§ 169.676 Grounded electrical systems.

(a) Except as provided in paragraph (b) of this section, each electrical system must meet subpart 111.05 of this chapter.

(b) Ground detection is not required.

§ 169.677 Equipment protection and enclosure.

(a) Except as provided in this section, all electrical equipment including motors, generators, controllers, distribution panels, consoles, etc., must be at least dripproof and protected.

(b) Equipment mounted on a hinged door of an enclosure must be constructed or shielded so that no live parts of the door mounted equipment will be exposed to accidental contact by a person with the door open and the circuit energized.

(c) Any cabinet, panel, or box containing more than one source of potential in excess of 50 volts must be fitted with a sign warning personnel of this condition and identifying the circuits to be disconnected to remove all the potentials in excess of 50 volts.

(d) Each distribution panelboard must be enclosed.

§ 169.678 Main distribution panels and switchboards.

(a) A distribution panel to which the generator leads are connected, and from which the electric leads throughout the vessel directly or indirectly receive their electric power is a switchboard.

(b) Each switchboard must have a driphood or an equivalent means of protecting against falling liquid.

(c) Nonconductive deck materials, mats, or gratings must be provided in front of each switchboard.

(d) If the switchboard is accessible from the rear, nonconductive deck material, mats, or gratings must be provided in the rear of the switchboard.

(e) Metal cases of instruments and secondary windings of instrument transformers must be grounded.

(f) Each switchboard must be placed in a location that is accessible, adequately ventilated, and as dry as practicable. All uninsulated current carrying parts must be mounted on nonabsorbent, noncombustible, high dielectric insulating material.

(g) Each switchboard must be of the dead front type.

(h) Each switchboard must have front and, if accessible from the back, rear non-conducting hand rails except on vessels where the surrounding bulkheads and decks are of an insulating material such as fiberglass or wood.

§ 169.679 Wiring for power and lighting circuits.

Wiring for each power and lighting circuit must meet subpart 111.60 of this chapter.

§ 169.680 Installation of wiring for power and lighting circuits.

(a) Wiring must be run as high as practicable above the bilges.

(b) Each cable installed where particularly susceptible to damage such as locations in way of doors, hatches, etc., must be protected by removable metal coverings, angle irons, pipe, or other