**BELL SYSTEM PRACTICES**
**Outside Plant Construction and Maintenance**

**SECTION G50.610.1**
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**AT&T Co Standard**

# CABLE SPLICING—GENERAL
## BONDING ACROSS SHEATH OPENINGS

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## 1. GENERAL

1.01 This section replaces Issue 2 and has been reissued to cover temporary bonding across sheath openings in alpeth or stalpeth cables at splice cases and terminal cases.

1.02 When removing a lead sleeve or making a sheath opening the electrical continuity of the sheath must be maintained except where a specific break is required because of electrolysis or noise considerations.

## 2. RULES

2.01 All sheath or splice openings in working cable should be bonded except at an insulating joint.

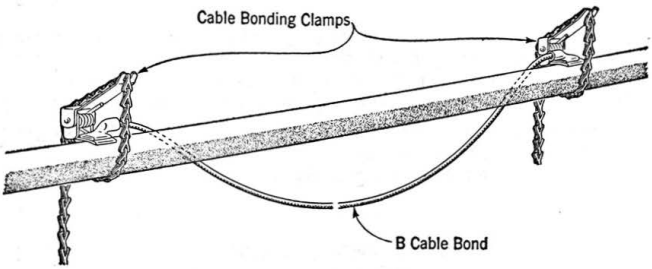
2.02 With lead sheath cable, the bond should be placed before the electrical continuity of the sheath is broken. At wrapped splices in alpeth or stalpeth cable it will usually be necessary to unwipe the sleeve before placing the bond. At splice and terminal cases the bond should be placed as soon as the sheath tabs are accessible.

2.03 If an aerial cable sheath is used as part of an electrolysis drainage circuit, the type of temporary bond to be used will be specified on the work sheet for the job. In the absence of specific instructions, bond as indicated in Paragraph 3.01 (a) or (b) for lead sheath and Paragraph 4.02, 4.03, 5.02 or 5.03 for alpeth or stalpeth sheath.

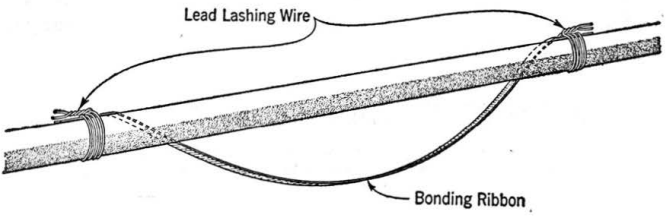
## 3. LEAD SHEATH CABLE

3.01 On lead sheath cable, clean the sheath with the carding brush where the bond is to be applied and bond as illustrated:

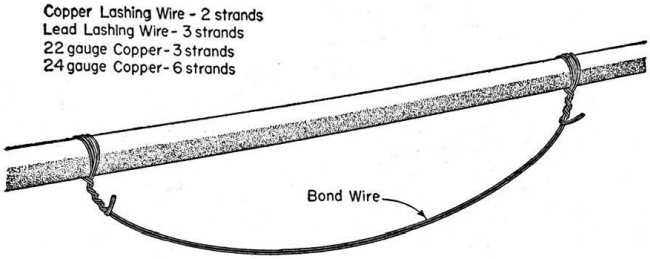
(a) Use B Cable Bond if available.



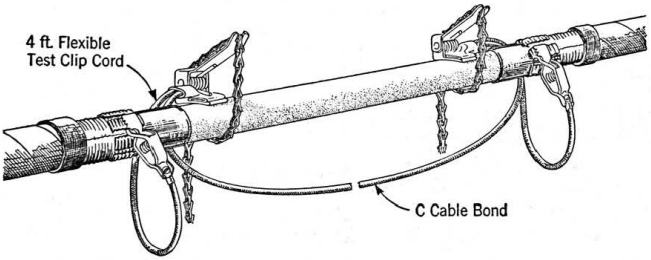

(b) Bonding Ribbon can be used if the above bond is not available.



(c) Lashing wire can be used on aerial or building cables as illustrated:




(d) C Cable Bond—for bonding across openings in copper jacketed cable.




3.02 Arrange the bond so that it will not interfere with the splicing operations at the opening or splice. Clean the sheath of the cable and fasten the bond securely on each side.

## 4. WRAPPED JOINTS ON ALPETH OR STALPETH

4.01 **At a new opening,** prepare the sheath for wrapped joints in alpeth or stalpeth cable as covered in other sections of the practices. Bond across the opening in accordance with Paragraphs 2.03 and 3.01. The connection is made to the exposed aluminum or terneplate at each side of the sheath opening.

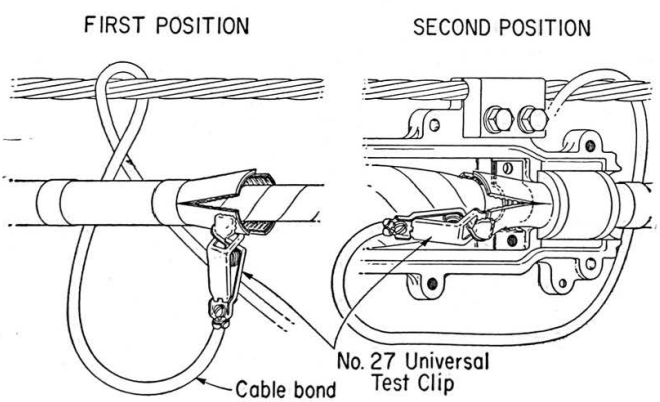
4.02 **At an existing wrapped joint splice** in alpeth or stalpeth cable, where auxiliary sleeves have been used, unwiping the main sleeve breaks the electrical continuity across the splice. Therefore, as soon as the main sleeve is unwiped and moved aside to expose the splice, bond across the opening in accordance with Paragraphs 2.03 and 3.01. The connection is made to the auxiliary sleeve at each side of the opening.

4.03 In alpeth cable where auxiliary sleeves have not been used, the connection is made to the bonding ribbon extending from each side of the sheath opening. The cable bond used with the splice or terminal case is suitable for this purpose.

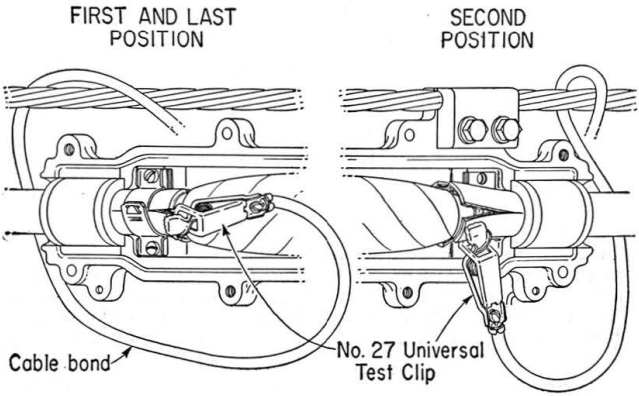
## 5. SPLICE OR TERMINAL CASES ON ALPETH OR STALPETH

5.01 A suitable cable bond for use with the splice and terminal cases consists of a five foot length of Type S No. 12 AWG single-conductor rubber covered flexible cord with No. 27 Universal Test Clips fastened to each end.

5.02 **At a new opening,** place the cable bond in the **first** position shown, at both ends of the sheath opening as soon as the sheath tabs have been cut. After the splicing work is completed and before fastening the sheath clamps in place, move the test clips to the **second** position shown.



5.03 **At an existing splice or terminal case** installation, place the cable bond across the sheath opening before unfastening the sheath clamps, as shown in the **first** position below. After unfastening the sheath clamps, move the test clips to the **second** position shown.

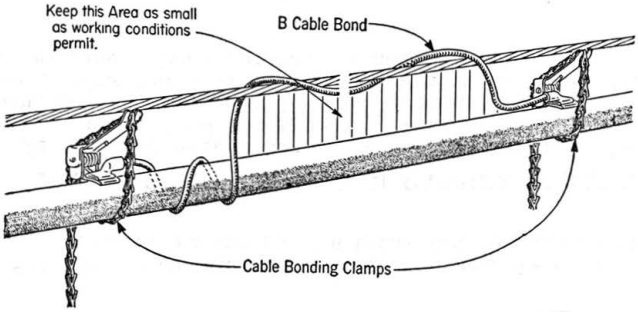



5.04 After completing the splicing work, move the test clips back to the first position before fastening the sheath clamps.

## 6. SHEATH OPENINGS WITH N CARRIER CIRCUITS

6.01 To keep noise pickup caused by extraneous radio frequency signals to a minimum when sheath openings are made in cables containing N carrier circuits, the bond across the opening should be so arranged that the area enclosed between the bonding cord and the cable is small.

6.02 In aerial cable, this can be done by wrapping the bonding cord around the strand across the opening. The bonding clamps should be attached as close to the edge of the sheath opening as practicable with the slack in the bonding cord wrapped around the sheath at one end of the opening as illustrated below.




6.03 In other cases, place the bonding cord parallel to and as close to the cable as practical without interfering with working conditions. The bonding clamps should be as close to the sheath opening as practical with the slack in the bonding cord wrapped around the sheath as in the illustration above.