

TABLE 111.60-7—DEMAND LOADS—Continued

Type of circuit	Demand load
Grounded neutral of a dual voltage feeder	100 percent of the capacity of the ungrounded conductors when grounded neutral is not protected by a circuit breaker overcurrent trip, or not less than 50 percent of the capacity of the ungrounded conductors when the grounded neutral is protected by a circuit breaker overcurrent trip or overcurrent alarm.

[CGD 74-125A, 47 FR 15236, Apr. 8, 1982, as amended by USCG-2004-18884, 69 FR 58348, Sept. 30, 2004; USCG-2003-16630, 73 FR 65198, Oct. 31, 2008]

§ 111.60-9 Segregation of vital circuits.

(a) *General.* A branch circuit that supplies equipment vital to the propulsion, control, or safety of the vessel must not supply any other equipment.

(b) *Passenger vessels.* (1) Each passenger vessel with firescreen bulkheads that form main fire zones must have distribution systems arranged so that fire in a main fire zone does not interfere with essential services in another main fire zone.

(2) Main and emergency feeders passing through a main fire zone must be separated vertically and horizontally as much as practicable.

§ 111.60-11 Wire.

(a) Wire must be in an enclosure.

(b) Wire must be component insulated.

(c) Wire, other than in switchboards, must meet the requirements in sections 24.6.7 and 24.8 of IEEE 45-2002, NPFC MIL-W-76D, UL 44, UL 83 (all four standards incorporated by reference; see 46 CFR 110.10-1), or equivalent standard.

(d) Switchboard wire must meet subpart 111.30 of this part.

(e) Wire must be of the copper stranded type.

[CGD 94-108, 61 FR 28281, June 4, 1996, as amended at 62 FR 23908, May 1, 1997; 62 FR 27659, May 20, 1997; USCG-2003-16630, 73 FR 65198, Oct. 31, 2008]

§ 111.60-13 Flexible electric cord and cables.

(a) *Construction and testing.* Each flexible cord and cable must meet the requirements in section 24.6.1 of IEEE 45-2002, Article 400 of NFPA NEC 2002, NEMA WC-3, NEMA WC-70, or UL 62

(all five standards incorporated by reference; see 46 CFR 110.10-1).

(b) *Application.* No flexible cord may be used except:

(1) As allowed under Sections 400-7 and 400-8 of NFPA NEC 2002; and

(2) In accordance with Table 400-4 in NFPA NEC 2002.

(c) *Allowable current-carrying capacity.* No flexible cord may carry more current than allowed under Table 400-5 in NFPA NEC 2002, NEMA WC-3, or NEMA WC-70.

(d) *Conductor size.* Each flexible cord must be No. 18 AWG (0.82 mm²) or larger.

(e) *Splices.* Each flexible cord and cable must be without splices or taps except for a cord or cable No. 12 AWG (3.3 mm²) or larger spliced for repairs in accordance with § 111.60-19.

(f) *Pull at joints and terminals.* Each flexible cord and cable must be connected to a device or fitting by a knot, tape, or special fitting so that tension is not transmitted to joints or terminal screws.

[CGD 74-125A, 47 FR 15236, Apr. 8, 1982, as amended by CGD 94-108, 61 FR 28281, June 4, 1996; USCG-2003-16630, 73 FR 65198, Oct. 31, 2008]

§ 111.60-17 Connections and terminations.

(a) In general, connections and terminations to all conductors must retain the original electrical, mechanical, flame-retarding, and, where necessary, fire-resisting properties of the cable. All connecting devices must be suitable for copper stranded conductors.

(b) If twist-on type of connectors are used, the connections must be made within an enclosure and the insulated cap of the connector must be secured to prevent loosening due to vibration.

(c) Twist-on type of connectors may not be used for making joints in cables,