

BELL SYSTEM PRACTICES
Outside Plant Construction
and Maintenance

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CABLE SPLICING—BURIED

REMOVING OUTER PROTECTION

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1. GENERAL

1.01 This section describes various types of outer protection used on buried cables and outlines the method of removing and terminating the protection at splice openings.

1.02 The sheath and each layer of protection on the cables described in this section are flooded with an asphalt compound.

1.03 Extreme care must be taken in removing the protective coverings in order to prevent damage to the sheath.

2. TOOLS

2.01 The tool listed below is required in addition to the tools usually carried by splicers.

Snips, Wiss M-3 Metal-Master: For cutting metal tapes.

3. JUTE

3.01 The covering on jute protected cable consists of two layers of impregnated paper and one or two layers of jute. The protection is removed as follows:

(1) At the point where the jute covering is to be terminated apply four turns of 2-inch friction tape, so located that when the splice opening is made there will be six inches of exposed lead sheath at each end of the opening.

- (2) Depending on the location of the cable the paper tapes can be removed as follows:
- In manholes, or wherever there is danger of gas explosion, soften the asphalt by means of hot paraffin, heated to not more than 200°, or a cloth soaked in kerosene.
 - Where it is safe to use an open flame it is easier to soften the asphalt by heating the cable gently with a splicer's furnace, or an acetylene torch.
- (3) As soon as the paper is removed clean the exposed sheath carefully with a kerosene soaked cloth making sure that all asphalt is removed. Wipe off the kerosene with a clean dry cloth.

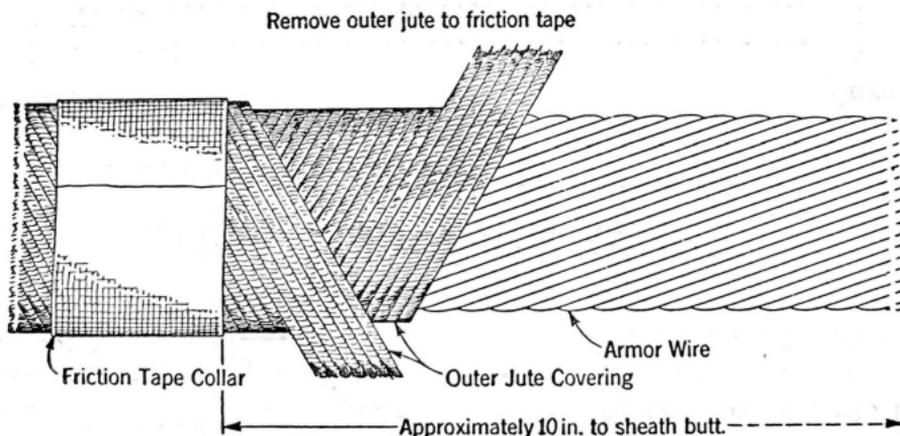
4. LIGHT WIRE ARMOR

4.01 On light wire armored cable, the protection over the sheath consists of a bedding of jute or thermoplastic, a layer of armor wires and an outer serving of jute.

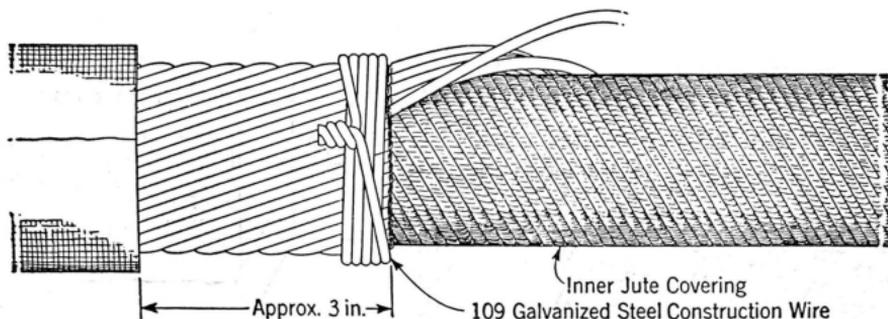
4.02 When the light wire armored cable is used at locations where it is desirable to anchor the cable, the armor should be terminated as outlined in Section G57.631.1.

4.03 At any other splice opening, the protection is removed as follows:

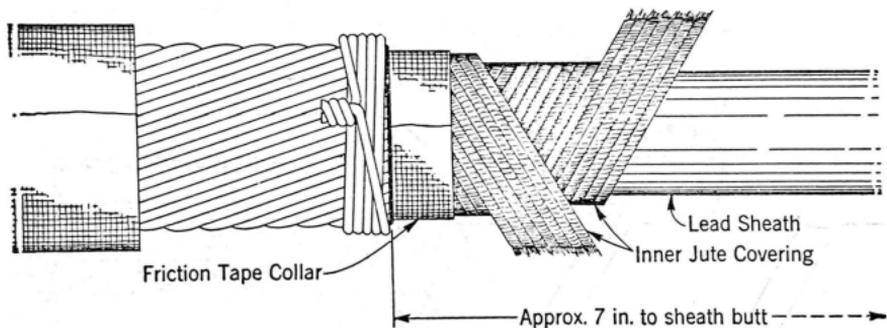
- At the point where the outer serving of jute is to be terminated apply four turns of 2-inch friction tape, so located that when the splice opening is made there will be three inches of armor and seven inches of lead sheath exposed at each end of the opening. Then remove the covering as outlined below.



Bind down armor wire with five turns of 109 Galv. Steel Construction Wire or equiv. Remove armor wire by partially cutting through each strand at the wire marker and then bending each strand back and forth until it breaks.



Apply two turns of $\frac{3}{4}$ in. friction tape. Remove inner jute to the friction tape marker and clean sheath.



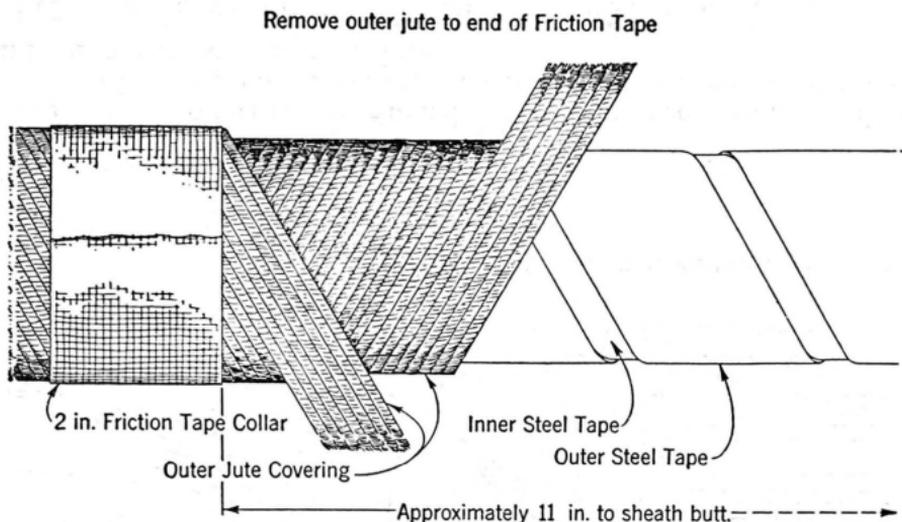
5. BURIED TAPE ARMOR

5.01 The covering on Buried Tape Armored cable consists of impregnated paper, a cushion of jute, two steel tapes and an outer covering of jute.

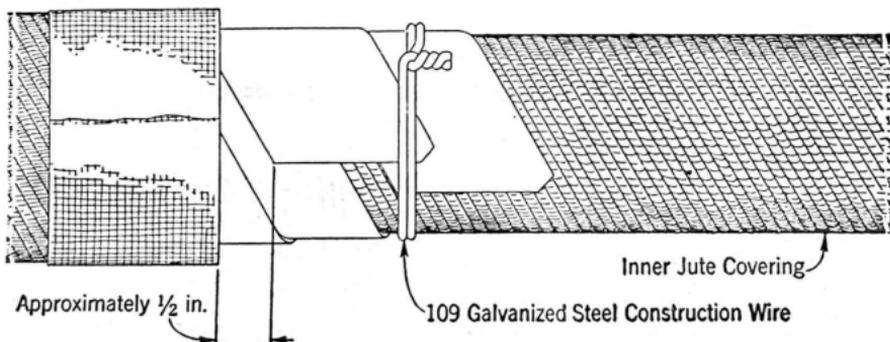
5.02 The covering on Gopher Protected cable consists of impregnated paper, a single steel tape, another layer of paper and an outer covering of jute or thermoplastic.

5.03 The method of removing the covering on Buried Tape Armored cable is outlined below. The single tape on Gopher Protected cable is removed in essentially the same way.

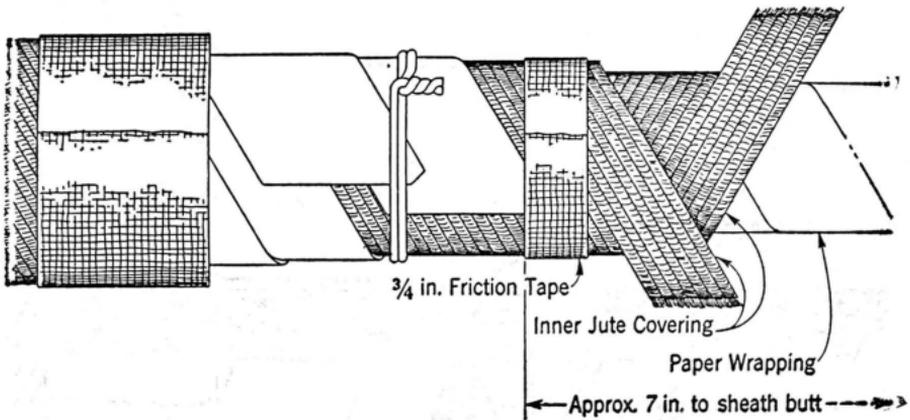
- (1) At the point where the outer serving of jute is to be terminated, apply four turns of 2-inch friction tape so located that when the splice opening is made there will be approximately four inches of armor and seven inches of sheath exposed at each end of the opening. Then remove the covering as outlined below.



Cut tape longitudinally with metal snips and trim corners as shown. Apply two turns of 109 Galvanized Steel Construction Wire or equivalent around tapes.



Apply four turns of $\frac{3}{4}$ in. friction tape covering $\frac{1}{4}$ in. of inner steel tape as shown below. Remove jute wrapping to edge of friction tape. Remove paper wrapping to edge of friction tape and clean sheath.

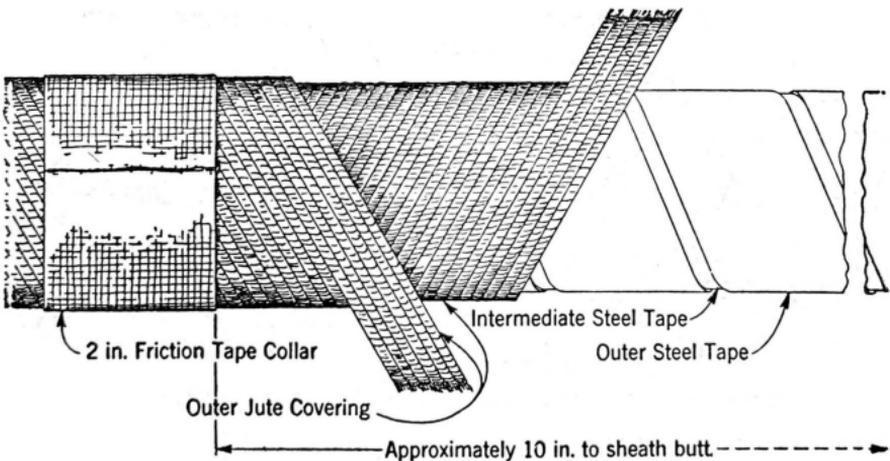


6. MODIFIED TAPE ARMOR

6.01 The covering on Modified Tape Armored cable consists of a layer of alternate lead and paper tapes, three steel tapes, and an outer covering of jute. The protection is removed as follows:

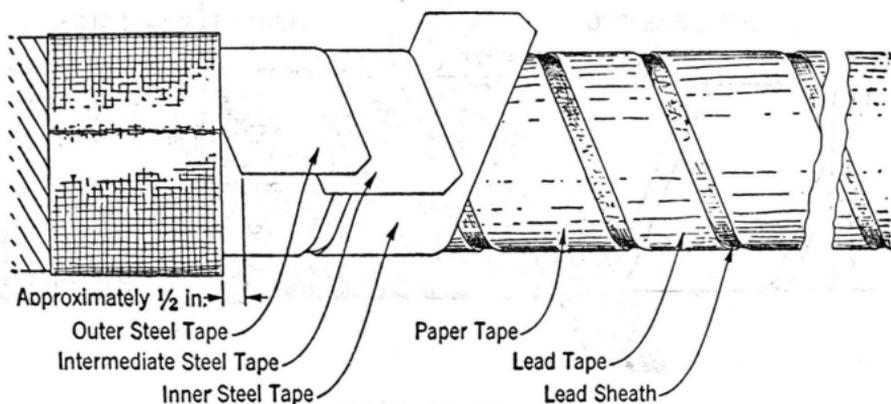
- (1) At the point where the outer serving of jute is to be terminated, apply four turns of 2-inch friction tape so

Remove outer jute to end of Friction Tape

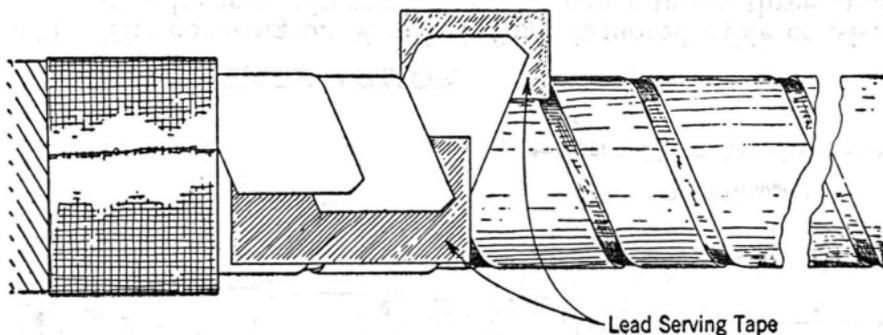


located that when the splice opening is made there will be four inches of armor and six inches of sheath exposed. Then remove the covering as outlined below.

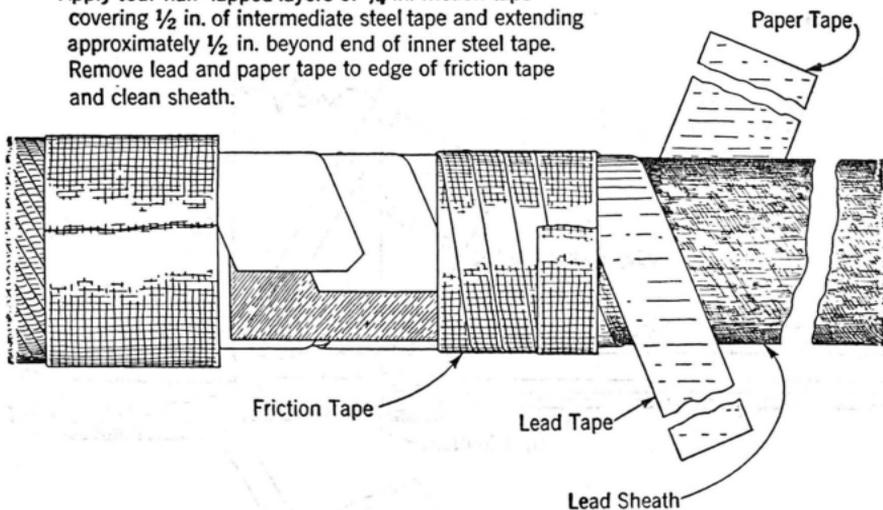
Cut tapes longitudinally with metal snips and trim corners as shown.



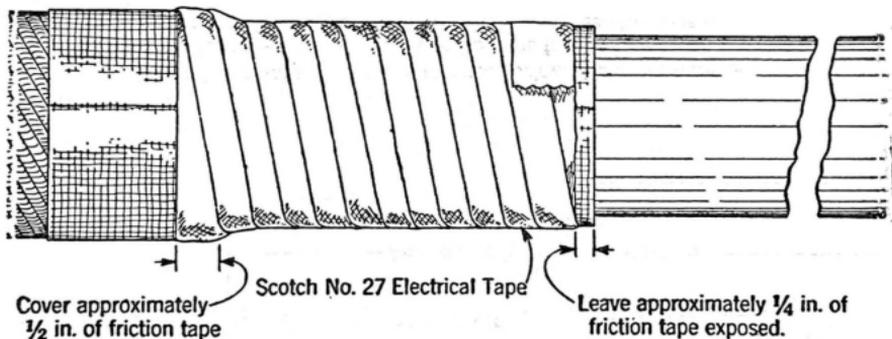
To prevent sheath damage, place strips of Lead Serving Tape under the cut ends of the steel tapes as shown and press in place.



Apply four half-lapped layers of $\frac{3}{4}$ in. friction tape covering $\frac{1}{2}$ in. of intermediate steel tape and extending approximately $\frac{1}{2}$ in. beyond end of inner steel tape. Remove lead and paper tape to edge of friction tape and clean sheath.



Apply two half-lapped layers of $\frac{3}{4}$ in. Scotch No. 27 Electrical Tape (Glass Cloth Tape) as indicated below:

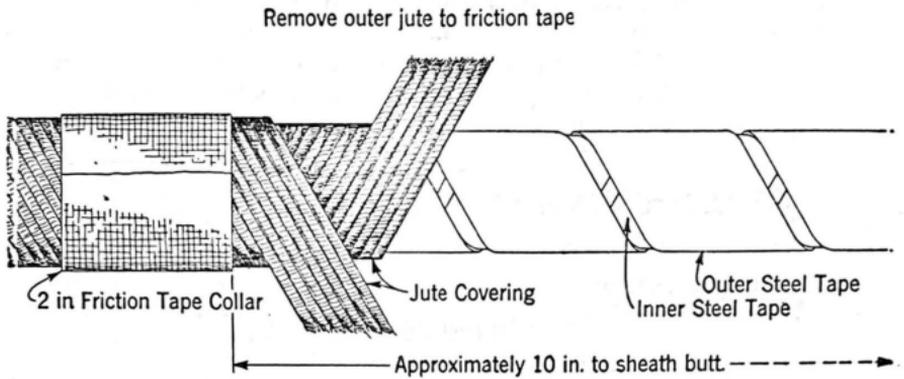


7. STUBS OF AUXILIARY APPARATUS—STEEL TAPE ARMOR

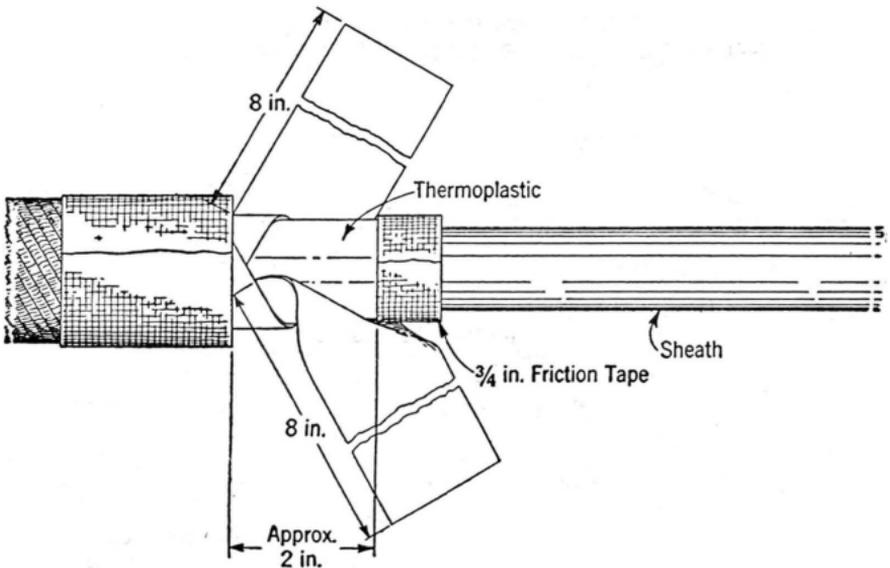
7.01 The stubs of auxiliary apparatus such as loading coil cases, pressure contactors and contactor terminals used in buried cable are protected with a bedding of thermoplastic, two steel tapes and an outer covering of jute. The method of removing and terminating the outer protection on cables having steel tapes is outlined below.

7.02 At the point where the outer serving of jute is to be terminated apply four turns of 2-inch friction tape, so located, that when the splice opening is made there will be

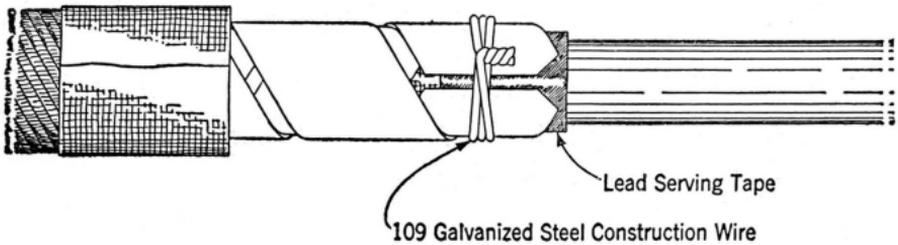
four inches of armor and six inches of sheath exposed. Then remove the covering as illustrated.



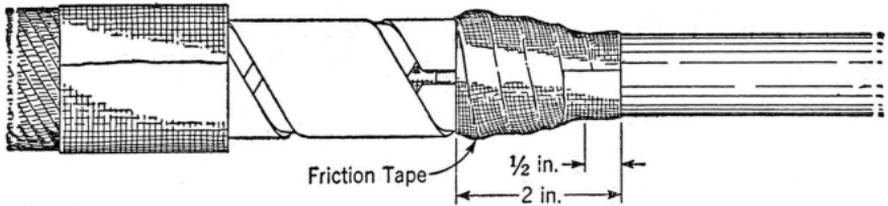
Unwind steel tapes and cut as indicated below. Apply four turns of $\frac{3}{4}$ inch friction tape approximately 2 in. from the friction tape collar. Remove the inner thermoplastic up to the tape and clean the sheath



Apply three turns of lead serving tape around the cable butted against the $\frac{3}{4}$ in. friction tape collar. Restore the metal tape to original lay, cut longitudinally and trim corners as indicated below. Bind down tapes with three turns of 109 galvanized steel construction wire or equivalent.



Apply two half-lapped layers of $\frac{3}{4}$ in. friction tape covering $\frac{1}{2}$ in. of the lead sheath and extending approx. 2 in. back over the metal tapes



Apply two half-lapped layers of $\frac{3}{4}$ in. Glass Cloth Tape as indicated below.

