AERIAL CABLE

BONDING

CONTENTS

1. GENERAL

1.01 This section has been revised to cover a method of bonding steel tapes at splice case or T type terminal locations when tape armored cable is used in aerial construction for squirrel protection. Method of bonding two or more cables together where they are located on the same pole, and bonding aerial cable to suspension strand has been retained.

2. BONDING AERIAL CABLE TO SUSPENSION STRAND

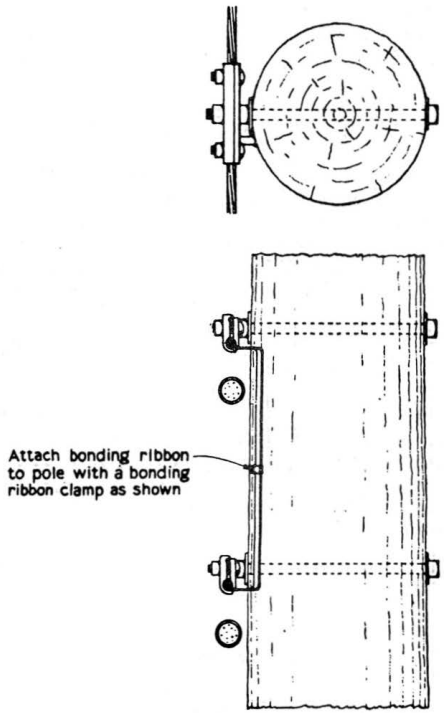
2.01 Bond the sheath of a ringed aerial cable to its suspension strand by means of grade clamps as covered in other sections of the practices.

2.02 The sheath of a lashed aerial cable is considered to be sufficiently bonded to its suspension strand by means of the lashing wire supporting it on the strand.

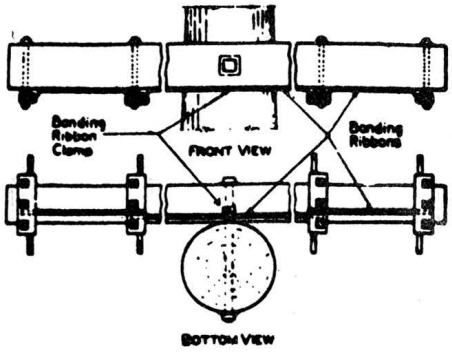
3. BONDING AERIAL CABLES TOGETHER

3.01 Attach a section of plain bonding ribbon in the respective cable suspension clamps as follows:

(a) Where the cable is attached directly to the pole install bonding ribbon as shown in the following illustrations:



(b) Where the cable is attached to cable crossarms install bonding ribbon as shown in the following illustration:



4. BONDING STEEL TAPES ON AERIAL TAPE ARMORED CABLE AT SPLICE CASE OR T TYPE TERMINAL LOCATIONS

4.01 After preparing ends of aerial tape armored cable and installing splice case or T type terminal as described in other sections of the practices, bond the steel tapes in the following manner.

(a) Cut a 30-inch piece of bonding ribbon. Wrap the ribbon with one half-lapped layer of B Glass Tape from a point 4-1/2 inches from one end of the ribbon to the same distance from the other end. These measurements may be increased if it is necessary to increase the distance of the opening of the steel tapes. Paint the taped portion with N-700 Black Proco Coating.

(b) Tin the steel tapes at each side of the splice location with rosin core solder. Make certain that the tapes are well tinned, and avoid building up excess solder.

(c) Form the bonding ribbon along the top of the splice case or T type terminal so that the taped portion of the ribbon will contact the case and will extend beyond the case at each end, and then form the ribbon over the ends of the case and along the cable so that it will lie in contact with the tinned surfaces of the steel tapes. Do not allow the bare portion of the bonding ribbon to contact the aluminum case. In forming the bonding ribbon, some slack should be provided to allow for expansion and contraction of the steel tapes.

(d) Place five tight wraps of copper lashing wire around the steel tapes and bonding ribbon at the tinned area on the tapes. Solder bonding ribbon, tapes, and lashing wire together at this point.

(e) Excess bonding ribbon beyond solder point may be trimmed off after solder has cooled.

4.02 For other splices on tape armored aerial cable where a lead sleeve is used, do not tape the bonding ribbon. Bond the ribbon to the center of the lead sleeve, allowing enough slack in the ribbon to provide for expansion and contraction differences between the sheath and the steel tapes.

Note: Where tape-armored cable is spliced to plain lead sheath cable and a splice case is used, bonding ribbon should be soldered to the steel tapes and extended across the splice case and soldered to the lead sheath cable. Bonding ribbon should be taped as outlined in Paragraph 4.01. At end terminal installations on tape-armored cable no bond is necessary between steel tapes and lead sheath when a splice case is used.