

## SECTION 1409

### TAPPING SLEEVE AND VALVE

#### 1409.0100 GENERAL

**1409.0101 Description of Work.** The work under this Section shall consist of furnishing all labor, materials, and equipment required for the installation of tapping sleeves and valves in accordance with the plans and requirements of these specifications.

**1409.0103 Submittals.** Tapping sleeves and valves and the materials used in their manufacture shall comply with the standards in Appendix B and appear on the Approved Materials List (Appendix A).

**1409.0104 Delivery, Storage, and Handling.** Tapping sleeves and valves shall be delivered to the site, stored, and handled in accordance with the manufacturer's instructions except as modified by the plans, special specifications, or as directed by the Engineer.

#### 1409.0200 PRODUCTS

##### 1409.0201 Materials.

**(A) Pressure Class.** Design pressure for tapping valves shall be 200 pounds per square inch for diameters up to 12 inches, and 150 pounds per square inch for diameters 16 inches and larger. Valves for operating pressures other than the above shall be as specified on the plans or in the special specifications. Tapping sleeves shall be rated for a minimum working pressure of 150 pounds per square inch.

**(B) Tapping Sleeves and Valves.** Tapping valves shall be identical in construction to resilient-seated gate valves as specified in Section 1410. Tapping valves shall have ends and seat rings of sufficient size to permit the use of full-size cutters.

Tapping sleeves are considered an integral part of a tapping valve assembly, with openings identical to those of the valve.

Tapping sleeves shall be ductile iron or stainless steel.

All tapping sleeves shall be factory lined and coated with a corrosion-resistant epoxy in accordance with ANSI/AWWA C550. Tapping sleeves shall be provided with a neoprene gasket and stainless steel bolts.

Size on size taps may be made no closer than 30 inches from a joint. All other taps must be minimum distance of 18 inches from a joint.

## SECTION 1409

### 1409.0300 EXECUTION

#### 1409.0302 Installation.

**(A) General.** Tapping sleeves and valves shall be installed in accordance with manufacturer's recommendations. Size on size tapping for pipe 12 inches in diameter and larger will not be accepted.

All fittings, valves, flexible couplings, and repair clamps shall be encased with an 8-millimeter polyethylene wrap in accordance with AWWA C105, Method C.

**(B) Workmanship.** All the Contractor's or subcontractor's personnel shall be skilled and knowledgeable regarding installation procedures for the tapping sleeves and valves, as well as all incidental appurtenances being installed.

**(C) Valves.** Prior to installation in the trench, valves 16 inches or larger shall be fully opened and closed by the Contractor to check the operation and ensure the valve fully seats. A record shall be made of the number of turns required to fully open or close the valve. This record shall be included on the as-built plans. The inside of the valve shall be thoroughly cleaned prior to valve installation.

**(D) Tapping Valves.** Tapping sleeves and tapping equipment shall be supported independently from the pipe during tapping operations.

**(E) Thrust Restraint.** Thrust restraint for tapping sleeves and valves shall be in accordance with the requirements of Section 1406, TW Standard Detail 610, the plans, and/or the special specifications.

**(F) Testing.** Air testing is not allowed. All tapping sleeves shall be hydrostatically tested for 15 minutes to the working pressure of the main being tapped. Any visible leaks or pressure drop constitute failure.