

E SHEATH REPAIR SLEEVING (AT-8743)

DESCRIPTION AND INSTALLATION

CONTENTS	PAGE	1. GENERAL
1. GENERAL	1	1.01 This section covers the description and installation of the E sheath repair sleeve (AT-8743). The E sheath repair sleeve is a heat-shrinkable <i>split</i> plastic sleeving furnished with a mechanical method of securing the edges during the shrinking operation.
2. PRECAUTIONS	1	
3. SPECIAL TOOLS AND MATERIALS	2	
4. E SHEATH REPAIR SLEEVE	4	
A. Description	4	1.02 This section is revised to include information covering the E sheath repair sleeve and to omit reference to the B, C, and D sheath repair sleeves. Since this is a general revision, arrows ordinarily used to indicate changes have been omitted.
B. Use	5	
C. Installing E Sheath Repair Sleeve	6	
D. Reheating Procedures	14	
E. Sleeve Removal	14	
5. SHEATH REPAIRS	16	2. PRECAUTIONS
A. Cable Bend Repairs	16	2.01 The E sheath repair sleeve should be installed at temperatures above 0°F (-18°C).
B. Cable Installation Repairs	16	2.02 This sleeving must <i>not</i> be used under the following conditions:
C. Covering Trouble Openings in Lead-Sheath Cable	16	(a) Underground plant subject to petroleum contamination or areas of steam leakage
D. Covering Trouble Openings in Plastic-Jacketed Cable	18	(b) Breaks in steampeth or coaxial cables
E. Inner Sheath Dam (Dual-Jacketed Cable)	23	(c) In manholes, cable vaults, or in other locations where the use of an open flame is prohibited
F. Repairing Auxiliary Tape Wraps	27	
G. Long Length Repairs (Overlapping)	29	

NOTICE

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ELECTRIC - Proprietary

Pursuant to Judge Greene's Order of August 5, 1983,
beginning on January 1, 1984, AT&T will cease to use
"Bell" and the Bell symbol, with the exceptions as set
forth in that Order. Pursuant thereto, any reference to
"BELL" and/or the BELL symbol in this document is here-
by deleted and "replaced".

2.03 Cables under air pressure must be vented and bled to zero pressure before and during application of the repair sleeve. (See Section 637-305-303, Cable Pressure Systems—Buffering.) In the heated soft state, the adhesive would allow escaping air from the cable sheath to form holes and tunnels under the repair sleeving and defeat the purpose of application. The cable can be repressurized about 15 minutes after application of the sleeving is completed. (The sleeving should be cool to the touch of an ungloved hand.) This will provide sufficient time for the adhesive to solidify.

2.04 Safety goggles and gloves must be worn when using an open flame torch. The craft person should wear clothing that will protect the arms and body from the heated adhesive or heated sheath repair sleeve.

2.05 On utility poles, protect telephone plant and foreign company attachments where open flame is applied by covering with a fireproof material such as Raychem's* Heat Shield Pad, AD-1460 or equivalent.

2.06 Avoid directing the flame on the supporting strand or guy wires, as excessive heating will weaken the strand or guy wires.

2.07 Do not place sheath repair sleeving over a wet cable sheath. Do not allow any water to collect inside the repair sleeving. When heat is applied, the steam generated will cause blowouts or tunnels between the sleeving and the cable sheath.

2.08 When cutting sheath repair sleeving, exercise care to **avoid ragged edges**, which could split when heated.

3. SPECIAL TOOLS AND MATERIALS

3.01 Special tools and materials which may be required for various applications of E sheath repair sleeves are shown in Fig. 1.

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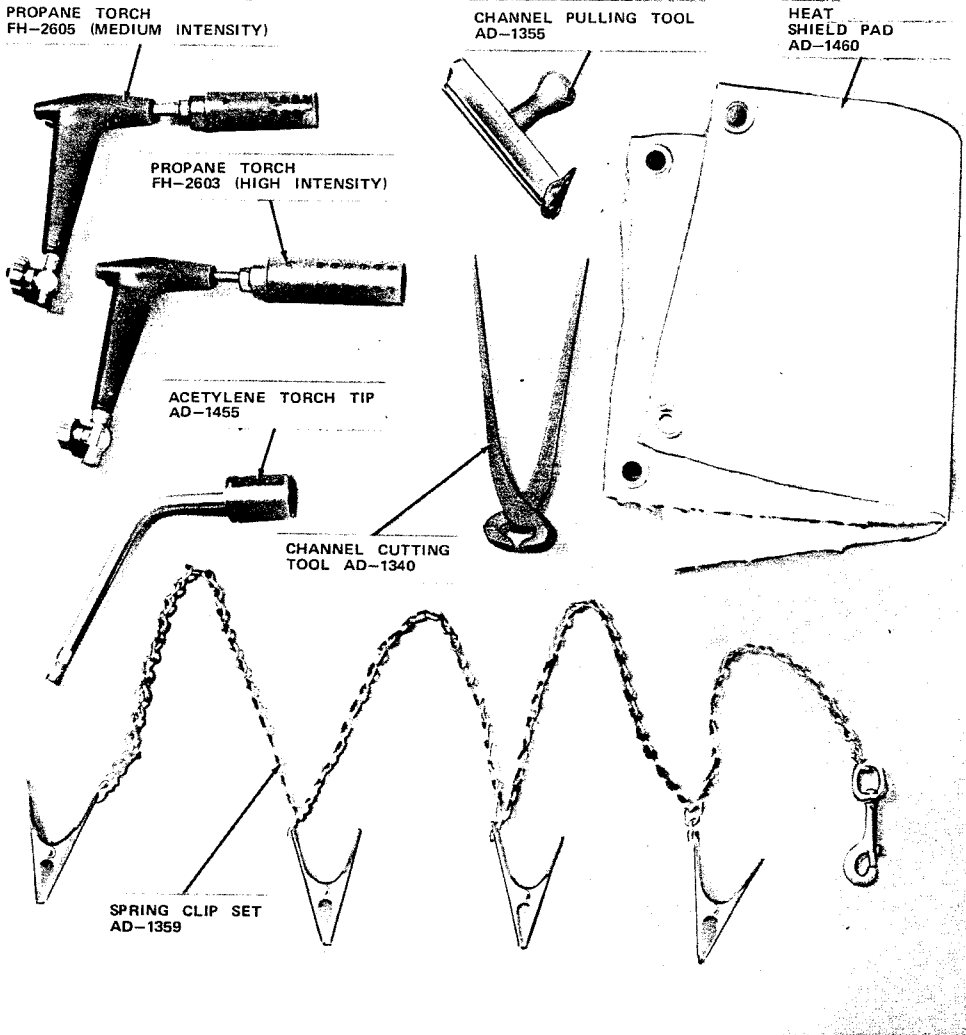


Fig. 1—Specialized Tools (Available From Raychem Corporation)

4. E SHEATH REPAIR SLEEVE

A. Description

4.02 The diameter range sizes of the E sheath repair sleeve is shown in Table A and is available in 5-foot lengths.

4.01 The E sheath repair sleeve (Fig. 2) is a heat-shrinkable split plastic sleeve.

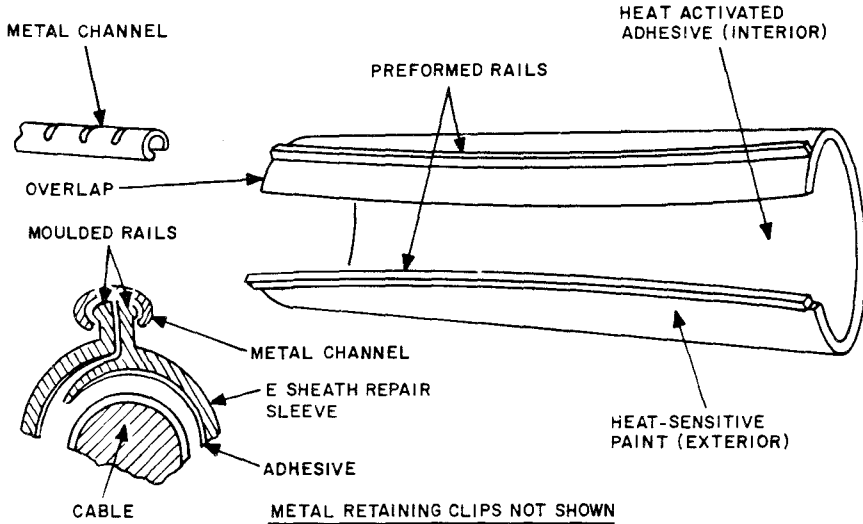


Fig. 2—E Sheath Repair Sleeving

TABLE A
E SHEATH REPAIR SLEEVING

DIAMETER RANGE (INCHES)	SLEEVE DESIGNATION
0.40 to 1.20	E-40-120-5
0.60 to 1.80	E-60-180-5
0.95 to 2.70	E-95-270-5
1.30 to 3.60	E-130-360-5
1.65 to 4.95	E-165-495-5
3.00 to 6.25	E-300-625-5

Note: Significance of sleeve designation

4.03 The sleeve is furnished with metal channels, metal retaining clips, diameter tape/size selection tape, pads, abrasive strips, and installation instructions.

4.04 The exterior surface of the sleeve is covered with a heat-sensitive paint. This paint will change color when heated to the proper temperature.

4.05 The interior surface of the sleeve is uniformly coated with a heat-activated adhesive. Preformed rails for closing the split sleeving are located at each side of the opening. A flap is under one side of the split portion. When closed, the flap seals the opening.

4.06 The split sleeve is held in place with a metal channel which slips over the preformed rails. This locks the two sides of the split sleeving together. The channels are available in 30-inch lengths. Precut slots across the width of the channel at 1/2-inch intervals facilitate separation at any desired length. The channel may be cut by flexing at the desired location until it parts. The end of a shortened channel should be filed to eliminate sharp edges.

4.07 The metal retaining clip provided with the sleeve is used to join metal channels together for sleeving lengths greater than 30 inches.

4.08 Application of heat with a propane or acetylene torch will soften the heat-activated adhesive and will cause the sleeving to shrink tightly around the cable. The constriction of the shrinking sleeving forces the softened adhesive to penetrate and seal cracks or cuts in the cable jacket, forming a pressure and watertight bond.

B. Use

4.09 The E sheath repair sleeve may be used to repair sheath breaks of the lead-sheathed, single or multijacketed plastic cables. Typical applications include: sheath damage, trouble openings, inner sheath dams, repair of taped auxiliaries, long length repairs, such as fire damage repairs on plastic-jacketed cable or corrosion of lead-sheathed cables.

4.10 The E sheath repair sleeve may be used on pressurized or nonpressurized cables in aerial, buried, or underground plant (see paragraph 2.02).

C. Installing E Sheath Repair Sleeve

4.11 When the sheath repair sleeve is used for the maintenance and/or repair of damaged lead or polyethylene-jacketed cables where there has been no substantial jacket removed, such as minor rodent bites, "T" zone repairs, jacket abrasion, lashing wire cuts, lead sheath corrosion, etc, the installation procedures are as outlined in Steps 1 through 6.

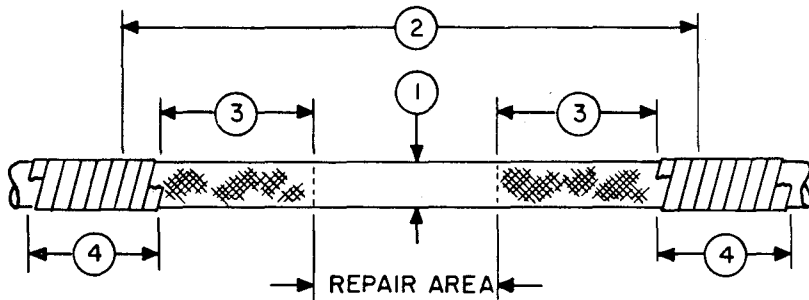
4.12 Prior to installing the sheath repair sleeve, prepare the cable as follows:

- **Pressurized Cable**—Vent and bleed cable to zero pressure (paragraph 2.03). Leave the cable vented during the entire installation procedure and until the sleeving is cool to the touch.
- **Ringed Cable**—Determine the *length* of the repair area *plus* a minimum of 16 inches

on *each side* of the repair area. Remove cable rings or cable supports from this total distance.

- **Lashed Cable**—Determine the length of the repair area *plus* a minimum of 3 feet on *each side* of the repair area. At each of these determined distances, temporarily secure the lashing wire to the strand with a C lashing wire grip. Terminate the lashing wire with D cable lashing clamps. (See Section 627-330-202, Lashed Aerial Cable—Terminating Lashing Wire.) Place lashed cable supports 2 inches from the lashing clamps and remove the C lashing wire grips. This provides a clearance below the strand of about 4 inches over the repair area.

4.13 Select sleeving size and length and prepare cable sheath as illustrated in Step 1 for plastic jacket and Step 1A for lead sheath.

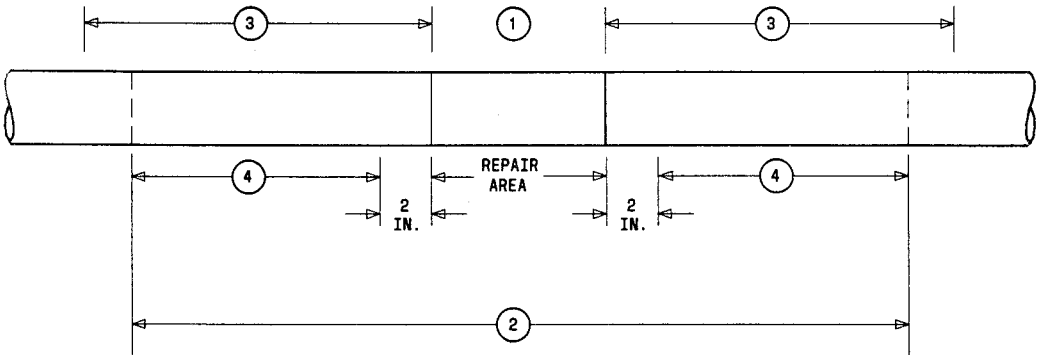


Step 1—Preparing Plastic Jacket for Sleeve Installation

- 1 Measure the cable diameter at the repair area and select the proper size sleeving from Table A.
- 2 Select the length of repair sleeving required by first determining the length of the repair area; then add 12 inches on each side of the repair area, ie, if the repair area is 15 inches long, the required repair sleeve length will be 39 inches.

Note: When less than a 5-foot length of repair sleeving is required, it is important to satisfy the following requirements:

- The cut edge must be as nearly square to the side of the sleeve as is reasonably possible.
 - The cut must be made cleanly with no jagged or rough edges. A clean cut may be achieved using scissors, metal shears, or a sharp blade and a straight-edge guide.
- 3 With a carding brush, thoroughly scuff plastic jacket a minimum of 10 inches on each side of the repair area. Keep the surface clean until the sheath repair sleeving has been installed.
 - 4 On plastic jacket, apply one half-lapped layer of B aluminum tape outward for 6 inches, beginning 10 inches from each side of the repair area. Smooth the aluminum tape with a hammer handle or equivalent.



Step 1A—Preparing Lead Sheath for Sleeve Installation

- 1 Measure the cable diameter at the repair area and select the proper size sleeving from Table A.
- 2 Select the length of repair sleeving required by first determining the length of the repair area; then, add 12 inches on each side of the repair area (ie, if the repair area is 15 inches long, the required repair sleeve length will be 39 inches).

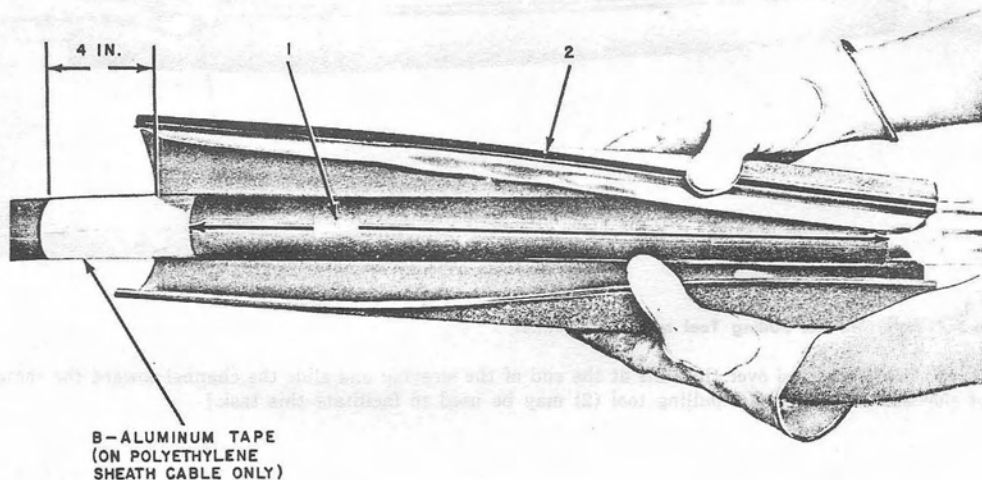
Note: When less than a 5-foot length of repair sleeving is required, it is important to satisfy the following requirements:

- The cut edge must be as nearly square to the side of the sleeve as is reasonably possible.
 - The cut must be made cleanly with no jagged or rough edges. A clean cut may be achieved using scissors, metal shears, or a sharp blade and a straight edge guide.
- 3 Apply a generous amount of lead particle entrapment compound [(LEPEC)—Section 081-852-127] with a clean, dry cloth by beginning at each side of the repair area and continuing outward on each side for a distance of 14 inches.
 - 4 Apply a 1/2-inch wide strip of LEPEC over the length of the bristles of the carding brush. Using strokes perpendicular to the length of the cable, clean a 10-inch long area of the sheath starting 2 inches from the repair area and ending 12 inches from the repair area.

Caution: Do not use the carding brush on any area of lead sheath that has not been completely covered with LEPEC.

- As the LEPEC begins to dry, add additional compound to the carding brush and continue carding until cleaning has been completed.
- Remove lead particulate from the carding brush by striking the brush against a solid object. The lead particulate should be caught in a container and disposed of in accordance with local practices covering scrap lead disposal.
- When the lead surface has been thoroughly cleaned, remove all excess LEPEC with a clean, dry cloth. Use B cleaning fluid to remove residual LEPEC. Adequate ventilation must be provided when using B cleaning fluid.

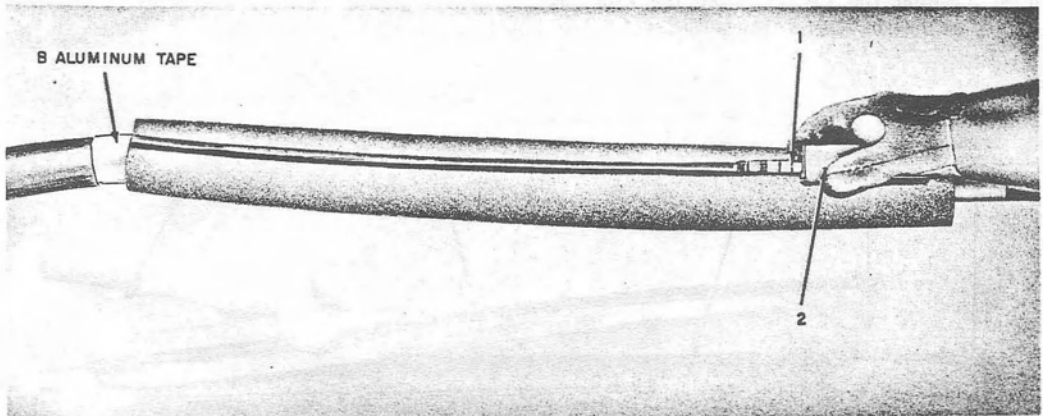
- 4.14 Position the sleeving over the cable as outlined in Steps 2 through 5.



Step 2—Placing E Sheath Repair Sleeve on Cable

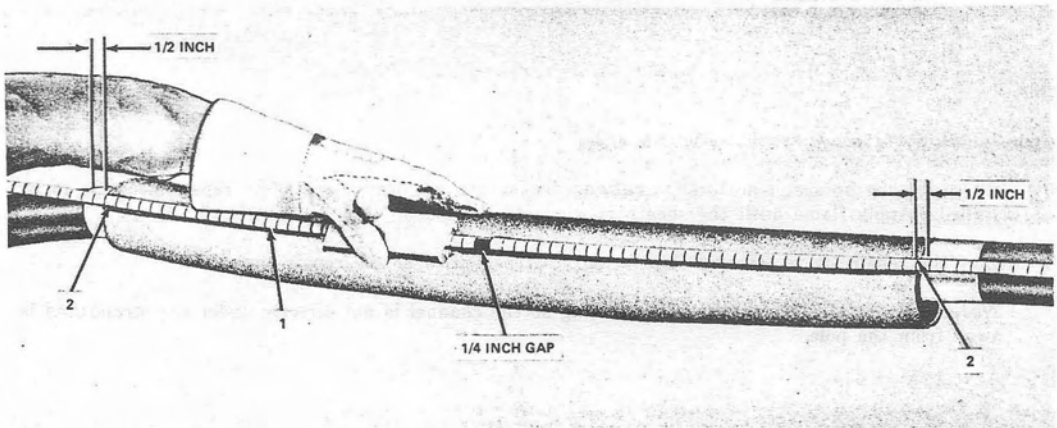
- 1 With a propane or acetylene torch, *preheat* the sheath uniformly where the repair sleeve is to be installed. Apply flame until the sheath is warm to the touch. **Do not** overheat.
- 2 Center the repair sleeve (overlap flap facing craft person) over the repair area.

Note: On aerial cable, position the sleeving so the channel is not directly under the strand and is away from the pole.



Step 3—Using Channel Pulling Tool to Place Channel

- 1 Place a metal channel over the rails at the end of the sleeving and slide the channel toward the center of the sleeve. [A channel pulling tool (2) may be used to facilitate this task.]

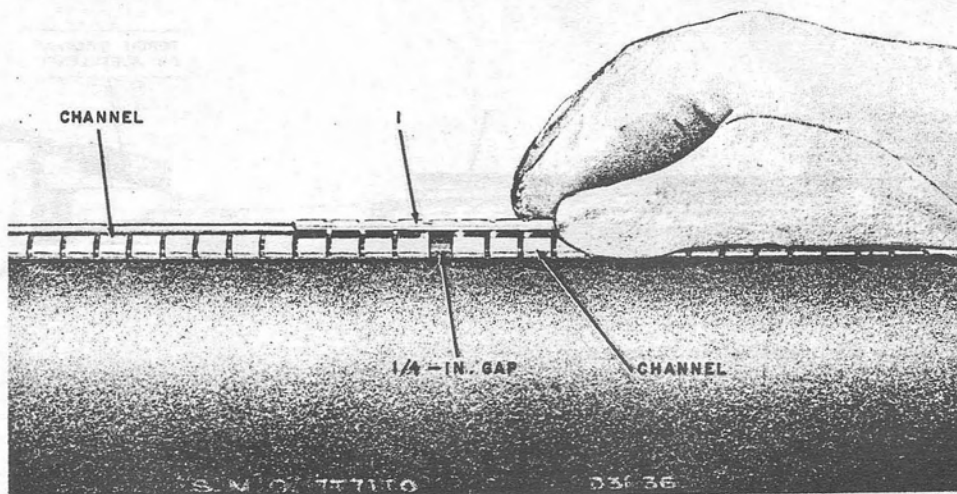


Step 4—Placing Second Channel

- 1 Slide another metal channel from the other end of the sleeve, leaving a 1/4-inch gap between the metal channels to allow for longitudinal contraction.

Note: Two channels *are not* required when the sleeve length is 29 inches or less.

- 2 Break off the excess channel extending from each end of the sleeve, leaving approximately 1/2 inch of channel extending beyond the sleeve. The ends of the shortened channel(s) should be filed to eliminate sharp edges.



Step 5—Placing Retaining Clip

1 Place a 5-inch retaining clip over the junction of channels and snap in place with a light tap.

4.15 Apply heat to the repair sleeve as outlined in Steps 6.

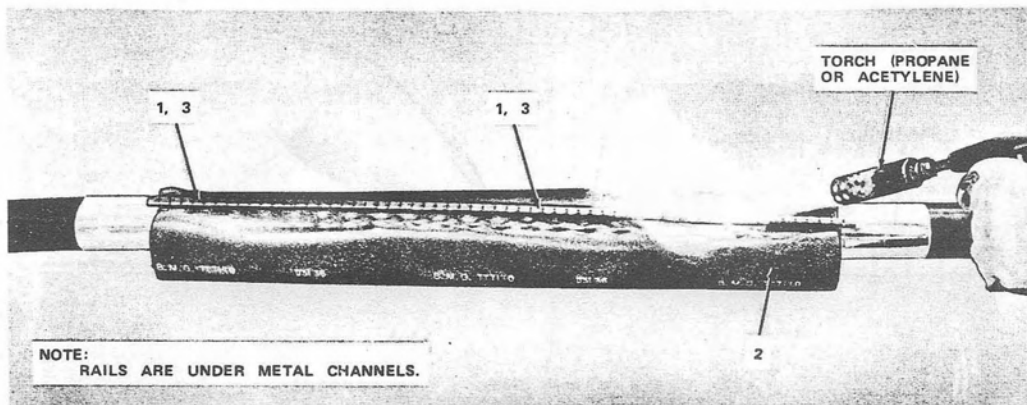
(a) Where necessary, cover adjacent materials or equipment with Raychem's Heat Shield Pad (AD-1460) or equivalent. (See paragraph 2.05.)

(b) Set pressure regulator on the gas cylinder as follows:

- **For propane—6 to 10 psi**—Adjust torch valve to achieve a flame with an overall length of 15 to 18 inches and an inner blue cone of 3 to 4 inches.

- **For acetylene**—open cylinder and torch valve **wide open**.

(c) Note the precautions covered in Part 2 before applying heat to the sleeve.



Step 6—Starting Heat Application

- 1 Apply heat to the rail/channel area until that section begins to shrink. The heat-sensitive paint **will not** be fully converted at this point.

Note: The heating application should be a back and forth painting motion across a 12- to 15-inch section. It is important to keep the torch approximately 5 to 7 inches away from the sleeving at all times and to keep the heat source in motion to avoid overheating in any given location.

- 2 Move to one end of the sleeve and begin to fully shrink the sleeve to the cable jacket. Heat around the entire circumference as you work from one end to the other.

Note: During this part of the heating procedure, all the heat-sensitive paint should be converted.

- 3 Apply extra heat to the channel area to get the adhesive fully activated because of the double thickness in this area.

4.16 The following condition should be observed regarding the proper shrinking of the repair sleeving.

(a) Complete color change of the heat-sensitive paint.

(b) Smooth wrinkle-free surface of the sleeving.

(c) Adhesive should be apparent around entire circumference at each end of the sleeving (Fig. 3).

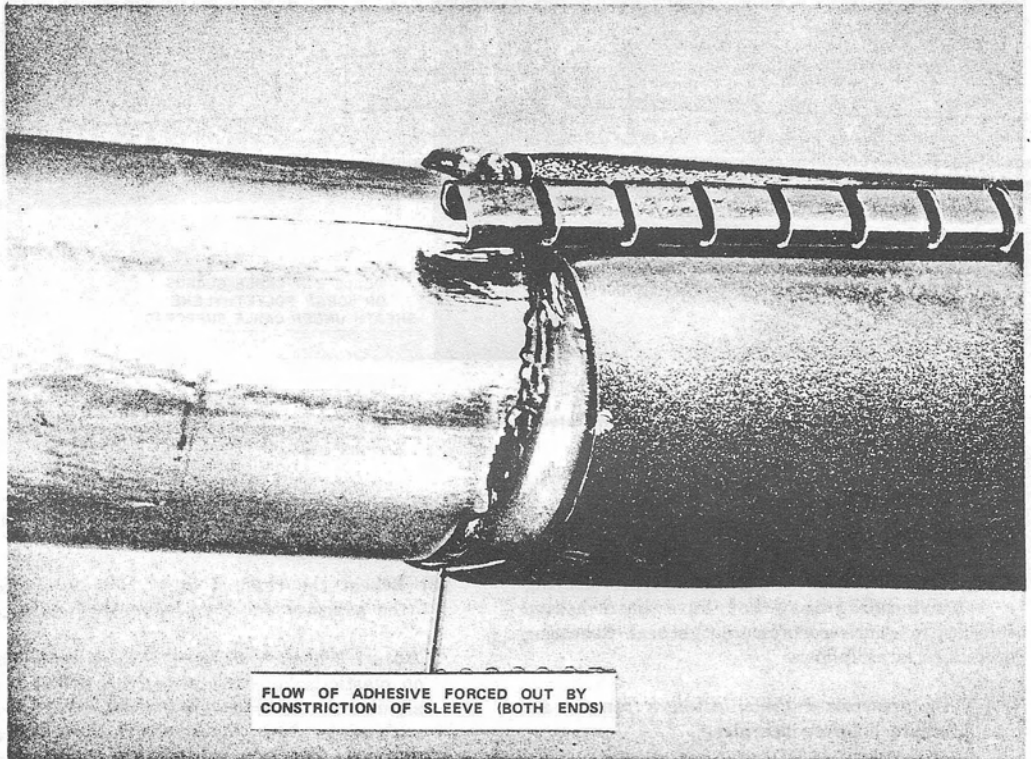


Fig. 3—Ending Heat Application

4.17 Figure 4 illustrates a completed repair sleeving application and the cable resupported on the strand.

Note: The metal channel must be cool to the touch before the cable can be bent, air pressure reapplied, or the cable supports placed. After a period of 2 minutes, the cooling can be accelerated by using wet cloths.

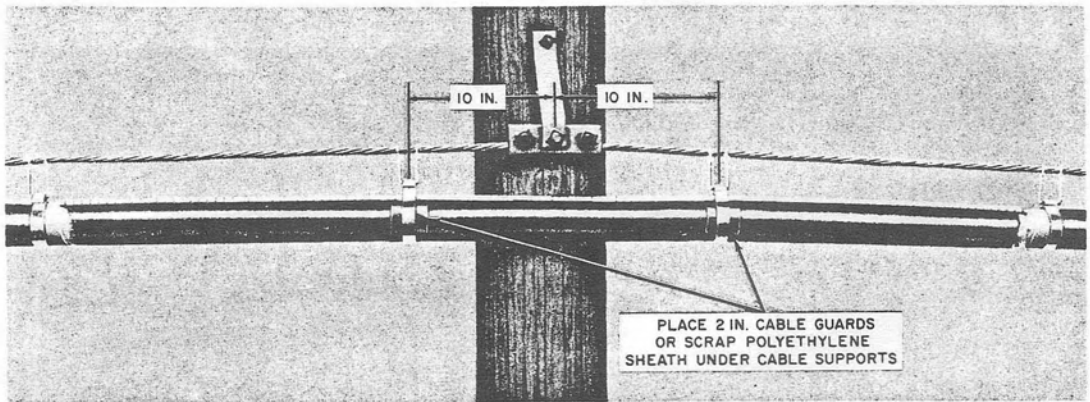


Fig. 4—Completed Aerial Slewing Application

D. Reheating Procedure

4.18 Occasionally a new sheath repair sleeving installation may not have been heated sufficiently to achieve a pressure-tight seal. Reheating procedure is as follows:

- (1) On pressurized cable, **always** remove air pressure before reheating.
- (2) The sheath repair sleeving must be reheated to the temperature necessary to reactivate the adhesive.

Note: The heat-sensitive paint was converted during the initial heating and cannot be used as an indicator.

Uniformly heat the entire sleeve. Total heating time should be about 1-1/2 minutes per foot of

slewing or until very warm to the touch.

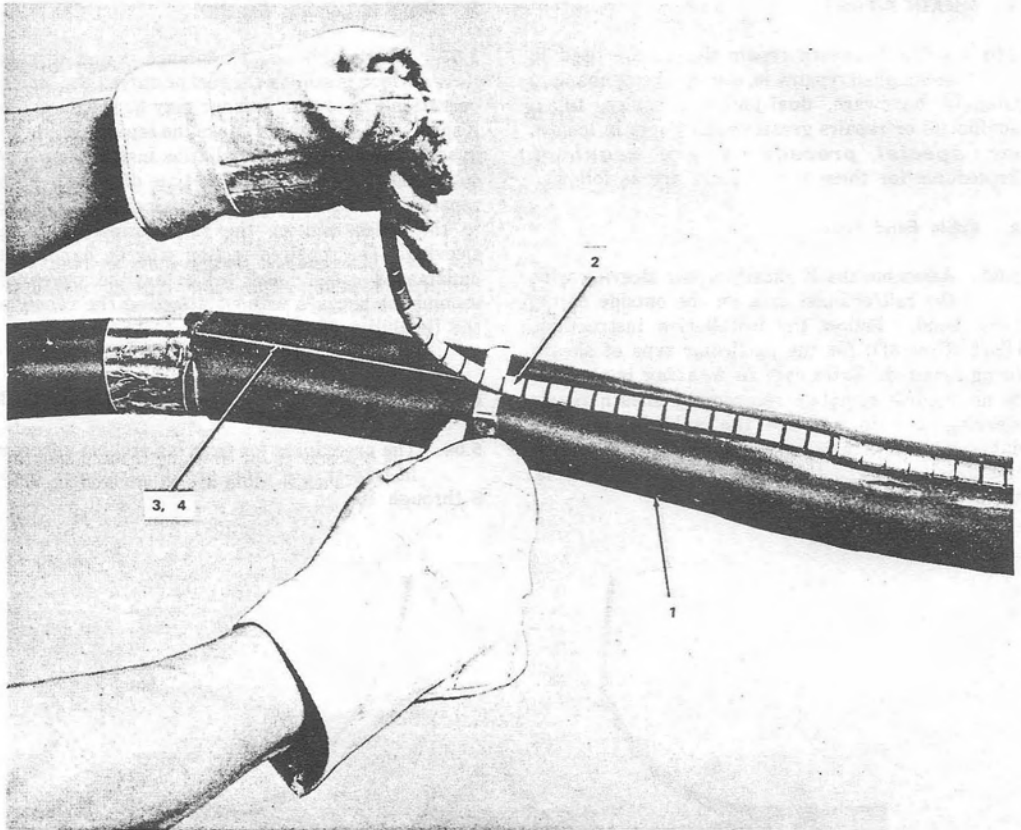
- (3) Reheat the channel area to fully activate the adhesive under this double-thick area.

Note: When reheating repair sleeving installed on plastic-jacketed cable and the 4 inches of aluminum tape originally extending beyond at each end of the repair sleeve has been **removed, replace aluminum tape on the cable jacket.**

E. Sleeve Removal

4.19 Remove the repair sleeve as outlined in Step 7.

- (a) Pressurized cable—Vent and bleed as indicated in Part 2.



Step 7—Sleeve Removal

- 1 With the appropriate propane or acetylene torch, heat the entire sleeve.
- 2 Immediately after heating, use a sharp skinning knife to cut and remove the rail and channel.
- 3 Grasp the edge of the sleeving (where the channel and rail were cut away) with pliers and peel the sleeve off the cable.

Note: Extra heating may be required during removal if the adhesive resolidifies before removal is completed. If so, heat only the sleeve, not the exposed cable sheath.

- 4 The adhesive remaining on the cable **does not** have to be removed if enclosure is to be accomplished using another E repair sleeve. Refer to Part 4C (Steps 2 through 6) for sleeve installation.

Note: If removal of the adhesive is necessary, allow to cool and remove with a shave hook.

5. SHEATH REPAIRS

5.01 When E sheath repair sleeves are used to accomplish repairs, ie, over diameter changes, bonding hardware, dual-jacketed cables, taped auxiliaries or repairs greater than 5 feet in length, etc, **special procedures are required**. Procedures for these type repairs are as follows.

A. Cable Bend Repairs

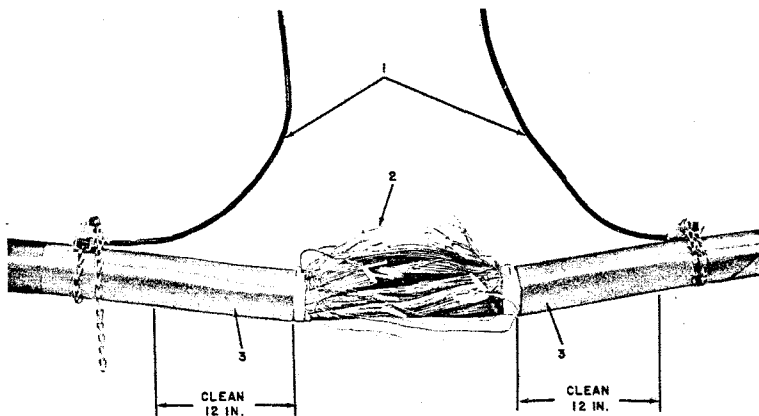
5.02 Assemble the E sheath repair sleeving with the rail/channel area on the outside of the cable bend. Follow the installation instructions (Part 4C or 4D) for the particular type of sheath being repaired. Extra care **in heating** is required to accomplish complete recovery of sheath repair sleeving and to activate the adhesive without damaging the wrinkled sleeving. Heat gently until the sleeving is smoothly recovered onto the cable; then, continue heating normally.

B. Cable Installation Repairs

5.03 When cable sheath damage occurs to cable which is still on the reel or during the placing operation, the sheath damage may be repaired with E sheath repair sleeving. Make the repair installation in accordance with the installation instructions (Part 4C or 4D) for the particular type of sheath being repaired. When the sheath repair sleeving is cool to the touch, remove the rail/channel from the sleeving. The repaired section may be handled as undamaged cable. The cable may be payed off around the sheaves without affecting the repair or the flexibility of the cable.

C. Covering Trouble Openings in Lead-Sheath Cable

5.04 The procedures for covering trouble openings in lead-sheath cable are illustrated in Steps 8 through 10.

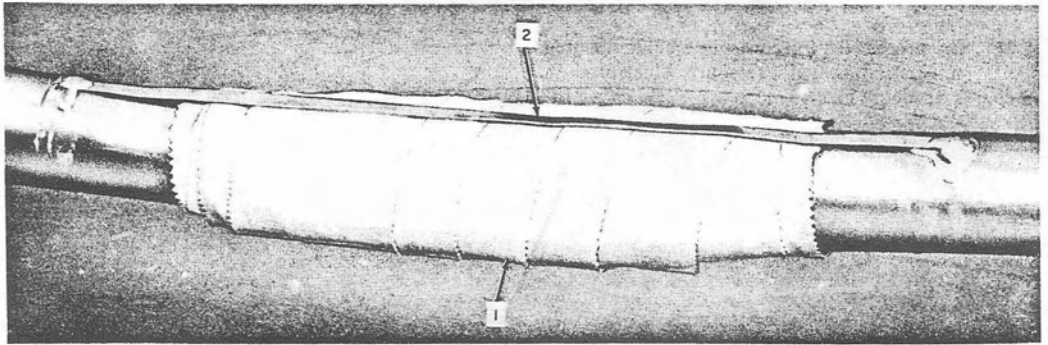


Step 8—Preparing Cable Sheath

- 1 Place a temporary bond across the trouble opening.
- 2 Repair conductors in accordance with the 632 Division of the Bell System Practices.

Note: Before closing, remove all air pressure in the area of the opening.

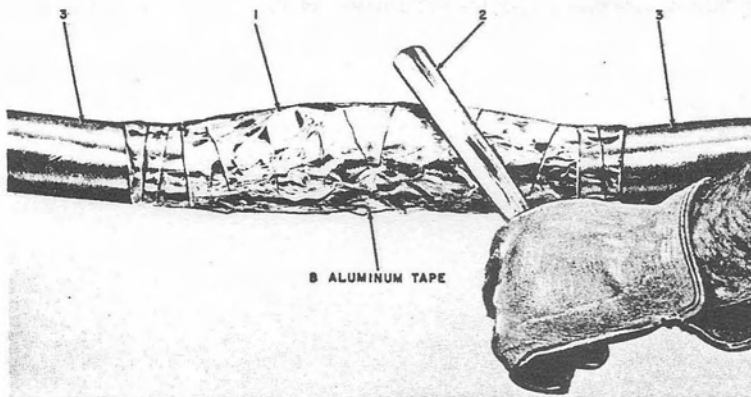
- 3 Clean the lead sheath as described in Part 4C.



Step 9—Installing Permanent Bond

- 1 Wrap the opening with muslin.
- 2 Install the permanent bond and remove temporary bond.

Note: Permanent bond must be equivalent to a No. 6 ground wire.

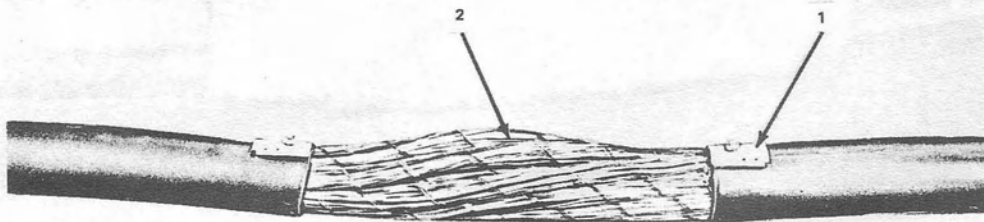


Step 10—Placing B Aluminum Tape Over Opening

- 1 Wrap the trouble opening with *two* half-lapped layers of B aluminum tape. Start and end the tape about 1 inch onto the lead sheath.
- 2 Smooth the aluminum tape with a hammer handle.
- 3 Ignite the torch and *preheat* the cleaned lead jacket until it is warm to the touch.
- 4 Install E sheath repair sleeve as detailed in Part 4.

D. Covering Trouble Openings in Plastic-Jacketed Cable

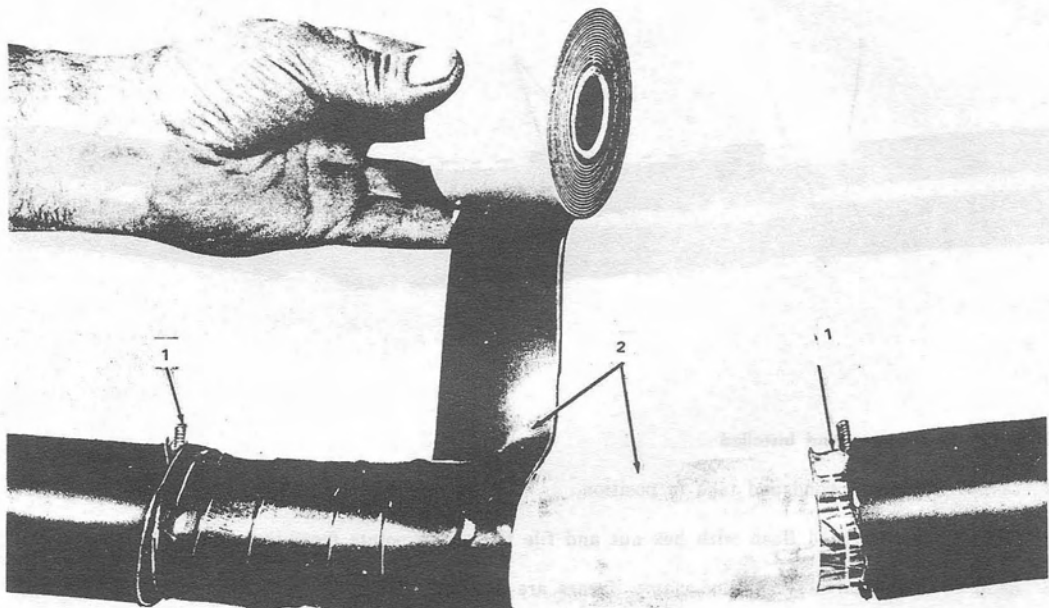
5.05 The procedures for covering trouble opening in plastic-jacketed cable are illustrated in Steps 11 through 15.



NOTE:
TEMPORARY BOND NOT SHOWN.

Step 11—Trouble Opening and Temporary Bond on Plastic-Jacketed Cable

- 1 Remove the sheath, install bond clamps, and place temporary bond.
- 2 Repair conductors in accordance with the 627 Division of the Bell System Practices.

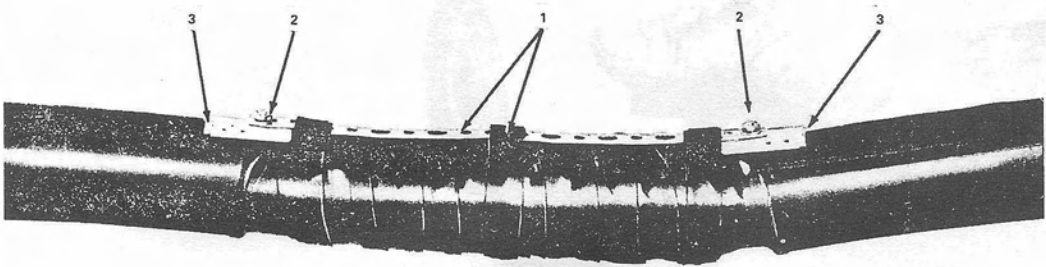


Step 12—Applying Tape (DR or Glass) Over B Polyethylene Tape

- 1 Disconnect temporary bond, remove top plate of bond clamp, and then reconnect temporary bond.
- 2 If the cable has *PIC insulated conductors*, cover the opening with two half-lapped layers of B polyethylene tape followed by two half-lapped layers of DR or glass tape.

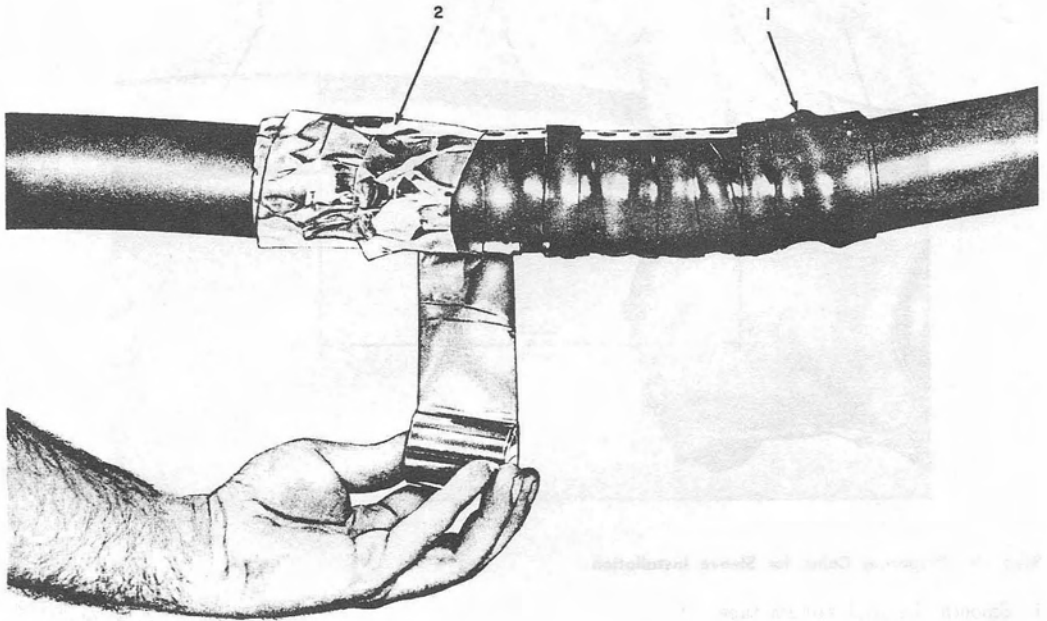
Note: The DR or glass tape should be applied onto the cable jacket and up to the bond clamp studs. **Apply the DR tape without tension.**

- 3 If the cable has *pulp insulated conductors*, wrap the opening with muslin (DR tape is not required).



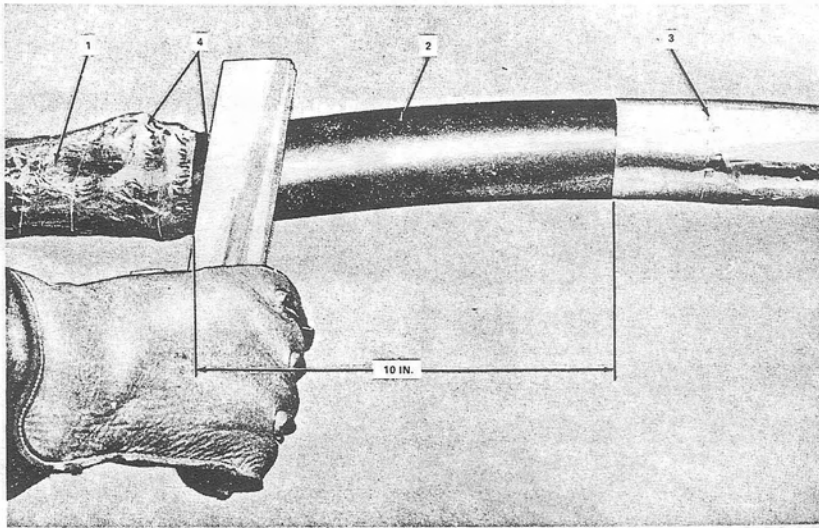
Step 13—Permanent Bond Installed

- 1 Install permanent bond and tape in position.
- 2 Cut off threaded stud flush with hex nut and file the rough points from the studs.
- 3 Bend down the ears of the bond clamp if ears are present.



Step 14—Covering the Opening With B Aluminum Tape

- 1 Cover the bond clamps with DR or glass tape.
- 2 Cover the opening, including taped bond clamps, with two half-lapped layers of B aluminum tape.

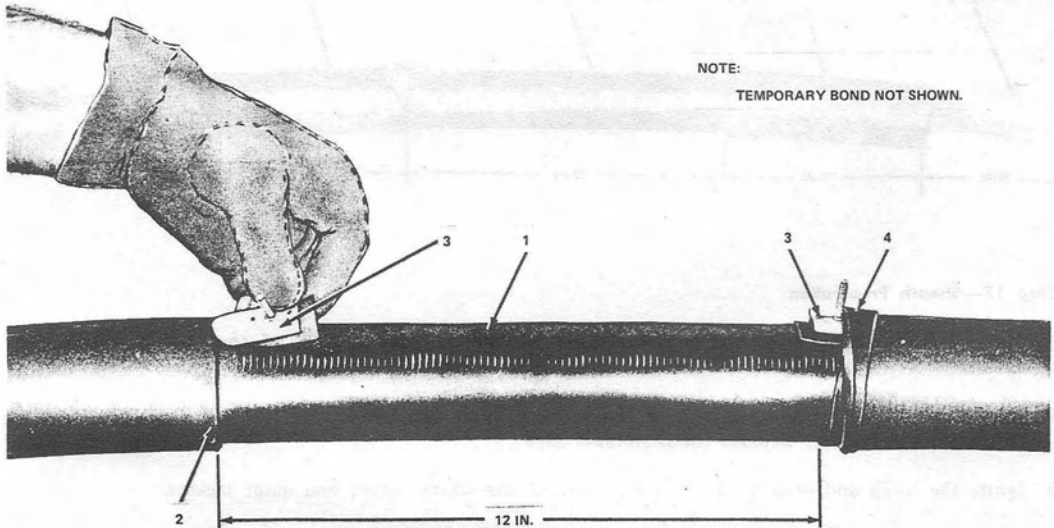


Step 15—Preparing Cable for Sleeve Installation

- 1 Smooth the B aluminum tape.
- 2 Clean and scuff the plastic (perpendicular to the cable) with a carding brush for 10 inches on each side of the dressed aluminum tape.
- 3 Beginning 10 inches from each side of the repair area, apply one half-lapped layer of B aluminum tape outward for 6 inches. Smooth the aluminum tape.
- 4 Measure the cable diameter and the taped area and select the proper size and length of repair sleeve required.
- 5 Install E sheath repair sleeve as detailed in Part 4.

E. Inner Sheath Dam (Dual-Jacketed Cable)

5.06 To accomplish an inner sheath dam in dual-jacketed cable, follow the procedures outlined in Steps 16 through 19.



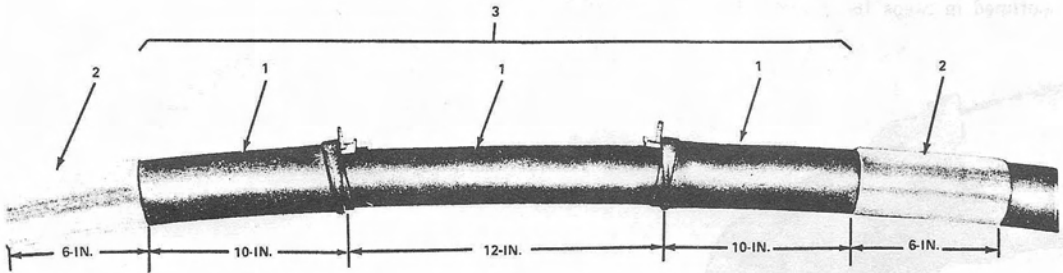
Step 16—Removing Outer Jacket and Installing Bond Clamps

- 1 Ring, cut, and remove a 12-inch length of the outer jacket.
- 2 Remove the exposed metal shield. Dress the edges of the shield to remove any sharp protrusions.
- 3 Install bonding clamps and attach temporary bond.

IMPORTANT! Install fish paper or other nonmelting insulating pad under the foot of the bond clamps between the bond clamp and the inner sheath.

- 4 Apply one lap of vinyl tape around the outer jacket at each end of the 12-inch opening. This will protect the craft person from any sharp edges on the shield.

NOTE:
TEMPORARY BOND NOT SHOWN.

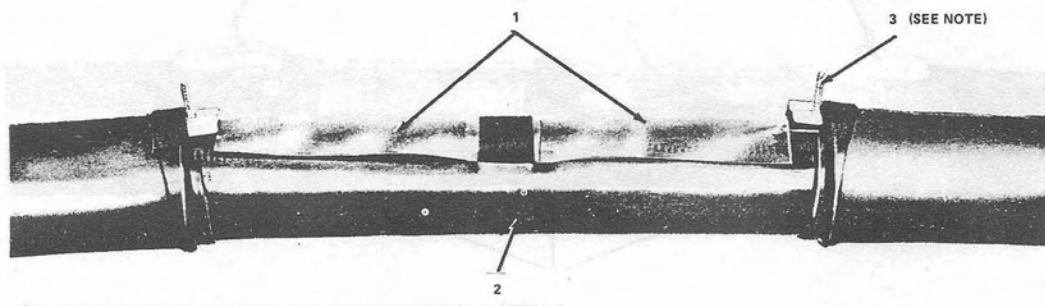


Step 17—Sheath Preparation

- 1 Clean and thoroughly scuff the exposed *inner jacket* and *10 inches of the outer jacket* on each side of the opening.
- 2 Beginning 10 inches from each side of the opening, apply one half-lapped layer of B aluminum tape outward for 6 inches. Smooth the aluminum tape.
- 3 Ignite the torch and preheat the entire surface of the scuffed inner and outer jackets.

Note: Total preheat time should be about 30 to 40 seconds or until warm to the touch.

NOTE:
TEMPORARY BOND NOT SHOWN

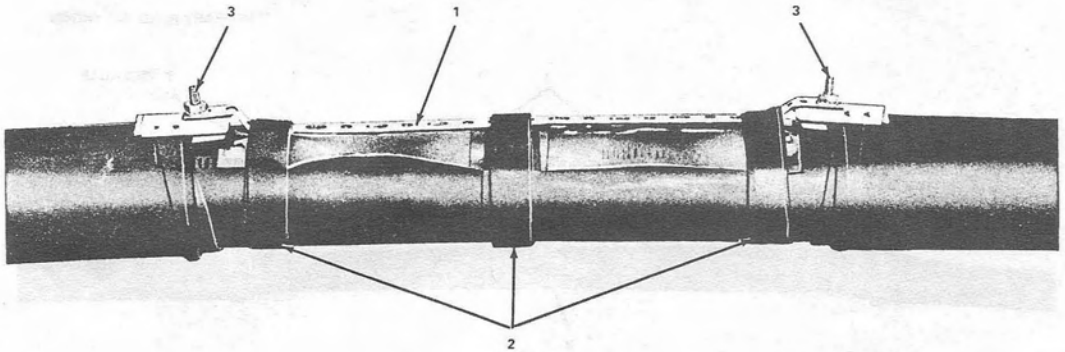


Step 18—Installing Adhesive Pads (ADP-17)

- 1 Position two 6-inch long adhesive pads (furnished with sleeve) longitudinally onto the inner jacket. These pads should be centered lengthwise between the bond clamps (pads will overlap about 1 inch in the center of the opening).

Note: Remove release paper from the adhesive pads before using.

- 2 Place one lap of vinyl tape at the center of the opening to hold the adhesive pads in place.
- 3 Remove temporary bond.



Step 19—Installing Permanent Bond

- 1 Install the permanent bond. Locate the bond bar on the bond clamp studs so the bonding strap can be bent to conform to the surface of the inner jacket.

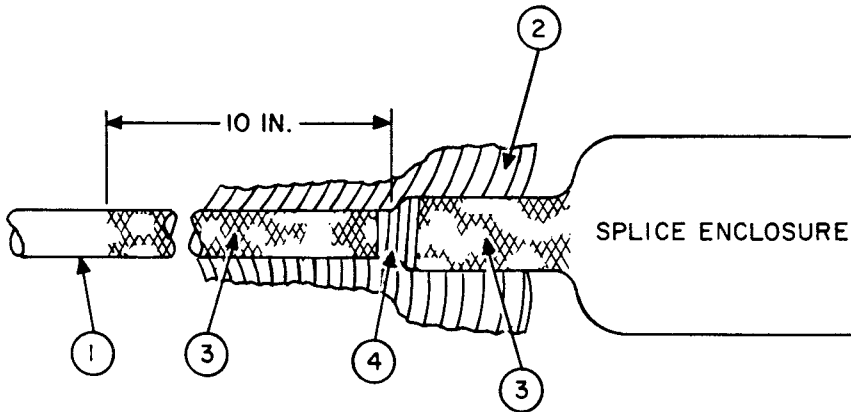
Caution: Do not use braided bond strap.

- 2 Using DR or glass tape, tape the bond strap to the inner jacket. One lap of tape at each end and one in the center is sufficient.
- 3 Cut off the threaded studs flush with the hex nut and file off rough points on the stud.
- 4 Complete the repair as detailed in paragraph 5.05, Steps 13 through 15.

Note: Assemble the E sheath repair sleeve so the rail/channel is at least 90° away from the bonding hardware.

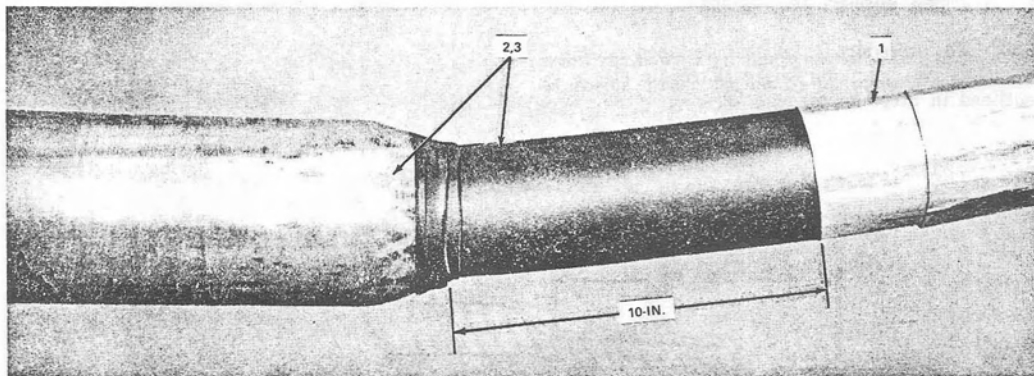
F. Repairing Auxiliary Tape Wraps

5.07 The procedure for repairing a taped auxiliary sleeve using an E sheath repair sleeve is outlined in Steps 20 through 22.



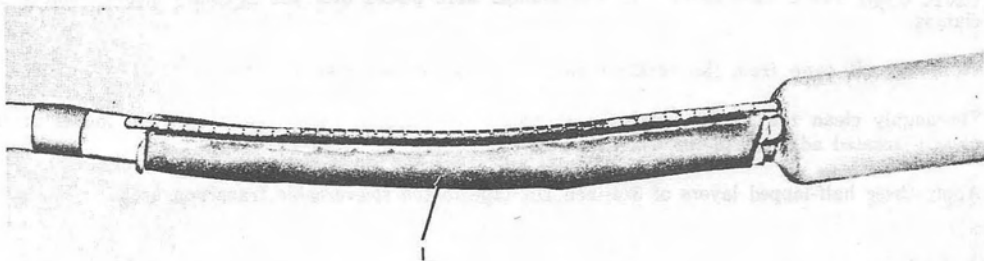
Step 20—Preparing Auxiliary Sleeve and Cable Sheath

- 1 If the cable is pressurized, bleed the cable to zero air pressure. Leave the cable flat during the entire repair sleeve installation. If hose clamps were placed over the auxiliary sleeve, remove the clamps.
- 2 **Remove all tape** from the auxiliary sleeve and the plastic-jacketed cable.
- 3 Thoroughly clean the **entire** auxiliary sleeve (as outlined in Part 4) and scuff 10 inches of the plastic-jacketed adjacent to the auxiliary sleeve.
- 4 Apply three half-lapped layers of 3/4-inch DR tape to the sleeve/cable transition area.



Step 21—Application of B Aluminum Tape

- 1 Beginning at the end of the 10 inches of scuffed sheath, apply one half-lapped layer of B aluminum tape outward for 6 inches. Smooth the aluminum tape.
- 2 Measure the *cable diameter* and the *auxiliary sleeve diameter* and select the proper size and length of repair sleeve required, as outlined in Part 4.
- 3 Ignite the torch and *preheat* the scuffed cable sheath and cleaned auxiliary sleeve. Preheat the cable sheath and the auxiliary sleeve until it is warm to the touch.



Step 22—Repair of Auxiliary Tape Wraps Completed

- 1 Assemble the repair sleeve over the auxiliary sleeve and apply heat as outlined in Part 4.

Note: If the diameter transition between the auxiliary sleeve and the cable is large or very abrupt, it may be necessary to assist the sleeving channel to conform. To do this, *lightly* tap the channel *at the transition* area, using a hammer handle or dull tool during the shrinking procedure.

G. Long Length Repair (Overlapping)

5.08 If long length repairs are to be accomplished on lead-sheathed cables, prepare the cable as described in Part 4 and then proceed to paragraph 5.10.

5.09 If long length repairs are to be accomplished on polyethylene-sheathed cables and the cable sheath is so badly damaged it must be removed:

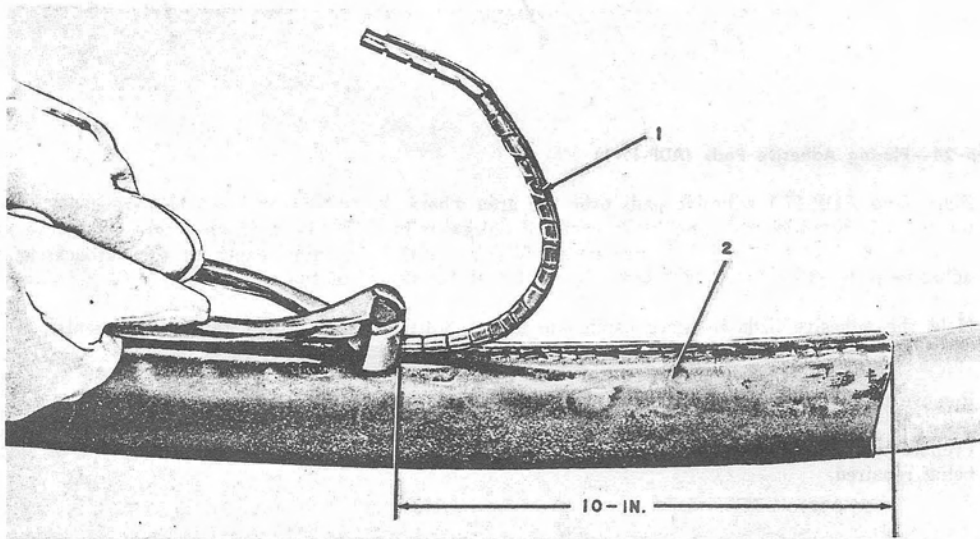
- (a) Wrap the exposed shield or armor with one half-lapped layer of DR tape.

(b) Wrap the DR tape with one half-lapped layer of B aluminum tape.

(c) Smooth the B aluminum tape.

(d) Prepare the polyethylene cable sheath outward from the repair as described in Part 4C.

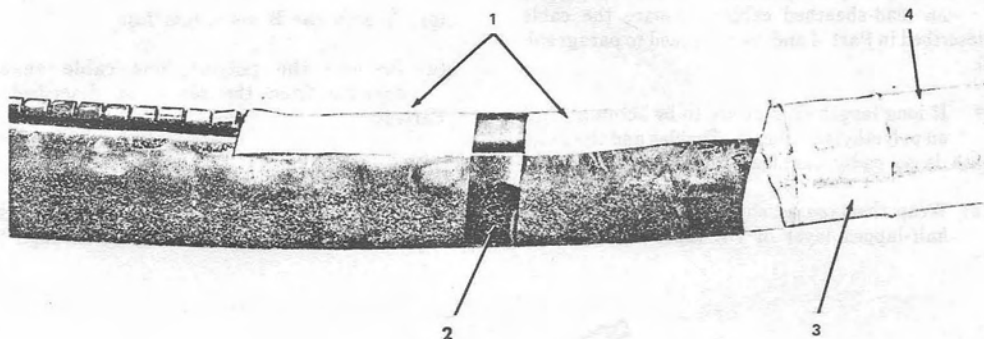
5.10 When a repair area exceeds 5 feet in length, proceed as outlined in Steps 23 through 26.

**Step 23—Removing Rail and Metal Channel**

- 1 After the first repair sleeve has *cooled*, cut and remove **10 inches** of rail and channel from the intended overlapping area. Use a skinning knife or channel cutting tool (AD-1340).

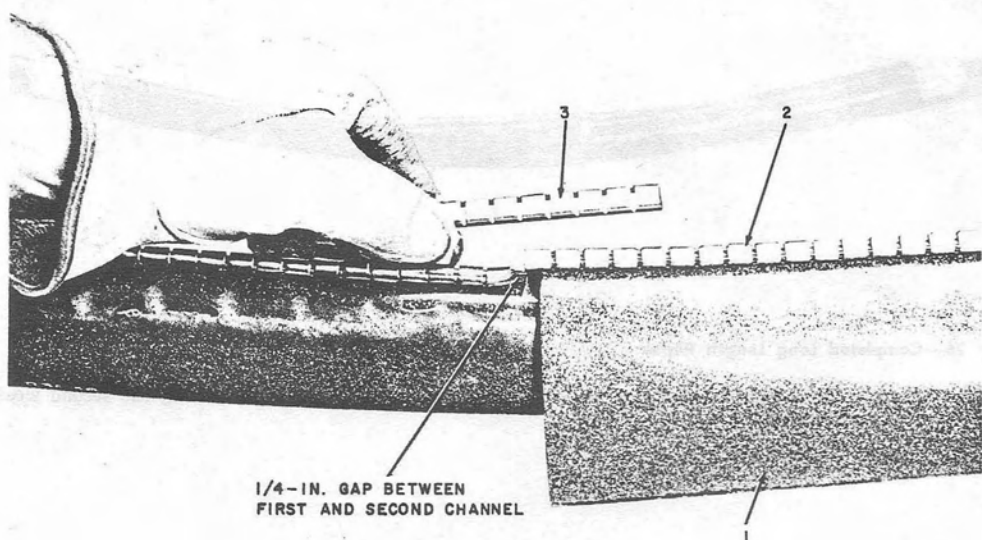
Note: Use shave hook or rasp to remove remaining ridge.

- 2 Thoroughly scuff the entire circumference of the intended overlap area to remove the heat-sensitive paint from the installed repair sleeve.



Step 24—Placing Adhesive Pads (ADP-17-1)

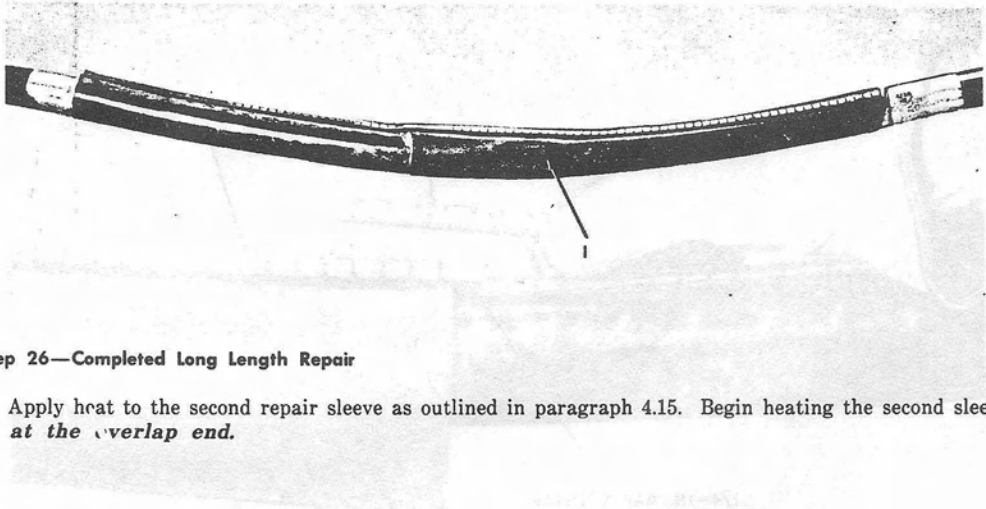
- 1 Place *two* ADP-17-1 adhesive pads over the area where the rail/channel has been removed. These 6-inch long adhesive pads should be centered *lengthwise* over the *groove* where the sleeve rails were attached so that the adhesive pads cover the entire *10-inch* length of the cutback; ie, the adhesive pads will overlap each other by 1 inch at the center of the cutback.
- 2 Hold the adhesive pads in place using one lap of 3/4-inch vinyl or DR tape at the center of the cutback.
- 3 Remove the aluminum tape extending beyond the previously installed sleeve.
- 4 Prepare and preheat the next repair area as described in Part 4 for the particular type of sheath being repaired.



Step 25—Placing Retaining Clip

- 1 Measure the diameter of the installed sleeve to determine the size of the next sleeve.
- 2 Slide the prepared sleeve over the overlap area.

Note: Cable sheath must be preheated before the sleeve is placed.
- 3 Align and position the second channel section *1/4 inch* from the first channel section.
- 4 Center the 5-inch clip over the channel junction and tap the clip lightly until it snaps in place.



Step 26—Completed Long Length Repair

- 1 Apply heat to the second repair sleeve as outlined in paragraph 4.15. Begin heating the second sleeve *at the overlap end.*