BELL SYSTEM PRACTICES
Outside Plant Construction and Maintenance

SECTION G73.105.1
Issue 1, September, 1952
AT&T Co Standard

PRESSURE TESTING
VALVES
LEAD CABLE AND SLEEVES

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1. GENERAL

1.01 This section covers the installation and use of valves and their accessories on lead cable and sleeves. Valves are installed in cables maintained under gas pressure for convenience in admitting gas and to provide pressure reading points.

1.02 This section replaces the related information contained in Section G73.206, Issue 1, which is cancelled. Methods of installing flanges on lead cable and sleeves, and valves and flanges on alpeth or stalpeth cable are given in other sections.

1.03 Each of the various pressure testing valves consists of a valve stem equipped with core and cap.

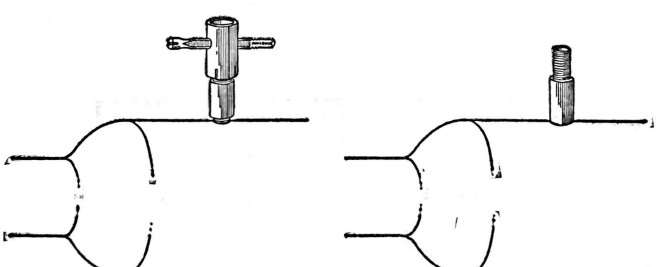
2. C PRESSURE TESTING VALVE

2.01 The C valve stem, shown below is designed to be installed directly in the lead sheath or sleeve of a cable. It provides a permanent gas admission and pressure reading point on cables maintained under continuous pressure.

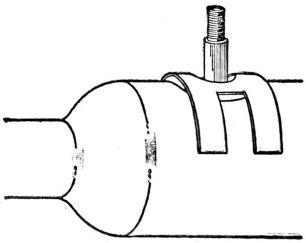
C VALVE STEM

2.02 Always remove the core from the valve stem before soldering as the heat is likely to damage the rubber on the valve core. Replace the valve core after the valve has cooled. The completed installation should be tested for leaks. A small quantity of testing solution should also be applied to the top of the valve stem with the finger to insure that the valve core provides a gastight seal. The solution should be applied sparingly as it has a tendency to deteriorate the valve core seating material. Before replacing the cap, the valve core should be depressed momentarily to blow out any solution that may have entered the valve stem.

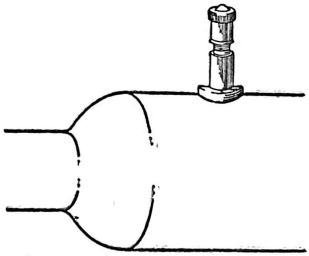
2.03 To install a C type valve in a lead sleeve, bore a hole in the sleeve with the cable drill about 2 to 3 inches from one of the wiped joints and proceed as shown in the following figure. In aerial cable, valves placed in the sleeve are installed at the end of the sleeve nearer the pole.



Remove cap and core from valve stem, using the valve repair tool. Insert threaded end of valve stem in hole made with cable boring tool and screw firmly into place, using valve repair tool fitted on stem as a wrench.



Place cable soldering form around base of valve stem and solder stem to lead sleeve.

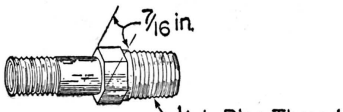


Remove cable soldering form. Do NOT replace valve core and cap until valve has cooled.

2.04 The method of installing a C valve on the side of a cable using a D Soldering Mold is given in the section on soldering molds.

3. F PRESSURE TESTING VALVE

3.01 The F valve stem, illustrated below, is used for installation in the F pressure testing flange to provide temporary gas admission and pressure reading points on cables under pressure. The housing of C and G pressure contactors are equipped with the F type valve.

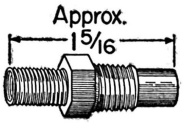


F VALVE STEM

3.02 Approved pipe joint compound should be applied to the lower threads of the valve before it is screwed into a flange or contactor.

4. H PRESSURE TESTING VALVE

4.01 The H valve stem, illustrated below, is designed for use on contactor-terminal housings. It is not suitable for installation in cable sheath, lead pipe, F pressure testing flanges or contactor housings.

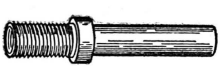


H VALVE STEM

4.02 Approved pipe joint compound should be applied to the lower threads of the valve before it is screwed into a contactor-terminal housing.

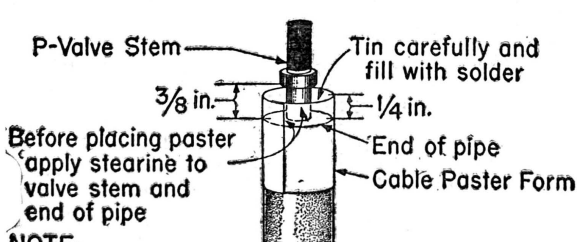
5. P PRESSURE TESTING VALVE

5.01 The P valve stem, shown below, has a one-inch long stem, 1/4-inch outside diameter, for insertion into the end of lead pipe where valve extensions are required.



P VALVE STEM

5.02 The valve should be installed as shown in the following illustration.

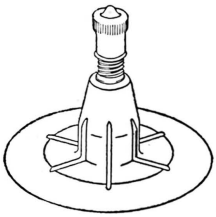


6. TR15R COMPLETE TIRE VALVE AND OVAL BASE REPAIR VALVE

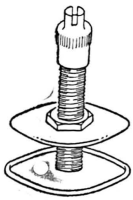
6.01 These valves are used in preparing temporary splice closures made of CR tape or equivalent material, to permit pressure testing. The method of installation is described in other sections.

(a) The TR15R is a rubber covered valve with a disc-shaped rubber base.

(b) The Oval Base Repair Valve is a metal valve with an oval metal base and screw and washer sealing arrangement.



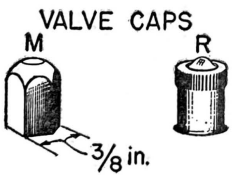
TR 15 R COMPLETE TIRE VALVE



OVAL BASE REPAIR VALVE

7. VALVE CAPS AND CORES

7.01 The caps on pressure testing valves are gastight and are provided to protect the valve core. All valves should be equipped with caps. The R valve cap is equipped with a rubber gasket and is designed with a round dome for installation and removal by means of the fingers. The M valve cap is equipped with a soft metal gasket and is designed with a hexagonal top for installation and removal by means of a wrench, thereby discouraging tampering and theft. The valve caps and cores are illustrated below.



VALVE CORES
Either type suitable in standard valves