

**MSS SP-111-2001**

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# Gray-Iron and Ductile-Iron Tapping Sleeves

**Standard Practice**  
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Unless otherwise specifically noted in this MSS SP, any standard referred to herein is identified by the date of issue that was applicable to the referenced standard(s) at the date of issue of this MSS SP. (See Annex A).

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## GRAY-IRON and DUCTILE-IRON TAPPING SLEEVES

### 0. 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 sewerage 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.

1.2 This standard covers the performance and design requirements of tapping sleeves of nominal pipe sizes from 4" to 48" NPS with flanged outlet branch connections 2" through 42" NPS.

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

### 2. DEFINITIONS

Under this standard the following definitions shall apply:

2.1 *Tapping Sleeve.* A split fitting which can be assembled around an existing main to make a branch or "tee" connection to the main with a tapping valve and tapping machine.

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 used to cut a hole into an existing pressurized or non-pressurized main through the use of a tapping sleeve and tapping valve for mounting and positioning the tapping machine with respect to the main. The tapping machine

is equipped with a cutter, which extends through the waterway of the tapping valve and branch of the sleeve, 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 sewerage 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.* Nominal Pipe Size.

2.7 *NPT.* 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.

Other definitions may be found in MSS SP-96.

### 3. PRESSURE RATING

The minimum working pressure rating shall be 150 psig.

### 4. MATERIAL

4.1 *General.* The requirements of ANSI, ASTM, AWWA, or other standards to which reference is made in this text shall govern the physical and chemical characteristics of the tapping sleeve components.