

Comparison Table—Service Temperatures for Boiler and Heat Exchanger Tubes

Max	GB	ASTM	DIN	BS	AFNOR	EN	JIS
			17175	3059-3601	NF A 49-213	10216-2	G 3456
Max.Service Temperature				3602-3603	NF A 49-215		G 3458
				3604-3606			G 3461
							G 3462
	(CHINA)	(USA)	(Germany)	(U.K.)	(France)	(Europe)	(Japan)
-100°C		A 334 Gr.3		503 LT	TU 10 N 14		
-40°C		A 334Gr.146		430 LT	TU 42 BT		
475°C	10 [°]	A 179	St35.8	320	TU 37 C	P235GH	STPT 38
	20 [°]	A 106 Gr.A		360			STB 35
	10 [°]	A 192					
	20 [°]	A 106 Gr.B	St45.8	430	TU 42 C	P265GH	STPT 42
	20 [°]	A 210 Gr.A1					STB 42
	20 [°]	A 106 Gr.C	17Mn4	440	TU 48 C		STPT 49
	20 [°]	A 210 Gr.C					
			19Mn5	500Nb	TU 52 C		STB 52
500°C			15Mo3	243	TU 15 D 3	16Mo3	
	12CrMo	A 209 T1	16Mo5 245			16Mo3	STBA 12
	12CrMo	A 335 P1	(VD TUV)				STPA 12
							STBA 13
550°C		A 213 T2			TU 15 CD 2.05		STBA 20
	15CrMo	A 335 P12					STPA 20
560°C	15CrMo	A 213 T12	13CrMo44	620-460	TU 13 CD 4.04	13CrMo4-5	STBA 22
	15CrMo	A 335 P12					STPA 22
575°C	15CrMo	A 213 T11		621	TU 10 CD 5.05		STBA 22
	15CrMo	A 335 P11					STPA 23
600°C	1Cr5Mo	A 213 T5	12CrMo195	625	TU Z 10 CD 05.05	X11CrMo5	STBA 25
	1Cr5Mo	A 335 P5			TU Z 12 CD 05.05		STPA 25
	12Cr2Mo	A 213 T22	10CrMo910	622-490	TU 10 C 9.10	10CrMo9-10	STBA 24
	12Cr2Mo	A 335 P22					STPA 24
			14MoV63				
625°C	Cr9Mo	A 213 T9	X12CrMo91	629-470	TU Z 10 CD 09	11CrMo9-10	STBA 26
	Cr9Mo	A 335 P9	(VD TUV)	629-490			STPA 26
650°C	10Cr9Mo1VNb	A 213 T91	X10CrMoVNB9-1		TU Z 10 CDVNb 09.01	X10CrMoVNB9-1	
	10Cr9Mo1VNb	A 335 P91			TU Z 10 CDNbV 09.02		

Producing according to the standards following

Designation Title

ASTM A 53	Black and Hot-Dipped, Zinc-Coated, Welded and Seamless Steel Pipe
ASTM A 106	Seamless Carbon Steel Pipe for High-Temperature Service
ASTM A 120	Black and Hot-Dipped Zinc-Coated (Galvanized) Welded and Seamless Steel Pipe for Ordinary Uses
ASTM A 134	Electric-Fusion (Arc)-Welded Steel Pipe (Size NPS 16 and Over)
ASTM A 135	Electric-Resistance-Welded Steel Pipe
ASTM A 161	Seamless Low Carbon and Carbon Molybdenum Steel Still Tubes for Refinery Service
ASTM A 179	Seamless Cold Drawn Low Carbon Steel Heat Exchanger and Condenser Tubes
ASTM A 192	Seamless Carbon Steel Boiler Tubes for Pressure Service for Refinery Service
ASTM A 199	Seamless Cold Drawn Intermediate Alloy Steel Heat-Exchange and Condenser Tubes
ASTM A 200	Seamless Medium Intermediate Alloy Steel Still Tubes for Refinery Service
ASTM A 209	Seamless Carbon-molybdenum Alloy Steel Boiler and Superheater Tubes
ASTM A 210	Seamless Medium Carbon Steel Boiler and Superheater Tubes
ASTM A 211	Spiral-Welded Steel or Iron Pipe
ASTM A 213	Seamless Ferritic and Austenitic Alloy Steels Boiler Superheater and Heat-exchange tubes
ASTM A 312	Seamless and Welded Austenitic Stainless Steel Pipes
ASTM A 333	Seamless and Welded Steel Pipe for Low-Temperature Service
ASTM A 335	Seamless Ferritic Alloy-Steel Pipe for High-Temperature Service
ASTM A 405	Seamless Ferritic Alloy-Steel Pipe Specially Heat Treated for High-Temperature Service
ASTM A 450	General Requirements for Carbon, Ferritic Alloy and Austenitic Alloy Steel Tubes
ASTM A 500	Cold-Formed Welded and Seamless Carbon Steel Structural Tubing in Rounds and Shapes
ASTM A 519	Seamless Carbon and Alloy Steel For Mechanical Tubing
ASTM A 556	Seamless Cold-Drawn Carbon Steel Feed Water Heater Tubes
ASTM A 714	High-Strength Low-Alloy Welded and Seamless Steel Pipe
ASTM A 731	Seamless, Welded Ferritic, and Martensitic Stainless Steel Pipe
ASTM A 790	Seamless and Welded Ferritic/Austenitic Stainless Steel Pipe
ASTM A 795	Black and Hot-Dipped Zinc-Coated (Galvanized) Welded and Seamless Steel Pipe for Fire Protection Use
ASTM A 999	General Requirements for Alloy and Stainless Steel Pipes
API 5L	Line Pipe
APL 5CT	Casing Pipe