

THE ENGINEERING EQUIPMENT AND MATERIALS USERS ASSOCIATION

**SPECIFICATION
FOR
PRODUCTION TESTING OF VALVES
PART 3 – GATE VALVES**

PUBLICATION No. 172 : 1995

EEMUA

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THE ENGINEERING EQUIPMENT AND MATERIALS USERS ASSOCIATION

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AMENDMENTS No 1, JANUARY 1996

The amendments listed below are authorised by the EEMUA Valves Technical Committee.

Page 10

- 1/1 §4.1.8 First line: after 'available for' insert 'and traceable to'.
- 1/2 §4.2.1 Second line: before 'corrosion inhibitor' insert 'suitable' and delete 'approved by the purchaser'.
- 1/3 §4.2.2 Delete '± 2°C in'.

Page 13, 5.3 Removal (etc) of Parts

- 1/4 In c) and d), substitute 'secure' for 'adequate'.

Page 14, 5.4 Test Temperature and Pressure

- 1/5 At end of first sentence delete 'measured and recorded' and substitute 'checked for compliance with 4.2.2'.

Page 17, §7.2.1

- 1/6 Delete second sentence and substitute:
Where the supply includes ancillary items which will be subjected to pressure under operating conditions, these shall be included in the test.

Page 21, 9.2 (Seat Tests) General

- 1/7 Add new paragraph 9.2.3:
Where valves are provided with gearboxes or actuators, these shall be fitted prior to testing unless otherwise agreed with the purchaser.

Page 25

- 1/8 Insert new sub-section (below) after 10.2, re-number succeeding sub-sections/ paragraphs and amend Contents page as appropriate.

10.3 Frequency of Testing

This test shall be performed on all valves fitted with a back seat unless otherwise agreed with the purchaser.

- 1/9 §10.4.1 (was §10.3.1) Delete existing text and substitute: 'Open the valve on to the back seat using the recommended back seating torque/force.'
- 1/10 §10.4.2 (was §10.3.2) At end of sentence delete 'water' and add 'test fluid until this appears at the gland'.

Page 37, APPENDIX B

- 1/11** Heading. After 'PURCHASER' add 'AT ENQUIRY/PURCHASE ORDER STAGE' and amend Contents page accordingly.
- 1/12** Delete in their entirety the line items corresponding to the following paragraph numbers: 4.1.5, 4.1.14, 7.2.1, 9.4.1.3 and 11.3.1.
- 1/13** 6th line item (4.2.4): amend to read 'whether maximum operating temperature for valves with austenitic steel internals $\leq 50^{\circ}\text{C}$ '.
- 1/14** 7th line item (5.1): replace 'any waivers on' by 'requirements for'.
- 1/15** Add line item: 'if anti-static test required 12'.



(C I C Wishart)

(Technical Secretary)

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FOREWORD

This specification has been developed by the EEMUA Valves Committee and is intended to improve the ex-works quality of production gate valves designed and manufactured to BS, API and other standards for valves required for use in the energy, process, oil and gas industries.

Use of Language

In this document the words 'will', 'may', 'should', 'shall' and 'must', when used in the context of actions by the purchaser or others, have specific meanings as follows:

- i) 'Will' is used normally in connection with an action by the purchaser, rather than by a manufacturer or supplier.
- ii) 'May' is used to indicate that the manufacturer or supplier is permitted to do something, or the purchaser reserves the right to do something, according to context.
- iii) 'Should' is used where a provision is preferred.
- iv) 'Shall' is used where a provision is mandatory.
- v) 'Must' is used only where a provision is a statutory requirement.

Units

This specification employs SI units, but additionally includes Imperial units where appropriate to common usage. *Note:* 'bar' signifies bar gauge.

1. SCOPE

This specification sets out the production test requirements to be applied to each valve unless otherwise specified by the purchaser. Tests of an optional nature are also included.

The specification is applicable to flanged, butt weld, socket weld, extended weld and threaded end steel gate valves of all types, with soft or hard seats, from Class 150 (PN 20) to Class 2500 (PN 420) rating and nominal bore sizes from $\frac{1}{4}$ " (DN 8) to 36" (DN 900), or larger at the discretion of the purchaser. This specification when quoted in the purchase order replaces in their entirety the requirements of the production tests of the valve standards invoked in the order, e.g. BS 6755 Part 1 as applied to BS 1414 gate valves, and Section 5 plus Appendix C of API 6D as applied to pipeline gate valves.

Tests outside the scope of this specification include material sampling and non-destructive testing of valve materials to verify their physical properties, chemical analysis and quality. Type approval tests, fire tests, high pressure gas tests, and tests at high and low temperature, are also excluded.

2. REFERENCES

This EEMUA specification makes reference to the publications listed below. Unless otherwise specified the latest editions of these publications including all addenda and revisions shall apply.

2.1 British Standards

- BS 1414 - Specification for steel wedge gate valves (flanged and butt-welding ends) for the petroleum, petrochemical and allied industries
- BS 1780 - Specification for bourdon tube pressure and vacuum gauges
- BS 5781 - Quality assurance requirements for measuring equipment. Part 1: Metrological confirmation system for measuring equipment
- BS 6755 - Testing of valves. Part 1: Specification for production pressure testing requirements.

2.2 American Petroleum Institute Standards

- API Spec. 6D - Specification for pipeline valves, (steel gate, plug, ball, and check valves)
- API Std 598 - Valve inspection and testing

2.3 American National Standards: American Society of Mechanical Engineers

- ASME* B16.5 - Pipe flanges and flanged fittings, steel, nickel alloy and other special alloys
- ASME* B16.34 - Valves - flanged, threaded and welding end

* Previously ANSI

2.4 International Organization for Standardization

- ISO 5208 - Industrial valves - pressure testing for valves

3. DEFINITIONS

3.1 Bi-directional Valve

A valve designed to seal against flow or pressure from either direction.

3.2 Double Block Valve

A valve having two seats sealing simultaneously against a single source of pressure.

3.3 Double Sealing Valve

A valve that when closed seals by the line pressure or mechanical means acting on the upstream and downstream seat ring.

3.4 Downstream Sealing Valve

A valve that seals on the downstream seat by either by mechanical or pressure action.

3.5 Hard Seated Valve

A valve having primary seats manufactured from metallic or ceramic materials.

3.6 Sealant Injection

A facility for injecting a sealant to the stem and/or seat area to form a secondary and emergency seal in the event of excessive leakage in service.

3.7 Soft Seated Valve

A valve having primary seats manufactured from polymers, elastomers and similar resilient or semi-resilient materials.

3.8 Valve Rated Pressure (VRP)

The maximum allowable working pressure at ambient temperature as stated in ASME B16.34 (or ASME B16.5) for the valve body material, or API Spec. 6D, Table 2.1, whichever is the higher.

3.9 Purchaser

The user or his contractor.