

- (b) The electrical resistance of the conduit in a complete installation measured between the conduit at a point near the main switch and any other point of the installation does not exceed 2 ohms; and
- (c) Where liable to condensation drip-outlets not exceeding $\frac{1}{4}$ in. diameter and not less than $\frac{1}{8}$ in. diameter are provided at the lowest point of each circuit to permit the exit of moisture; and
- (d) The conduits of each circuit are erected complete before the cables are drawn in, that conduits of less than 1 in. diameter are supported at least every 4 ft. and other conduits at least every 6 ft., save that where used between supports placed more than 6 ft. apart they shall be supported to the satisfaction of the Authorized Inspector, and that all conduits, except where checked into joists, studs, and the like, are secured by means of saddles spaced where possible at intervals not exceeding 4 ft. All saddles shall be securely fixed; and
- (e) Except where terminating at accessories and fittings, metal bell-mouths or other approved outlets are fitted to the ends of all conduits to prevent abrasion, and that the conduit at all external outlet points is set down not less than 45 degrees and terminates with a non-corroding bell-mouth; and
- (f) The ends of all conduits are—
- (i) Reamed out and do not project into any conduit-fitting, junction-box, or other outlet beyond the thread, bushing, or lock-nut in such fitting, junction-box, or other outlet; and
 - (ii) Where terminating at any accessory and/or fitting (other than where mounted on a switchboard) screwed thereto, or provided with metal outlet-boxes or approved outlet-flanges, or where the conduit is run on the surface and it is not necessary to earth the accessory or fitting the conduit may terminate in, but not pass through, a wooden block. Where a metal outlet-box is not provided with the standard length of thread the conduit shall be securely clamped thereto. Where a wooden block is used it shall comply with Regulation 47-81 hereof. All boxes and flanges shall be securely fixed; and
- (g) No inspection elbow or tee shall be used for drawing-in purposes for any cable larger than 7/036 in.; and
- (h) All bends have a radius not less than two and a half times the outside diameter of the conduit, and that all elbows and tees are of the inspection type, save that—
- (i) At the ends of conduits immediately behind fittings or accessories plain conduit fittings may be used; and
 - (ii) In surface wiring where the conduit turns to pass through a wall one plain elbow may be used if the conditions are such that the use of an inspection elbow or normal bend would be impracticable; and
- (i) In damp situations and where exposed to the weather conduits, together with their fittings, saddles, and fixings, are of incorrodible material or rendered incorrodible by a suitable method. Conduit fittings and boxes shall be rendered watertight; and
- (j) In damp situations and where exposed to the weather if the protective covering of the conduit has been removed from any part such part shall be adequately protected; and
- (k) Where conduits are to be buried in concrete, plaster, cement, or the like, in any building they shall comply with the following requirements—
- (i) The conduit shall finish at outlets in flush boxes, and no inspection fittings, solid elbows, or tees shall be used. Draw-in boxes may be used provided that their covers are flush with the finished surface; and
 - (ii) The wires shall be drawn in from the outlets or draw-in boxes specified in the preceding paragraph, and the conduit shall be cleared of all moisture and debris by pulling a swab through before the wires are drawn in; and
- (l) Where flexible conduit is used it shall be efficiently connected mechanically and electrically to the appliance and to the screwed conduit, plug, or other accessory or fitting.

WOOD CASING.

45-11. All classes of cables specified in Regulations 23-42 and 23-43 hereof may be enclosed in wood casing provided that—

- (a) It is used only in dry situations and on the surface. In positions subject to occasional condensation such as bathrooms and washhouses in domestic installations casing may be used provided the capping and casing are painted over with water-resisting paint after erection; and

- (b) It is not fixed in contact with any gas-pipe or water-pipe, or immediately below the latter; and
- (c) The capping is secured by screws at intervals not exceeding 2 ft.; and,
- (d) If the casing forms part of ornamental woodwork, ready access is provided to the cables contained therein; and
- (e) The casing is fixed at intervals not exceeding 2 ft. 6 in., unless continuously supported, in which case fixings shall be not more than 5 ft. apart, and that all joints are close fitted and all angles are mitred; and
- (f) In no circumstances shall it be used where the pressure exceeds 250 volts to earth, or for enclosing service-mains, or for passing through party walls.

FLEXIBLE CORDS.

45-21. Flexible cord shall be used only for pendants, the internal wiring of fittings, and the connecting of appliances, fittings, and lift-cages to the fixed wiring, and shall be installed in accordance with the following requirements:—

- (a) It shall be installed in a position where it will be as free from mechanical injury as the circumstances permit, and with this object in view it may be supported by insulated screw-hooks or other adequate means within the limits of the room or compartment in which it is connected to the fixed wiring; and
- (b) In no circumstances shall it support anything other than the fitting or accessory to which it is attached; and
- (c) The maximum weight carried by a twin twisted flexible cord shall be as follows:—
- | | | |
|---------------------------------|----|--------|
| 23/0076 in. or its equivalent.. | .. | 5 lb. |
| 40/0076 in. or its equivalent.. | .. | 10 lb. |
- (d) Where it is necessary for a flexible cord from a hanging fitting to pass into a ceiling to a plug-socket or other connector it shall be suitably protected; and
- (e) Where taken across the surface of a ceiling the total length shall not exceed 9 ft., and it shall be supported by insulated screw-hooks at intervals not exceeding 4 ft. 6 in.; and
- (f) The type of flexible cord to be used shall be in accordance with the requirements of Table XV in Division VII hereof.

TEMPORARY WIRING.

45-31. Temporary wiring shall be carried out only after special permission has been granted by the electrical supply authority in accordance with Regulations 15-06 to 15-11 (both inclusive) hereof, and shall comply with the following requirements:—

- (a) All such wiring shall be supported by porcelain cleats or knob insulators, or in such other manner as may be approved in any particular case by the electrical supply authority's engineer; and
- (b) The wiring shall be kept clear of any inflammable materials, and shall be so supported as to be free from risk of mechanical injury or of interference by unauthorized persons; and
- (c) All joints shall be mechanically and electrically sound; and
- (d) Temporary wiring shall not be connected to permanent wiring except at a switchboard or at a suitable point; and
- (e) Each circuit shall be controlled by a switch and protected by a cut-out; and
- (f) The maximum number of lamps on any subcircuit shall be such that the total current supplied from such subcircuit does not exceed 15 amperes.

WIRING WHERE INFLAMMABLE GOODS, OR EXPLOSIVE DUST OR GAS IS PRESENT.

45-41. (1) In any place where highly inflammable goods (e.g., cinematograph-films or petrol) are stored or packed, or where inflammable or explosive dust or gas is liable to be present, no lamp except an incandescent lamp shall be used, and it and its holder shall be enclosed in a fitting having a thick glass globe and an adequate radiating surface.

(2) Where inflammable or explosive dust or gas is liable to be present every fitting shall be gas-tight.

45-42. (1) The cables in such place as aforesaid shall be enclosed in screwed steel conduit for their entire length, and where inflammable or explosive dust or gas is liable to be present the conduit shall be rendered gas-tight by painting all threads with white-lead, red-lead, or graphite pipe-jointing compound before screwing into any conduit-fitting or other fitting, and all conduit-fittings shall be gas-tight.

(2) The conduit shall in all cases be screwed into the lamp-fitting, conduit-fitting, and/or terminal box of every motor and/or other appliance.

(3) No unenclosed flexible cable or flexible cord other than one used for a portable appliance shall be used.