Subpart 111.107—Industrial Systems

111.107–1 Industrial systems.

AUTHORITY: 46 U.S.C. 3306, 3703; Department of Homeland Security Delegation No. 0170.1.

SOURCE: CGD 74–125A, 47 FR 15236, Apr. 8, 1982, unless otherwise noted.

Subpart 111.01—General

§ 111.01–1 General.

(a) Electric installations on vessels must ensure:

(1) Maintenance of services necessary for safety under normal and emergency conditions.

(2) Protection of passengers, crew, other persons, and the vessel from electrical hazards.

(3) Maintenance of system integrity through compliance with the applicable system requirements (IEEE, NEC, IEC, etc.) to which plan review has been approved.

(b) Combustible material should be avoided in the construction of electrical equipment.

[CGD 74–125A, 47 FR 15236, Apr. 8, 1982, as amended by CGD 94–108, 61 FR 28275, June 4, 1996; 62 FR 23907, May 1, 1997]

§ 111.01–3 Placement of equipment.

(a) Electric equipment must be arranged, as far as practicable, to prevent mechanical damage to the equipment from the accumulation of dust, oil vapors, steam, or dripping liquids.

(b) Apparatus that may arc must be ventilated or be in ventilated compartments in which flammable gases, acid fumes, and oil vapors cannot accumulate. Skylights and ventilators must be arranged to prevent flooding of the apparatus.

§ 111.01–5 Protection from bilge water.

Each of the following in or around the bilge area must be arranged or constructed so that it cannot be damaged by bilge water:

(a) Generators.

(b) Motors.

(c) Electric coupling.

(d) Electric cable.

[CGD 94–108, 61 FR 28275, June 4, 1996]

§ 111.01–7 Accessibility and spacing.

(a) The design and arrangement of electric apparatus must afford accessibility to each part as needed to facilitate proper inspection, adjustment, maintenance, or replacement.

(b) Within an enclosure, the spacing between energized components (or between an energized component and ground) must be to the appropriate industry standard for the voltage and current utilized in the circuit. Additionally, spacing within any enclosure must be sufficient to facilitate servicing.

[CGD 94–108, 61 FR 28275, June 4, 1996]

§ 111.01–9 Degrees of protection.

(a) Interior electrical equipment exposed to dripping liquids or falling solid particles must be manufactured to at least NEMA 250 or IEC 60529 (both incorporated by reference; see 46 CFR 110.10–1) IP 22 degree of protection as appropriate for the service intended.

(b) Electrical equipment in locations requiring exceptional degrees of protection as defined in 46 CFR 110.15–1 must be enclosed to meet at least the minimum degrees of protection in ABS Steel Vessel Rules (incorporated by reference; see 46 CFR 110.10–1), section 4–8–3, Table 2, or appropriate NEMA 250 type for the service intended. Each enclosure must be designed so that the total rated temperature of the equipment inside the enclosure is not exceeded.

(c) Central control consoles and similar control enclosures must be manufactured to at least NEMA 250 Type 2 or IEC 60529 IP 22 degree of protection regardless of location.

(d) Equipment for interior locations not requiring exceptional degrees of protection must be manufactured to at least NEMA 250 Type 1 with dripshield or IEC 60529 IP 11 as specified in IEC 60529.

[USCG–2003–16630, 73 FR 65195, Oct. 31, 2008]

§ 111.01–11 Corrosion-resistant parts.

Each enclosure and part of electric equipment that can be damaged by corrosion must be made of corrosion-resistant materials or of materials having a corrosion resistant finish.