

VALVE CODES AND STANDARDS

ANSI - American National Standards Institute

- B16.34: "Valves - Flanged, Threaded, and Welding End"
- Design basis for all kinds of valves, including pressure-temperature ratings, dimensions, materials, and testing.
 - Cast and forged flanged, threaded, and welding end valves.
 - Class 150 thru Class 4500.
- B16.10: "Face-to-Face and End-to-End Dimensions of Valves"
- Face-to-Face dimensions for flanged end valves and end-to-end dimensions for welding end valves.
 - Gate, globe, angle, check, plug, and ball valves.
 - Class 150 thru Class 2500.
- B 16.5: "Pipe Flanges and Flanged Fittings"
- Design basis for all kinds of flanges such as raised face, ring joint face, tongue and groove face.
 - Class 150 thru 2500, NPS (Nominal Pipe Size) 1/2" thru 24".

API - American Petroleum Institute

- 600: "Bolted Bonnet Steel Gate Valve for Petroleum and Natural Gas Industries"
- Specific and detailed design requirements.
 - 1"-24" Sizes, Class 150 thru 2500 flange and butt welding ends.
- 602: "Compact Steel Gate Valves - Flanged, Threaded, Welding, and Extended-Body Ends"
- Specific and detailed design requirements for compact gate valves.
 - 2 1/2" and smaller, Class 800 and 1500, threaded and socket ends.
 - 4" and small, Class 150 thru 1500, flanged and butt welding ends.
 - Cast and forged, Carbon Steel and Stainless Steel.
- 598: "Valve Inspection and Testing"
- Pressure test requirements and acceptance criteria for shell, backseat, and closure tests.

MSS - Manufacturers Standardization Society of Valve and Fittings Industry

- SP-61: "Pressure Testing of Steel Valves"
- Requirements and acceptance criteria for shell and seat closure pressure testing of steel valves.
- SP-25: "Standard Marking System for Valves, Fittings, Flanges, and Unions"
- Requirements for marking on nameplate and valve body.
- SP-55: "Quality Standard for Steel Castings for Valves, Flanges and Fittings, and other piping components. - Visual Methods"
- Reference photographs of casting surface irregularities.
- SP-117: "Bellows Seals for Globe and Gate Valves"
- Reference requirements for design, materials, fabrication, installation, qualification and testing of bellows/assemblies for gate and globe valves.

ASME - American Society of Mechanical Engineers

ASME Boiler and Pressure Vessel Code

Section IX: "Welding and Brazing Qualifications"

- Requirements for qualification of welders and procedures employed in welding.

ASME Code for Pressure Piping, B31

B31.3: "Chemical Plant and Petroleum Refinery Piping"

- Requirements for material, design, fabrication, and testing of piping, including valves and specialty components.

NACE - National Association of Corrosion Engineers

MR0175: "Standard Material Requirements-Sulfide Stress Cracking Resistant Metallic Materials for Oilfield Equipment"

- Material requirements for components exposed to sour environment (H₂S-bearing hydrocarbon service)
- Selected material and limited hardness.