BOND CLAMPS

DESCRIPTION AND USE

CONTENTS

1. GENERAL ........................................ 1

2. DESCRIPTION .................................. 1

   B Bond Clamp .................................. 2

   D Bond Clamp .................................. 2

3. INSTALLATION .................................. 3

   B Bond Clamp .................................. 4

   D Bond Clamp .................................. 7

4. INSTALLING THE BOND ......................... 8

   Bond Strap .................................. 8

   Braided Bond .................................. 9

   Ground Wire .................................. 9

   Bonding Ribbon ................................. 10

2. DESCRIPTION

   2.01 The B and D bond clamps are shown in
       Fig. 1 and 2. The B bond clamp is available
       in three sizes as listed in Table A. The size
       designation is stamped on the inner and outer
       plates. One size D bond clamp is used for all cable
       sizes.

1. GENERAL

   1.01 This section covers the description and
       installation of the B and D bond clamps,
       and methods of installing the bonds.

   1.02 This section is reissued to update installation
       information on D bond clamps. Revision
       arrows are used to emphasize the more significant
       changes.

   1.03 The maximum current carrying capacity of
       these clamps is equivalent to a No. 6 AWG
       copper conductor. They may be used in both
       exposed and unexposed plant.

NOTICE

Not for use or disclosure outside the
Bell System except under written agreement

Printed in U.S.A.
TABLE A
CABLE/CLAMP REFERENCE

<table>
<thead>
<tr>
<th>CABLE OD (INCHES)</th>
<th>UP TO 0.9</th>
<th>0.9 TO 1.6</th>
<th>OVER 1.6</th>
</tr>
</thead>
<tbody>
<tr>
<td>C*</td>
<td>Size 1</td>
<td>Size 2</td>
<td>Size 3</td>
</tr>
<tr>
<td>L</td>
<td>B Bond</td>
<td>B Bond</td>
<td>B Bond</td>
</tr>
<tr>
<td>A</td>
<td>Clamp</td>
<td>Clamp</td>
<td>Clamp</td>
</tr>
<tr>
<td>M</td>
<td>D Bond</td>
<td>D Bond</td>
<td>D Bond</td>
</tr>
<tr>
<td>P</td>
<td>Clamp†</td>
<td>Clamp</td>
<td>Clamp</td>
</tr>
</tbody>
</table>

* All sizes of bond clamps shall be tightened with a 216-type tool.
† When using D bond clamps on cable sizes 0.4 to 0.9 inches in diameter and all DEPIC cables, a 2-inch long slit in the cable sheath, 180 degrees away from point of insertion of D bond clamp, will be required to eliminate damaging mylar core wrap and the DEPIC conductor.

B Bond Clamp

2.02 The B bond clamp is shorter than the D bond clamp. The primary uses of the B bond clamp are with wrapped joints and with 2-type closures. The cable sheath must be slit to install the B bond clamp.

D Bond Clamp

2.03 The D bond clamp provides a simplified installation method which does not require slitting and taping of the sheath except when used on cable sizes 0.4 to 0.9 inches in diameter and on all Dual Expanded Polyethylene Insulated Conductor (DEPIC) cables. In order to achieve the same amount of surface contact on the metallic shield and also the desired mechanical strength as the B bond clamp, the D bond clamp is approximately 0.6 inch longer.

2.04 Two sets of triangular teeth are provided in the outer plate of the bond clamp to bite into the plastic cable sheath.

2.05 Projections are provided at one end of the outer plate to aid in positioning and holding sealing clamps when used in pedestal closures.

2.06 A bond strap (Fig. 3) is available on an optional basis for connection between stud of bond clamp and ground.

---

**Fig. 3—Bond Strap**
2.07 Figure 4 shows a bond strap assembly (Comcode No. 842353070) which is available for rehabilitation applications (see Section 644-203-101).

Fig. 4—Bond Strap Assembly

3. INSTALLATION

Proper installation of the bond clamp is vital. It establishes shield continuity and provides electrical protection which allows the installation to meet transmission objectives.

Warning: Maintain sheath continuity at all times. To do this may require use of a temporary bond.
3.01 Install the B bond clamp as illustrated in Fig. 5, 6, or 7.

**DO NOT REMOVE CORE WRAP**

**CUT SHEATH AND METAL SHIELD WITH TABBING SHEARS ONLY**

**TWO TURNS OF VINYL TAPE STICKY SIDE OUT**

**PLACE INNER PLATE BETWEEN CORE WRAP AND SHIELD**

**WRAP WITH TWO HALF-LAPPED LAYERS OF VINYL TAPE BEFORE PLACING OUTER PLATE**

**REMOVE CORE WRAPPER AND PLACE BINDER GROUP IDENTIFICATION TIES**

**PLACE OUTER PLATE EXTERNAL TOOTH LOCK WASHER, FLAT WASHER AND HEX-NUT**

**TIGHTEN HEX-NUT SECURELY WITH 216-TYPE TOOL**

Fig. 5—Installing B Bond Clamp
**Step 1:**
- Cut sheath and metal shield with tabbing shears only.
- Place inner plate between core wrap and shield.

**Step 2:**
- Wrap with two half-lapped layers of vinyl tape before placing outer plate.

**Step 3:**
- Remove core wrap and place binder identification ties.

**Step 4:**
- Place outer plate, external tooth lockwasher, flat washer and hex-nut.
- Tighten hex-nut with 216-type tool.

Fig. 6—Installing B Bond Clamp—Multijacket Cable
DO NOT REMOVE CORE WRAP

SECTION 081-852-118

DO NOT REMOVE CORE WRAP

CUT JACKET AND METAL SHIELD WITH TABBING SHEARS ONLY

JACKET AND SHIELD REMOVED

1-1/2 IN.

STEP 1

STEP 2

STEP 3

TWO TURNS OF VINYL TAPE STICKY SIDE OUT

PLACE INNER PLATE BETWEEN CORE WRAP AND SHIELD

Beads of B SEALANT

STEP 4

TWO HALF-LAPPED LAYERS OF VINYL TAPE

STEP 5

REMOVE CORE WRAPPER AND PLACE IDENTIFICATION TIES

PLACE OUTER PLATE EXTERNAL TOOTH LOCKWASHER, FLAT WASHER AND HEX-NUT

TIGHTEN HEX-NUT WITH 2/6-TYPE TOOL

Fig. 7—Installing B Bond Clamp—Corrosive Area
D Bond Clamp

3.02 Install D bond clamp as shown in Fig. 8 through 10. In high corrosive areas, place B sealant as shown in Fig. 7, Step 3. Figure 11 shows installation on cables 0.9 inch in diameter or less and on all DEPIC cables.

Note: A wrap of vinyl tape around clamp and slit area is recommended to cover sharp edges.

Fig. 8—Cable Preparation for Installation of D Bond Clamp

Fig. 9—Inner Plate Installed

Fig. 10—Completed Installation of D Bond Clamp
ON CABLE SIZES 0.9 INCHES IN DIA. OR LESS AND ON ALL DEPIC CABLES:
- MAKE A 2-INCH SLIT IN THE JACKET, THEN SLIDE THE BOND CLAMP SHOE INTO PLACE.
- MAKE SURE THE PLATE IS INSERTED OPPOSITE THE SLIT AS SHOWN.

Fig. 11—Installation of D Bond Clamp—Cable Slitting Required

4. INSTALLING THE BOND

Bond Strap

4.01 Install bond strap as shown in Fig. 12. Tighten nut with 216-type tool. Complete the bond by connecting the other end of the bond strap to another bond clamp or to the closure ground bracket.

When installing the braided bond, ground wire, or bonding ribbon as described in the following paragraphs, use size 2B bond clamp outer plate. Extra plates are available in kits of ten. They may be used on either B or D bond clamps.
**Braided Bond**

4.02 When braided bond is used, secure bond as shown in Fig. 13. Extra nut, washers, and outer plate may be ordered as an AT-8544 B2 cover clamp.

**Ground Wire**

4.03 When No. 6 AWG ground wire is used, secure the wire as shown in Fig. 14.
**Bonding Ribbon**

4.04 When bonding ribbon is used, secure the ribbon as shown in Fig. 15.

---

**Fig. 15—Installing Bond Ribbon on Bond Clamp**