

MSS SP-111-2015

Gray-Iron and Ductile-Iron Tapping Sleeves

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



www.msshq.org

This MSS Standard Practice was developed under the consensus of the MSS Technical Committee 112 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.

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

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.

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

Excerpts of this Standard Practice may be quoted with permission. Credit lines should read ‘Extracted from MSS SP-111-2015 with permission of the publisher, Manufacturers Standardization Society of the Valve and Fittings Industry’. Reproduction and/or electronic transmission or dissemination is prohibited under copyright convention unless written permission is granted by the Manufacturers Standardization Society of the Valve and Fittings Industry Inc. All rights reserved.

Originally Approved: October 1992
Originally Published: December 1992
Current Edition Approved: April 2015
Current Edition Published: July 2015

MSS is a registered trademark of Manufacturers Standardization Society of the Valve and Fittings Industry, Inc.

Copyright © 2015 by
Manufacturers Standardization Society
of the
Valve and Fittings Industry, Inc.
Printed in U.S.A.



Manufacturers Standardization Society of the Valve And Fittings Industry, Inc.

127 Park Street, NE • Vienna, VA 22180-4602 • 703-281-6613 • FAX 703-281-6671 • www.msshq.org • e-mail: info@msshq.org

EXECUTIVE DIRECTOR: Robert F. O'Neill

April 27, 2017

AMENDMENT FOR MSS SP-111-2015 (*Gray-Iron and Ductile-Iron Tapping Sleeves*)

This “normative” amendment applies to MSS SP-111-2015 edition.

NOTE THE FOLLOWING AMENDMENTS:

Page 6, Annex A (Referenced Standards and Applicable Dates). Amend the existing Annex A with the following specific updates:

MSS; ANSI/MSS

SP-60-~~2011~~2017

Connecting Flange Joints between Tapping Sleeves and Tapping Valves

SP-96-~~2011~~2017

~~Guidelines on Terminology for Valves, and Fittings, and Their Related Components~~

SP-113-~~2011~~2017

Connecting Joints between Tapping Machines and Tapping Valves

This Amendment has been inserted into the Standard Practice. For those who obtained the Standard Practice before the April 27, 2017 amendment publication date indicated above or otherwise do not already have this information, please include this Amendment within your existing 2015 edition of the Standard Practice.

Future editions of this Standard Practice will include this amended information.

PRESIDENT: M.A. Clark – NIBCO, Inc.

VICE PRESIDENTS: F.J. Washburn – Rotork Controls, Inc. • J. Barker – DeZURIK APCO Hilton, Inc.

TREASURER: G.M. Johnson – United Valve

“The Technical Voice of the Industry”

TABLE OF CONTENTS

<u>SECTION</u>	<u>PAGE</u>
PURPOSE	1
1 SCOPE	1
2 DEFINITIONS	1
3 PRESSURE RATING	2
4 MATERIAL	2
5 DESIGN	2
6 TESTING	3
7 WORKMANSHIP	3
8 COATINGS	3
9 MARKING AND SHIPPING	3
10 ASSEMBLY, INSTALLATION, AND FIELD TESTING	3

TABLE

1 Maximum Dimension (A) from Centerline to Branch Flange for Use on Gray-Iron and Ductile-Iron Pipe	5
--	---

ANNEX

A Referenced Standards and Applicable Dates	6
---	---

GRAY-IRON AND DUCTILE-IRON TAPPING SLEEVES

PURPOSE

To provide information for standardization of tapping sleeves used to make connections to existing mains.

1. SCOPE

1.1 This Standard Practice covers the performance and design requirements of gray-iron or ductile-iron tapping sleeves used in water and sewage systems. Tapping sleeves are used with tapping valves to permit connection to an existing main without interruption of service. Tapping valve requirements are not covered in this Standard Practice.

1.2 This Standard Practice covers the performance and design requirements of tapping sleeves of nominal pipe sizes from NPS 4 through NPS 48 (DN 100 through DN 1200), with flanged outlet branch connections from NPS 2 through NPS 42 (DN 50 through DN 1050).

1.3 Tapping saddles and fabricated tapping sleeves are not covered by this Standard Practice.

2. DEFINITIONS

Under this Standard Practice the following definitions shall apply:

2.1 **Tapping Sleeve** A fitting that can be assembled onto an existing main to make a branch or "tee" connection to the main with a tapping valve and tapping machine, without interruption of service.

2.2 **Tapping Valve** A special gate valve designed with end connections to provide a waterway opening clearance for tapping operations, as well as, proper alignment and positioning of a tapping sleeve, valve, and tapping machine.

2.3 **Tapping Machine** A machine (also known as a drilling machine) used to cut a hole into an existing pressurized or non-pressurized main through the use of a tapping sleeve and tapping valve.

The tapping machine is equipped with a cutter, which extends through the waterway of the tapping valve and sleeve branch, to cut the hole into the main and remove the cut-out piece (coupon) upon retraction of the cutter. The tapping valve can then be closed to seal the branch connection while the tapping machine is removed from the valve and the branch pipeline is connected to the tapping valve.

2.4 **Main** A pipe used in a water or sewer system for distribution of water or collection of sewage.

2.5 **Manufacturer** The party producing products in accordance with this Standard Practice.

2.6 **NPS** Indicates "Nominal Pipe Size" (U.S. customary). A standard size identification number, not necessarily an actual dimension. The (SI) metric-based equivalent is called DN or Nominal Diameter/"diametre nominel".

2.7 **NPT** Indicates "National Standard Taper Pipe Thread".

2.8 **Purchaser** The party entering into a contract or agreement to purchase products manufactured according to this Standard Practice.

2.9 **Working Pressure Rating** Maximum pressure to which the in-service tapping sleeve should be subjected.

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