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SECTION VI

ADDITIONAL CONSTRUCTION REQUIREMENTS FOR TOWER LINES

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SECTION VI

ADDITIONAL CONSTRUCTION REQUIREMENTS FOR TOWER LINES

60. GENERAL

The following rules cover certain special details for the construction of tower lines. These rules are supplemental to the rules given for supply lines in general and to the detailed construction requirements for supply lines, which rules must be observed in tower line construction, except as modified herein, or where clearly inapplicable.

60.1 Definition (see Rule 21.7-C)

61. MAINTENANCE AND INSPECTION (see Rules 31.1 and 31.2)

62. STRENGTH REQUIREMENTS (see Section IV)

Where steel supports or towers are used which are not capable of withstanding practically as great a stress longitudinally as transversely, longitudinal guying shall be used (see Rule 47.2) or anchor towers shall be placed at intervals not greater than 10 spans. Such anchor towers shall be capable of withstanding the combined longitudinal tension under the loadings of Section IV of all conductors up to 10,000 pounds plus one half the excess above 10,000 pounds.

63. MATERIALS

63.1 Tower Members

Tower members shall have a thickness of metal not less than the following:

Galvanized steel: Main corner members, 3/16 inch; other members, 1/8 inch.

Painted steel: Main corner members, 1/4 inch; other members, 3/16 inch.

All iron or steel members of towers and all hardware subject to injurious corrosion under the prevailing conditions shall be protected by galvanizing, painting or other treatment which will effectively retard corrosion.

63.2 Overhead Ground Wires

Overhead ground wires or lightning protection wires shall be galvanized steel cable not less than 1/4 inch in diameter, or other corrosion resistant material of equal tensile strength. Where overhead ground wires are not used, effort shall be made to secure an effectively grounded structure.

63.3 Guys And Anchors

A. Guys

Guys shall be galvanized steel strand not less than 5/16 inch in diameter, or other corrosion resistant material of equal tensile strength, or they shall be rolled rods of galvanized steel or other corrosion resistant material, with a tensile strength at least equivalent to 5/16-inch steel cable.

B. Anchors

Anchor rods shall be galvanized steel not less than 5/8 inch in diameter or shall be of other material of equal strength and durability.

64. STEPPING

All metal towers shall be provided with steps or ladders, which shall start at not less than 7 feet 6 inches from the ground line and the spacing between steps on the same side of the tower legs shall not exceed 36 inches.

Where the members of the tower structure are so arranged that the tower may be climbed with safety no steps or ladder need be provided.

65. MARKING

All fabricated steel towers and similar structures which are of a design easily climbed and which are located in urban districts or in cultivated agricultural areas or near roads or trails which are frequently traveled, shall be equipped with a sign so worded as to warn the public of the danger of climbing same. Such sign shall be placed and arranged so that it may be read from the four corners of the structure. Such signs shall be neither less than 8 feet nor more than 20 feet above the ground except where the lowest horizontal member of the tower is more than 20 feet above the ground in which case the sign shall be not more than 30 feet above the ground.

66. CROSSINGS

Where lines supported by towers cross over major railroads (see Rule 22.3-B), or major communication lines (see Rule 20.5-A1), or other tower lines of voltages exceeding 30,000 volts, the towers supporting the crossing spans shall be designed to withstand, with safety factors as specified in Rule 44, the most severe conditions of temperature and loading specified in Rule 43 combined with the unbalanced pull which would be caused by any two conductors dead-ended or any two conductors broken in the span adjacent to the crossing.