

CLEARANCES BETWEEN LINES.

41-31. Every overhead electric line crossing a tramway system having overhead electric trolley-wires shall have the following minimum clearances above any trolley-wire, namely: 4 ft. in the case of lines operating at a pressure not exceeding 11,000 volts; 6 ft. in any other case.

41-32. No aerial electric line at medium pressure or any lower pressure shall come within 2 ft. of any other separately owned aerial line or cable except at a pole, and then only by arrangement between the respective owners of the wires.

41-33. No aerial electric line at high pressure or extra-high pressure shall cross any other separately owned aerial electric line or cable except pursuant to an agreement between the respective owners, and in every case shall have the following clearances between lines, measured horizontally or vertically, at all temperatures:—

- (a) Medium pressure or any lower pressure and high pressure—
 - (i) If all covered (except neutral) .. 2 ft.
 - (ii) If any bare (except neutral) .. 4 ft.
- (b) Medium pressure or any lower pressure and extra-high pressure not over 11,000 volts .. 4 ft.
- (c) Medium pressure or any lower pressure and extra-high pressure over 11,000 volts .. 6 ft.
- (d) High pressure and extra-high pressure not over 11,000 volts .. 4 ft.
- (e) High pressure and extra-high pressure over 11,000 .. 6 ft.
- (f) Extra-high pressure not over 11,000 volts and extra-high pressure not over 35,000 volts .. 4 ft.
- (g) Extra-high pressure and extra-high pressure over 35,000 volts .. 6 ft.

41-34. (1) An aerial electric line crossing below another aerial line at a point between two poles or other supports carrying the upper line shall have not less than the following clearance between such lower line and the nearest of the said poles or other supports thereto, according to the pressure at which such lower line is alive:—

- (a) Medium pressure or any lower pressure—
 - If covered (except neutral) .. 2 ft.
 - If bare (except neutral) .. 4 ft.
- (b) High pressure—
 - If covered .. 4 ft.
 - If bare .. 6 ft.
- (c) Extra-high pressure .. 6 ft.

(2) An aerial electric line crossing below another aerial line at a pole or other support carrying the upper line shall be attached to an insulator fixed on a crossarm fitted to the pole or other support.

41-35. Where any guard-wire is used it shall, for the purposes of Regulations 41-33 and 41-34 hereof, be deemed to be a medium pressure electric line, and the clearances specified in the aforementioned regulations with respect to medium pressure lines shall be observed.

41-36. (1) Where aerial electric lines of more than one pressure are carried on the same pole or other support such lines shall have the following clearances measured at the pole or other support:—

- (a) Medium pressure and any lower pressure, or low pressure and extra-low pressure—
 - (i) If all covered (except neutral)—vertical or horizontal .. 2 ft.
 - (ii) If any bare (except neutral)—vertical or horizontal .. 4 ft.
- (b) Medium pressure or any lower pressure and high pressure:—
 - (i) If all covered (except neutral)—vertical or horizontal .. 2 ft.
 - (ii) If any bare (except neutral)—vertical or horizontal .. 4 ft.
- (c) Medium pressure or any lower pressure and extra-high pressure not over 11,000 volts—vertical .. 4 ft.
- (d) Medium pressure or any lower pressure and extra-high pressure over 11,000 volts—vertical .. 6 ft.
- (e) High pressure and extra-high pressure not over 11,000 volts—
 - (i) Vertical .. 4 ft.
 - (ii) Horizontal .. 3 ft.
- (f) High pressure and extra-high pressure over 11,000 volts—vertical or horizontal .. 4 ft.
- (g) Extra-high pressure and extra-high pressure—
 - (i) Vertical .. 4 ft.
 - (ii) Horizontal .. 3 ft.

(2) Under any of the conditions of wind-pressure and temperature referred to in the license or these regulations, the separation between wires at the centre of the span shall not be less than one-half of the distances specified in the last preceding clause.

41-37. (1) Where aerial electric lines of the same pressure are carried on the same pole or other support the circuits shall have the following clearances, measured at the pole or other support:—

- (a) Medium pressure or any lower pressure—
 - vertical or horizontal .. 1 ft.
- (b) High pressure—vertical or horizontal .. 2 ft.
- (c) Extra-high pressure not over 11,000 volts—
 - (i) Vertical .. 2 ft.
 - (ii) Horizontal .. 2½ ft.

(2) For pressures exceeding 11,000 volts the clearances shall be such as are approved.

(3) Under any of the conditions of wind-pressure and temperature referred to in the license or these regulations, the separation between wires at the centre of the span shall not be less than one-half of the distances specified in clause (1) of this regulation.

41-38. Where aerial electric lines of different pressures are taken down a pole or other support to a transformer or other apparatus, unless the lines are enclosed in pipes or lead-covered cables are used, they shall be supported vertically by insulators spaced not more than 8 ft. apart or by strain insulators fitted at top and bottom, and the following clearances between lines of different pressures shall be provided:—

- (a) Medium pressure or any lower pressure and high pressure .. 1 ft.
- (b) Medium pressure or any lower pressure and extra-high pressure not over 11,000 volts .. 2 ft.
- (c) High pressure and extra-high pressure not over 11,000 volts .. 2 ft.

41-39. (1) Where it is possible for any aerial conductor to be alive on any crossarm below the top crossarm while any conductors above are dead, either the following climbing-spaces between conductors through which it may be necessary to climb shall be provided at the pole or other support, or all conductors through which it is necessary to climb shall be made dead before any work is undertaken on the aerial lines, or else every conductor below the top crossarm shall be enclosed in an earthed pipe or be protected by an approved protective cover while work is being carried out:—

- (a) Medium pressure or any lower pressure covered (except neutral) .. 2½ ft.
- (b) Medium pressure or any lower pressure bare (except neutral) .. 3 ft.
- (c) High pressure, covered .. 3 ft.
- (d) High pressure, bare .. 4 ft.
- (e) Extra-high pressure not over 11,000 volts .. 5 ft.

Provided that where vertical-rack construction is used for medium pressure or any lower pressure electric lines the above clearances need not be provided; but, if not so provided, pole-steps shall not be used.

(2) Where climbing-space is provided between lines of different pressure the clearance allowed shall be that provided for the higher pressure.

41-40. The minimum clearance between any aerial electric line and any telegraph-line or between any aerial electric line and any railway communication or signal-wire shall be not less than that prescribed by Regulations 45-04, 45-05, and 46-12 hereof.

CLEARANCES FROM BUILDINGS.

41-51. (1) Where a medium pressure or any lower pressure aerial electric line passes above any building the following minimum clearances, shall be provided:—

- (a) A vertical clearance of 7 ft. 6 in. above the highest point of any flat roof, open balcony, veranda roof, and lean-to roof, except as provided in clause (2) of this regulation; and
- (b) A vertical clearance of 7 ft. 6 in. immediately under such lines, and a horizontal clearance of 4 ft. in the case of any pitched roof except where the line is attached to the building as provided in Regulation 41-71 hereof, and except where the line crosses the ridge of the roof, in which case there shall be a vertical clearance of 2 ft. above such ridge.

(2) When such line is a service-line and it is not practicable to terminate it on a building otherwise than immediately above the attachment of a veranda roof or lean-to roof the vertical clearance may be reduced to 6 in. above the highest point of such roof.

(3) Every such wire (other than an earthed neutral or middle conductor, or a wire having a clearance of not less than 7 ft. 6 in.) shall be covered.

41-52. (1) Where a high pressure or extra-high pressure aerial electric line passes above any building or part of a building it shall have a vertical clearance of not less than 8 ft. above the highest part of the building immediately under such line, and a horizontal clearance of not less than 4 ft. between such line and any part of such building.