

INCH-POUND

MIL-V-24619(SH)  
AMENDMENT 1  
17 August 1990

## MILITARY SPECIFICATION

### VALVE, QUICK CLOSING, FOR SATURATED STEAM SERVICE

This amendment forms a part of MIL-V-24619(SH), dated 12 September 1983, and is approved for use by the Naval Sea Systems Command, Department of the Navy, and is available for use by all Departments and Agencies of the Department of Defense.

#### PAGE 2

Delete "MIL-STD-1552 - Provisioning Technical Documentation, Uniform Department of Defense Requirements for" and substitute: "MIL-STD-1388-2 - DOD Requirements for a Logistic Support Analysis Record."

#### PAGE 8

3.3.10(a), line 1: Delete "Alinement" and substitute "Alignment".

3.3.13.1, line 1: Insert at beginning of paragraph: "Thread engagement".

3.13.15: Add the following sentence: "The use of staking, set screws, and snap rings is prohibited."

#### PAGE 9

3.3.17.2.1, line 1: Insert at beginning of paragraph: "Seat expansion seal ring."

3.3.17.2.2, line 1: Insert at beginning of paragraph: "Lapping tool."

Page 1 of 9

AMSC N/A

FSC 4820

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MIL-V-24619(SH)  
AMENDMENT 1

PAGE 10

3.3.18.4.1.2, line 1: Insert at beginning of paragraph: "Location of injurious imperfections."

PAGE 11

3.3.19.1, line 1: Insert at beginning of paragraph: "Hydraulic operating pressures and temperature."

PAGE 12

Add as new paragraph 3.3.19.6: "3.3.19.6 Hard pump. When specified (see 6.2.1), the valve shall be capable of being opened in one minute or less when hydraulic oil is supplied by a hand pump (supplied by others) with the following characteristics: Pump capacity – 1.5 in<sup>3</sup>/stroke; Time per stroke – 2 seconds."

3.3.20.2, line 1: Insert at beginning of paragraph: "Normal opening time."

3.3.20.3, line 1: Insert at beginning of paragraph: "Maximum opening time."

3.3.20.4, line 1: Insert at beginning of paragraph: "Maximum steam flow."

3.3.20.5, line 1: Insert at beginning of paragraph: "Maximum pressure drop."

PAGE 13

3.3.20.6, line 1: Insert at beginning of paragraph: "Maximum design pressure and temperature."

3.3.20.8, line 1: Insert at beginning of paragraph: "Opening capability." Line 2: Delete "design" and substitute "differential".

PAGE 14

3.5, line 2: Delete "MIL-STD-1552" and substitute "MIL-STD-1388-2".

MIL-V-24619(SH)  
AMENDMENT 1

Add as a new paragraph 3.5.1: "3.5.1 Tools. A recommendation of tools required to service the valve shall be made by the manufacturer. The manufacturer, whenever possible, will utilize tools listed in the federal supply catalog to perform and enable service on the supplied valve. Any tool, including lapping tools, required for servicing the supplied valve that is not listed in the federal supply catalog shall be supplied by the vendor."

3.6.1: Delete first sentence, (a) through (k), and substitute: "When specified in the contract or purchase order, drawings shall be prepared (see 6.2.2 and Appendix A)."

PAGE 15

3.6.1.1: Delete first and second sentences, (a) through (e), and substitute: "When specified in the contract or order, certification data shall be prepared (see 6.2.2 and Appendix B)."

3.6.2: Delete.

PAGE 17

4.3.2.2.1, line 5: Delete "critieria" and substitute "criteria".

4.3.2.2.2.1, line 1: Insert at beginning of paragraph: "Test duration."

4.3.2.2.2.2, line 1: Insert at beginning of paragraph: "Cycling test."

4.3.2.2.2.3, line 1: Insert at beginning of paragraph: "Thermal test."

4.3.2.2.2.4, line 1: Insert at beginning of paragraph: "Seat tightness test."

4.3.2.3.1, line 1: Insert at beginning of paragraph: "Chattering test."

4.3.2.3.2, line 2: Delete "presure" and substitute "pressure".

PAGE 18

4.3.2.4.1.1, line 1: Insert at beginning of paragraph: "Position of valves."

4.3.2.4.1.2, line 1: Insert at beginning of paragraph: "Post shock examination and test."

4.3.2.4.1.3, line 1: Insert at beginning of paragraph: "Shock test acceptance criteria."

MIL-V-24619(SH)  
AMENDMENT 1

4.4.1.1, line 1: Insert at beginning of paragraph: "Verification of conformance with requirements."

4.4.1.2, line 1: Insert at beginning of paragraph: "Radiographic examination."

4.4.1.3, line 1: Insert at beginning of paragraph: "Magnetic particle inspection."

PAGE 19

4.4.1.4.1, line 1: Insert at beginning of paragraph: "End preparations 1 inch and larger."

4.4.1.4.2, line 1: Insert at beginning of paragraph: "End preparations less than 1 inch."

4.4.1.4.3, line 1: Insert at beginning of paragraph: "Liquid penetrant inspection."

PAGE 21

6.2.1: Add new line item (p): "(p) Hand pump (see 3.3.19.6)." Revise the letters of the remaining line items accordingly.

PAGE 22

6.2.2: Delete the following:

"3.6 and 3.6.1	Drawings, engineering and associated lists	DI-E-7031	Level 3 Design activity designation- contractor Drawing no.- contractor Delivery of hard copies- contracting- activity
3.6 and 3.6.1.1			Certification data sheets-required
3.6 and 3.6.2	Manual, technical, preliminary	DI-M-2043	MIL-M-15071, type I"

MIL-V-24619(SH)  
AMENDMENT 1

Insert in its place the following:

"3.6, 3.6.1 and appendix A	Engineering drawings	DI-DRPR-80651 Level 3
3.6, 3.6.1.1 and appendix B	Certification data/report	DI-MISC-80678"

**PAGE 23**

Add new paragraph 6.2.2.4: "6.2.2.4 Technical manuals. The requirement for technical manuals should be considered when this specification is applied on a contract. If technical manuals are required, military specifications and standards which have been cleared and listed in DOD 5010.12-L (AMSL) must be listed on a separate CDRL (DD Form 1423), included as an exhibit to the contract. The technical manuals must be acquired under separate contract line item in the contract. Technical content shall include the requirements of the Appendix C, title "Manual Technical Content Requirements."

Add, as new pages, Appendix A, B, and C as follows:

MIL-V-24619(SH)  
AMENDMENT 1

APPENDIX A

ENGINEERING DRAWINGS TECHNICAL CONTENT REQUIREMENTS

10. SCOPE

10.1 Scope. This appendix covers the technical requirements that should be included on drawings when required by the contract or order. This appendix is mandatory only when data item description DI-DRPR-80651 is cited on the DD Form 1423.

20. APPLICABLE DOCUMENTS

20.1 Non-Government publications. The following documents form a part of this appendix to the extent specified herein. Unless otherwise specified, the issues of the documents which are DOD adopted shall be those listed in the issue of the DODISS specified in the solicitation. Unless otherwise specified, the issues of documents not listed in the DODISS are the issues of documents cited in the solicitation.

AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI)

- B46.1 Surface Texture (Surface Roughness, Waviness and Lay)
- Y14.5 Dimensioning and Tolerancing (DOD adopted)

(Applications for copies should be addressed to the American National Standards Institute, 1430 Broadway, New York, NY 10018).

(Non-Government standards and other publications are normally available from the organizations which prepare or which distribute the documents. These documents also may be available in or through libraries or other informational services.)

30. DRAWINGS

30.1 Drawings. Drawings shall contain the following additional information:

(a) Accurately scaled cross-sectional assembly which depicts the design and construction of the valve, including variation in design based on pipe size, identification of critical clearances and dry weight and center of gravity (see 3.3.7)

(b) Bill of materials listing specification, grade, condition and any other data required to identify the properties of the materials

(c) Detail drawings of parts and subassemblies necessary for evaluation of the equipment and

MIL-V-24619(SH)  
AMENDMENT 1

parts necessary for maintenance and overhaul of the valve. Details of these parts shall be so complete as to permit emergency manufacture by a Naval shipyard without assistance from the original manufacturer. Subassembly parts which cannot be acquired or serviced individually, shall be shown as a single part and so indicated. Multidetail drawings are preferred, but monodetail drawings may be used.

(d) Layout of the pressure-containing envelope (body and bonnet or cover) giving dimensions which control compression of the spiral-wound gaskets. This is to assure that where remachining is necessary to repair the sealing surfaces on these parts, that compensating cuts can be accurately made to restore original gasket compression. This layout shall also specify the dimensional limits of corrective remachining with which the function of the valve remains unaffected.

(e) Recommended torques or equivalent procedures for assembling joints and threaded assemblies

(f) Tabulation of required gasket characteristics including all dimensions with tolerances and load versus compression characteristics with tolerances

(g) Mark areas to be radiographic, magnetic particle, or dye penetrant inspected

(h) Installation and maintenance dimensions. Overall dimensions, accessibility space including disassembly clearances and all dimensions pertinent to installation.

(i) Surface finishes. Show finish marks for all hard face surfaces and bearing areas.

(j) Name of laboratory conducting shock and vibration tests, test report identification and the Navy approval letter.

(k) Steam leakoff flow with the valve closed.

MIL-V-24619(SH)  
AMENDMENT 1

**APPENDIX B**

**CERTIFICATION DATA/REPORT TECHNICAL CONTENT REQUIREMENTS**

**10. SCOPE**

**10.1 Scope.** This appendix covers the technical requirements that should be included in certification data sheets when required by the contract or order. This appendix is mandatory only when data item description DID-MISC-80678 is cited on the DD Form 1423.

**20. APPLICABLE DOCUMENTS**

This section is not applicable to this appendix.

**30. CERTIFICATION**

**30.1 Certification.** When required by the contract or order, certification data sheets shall contain the following information:

- (a) Type
- (b) Pressure and temperature rating
- (c) Body and bonnet material
- (d) Seat, disc, and stem material
- (e) Type of power actuator. Shock and vibration tests of valve with the power actuator attached.



MIL-V-24619(SH)  
AMENDMENT 1

**APPENDIX C**

**MANUAL TECHNICAL CONTENT REQUIREMENTS**

**10. SCOPE**

**10.1 Scope.** This appendix covers the technical requirements that should be included in the manuals when required by the contract or order.

**20. APPLICABLE DOCUMENTS**

This section is not applicable to this appendix.

**30. MANUALS**

**30.1 Manuals.** When required by the contract or order, manuals shall contain the following information:

(a) Drawings of the valve including certification data sheet. Drawings shall be supplemented by additional illustrations where necessary to adequately describe operation and maintenance. These additional illustrations may consist of exploded views, partial or full sections, and may eliminate extraneous lines and details to clarify the interaction of parts.

(b) Table listing wrench sizes and torque or other equivalent procedures for assembling joints and threaded parts.

(c) Instructions to permit overhaul by shipyard or other repair facility. These should include procedures for checking critical dimensions subject to wear or change and the acceptable dimensional limits and surface finish condition. Also, the appropriate procedures for part replacement, correction at repair facility, or repair at manufacturer's facility which should be followed to correct each case of damage or wear.

(d) Detailed disassembly and reassembly procedures. In addition to providing procedures for the complete disassembly and reassembly of the equipment, maintenance and troubleshooting sections shall contain, or refer to, only the limited disassembly and reassembly required to accomplish each particular operation. This is intended to reduce the possibility of unnecessary disassembly and unnecessary disturbance of adjustments when performing specific or limited maintenance or troubleshooting operations.

(e) Adjustment procedures.

Preparing activity:  
Navy - SH  
(Project 4820-N065)