

corrosive gas, fume, and/or liquid is present, or liable to be present, special precautions shall be taken to prevent corrosion or deterioration of the earthing-clip and earthing-lead.

(2) For armoured cables such clips shall be so designed as to grip firmly the wires of the armouring without damage to the insulation.

(3) For lead-sheathed armoured cables the principal contact shall be with the lead, but the clip shall be so designed as to grip the armouring firmly without damage to the lead.

PART 35.—RADIO APPARATUS.

35-01. Every transformer which is used with any radio apparatus and which is, or which may be, in electrical contact with any submain or subcircuit which is connected to a service-main shall—

(a) Be of the double-wound type in which the primary winding is effectively separated from all other windings by adequate insulation capable of withstanding the test prescribed by Regulation 62-41 hereof; and

(b) Be of such design, construction, and material that no accessible part of the transformer shall rise to a temperature higher than 176° F.

35-02. Every resistance which is used with any radio apparatus and which is, or which may be, in electrical contact with any submain or subcircuit which is connected to a service-main shall be of such design, construction, and material that no accessible part of the resistance shall rise to a temperature higher than 176° F.

35-03. Where condensers used with any radio apparatus are connected in series across any submain or subcircuit which is connected to a service-main the mid-point between the condensers shall not be connected to the chassis nor shall a condenser be connected between the chassis and such submain or subcircuit.

35-04. Every battery-eliminator shall comply with the following requirements:—

(a) It shall be enclosed in a case of metal or of some material that is tough, not readily combustible, and non-hygroscopic; and

(b) Such case shall be adequately ventilated and of such design, construction, and material as reasonably to prevent all risk of causing injury to any person.

35-05. Every condenser which is used with any radio apparatus and which is, or which may be, in electrical contact with any submain or subcircuit which is connected to a service-main shall be capable of withstanding the test prescribed by Regulation 62-42 hereof.

PART 36.—MARKING OF ACCESSORIES, APPLIANCES, LAMPS, AND SWITCHES.

36-01. There shall be permanently and legibly marked—

(a) The maker's name, or registered trade-mark, or registered trade-name on all appliances, lamps, adaptors, ceiling-roses, cut-outs, circuit-breakers, flexible cord connectors, lamp-holders, plugs and sockets, and switches; and

(b) The maximum operating voltage and amperage on all cut-outs, circuit-breakers, flexible cord connectors, plugs and sockets, and switches other than switch lamp-holders, switches not exceeding 1.25 amperes rating if incorporated in an appliance or fitting, and pendant switches save that in the case of pendant switches the maximum operating voltage shall be marked thereon; and

(c) The operating voltage and either amperage or wattage on all appliances; and

(d) The operating voltage and the amperage, or wattage, or lumens, or candle-power on all lamps other than series street-lighting lamps.

36-02. Where alternative ratings are marked on any appliance, accessory, or apparatus, such appliance, accessory, or apparatus shall be capable of withstanding the prescribed tests at the highest marked rating.

PART 37.—GENERAL.

37-01. All apparatus shall be so designed, proportioned, and constructed that it will carry its rated load at all times without heating to an extent which will cause risk of breakdown of its insulation.

37-02. All material used in the construction of any accessory, fitting, appliance, or apparatus shall, where practicable, be non-ignitable. Where the use of ignitable material is necessary, such material shall not come in contact with any part the temperature of which exceeds 212° F. and unless adequately separated therefrom by fire-resisting material, shall be maintained at a distance from all parts in which this temperature is exceeded sufficient to avoid any risk of fire.

37-03. Resistances, control gear, and all apparatus, other than apparatus designed and intended for heating and cooking purposes, shall be so arranged that in normal operation no accessible part of the enclosing case can rise to a temperature exceeding 176° F.

37-04. The connecting terminals of every apparatus in which heat is generated shall be so arranged that connecting cables are not exposed to temperatures in excess of those permitted under these regulations for the class of insulation to be used, the terminals being situated to facilitate the connecting cables entering from below where this is necessary to avoid exposure to any such excess temperatures.

DIVISION IV.—INSTALLATION I.

PART 41.—ELECTRICAL PLANT.

GENERATORS.

41-01. (1) Generators, other than flame-proof, forced-draught, induced-draught, or pipe-ventilated machines shall be placed in well-ventilated rooms where inflammable or explosive dust or gas cannot accumulate under normal conditions. In situations where inflammable or explosive materials are stored or handled generators may be placed only if adequately protected to the satisfaction of the Authorized Inspector.

(2) Generators shall be placed in positions in which they are not exposed to risk of mechanical injury, or to damage from water, steam, or oil.

41-02. Adequate precautions shall be taken in the installation of every generator as will ensure immunity from electrical hazard.

TRANSFORMERS, RESISTANCES, AND CHOKE-COILS.

41-11. (1) Transformers, resistances, and choke-coils operating at other than extra-low pressure shall, unless cased, be carried on supports of incombustible material.

(2) In situations where in the opinion of an Authorized Inspector inflammable or explosive gas, dust, or flyings are liable to be present the transformers shall be oil-immersed or gas-tight.

41-12. Adequate precautions shall be taken in the installation of every transformer, resistance and choke-coil as will ensure immunity from electrical hazard.

41-13. Auto-transformers, resistances, or choke-coils shall not, except as provided in the next succeeding regulation, be used to reduce the voltage to low pressure or extra-low pressure—

(a) To supply general wiring in buildings; or

(b) For any other purpose where the low pressure or extra-low pressure circuit or apparatus has exposed live metal with which it is possible for any person to make accidental contact.

41-14. Notwithstanding anything in the last preceding regulation resistances or choke-coils may be used for—

(a) Battery charging; and

(b) Arc lamps, provided that the maximum potential difference across the terminals of the arc or any part of the circuit between such resistance or choke-coil and the arc does not exceed 50 volts.

SECONDARY BATTERIES.

41-21. When apparatus is supplied from a secondary battery the work of connecting such apparatus to such battery shall be done in accordance with the provisions of these regulations which would govern the connecting of such apparatus with a generating plant developing the same difference of potential.

41-22. Every battery shall be so arranged that the difference in potential between adjacent cells does not exceed 50 volts unless adequate protection is provided against electrical hazard. Each cell shall be readily accessible from the top and from at least one side.

41-23. The room in which any battery is placed shall be thoroughly ventilated.

41-24. Suitable apparatus shall be provided for controlling the current with which a battery is being charged.

41-25. Where a battery is being charged through a resistance or rectifier such resistance or rectifier shall be connected in the live conductor between the source of supply and the battery. The supply to the battery shall be controlled by a suitable switch fixed in an accessible position.

41-26. Every portable battery shall while being charged from a source of supply exceeding extra-low pressure be placed so that an attendant can handle the battery only while standing upon a wooden platform, or other insulated platform, suitably designed and placed so as to prevent the accumulation of acid or water in contact with it.