BELL SYSTEM PRACTICES
Outside Plant Construction and Maintenance

SECTION G50.673.1
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AT&T Co Standard

CABLE SPLICING—GENERAL
WRAPPING COMPLETED SPLICE

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1. GENERAL

1.01 This section describes the method of wrapping completed splices and sheath openings before placing the lead sleeve, except at openings made for insulating joints or gas pressure plugs. It is being reissued to include the method of wrapping splices in lepeth sheath cable.

1.02 The methods used in putting intermediate wrappings around various complements of conductors, as in cables containing coaxials, are covered in other sections.

1.03 The method of wrapping the splice depends on the dielectric strength from core to sheath. The three degrees of dielectric strength and the method of obtaining them are as follows:

(1) **Normal dielectric cable** is made with two strips of spirally wrapped paper between the core and the sheath.

(2) **High dielectric cable** is made with four or more strips of spirally wrapped paper between the core and the sheath.

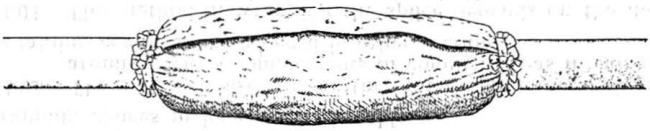
(3) **Lepeth sheath cable** of very high dielectric strength is made with an extruded layer of polyethylene between the core and the lead sheath.

2. PAPER CORE WRAP

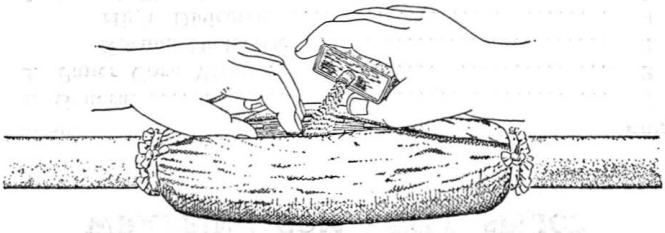
Normal Dielectric

2.01 In cables that have two paper wrappers under the sheath, thus indicating that they are of the normal dielectric type, the final wrapping is done in the following way:

(1) If loose desiccant is used, envelop the splice or sheath opening with a single piece of dry muslin, long enough to extend about 1 inch over the sheath at each end, and wide enough to overlap about 1 inch at the top. Tie the muslin around the sheath with dry cotton sleeving or cotton tape.



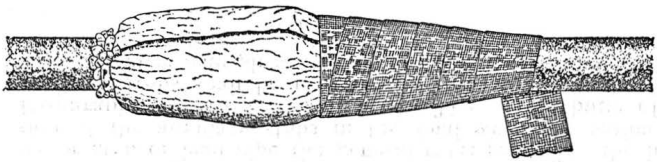
(2) Pour the required amount of desiccant into the splice or sheath opening through the overlap in the muslin, as illustrated below. Distribute the desiccant as uniformly as possible among the conductors.

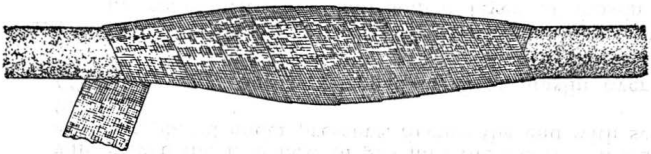


(3) Close the opening in the muslin so the edges overlap.

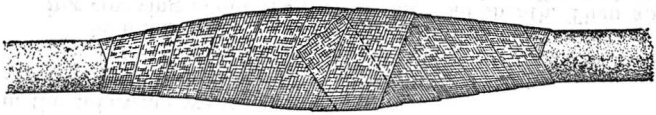
(4) If four ounce bags of desiccant are used, they are laid in the splice and the muslin envelope is not required.

(5) Starting at the center, wrap the splice with two half-lapped layers of dry muslin as indicated on page 3, finishing off at the center.

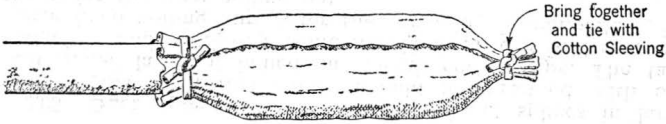




(6) Secure the end of the muslin with a slip tie as shown below.



2.02 At a cap or butt splice the muslin envelope for the desiccant should be prepared as shown below.



2.03 At a "Y" splice the muslin envelope should not be tied around each cable individually. A tie around both cables is sufficient. The muslin wrapping should not be passed between the cables.

2.04 **Paraffin:** If paraffin is used to dry the splice, omit the muslin envelope and make the final wrapping with two half-lapped layers of boiled out muslin, applied while the splice or sheath opening is still soft and warm from boiling out. After the wrapping is completed give the splice or sheath opening a final boiling out with paraffin.

2.05 **Duct Splices in Large Cables:** Duct splices in large paper insulated cables should be wrapped with one half-lapped layer of boiled out 1-inch cotton tape. The tape should be applied tightly while the duct splice is still soft and warm from boiling out. After the wrapping is completed give the splice the final boiling out.

High Dielectric

2.06 In cables that have four or more paper wrappers under the sheath, thus indicating that they are of the high dielectric type, it is necessary to provide additional protection in the following way:

(1) Apply the required quantity of desiccant.

(2) At a straight splice wrap a collar of four turns of 4-inch muslin over the sheath butt at one end of the opening covering about 1/2 inch of the lead sheath. Then apply one half-lapped layer of muslin across the splice and finish off with a collar of four turns of muslin at the other end of the splice. Secure the end with scotch tape.

(3) Apply one half-lapped layer of B Polyethylene Tape leaving 1/2 inch of muslin exposed at each end. This will ensure the free flow of gas into the sleeve, should the cable be placed under pressure. Secure the end with scotch tape.

(4) Then apply one half-lapped layer of muslin over the B Polyethylene Tape.

2.07 At a Y splice the muslin collars are not required. Wrap the splice with one half-lapped layer of muslin and complete the wrapping with one half-lapped layer of B Polyethylene Tape followed by one half-lapped layer of muslin.

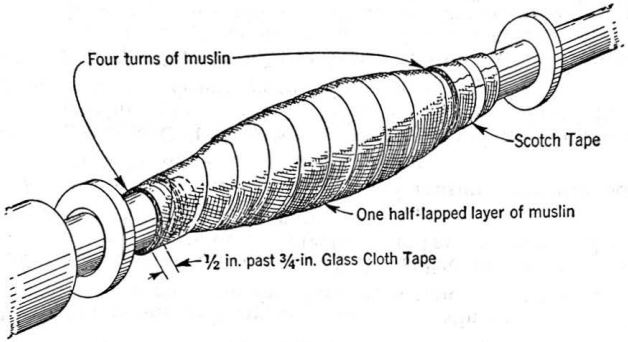
2.08 When wrapping a splice in high dielectric cable involving a loading coil case stub, terminal stub, contactor stub or lead pipe the general rules regarding the inclusion of the auxiliary stubs in the final wrapping outlined in Paragraphs 3.09 to 3.12 shall apply. The sheath butts of the auxiliary stubs shall be prepared in the manner outlined for high dielectric lead sheath cable in Section G50.616.1.

3. LEPETH SHEATH CABLE

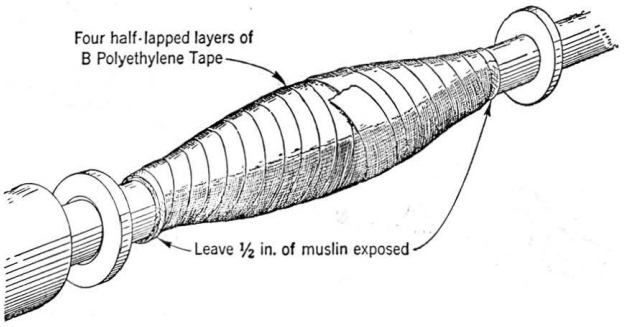
Straight Splice

3.01 Apply the required quantity of desiccant.

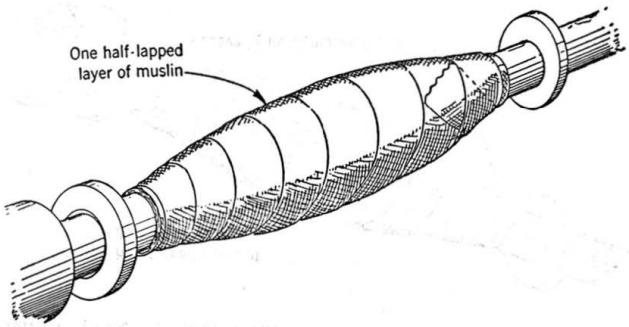
3.02 Wrap a collar of four turns of 4-inch muslin over the sheath butt at one end of the opening covering the glass cloth tape. Then apply one half-lapped layer of muslin across the splice and finish off with a collar of four turns of muslin at the other end of the splice. Secure the end with scotch tape.



3.03 Starting at the center of the splice apply four half-lapped layers of B Polyethylene Tape leaving 1/2-inch muslin exposed at each end.



3.04 Apply one half-lapped layer of muslin over the polyethylene tape.



Y Splice

3.05 Apply the required quantity of desiccant.

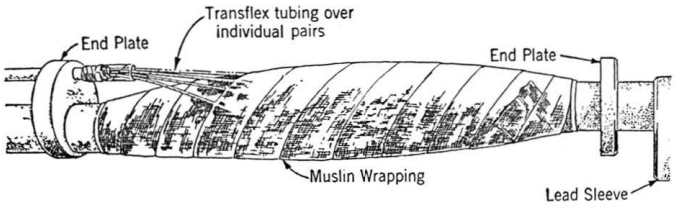
3.06 Apply one half-lapped layer of muslin over the splice opening covering the glass cloth tape at each end.

3.07 Starting at the center of the splice apply four half-lapped layers of B Polyethylene Tape leaving 1/2 inch of muslin exposed at each end.

3.08 Apply one half-lapped layer of muslin over the polyethylene tape.

3.09 **Loading Coil Case Stub:** When wrapping a completed loading splice the stub cable should be included in the final wrapping as described in Paragraphs 3.05 to 3.08.

3.10 **37-Type Terminal Stub:** When applying the final muslin and polyethylene wrapping to the completed splice as covered in Paragraphs 3.01 to 3.08 do not include the terminal stub as the tape may obstruct the opening in the lead pipe. The transflex tubing over the end of the stub and the stub conductors takes the place of the polyethylene tape. The transflex tubing on the stub conductors should extend under the wraps of polyethylene and muslin as illustrated below.



3.11 **Contactor Stub:** In wrapping the completed splice, do not include the contactor stub. Extend the conductors under the wrappings of polyethylene and muslin as illustrated in Paragraph 3.10.

3.12 **Lead Pipe:** The lead pipe which extends 1/2 inch inside the end plate is not included in the polyethylene and muslin wrapping.

4. RUBBER INSULATED CONDUCTORS

4.01 Twisted copper joints may be corroded when in close proximity to rubber insulated conductors. Therefore, when a splice contains a number of rubber insulated conductors, such as from a service cable, the rubber insulated conductors should be grouped together and the group should be wrapped with two half-lapped layers of dry muslin. The wrapped group should then be placed in with the other conductors and the splice should be wrapped in the usual way.