Prepared by
The Pacific Telephone and Telegraph Company
Southern California Area
BELL SYSTEM PRACTICES
Outside Plant Construction
and Maintenance
SECTION G51.124.3-S
Issue A, August, 1949
T. P. T. & T. Co.

TENSIONING STRAND

OVERSIZE STRAND

1. GENERAL

1.01 This section outlines certain strand tensioning recommendations to be observed where the size of the suspension strand is larger than required for the span lengths involved and the unit weight of cable to be supported. Although applying specifically to alpeth cables that are to be supported by oversize strand, these recommendations apply generally to all types of cables if they are to be supported by oversize strand.

1.02 Alpeth cables are lighter than lead-sheath cables of the same gauge and number of pairs. Where strand of a size appropriate for a specific size of lead cable is placed and tensioned but alpeth cable is received, the strand in place will in most cases be larger than actually required to support the alpeth cable. The following are examples of such cases where span lengths do not exceed 150 feet.

Example 1 - A 303 pair, 22 gauge lead-sheath cable (weight - 3.45 lbs. per ft.) requires 10,000-pound strand, but a 303 pair, 22 gauge alpeth-sheath cable (weight 1.7 lbs. per ft.) requires only 6,000-pound strand.

Example 2 - A 909 pair, 24 gauge lead-sheath cable (weight - 5.56 lbs. per ft.) requires 16,000-pound strand, but a 909 pair, 24 gauge alpeth-sheath cable (weight - 3.0 lbs. per ft.) requires only 10,000-pound strand.

2. SLACKING OFF OVERSIZE STRAND

2.01 Before placing alpeth cable on suspension strand, check the size of the suspension strand. If larger than required for the alpeth cable, check strand tension (with a strand dynamometer) to see if it agrees with the strand stringing tension for the proper size of strand recommended in Section G51.125. If not, existing strand should be slacked off to the proper tension.

3. LEAD AND ALPETH CABLES ON THE SAME CONTINUOUS STRAND

3.01 Where lead and alpeth cables are to be supported on the same continuous strand, the section of suspension strand intended to support the lead cable should be tensioned to the recommended amount and the section of suspension strand intended to support the alpeth cable should be tensioned to the proper amount for the size of strand required for the alpeth cable. False dead-ends and associated guys and anchors should be placed at the ends of the higher tensioned strand as in the case of strand diminishing points, or slack span construction.