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

Liquid Penetrant Examination Method

Standard Practice
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FOREWORD

This MSS Standard Practice, SP-93, *Quality Standard for Steel Castings and Forgings for Valves, Flanges, Fittings, and Other Piping Components – Liquid Penetrant Examination Method*, was originally adopted in 1982 for the purpose of providing a uniform method of Liquid Penetrant Examination. It was specifically developed for the valve/piping industry but may be used in any application where this type of examination is suitable.

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

The Third edition was reaffirmed in 1992 with essentially no changes.

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

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

The 2014 edition included editorial corrections, a clarification to Scope in Section 1, update of Section 7 and Table 1, and an update of Annex A references. It was also re-formatted to conform to current MSS publication practices.

This 2020 edition includes a new definition in Section 3.5, updated Annex A references, other minor revisions, and re-formatting to conform to current MSS publication practices.

This 2020 edition includes updates to the definitions in Section 3, updated Annex A references, other minor revisions, and re-formatting to conform to current MSS publication practices.
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MSS Standard Practices (SPs) related to or referenced in this publication:

ANSI/MSS SP-96  Terminology for Valves, Fittings, and Their Related Components

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
ANSI/MSS SP-55  Quality Standard for Steel Castings for Valves, Flanges, Fittings, and Other Piping Components
     – Visual Method for Evaluation of Surface Irregularities
ANSI/MSS SP-58  Pipe Hangers and Supports – Materials, Design, Manufacture, Selection, Application, and Installation
ANSI/MSS SP-96  Terminology for Valves, Fittings, and Their Related Components
ANSI/MSS SP-114  Corrosion Resistant Pipe Fittings Threaded and Socket Welding Class 150 and 1000
ANSI/MSS SP-122  Plastic Industrial Ball Valves
ANSI/MSS SP-134  Valves for Cryogenic Service, including Requirements for Body/Bonnet Extensions
ANSI/MSS SP-135  High Pressure Knife Gate Valves
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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