

SECTION 02626

TAPPING SLEEVES AND VALVES

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Tapping sleeves and valves for connections to existing water system.

1.2 UNIT PRICES

- A. Measurement is on a lump sum basis for each tap.

1.3 SUBMITTALS

- A. Submit product data in accordance with requirements of all sections and provisions of these specifications.

1.4 QUALITY CONTROL

- A. Provide manufacturer's affidavit that all valves purchased for tapping of existing waterlines conform to Section 02640 - Gate Valves and to applicable requirements of AWWA C500 and that they have been satisfactorily tested in accordance with AWWA C500.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Tapping Sleeves:
  - 1. Tapping Sleeve Bodies: AWWA C110 cast or ductile iron; AWWA C200 carbon steel; in two sections to be bolted together with high-strength, corrosion-resistant, low-alloy, steel bolts; mechanical joint ends.
  - 2. Branch Outlet of Tapping Sleeve: Flanged; machined recess; AWWA C207, Class D, ANSI 150 lb drilling. Gasket: Affixed around recess of tap opening to preclude rolling or binding during installation.
  - 3. Where fire service from 6-inch main is approved, use cast iron split sleeve.

- B. Welded-steel tapping-sleeve bodies may be used in lieu of cast or ductile iron bodies for following sizes and with following restrictions.
1. Flange: AWWA C207, Class D, ANSI 150 lb drilling. Gasket: Affixed around recess of tap opening to preclude rolling or binding during installation.
  2. Steel sleeves are restricted to use on pipe sizes 6-inch and larger.
  3. Body: Heavy, welded-steel construction; top half grooved to retain neoprene O-ring seal permanently against O.D. of pipe.
  4. Bolts: AWWA C500 Section 3.5; coated with 100 percent vinyl resin or corrosive resistant material.
  5. Steel Sleeves: Fusion-bonded epoxy coated to minimum 12-mil thickness. Finished epoxy coat: Free of laminations and blister; not peel; and remain pliant and resistant to impact. Ship steel sleeves in wooden crates that provide protection from damage to epoxy coating during transport and storage.
  6. Steel tapping sleeves shall be Smith Blair No. 622, JCM No. 412, or equal.
  7. Tapping Sleeves: Provide with 3/4-inch NPT test opening for testing prior to tapping. Provide 3/4-inch bronze plug for opening.
  8. Do not use steel sleeves for taps greater than 75 percent of pipe diameter.
- C. Tapping Valves: Meet all requirements of Section 02640 with following exceptions:
1. Inlet Flanges:
    - a. AWWA C110; Class 125.
    - b. AWWA C110; Class 150 and higher: Minimum eight hole flange.
  2. Outlet: Standard mechanical or push-on joint; to fit any standard tapping machine.
  3. Valve Seat Opening: Accommodate full-size shell cutter for nominal size tap without any contact with valve body; double disc.
- D. Valve Boxes: Furnish and install according to Section 02604.

**PART 3 - EXECUTION****3.1 GENERAL**

- A. Install tapping sleeves and valves at locations and of sizes as shown on Drawings.
- B. Thoroughly clean tapping sleeve, tapping valve and pipe prior to installation and in accordance with manufacturer's instructions.
- C. Hydrostatically test installed tapping sleeve to 150 psig for a minimum of 15 minutes. Inspect sleeve for leaks, and remedy leaks prior to tapping operation.
- D. When tapping concrete pressure pipe, size on size, use shell cutter one standard size smaller than waterline being tapped.
- E. Do not use Large End Bell (LEB) increasers with a next size tap unless existing pipe is asbestos-cement.

**3.2 INSTALLATION**

- A. Tighten bolts in proper sequence so that undue stress is not placed on pipe.
- B. Align tapping valve properly and attach it to tapping sleeve.
- C. Make tap with sharp, shell cutter:
  - 1. For 12-inch and smaller tap, use minimum cutter diameter one-half inch less than nominal tap size.
  - 2. For 16-inch and larger tap, use manufacturer's recommended cutter diameter.
- D. Withdraw coupon and flush all cuttings from newly made tap.
- E. Wrap completed tapping sleeve and valve in accordance with Section 02630.
- F. Place concrete thrust block behind tapping sleeve (NOT over tapping sleeve and valve).
- G. Request inspection of installation prior to backfilling.
- H. Backfill in accordance with Section 02227.

END OF SECTION