BELL SYSTEM PRACTICES
Outside Plant Construction and Maintenance

SECTION G23.146.1
Issue 1, April, 1957
AT&TCo Standard

GUY GRIPS

1. GENERAL

1.01 This section describes Guy grips and the method of using them when placing guys.

1.02 Guy grips may be used to dead-end guy strand at guy bolts, strain insulators and guy rods as an alternate for 3-bolt clamps or strandvises.

1.03 Guy grips are not recommended for use at guy rods where there is an existing guy because of the additional time needed for an installation under this condition.

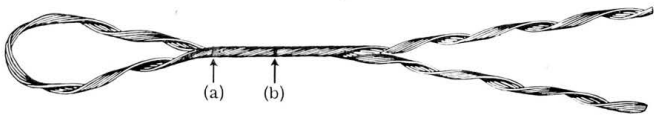
1.04 The guy grips may be used on galvanized strand but shall **not** be used on corrosive resistant strand or in areas where corrosive conditions are severe.

1.05 Gloves and eye protection should be worn when wrapping or unwrapping guy grips to lessen the possibility of injuries.

2. DESCRIPTION

2.01 Guy grips are made of a high strength steel wire, formed to close tolerances to maintain a permanent grip even under adverse conditions. The inner surfaces of the guy grips are coated with an abrasive grit which increases the friction between the guy grips and the strand and, therefore, increases the holding power of the grips.

2.02 The guy grips are available in sizes corresponding to the outside diameter of standard strand. The strand size is indicated on a tape fastened to each grip and also may be identified by the color of the paint marking at the starting or crossover point as shown below. Colored mark (a) in Fig. 1 indicates starting or crossover point for all installations except where strain insulators are used. Colored mark (b) indicates crossover point when using strain insulators. (Guy grips for 25M strand have only one paint mark which is the crossover point with or without strain insulators.)



GUY GRIP FOR GALVANIZED STEEL STRAND

Strand Size	Strand Diameter	Overall Length	Crossover Points Color Code
2.2M	3/16″	20″	Red
6M	5/16″	30″	Black
10M	3/8″	35″	Orange
16M	7/16″	38″	Green
25M	1/2″	40″	Blue

3. INSTALLATION

3.01 In most instances when using guy grips, the guy can be preassembled on the ground as follows:

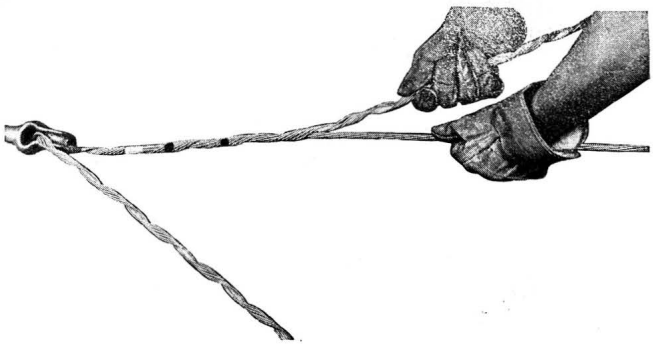
(a) Select the **proper size** guy grip for the strand being used.

(b) Apply one or two wraps of friction tape around the cut end of the strand to keep the wires in place. Avoid excessive taping.

(c) Insert the guy grip through the eye of the guy bolt or other terminating device.

(d) Place the end of the strand firmly inside one leg of the guy grip extending the end of the strand approximately one inch past the appropriate color marking.

(e) Wrap this leg around the strand while pulling the guy grip away from the strand with enough force to permit easy application. Make two or three wraps. Do not bend the leg of the guy grip enough to permanently deform it.



(f) Start the second leg in the open space by matching the painted crossover points and wrapping around the strand.

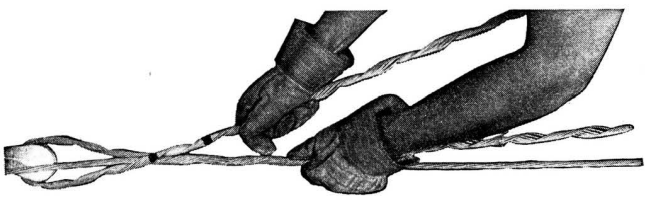
(g) Finish wrapping by pulling around and away from the strand. Generally, on guy grips used on strand less than 7/16 inch, the last wrap can be snapped into the lay of the strand by a twisting pushing motion of the hand, away from the eye of the grip. For larger grips it will be easier to apply the last pitch of each leg if the leg is split in half (three wires at a time) a pitch or two back from the end.

3.02 In assembling a guy, the strand is fastened to the guy bolt as described above. When a strain insulator is required, the guy strand is cut and secured to each side of the insulator in a similar manner. This completed assembly is then raised to the pole top and the guy bolt fastened in place.

4. TENSIONING

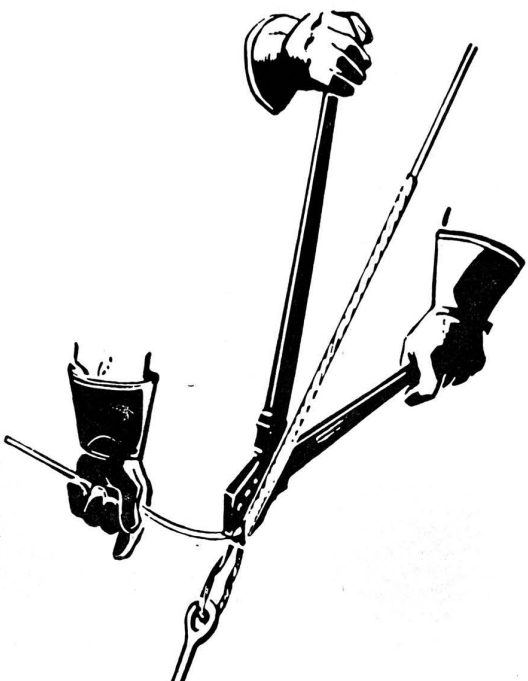
4.01 At the lower end of the guy, apply a strand puller to the guy strand a short distance above the point where the guy grip will terminate. Fasten a guy pulling eye on the guy rod and apply tension on the guy with a chain hoist. Over tension the guy (two or three clicks of the chain hoist will usually be sufficient) to compensate for the slight slack produced in attaching the lower guy grip.

4.02 Pull out as much slack as possible by hand and measure by eye the approximate terminating point of the strand. Align this point of the strand with the guy grip crossover point nearest the guy rod and partially apply one leg of the guy grip. Insert the free leg through the eye of the guy rod, pull up this leg until the crossover marks on both legs match, and wrap the legs around the strand.



4.03 Stop wrapping at about 3/4 the total length of the guy grip, making sure that the eye of the guy grip is properly positioned in the groove of the guy rod and then back off the chain hoist and check the tension. If the guy needs further tightening, take up more tension, unwrap, and reapply the guy grip.

4.04 Bend strand away from the guy grip crotch, tape strand if required, and cut as close as possible to the crotch. The strand end can then be worked into the leg of one side of the loop of the guy grips.



5. REMOVING AND RETENSIONING

5.01 When removing a guy or retentioning a slack guy, it is necessary to remove the guy grip. In order to do this, proceed as follows:

(a) Relieve tension on the guy as outlined in Paragraph 4.01.

(b) Note that the wires of one leg are shorter than those of the other leg.

(c) Using a screw driver blade, carefully pry the wires of the longer leg, one at a time, and unwind about one pitch. The individual wires of this leg will be fanned out instead of being preassembled as when first applied.

(d) After each wire of this leg has been removed the same distance, and no wires are crossed over one another, reform the wires as they were originally. Then grasp the leg and unwrap it from the strand.

(e) The first leg should be completely removed to the crossover point before following the same procedure for the second leg.

(f) The guy grip may be reapplied to the strand after having been removed providing the grip has not been excessively distorted or damaged.