

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

**SECTION G52.650.1**  
**Issue 1, May, 1956**  
**AT&T Co Standard**

## **CABLE SPLICING**

### **BONDING AERIAL POLYETHYLENE SHEATH CABLES**

#### **1. GENERAL**

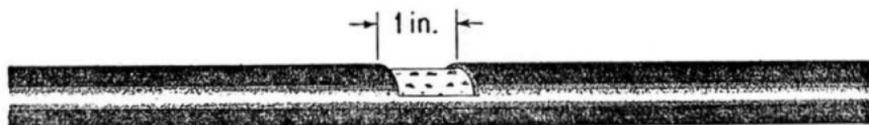
1.01 This section describes the method of making a bond between metallic portion of aerial polyethylene sheath cables and the suspension strand where additional bonds are needed for protection reasons, such as in lightning areas, and for power wire coordination.

1.02 It may be used in lightning areas on long lengths of aerial polyethylene sheath cable, as required, to reduce the length of unbonded cable to not more than 1000 feet as covered in Section G10.345.1, where terminals, splices, etc., are placed too far apart.

#### **2. METHOD OF BONDING**

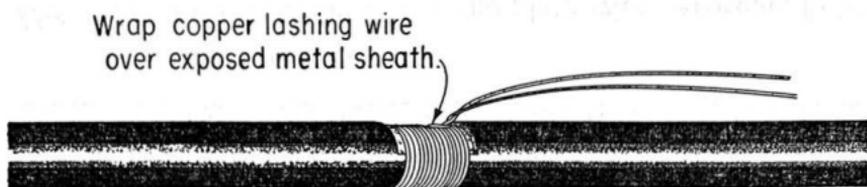
2.01 On the top of the cable, remove a piece of the polyethylene sheath.

Remove polyethylene for  $\frac{1}{2}$  of circumference.

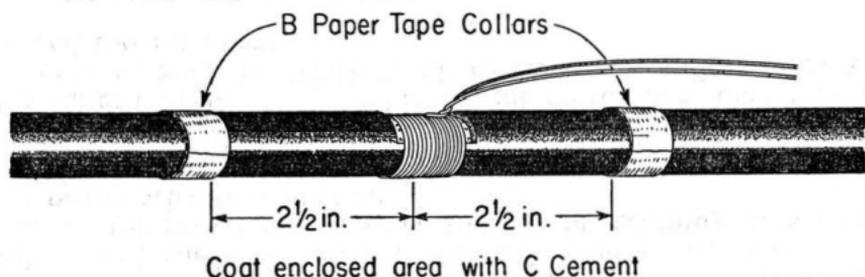


2.02 Clean the aluminum or terne plate with kerosene, finishing with a dry cloth.

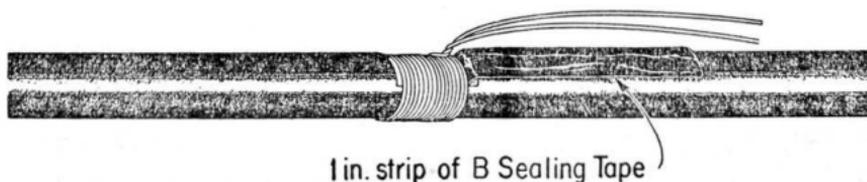
2.03 Take a length of copper lashing wire and wrap it tightly around the cable over the exposed metal sheath. Twist the ends together to secure them.



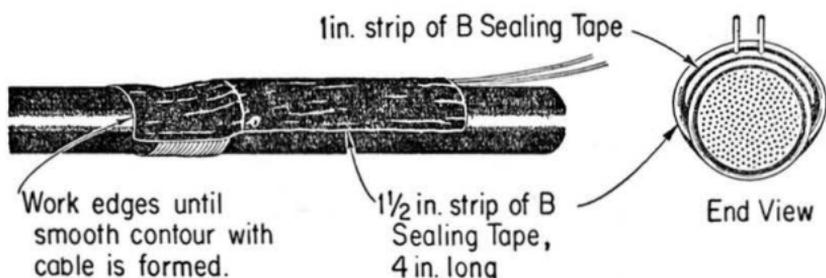
2.04 Scuff the polyethylene sheath with the carding brush. Place B Paper Tape collars on the sheath, and coat the enclosed area with C Cement. Allow 3 to 5 minutes drying time in warm weather and 5 to 10 minutes in cold weather.



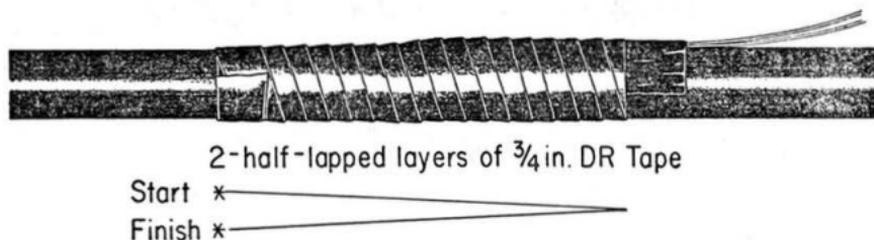
2.05 Cut a 3-inch long by 1-inch wide strip of B Sealing Tape. Lay this strip on the top of the cable sheath on the side of the opening where the bond will be made to the strand. Press the copper lashing wires down into the tape, leaving space between them for the sealing tape to fill in..



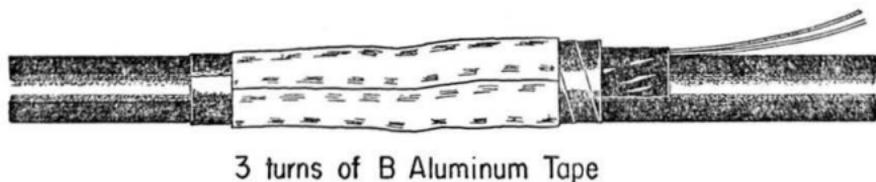
2.06 Cut a 4-inch long, 1-1/2-inch wide strip of B Sealing Tape, lay this over the 1-inch wide strip with the extra length filling the sheath opening. Press the top firmly over the strip underneath until all crevices are filled and the edges are contoured to the surface of the cable.



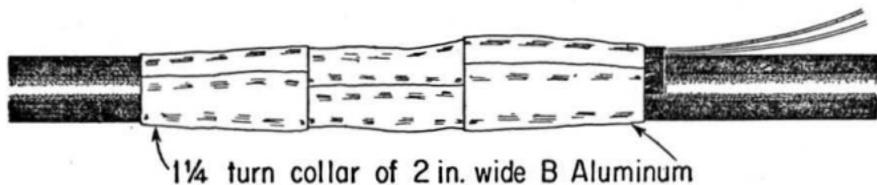
2.07 Apply two half-lapped layers of 3/4-inch DR Tape over the cemented area and the B Sealing Tape. In applying the tape it should be stretched to 5/8-inch width.



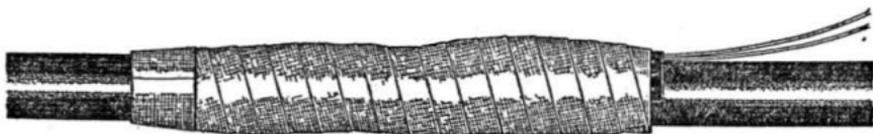
2.08 Apply a collar of 3 turns of B Aluminum Tape centered on the DR Tape. Iron the tape smoothly in place with the handle of the dresser or carding brush.



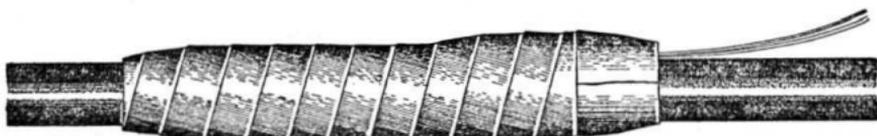
- 2.09 Apply 1-1/4 turn wrappings of 2-inch wide B Aluminum Tape extending beyond the exposed DR Tape 1/2 inch at each end. Then iron smoothly in place.



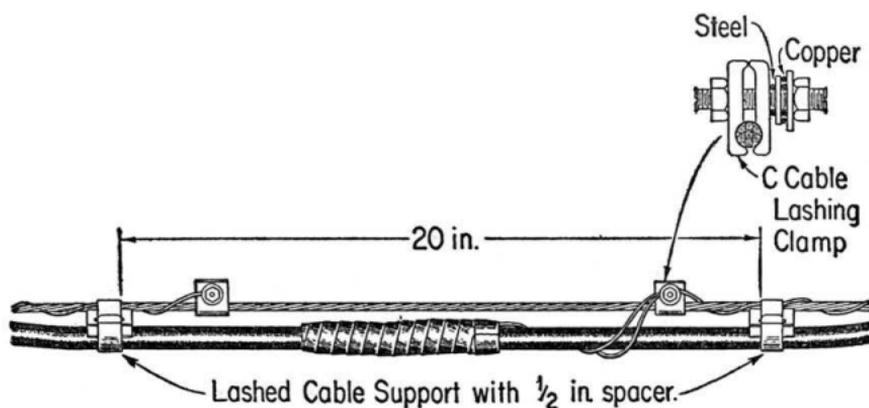
- 2.10 Apply two half lapped layers of 3/4-inch friction tape, extending just beyond the edge of the aluminum tape.



- 2.11 Cover the friction tape with a single half-lapped layer of D Vinyl Tape. The last turn should be applied free from all tension so that the end of the tape will not ravel.



- 2.12 Terminate the copper lashing wire in the C Cable Lashing Clamp.

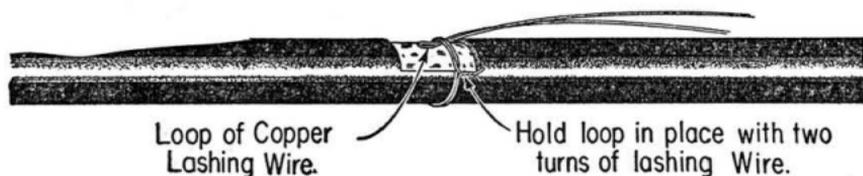


### 3. ALTERNATIVE METHOD OF BONDING STALPETH SHEATH

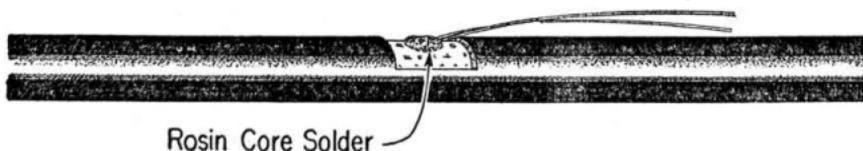
3.01 This method should not be used on cable having polyethylene insulated conductors, which may be damaged by the heat from the soldering operation.

3.02 Remove the piece of polyethylene sheath and clean the terne plate as covered in Paragraphs 2.01 and 2.02.

3.03 Take a length of copper lashing wire, form a 1/4-inch loop at the mid-point and bind the loop in place on the exposed terne plate with another piece of lashing wire.



3.04 Solder the loop in place with rosin core solder. Then remove the lashing wire binding.



3.05 The remainder of the method is the same as covered in Part 2, starting with Paragraph 2.04.