BELL SYSTEM PRACTICES
Outside Plant Construction and Maintenance

SECTION G50.244.3
Issue 1, February, 1949
AT&T Co Standard

CABLE GENERAL—TESTING
PRECAUTIONS IN TESTING COAXIALS

Contents **Page**

1. GENERAL

1.01 This section describes the precautions that must be observed in testing coaxials using high voltage test sets. The paper-insulated conductors in coaxial cables should be tested in the usual manner, observing the precautions followed in testing such conductors.

1.02 Because of the hazardous voltages employed in making these tests, coaxials shall not be tested until those who are engaged in the tests are thoroughly trained in the safety precautions contained herein and until all of these precautions have been carried out.

2. PRECAUTIONS

2.01 If the section under test is open at the distant end or at an intermediate point, an approved communication circuit shall be established between the test location and the end of the cable or intermediate point.

2.02 Before testing coaxials with the 628DS Megger Test Set, 90A Test Set, 94A Test Set or other special high voltage test set, steps should be taken to ensure that no construction or maintenance man will open the section of cable under test during the testing period.

2.03 When the distant end of the section under test will be unattended, the coaxials should be cleared and the end of the cable protected to ensure that the high voltage applied in making tests will not injure anyone.

2.04 When the ends of coaxials under test are located in an attended station, the supervisor in charge should be advised of the tests.

2.05 If there are open splices or if the far end of the cable is open, make sure that all workmen are out of the manholes or splicing pits before tests are made, except at the test point, where the splicer may remain in the splicing pit or the manhole to change the leads from one coaxial to another. Approved rubber gloves must be worn by the splicer who changes the connections.

2.06 The testing equipment should be set up above ground in such position that the tester can see the splicer in the splicing pit or manhole. The leads provided are of sufficient length to use the sets outside the manhole or splicing pit. The tester will assure himself by observation and by talking to the splicer that the latter is clear of all leads before testing, and that the testing equipment is discharged or otherwise de-energized before he orders the splicer to change the connections. In unusual cases where testing equipment may be set up in a location where the tester cannot communicate directly with the splicer a suitable signaling circuit should be set up between them.

2.07 Before starting the high voltage tests from an unspliced end of cable, all paper-insulated conductors except the communication pair should be skinned, bunched and grounded to the outer coaxial conductors, cable sheath, and metallic tape or copper jacket, if any, at the end where the tests are made. With this precaution no dangerous voltage will be set up inadvertently on wires not under test (by accidental contact with the high voltage test leads) which subsequently might injure workmen or cause an insulation breakdown between conductors or from conductors to sheath.

2.08 Immediately after completion of high voltage tests, each inner conductor should be shorted to its outer conductor to dissipate any potential on the coaxial.