

## **Valve & Fittings Industry Standards Organizations**

Many standards play an important role in the design and production of forged steel valves, fittings, flanges and unions. These standards cover material, product dimension and design, procedure, and safety.

Material standards are sponsored by such organizations as the American Society for Testing and Materials (ASTM), the American Iron & Steel Institute (AISI), and the Society of Automotive Engineers (SAE).

The American National Standards Institute, Inc., whose membership is composed of both user and producer groups, serves as the issuing agency for the majority of product standards related to the valve and fittings industry. Product standards are also issued by individual user and producer agencies such as the American Petroleum Institute (API) and the Manufacturers' Standardization Society of the Valve & Fittings Industry (MSS). The latter is an active member of ANSI.

Procedural and safety standards are issued by ANSI, MSS and the American Society of Mechanical Engineers (ASME).

Following is a partial list of agencies whose standards have a direct bearing on the design and production of forged steel valves, fittings, flanges and unions. Some of the more significant standards are listed under the issuing agency.

**American Iron & Steel Institute**  
**1000 16th Street, N.W.**  
**Washington, D.C. 20036**

**Division of Refining**  
**2101 L Street, N.W.**  
**Washington, D.C. 20037**

API Std. 598 - Valve Inspection and Test.

API Std. 600 - Flanged & Butt Welded End Steel Gate & Plug Valves for Refinery Use.

API Std. 602 - Compact Design Carbon Steel Gate Valves for Refinery Use.

API Std. 606 - Compact Carbon Steel Gate Valves Extended Body.

**American Petroleum Institute**  
**Division of Production**  
**300 Corrigan Tower Bldg.**  
**Dallas, Texas 75201**

API Std. 6D - Steel Gate, Plug & Check Valves for Pipe Line Service.

**The American National Standards Institute, Inc.**  
**1430 Broadway**  
**New York, N. Y. 10018**

ANSI B1.1 - Unified & American Screw Threads.

ANSI B1 .2 - Screw Thread Gauges & Gauging.

ANSI B1 .5 - Acme Screw Threads.

ANSI B2.1 - Pipe Threads.

ANSI B16.5 - Steel Pipe Flanges & Flanged Fittings.

ANSI B16.9 - Steel Butt Welding Fittings.

ANSI B16.10 - Face-to-Face Dimensions of Ferrous Flanged & Welding End Valves.

ANSI B16.11 - Forged Steel Fittings. Socket-Welding and Threaded.

ANSI B16.14 - Ferrous Plugs. Bushings & Lock Nuts with Pipe Threads. .

ANSI B16.20 - Ring Joint Gaskets in Grooves for Steel Pipe Flanges.

ANSI B16.21 - Non-Metallic Gaskets for Pipe Flanges.

ANSI 16.25 - Butt Welding Ends.

ANSI B16.34 - Valves - Flanged and Butt Welding Ends.

ANSI B18.2 - Square & Hexagon Bolts & Nuts.

ANSI - Code for Pressure Piping

B31.1.0 - Power Piping (Section 1)

B31 .2 - Fuel Gas Piping (Section 2)

B31.3 - Chemical Plant and Petroleum Refinery Piping (Section 3)

B31.4 - Liquid Petroleum Transportation Piping Systems (Section 4)

B31 .5 - Refrigeration Piping (Section 5)

B31.8 - Gas Transmission and Distribution Piping Systems (Section 8)

**American Society for Testing Materials**  
**1916 Race Street**  
**Philadelphia, Pa. 19103 `**

ASTM A105 - Forgings. Carbon Steel, for Piping Components.

ASTM A106 - Seamless Carbon Steel Pipe for High Temperature Service.

ASIM A182 - Forged or Rolled Alloy-Steel Pipe Flanges, Forged Fittings & Valves & Parts for High Temperature Service.

ASTM A193 - Alloy Steel Bolting Materials for High Temperature Service.

ASTM A194 - Carbon & Alloy Steel Nuts for Bolts for High Pressure & High Temperature Service.

**American Society of Mechanical Engineers  
United Engineering Center  
345 E. 47th Street  
New York, N. Y., 10017**

ASME Boiler & Vessel Code:

Power Boilers (Section. I)

Material Specifications (Section II)

Nuclear Power Plant Components (Section III)

Heating Boilers (Section IV)

Recommended Rules for care of Power Boilers (Section VII)

Pressure Vessels (Section VIII)

Welding Qualifications (Section IX)

**Manufacturers Standardization Society of the Valve & Fittings Industry  
5203 Leesburg Pike, Suite 502  
Arlington, Virginia 22209**

MSS SP-6 - Standard Finishes for Contact Faces of Pipe Flanges & Connecting End Flanges of Valves & Fittings.

MSS SP-25 - Standard Marking System for Valves, Fittings, Flanges, & Unions.

MSS SP-45 - Bypass & Drain Connection Standard.

MSS SP-61 - Hydrostatic Testing of Steel Valves.

MSS SP-85 - High Pressure Chemical Industry Flanges and Threaded Stubs for use with Lens Gaskets.

MSS SP-79 - Socket Welding Reducer Inserts.

MSS SP-83 - Carbon Steel Pipe Unions —Socket Welding & Threaded.

MSS SP-84 - Steel Valves — Socket Welding & Threaded Ends.

MSS SP-86 - MSS Guidelines for Metric Data in Standards for Valves. Flanges. & Fittings.

**Society of Automotive Engineers  
2 Pennsylvania Plaza  
New York, N. Y. 10001**