Quality Standard for Ferritic and Martensitic Steel Castings and Forgings for Valves, Flanges, Fittings, and Other Piping Components

Ultrasonic Examination Method
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Substantive changes in this 2015 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.

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This MSS Standard Practice, SP-94, *Quality Standard for Ferritic and Martensitic Steel Castings and Forgings for Valves, Flanges, Fittings, and Other Piping Components – Ultrasonic Examination Method*, was originally adopted in 1983 for the purpose of providing industry with a uniform method of applying the Ultrasonic Examination procedure and interpretation of the results.

The Standard Practice was reaffirmed in 1987 with essentially no changes.

The Third edition, issued in 1992, was revised to include a surface finish requirement for the calibration blocks. This was necessary as the previously referenced surface comparator of the Alloy Casting Institute was no longer available.

The 1999 edition included minor revisions and was re-formatted to conform to current MSS publication practices.

The 2008 edition included minor revisions and was re-formatted to conform to current MSS publication practices.

This 2015 edition includes editorial and substantive revisions that include the addition of “forgings” as part of the Scope and Title, identification of critical sections (as per ASME B16.34), revision of Figure 1 and 2, and other “flagged” changes. Additionally, this edition was re-formatted to conform to updated MSS publication practices.
# TABLE OF CONTENTS

## SECTION                  PAGE

1. SCOPE ................................................................. 1
2. DEFINITIONS .......................................................... 1
3. BASE FOR USE ..................................................... 1
4. EQUIPMENT .......................................................... 1
5. PERSONNEL REQUIREMENTS ....................................... 3
6. CASTING OR FORGING CONDITIONS ............................... 5
7. TEST CONDITIONS .................................................. 5
8. PROCEDURE .......................................................... 5
9. DATA REPORTING .................................................... 6
10. EVALUATION OF INDICATIONS .................................. 6
11. ACCEPTANCE STANDARDS ......................................... 8

## TABLE

| 1 | Dimensions and Identification of Reference Block in the Basic Set | 3 |
| 2 | Dimensions of Calibration Blocks for Angle Beam Examination | 5 |

## FIGURE

| 1 | Ultrasonic Standard Reference Block | 2 |
| 2 | Basic Calibration Block for Angle Beam Examination | 4 |

## ANNEX

| A | Referenced Standards and Applicable Dates | 9 |
MSS Standard Practices (SPs) related to or referenced in this publication:

- ANSI/MSS SP-25  
  Standard Marking System for Valves, Fittings, Flanges, and Unions

- ANSI/MSS SP-96  
  Guidelines on Terminology for Valves and Fittings

- MSS SP-54  
  Quality Standard for Steel Castings for Valves, Flanges, Fittings and Other Piping Components - Radiographic Examination Method

American National Standards Published by MSS, an ANSI-accredited Standards Developer:

- ANSI/MSS SP-25  
  Standard Marking System for Valves, Fittings, Flanges, and Unions

- ANSI/MSS SP-44  
  Steel Pipeline Flanges (including 2011 Errata Sheet)

- ANSI/MSS SP-55  

- ANSI/MSS SP-58  
  Pipe Hangers and Supports - Materials, Design, Manufacture, Selection, Application, and Installation

- ANSI/MSS SP-96  
  Corrosion Resistant Pipe Fittings Threaded and Socket Welding Class 150 and 1000

- ANSI/MSS SP-114  
  Guidelines on Terminology for Valves and Fittings

- ANSI/MSS SP-134  
  Valves for Cryogenic Service, including Requirements for Body/Bonnet Extensions

- ANSI/MSS SP-138  
  Quality Standard Practice for Oxygen Cleaning of Valves and Fittings

- ANSI/MSS SP-144  
  Pressure Seal Bonnet Valves

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