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## **Main Specifications of common use for piping products**

### **MSS - Manufacturers Standardization Society of the Valve and Fitting Industry**

MSS SP 25	Standard marking system for valves, fittings, flanges and unions.
MSS SP 43	Wrought stainless steel butt-welding fittings
MSS SP 44	Steel pipeline flanges
MSS SP 75	Specification for high test wrought butt-welding fittings

### **BSI - British Standard Institution**

BS3059	Steel boiler and superheater tubes
BS3074	Nickel and nickel alloys: Seamless tubes
BS3605	Austenitic stainless steel pipes and tubes for pressure purposes
BS3606	Steel tubes for heat exchangers
BS3799	Steel pipe fittings, screwed and socket welding for the petroleum industry (interchangeable with ANSI B16.11)

### **ASME - American Society of Mechanical Engineers**

SA335	Smls Chrome Moly Pipe - grades P11, P22, P5, P9 - 1/2" to 24"
SA234	Smls Chrome Moly BW fittings - grades WP11, WP22, WP5, WP9 - 1/2" to 24" - Elbow, Tee Caps, Conc. And Ecc. Reducers
SA182	Chrome Moly Forged - grades F11, F22, F5, F9 - flanges (2" to 24"-lbs 150, 300, 600, 900, 1500-WN, SO,BL, SW) - fittings (1/2" to 24" - Elbows, Tee, Cap, Coupling, Inserts, Unions) - valves 1/2" to 2"
A217	Chrome Moly Cast Valves - grades C5, C12

### **ANSI - American national standard for piping, pipe flanges, fittings and valves**

B16.5	Pipe flanges and flanged fittings
B16.9	Factory made wrought steel butt-welding fittings
B16.10	Face to face and end-to-end dimensions of valves
B16.11	Forged fittings, socket welding and threaded
B16.25	Butt-welding ends
B16.28	Wrought steel butt-welding short radius elbows and returns
B16.34	Valves-flanged, threaded and welding ends
B16.36	Orifice flanges
B16.47	Large diameter steel flanges (NPS 26 through NPS 60)
B1.20.1	Pipe threads, general purpose (inch)



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**API - American Petroleum Institute**

API 5L                    Specification for line pipe  
API 590                  Steel line blanks  
API 6A                   Wellhead equipments  
API 605                  Large diameters carbon steel flanges

**AWWA - American Water Works Association**

AWWA C207             Steel pipe flanges for waterworks service - size 4 in. through 144 in.

**NACE - National Association of Corrosion Engineering**

MR0175-90             Standard material requirements, sulphide stress cracking resistant - metallic materials for oilfield equipment

**ASTM - American Society for Testing and Materials**

A53                      Pipe, steel black and hot dipped, zinc coated, welded and seamless  
A105                     Forging, carbon steel, for piping components  
A106                     Seamless carbon steel pipe for high temperature service  
A182                     Forged or rolled alloy steel pipe flanges, forged fittings and valves and parts for high temperature service  
A193                     Alloy steel and stainless steel bolting materials for high temperature services  
A213                     Seamless ferritic and austenitic alloy-steel boiler, superheater and heat exchanger tubes  
A234                     Piping fittings of wrought carbon steel and alloy steel for moderate and elevated temperatures  
A240                     Heat resistant Chromium and Chromium-Nickel stainless steel plate, sheet and strip for pressure vessels  
A268                     Seamless and welded ferritic and martensitic stainless steel tubing for general service  
A269                     Seamless and welded austenitic stainless steel tubing for general service  
A271                     Seamless austenitic chromium-nickel steel tubes for refinery service  
A312                     Seamless and welded austenitic stainless steel pipes  
A320                     Alloy steel bolting materials for low temperature service  
A333                     Seamless and welded pipe for low temperature service  
A335                     Seamless ferrite alloy steel pipe for high temperature service  
A350                     Forging, carbon and alloy steel, requiring notch toughness testing for piping component  
A358                     Electric fusion welded (EFW) austenitic Chromium-Nickel alloy steel pipe for high temperature service  
A363                     Seamless and welded unalloyed titanium and titanium alloy fittings  
A366                     Factory made wrought Nickel and Nickel-alloy fittings  
A376                     Seamless austenitic steel pipe for high-temperature central-station service  
A403                     Wrought austenitic stainless steel piping fittings  
A409                     Welded large diameter austenitic stainless steel pipe for corrosive or high temperature service  
A420                     Piping fittings of wrought carbon steel and alloy steel for low temperatures  
A450                     General requirements for carbon, ferrite alloy, and austenitic alloy steel tubes  
A511                     Seamless stainless steel mechanical tubing



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A515	Pressure vessel plates, carbon steel, for intermediate and higher temperature service
A516	Pressure vessel plates, carbon steel, for moderate and lower temperature service
A530	General requirements for specialised carbon and alloy steel pipe
A671	Electric fusion welded (EFW) steel pipe for atmospheric and lower temperatures
A672	Electric fusion welded (EFW) steel pipe for high-pressure service at moderate temperature
A778	Welded un-annealed austenitic stainless steel tubular products
A789	Seamless and welded ferritic-austenitic stainless steel tubing for general service
A790	Seamless and welded ferrite-austenitic stainless steel pipe
A813	Single or double welded austenitic stainless steel pipes
A815	Wrought ferrite-austenitic and martensitic stainless steel piping fittings
B161	Nickel seamless pipe and tube (UNS N02200, N02201)
B163	Seamless nickel and nickel alloy condenser and heat exchanger tubes(UNS N02200, N04400, N06600, N08800)
B165	Nickel-copper alloy (UNS N04400)
B167	Nickel-chromium-iron alloys (UNS N06600, N06601 and N06690), seamless pipe and tube
B337	Seamless and welded titanium and titanium alloy pipe
B338	Seamless and welded titanium and titanium alloy tubes for condenser and heat exchangers
B407	Nickel-iron-chromium alloy (UNS N08800, N08810, N08811) seamless pipe and tube
B423	Nickel-iron-chromium-molybdenum-copper alloys (UNS N08825), pipe and tube
B444	Nickel-chromium-molybdenum-columbium alloys (UNS N06625), pipe and tube
B464	Welded UNS N08020, N08026 and N08024 alloy pipes
B514	Welded Nickel-Iron-Chromium alloy pipe (UNS N08800 and N08810)
B515	Welded UNS N08800 and N08810 alloy tubes
B517	Welded Nickel-Iron-Chromium alloy pipe (UNS N06600)
B673	Welded pipes UNS N08904 and N08367
B619	Welded Nickel and Nickel-Cobalt pipes
B622	Seamless nickel and nickel-cobalt alloy pipe and tube (UNS N06455, N06059, N10276, n06002)
B675	Welded pipes UNS N08366 and N08367
B668	Seamless tubes (UNS N08028)
B677	Seamless pipe and tube (UNS N08904, N08925, 08926)
B705	Nickel-alloy welded pipes (UNS N06625 and N08825)
B710	Nickel-Iron-Chromium-Silicon alloy welded pipes
B729	Seamless pipe and tube (UNS N08020, N08026, N08024)

## **DIN - Standards**

2462	Seamless stainless steel tubes (dimensions and weights)
11850	Stainless steel tubing for the beverage industry and dairy farm equipment and machinery (Dimensions and materials)
17456	Seamless circular austenitic stainless steel tubes for general service
17458	Seamless circular austenitic stainless steel tubes subject t special requirements
17459	Seamless austenitic high temperature steel tubes



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17740	Nickel for semi-finished products
17742	Nickel-chromium alloy
17743	Nickel-copper alloy
17744	Nickel-molybdenum-chromium alloys
17745	Nickel-copper alloy with iron
17751	Nickel and nickel-alloy tubes - special properties
17850	Titanium
17861	Seamless circular titanium and titanium alloy tubes
28180	Seamless steel tubes for heat exchangers
59755	Nickel and nickel alloy tubes - dimensions

### **JIS - Japanese Standards**

G3459	Stainless steel pipe
G3463	Stainless steel boiler and heat exchanger tubes
H4631	Titanium pipes and tubes for ordinary piping

### **NF - Standards**

A49-117	Seamless ferritic and austenitic stainless steel tubes for general service
A49-214	Seamless austenitic high strength high-temperature steel tubes for elevated temperatures
A49-217	Seamless ferritic, austenitic and ferrite-austenitic stainless steel tubes for heat exchangers
A49-218	Seamless austenitic stainless steel tubes for furnace construction
A49-317	Seamless austenitic mechanical tubing

### **GOST - Standards**

9940	Seamless stainless steel tubes, hot finished
9941	Seamless stainless steel tubes, cold and hot finished

*These information have to be intended as a general guide. Therefore their use is always at user's responsibility. Rey Italia makes no warranty of any kind with respect to the subject matter of accuracy of the information.*