BELL SYSTEM PRACTICES
Outside Plant Construction and Maintenance

SECTION G50.677.7
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AT&T Co Standard

CABLE SPLICING—GENERAL
WIPING DISC JOINTS

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1. GENERAL

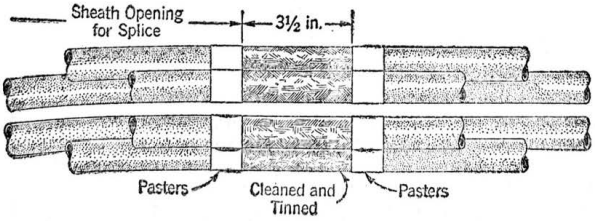
1.01 This section outlines the method of preparing and wiping disc joints on multiple splices.

2. ARRANGEMENT OF DISCS

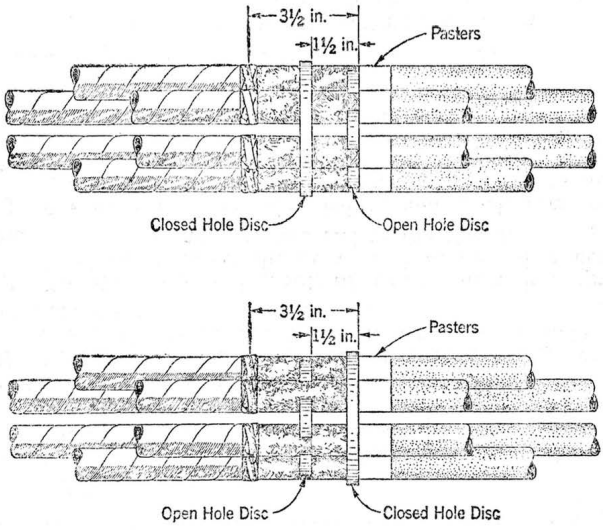
2.01 Standard discs for terminating large exchange cables are available in two types known as open hole and closed hole discs.

2.02 The discs are used in sets of two, an inner disc located 1-1/2 inches under the sleeve, and an outer disc located on the terminating cables at the end of the sleeve.

2.03 Set up the terminating cables and mark each cable where the sheath is to be removed and also about 3-1/2 inches beyond the first mark. Clean each cable between the marks and coat the cleaned surface with stearine. Place pasters outside the marks and then tin each cable as shown below.



2.04 Remove the sheath from the terminating cables and reset them carefully, tying them securely to match the holes in the discs. Thin wood strips may be used between the cables to give the correct separation. Slide the discs along the cables and position them as shown in one of the following illustrations.



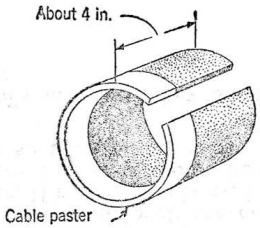
2.05 After the discs are in place inspect them carefully to see that there are no openings around the cables through which solder might flow during the wiping operations. Slight openings in the open hole disc can usually be corrected by lightly tapping the cables and the edge of the disc with a cable dresser or hammer. If there are openings around the cables where they pass through the closed hole disc, it will be necessary to close them by means of a clove hitch of cotton sleeving around the cable at the outer edge of the disc.

3. PRELIMINARY WIPE

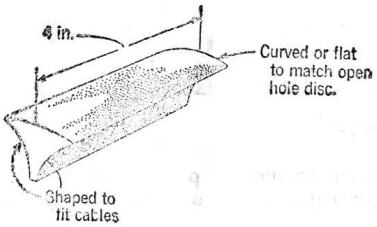
3.01 It is advisable to partially wipe the disc joint before splicing any of the conductors. This will seal the inside of the joint and hold the terminating cables together to prevent shifting during splicing.

3.02 The cable sheath outside of the discs may be prepared in various ways. The simplest way is to place pasters around each terminating cable and a final paster around the entire group. At the closed hole disc a muslin wrapping should be built up so that the paster will be level and extend about 1/8 inch over the edge of the disc.

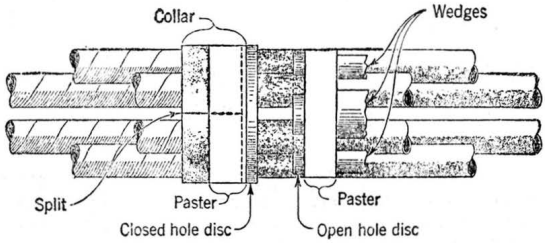
3.03 A split lead collar may be placed outside of a closed hole disc. The collar should have the same outside diameter as the disc so that a paster can be placed over the collar and extend about 1/8 inch over the edge of the disc. It may be necessary to build up with muslin wrapping around the cables to make the collar flush with the disc. The collar should have pasters inside and outside at the edge of the disc and should be drawn closed with a tie. The general shape of a collar is shown in the following illustration.



3.04 Temporary lead or aluminum wedges may be inserted between the cables outside an open hole disc that is used as an outer disc. If lead wedges are used, they should be coated with plaster of paris to prevent solder from bonding them to the disc or cables. The wedges should be shaped to give a uniform surface around the cables and to permit placing a final paster around the group outside of the disc. The general shape of a wedge is shown in the following illustration.

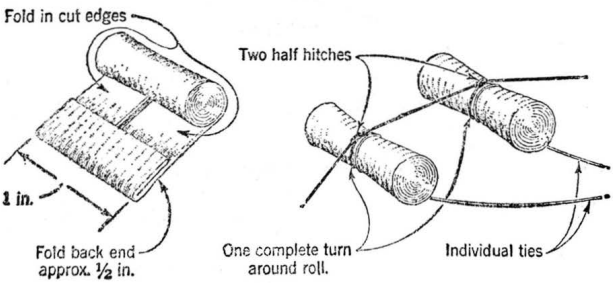


3.05 The following illustration shows a disc joint with wedges at the open hole disc and a collar at the closed hole disc.



3.06 The preliminary wipe consists of filling the center part of the disc joint with solder to a level approximately flush with the open hole disc. In bringing the joint up to a wiping heat, the solder should not be poured initially between the cables because it would freeze and block the crotches. To prevent this it is necessary to pack the crotches with cotton tape or rolls of muslin. If cotton tape is used it should be packed in each crotch and the free ends should be brought out at the top of the disc joint so that the tapes can be withdrawn conveniently.

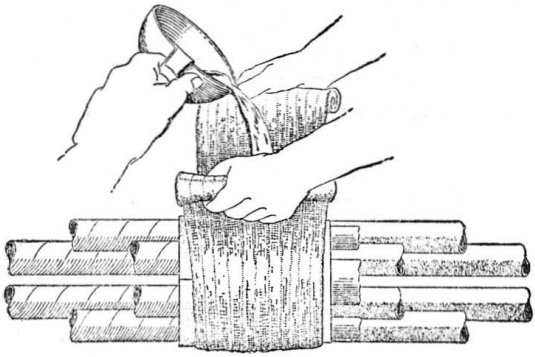
3.07 If muslin rolls are used they should be prepared as shown below.



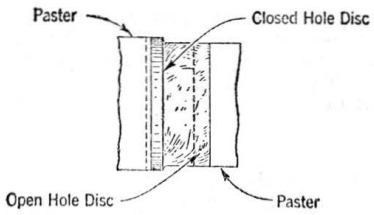
A roll is placed in each crotch, the individual tie is passed through the center of the joint and brought out at the top, thus holding the roll in the crotch. The common tie for all the rolls is passed around the group of cables and all ties are brought together at the top.

3.08 After all pasters and crotch packings or rolls are in place, the wiping operation is started by pouring solder over the outside of the cables. After the cables and discs have been heated, as indicated by the solder flowing freely from the sides and bottom, the cotton tape packing or the muslin rolls should be removed with long nose pliers. The rolls can be conveniently removed by cutting the threads at the top and pulling on the common thread that passes around the group.

3.09 Continue pouring the solder, allowing it to flow through the joint and around the cables, and catching it in a large catch cloth. After all parts are at a wiping heat, hold a large catch cloth around the joint and fill the center part with solder using a special cloth as shown in the following illustration. The cloth should be about 7 inches wide and 18 inches long.



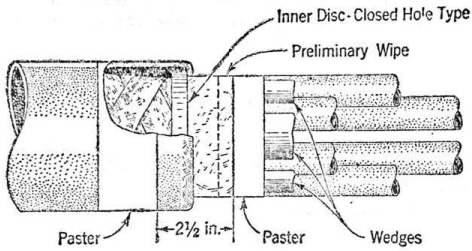
3.10 After the solder solidifies wipe it approximately flush with the open hole disc as shown in the following illustration.

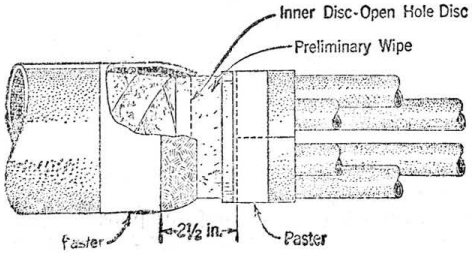


3.11 After the preliminary wipe has been made, splice the conductors and wrap the splice in the standard way.

4. FINAL WIPE

4.01 Slide the sleeve in place and beat in tightly around the inner disc. Place pasters on the sleeve and at the outer disc, so that the finished joint will be approximately 2-1/2 inches wide. Wedges may be used with the outer open hole disc arrangement or a collar may be used with the outer closed hole disc.





4.02 Using standard solder, heat and wipe the joint so that it will have a finished appearance similar to those shown in Paragraph 4.03, depending on the position of the discs. In wiping the final joint do not heat it so hot that the central part of the preliminary wipe will melt and run out.

4.03 The finished shape of the disc joint depends on which disc is used as the outer one, as illustrated below.