

Stainless, Carbon & Alloy ASTM Pipe & Fitting Cross References

Grade	Fittings	Flanges	Pipe	Tube	Plate	Bar	EFW	Bar
Stainless Steel	A403 WP 304	A182 F304	A312 TP 304	A213/249/269 TP 304	A240 TP 304	A276/479 Gr. 304	A358 TP 304	A276/479 Gr. 304
Stainless Steel	A403 WP 304L	A182 F304L	A312 TP 304L	A213/249/269 TP 304L	A240 TP 304L	A276/479 Gr. 304L	---	A276/479 Gr. 304L
Stainless Steel	A403 WP 304H	A182 F304H	A312 TP 304H	A213/249/269 TP 304H	A240 TP 304H	A276/479 Gr. 304H	A358 TP 304H	A276/479 Gr. 304H
Stainless Steel	A403 WP 316	A182 F316	A312 TP 316	A213/249/269 TP 316	A240 TP 316	A276/479 Gr. 316	A358 TP 316	A276/479 Gr. 316
Stainless Steel	A403 WP 316L	A182 F316L	A312 TP 316L	A213/249/269 TP 316L	A240 TP 316L	A276/479 Gr. 316L	---	A276/479 Gr. 316L
Stainless Steel	A403 WP 316H	A182 F316H	A312 TP 316H	A213/249/269 TP 316H	A240 TP 316H	A276/479 Gr. 316H	A358 TP 316H	A276/479 Gr. 316H
Stainless Steel	A403 WP 316Ti	A182 F316Ti	A312 TP 316Ti	A213/249/269 TP 316Ti	A240 TP 316Ti	A276/479 Gr. 316Ti	---	A276/479 Gr. 316Ti
Stainless Steel	A403 WP 309	A182 F309	A312 TP 309	A213/249/269 TP 309	A240 TP 309	A276/479 Gr. 309	A358 TP 309S	A276/479 Gr. 309
Stainless Steel	A403 WP 310	A182 F310	A312 TP 310	A213/249/269 TP 310	A240 TP 310S	A276/479 Gr. 310	A358 TP 309H	A276/479 Gr. 310
Stainless Steel	A403 WP 317L	A182 F317	A312 TP 317	A213/249/269 TP 317L	A240 TP 317L	A276/479 Gr. 317L	A358 TP 317L	A276/479 Gr. 317L
Stainless Steel	A403 WP 321	A182 F321	A312 TP 321	A213/249/269 TP 321	A240 TP 321	A276/479 Gr. 321	A358 TP 321	A276/479 Gr. 321
Stainless Steel	A403 WP 347	A182 F347	A312 TP 347	A213/249/269 TP 347	A240 TP 347	A276/479 Gr. 347	A358 TP 347	A276/479 Gr. 347
Stainless Steel	A403 WP 347H	A182 F347H	A312 TP 347H	A213/249/269 TP 347H	A240 TP 347H	A276/479 Gr. 347H	---	A276/479 Gr. 347H
410	A815	A182 F410	A268	A213/249/269	A240 TP 410	A276/479 Gr.410		A276/479 Gr.410
Duplex Steel 2205	A815 UNS 31803	A182 F51	A789/790 UNS 31803	A789/790	A240	A276/479		A276/479
Carbon Steel	A234 WPB	A105	A106 GR.B		A36	A105		A105
Low Temp C.S. Gr. 1	A420 WPL1	A350 LF2	A333 GR. 1	A334 GR. 1	A516	A350 LF2		A350 LF2
Low Temp C.S. Gr. 3	A420 WPL3	A350 LF3	A333 GR. 3	A334 GR. 3	A516	A350 LF3		A350 LF3
Low Temp C.S. Gr. 6	A420 WPL6	A350 LF2	A333 GR. 6	A334 GR. 6	A516	A350 LF2		A350 LF2
Cr-Mo Grade 1	A234 WP1	A182 F1	A335 P1	A213 T1	A387 GRADE 1	A182 F1		A182 F1
Cr-Mo Grade 5	A234 WP5	A182 F5	A335 P5	A213 T5	A387 GRADE 5	A182 F5		A182 F5
Cr-Mo Grade 9	A234 WP9	A182 F9	A335 P9	A213 T9	A387 GRADE 9	A182 F9		A182 F9
Cr-Mo Grade 11	A234 WP11	A182 F11	A335 P11	A213 T11	A387 GRADE 11	A182 F11		A182 F11
Cr-Mo Grade 22	A234 WP22	A182 F22	A335 P22	A213 T22	A387 GRADE 22	A182 F22		A182 F22
Cr-Mo Grade 91	A234 WP91	A182 F91	A335 P91	A213 T91	A387 GRADE 91	A182 F91		A182 F91

COMPARISON TABLES COMPARISON OF ASTM SPECIFICATIONS AND SIMILAR STANDARDS FOR PIPE

Steel Composition	ASTM Specification and Grade Pipe	JIS Grade Pipe	B.S. Specification and Grade Pipe	DIN Specification and Grade Pipe
Carbon Steel	A 106-A	STPT38	3602 Steel 23	17175-St 35.8
Carbon Steel	A 106-B	STPT42	3602 Steel 27	17175-St 45.8
Carbon Steel	A 106-C	STPT49	3602 Steel 35	
Carbon Steel	A 333 and A 334-6	STPL39	3603 Steel 27 LT 30	
3-1/2%Ni Steel	A 333 and A 334-3	STPL46	3603 Steel 503 LT 100	
Carbon-Molybdenum Steel	A 335-P1	STPA12		17175-15Mo3
1% Cr-1/2% Molybdenum Steel	A 335-P12	STPA22	3604 HF 620	17175-15Mo3
1-1/4% Cr-1/2% Molybdenum Steel	A 335-P11	STPA23	3604 HF 621	
2-1/4% Cr-1% Molybdenum Steel	A 335-P22	STPA24	3604 HF 622,27	17175-10 CrMo 910
5% Cr-12% Molybdenum Steel	A 335-P5	STPA25	3604 HF 625	
7% Cr-1/2% Molybdenum Steel	A 335-P7	--		
9% Cr-1% Molybdenum Steel	A 335-P9	STPA26		
18% Cr-8% Ni Steel	A 312-TP304	SUS304TP	3605-801	17440-X5 CrNi 189
18% Cr-8% Ni-(0.04-0.10)% C Steel	A 312-TP304H	SUS304HTP	3605-811	
18% Cr-8%Ni-0.035% C steel	A 312-TP304L	SUS304LTP	3605-811L	17440-X2 CrNi 189
22% Cr-12% Ni Steel	A 312-TP309	SUS309STP		
25% Cr-20% Ni Steel	A 312-TP310	SUS310STP	3605-805S	
18% Cr-8% Ni-Cb + Ta Steel	A 312-TP347	SUS347TP	3605-822Nb	17440-X5 CrNiNb 189
18% Cr-8% Ni-Mo Steel	A 312-TP316	SUS316TP	3605-845	17440-X5 CrNiMo 1810
18% Cr 8% Ni-Mo-(0.04-0.10)% C Steel	A312-TP316H	SUS316HTP	3605-855	
18% Cr 8% Ni-Mo-0.035% C Steel	A312-TP316L	SUS316LTP	3605-845L	17440-X2 CrNiMo 1810
18% Cr-8% Ni-Ti Steel	A312-TP321	SUS321TP	3605-822Ti	17440-X10 CrNiTi 189
18% Cr-8%Ni-Ti(0.04-0.10)% C Steel	A312-TP321H	SUS321HTP	3605-832Ti	
18% Cr-8% Ni-Cb+Ta(0.04-0.10)% C Steel	A312-TP347H	SUS347HTP	3605-832Nb	

COMPARISON TABLES

COMPARISON OF ASTM SPECIFICATIONS AND SIMILAR STANDARDS FOR TUBE

Material	ASTM / ASME	DIN	Ger. Mat.-No.	BS	Grade Material
Carbon Steel	A179	ST 35.8/1	1.0305	3059/1	CFS 360
Carbon Steel	A192	ST 35.8/1	1.03305	3059/2	CFS/HFS360
Carbon Steel	A210 Gr.A1	ST 45.8/1	1.0405	3602/1	CFS/HFS410
Carbon Steel	A210 Gr.C	17Mn4	1.0481	3602/1	CFS/HFS460
	A214	ST 37.8/DIN 17177	1.0315	3059/2	ERW360CAT
Low Alloy Steel	A209T1	16Mo5	1.5423	3606	245
Low Alloy Steel	A213/A199 T11/T12	13CrMo44	1.7335	3604	621
Low Alloy Steel	A213/A199 T22	10CrMo910	1.7380	3059	622-440
Low Alloy Steel	A213/199 T5	123CrMo195	1.7362	3604	625
Low Alloy Steel	A213/A199 T9	X12CrMo91	1.7386	3059/3604	629-470
Low Alloy Steel	A335P1/A161 T1	16Mo5	1.5423	3603	245
Low Alloy Steel	A335 P11/P12/A200 T11/T12	13CrMo44	1.7335	3604	620-460
Low Alloy Steel	A335 P22/A200 T22	10CrMo910	1.7380	3604	622
Low Alloy Steel	A335 P5/A200 T5	12CrMo195	1.7362	3606	625
Low Alloy Steel	A335 P9/A200 T9	X12CrMo91	1.7386	3059/2	629-590
Stainless Steel	A213/A312 TP304	X5CrNi189	1.4301	970	304 S15
Stainless Steel	A213/A312 TP304L	X2CrNi189	1.4306	970	304 S12
Stainless Steel	A213/A312 TP321	X10CrNiTi189	1.4541	970	321 S12
Stainless Steel	A213/A312 TP316	X5CrNiMo810	1.4401	970	315 S16
Stainless Steel	A213/A312 TP316L	X2CrNiMo1810	1.4404	970	316 S12
Stainless Steel	A213/A312 TP347	X10CrNiNb189	1.4550	970	347 S17
Stainless Steel	A213/A312 TP316Ti	X10CrNiTi1810	1.4571	970	320 S17
Stainless Steel	A289/A970 UNS S31803	X2CrNiMo11225	1.4462	----	----
Stainless Steel	B677 Alloy904L	X2NiCrMoCu25205	1.4359	----	----
Nickel	B161 Ni200	Ni99.2	2.4066	3074	NA11
Nickel	B161 Ni201	Ni99.2	2.4068	3074	NA12
Nickel Copper	B163 UNS N04400	NiCu30Fe	2.4360	3074	NA13
Nickel-Chrom-Iron	B163 UNS N06600	NiCr15Fe	2.4816	3074	NA14
Nickel-Chrom-Iron	B161 UNS N08825	NiCr21Mo	2.4858	3074	NA16
Nickel-Chrom-Iron	B468 UNS N08020	-----	-----	----	----
Nickel-Chrom-Iron	B163 UNS N08800	X10NiCrAlTi3220	1.4876	3074	NA15
Copper Alloy	B75/B111 No. 122	Sf-Cu	2.0090	2871	C106
Copper Alloy	B75/B111 No. 142	CuAsp	2.1491	2871	C107
Copper Alloy	B111 Ca. No. 443	CuZn28Sn	2.0470	2871	CZ111
Copper Alloy	B111 Ca. No. 687	CuZn20Al	2.0460	2871	CZ110
Copper Alloy	B111 Ca. No. 608	CuAl5AS	2.0918	----	----

Copper Alloy	B111 Ca. No. 706	CuNi10Fe	2.0872	2871	CN102
Copper Alloy	B111 Ca. No. 715	CuNi30Fe	2.0882	2871	CN107
Aluminium Alloy	Alloy1050/1050A	Al99.5	3.0255	1050A(1B)	----
Aluminium Alloy	Alloy5754	AlMg3	3.3535	(N5)	----
Aluminium Alloy	Alloy3003	AlMnCu	3.0517	----	----
Aluminium Alloy	Alloy5083	AlMg4,5Mn	3.3547	5083(N8)	----

Nickel Alloys & Super Alloys in Form of

Wire	Bar	Sheet	Plate	Tube	Pipe	Fittings	Flanges	Forgings	Welding Rod
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Grade	Werkstoff No.	UNS
Nickel 200	W.Nr. 2.4060	N02200
	W.Nr. 2.4066	
Nickel 201	W.Nr. 2.4061	N02201
	W.Nr. 2.4068	
Monel 400	W.Nr. 2.4360	N04400
	W.Nr. 2.4361	
Monel K500	W.Nr. 2.4375	N05500
Inconel 600	W.Nr. 2.4816	N06600
Inconel 601	W.Nr. 2.4851	N06601
Inconel 617	W.Nr. 2.4663	N06617
Inconel 625	W.Nr. 2.4856	N06625
Inconel 718	W.Nr. 2.4668	N07718
Inconel X-750	W.Nr. 2.4669	N07750
Incoloy 800	W.Nr. 1.4876	N08800
Incoloy 800H/HT	W.Nr. 1.4876	N08810
Incoloy 800HT	W.Nr. 1.4876	N08811
Incoloy 825	W.Nr. 2.4858	N08825
Hastelloy C22	W.Nr. 2.4602	N06022
Hastelloy C276	W.Nr. 2.4819	N10276
Hastelloy B-2	W.Nr. 2.4617	N10665

Hastelloy C-4	W.Nr. 2.4610	N06455
Hastelloy X	W.Nr. 2.4665	N06002

Stainless Steel & Special Alloys in Form of

Wire	Bar	Sheet	Plate	Tube	Pipe	Fittings	Flanges	Forgings	Welding Rod
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Grade	UNS
13-8 Mo	S13800
15-5 PH	S15500
15-7 Mo	S15700
17-4 PH	S17400
17-7 PH	S17700
Stainless Steel 304H	S30400
Stainless Steel 309	S30900
Stainless Steel 310	S31000
Stainless Steel 317L	S31703
Stainless Steel 321	S32100
Stainless Steel 347	S34700
Stainless Steel 431	S43100
Stainless Steel 440A	S44002
440C	S44004
446	S44600
Alloy 20	N08020

Titanium & Titanium Alloys in Form of

Wire	Bar	Sheet	Plate	Fittings	Flanges	Forgings	Welding Rod
Grade	UNS						
Ti Grade 1	R50250						
Ti Grade 2	R50400						
Ti Grade 4	R50700						

International Cross Reference

U.S.A.	Germany	Germany	France	Japan	Italy	Sweden	U.K.	European Union	Spain	Russia
AISI	DIN 17006	W.N. 17007	AFNOR	JIS	UNI	SIS	BSI	EURONORM	UNE	GOST
201				SUS 201						
301	X 12 CrNi 17 7	1.431	Z 12 CN 17-07	SUS 301	X 12 CrNi 1707	23 31	301S21	X 12 CrNi 17 7	X 12 CrNi 17-07	
302	X 5 CrNi 18 7	1.4319	Z 10 CN 18-09	SUS 302	X 10 CrNi 1809	23 31	302S25	X 10 CrNi 18 9	X 10 CrNi 18-09	12KH18N9
303	X 10 CrNiS 18 9	1.4305	Z 10 CNF 18-09	SUS 303	X 10 CrNiS 1809	23 46	303S21	X 10 CrNiS 18 9	X 10 CrNiS 18-09	
303 Se			Z 10 CNF 18-09	SUS 303 Se	X 10 CrNiS 1809		303S41		X 10 CrNiS 18-09	12KH18N10E
304	X 5 CrNi 18 10	1.4301	Z 6 CN 18-09	SUS 304	X 5 CrNi 1810	23 32	304S15	X 6 CrNi 18 10	X 6 CrNi 19-10	08KH18N10
	X 5 CrNi 18 12	1.4303					304S16			06KH18N11
304 N				SUS 304N1	X 5 CrNiN 1810					
304 H				SUS F 304H	X 8 CrNi 1910				X 6 CrNi 19-10	
304 L	X 2 CrNi 18 11	1.4306	Z 2 CN 18-10	SUS 304L	X 2 CrNi 1911	23 52	304S11	X 3 CrNi 18 10	X 2 CrNi 19-10	03KH18N11
	X 2 CrNiN 18 10	1.4311	Z 2 CN 18-10-Az	SUS 304LN	X 2 CrNiN 1811	23 71				
305			Z 8 CN 18-12	SUS 305	X 8 CrNi 1812	23 33	305S19	X 8 CrNi 18 12	X 8 CrNi 18-12	
			Z 6 CNU 18-10	SUS XM7				X 6 CrNiCu 18 10 4 Kd		
309	X 15 CrNiS 20 12	1.4828	Z 15 CN 24-13	SUH 309	X 16 CrNi 2314		309S24	X 15 CrNi 23 13		
309 S				SUS 309S	X 6 CrNi 2314			X 6 CrNi 22 13		
310	X 12 CrNi 25 21	1.4845		SUH 310	X 22 CrNi 2520		310S24			20KH23N18
310 S	X 12 CrNi 25 20	1.4842	Z 12 CN 25-20	SUS 310S	X 5 CrNi 2520	23 61		X 6 CrNi 25 20		10KH23N18
314	X 15 CrNiSi 25 20	1.4841	Z 12 CNS 25-20		X 16 CrNiSi 2520			X 15 CrNiSi 25 20		20KH25N20S2
316	X 5 CrNiMo 17 12 2	1.4401	Z 6 CND 17-11	SUS 316	X 5 CrNiMo 1712	23 47	316S31	X 6 CrNiMo 17 12 2	X 6 CrNiMo 17-12-03	
316	X 5 CrNiMo 17 13 3	1.4436	Z 6 CND 17-12	SUS 316	X 5 CrNiMo 1713	23 43	316S33	X 6 CrNiMo 17 13 3	X 6 CrNiMo 17-12-03	
316 F	X 12 CrNiMoS 18 11	1.4427								
316 N				SUS 316N						
316 H				SUS F 316H	X 8 CrNiMo 1712				X 5 CrNiMo 17-12	
316 H					X 8 CrNiMo 1713				X 6 CrNiMo 17-12-03	

316 L	X 2 CrNiMo 17 13 2	1.4404	Z 2 CND 17-12	SUS 316L	X 2 CrNiMo 1712	23 48	316S11	X 3 CrNiMo 17 12 2	X 2 CrNiMo 17-12-03	03KH17N14M2
	X 2 CrNiMoN 17 12 2	1.4406	Z 2 CND 17-12-Az	SUS 316LN	X 2 CrNiMoN 1712					
316 L	X 2 CrNiMo 18 14 3	1.4435	Z 2 CND 17-13		X 2 CrNiMo 1713	23 53	316S13	X 3 CrNiMo 17 13 3	X 2 CrNiMo 17-12-03	03KH16N15M3
	X 2 CrNiMoN 17 13 3	1.4429	Z 2 CND 17-13-Az		X 2 CrNiMoN 1713	23 75				
	X 6 CrNiMoTi 17 12 2	1.4571	Z6 CNDT 17-12		X 6 CrNiMoTi 1712	23 50	320S31	X 6 CrNiMoTi 17 12 2	X 6 CrNiMoTi 17-12-03	08KH17N13M2T 10KH17N13M2T
	X 10 CrNiMoTi 18 12	1.4573			X 6 CrNiMoTi 1713		320S33	X 6 CrNiMoTi 17 13 3	X 6 CrNiMoTi 17-12-03	08KH17N13M2T 10KH17N13M2T
	X 6 CrNiMoNb 17 12 2	1.4580	Z 6 CNDNb 17-12		X 6 CrNiMoNb 1712			X 6 CrNiMoNb 17 12 2		08KH16N13M2B
	X 10 CrNiMoNb 18 12	1.4583			X 6 CrNiMoNb 1713			X 6 CrNiMoNb 17 13 3		09KH16N15M3B
316Ti	X6CrNiMoTi1712.2	1.4571	Z6CNDT17-12		XCrNiMoTi7.12	2350	320S18 320S31		F.3535 X6CrNiMoTi17 12.2	10Ch17N13M2T
317				SUS 317	X 5 CrNiMo 1815	23 66	317S16			
317 L	X 2 CrNiMo 18 16 4	1.4438	Z 2 CND 19-15	SUS 317L	X 2 CrNiMo 1815	23 67	317S12	X 3 CrNiMo 18 16 4		
317 L	X 2 CrNiMo 18 16 4	1.4438	Z 2 CND 19-15	SUS 317L	X 2 CrNiMo 1816	23 67	317S12	X 3 CrNiMo 18 16 4		
330	X 12 NiCrSi 36 16	1.4864	Z 12NCS 35-16	SUH 330						
321	X 6 CrNiTi 18 10	1.4541	Z 6 CNT 18-10	SUS 321	X 6 CrNiTi 1811	23 37	321S31	X 6 CrNiTi 18 10	X 6 CrNiTi 18-11	08KH18N10T
	X 12 CrNiTi 18 9	1.4878								
321 H				SUS 321H	X 8 CrNiTi 1811		321S20		X 7 CrNiTi 18-11	12KH18N10T
329	X 8 CrNiMo 27 5	1.4460		SUS 329J1		23 24				
347	X 6 CrNiNb 18 10	1.4550	Z 6 CNNb 18-10	SUS 347	X 6 CrNiNb 1811	23 38	347S31	X 6 CrNiNb 18 10	X 6 CrNiNb 18-11	08KH18N12B
347 H				SUS F 347H	X 8 CrNiNb 1811				X 7 CrNiNb 18-11	
904L		1.4939	Z 12 CNDV 12-02							
	X 20 CrNiSi 25 4	1.4821								
UNS31803	X 2 CrNiMoN 22 5	1.4462								
UNS32760	X 3 CrNiMoN 25 7	1.4501	Z 3 CND 25-06Az							
403	X 6 Cr 13	1.4000	Z 12 C 13	SUS 403	X 12 Cr 13	23 02	403S17	X 10 Cr 13	X 6 Cr 13	12Kh13
	X 10 Cr 13	1.4006						X 12 Cr 13		
	X 15 Cr 13	1.4024								

405	X 6 CrAl 13	1.4002	Z 6 CA 13	SUS 405	X 6 CrAl 13		405S17	X 6 CrAl 13	X 6 CrAl 13	
	X 10 CrAl 7	1.4713	Z 8 CA 7					X 10 CrAl 7		
	X 10 CrAl 13	1.4724			X 10 CrAl 12					10Kh13SYu
	X 10 CrAl 18	1.4742						X 10 CrSiAl 18		15Kh18SYu
409	X 6 CrTi 12	1.4512	Z 6 CT 12	SUH 409	X 6 CrTi 12		409S19	X 5 CrTi 12		
					X 2 CrTi 12					
410	X 6 Cr 13	1.4000	Z 10 C 13	SUS 410	X 12 Cr 13	23 02	410S21	X 12 Cr 13	X 12 Cr 13	12Kh13
	X 10 Cr 13	1.4006	Z 12 C 13							
	X 15 Cr 13	1.4024								
410 S	X 6 Cr 13	1.4000	Z 6 C 13	SUS 410S	X 6 Cr 13	23 01	403S17	X 6 Cr 13		08Kh13
A179	DIN 17175	St. 35.8	TU 37 c	STPT 38			320			
A106 Gr B	DIN 17175	St. 45.8	TU 42 C	STPT42			430			20
A210 Gr A1	DIN 17175			STB 42						
A213 T 12	DIN 17175	13 Cr Mo 44	TU 13 CD 4.04	STBA 22			620-460			15 XM
A335 P12				STPA22						
A213 T11			TU 10 CD 5.05	STBA 22			621			
A335 P11				STPA 23						
A213 T5			TUZ10CD05.05	STBA 25			625			
A335 P5			TUZ12CD05.05	STPA 25						
A213 T22	DIN 17175	10Cr Mo 9 10	TU10C9.10	STBA 24			622-490			
A335 P22				STPA 24						
A213 T9	DIN 17175	X12Cr Mo91	TUZ10CD09	STBA 26			629-470			
A335 P9	DIN 17175	(VD TUV		STPA 26			629-490			
A213 T91	DIN 17175	X20Cr Mo V 12.1	TUZ10CDVNb 09.01				762			
A335 P91			TUZ10CDNbV 09.02							
A516 Gr.70	DIN 17Mn4	1.0481	A48CP;AP	SG365	Fe510-1KG,KT,KW		762		A47RC1	14G2
A515 Gr.70				SGV410	Fe510-2KG,KT,KW				RA II	

A182-F11;12"	13CrMo4 4	1.7335	15CD3.5	SFVA F12	14CrMo3	2216	620-440		F.2631	12ChM
A187Gr.12Cl.2			15CD4.5		16CrMo3		620-470		14CrMo4.5	15Chm
A387Gr.12Cl.2	16CrMo 4 4	1.7337	15CD4.5		18CrMo4.5KW;KG					15Chm
430	X6Cr17	1.4016	Z8C17	SUS430	X8Cr17	2320	430S17 430S18		F.3113-X6Cr17	12Ch17
420	X20Cr13	1.4021	Z20C13	SUS420J1	X20Cr13	2320	420S37		F.3402-X20Cr13	20Ch13
440C	X105CrMo17	1.4125	Z100CD17	SUS440C						(95Ch18)

ASTM STANDARDS RELATING TO STEEL

ASTM	SPECIFICATION
ASTM A 53 / A 53M	Pipe, Steel, Black and Hot – Dipped, Zinc – Coated, Welded and Seamless
ASTM A 105 / A105M	Carbon Steel Forgings for Piping Applications
ASTM A 106 / A 106M	Seamless Carbon Steel Pipe for High – Temperature Service
ASTM A 120 / A 120M	Black and Hot Dipped Zinc Coated (Galvanized) Welded and Seamless Steel Pipe for Ordinary Uses.
ASTM A 179 / A 179M	Seamless Cold – Drawn Low – Carbon Steel Heat – Exchanger and Condenser Tubes
ASTM A 181 / A 181M	Carbon Steel Forgings, for general – Purpose Piping
ASTM A 182 / A 182M	Forged or Rolled Alloy and Stainless Steel Pipe Flanges, Forged Fittings, and Valves and Parts for High – Temperature Service
ASTM A 192 / A 192M	Seamless Carbon Steel Boiler Tubes for High – Pressure Services
ASTM A 193 / A 193M	Alloy Steel & Stainless Steel Bolting Materials for High – Temperature Service
ASTM A 194 / A 194M	Carbon & Alloy Steel Nuts For Bolts for High Pressure or High Temperature Service,or Both
ASTM A 210 / A 210M	Seamless Medium – Carbon Steel Boiler and Superheater Tubes
ASTM A 213 / A 213M	Seamless Ferritic and Austenitic Alloy – Steel Boiler, Superheater and heat Exchanger Tubes
ASTM A 234 / A 234M	Piping Fittings of Wrought Carbon Steel and Alloy Steel for Moderate and High Temperature Service
ASTM A 240 / A 240M	Heat Resisting Chromium and Chromium- Nickel Stainless Steel Plate, Sheet and Strip for Pressure Vessels.
ASTM A 249 / A 249M	Welded Austenitic Steel Boiler, Superheater, Heat – Exchanger, and Condenser Tubes
ASTM A 350 / A 350M	carbon and low alloy steel forged or ring-rolled flanges, forged fittings and valves for low-temperature service.
ASTM A 312 / A 312M	Seamless, Welded, and Heavily Cold Worked Austenitic Stainless Steels Pipes
ASTM A 333 / A 333M	Seamless and Welded Steel Pipe for Low – Temperature Service
ASTM A 335 / A 335M	Seamless Ferritic Alloy – Steel Pipe for High Temperature Services
ASTM A 358 / A 358M	Electric – Fusion – Welded Austenitic Chromium – Nickel Stainless Steel Pipe for High – Temperature Services and General Applications
ASTM A 387 / A 387 M	chromium-molybdenum alloy steel plates for welded broilers and pressure vessels designed for elevated temperature service
ASTM A 403 / A 403M	Wrought Austenitic Stainless Steel Piping Fittings
ASTM A 420 / A 420M	Piping Fittings of Wrought Carbon Steel and Alloy Steel for Low – Temperature Service
ASTM A 479 / A479M	Stainless and Heat Resisting Steel Bars and Shapes for use in Boilers and other Pressure Vessels.
ASTM A 516 / A 516M	carbon steel plates intended primarily for service in welded pressure vessels where improved notch toughness is important.
ASTM A 269 - 04	Seamless and welded Austenitic Stainless Steel Tubing for general Service.
ASTM A 790/ A 790M	Seamless and welded Ferritic / Austenitic Stainless Steel Pipe.

Aluminium Brass Alloy 687

U.K.	U.S.A.	Germany		Japan	
<u>BS</u> <u>2871/PART</u> <u>3 CZ 110</u>	<u>ASTM B 111 C</u> <u>68700</u>	<u>DIN</u> <u>17660/1785</u> <u>CuZn20Al2</u>	<u>NFA 51102</u> <u>CuZn20Al2</u>	<u>JIS</u> <u>H3300</u> <u>C</u> <u>6870</u>	

Admiralty Brass Alloy443

U.K.	U.S.A.	Germany		Japan	
<u>BS</u> <u>2871/PART</u> <u>3 CZ 111</u>	<u>ASTM B 111 C</u> <u>44300</u>	<u>DIN</u> <u>17660/1785</u> <u>CuZn28Sn1</u>	<u>NFA 51102</u> <u>CuZn29Sn1</u>	<u>JIS</u> <u>H3300</u> <u>C</u> <u>4430</u>	

Copper Nickel 90/10 Alloy 706

U.K.	U.S.A.	Germany		Japan	
<u>BS</u> <u>2871/PART</u> <u>3 CN 102</u>	<u>ASTM B 111 C</u> <u>70600</u>	<u>DIN</u> <u>17664/1785</u> <u>CuNi10Fe1Mn</u>	<u>NFA 51102</u> <u>CuNi10Fe1Mn</u>	<u>JIS</u> <u>H3300</u> <u>C</u> <u>7060</u>	

Copper Nickel 70/30 Alloy 715

U.K.	U.S.A.	Germany		Japan	
<u>BS</u> <u>2871/PART</u> <u>3 CN 107</u>	<u>ASTM B 111 C</u> <u>71500</u>	<u>DIN</u> <u>17664/1785</u> <u>CuNi30Mn1Fe</u>	<u>NFA 51102</u> <u>CuNi30Mn1Fe</u>	<u>JIS</u> <u>H3300</u> <u>C</u> <u>7150</u>	

Copper Nickel Iron Manganese 66/30/2/2 Alloy 71640

U.K.	U.S.A.	Germany		Japan	
<u>BS</u> <u>2871/PART</u>	<u>ASTM B 111 C</u> <u>71640</u>	<u>DIN</u>	<u>NFA 51102</u>	<u>JIS</u>	

3 CN 108		17664/1785	CuNi30Fe2Mn2	H3300		
		CuNi30Fe2Mn2		C 7164		
Duplex 22 Cr 5 Ni 3 Mo; Duplinos 2205;W-St. 1.4462						
UNS S31803	ASTM A789/790	DIN W-Nr.4462	X2CrNiMoN225			
AUSTENITIC 20 Cr 25 Ni 5 Mo; technicromo 904L;W-st. 1.4462						
UNS N08904	Alloy 904LASTM B677	DIN W-Nr.4539	X2NiMoCu25 20 5	SIS 2562	AFNOR Z1NCDU2520	TECHNICROMO 904L
Duplex 19 Cr 5 Ni 3 Mo; Duplinos 1905;W-St. 1.4417						
UNS S31500	ASTM B669/789/790	DIN W-Nr.4417	X2CrNiMo 195			
Duplex 25 Cr 6 Ni Mo; Duplinos 2506;W-St. 1.4460						
AISI 329	SIS 2324	DIN W-Nr.4460	X4CrNiMoN 27 5 2	JIS SUS 329 J1	JIS SCH 11	JIS SCA 11

Material Card Index - Material Group

Nickel base alloy and high nickel containing steels							
1.3912	1.4862	2.4145	2.4360	2.4375	2.4617	2.4633	2.4816
2.4819	2.4831	2.4851	2.4858	2.4952			
High-speed steels							
1.3207	1.3243	1.3333	1.3343	1.3344	1.3346		

Stainless steels (ferritic)							
1.4003	1.4016	1.4105	1.4106	1.4113	1.4502	1.4509	1.4511
1.4512	1.4601	1.4724	1.4742				
Stainless steels (martensitic)							
1.3541	1.4005	1.4006	1.4021	1.4024	1.4028	1.4034	1.4037
1.4057	1.4104	1.4108	1.4116	1.4120	1.4122	1.4313	1.4351
1.4418	1.4542	1.4545	1.4548				
Stainless steels (austenitic)							
1.3813	1.3952	1.3964	1.4300	1.4301	1.4303	1.4305	1.4306
1.4307	1.4310	1.4316	1.4370	1.4401	1.4404	1.4406	1.4427
1.4429	1.4435	1.4436	1.4438	1.4441	1.4452	1.4455	1.4529
1.4536	1.4539	1.4541	1.4546	1.4567	1.4571	1.4576	1.4578
1.4597	1.4893						
Stainless steels (ferritic-austenitic)							
1.4162	1.4362	1.4460	1.4462	1.4469	1.4501	1.4872	
Heat resisting steels and valve steels							
1.4713	1.4718	1.4724	1.4742	1.4762	1.4791	1.4828	1.4829
1.4835	1.4841	1.4862	1.4871	1.4872	1.4875	1.4882	1.4893
1.4923	1.5028						

Welding filler metals

1.2396	1.2398	1.4316	1.4332	1.4351	1.4370	1.4455	1.4462
1.4501	1.4502	1.4576	1.4820	1.4829			

MS ERW PIPE

ISO R65 LIGHT II BS 1387 LIGHT BS CLASS A

ISO MEDIUM BS 1387 MEDIUM BS CLASS B DIN 2440

ISO HEAVY BS 1387 HEAVY BS CLASS C DIN 2441

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