

**MSS SP-111-2012**

# Gray-Iron and Ductile-Iron Tapping Sleeves

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

**This Standard Practice has been substantially revised from the previous 2001 (R2005) edition. It is suggested that if the user is interested in knowing what changes have been made, that direct page by page comparison should be made of this document.**

Non-toleranced dimensions in this Standard Practice are nominal and, unless otherwise specified, shall be considered “for reference only”.

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## 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 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 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.