BELL SYSTEM PRACTICES
Outside Plant Construction and Maintenance

ADDENDUM G74.420
Issue 1, August, 1941
AT&T Co Standard

CABLE SPLICING

REPAIR OF UNDERGROUND CABLE

1. GENERAL

1.01 This addendum supplements the information contained in Section G74.420 and outlines the use of desiccant in expelling moisture from cables.

2. EXPELLING MOISTURE FROM CABLE

2.01 Remove the sheath and expose all of the core affected by the moisture and some of the dry core on each side of the opening. Balloon the splice or core and repair any conductor having badly charred or otherwise damaged insulation in order to minimize the possibility of arcing.

2.02 **Desiccant Method:** Desiccant is a granular material and, unless reasonable care is exercised in applying it to the splice, it may have an abrasive action on insulation that is wet. As the insulation becomes dry, however, it becomes more resistant to mechanical damage.

2.03 Cut a piece of muslin about 6 inches longer than the sheath opening and several inches wider than the circumference of the cable or splice. Wrap the muslin around the cable or splice so that the opening in the muslin is at the top and the ends overlap the cable sheath. Then tie the ends of the muslin to the cable with cotton sleeving or tape, as shown below, to form an envelope.

2.04 The quantity of desiccant to be used in a standard length splice opening can be determined from the table in Section G71.108. If the cable opening is longer than the usual splice opening or if the conductors are very wet, increase the quantity of desiccant accordingly. Do not use any more desiccant than can be distributed among the conductors as the material that falls to the bottom of the envelope or is piled on top of the splice does not aid in drying the insulation.

2.05 Sprinkle the desiccant among the conductors distributing it as thoroughly as possible. Distribution of the desiccant will be facilitated by separating the conductors with the fingers and gently working the granules into all spaces. The manipulation of the conductors will cause some of the desiccant to fall. As the desiccant collects at the bottom of the envelope, pick it up with the fingers and replace it among the conductors. When, in drying very wet cable, it is noted from the condition of the insulation that the drying action of the desiccant is slowing up, the spent material should be removed and replaced with fresh desiccant. It will ordinarily require about 5 minutes for thoroughly distributed desiccant to lose its effectiveness in very wet cable.

2.06 Continue these operations until all conductors are dry to the touch. Then hold the muslin against the bottom of the conductors with one hand and with the other place the desiccant that has fallen to the bottom back among the conductors, distributing it well. Then wrap the opening or splice with rubber bandages.

2.07 After about 15 minutes, call the testboard and request an insulation test to determine whether the conductors are serviceable. If they are, remove the rubber bandages and shake out all desiccant. Examine the conductors and repair all damaged insulation with Scotch electrical tape.

2.08 If the test shows that the conductors are not serviceable, remove the bandage, shake out the desiccant, and replace with fresh desiccant. After 10 or 15 minutes, call for another test.

2.09 After the conductors have been found serviceable, slide the lashed ends of the envelope toward each other until they extend about 1 inch over the sheath and place fresh desiccant among the conductors using the quantity of desiccant specified in Section G71.108 unless the opening is longer than the normal splice opening, in which case increase the quantity of desiccant accordingly. Then wrap the splice and cover it with a lead sleeve in the usual manner.