

**MSS SP-92-2012**

# MSS Valve User Guide

**Standard Practice**  
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## **FOREWORD**

When a complex product is used for a variety of applications and in various operating environments, it is reasonable to expect that the performance of such a product will reflect upon its suitability for the specific service as well as its proper installation and maintenance. Recognizing that operating problems involving industrial valves frequently involve the use of valves not properly selected for the intended service, or adversely affected by improper handling, installation, operation, or maintenance, the Manufacturers Standardization Society has prepared this Valve User Guide.

**The Society or its members, jointly or severally, make no guarantee and assume no liability or responsibility regarding the contents of this document. It has not been possible to include every consideration related to the satisfactory use of valves, and, especially in abnormal or unusual circumstances, the possible need for other considerations and precautions should be recognized.**

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## MSS VALVE USER GUIDE

### 1. SCOPE

This Guide presents information which should be helpful to users desiring to avoid the most obvious causes of problems with valves. The material is divided into five main sections: "References", "Selection", "Shipping and Storage", "Installation", and "Operation and Maintenance".

### 2. REFERENCES

The following standard references are normative to this Standard Practice (see Annex A):

- a) API 607
- b) ASME B16.5
- b) ISO 10497

The standards, specifications, and manuals listed in Appendix X1 of this Standard Practice are included as useful reference documents to help the user understand the various valve types and their operational limitations. Such an understanding is particularly important when selecting equipment for a specific pressure/temperature/fluid application. This "informative" list is not all-inclusive. Note that Piping Codes are not listed; however, the user is cautioned that they may include requirements for valves in certain applications.

### 3. SELECTION

#### 3.1 *General*

3.1.1 It is beyond the scope of this Standard Practice to make recommendations for specific applications because misapplication of a valve type could result in operating problems which adversely affect system safety and efficiency. However, observance of the considerations, recommendations and cautions offered herein will provide increased assurance of satisfactory valve performance.

3.1.2 The valve industry offers a wide variety of valve types and materials for use in industrial piping applications. There are usually several possible choices for a given requirement. Any one valve may offer significant advantages and/or limitations compared to another valve. It is good practice to consult the manufacturer regarding specific requirements.

The purchasing function includes the responsibility for securing the required valves at the lowest cost, but must also ensure that the valves purchased are in fact satisfactory for the intended service. The lowest total user (life cycle cost criteria should be used only in choosing between alternatives that are known to satisfy the service requirement.

#### 3.2 *Pressure-Temperature Rating*

3.2.1 The pressure-temperature rating of the valve must be properly selected for the service requirement. If the service involves a temperature above 100 °F (38 °C), the valve pressure rating at the service temperature must be verified as meeting the requirements of the application.

3.2.2 If system testing will subject the valve to a pressure in excess of its working pressure rating, then the intended testing pressure and a statement explaining whether the test pressure is through the opened valve or a differential across the closed valve, should be included in the purchase specification.

#### 3.3 *Bending Strength*

3.3.1 Piping systems are subject to mechanical constraints at fixed support points such as rigid nozzles, anchors, etc. Cold springing at assembly, system temperature changes, together with gravity, possible inertia loads, landslides, non-