

BELL SYSTEM PRACTICES
Outside Plant Construction
and Maintenance

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CABLE SPLICING—GENERAL
COTTON SLEEVES

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1. GENERAL

1.01 Cotton sleeves are generally used to insulate joints in paired or quadded conductors. The sleeves are usually supplied as a prepared item in 3-1/4 inch lengths, but may also be prepared locally from dry cotton sleeving supplied on spools.

2. STANDARD SIZES

2.01 **Prepared single wall cotton sleeves** are available in the following standard sizes.

<u>Size of Sleeve (Inch)</u>	<u>Number of Sleeves per Carton</u>
3/32	900
1/8	700
5/32	400
1/4	200
3/8	100

2.02 **Prepared double wall cotton sleeves** are available in the following standard sizes.

<u>Size of Sleeve (Inch)</u>	<u>Number of Sleeves per Carton</u>
5/32	300
1/4	150

2.03 **Colored Tracers:** Prepared double wall cotton sleeves for use on toll conductors can be obtained plain, with 1 black tracer, 2 red tracers, or 3 green tracers. Instructions on their use will be contained in the splicing instructions issued for the particular installation. Tracer sleeves will generally be applied as follows:

Green tracer sleeves should be used on West-bound and South-bound 4-wire circuits.

Red tracer sleeves should be applied to East-bound and North-bound 4-wire circuits.

Black tracer and plain sleeves should be used on 2-wire circuits.

The colored tracer sleeves may also be used to designate conductors segregated for carrier current operation.

3. USE

3.01 Single wall cotton sleeves are generally used to insulate the conductor joints in subscriber cables and interoffice trunk cables as well as exchange pairs in toll cables.

3.02 Double wall cotton sleeves are used to insulate soldered joints in conductors that are used for important circuits such as:

- (a) Quadded conductors.
- (b) Paired conductors intended for carrier circuits.
- (c) Paired conductors with double paper insulation, intended for radio program circuits.
- (d) Heavy gauge pairs, such as 13- and 16-gauge, regardless of the intended use.

3.03 **Straight and Butt Joints.** The following table lists the recommended sleeve sizes for insulating straight and butt joints.

**COTTON SLEEVE SIZES
STRAIGHT AND BUTT JOINTS**

GAUGE - A	GAUGE - B	SLEEVE SIZE	
		SINGLE WALL (in Inches)	DOUBLE WALL (in Inches)
ALL CONDUCTORS WITH PULP INSULATION			
28 26 24	28 26 24 22	3/32	—
22	22	1/8	—
ONE OR MORE CONDUCTORS WITH TEXTILE OR STRIP PAPER INSULATION			
28 26 24	28 26 24	3/32	—
22	28 26 24 22	1/8	5/32
19	28 26 24 22 19	5/32	5/32
16	22 19 16	—	1/4
13	19 16 13	—	1/4

The sleeve sizes shown can be used with any combination of two wires of the gauges listed in the boxes in columns A and B

3.04 **Single Bridge Joints:** The following table lists the recommended sleeve sizes for insulating single bridge joints.

COTTON SLEEVE SIZES
SINGLE BRIDGE JOINTS

GAUGE - A	GAUGE - B	GAUGE - C	SLEEVE SIZE	
			SINGLE WALL (in Inches)	DOUBLE WALL (in Inches)
ALL CONDUCTORS WITH PULP INSULATION				
28 26 24	28 26 24	28 26 24	3/32	—
22	28 26 24 22	28 26 24	1/8	—
22	22	22	5/32	—
ONE OR MORE CONDUCTORS WITH TEXTILE OR STRIP PAPER INSULATION				
28	28	26 24	3/32	—
26	26	28 26	3/32	—
28	28	22	1/8	—
28 26	26	24 22	1/8	—
24	24	28 26 24	1/8	—
24	22	28 26	1/8	—
22	22	28	1/8	—
24	24	22	5/32	—
22	22	26 24 22	5/32	5/32
19	28 26 24 22 19	28 26 24 22	5/32	5/32
19	19	19	1/4	1/4
16 13	All	All	—	1/4

The sleeve sizes shown can be used with any combination of three wires of the gauges listed in the boxes in columns A, B, and C

3.05 **Double Bridge Joint:** The cotton sleeve for a double bridge joint should be the smallest size that can be placed conveniently over the joint.

3.06 If it is known that a straight splice will be converted subsequently into a bridge splice, it will be advisable to use initially the size of cotton sleeve that would be used for the bridge splice. This will facilitate the splicing operations when the bridge conductor is added.