

**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
Carbon Steel	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	1.738	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	1.738	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	1.455	970	347 S17
Stainless Steel	A213/A312 TP316Ti	X10CrNiMiTi1810	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	2.436	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	2.009	2871	C106
Copper Alloy	B75/B111 No. 142	CuAsp	2.1491	2871	C107
Copper Alloy	B111 Ca. No. 443	CuZn28Sn	2.047	2871	CZ111
Copper Alloy	B111 Ca. No. 687	CuZn20Al	2.046	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