0 – 19.0		5(C+N) – 0.80		0.11		
11	0Cr18Ni11Nb	GB/T14976	0.08	1.00	2.00	0.035	0.030	9.0 – 13.0	17.0 – 19.0			10C%		
		GB 13296												
	TP347	ASTM A312	0.08	1.00	2.00	0.045	0.030	9.0 – 13.0	17.0 – 19.0		17.0 – 20.0		10C – 1.0	
		ASTM A213												
		ASTM A269												
	MT347	ASTM A511				0.040		9.0 – 13.0	17.0 – 20.0		10C – 1.0			
SUS347TP	JIS G3459	0.08	1.00	2.00	0.045	0.030	9.0 – 13.0	17.0 – 20.0			10C%			
	JIS G3463				0.040									17.0 – 19.0
1.4550 X6CrNiNb18–10	EN 10297	0.08	1.00	2.00	0.045	0.015	9.0 – 12.0	17.0 – 19.0			10C – 1.0			
EN 10216	0.040													



COMPARISON TABLE FOR CHINESE AND FOREIGN STAINLESS STEEL GRADES
中外不锈钢牌号对照表

NO	GB			ASTM/UNS	JIS	ISO	DIN EN	GOST
	ISC	New	Old					
1	S30210	12Cr18Ni9	1Cr18Ni9	S30200,302	SUS302	X10CrNi18-8	X10CrNi18-8,1.4310	12X18H9
2	S30408	06Cr19Ni10	0Cr18Ni9	S30400,304	SUS304	X5CrNi18-10	X5CrNi18-10,1.4301	08X18H10
3	S30403	022Cr19Ni10	00Cr19Ni10	S30403,304L	SUS304L	X2CrNi19-11	X2CrNi19-11,1.4306	03X18H10
4	S30458	06Cr19Ni10N	0Cr19Ni9N	S30451,304N	SUS304N1	X5CrNiN19-9	X5CrNiN19-9,1.4315	-
5	S30453	022Cr19Ni10N	00Cr18Ni10N	S30453,304LN	SUS304LN	X2Cr1NiN18-9	X2CrNiN18-10,1.4311	-
6	S30908	06Cr23Ni13	0Cr23Ni13	S30908,3095	SUS309S	X12CrNi23-13	X12CrNi23-13,1.4833	10X23H13
7	S31008	06Cr25Ni20	0Cr25Ni20	S31008,310S	SUS310S	X12CrNi23-13	X12CrNi23-12,1.4845	10X23H18
8	S31608	06Cr17Ni12Mo2	0Cr17Ni12Mo2	S31600,316	SUS316	X5CrNiMo17-12-2	X5CrNiMo17-12-2,1.4401	-
9	S31603	022Cr17Ni12Mo2	00Cr17Ni14Mo2	S31603,316L	SUS316L	X2CrNiMo17-12-2	X2CrNiMo17-12-2,1.4404	03X17H14M2
10	S31609	07Cr17Ni12Mo2	1Cr17Ni12Mo2	S31609,316H	-	-	X3CrNiMo17-13-3,1.4436	-
11	S31668	06Cr17Ni12Mo2Ti	0Cr18Ni12Mo3Ti	S31635,316Ti	SUS316Ti	X6CrNiMoTi17-12-2	X6CrNiMoTi17-12-2,1.4571	08X17H13M2T
12	S31658	06Cr17Ni12Mo2N	0Cr17Ni12Mo2N	S31651,316N	SUS316N	SUS316N	-	-
13	S31653	022Cr17Ni12Mo2N	00Cr17Ni13Mo2N	S31653,316LN	SUS316LN	X2CrNiMoN 17-12-2	X2CrNiMoN17-13-3,1.4429	-
14	S31688	06Cr18Ni12Mo2Cu2	06Cr18Ni12Mo2Cu2	-	SUS316J1	-	-	-
15	S31683	022Cr18Ni14Mo2Cu2	00Cr18Ni14Mo2Cu2	-	SUS316J1L	-	-	-
16	S31708	06Cr19Ni13Mo3	0Cr19Ni13Mo3	S31700,317	SUS317	-	X5CrNiMo17-13,1.4449	-
17	S31703	022Cr19Ni13Mo3	00Cr19Ni13Mo3	S31703,317L	SUS317L	X2CrNiMo19-14-4	X2CrNiMo18-15-4,1.4438	03X16H15M3
18	S32168	06Cr18Ni11Ti	0Cr18Ni10Ti	S32100,321	SUS321	X6CrNiTi18-10	X6CrNiTi18-10,1.4541	08X18H10T
19	S32169	07Cr19Ni11Ti	1Cr18Ni11Ti	S32109,321H	-	X7CrNiTi18-10	X8CrNiTi18-10,1.4878	12X18H10T
20	S34778	06Cr18Ni11Nb	0Cr18Ni11Nb	S34700,347	SUS347	X6CrNiNb18-10	X1CrNiMoN25-22-2	08X18H126
21	S31053	022Cr25Ni22Mo2N	-	310MoLN,S31050	-	X1CrNiMoN25-22-2	1.4466	-
22	S38340	16Cr25Ni20Si2	-	S31400	-	X15CrNiSi25-21	X15CrNiSi25-20,1.4841	20X25H20C2
23	S31782	015Cr21Ni26Mo5Cu2	-	904L,N08904	SUS 890L	X1NiCrMoCu25-20-5	X1NiCrMoCu25-20-5,1.4539	-
24	S22253	022Cr22Ni5Mo3N	-	S31803	SUS 329J3L	X2CrNiMoN22-5-3	X2CrNiMoN22-5-3,1.4462	-
25	S25073	022Cr25Ni7Mo4N	-	2507,S32750	-	X2CrNiMoN25-7-4	X2CrNiMoN25-7-4,1.4410	-
26	S27603	022Cr25Ni7Mo4WcuN	-	S32760	SUS329J2L	X2CrNiMoCuWN25-7-4	X2CrNiMoCuWN25-7-4,1.4501	-
27	S23043	022Cr23Ni4MoCuN	-	2304,S32304	-	X2CrNiN23-4	X2CrNiN23-4,1.4362	03KH23N6
28	H10276	NS 3304	-	Inconel C-276,N10276	-	SNi 6276	NiMo16Cr15W,2.4819	-
29	20	-	-	-	S20C	C25	C22,1.0402	20
30	N 04400	NS 6400	Ni68Cu28Fe	Monel 400,N04400	-	-	2.4360	-
31	N 06600	NS 3102	-	Inconel 600,N06600	NCF 600	-	NiCr15Fe,2.4816	-
32	N 06625	NS 3306	-	Inconel 625,N06625	NCF 625	-	NiCr22Mo9Nb,2.4856	-
33	N 08825	NS 1402	-	Incoloy 825,N08825	NCF 825	-	NiCr21Mo,2.4858	-
34	N 08800	NS 1101	-	Incoloy 800,N08800	NCF 800	-	X10NiCrAlTi32-20,1.4876	-

(SUPER)DUPLEX STEEL CHEMICAL COMPOSITION AND MECHNICAL CHARACTER
双相钢化学&机械性能表

Type	UNS	Chemical composition						Mechanical property		
		C≤	Cr	Ni	Mo	Cu	N	> ksi (Mpa)	> ksi (Mpa)	Elongation
Low alloy type	S31500	0.03	18.0-19.0	4.3-5.2	2.5-3.0	-	0.05-0.10	92(630)	64(440)	30
	S32001	0.03	19.5-21.5	1.0-3.0	≤0.60	≤1.00	0.05-0.17	90(620)	65(450)	25
	S32003	0.03	19.5-22.5	3.0-4.0	1.5-2.0	-	0.14-0.20	90(620)	65(450)	25
	S32304	0.03	21.5-24.5	3.0-5.5	0.05-0.60	0.05-0.60	0.05-0.20	87(600)	58(400)	25
Type in the alloy	S31803	0.03	21.0-23.0	4.5-6.5	2.5-3.5	-	0.08-0.20	90(620)	65(450)	25
	S32205	0.03	22.0-23.0	4.5-6.5	3.0-3.5	-	0.14-0.20	95(655)	70(485)	25
High alloy type	S32550	0.04	24.0-27.0	4.5-6.5	2.9-3.9	1.5-2.5	0.10-0.25	110(760)	80(550)	15
Super DSS	S32750	0.03	24.0-26.0	6.0-8.0	3.0-5.0	≤0.5	0.24-0.32	116(800)	80(550)	15
	S32760	0.05	24.0-26.0	6.0-8.0	3.0-4.0	0.5-1.0	0.20-0.30	109(750)	80(550)	25

HASTELLOY ALLOY CHEMICAL COMPOSITION
哈氏合金化学成分表

HASTELLOY CHEMICAL COMPOSITION														
	Ni	Cr	Mo	Fe	C	Si	Co	Mn	P	S	W	V	Cu	Nb+Ta
N10665(B-2)	remainder	≤1.0	26.0~30	≤2.0	≤0.02	≤0.10	≤1.0	≤1.0	≤0.04	≤0.03	-	-	-	-
N10276(C-276)	remainder	14.5~16.5	15.0~17.0	4.0~7.0	≤0.01	≤0.08	≤2.5	≤1.0	≤0.04	≤0.03	3.5~4.5	≤0.35	-	-
N06007(G-3)	remainder	21.0~23.5	5.5~7.5	18.0~21	≤0.05	≤1.0	≤2.5	1.0~2.0	≤0.04	≤0.03	≤1.0	-	1.5~2.5	1.75~2.5



OUTER DIAMETER SIZE AND WALL THICKNESS TABLE (AMERICAN STANDARD) ANSI B36.10, B36.19M
外径尺寸和壁厚表(美标)ANSIB36.10、B36.19M

公称通径 Nominal Pipe Size		外径 Outside Diameter	公称壁厚 Nominal Wall Thickness							
NPS inch	DN	(Odmm)	Sch5s	Sch10s	Sch10	Sch20	Sch30	Sch40s	STD	Sch40
1/8	6	10.3	-	1.24	-	-	-	1.73	1.73	1.73
1/4	8	13.7	-	1.65	-	-	-	2.24	2.24	2.24
3/8	10	17.1	-	1.65	-	-	-	2.31	2.31	2.31
1/2	15	21.3	1.65	2.11	-	-	-	2.77	2.77	2.77
3/4	20	26.7	1.65	2.11	-	-	-	2.87	2.87	2.87
1	25	33.4	1.65	2.77	-	-	-	3.38	3.38	3.38
1-1/4	32	42.2	1.65	2.77	-	-	-	3.56	3.56	3.56
1-1/2	40	48.3	1.65	2.77	-	-	-	3.68	3.68	3.68
2	50	60.3	1.65	2.77	-	-	-	3.91	3.91	3.91
2-1/2	65	73.0	2.11	3.05	-	-	-	5.16	5.16	5.16
3	80	88.9	2.11	3.05	-	-	-	5.49	5.49	5.49
3-1/2	90	101.6	2.11	3.05	-	-	-	5.74	5.74	5.74
4	100	114.3	2.11	3.05	-	-	-	6.02	6.02	6.02
5	125	141.3	2.77	3.40	-	-	-	6.55	6.55	6.55
6	150	168.3	2.77	3.40	-	-	-	7.11	7.11	7.11
8	200	219.1	2.77	3.76	-	6.35	7.04	8.18	8.18	8.18
10	250	273.1	3.40	4.19	-	6.35	7.80	9.27	9.27	9.27
12	300	323.9	3.96	4.57	-	6.35	8.38	9.53	9.53	10.31
14	350	355.6	3.96	4.78	6.35	7.92	9.53	-	9.53	11.13
16	400	406.4	4.19	4.78	6.35	7.92	9.53	-	9.53	12.70
18	450	457.2	4.19	4.78	6.35	7.92	11.13	-	9.53	14.27
20	500	508.0	4.78	5.54	6.35	9.53	12.70	-	9.53	15.09
22	-	558.8	4.78	5.54	6.35	9.53	12.70	-	9.53	-
24	600	609.6	5.54	6.35	6.35	9.53	14.27	-	9.53	17.48
26	-	660.4	-	-	7.92	12.70	-	-	9.53	-
28	700	711.2	-	-	7.92	12.70	15.88	-	9.53	-
30	-	762.0	6.35	7.92	7.92	12.70	15.88	-	9.53	-
32	800	812.8	-	-	7.92	12.70	15.88	-	9.53	17.48
34	-	863.6	-	-	7.92	12.70	15.88	-	9.53	17.48
36	900	914.4	-	-	7.92	12.70	15.88	-	9.53	17.48
38	-	965.2	-	-	-	-	-	-	9.53	-
40	1000	1016.0	-	-	-	-	-	-	9.53	-
42	-	1066.8	-	-	-	-	-	-	9.53	-
44	1100	1117.6	-	-	-	-	-	-	9.53	-
46	-	1168.4	-	-	-	-	-	-	9.53	-
48	1200	1219.2	-	-	-	-	-	-	9.53	-

OUTER DIAMETER SIZE AND WALL THICKNESS TABLE (AMERICAN STANDARD) ANSI B36.10, B36.19M
外径尺寸和壁厚表(美标)ANSIB36.10、B36.19M

公称通径 Nominal Pipe Size		外径 Outside Diameter	公称壁厚 Nominal Wall Thickness								
NPS inch	DN	(Odmm)	Sch60	Sch80s	XS	Sch80	Sch100	Sch120	Sch140	Sch160	XXS
1/8	6	10.3	-	2.41	2.41	2.41	-	-	-	-	-
1/4	8	13.7	-	3.02	3.02	3.02	-	-	-	-	-
3/8	10	17.1	-	3.20	3.20	3.20	-	-	-	-	-
1/2	15	21.3	-	3.73	3.73	3.73	-	-	-	4.78	7.47
3/4	20	26.7	-	3.91	3.91	3.91	-	-	-	5.56	7.82
1	25	33.4	-	4.55	4.55	4.55	-	-	-	6.35	9.09
1-1/4	32	42.2	-	4.85	4.85	4.85	-	-	-	6.35	9.70
1-1/2	40	48.3	-	5.08	5.08	5.08	-	-	-	7.14	10.15
2	50	60.3	-	5.54	5.54	5.54	-	-	-	8.74	11.07
2-1/2	65	73.0	-	7.01	7.01	7.01	-	-	-	9.53	14.02
3	80	88.9	-	7.62	7.62	7.62	-	-	-	11.13	15.24
3-1/2	90	101.6	-	8.08	8.08	8.08	-	-	-	-	-
4	100	114.3	-	8.56	8.56	8.56	-	11.13	-	13.49	17.12
5	125	141.3	-	9.53	9.53	9.53	-	12.70	-	15.88	19.05
6	150	168.3	-	10.97	10.97	10.97	-	14.27	-	18.26	21.95
8	200	219.1	10.31	12.70	12.70	12.70	15.09	18.26	20.62	23.01	22.23
10	250	273.1	12.70	12.70	12.70	15.09	18.26	21.44	25.40	28.58	25.40
12	300	323.9	14.27	12.70	12.70	17.48	21.44	25.40	28.58	33.32	25.40
14	350	355.6	15.09	-	12.70	19.05	23.83	27.79	31.75	35.71	-
16	400	406.4	16.66	-	12.70	21.44	26.19	30.96	36.53	40.49	-
18	450	457.2	19.05	-	12.70	23.83	29.36	34.96	39.67	45.24	-
20	500	508.0	20.62	-	12.70	26.19	32.54	38.10	44.45	50.01	-
22	-	558.8	22.23	-	12.70	28.58	34.93	41.28	47.63	53.98	-
24	600	609.6	24.61	-	12.70	30.96	38.89	46.02	52.37	59.54	-
26	-	660.4	-	-	12.70	-	-	-	-	-	-
28	700	711.2	-	-	12.70	-	-	-	-	-	-
30	-	762.0	-	-	12.70	-	-	-	-	-	-
32	800	812.8	-	-	12.70	-	-	-	-	-	-
34	-	863.6	-	-	12.70	-	-	-	-	-	-
36	900	914.4	-	-	12.70	-	-	-	-	-	-
38	-	965.2	-	-	12.70	-	-	-	-	-	-
40	1000	1016.0	-	-	12.70	-	-	-	-	-	-
42	-	1066.8	-	-	12.70	-	-	-	-	-	-
44	1100	1117.6	-	-	12.70	-	-	-	-	-	-
46	-	1168.4	-	-	12.70	-	-	-	-	-	-
48	1200	1219.2	-	-	12.70	-	-	-	-	-	-



COMMON AUSTENITIC STAINLESS STEEL CHEMICAL COMPOSITION.
奥氏体不锈钢化学成分表

pattern of organization	GB-T20878		Chemical composition (mass fraction) %											
	Uniform digital code	Grade												
			C	Si	Mn	P	S	Ni	Cr	Mo	Cu	N	other	
	1	S30210	12Cr18Ni9	0.15	1.00	2.00	0.045	0.030	8.00~10.00	17.00~19.00	-	-	0.10	-
	2	S30408	06Cr19Ni10	0.08	1.00	2.00	0.045	0.030	8.00~11.00	18.00~20.00	-	-	-	-
	3	S30403	022Cr19Ni10	0.03	1.00	2.00	0.045	0.030	8.00~12.00	18.00~20.00	-	-	-	-
	4	S30458	06Cr19Ni10N	0.08	1.00	2.00	0.045	0.030	8.00~11.00	18.00~20.00	-	-	0.10~0.16	-
	5	S30478	06Cr19Ni9NbN	0.08	1.00	2.50	0.045	0.030	7.50~10.50	18.00~20.00	-	-	0.15~0.30	Nb:0.15
	6	S30453	022Cr19Ni10N	0.03	1.00	2.00	0.045	0.030	8.00~11.00	18.00~20.00	-	-	0.10~0.16	-
	7	S30908	06Cr23Ni13	0.08	1.00	2.00	0.045	0.030	12.00~15.00	22.00~24.00	-	-	-	-
	8	S31008	06Cr25Ni20	0.08	1.50	2.00	0.045	0.030	19.00~22.00	24.00~26.00	-	-	-	-
	9	S31608	06Cr17Ni12Mo2	0.08	1.00	2.00	0.045	0.030	10.00~14.00	16.00~18.00	2.00~3.00	-	-	-
	10	S31603	022Cr17Ni12Mo2	0.03	1.00	2.00	0.045	0.030	10.00~14.00	16.00~18.00	2.00~3.00	-	-	-
	11	S31609	07Cr17Ni12Mo2	0.04~0.10	1.00	2.00	0.045	0.030	10.00~14.00	16.00~18.00	2.00~3.00	-	-	-
	12	S31668	06Cr17Ni12Mo2Ti	0.08	1.00	2.00	0.045	0.030	10.00~14.00	16.00~18.00	2.00~3.00	-	-	Ti5C-0.70
	13	S31658	06Cr17Ni12Mo2N	0.08	1.00	2.00	0.045	0.030	10.00~13.00	16.00~18.00	2.00~3.00	-	0.10~0.16	-
	14	S31653	022Cr17Ni12Mo2N	0.03	1.00	2.00	0.045	0.030	10.00~13.00	16.00~18.00	2.00~3.00	-	0.10~0.16	-
	15	S31688	06Cr18Ni12Mo2Cu2	0.08	1.00	2.00	0.045	0.030	10.00~14.00	17.00~19.00	1.20~2.75	1.00~2.50	-	-
	16	S31683	022Cr18Ni14Mo2Cu2	0.03	1.00	2.00	0.045	0.030	12.00~16.00	17.00~19.00	1.20~2.75	1.00~2.50	-	-
	17	S31708	06Cr19Ni13Mo3	0.08	1.00	2.00	0.045	0.030	11.00~15.00	18.00~20.00	3.00~4.00	-	-	-
	18	S31703	022Cr19Ni13Mo3	0.03	1.00	2.00	0.045	0.030	11.00~15.00	18.00~20.00	3.00~4.00	-	-	-
	19	S32168	06Cr18Ni11Ti	0.08	1.00	2.00	0.045	0.030	19.00~13.00	17.00~19.00	-	-	-	Ti5C-0.70
	20	S32169	07Cr19Ni11Ti	0.04~0.10	0.75	2.00	0.030	0.030	19.00~13.00	17.00~120.00	-	-	-	Ti4C-0.60
	21	S34778	06Cr18Ni11Nb	0.08	1.00	2.00	0.045	0.030	9.00~12.00	17.00~19.00	-	-	-	Nb:10C~1.10
	22	S34779	07Cr18Ni11Nb	0.04~0.10	1.00	2.00	0.045	0.030	9.00~12.00	17.00~19.00	-	-	-	Nb:8C~1.10

SUPER AUSTENITIC STAINLESS STEEL CHEMICAL COMPOSITION.
超级奥氏体不锈钢化学成分表

Grade	C	Mn	P	S	Si	Cr	Ni	Mo	Ti	Nb	Ta	N	V	CU	Ce	B	Al
N08904	0.020	2.0	0.045	0.03	1.00	19.0~23.0	23.0~28.0	4.0~5.0	-	-	-	-	-	1.0~2.0	-	-	-
N08367	0.030	2.0	0.040	0.030	1.00	20.0~22.0	23.5~25.5	6.0~7.0	-	-	-	0.18~0.25	-	0.75	-	-	-
S31254	0.020	1.0	0.030	0.010	0.8	19.5~20.5	17.5~18.5	6.0~6.5	-	-	-	0.18~0.22	-	0.5~1.0	-	-	-
S30432	0.07~0.13	1.0	0.04	0.010	0.30	17.0~19.0	7.5~10.5	-	-	0.3~0.6	-	0.05~0.12	-	2.5~3.5	-	0.001-0.010	0.003-0.03
S31042	0.04~0.10	2.0	0.045	0.030	1.00	24.0~26.0	19.0~22.0	-	-	0.2~0.6	-	0.15~0.35	-	-	-	-	-

NICKEL ALLOY CHEMICAL COMPOSITION
镍基合金化学成分表

Grade	Alloy name	Chemical composition																Pipe standard	Physical properties			
		C	Mn	Si	P	S	Cr	Ni	Mo	Cu	Ti	Al	Fe	Co	V	W	Nb + Ta		strength of extension (Mpa)	yield strength (Mpa)	Elongation (%)	Density
N04400	Monel 400	≤0.3	≤2.0	≤0.5	≤0.3	≤0.024		≥63.0		28.0~34.0			≤25					B163	≥483	≥193	≥35	8.83
N06600	Inconel 600	≤0.15	≤1.0	≤0.5		≤0.015	14.0~17.0	≥72.0		≤0.5			60~10.0					B163	≥552	≥241	≥30	8.43
N06601	Inconel 601	≤0.1	≤1.0	≤0.5		≤0.015	21.0~25.0	58.0~63.0		≤1.0		1.0~1.7	remainder					B163	≥552	≥207	≥30	8.11
N06690	Inconel 690	≤0.05	≤0.5	≤0.5		≤0.015	27.0~31.0	> 58.0		≤0.5			70~11.0					B163	≥586	≥241	≥30	9.2
N08800	Incoloyl 800	≤0.10	≤1.5	≤1.0		≤0.015	19.0~23.0	30.0~35.0		≤0.75	0.15~0.60	0.15~0.60	≥39.5					B163	≥517	≥207	≥30	7.94
N08825	Incoloy 825	≤0.05	≤1.0	≤0.5		≤0.03	19.5~23.5	38.0~46.0	2.5~3.5	1.5~3.0	1.6~1.2	≤0.2	≥22					B423	≥517	≥172	≥30	8.14
N08221		≤0.025	≤1.0	≤0.5		≤0.03	20.0~22.0	39.0~46.0	5.0~6.5	1.5~3.0	0.6~1.0	≤0.2	≥22					B423	≥545	≥234	≥30	
N08020	Alloy 20	≤0.07	≤2.00	≤1.00	≤0.045	≤0.035	19.00~21.00	32.0~38.00	2.00~3.00	3~4			remainder				8C-1	B729	≥550	≥240	≥30	8.08
N08810	Incoloy 800H	0.05~0.10	≤1.5	≤1.0		≤0.015	19.0~23.0	30.0~35.0		≤0.75	0.15~0.60	0.15~0.6	≥39.5					B163	≥448	≥172	≥30	8.0
N08811	Incoloy 800HT	0.06~0.10	≤1.5	≤1.0		≤0.015	19.0~23.0	30.0~35.0		≤0.75	0.25~0.6	0.25~0.6	≥39.5					B163	≥448	≥172	≥30	
N10276	Hastelloy C-276	≤0.010	≤1.0	≤0.08	≤0.04	≤0.03	14.5~16.5	remainder	15.0~17.0				4.0~7.0	≤2.5	≤0.35	3.0~4.5		B622	≥690	≥283	≥40	8.89
N06022	Hastelloy C-22	≤0.015	≤0.50	≤0.08	≤0.02	≤0.02	20.0~22.5	remainder	12.5~14.5				2.0~6.0	≤2.5	≤0.35	2.5~3.5		B622	≥690	≥310	≥45	8.7
N06255	Inconel 622	≤0.03	≤1.0	≤1.0	≤0.03	≤0.03	23.0~26.0	47.0~52.0	6.0~9.0	≤12	≤0.69		remainder			≤3.0		B622	≥586	≥221	≥40	
Grade	Alloy name	C	Mn	Si	P	S	Cr	Ni	Mo	Cu	Ti	Al	Fe	Co	V	W	Nb + Ta	Cb	Ta	B		
N06625	Inconel 625	≤0.10	≤0.50	≤0.50	≤0.15	≤0.15	20.0~23.0	≥58.0	8.0~10.0		≤0.40	≤0.40	≤5.0	≤1.0								
N07718	Inconel 718	≤0.08	≤0.35	≤0.35	≤0.015	≤0.015	17.0~21.0	50.0~55.0	2.8~3.30	≤0.3	0.65~1.150	0.20~0.80	Rem	≤1.0			3.15~4.15	4.75~5.50	≤0.05	≤0.006		

