OPEN WIRE

BRIDLING–OPEN WIRE LINES DESCRIPTION AND INSTALLATION

1. GENERAL

1.01 This practice provides methods of bridling open wire lines at the junction of open wire and cable, buckarm poles, protective equipment, and at the junction of open wire side lead terminations. This practice also covers methods of making bridle wire connections in both corrosive and non-corrosive areas.

2. DESCRIPTION

2.01 Three types of wire are available for bridling purposes:

a. No. 14 gauge twisted pair with rubber insulated, neoprene jacketed, hard drawn copper conductors.

b. No. 20 gauge twisted pair (red) 40% conductivity, rubber insulated, neoprene jacketed, copper steel conductors.

c. No. 18 two-conductor, (black), rubber insulated, neoprene jacketed, twisted, solid annealed copper conductors.

3. USE

3.01 Use No. 14 gauge wire at the following locations:

a. All bridling of toll circuits.

b. Bridling from exchange open wires to protected cable terminals.

c. Bridling from exchange open wires to external protectors such as 222 type arrestors (extend from external protectors to unprotected cable terminals with 18 gauge, as in paragraph 3.02 a.).

d. Bridling associated with battery feeders when specified.

e. Between poles at side-lead terminations.

3.02 Use No. 18 bridle wire (black) at the following locations:

a. Bridling of exchange circuits from unprotected cable terminals to external protectors (extend from protectors to exchange open wires with 14 gauge, as in paragraph 3.01 c.).

b. Bridling open wire exchange circuits at buckarm poles.

3.03 Use No. 20 gauge 40% conductivity bridle wire (red) between exchange open wire and one-pair-wire terminals.

3.04 All bridling wires should be free of splices.

4. ILLUSTRATIONS

4.01 The following illustrations (Figures 1 through 6) show the recommended positions of bridle wires on poles and crossarms.

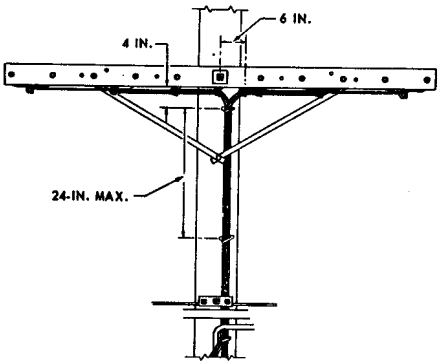

FIGURE 1. Bridle Wires at Dead-end Poles, Pole-mounted Terminals.

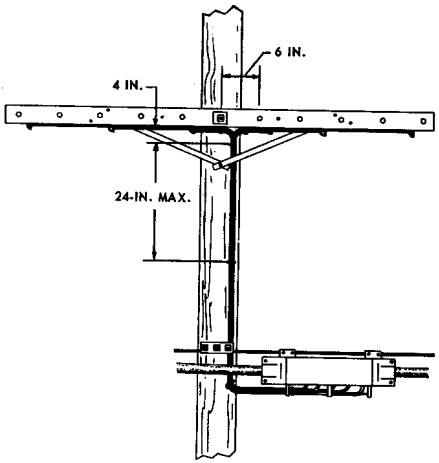

FIGURE 2. Bridle Wires at Dead-end Poles, Strand-mounted Terminals.

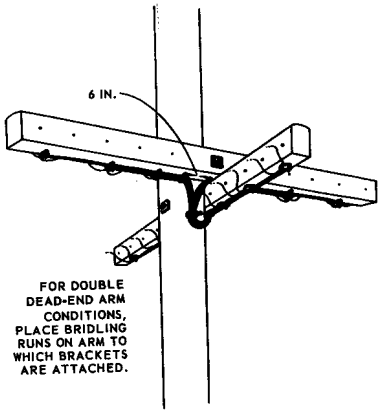

FIGURE 3. Bridle Wires at Buckarm Poles.

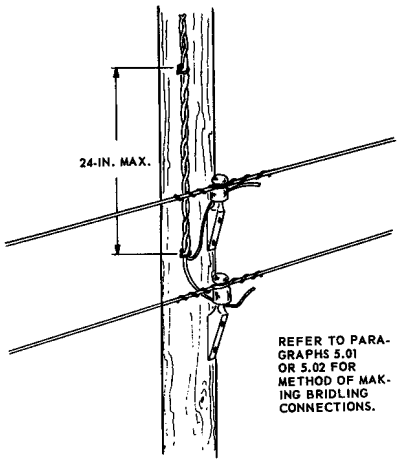

FIGURE 4. Bridle Wires at Wooden Pole Brackets.

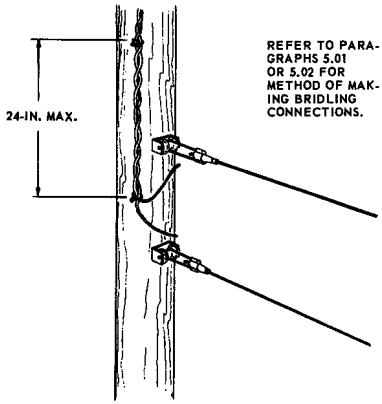

FIGURE 5. Bridle Wires at Bracket Dead-ends.

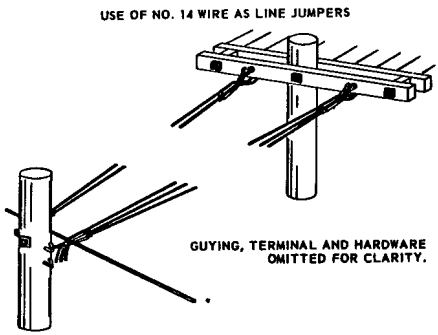

FIGURE 6. Bridle Wires at Side-Lead Terminations.

5. CONNECTIONS TO LINE WIRE

5.01 *Non-Corrosive Areas:* All connections between open wire and bridling wire in non-corrosive areas should be made with split sleeves of varying sizes depending on the type and gauge of wire of the main facility. Figures 7, 8 and 9 illustrate the split sleeve and some of its uses.

FIGURE 7. Split Sleeve.

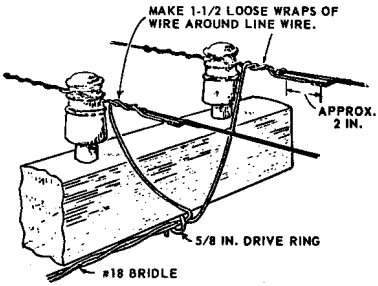

FIGURE 8. Placing Split Sleeve at an Intermediate Pole.

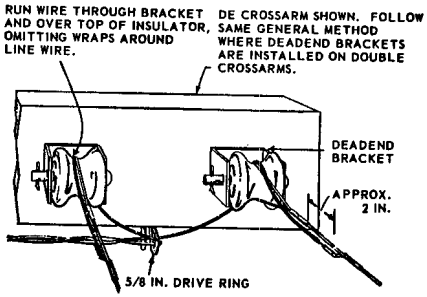

FIGURE 9. Placing Split Sleeve at a Dead Pole.

5.02 *Corrosive Areas:* All connections between open wire and bridling wire in corrosive areas should be made with bridging connectors of the appropriate size, depending on the type and gauge of the main facility. Figures 10, 11 and 12 illustrate the bridging connector and some of its uses.

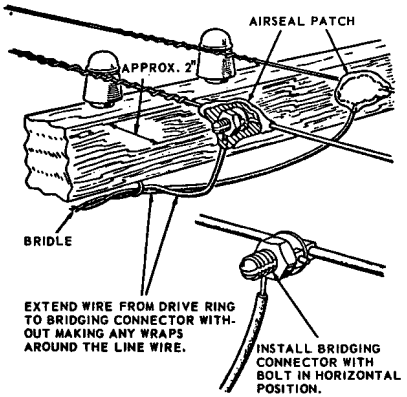

FIGURE 10. Installation of a Bridging Connector.

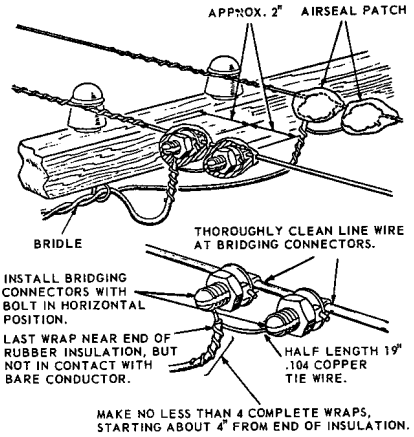

FIGURE 11. Bridle Wire Connection in a Highly Corrosive Area.

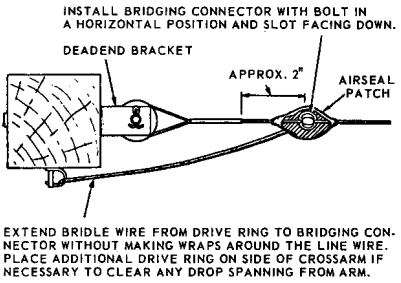

FIGURE 12. Bridle Wire Connection at Dead-ends.

6. PLACING SPLIT SLEEVES AT BRIDLING POINTS

6.01 Run the bridle wire on the pole or crossarms to provide sufficient wire to reach beyond the deadend or insulator tie as shown in Figures 13 and 14.

FIGURE 13. Placing Split Sleeve at the Dead-end.

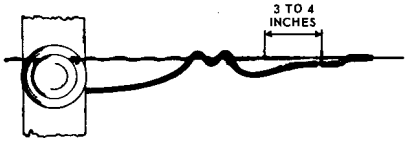

FIGURE 14. Placing Split Sleeve at the Insulator.

6.02 Install the bridging sleeve as follows:

a. Remove 2 inches of insulation from the bridle wire. Clean the copper conductor thoroughly with abrasive cloth.

b. Insert the cleaned wire in the sleeve so the end of the insulation is 3/4 inch from the end of the sleeve. See Figure 15.

c. Make at least five presses with the 31-DC Nicopress tool, starting at the inner end and working toward the outer end with adjacent presses overlapping slightly. When making the last press, the side of the presser jaws should extend slightly beyond the end of the sleeve. No attempt should be made to remove the fin by pressing a second time.

d. Wrap the bridle wire around the line wire one and one-half turns. See Figure 14. Clean the line wire thoroughly with abrasive cloth. Place the split sleeve on the line wire and close the split end of the sleeve down on the line wire throughout its length by pressing with the side cutting pliers. See Figure 16.

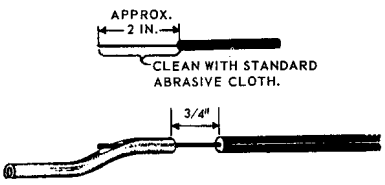

FIGURE 15. Placing Bridle Wire in the Sleeve.

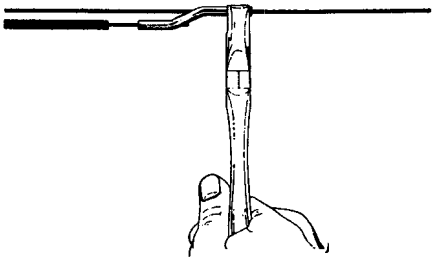

FIGURE 16. Closing Split Sleeve on Line Wire.

e. Make a minimum of eight presses with the 31-DC Nicopress tool, starting at the inner end of the split portion and working towards the outer end with adjacent presses overlapping slightly so as to result in a complete closure of the seam. When making the last press, the side of the presser jaws should extend slightly beyond the end of the sleeve. The pressing tool should be so positioned on the split sleeve that the seam will coincide with one of the fins formed in the pressing operation. This is necessary to insure a complete closure of the seam. No attempt should be made to remove the fin by pressing a second time. A completed sleeve is shown in Figure 17.

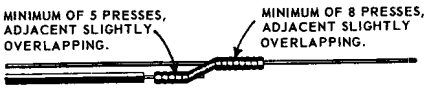

FIGURE 17. Completed Split Sleeve.

7. BRIDLE RINGS AND DRIVE RINGS

7.01 The type of bridle or drive ring used for bridle runs on poles or crossarms depends on the number and type of bridle wire used. Table A lists the type of ring to use.

TABLE A. Bridle or Drive Ring

Size of Wire	Number of Pairs		
	5/8-Inch Drive Ring	1-1/4 " C Bridle or Drive Ring	1-5/8 " A Bridle Ring
14GA. Twisted	3	6	12
18GA. Twisted	6	12	26

8. DISCONNECTING AND RECONNECTING BRIDLING-WIRE SPLIT SLEEVES

8.01 In disconnecting a bridging sleeve connection, cut the bridle wire as close to the split sleeve as possible. When making a reconnection, place the new bridging (split) sleeve adjacent (either side) to the previous attachment.