BELL SYSTEM PRACTICES
Outside Plant Construction and Maintenance

SECTION G52.141.2
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AT&T Co Standard

CABLE DANCING— DOUBLE CABLE LINES

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1. GENERAL

1.01 This section covers the method for reducing or preventing dancing of cable on lines carrying two cables supported on the same suspension bolt. Information contained herein was formerly found in Issue 1 of Section G52.141.1.

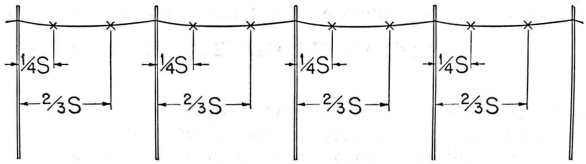
1.02 Dancing may occur on lines carrying two cables on opposite ends of cable suspension bolts when the difference in sag of the two cables is 10 inches or less at mid-span and the line is exposed to cross-winds. Either one or both cables may be found to dance when the cables are the same relative size and weight. Considerable difference in the cable size or weight results in more violent motion of the lighter or smaller cable. The measures described herein minimize this dancing condition.

2. LOCATION OF STRAND TIE STRAPS

2.01 On new construction where conditions are known to be favorable to dancing, strand tie straps should be installed when specified on detailed construction plans.

2.02 On existing lines where dancing has been observed or where inspections reveal that dancing has occurred and conditions are indicative of plant damage if preventive measures are not taken, strand tie straps should be installed.

2.03 The most effective arrangement for reducing or preventing cable dancing requires the installation of strand tie straps at two locations in each span. The tie straps should be located at the 1/4 and 2/3 points of each span to be equipped. Where consecutive spans are to be equipped the progressive arrangement on the line should be 1/4-2/3, 1/4-2/3, 1/4-2/3, etc. This arrangement is illustrated as follows:



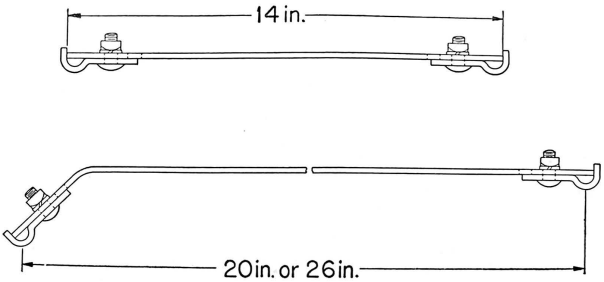
S=Span Length X=Location of Tie Strap

Note: It is important that these distances be as exact as practicable; otherwise the effectiveness of the strand tie straps will be lost.

3. INSTALLATION OF STRAND TIE STRAPS

3.01 The strand tie strap is 3/16" x 1-3/16" in cross-section and each end of the strap is equipped with a grooved detail, a lock washer and a carriage bolt. The length of strap to use depends upon the diagonal separation between the two strands at the point of attachment as follows:

Length of Strap	Diagonal Separation at Point of Attachment
14"	Not more than 16-1/2"
20"	16-1/2" to 22-1/2"
26"	22-1/2" to 29"



3.02 If a lashed cable is involved, it will be necessary to protect the sheath of the lashed cable from abrasion under the tie strap. A lashed cable support should be used for this purpose and should be placed prior to the installation of the tie strap. In order to provide clearance for this support and the strand tie strap, insert soft-wood wedges (about two inches wide) between the cable sheath and the strand. The lashed cable support should be wrapped **once** around the cable under the lashing wire and strand, then **twice** around both the cable and lashing wire and under the strand. Each turn should be brought through the buckle loop and pulled tight. End of the support strap should be trimmed and folded back in the regular manner. After the strand tie strap has been installed, wedges should be withdrawn.

3.03 Install the strand tie strap as follows:

(1) Remove nut, lock washer and carriage bolt.

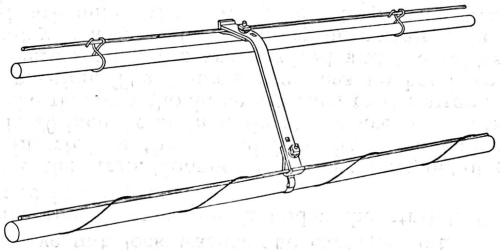
(2) Place the clamping detail under the strand. Position strand in the groove.

(3) Place the strap. Tongue on the clamping detail should be inserted in the second hole from the end of the strap. If 20-inch or 26 inch tie straps are used, the bent end of the tie strap should be attached to the strand in the higher position. The 14-inch strap has no bend. In some cases where small poles are involved and the cables vary appreciably in weight, the strap may bear against the upper cable sheath unless the strap is bent to provide clearance. In such cases a bend of approximately 45 degrees should be made near one end of the 14-inch strap and this end attached to the strand in the upper position.

(4) Place carriage bolt, lock washer and nut. Head of the carriage bolt should be on the underside of the strap. Turn nut down finger tight.

(5) Attach clamping detail and strap to other strand.

(6) Tighten both nuts securely. On lashed cables be sure that the strand tie strap is properly positioned with respect to the lashed cable support.



4. RIDING STRAND CONTAINING STRAND TIE STRAPS

4.01 The cable car will not pass a strand tie strap. When it is necessary to ride a strand on which these straps are installed, proceed as follows:

(1) When the car reaches the strap, remove the clamping detail from the strand being ridden.

(2) Raise the free end of the strap sufficiently to allow the car to pass.

(3) Reinstall the strap.