Standard Finishes for Contact Faces of Pipe Flanges and Connecting-End Flanges of Valves and Fittings

Standard Practice
Developed and Approved by the
Manufacturers Standardization Society of the
Valve and Fittings Industry, Inc.
127 Park Street, NE
Vienna, Virginia 22180-4602
Phone: (703) 281-6613
Fax: (703) 281-6671
E-mail: standards@msshq.org

Since MSS 1924 ®

www.msshq.org

This MSS Standard Practice was developed under the consensus of the MSS Technical Committee 102 (primary), 110, 201, and the MSS Coordinating Committee. The content of this Standard Practice is the resulting efforts of competent and experienced volunteers to provide an effective, clear, and non-exclusive standard that will benefit the industry as a whole. This MSS Standard Practice describes minimal requirements and is intended as a basis for common practice by the manufacturer, the user, and the general public. The existence of an MSS Standard Practice does not in itself preclude the manufacture, sale, or use of products not conforming to the Standard Practice. Mandatory conformance to this Standard Practice is established only by reference in other documents such as a code, specification, sales contract, or public law, as applicable. MSS has no power, nor does it undertake, to enforce or certify compliance with this document. Any certification or other statement of compliance with the requirements of this Standard Practice shall not be attributable to MSS and is solely the responsibility of the certifier or maker of the statement.

"Unless indicated otherwise within this MSS Standard Practice, other standards documents referenced to herein are identified by the date of issue that was applicable to this Standard Practice at the date of approval of this MSS Standard Practice (see Annex A). This Standard Practice shall remain silent on the validity of those other standards of prior or subsequent dates of issue even though applicable provisions may not have changed."

By publication of this Standard Practice, no position is taken with respect to the validity of any potential claim(s) or of any patent rights in connection therewith. MSS shall not be held responsible for identifying any patent rights. Users are expressly advised that determination of patent rights and the risk of infringement of such rights are entirely their responsibility.

In this Standard Practice, all text, notes, annexes, tables, figures, and references are construed to be essential to the understanding of the message of the standard, and are considered normative unless indicated as "supplemental". All appendices, if included, that appear in this document are construed as "supplemental". Note that supplemental information does not include mandatory requirements.

The U.S. customary units and SI (metric) units in this Standard Practice are regarded separately as the standard; each should be used independently of the other. Combining or converting values between the two systems may result in non-conformance with this Standard Practice.

> Substantive changes in this 2017 edition are "flagged" by parallel bars as shown on the margins of this paragraph. The specific detail of the change may be determined by comparing the material flagged with that in the previous edition.

Non-toleranced dimensions in this Standard Practice are nominal unless otherwise specified.

Originally Approved: December 1929
Originally Published: January 1930
Current Edition Approved: January 2017
Current Edition Published: March 2017

TABLE OF CONTENTS

SECTION **PAGE**

1 SCOPE 1
2 DEFINITIONS 1
3 REQUIREMENTS 1
4 LIMITATIONS 1

TABLE

1 Standard Finishes for Contact Faces of Pipe Flanges and Connecting-End Flanges of Valves and Fittings 3

FIGURE

1 Types of Contact Faces for Flanges 2

ANNEX

A Referenced Standards and Applicable Dates 4

STANDARD FINISHES FOR CONTACT FACES OF PIPE FLANGES AND CONNECTING-END FLANGES OF VALVES AND FITTINGS

1. SCOPE

1.1 This Standard Practice pertains to the finish of gasket contact faces of pipe flanges and connecting-end flanges of valves and fittings.

1.2 This Standard Practice is intended for applications to products for which ASME B16 Standards do not contain complete facing finish requirements or for which there are no such standards.

2. DEFINITIONS

2.1 ***Flange Facing Finish*** The surface finish on the flange contact face (see Figure 1) that comes in contact with a gasket upon flange assembly.

2.2 ***Roughness Average*** The term "Ra" (Roughness average) is expressed in microinches (μin) or micrometers (μm).

2.3 ***Other Definitions*** Other definitions may be found in MSS SP-96.

3. REQUIREMENTS

3.1 The flange facing finish shall be evaluated by visual comparison with "Ra" standards (see ASME B46.1) and not by instruments having stylus tracers and electronic amplification. The finishes required are given in Table 1.

Other finishes may be furnished by agreement between purchaser and manufacturer.

3.2 Dimensions shown in Table 1 shall not be cause for rejection by depth gage measurement or precision instrument measurements.

4. LIMITATIONS

4.1 Surface finishes listed in Table 1 are not necessarily optimal for all gasket material types.

4.2 On flat faces, serrations need not extend beyond corresponding raised face diameter.

4.3 Flat face and raised face flanges may be provided with a protective coating in certain industries. If provided with such coating, the surface finish requirements only pertain to the machined surface under the protective coating.