

TABLE OF COMMON STAINLESS STEEL CHEMICAL CONSTITUENTS
 常用不锈钢化学元素成份表

类型	钢号	化学成分（质量分数），%											
		C	Si	Mn	Cr	Ni	Mo	Cu	Ti	Nb	N	P	S
奥氏 体型	S30408	≤0.08	≤1.00	≤2.00	18.00-20.00	8.00-10.50	-	-	-	-	-	≤0.035	≤0.020
	S30403	≤0.030	≤1.00	≤2.00	18.00-20.00	8.00-12.00	-	-	-	-	-	≤0.035	≤0.020
	S30409	0.4-0.10	≤1.00	≤2.00	18.00-20.00	8.00-10.50	-	-	-	-	-	≤0.035	≤0.020
	S32168	≤0.08	≤1.00	≤2.00	17.00-19.00	9.00-12.00	-	-	5xC-0.70	-	-	≤0.035	≤0.020
	S34779	0.04-0.10	≤1.00	≤2.00	17.00-19.00	9.00-12.00	-	-	-	8xC-1.10	-	≤0.035	≤0.020
	S31608	≤0.08	≤1.00	≤2.00	16.00-18.00	10.00-14.00	2.00-3.00	-	-	-	-	≤0.035	≤0.020
	S31603	≤0.030	≤1.00	≤2.00	16.00-18.00	10.00-14.00	2.00-3.00	-	-	-	-	≤0.035	≤0.020
	S31609	0.04-0.10	≤1.00	≤2.00	16.00-18.00	10.00-14.00	2.00-3.00	-	-	-	-	≤0.035	≤0.020
	S31668	≤0.08	≤1.00	≤2.00	16.00-18.00	10.00-14.00	2.00-3.00	-	5xC-0.70	-	-	≤0.035	≤0.020
	S31703	≤0.030	≤1.00	≤2.00	18.00-20.00	11.00-15.00	3.00-4.00	-	-	-	-	≤0.035	≤0.020
	S31008	0.04-0.08	≤1.00	≤2.00	24.00-26.00	19.00-22.00	-	-	-	-	-	≤0.035	≤0.020
	S39042	≤0.020	≤1.00	≤2.00	19.00-21.00	24.00-26.00	4.00-5.00	1.20-2.00	-	-	≤0.10	≤0.030	≤0.010
奥氏体—铁素 体型	S21953	≤0.030	1.30-2.00	1.00-2.00	18.00-19.50	4.50-5.50	2.50-3.00	-	-	-	0.05-0.12	≤0.030	≤0.020
	S22253	≤0.030	≤1.00	≤2.00	21.00-23.00	4.50-6.50	2.50-3.00	-	-	-	0.08-0.20	≤0.030	≤0.020
	S22053	≤0.030	≤1.00	≤2.00	22.00-23.00	4.50-6.50	3.00-3.50	-	-	-	0.14-1.10	≤0.030	≤0.020

9 CONTRAST TABLE OF MAIN CHINESE AND FOREIGN AUSTENITIC STAINLESS STEELS
 09中外主要奥氏体不锈钢对照表

序号	中国		日本	美国		韩国	欧盟 BSEN	印度IS	澳大利亚 AS	中国台湾 CNS
	旧牌照	新牌照(07.10)		ASTM	UNS					
1	1Cr17Mn6Ni5N	12Cr17Mn6Ni5N	SUS201	201	S20100	STS201	1.4372	10Cr17Mn6Ni4N	201-2	201
2	1Cr18Mn8Ni5N	12Cr18Mn9Ni5N	SUS202	202	S20200	STS202	1.4373	-	-	202
3	1Cr17Ni7	12Cr17Ni7	SUS3014	301	S30100	STS301	1.4319	10Cr17Ni7	301	301
4	0Cr18Ni9	06Cr19Ni10	SUS304	304	S30400	STS304	1.4301	07Cr18Ni9	304	304
5	00Cr19Ni10	022Cr19Ni10	SUS304L	304L	S30403	STS304L	1.4306	02Cr18Ni11	304L	304L
6	0Cr19Ni9N	06Cr19Ni10N	SUS304N1	304N	S30451	STS304N1	1.4315	-	304N1	304N1
7	0Cr19Ni10NbN	06Cr19Ni9NbN	SUS304N2	XM21	S30452	STS304N2	-	-	304N2	304N2
8	00Cr18Ni10N	022Cr19Ni10N	SUS304LN	304LN	S30453	STS304LN	-	-	304LN	304LN
9	1Cr18Ni12	10Cr18Ni12	SUS305	305	S30500	STS305	1.4303	-	305	305

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序号	中国		日本	美国		韩国	欧盟 BSEN	印度IS	澳大利亚 AS	中国台湾 CNS
	旧牌照	新牌照(07.10)		ASTM	UNS					
10	0Cr23Ni13	06Cr23Ni13	SUS309S	309S	S30908	STS309S	1.4833	-	309S	309S
11	0Cr25Ni20	06Cr25Ni20	SUS310S	310S	S31008	STS310S	1.4845	-	310S	310S
12	0Cr17Ni12Mo2	06Cr17Ni12Mo2	SUS316	316	S31600	STS316	1.4401	04Cr17Ni12Mo2	316	316
13	0Cr18Ni12Mo3Ti	06Cr17Ni12Mo2Ti	SUS316Ti	316Ti	S31635	-	1.4571	04Cr17Ni12MoTi ²⁰	316Ti	316Ti
14	00Cr17Ni14Mo2	022Cr17Ni12Mo2	SUS316L	316L	S31603	STS316L	1.4404	~02Cr17Ni12Mo2	316L	316L
15	0Cr17Ni12Mo2N	06Cr17Ni12Mo2N	SUS316N	316N	S31651	STS316N	-	-	316N	316N
16	00Cr17Ni13Mo2N	022Cr17Ni13Mo2N	SUS316LN	316LN	S31653	STS316LN	1.4429	-	316LN	316LN
17	0Cr18Ni14Mo2Cu2	06Cr18Ni12Mo2Cu2	SUS316J1	-	-	STS316J1	-	-	316J1	316J1
18	00Cr18Ni14Mo2Cu2	022Cr18Ni14Mo2Cu2	SUS316J1L	-	-	STS316J1L	-	-		316J1L
19	0Cr19Ni13Mo3	06Cr19Ni13Mo3	SUS317	317	S31700	STS317	-	-	317	317
20	00Cr19Ni13Mo3	022Cr19Ni13Mo3	SUS317L	317L	S31703	STS317L	1.4438	-	317L	317L
21	0Cr18Ni10Ti	06Cr18Ni11Ti	SUS321	321	S32100	STS321	1.4541	04Cr18Ni10Ti ²⁰	321	321
22	0Cr18Ni11Nb	06Cr18Ni11Nb	SUS347	347	S34700	STS347	1.455	04Cr18Ni10Nb ⁴⁰	347	347
23	0Cr26Ni5Mo2	-	SUS329J1	329	S32900	STS329J1	1.4477	-	329J1	329J1
24	00Cr18Ni5Mo3Si2	022Cr19Ni5Mo3Si2N	SUS329J3L	-	S31803	STS329J3L	1.4462	-	329J3L	329J3L
25	0Cr13Al	06Cr13Al	SUS405	405	S40500	STS405	1.4002	04Cr13	405	405
26	-	022Cr11Ti	SUH409	409	S40900	STS409	1.4512	-	409L	409L
27	00Cr12	022Cr12	SUS410L	-	-	STS410L	-	-	410L	410L
28	1Cr17	10Cr17	SUS430	430	S43000	STS430	1.4016	05Cr17	430	430
29	1Cr17Mo	10Cr17Mo	SUS434	434	S43400	STS434	1.4113	-	434	434
30	-	022Cr18NbTi	-	-	S43940	-	1.4509	-	439	439
31	00Cr18Mo2	019Cr19Mo2NbTi	SUS444	444	S44400	STS444	1.4521	-	444	444
32	1Cr12	12Cr12	SUS403	403	S40300	STS403	-	-	403	403
33	1Cr13	12Cr13	SUS410	410	S41000	STS410	1.4006	12Cr13	410	410
34	2Cr13	20Cr13	SUS420J1	420	S42000	STS420J1	1.4021	20Cr13	420	420J1
35	3Cr13	30Cr13	SUS420J2	-	-	STS420J2	1.4028	30Cr13	420J2	420J2
36	7Cr17	68Cr17	SUS440A	440A	S44002	STS440A	-	-	440A	440A



TECHNOLOGY
 PARAMETER 技术参数

外径尺寸和壁厚表 ANSIB36.10、B36.19

公称直径		管外径 mm	ANSIB36.10、B36.19																
mm	in		sch5s	sch10s	sch10	sch20	sch30	sch40s	STD	Sch40	Sch60	Sch80s	XS	Sch80	Sch100	Sch120	Sch140	Sch160	XXS
6	1/8	10.29	-	1.24	-	-	-	1.73	1.73	1.73	-	2.41	2.41	2.41	-	-	-	-	-
8	1/4	13.72	-	1.65	-	-	-	1.73	1.73	1.73	-	3.02	3.02	3.02	-	-	-	-	-
10	3/8	17.14	-	1.65	-	-	-	2.31	2.31	2.31	-	3.20	3.20	3.20	-	-	-	-	-
15	1/2	21.34	1.65	2.11	-	-	-	2.77	2.77	2.77	-	3.73	3.73	3.73	-	-	-	4.78	7.47
20	3/4	26.67	1.65	2.11	-	-	-	2.87	2.87	2.87	-	3.91	3.91	3.91	-	-	-	5.56	7.82
25	1	33.40	1.65	2.77	-	-	-	3.38	3.38	3.38	-	4.55	4.55	4.55	-	-	-	6.35	9.09
32	1 1/4	42.16	1.65	2.77	-	-	-	3.56	3.56	3.56	-	4.85	4.85	4.85	-	-	-	6.35	9.70
40	1 1/2	48.26	1.65	2.77	-	-	-	3.68	3.68	3.68	-	5.08	5.08	5.08	-	-	-	7.14	10.16
50	2	60.32	1.65	3.05	-	-	-	3.91	3.91	3.91	-	5.54	5.54	5.54	-	-	-	8.14	11.07
65	2 1/2	73.02	2.11	3.05	-	-	-	5.16	5.16	5.16	-	7.01	7.01	7.01	-	-	-	9.52	14.02
80	3	88.90	2.11	3.05	-	-	-	5.49	5.49	5.49	-	7.62	7.62	7.62	-	-	-	11.12	15.24
90	3 1/2	101.60	2.11	3.40	-	-	-	5.74	5.74	5.74	-	8.08	8.08	8.08	-	-	-	-	-
100	4	114.30	2.11	3.40	-	-	-	6.02	6.02	6.02	-	8.56	8.56	8.56	-	11.12	-	13.49	17.12
125	5	141.30	2.77	3.76	-	-	-	6.55	6.55	6.55	-	9.53	9.53	9.53	-	12.70	-	15.88	19.05
150	6	168.28	2.77	4.57	-	6.35	7.04	7.11	7.11	7.11	-	10.97	10.97	10.97	-	14.27	-	18.26	21.94
200	8	219.08	2.77	4.78	-	6.35	7.80	8.18	8.18	8.18	10.31	12.70	12.70	12.70	15.09	18.26	20.62	23.01	22.22
250	10	273.05	3.40	4.78	-	6.35	8.38	9.27	9.27	9.27	12.70	12.70	12.70	15.09	18.26	21.44	25.40	28.58	25.40
300	12	323.85	3.96	4.78	6.35	7.92	9.52	9.52	9.52	10.31	14.27	12.70	12.70	17.48	21.44	25.40	28.58	33.32	25.40
350	14	355.60	3.96	5.54	6.35	7.92	9.52	*9.52	9.52	11.31	15.09	12.70	12.70	19.05	23.83	27.79	31.75	35.71	-
400	16	406.40	4.19	5.54	6.35	7.92	11.12	*9.52	9.52	12.70	16.66	12.70	12.70	21.44	26.19	30.96	36.52	40.49	-
450	18	457.20	4.78	6.35	6.35	9.52	12.70	*9.52	9.52	14.27	19.05	12.70	12.70	23.82	29.36	34.92	39.47	45.24	-
500	20	508.00	5.54	*7.92	6.35	9.52	14.27	*9.52	9.52	15.09	20.62	12.70	12.70	26.19	32.54	38.10	44.45	50.01	-
550	22	558.8	-	*7.92	7.92	9.52	-	*9.52	9.52	-	22.22	12.70	12.70	28.58	34.92	41.28	47.62	53.98	-
600	24	609.6	-	*7.92	7.92	12.70	15.88	*9.52	9.52	17.48	24.61	12.70	12.70	30.96	38.89	46.02	52.37	59.54	-
650	26	660.4	6.35	*7.92	7.92	1.70	15.88	*9.52	9.52	-	-	12.70	12-70	-	-	-	-	-	-
700	28	711.2	-	*7.92	7.92	12.70	15.88	*9.52	9.52	-	-	12.70	12-70	-	-	-	-	-	-
750	30	762.0	-	*7.92	7.92	12.70	15.88	*9.52	9.52	-	-	12.70	12-70	-	-	-	-	-	-
800	32	812.0	-	*7.92	7.92	12.70	-	*9.52	9.52	17.48	-	12.70	12-70	-	-	-	-	-	-
850	34	863.6	-	*7.92	7.92	12.70	-	*9.52	9.52	17.48	-	12.70	12-70	-	-	-	-	-	-
900	36	914.4	-	*7.92	7.92	-	-	*9.52	9.52	19.05	-	12.70	12-70	-	-	-	-	-	-
950	38	965.2	-	*7.92	7.92	-	-	*9.52	9.52	-	-	12.70	12-70	-	-	-	-	-	-
1000	40	1016.0	-	*7.92	7.92	-	-	*9.52	9.52	-	-	12.70	12-70	-	-	-	-	-	-
1050	42	1066.8	-	*7.92	7.92	-	-	*9.52	9.52	-	-	12.70	12-70	-	-	-	-	-	-
1100	44	1117.6	-	-	7.92	-	-	-	*9.52	-	-	12.70	12-70	-	-	-	-	-	-
1150	46	1168.4	-	-	-	-	-	-	*9.52	-	-	-	12-70	-	-	-	-	-	-
1200	48	1219.2	-	-	-	-	-	-	*9.52	-	-	-	12-70	-	-	-	-	-	-
1300	52	1320.8	-	-	-	-	-	-	*9.52	-	-	-	12-70	-	-	-	-	-	-
1350	54	1371.6	-	-	-	-	-	-	*9.52	-	-	-	12-70	-	-	-	-	-	-
1400	56	1422.4	-	-	-	-	-	-	*9.52	-	-	-	12-70	-	-	-	-	-	-
1500	60	1524.0	-	-	-	-	-	-	*9.52	-	-	-	12-70	-	-	-	-	-	-
1600	64	1625.6	-	-	-	-	-	-	*9.52	-	-	-	12-70	-	-	-	-	-	-
1700	68	1727.2	-	-	-	-	-	-	*9.52	-	-	-	12-70	-	-	-	-	-	-
1800	72	1828.8	-	-	-	-	-	-	*9.52	-	-	-	12-70	-	-	-	-	-	-
1900	76	1930.4	-	-	-	-	-	-	*9.52	-	-	-	12-70	-	-	-	-	-	-
2000	80	2032.0	-	-	-	-	-	-	*9.52	-	-	-	12-70	-	-	-	-	-	-

不锈钢化学元素的作用

EFFECTS OF STAINLESS STEEL CHEMICAL ELEMENTS

- **碳**: 含碳量越高, 钢的硬度就越高, 但是它的可塑性和韧性就越差;
- **硫**: 是钢中的有害杂物, 含硫较高的钢在高温进行压力加工时, 容易脆裂, 通常叫做热脆性
- **磷**: 能使钢的可塑性及韧性明显下降, 特别的在低温下更为严重, 这种现象叫做冷脆性。在优质钢中, 硫和磷要严格控制, 但从另方面看, 在低碳钢中含有较高的硫和磷, 能使其切削易断, 对改善钢的可切削性是有利的;
- **锰**: 能提高钢的强度, 能削弱和消除硫的不良影响, 并能提高钢的淬透性, 含锰量很高的高合金钢 (高锰钢) 具有良好的耐磨性和其它的物理性能;
- **硅**: 它可以提高钢的硬度, 但是可塑性和韧性下降, 电工用的钢中含有一定量的硅, 能改善软磁性能;
- **钨**: 能提高钢的红硬性和热强性, 并能提高钢的耐磨性;
- **铬**: 能提高钢的淬透性和耐磨性, 能改善钢的抗腐蚀能力和抗氧化作用;
- **钒**: 能细化钢的晶粒组织, 提高钢的强度, 韧性和耐磨性。当它在高温熔入奥氏体时, 可增加钢的淬透性; 反之, 当它在碳化物形态存在时, 就会降低它的淬透性;
- **钼**: 可明显提高钢的淬透性和热强性, 防止回火脆性, 提高剩磁和矫顽力;
- **钛**: 能细化钢的晶粒组织, 从而提高钢的强度和韧性。在不锈钢中, 钛能消除或减轻钢的晶间腐蚀现象;
- **镍**: 能提高钢的强度和韧性, 提高淬透性, 含量高是, 可显著改变钢和合金的一些物理性能, 提高钢的抗腐蚀能力;
- **硼**: 当钢中含有微量的 (0.0010.005%) 硼时, 钢的淬透性可以成倍的提高;
- **铝**: 能细化钢的晶粒组织, 抑制低碳钢的时效。提高钢在低温下的韧性, 还能提高钢的抗氧化性, 提高钢的耐磨性和疲劳强度等;
- **铜**: 它的突出作用是改善普通低合金钢的抗大气腐蚀性能, 特别是和磷配合使用时更为明显。
- **carbon**: the higher the carbon content, the higher the hardness of steel, but its plasticity and toughness is poor;
- **sulfur**: is the harmful sundries in steel, high sulfur steel in high temperature pressure processing, easy to brittle, usually called hot brittleness
- **p**: can make the plasticity and toughness of steel significantly reduced, especially at low temperature is more serious, this phenomenon is called cold brittleness. In high quality steel, sulfur and phosphorus should be strictly controlled, but from another point of view, in low carbon steel contains higher sulfur and phosphorus, can make it easy to cut off, to improve the cutting ability of steel is beneficial;
- **manganese**: can improve the strength of steel, can weaken and eliminate the bad influence of sulfur, and can improve the hardenability of steel, high alloy steel (high manganese steel) with high manganese content has good wear resistance and other physical properties;
- **silicon**: it can improve the hardness of steel, but the plasticity and toughness decline, electrical steel contains a certain amount of silicon, can improve the soft magnetic properties;
- **tungsten**: can improve the red hardness and thermal strength of steel, and can improve the wear resistance of steel;
- **chromium**: can improve the hardenability and wear resistance of steel, can improve the corrosion resistance and oxidation resistance of steel;
- **vanadium**: can refine the grain structure of steel, improve the strength, toughness and wear resistance of steel. When it is melted into austenite at high temperature, the hardenability of steel can be increased. On the contrary, when it exists in carbide form, its hardenability will be reduced.
- **molybdenum**: can significantly improve the hardenability and thermal strength of steel, prevent temper brittleness, improve remanence and coercivity;
- **titanium**: can refine the grain structure of steel, thus improving the strength and toughness of steel. In stainless steel, titanium can eliminate or reduce the intergranular corrosion of steel.
- **nickel**: can improve the strength and toughness of steel, improve the hardenability, high content is, can significantly change some physical properties of steel and alloy, improve the corrosion resistance of steel;
- **boron**: when the steel contains a small amount of boron (0.0010.005%), the hardenability of the steel can be multiplied;
- **aluminum**: it can refine the grain structure of steel and inhibit the aging of low carbon steel. It can also improve the oxidation resistance, wear resistance and fatigue strength of steel by improving the toughness of steel at low temperature.
- **copper**: its prominent role is to improve the atmospheric corrosion resistance of ordinary low-alloy steel, especially when used with phosphorus.

各类不锈钢理算公式

ADJUSTMENT FORMULAS OF ALL KINDS OF STAINLESS STEEL

钢品理论重量

THEORETICAL WEIGHT OF STEEL

不锈钢板

厚度×宽×长×7.93

如 $2.0 \times 1.22 \times 2.44 \times 7.93 = 47.2\text{Kg/张}$

不锈钢管

(外径-壁厚)×壁厚×0.02491

如 $(57-3.5) \times 3.5 \times 0.02491 = 4.66\text{Kg/米}$

不锈钢圆钢

直径×直径×0.00623

如 $18 \times 18 \times 0.00623 = 2.02\text{Kg/米}$

不锈钢角钢

边长×边长×7.8×0.000198

如 $40 \times 40 \times 7.8 \times 0.000198 = 2.47\text{Kg/米}$

(边宽+边宽-边厚)×边厚×0.00793

如 $(40+40-3) \times 3 \times 0.00793 = 1.83\text{Kg/米}$

不锈钢扁钢

厚度×宽×0.00793

如 $8 \times 80 \times 0.00793 = 5.08\text{Kg/米}$

不锈钢方管

(边宽×4÷3.14-厚度)×厚度×0.02491

如 $(40 \times 4 \div 3.14 - 3) \times 3 \times 0.02491 = 3.58\text{Kg/米}$

六角钢

对边×对边×0.00686

方钢

对边×对边×0.00793

圆管规格: 12-830mm×1-60mm (外径×壁厚)

方管规格: 2-250mm×2-20mm (边长×壁厚)

重量 (Kg)=厚度(mm)×宽度 (mm)×长度 (mm)×密度值 密度钢种

7.93 201,202,301,302,304,304L, 305,321

7.75 405, 410,420

7.98 309S, 310S, 316S, 316L, 347

不锈钢元棒, 钢丝, 理论计算公式

直径×直径×0.00609=Kg/m(适用于410 420 420j2 430 431)

例如: $\phi 50 50 \times 50 \times 0.00609 = 15.23\text{Kg/米}$

直径×直径×0.00623=Kg/m(适用于301 303 304 316 316L 321)

例如: $\phi 50 50 \times 50 \times 0.00623 = 15.575\text{Kg/米}$

不锈钢型材, 理论计算公式

六角棒 对边×对边×0.00686=Kg/米

方棒 边宽×边宽×0.00793=Kg/米

不锈钢管, 理论计算公式

(外径-壁厚)×壁厚×0.02491=Kg/米

例如: $\phi 57 \times 3.5 (57-3.5) \times 3.5 \times 0.02491 = 4.66\text{Kg/米}$

不锈钢管重量计算公式

管子(外径-壁厚)×壁厚×0.02491=每米重量

圆钢 外径×外径×0.00623=每米重量

方管的计算公式是: $0.0246615 \times (\text{边长} \times 4 \div 3.14 - \text{厚度}) \times \text{厚度}$

矩形管公式: $0.0246615 \times ((\text{长} + \text{宽}) \times 2 \div 3.14 - \text{厚度}) \times \text{厚度}$

MECHANICAL PROPERTIES OF FORGINGS

锻件力学性能

统一数字代号	材料牌号	公称厚度mm	热处理状态℃	拉伸性能			硬度HBW
				Rm/MPa	Rp0.2/MPa	A/%	
				不小于			
S11306	06Cr13	≤150	A(800~900缓冷)	410	205	20	110~163
S11348	06Cr13A1	≤150	A(800~900缓冷)	415	170	20	110~160
S30408	06Cr19Ni10	≤150	S(1010~1150快冷)	520	220	35	139~192
		▷ 150~300		500	220	35	131~192
S30403	022Cr19Ni10	≤150	S(1010~1150快冷)	480	210	35	128~187
		▷ 150~300		460	210	35	121~187
S30409	07Cr19Ni10	≤150	S(1010~1150快冷)	520	220	35	≤180 ^a
		▷ 150~300		500	220	35	—
S30453	022Cr19Ni10N	≤150	S(1010~1150快冷)	520	205	40	≤201
S30458	06Cr19Ni10N	≤150	S(1010~1150快冷)	550	240	30	≤201
S32168	06Cr18Ni11Ti	≤150	S(920~1150快冷)	520	205	35	139~187
		▷ 150~300		500	205	35	131~187
S32169	07Cr19Ni11Ti	≤150	S(1010~1150快冷)	520	205	40	≤187 ^a
S34778	06Cr18Ni11Nb	≤150	S(1010~1150快冷)	520	205	40	≤201
S34779	07Cr18Ni11Nb	≤150	S(1050~1180快冷)	520	205	35	≤187 ^a
		▷ 150~300		500	205	35	—
S31608	06Cr17Ni12Mo2	≤150	S(1010~1150快冷)	520	220	35	139~187
		▷ 150~300		500	220	35	131~187
S31603	022Cr17Ni12Mo2	≤150	S(1010~1150快冷)	480	210	35	128~187
		▷ 150~300		460	210	35	121~187
S31609	07Cr17Ni12Mo2	≤150	S(1010~1150快冷)	520	220	35	139~187
		▷ 150~300		500	220	35	131~187
S31653	022Cr17Ni12Mo2N	≤150	S(1010~1150快冷)	520	210	40	≤217
S31658	06Cr17Ni12Mo2N	≤150	S(1010~1150快冷)	550	240	35	≤217
S31668	06Cr17Ni12Mo2Ti	≤150	S(1010~1150快冷)	520	210	35	139~187
		▷ 150~300		500	210	35	131~187
S31703	022Cr19Ni13Mo3	≤150	S(1010~1150快冷)	480	195	35	128~187
		▷ 150~300		460	195	35	121~187
S31008	06Cr25Ni20	≤150	S(1030~1180快冷)	520	205	35	—
		▷ 150~300		500	205	35	—
S39042	015Cr21Ni26Mo5Cu2	≤300	S(1050~1180快冷)	490	220	35	—
S31252	015Cr20Ni18Mo6CuN	≤300	S(1150以上快冷)	650	300	35	—
S21953	022Cr19Ni5Mo3Si2N	≤150	S(950~1050快冷)	590	390	25	—
S22253	022Cr22Ni5Mo3N	≤150	S(1020~1100快冷)	620	450	25	—
S22053	022Cr23Ni5Mo3N	≤150	S(1020~1100快冷)	620	450	25	—
S23043	022Cr23Ni4MoCuN	≤150	S(1020~1100快冷)	600	400	25	—
S25073	022Cr25Ni7Mo4N	≤150	S(1020~1100快冷)	800	550	25	—
S25554	03Cr25Ni6Mo3Cu2N	≤150	S(1020~1100快冷)	760	550	15	—
S51740	05Cr17Ni4Cu4Nb	≤200	S(1020~1060快冷) +Ag (620空冷)	930	725	15	≥277

锅炉受压元件用各级别锻件硬度值（HBW,逐渐检验）应符合上述规定。

锅炉受压元件用各级别锻件硬度值 (HBW,逐渐检验) 应符合上述规定。

锻件级别、检验项目和检验数量 FORGING GRADE, INSPECTION ITEMS AND INSPECTION QUANTITY

锻件级别	检验项目	检验数量
I	硬度 (HBW)	逐渐检验
II	拉伸 (Rm、Rp0.2、A)	同冶炼炉号、同炉热处理、锻造工艺、锻造比和公称厚度相近的锻件组成一批，每批抽检公称厚度最大的一件
III	拉伸 (Rm、Rp0.2、A)	
IV	超声检测	逐渐检验
	拉伸 (Rm、Rp0.2、A)	逐渐检验
	超声检测	逐渐检验