

**BELL SYSTEM PRACTICES**  
**Outside Plant Construction**  
**and Maintenance**

**SECTION G50.700.8**  
**Issue 3, February, 1961**  
**AT&TCo Standard**

**SPLICE CASES**  
**20 AND 21 TYPES**  
**INSTALLATION**  
**AERIAL AND UNDERGROUND**

<b>Contents</b>	<b>Page</b>
1. General .....	1
2. Installation .....	2
3. Pressure Testing .....	6

**1. GENERAL**

1.01 This section outlines the method of installing 20 and 21-type splice cases on lead, alpeth and stalpeth sheath cables in **aerial and underground plant**. It has been revised to include some precautions and minor changes in methods. Section G50.700.7 describes the method for sheath preparation.

1.02 **Only B Sealing Tape and B Sealing Cord shall be used.** Made of a semiconducting material, these items are identical in appearance to C Sealing Tape and Cord except for the wrappings and the marking on the package. **The materials are not interchangeable. C Sealing Tape and Cord are for use only on buried cable installations.**

## 2. INSTALLATION

2.01 **Thoroughly scuff the sheath** for a distance of about 2 inches starting at the ends of the wrappings covering the inner clamp.

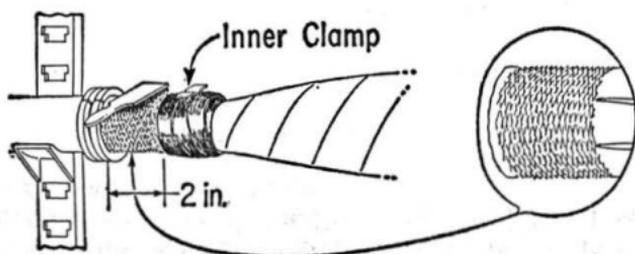


Fig. 1

2.02 Position the cable in the splice case and slide inner sealing washers in place as shown. Mark position of washers on sheath. Make sure that the sheath clamps are aligned with the grooved seat of the splice case.

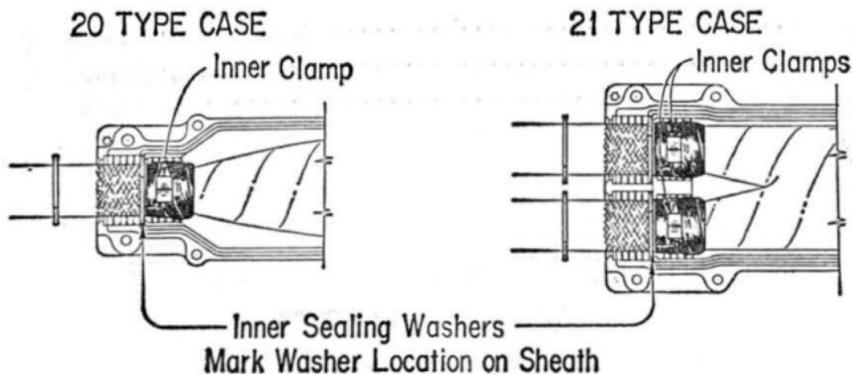
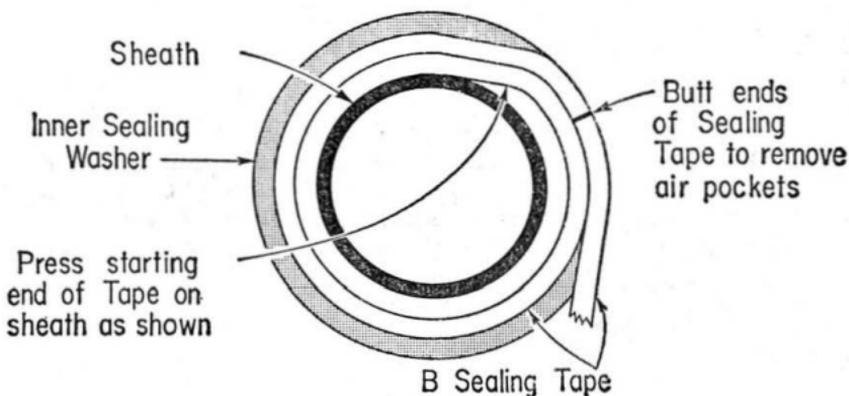
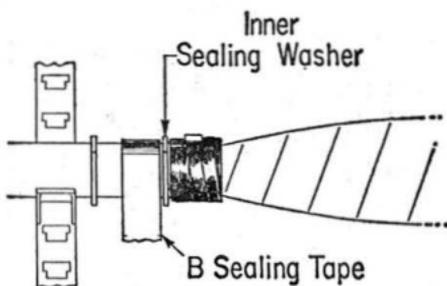


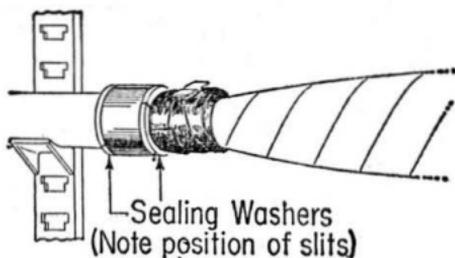
Fig. 2

2.03 Build up collars of B Sealing Tape on the outer sheath adjacent to the washers to a diameter **equal to or slightly larger** than that of the washers. **The tape should be kept as clean as possible and should not be stretched.**



**Fig. 3**

2.04 Position the outer sealing washer with the slit about 90 degrees from that of the inner washer. Butt the outer washer against the sealing tape.



**Fig. 4**

2.05 **Clean any oil, grease, dirt, filings, moisture, desiccant, etc., from the sealing surfaces in the splice case** with a clean, dry, and lint-free cloth, KS-14666, soaked with a small quantity of KS-16302 cleaner. Place the bottom (or back) splice case with the inner sealing washers on the cable flush against the shoulder of the housing. In an aerial installation, attach the case to the strand using a 50-A Hanger if case is not equipped with strand clamp.

2.06 Fill any unused opening in the splice case with a solid plug of sealing tape, placing a solid sealing washer (C or D) of the proper size at each end of the plug. See G50.700.4 for sealing washer sizes.

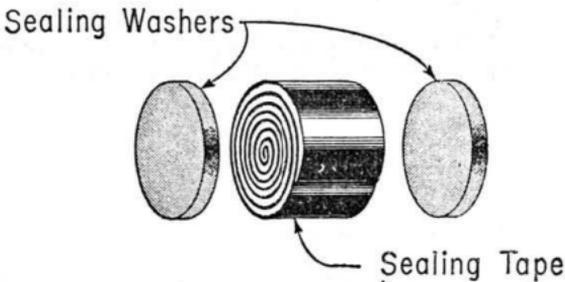


Fig. 5

2.07 Place sealing cord in the side grooves, being careful to avoid making flat spots or dents in the cord. **Do not stretch.** Do not handle with damp or oily hands. Inspect to insure that cord is in the grooves and free from moisture or dirt. If moisture or dirt is present, replace cord.

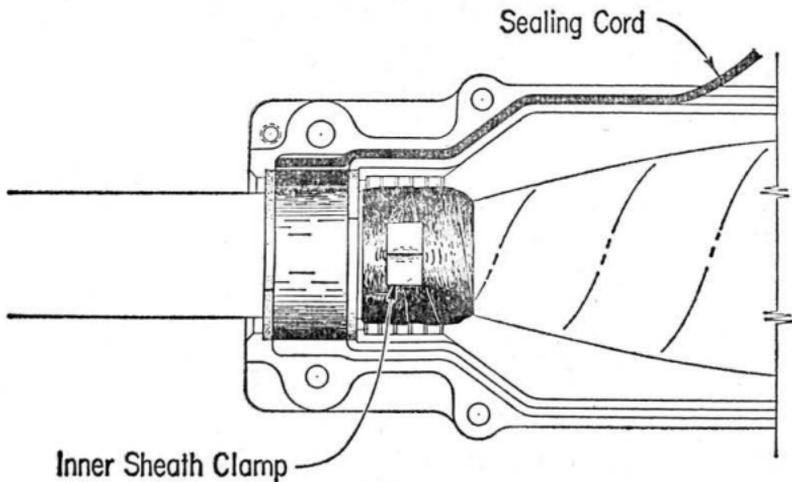


Fig. 6

- 2.08 On 21-type cases place a 1-1/2 inch length of sealing cord in each crotch.

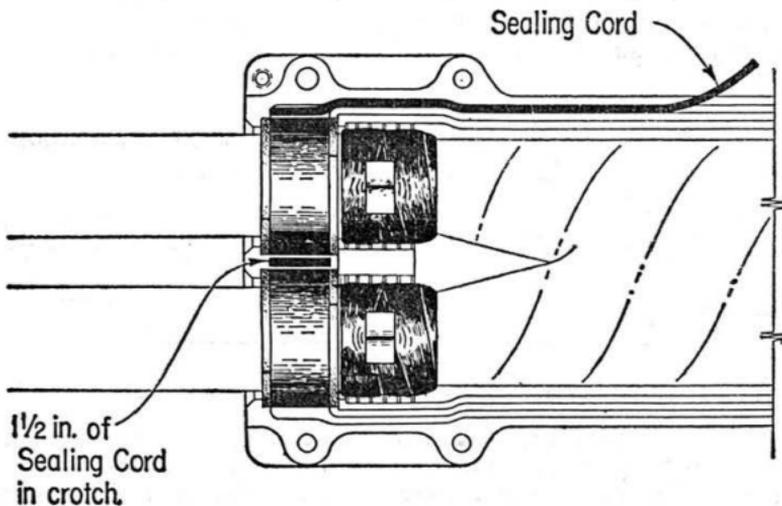


Fig. 7

- 2.09 Place the other case in position, being careful not to disturb the C Sealing Cord.
- 2.10 Place bolts in positions 3, 4, 7 and 8 as shown on the following sketch. If full size cables are being installed the separation may be so great that it will not be possible to start the nuts on the bolts. In these instances hex headed bolts 3/8 in. x 16 x 2 inches long should be used to pull the cases together until the regular bolts provided with the cases can be used in positions 1, 2, 5 and 6. The 2-inch bolts are available commercially and should be purchased locally.

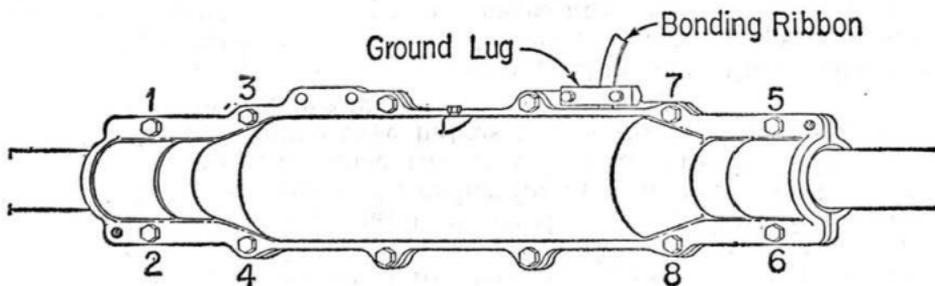


Fig. 8

**Note:** The cases are now ready for the all-important bolt tightening operation. Only a very light pull on the wrench is required to bring the two splice case halves together. If the bolts do not tighten with an easy pull the washers are jamming or the sheath clamp is causing the interference. In either instance a heavy pull on the wrench will cause the cast iron to break. Only when the two splice case halves are metal to metal is it safe to apply a heavy torque on the bolts.

2.11 If the long bolts have been used replace them with the standard bolts and tighten bolts 1, 2, 5, 6, 3, 4, 7, and 8 in that sequence until the splice cases are about 1/8 inch apart. **Bring the cases together evenly and never tighten any bolt more than two turns at a time. If at any time a bolt requires more than an easy turning effort go to the next bolt. Then, if turning is still difficult, check for misalignment of cases and washers.**

2.12 Place remaining bolts, in sides of cases, tighten hand-tight, then tighten all bolts no more than one turn at a time until **metal-to-metal contact is obtained at every bolt location.** Then continue to tighten, **using only the tools furnished with the B Wrench Kit,** until all bolts are completely tight.

2.13 Place ground lug and bonding ribbon where required. On an aerial installation make remaining strand attachment.

### 3. PRESSURE TESTING

3.01 Flash test each splice case installation after a back pressure of 5 pounds has been reached. Use B or C pressure testing solution as appropriate for test.

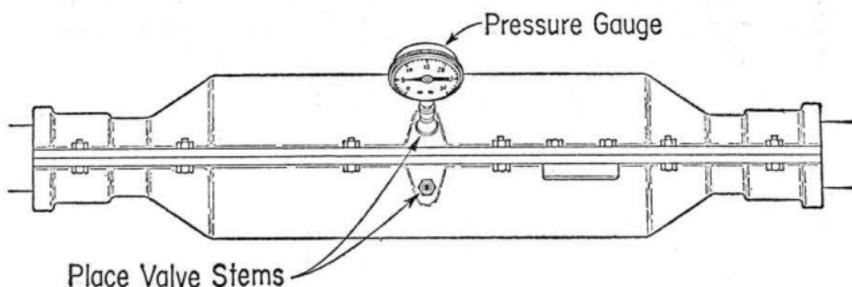


Fig. 9

3.02 **Bolts may loosen due to the presence of sealing compound at the bolt locations. Relaxation of this compound will completely occur during the pressure testing interval. The final operation, after pressure testing is completed and before leaving the job, should be to recheck and tighten all nuts and bolts.**