

## ***Earthing of Installation***

### **Regulation 34. Earthing of metallic part, neutral point, etc.**

(1) Any metallic sheath, cover, handle, joint box, switch box, fuse box, switchgear frame, the frame bed plate of any generator, converter, rectifier and motor, the metallic case and core of any transformer, and the metallic frame and cover of any refrigerator, cooking stove and other electrical equipment including any domestic appliance, except those of class II construction, shall be effectively earthed.

(2) Any water pipe connected to a public water supply system shall not be used as a sole means of earthing.

(3) Any gas pipe shall not be used as a sole means or earthing.

(4) The neutral point of an alternating current system or the midpoint of a direct current system shall not be connected to earth at more than one point, except with the approval of the Commission.

(5) Where the neutral or mid-point of a system is not effectively earthed, an indicative and protective device shall be installed in order to avoid danger due to leakage of current to earth from a live conductor.

(6) Where permission of the Commission has been obtained for the neutral conductor to be used as an earth conductor for earthing the frame of an electrical apparatus, the neutral conductor shall not be used as the return conductor for a single phase supply.

### **Regulation 35. Method of earthing.**

In any installation a complete system of earthing conductors made of an acceptable material and having an adequate cross-sectional area with one or more earth plates, pipes or rods shall be provided. Such system of earthing conductors shall be connected to the earth and effectively maintained.

### **Regulation 36. Protection against earth leakage current.**

(1) For an installation in a place of public entertainment, protection against earth leakage current shall be afforded for any final circuit supplying electricity to an equipment which is intended to provide service to the public or which is intended to be accessible to, used by or operated by the public by a residual current device having a rated residual operating current not exceeding 10 milliamperes.

(2) For an installation in a place where the floor is likely to be wet or where the wall or enclosure is of low electrical resistance, protection against earth leakage current shall be afforded for any final circuit supplying electricity to any equipment, either individually or in a group, by a residual current device having a rated residual operating current not exceeding 10 milliamperes.

(3) For an installation where hand-held equipment, apparatus or appliance is used or is likely to be used, protection against earth leakage current shall be afforded for any final

circuit, either individually or in a group, by a residual current device having a rated residual operating current not exceeding 30 milliamperes.

(4) For an installation, other than the installations mentioned in subregulations (1), (2) and (3), protection against earth leakage current shall be afforded for any final circuit, either individually or in a group, by a residual current device having a rated residual operating current not exceeding 100 milliamperes unless—

(a) for functional reasons, it is impractical to provide the protection; or

(b) it is unsafe or even dangerous to provide the protection.