

wire shall be in lengths not exceeding 300 feet, and shackled with insulating shackles. Where the conducting wires are crossed, as provided in Regulation 34, the suspending wires shall also be crossed in the same manner. All suspending wires, if of iron or steel, shall be galvanized.

32. *Conductors to be fastened to inner side of insulators.*—In all cases where aerial conductors are supported by insulators, such conductors must be fastened to the inner side of the insulators, except where guard irons are used, so that, in the event of the conductor fastening giving way, the conductor will not fall to the ground.

33. *Minimum sectional area of conductors.*—No single wire less than No. 14 S.W.G., shall be used, and no smaller wire than No. 20 S.W.G., shall be used in any stranded cable. No stranded cable shall have a sectional area less than the equivalent of No. 14 S.W.G.

34. *Protection of telegraph and telephone wires from interference.*—Except where otherwise permitted by the constituted authorities, in the case of aerial conductors carrying alternating currents, the two conductors constituting the lead and return for any circuit shall be run parallel with each other, and at a distance apart not exceeding 18 inches; and the position of such lead and return shall be interchanged by crossing every half mile, or at least once in any shorter length of parallel telegraph or telephone wire, which would be liable to induction.

35. *Conductors not to be placed on telegraph or telephone poles.*—In no case, without special permission from the Postmaster-General, shall any aerial conductor be attached to any pole or support carrying a telegraph or telephone wire.

36. *Owner of conductor responsible for supports.*—The owner of every aerial conductor and support shall be responsible for the efficiency of the same, and every support shall bear a distinctive mark, approved by the constituted authorities, to indicate the ownership.

37. *Maintenance.*—Every aerial conductor, including its supports and all the structural parts and electrical appliances and devices belonging to or connected with such conductor, shall be duly and efficiently supervised and maintained by or on behalf of the owners as regards both electrical and mechanical conditions.

38. *Transformers.*—Where transformers are attached to street poles they shall be securely fixed thereto, at a height of at least 18 feet above ground, and shall be provided with switches and fusible cut-outs placed in the lead and return of the high-pressure or extra high-pressure conductors, in such a manner that the transformer can be completely disconnected from the supply mains, and the whole apparatus shall be enclosed in a watertight covering, which, if of metal, shall be efficiently connected to earth, and necessary precautions shall be taken to render it impossible for the low-pressure or secondary conductors to receive current from the high-pressure or primary conductors. (See Regulation 52.)

39. *Unused conductors to be removed.*—No wire or support or attachment thereto shall remain erected for more than one month after it has ceased to be in use, unless the owner or owners intend, within a period not exceeding three months, to take it again into use, and shall give notice of such intention to the constituted authorities.

40. *Protection of telegraph and telephone lines from induction.*—Every aerial conductor shall be placed and used with due regard to electric lines and works from time to time used, or intended to be used, for the purpose of telegraphic or telephonic communication, or the currents in such electric lines and works, and every reasonable means shall be employed in the placing and use of aerial conductors, to prevent telegraph and telephone wires being injuriously affected, whether by induction or otherwise, to the entire satisfaction of the Postmaster-General.

41. *Bare conductors for long distances.*—For the purpose of transmission of electrical energy over long distances, the constituted authorities may, after due inquiry, and on satisfying themselves that the public safety will not be endangered thereby, grant permission, under special conditions, for the erection of bare conductors overhead in sparsely populated districts, and beyond the area of cities and towns.

Converting Stations.

42. *Converting stations.*—Converting stations or points in a system of distribution to which a high-pressure supply is given from generating stations, and from which a low-pressure supply is given to one or more consumers, and which are not on the consumer's premises, shall be established in suitable places, which are in the sole occupation and charge of the undertakers.

43. *Precautions against contact.*—In every case where the supply is transformed at a converting station, as described in the preceding Regulation, some means or apparatus approved by the constituted authorities shall be provided which shall render it impossible that the low-pressure distributing mains shall be at any time charged to a dangerous difference of potential from the earth, owing to any accidental contact with, or leakage from, the high-pressure system either within or without the converting station. (See Regulation 52.)

Consumers' Premises.

44. *Transformers and high-pressure apparatus to be enclosed in metal.*—Where the general supply of energy is a high-pressure supply, and transforming apparatus is installed on the consumer's premises, connected to the distributing mains by high-pressure service lines, and to the consumer's terminals by low-pressure service lines, the whole of the high-pressure service lines, conductors, and apparatus, including the transforming apparatus itself, so far as they shall be on the consumer's premises, shall be completely enclosed in solid walls, or in strong metal casing efficiently connected to earth, and securely fastened throughout.

45. *Precautions against contact.*—In every case where any transforming apparatus is installed on the consumer's premises, as described in the preceding Regulation, some means or apparatus approved by the constituted authorities shall be provided, which shall render it impossible that the low-pressure service lines and consumer's wires shall be at any time charged to a dangerous difference of potential from the earth, owing to any accidental contact with, or leakage from, the high-pressure system either within or without the transformer. (See Regulation 52.)

46. *Low-pressure apparatus to be insulated.*—All terminals, low-pressure service lines, or other apparatus, between the transforming apparatus or other source of supply and the consumer's terminals, so far as they shall be on the consumer's premises, shall be completely enclosed in insulated cases or coated