



Standard Marking System for Valves, Fittings, Flanges, and Unions

Standard Practice
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U.S. customary units in this Standard Practice are the standard; the SI (metric) units are for reference only.

This Standard Practice has been substantively revised from the previous 2013 edition. It is suggested that if the user is interested in knowing what changes have been made, that a direct page by page comparison should be made of this document and that of the previous edition.

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FOREWORD

The original publication of the Standard Marking System was developed by MSS in 1934. It stated the basic rules but was considered to need more details for general use. A second edition was therefore prepared with additional details and examples and was published in 1936.

The third edition, published in 1954, recognized the use of new materials, increased operating temperatures and pressures, and added more examples of markings for regular products.

In 1958, the fourth edition incorporated relatively minor changes and updates; including some additional marking examples.

For the fifth edition, published in 1960, the format was revised to permit the use of nameplates on valve bodies. In addition, this version added requirements for the marking of ductile iron products.

The sixth edition, published in 1964, broadened the scope of this marking standard and revised the examples and sections of the text to reflect changes in piping requirements.

The seventh edition, published in 1978, was substantially revised and re-written to simplify its cross references and to improve readability. This edition incorporated the marking features of pressure-temperature marking designations contained in existing American National Standards involving products and materials. It was also rearranged so that the General Rules were stated in Sections 1 through 11 and amplified in Sections 12 through 18; which gave specific rules and examples of marking requirements relating to various products and materials.

In 1993, the eighth edition incorporated relatively minor changes and updates; including minor revisions required to harmonize this document with then-current MSS Standard Practices.

The tenth edition, published in 2008, included revisions to ASME B16.34 example markings and mandatory MSS conformance markings, in addition to clarifications of other general requirements.

The eleventh edition, published in 2013, included new Annexes for Reference Tables and Marking Requirement Examples, the addition of laser marking techniques and country of origin marking, substantial revision and re-formatting to update the document text and tables, and other revisions to provide clarification as warranted. The 2013 edition was also approved as an American National Standard.

With this twelfth edition, published in 2018, SP-25 observes over 83 years of providing the industry with standardized marking guidance. This twelfth edition includes a new section involving products with rating designations which are constant throughout a specified temperature range; revised requirements involving the marking of a manufacturer's name, trademark, logo, or symbol; revised two material designation subsections involving standard references for marking nameplates and bodies; updated Tables 1 and 2 involving examples of common symbols for metallic/non-metallic materials; updated terminology; included supplemental material designations (e.g., Bismuth, Bismuth-Selenium, and Silicon) for certain non-ferrous flanges, flanged fittings, and flanged unions; updated Annex B to include many revised and new examples; updated and revised Annex C references; and other revisions to provide clarification as warranted. It was also agreed for the next revision to consider markings for MSS SP-44 flanges and ASME B16.36 orifice flanges. This 2018 revised American National Standard edition was ANSI-approved after being substantively revised, reformatted, and approved by MSS, then submitted unpublished to the ANSI balloting and approval process.

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Manufacturers Standardization Society of the Valve and Fittings Industry

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STANDARD MARKING SYSTEM FOR VALVES, FITTINGS, FLANGES, AND UNIONS

1. SCOPE

1.1 This standard marking system applies to the marking of new valves, fittings, flanges, and unions used in piping connections that include (but are not limited to) flanged, soldered, brazed, threaded, or welded joints.

1.2 The markings specified within this Standard Practice serve to identify the manufacturer, the rating designation, materials of construction, and special service limitations imposed by the manufacturer. They are used for product identification and to assist in proper application.

1.3 Marking for remanufactured and refurbished valves, fittings, flanges, and unions is outside the scope of this Standard Practice.

2. GENERAL MARKING REQUIREMENTS

2.1 Each product, of a size and shape permitting legible marking, shall be marked in accordance with the provisions of this Standard Practice.

2.2 Markings shall be applied to the body of valves, flanges, fittings, and union components, or on an identification plate. For quarter-turn valves, markings shall be applied to the body, identification plate, or handle. Markings on covered quarter-turn valve handles may not be integral with the base handle material.

2.3 Markings shall consist of numerals, letters, or symbols that are cast, forged, stamped, electro-etched, vibro-etched, laser-etched, or otherwise made integral with the product, or as markings on an identification plate attached to the product, or both. Where stamping is used on pressure containing walls, low stress stamps which produce a round bottom impression shall be used; such low stress stamps are not required on flanged edges or on raised pads provided for marking purposes.

2.4 Markings indicating conformance with recognized documents, such as the ASME Boiler and Pressure Vessel Codes (BPVC), or applicable API, FM, and UL conformance, testing, and/or certification requirements, may be applied only by authorized, licensed, or approved manufacturers.

Such markings shall be applied only to products fully conforming to the applicable qualification, conformance, and/or certification requirements and may be shown on the body or an attached plate, at the option of the manufacturer.

2.5 Manufacturers should apply markings indicating conformance with codes and standards such as API, ASME, ASTM, AWWA, and MSS, on products that fully conform to the applicable codes or standards. Partial compliance markings may apply in specific cases, as allowed for by the code or standard. Certain codes and standards specify mandatory product conformance markings and methods. Such markings shall be shown on the body, on an attached plate, or as otherwise specified.

2.6 International and Federal commerce laws, Codes, or contracts may require marking of finished products with country of origin. When required, the markings shall be conspicuous and positioned to prevent concealment during inspection, installation, or use.

2.7 Flow or pressure indication shall be marked on unidirectional valves. Commonly used markings include arrows or the words “inlet” or “outlet” or “high pressure side” marked at an appropriate end.

2.8 Nothing in this Standard Practice shall be construed as prohibiting the use of additional markings such as catalog reference numbers, pattern numbers, patent numbers, dates, customer specification numbers, etc.