

STANDARDS NORMS USED FOR INDUSTRIAL VALVES

General

PED	Pressure Equipment Directive - Certification for the design and manufacturing of equipment under pressure
ASME Section IX	Welding and Brazing Qualifications
API Q1	Specification for quality programs for the oil & gas industry
API 6D	Specification for pipeline valves (gate, plug, ball, and check)
API 6DSS	Specification for pipeline valves (gate, plug, ball, and check) in submarine installation
API 6A	Specifications for well heads and production trees in the oil & gas production
MSS-SP-25	Standard Marking System for Valves, Fittings, Flanges and Union
BS 1868	Specification for steel check valves
BS 6364	Specification for valves for cryogenic service
ISO 28291	Design, dimensions, material, fabrication, and production testing of isolation valves for low-temperature applications

Material specifications and certifications

NACE MR0175	Corrosion resistant materials for sour oil&gas applications
NACE MR0103	Corrosion resistant materials for clean service in downstream applications
EN 10204 3.1	Material certification for the components under pressure
EN 10204 3.2	Material certification for the components under pressure made by an independent authority

Testing standards

ISO 5208	Industrial valves — Pressure testing of metallic valves
API 598	Valve inspection and testing
FCI 70-2	Control valve seat leakage tests
FCI 70-3	Regulator seat leakage test
MSS SP-61	Pressure Testing of Steel Valves
EN 12266-1	Testing of valves (former BS 6755)

American Petroleum Institute (API)

API 526	Flanged steel safety - relief valves
API 527	Seat tightness of pressure relief valves
API 528	Safety relief valve nameplate nomenclature
API 594	Check valves: flanged, lug, wafer, and butt-welding
API 599	Metal plug valves, flanged, threaded and welding ends
API 600	Specification for valve design/construction and the material/trim designations for steel gate valves
API 602	Gate, globe and check valves < DN 100 (NPS 4")
API 603	Corrosion-resistant, bolted bonnet gate valves - flanged and butt-welding ends
API 608	Class 150 and Class 300 ball valves
API 609	Lug and wafer type butterfly valves

American Society of Mechanical Engineers (ASME)

B1.20.1	Pipe thread code
B16.1	Cast iron pipe flanges and flange fittings
B16.4	Gray iron threaded fittings
B16.5	Pipe flanges and flanged fittings of steel, nickel-based alloys, and other alloys
B16.9	Factory-made wrought butt welding fittings
B16.10	Face to face and end to end dimensions of valves
B16.11	Forged fittings socket welding and threaded
B16.20	Metallic gaskets for pipe flanges ring-joint spiral-wound & jacketed
B16.24	Cast copper alloy pipe flanges and flanged fittings
B16.25	But welded ends
B16.34	Valves with flanged, threaded and welding ends
B16.42	Ductile iron pipe flanges and flanged fittings
B16.47	Large diameter steel flanges NPS 26" through 60"
B16.104	Control Valve Seat Leaking

European Industrial Valve Standards (EN)

EN 19	Marking
EN 558-1	Industrial valves - face-to-face and centre-to-face dimensions of metal valves for use in flanged pipe systems Part 1: PN designated valves
EN 558-2	Industrial valves - face-to-face and centre-to-face dimensions of metal valves for use in flanged pipe systems Part 2: Class designated valves
EN 593	Butterfly valves
EN 736-1	Terminology: Definition of types of valves
EN 736-2	Terminology: Definition of components of valves
EN 736-3	Definition of terms
EN 1092-1	Flanges and their joints, circular flanges for pipes, valves, fittings, and accessories, PN designated
EN 1349	Industrial process control valves
EN 5211	Industrial valves — Part-turn actuator attachment
EN 12516-1	Shell design strength – Tabulation method for steel valves
EN 12516-2	Shell design strength – Calculation method for steel valves
EN 12516-3	Shell design strength – Experimental method
EN 12627	Butt weld end design
EN 12760	Socket weld end design
EN 12982	End to end dimensions for but weld end valves
EN 14141	Valves for natural gas transportation in pipelines. Performance requirements and test
EN 14313	Petroleum and natural gas industries - Pipeline transportation systems - Pipeline valves

European flange standards

EN 1092-1	Steel flanges – PN designated
EN 1092-2	Cast iron flanges – PN designated
EN 1759-1	Steel flanges – class designated

Manufacturers Standardization Society (MSS)

SP-6	Standard finishes for contact faces of pipe flanges and connection end flanges of valves and fittings
SP-44	Steel pipeline flanges
SP-45	Bypass and drain connections
SP-53	Quality standards for steel castings and forgings for valves, flanges, fittings, and other piping components - Mag. Particle test
SP-54	Quality standards for steel castings and forgings for valves, flanges, fittings, and other piping components - Radiographic test
SP-55	Quality standards for steel castings and forgings for valves, flanges, fittings, and other piping components - Visual test
SP-67	Butterfly valves
SP-68	High pressure butterfly valves with offset design
SP-82	Valve Pressure Testing Methods
SP-91	Guidelines for manual operation of valves
SP-147	Quality standard for steel casting used in standard class steel valves.

Fire safety

ISO 10497	Fire type-testing requirements
API 589	Fire test for evaluation of valve stem packing
API 607	Fire safety of soft seated quarter turn valves
API 6FA	Fire safety of valves according to API 6D and API 6A
API 6FB	Fire safety of sealing at end connections of valves
API 6FD	Fire safety of check valves
BS 6755	Specification for fire type-testing requirements

Fugitive emissions

ISO 15848-1	Industrial valves - Measurement, test, and qualification procedures for fugitive emissions - Part 1: Classification system and qualification procedures for type testing of valves
ISO 15848-2	Industrial valves - Measurement, test, and qualification procedures for fugitive emissions - Part 2: Production acceptance test of valves
TA-Luft	Specification for fugitive emissions of valves
API 343	Fugitive emissions from equipment leaks II: Calculation procedures for petroleum industry facilities
EPA	Recommendations of the Environmental Protection Act (USA)