

41-77. Where an uplift occurs at a pole or other support:—

(a) Every high pressure or extra-high pressure aerial electric line shall be secured to a shackle insulator or other suitable insulator so that it cannot become detached, or it shall be protected by a stirrup fitted over the line and fastened at both ends to the cross-arm or by means of a suitable clamp attached to the insulator, except in those cases where any such line in becoming detached from its support will not reduce the standard clearance between conductors or otherwise be dangerous.

(b) Every medium pressure or any lower pressure aerial electric line erected on the same pole or other support as lines at other pressures shall be secured to a shackle insulator or other suitable insulator, except in those cases where any such line when detached from its support will not decrease the clearance between it and the lines above by more than one-half the clearances specified in Regulation 41-36 hereof.

41-78. Any crossarm carrying a high pressure overhead electric line which is erected on a pole carrying a telegraph-line shall have a distinctive red marking thereon.

41-79. (1) Where covered electric lines of any pressure are used they shall be so attached to the insulators that their covering is not thereby impaired or likely to become impaired.

(2) Bare binding-wire shall not be used on covered wire unless at least two layers of compounded weatherproof tape are first wrapped round the outside of the covering of the wire.

(3) Where marline is used it shall be not less than three-ply, tightly wound and of first quality.

41-80. Every crossarm on terminal poles or pull-offs shall be so fixed that the pull on the wires will draw the crossarm towards the pole, and not away from it.

41-81. Aerial electric lines at medium pressure or any lower pressure may be carried on brackets attached to buildings, provided they are inaccessible from any portion of the building without the use of a ladder or other special appliance, and provided also that they are secured in such a manner that they cannot fall away from the insulator-support or make contact with the building.

#### STAYS, STRUTS, AND TRUSSES.

41-91. (1) Except where it is erected alongside a substantial fence or hedge, every stay, strut, or truss used within borough, town district, or township limits shall not be less than 9 ft. above ground-level.

(2) Outside such limits as aforesaid, a stay-wire may be attached to a stub-pole or a log of durable wood, or other form of "deadman" buried at least 4 ft. below ground-level, and it shall be attached to the "deadman" by means of a galvanized-iron bolt at least  $\frac{3}{4}$  in. in diameter, and the wire itself shall not, at any part thereof, be in contact with the ground.

(3) Where any stay less than 9 ft. above ground-level is not erected alongside a substantial fence or hedge it shall be guarded by—

(a) A substantial post-and-rail fence erected round the stay; or

(b) Two posts in line with and immediately against the stay, provided with a rail fitted between or on top of the posts; or

(c) A galvanized-iron pipe not less than 2 in. in diameter enclosing the stay; or

(d) A double wooden batten (each batten being not less than 2 in. by 1 in.) securely fastened, with the stay between the battens; or

(e) Some other approved device;

and the guard shall extend from the point where the stay-bolt enters the ground to a point where the stay is not less than 9 ft. above ground-level:

Provided that where a stay is elsewhere than in a street, and there is no danger of any person being injured by coming in contact therewith, the guard may be omitted.

(4) All guards shall be painted white.

(5) All stay-wires shall be stranded with a minimum of three strands.

(6) The height of every stay, and the like, over a street shall not be less than 18 ft. above ground-level.

(7) When used to stay any pole carrying a high pressure or extra-high pressure electric line within borough, town district, or township limits, every metal stay, strut, or truss shall be earthed. Outside such limits, such stay, strut, or truss shall be earthed when any part thereof is erected at a less height than 9 ft. above ground-level.

(8) Every stay-wire made from steel having an ultimate strength of not less than 80,000 lb. per square inch shall have a factor of safety of not less than 2.25. All other stay-wires shall have a factor of safety of not less than 3.

41-92. (1) In those cases where the stay, strut, or truss is required by these regulations to be earthed, and where the resistance in accordance with Regulation 51-01 hereof cannot be obtained, the stay when used to stay poles other than metal, shall have, in addition to earthing, a strain insulator (or

insulators) of the interlocking type, or some other approved type, inserted therein not less than 9 ft. vertically above ground-level.

(2) Each insulator used shall have a mechanical strength at least equal to that of the stay in which it is installed, and for pressures not exceeding 35,000 volts shall also have a minimum flash-over voltage in accordance with Regulation 51-22 hereof. Where the pressure exceeds 35,000 volts the stay shall be insulated in an approved manner.

41-93. Every metal stay, strut, or truss with which a telegraph linesman is likely to make contact when attending to telegraph-lines shall be earthed.

#### PART 42.—OVERHEAD CONDUCTORS II.

##### PRECAUTIONS WITH METAL.

42-01. All live metal less than 14 ft. above ground-level, and attached to any pole or other support, shall be protected in such a manner that unauthorized persons cannot make accidental contact therewith.

42-02. All metal attached to any pole or other support, and not connected to the circuit, and which may become charged by accident or otherwise, shall be earthed or otherwise adequately protected if placed less than 9 ft. above ground-level.

42-03. Every metal tower and pole shall be earthed.

##### MAXIMUM SPAN.

42-11. (1) The distance between supports carrying an aerial electric line within borough or town district limits, or within such other limits as may be specified in the license, shall not exceed  $2\frac{1}{2}$  chains (165 ft.) unless the Minister otherwise approves in writing.

(2) Where poles are erected on both sides of a street they shall, where practicable, be placed opposite each other.

42-12. The maximum span of any aerial electric line where crossing a railway-line shall not exceed that prescribed by clause (2) of Regulation 46-11 hereof.

42-13. The maximum span of any aerial electric line where crossing a telegraph-line shall not exceed that prescribed by paragraph (g) of Regulation 45-05 hereof.

##### STREET CROSSINGS.

42-21. Where an aerial electric line crosses any street within which it is erected, no angle formed by the street and the line crossing the street shall be less than 45°.

This regulation shall not apply to street intersections where the electric line does not change its direction.

##### COVERING OF AERIAL ELECTRIC LINES AND USE OF BARE WIRE.

42-31. (1) Every aerial electric line at medium pressure or any lower pressure within a borough, town district, or township, or within such other limits as may be specified in the license, shall, except as provided in Regulation 42-33 hereof, be covered throughout with good quality triple-braiding, thoroughly impregnated with weatherproof compound or other approved covering.

This covering shall not be deemed to be an insulating covering for making the line safe to handle when alive. All joints shall be effectively covered with compounded weatherproof tape.

(2) Every aerial electric line at high pressure within a borough, town district, or township, or within such other limits as may be specified in the license, shall be covered with vulcanized-rubber of at least 600 megohm grade.

This covering shall not be deemed to be an insulating covering for making the line safe to handle when alive. All joints shall be effectively covered with rubber and compounded weatherproof tape.

(3) Notwithstanding anything to the contrary in the foregoing provisions of this regulation, bare wires may be erected within borough, town district, or township limits in such places as are approved in writing by the Minister.

(4) Every aerial electric line at extra-high pressure shall be bare.

(5) Except as prescribed in Regulation 45-05 hereof, an aerial electric line at any pressure may be bare when erected outside the limits aforesaid.

42-32. (1) Every aerial electric line at medium pressure or any lower pressure which is attached to a building shall, except as provided in Regulation 42-33 hereof, be covered with good quality triple-braiding thoroughly impregnated with weather-proof compound or other approved covering:—

(a) In the case of every residence—

(i) For the whole length of such line where the length is 60 ft. or less;

(ii) For not less than 60 ft. from the residence where such line exceeds 60 ft.

(b) In all other cases for a distance of not less than 6 ft. from the building.