(2) Where single lead-covered unarmoured cables are used for alternating current the lead and return cables shall be placed as near as possible to each other.

44–05. (1) Rubber-insulated cables for use on pressures which do not vary from earth potential by more than—

(*a*) 250 volts shall be of not less than 600 megohm grade as prescribed by column 3 of Table IX in Division VII hereof; and

(*b*) 650 volts shall be of not less than 2,500 megohm grade as prescribed by column 4 of Table IX in Division VII hereof.

(2) Paper-insulated cables shall have an insulation resistance not less than that prescribed by column 5 of Table IX in Division VII hereof.

SERVICE-MAINS.

44–11. Service-mains shall in all cases be—

(*a*) Enclosed in conduit in accordance with Regulation 45–01 hereof, which includes no other conductor, and which in the case of all buildings of more than two rooms shall not be of a smaller diameter than $\frac{3}{4}$ in.; or

(*b*) Armoured cable; or

(*c*) Lead-covered cable embedded in bitumen.

44–12. Except in the case of different systems of supply there shall, where practicable, be only one point of entry to any building and one point within a building at which the installation as a whole can be controlled, save that where a master-switch is provided in accordance with Regulation 42–24 hereof there may be two points of control—namely, the master-switch and the main switch.

BARE CONDUCTORS.

44–21. Bare conductors may be used as collector or trolley-wires for travelling cranes and similar appliances, for battery connections, for bus-bars, for luminous-discharge-tube connections (not exceeding 12 in. in length), and for earthing-leads. Conductors used as collector or trolley-wires shall be solid.

44–22. (1) Every bare conductor, other than an earthing-lead, shall be carried on insulators unless self supporting, and it shall be so spaced and protected that risk of accidental contact is reduced to a minimum.

(2) Where the voltage exceeds extra-low pressure no bare conductor shall be readily accessible to any unauthorized person.

44–23. Except as hereinbefore specified, bare conductors shall be used only in positions not ordinarily accessible to any unauthorized person and in such circumstances as may be sanctioned by the Authorized Inspector.

AERIAL CONDUCTORS.

44–31. Where the length of any aerial line exceeds 1 chain and/or where the voltage exceeds medium pressure the provisions of the Electrical Supply Regulations, 1935, shall apply.

44–32. Where the span of an aerial line does not exceed 1 chain soft-drawn copper conductors may be used provided the voltage does not exceed medium pressure.

44–33. Where the length of any aerial line does not exceed 1 chain the conductors shall be stranded and shall have a minimum area of 0·007 sq. in. (7/·036 in. or its equivalent).

44–34. Where any part of an aerial conductor other than an earthed conductor is within 7 ft. 6 in. of a building such part shall be covered with rubber insulation in accordance with Regulation 23–12 hereof and be braided, or where the voltage does not exceed medium pressure it may be covered with good quality triple-braiding thoroughly impregnated with weather-proof compound.

44–35. (1) No consumer's aerial conductor shall be erected or maintained at a less height than 9 ft. above ground-level or water-level except that in any part of the premises used by vehicles having a height (including their loads) greater than 8 ft. the minimum height shall be 12 ft.

(2) In the case of trolley-wires in tunnels and in and about mines the Chief Electrical Engineer may grant exemption from the provisions of this regulation subject to such conditions as he may impose on the grounds of freedom from electrical hazard.

44–36. Where a consumer's aerial conductors at medium pressure or any lower pressure pass above any building or part of a building the following minimum clearances, measured at a temperature of 120° F., 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 paragraph (*c*) of this regulation; and

(*b*) A vertical clearance of 7 ft. 6 in. immediately under such conductors and a horizontal clearance of 4 ft. in the case of any pitched roof, except as provided in paragraph (*c*) of this regulation, and except where the conductors cross the ridge of the roof, in which case there shall be a vertical clearance of 2 ft. above such ridge.

(*c*) Where it is not practicable to terminate the conductors 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.

44–37. (1) Where a consumer's aerial conductors at high pressure pass above any building or part of a building they shall have a vertical clearance of not less than 8 ft. above the highest part of the building, immediately under the lines, and a horizontal clearance of not less than 4 ft. between the lines and any part of the building.

(2) The vertical clearance shall be measured at a temperature of 120° F., and the horizontal clearance shall be measured when the line is at a maximum deflection from the vertical due to a wind-pressure of 18 lb. per square foot of diametral plane.

(3) A conspicuous notice—"DANGER: LIVE WIRES"—shall, where possible, be fixed to a part of the building nearest to the lines, where it will be readily seen by any person on the building near the wires, and shall be permanently maintained in a legible condition.

(4) Where it is not possible to fix such notice in a conspicuous place, then a notice, with the word "DANGER" in letters not less than 2 in. high, shall be fixed to one of the aerial conductors immediately over the highest part of the building, and the necessary clearance shall be allowed between the building and the bottom part of this notice.

44–38. All aerial conductors shall be efficiently supported on insulators. Where exposed to the weather such insulators shall be of the outdoor type.

44–39. Each aerial circuit shall be run as a separate circuit from the main switchboard or distribution board, or alternatively the aerial conductors shall be protected by a weatherproof cut-out fixed outside at the point where the wires leave the building. The leads of such separate circuit within a building shall have a cross-sectional area of not less than 0·002 sq. in. (3/·029 in. or its equivalent).

44–40. Aerial electric lighting, heating, or power conductors shall not cross over or under in close proximity to any aerial wire, counterpoise wire, lead-in wire, or stay-wire belonging to or connected with any radio installation, or be erected in such a position that it is possible for them to make contact therewith, or for any person to make simultaneous contact accidentally with any such conductor and any such aerial wire, counterpoise wire, lead-in wire, or stay-wire.

UNDERGROUND AND UNDERWATER CONDUCTORS.

44–51. Where conductors other than service-mains are buried in the ground outside of any building the conductors shall be—

(*a*) Lead-covered; or

(*b*) Lead-covered and armoured; or

(*c*) Covered with tough rubber compound in accordance with Regulation 23–71 hereof; or

(*d*) Vulcanized-rubber insulated in accordance with Regulation 23–12 hereof and embedded in bitumen or other approved compound.

44–52. Where conductors are laid under water they shall be—

(*a*) Lead-covered; or

(*b*) Lead-covered and armoured; or

(*c*) Covered with tough rubber compound in accordance with Regulation 23–71 hereof.

OPEN WIRING WITH BRAIDED CABLES.

44–61. In no case shall open wiring be used unless permission in writing is first obtained from the electrical supply authority, which shall give such permission only where encased wiring would be unsuitable.

44–62. Braided cables such as are specified in paragraph (*b*) of Regulation 23–42 hereof may, subject to the provisions of the preceding regulation, be used without the further protection of conduit or casing for lighting, heating, or power purposes, provided that—

(*a*) They are used only for surface work; and

(*b*) They are kept away from all structural metalwork; and

(*c*) They are adequately protected wherever they are within 6 ft. above a floor; and

(*d*) They are not in electrical or mechanical contact with any gas or water-pipe; and

(*e*) They are secured by porcelain cleats or insulators which have smooth or rounded edges that will not indent or damage the braiding, and which are of non-absorbent material and the fixings of which are of non-absorbent, non-rusting material; and

(*f*) They are spaced not less than $\frac{1}{2}$ in. from walls, ceilings, or other structures, and so spaced as to prevent any two or more cables coming into contact, and that they are supported at intervals of not more than 4 ft. 6 in.; and