

Valve Inspection and Testing

API STANDARD 598
ELEVENTH EDITION, FEBRUARY 2023



American
Petroleum
Institute

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Contents

	Page
1 Scope.....	1
2 Normative References	1
3 Terms and Definitions	2
4 Inspection, Examination, and Supplementary Examination.....	3
4.1 Inspection at the Valve Manufacturer's Plant.....	3
4.2 Inspection Outside the Valve Manufacturer's Plant	3
4.3 Inspection Notice	3
4.4 Extent of Inspection	3
4.5 Examination	3
4.6 Supplementary Examination	4
5 Pressure Tests	4
5.1 Test Location.....	4
5.2 Test Equipment	4
5.3 Tests Required.....	4
5.4 High-pressure Closure Test	5
5.5 High-pressure Pneumatic Shell Test.....	5
5.6 Test Fluid	6
5.7 Test Pressures	6
5.8 Test Duration.....	6
5.9 Test Leakage	9
6 Pressure Test Procedures.....	11
6.1 General	11
6.2 Backseat Test.....	11
6.3 Shell Test	12
6.4 Low-pressure Closure Test	12
6.5 High-pressure Closure Test	13
6.6 Double Block and Bleed Successive High- pressure Closure Test.....	13
6.7 Double Block and Bleed Simultaneous High-pressure Closure Test	13
7 Valve Certification and Retesting	13
7.1 Certificate of Compliance.....	13
7.2 Retesting.....	13
7.3 Material Test Report.....	13
Annex A (informative) Information to Be Specified by the Purchaser	15
Bibliography.....	16

Figures

1 Volumetric Device	11
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Contents

	Page
Tables	
1 Pressure Tests	5
2 Shell Test Pressures	7
3 Backseat and Closure Test Pressures	8
4 Duration of Required Test Pressure.....	8
5 Maximum Allowable Leakage Rates for Closure Tests	10

Valve Inspection and Testing

1 Scope

1.1 This standard covers inspection, examination, supplementary examinations, and pressure test requirements for resilient-seated, nonmetallic-seated (e.g., ceramic), and metal-to-metal-seated valves of the gate, globe, plug, ball, check, and butterfly types. Resilient seats are considered to be:

- a) soft seats, both solid and semisolid grease type (e.g., lubricated plug);
- b) combination soft and metal seats (e.g., laminated seat rings);
- c) any other type of seat material designed to meet resilient seat leakage rates as specified in [Table 5](#).

This standard supplements the API standards that reference it, but it may also be applied to other types of valves by agreement between the purchaser and the valve manufacturer. See [Annex A](#) for information to be specified by the purchaser.

1.2 The inspection requirements pertain to examinations and testing by the valve manufacturer and any supplementary examinations that the purchaser may require at the valve manufacturer's plant. The test requirements cover both required and optional pressure tests at the valve manufacturer's plant or at a facility mutually agreeable to both the manufacturer and the purchaser.

1.3 The following tests and examinations are specified in this standard:

- a) shell test;
- b) backseat test;
- c) low-pressure closure test;
- d) high-pressure closure test;
- e) double block and bleed high-pressure closure test;
- f) visual examination of castings;
- g) high-pressure pneumatic shell test.

2 Normative References

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

API Standard 594, *Check Valves: Flanged, Lug, Wafer and Butt-welding*

API Standard 602, *Gate, Globe, and Check Valves for Sizes DN 100 (NPS 4) and Smaller for the Petroleum and Natural Gas Industries*

API Standard 609, *Butterfly Valves: Double-flanged, Lug- and Wafer-type*

ASME B16.11,¹ *Forged Fittings, Socket-Welding and Threaded*

¹ ASME International, 3 Park Avenue, New York, New York 10016–5990, www.asme.org.