

## Coast Guard, DOT

## § 110.25-1

(4) A water closet without a shower or bath;

(5) A radio, gyro and chart room; and

(6) A location with similar environmental conditions.

*Location requiring an exceptional degree of protection* means a location exposed to weather, seas, splashing, pressure-directed liquids, or similar moisture conditions. These locations include—

(1) On deck;

(2) A machinery space;

(3) A cargo space;

(4) A location within a galley or pantry area, laundry, or water closet which contains a shower or bath; and

(5) Other spaces with similar environmental conditions.

*Marine inspector or inspector* means a civilian employee or military member of the Coast Guard assigned by an Officer in Charge, Marine Inspection, or the Commandant to perform duties with respect to the inspection, enforcement, and administration of vessel safety and navigation laws and regulations.

*Nonsparking fan* means nonsparking fan as defined in ABS Rules for Building and Classing Steel Vessels, section 4/5B7.7.

*Ocean vessel* means a vessel that navigates the waters of any ocean or the Gulf of Mexico more than 20 nautical miles offshore and is certificated by the Coast Guard for ocean navigation.

*Qualified person* means a person who by virtue of that person's knowledge, ability, experience, specialized training, or licensing can competently and safely perform required electrical duties or functions.

*Waterproof* means watertight; except that, moisture within or leakage into the enclosure is allowed if it does not interfere with the operation of the equipment enclosed. In the case of a generator or motor enclosure, *waterproof* means watertight; except that, leakage around the shaft may occur if the leakage is prevented from entering the oil reservoir and the enclosure provides for automatic drainage.

*Watertight* means enclosed so that equipment meets at least a NEMA 250 Type 4 or 4X or an IEC IP 56 rating.

[CGD 94-108, 61 FR 28274, June 4, 1996, as amended at 62 FR 23907, May 1, 1997; 62 FR 27659, May 20, 1997; USCG-2000-7790, 65 FR 58462, Sept. 29, 2000]

### Subpart 110.20—Equivalents

#### § 110.20-1 Equivalents.

The Commanding Officer, Marine Safety Center (MSC), may approve any arrangement, fitting, appliance, apparatus, equipment, calculation, information, or test that provides a level of safety equivalent to that established by specific provisions of this subchapter. Requests for approval must be submitted to the Marine Safety Center. If necessary, the Marine Safety Center may require engineering evaluations and tests to demonstrate the equivalence of the substitute.

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

### Subpart 110.25—Plan Submittal

#### § 110.25-1 Plans and information required for new construction.

The following plans, if applicable to the particular vessel, must be submitted for Coast Guard review in accordance with § 110.25-3:

NOTE: A Navigation and Vessel Inspection Circular on the Subject of "Coast Guard Review of Merchant Vessel Plans and Specifications" is available from the offices listed in § 110.25-3. The Circular recommends practices and procedures for plan submittals.

(a) Elementary one-line wiring diagram of the power system, supported, by cable lists, panelboard summaries, and other information including—

(1) Type and size of generators and prime movers;

(2) Type and size of generator cables, bus-tie cables, feeders, and branch circuit cables;

(3) Power, lighting, and interior communication panelboards with number of circuits and rating of energy consuming devices;

(4) Type and capacity of storage batteries;

(5) Rating of circuit breakers and switches, interrupting capacity of circuit breakers, and rating or setting of overcurrent devices;

(6) Computations of short circuit currents in accordance with Subpart 111.52; and

(7) Overcurrent protective device coordination analysis for each generator distribution system of 1500 kilowatts or above that includes selectivity and shows that each overcurrent device has an interrupting capacity sufficient to interrupt the maximum asymmetrical short-circuit current available at the point of application.

(b) Electrical plant load analysis including connected loads and computed operating loads for each condition of operation.

(c) Elementary and isometric or deck wiring plans, including the location of each cable splice, a list of symbols, and the manufacturer's name and identification of each item of electrical equipment, of each—

- (1) Steering gear circuit and steering motor controller;
- (2) General emergency alarm system;
- (3) Sound-powered telephone or other fixed communication system;
- (4) Power-operated boat winch;
- (5) Fire detecting and alarm system;
- (6) Smoke detecting system;
- (7) Electric watertight door system;
- (8) Fire door holding systems;
- (9) Public address system;
- (10) Manual alarm system; and
- (11) Supervised patrol system.

(d) Deck wiring or schematic plans of power systems and lighting systems, including symbol lists, with manufacturer's name and identification of each item of electric equipment, and showing:

- (1) Locations of cables;
  - (2) Cable sizes and types;
  - (3) Locations of each item of electric equipment;
  - (4) Locations of cable splices.
- (e) Switchboard wiring diagram.
- (f) Switchboard material and name-plate list.
- (g) Elementary wiring diagram of metering and automatic switchgear.

(h) Description of operation of propulsion control and bus transfer switchgear.

(i) For vessels with hazardous locations for which part 111, subpart 111.105, is applicable, plans showing the extent and classification of all hazardous locations, including information on—

- (1) Equipment identification by manufacturer's name and model number;
- (2) Equipment use within the system;
- (3) Cable parameters;
- (4) Equipment locations;
- (5) Installation details; and
- (6) A certificate of testing, and listing or certification, by an independent laboratory, where required by the respective standard.

(j) Plans and installation instructions for each approved component of an intrinsically safe system listed or certified by an independent laboratory (see §111.105-11 of this chapter).

(k) Motor starter elementary wiring diagram, enclosure drawing, and starter application.

(l) Plans and information sufficient to evaluate equipment to be considered for equivalency under §110.20-1.

(m) Plans and information sufficient to evaluate equipment or systems required to meet the specifications of this Subchapter but not to be approved by the Commandant.

NOTE TO PARAGRAPH (m): This equipment evaluation is generally performed by the Commanding Officer, Marine Safety Center and includes items such as cable splices, signalling lights, shore connection boxes, submersible pumps, engine order telegraph systems, shaft speed and thrust indicator systems, and steering gear failure alarm systems.

(n) Plans and information sufficient to evaluate equipment required by this subchapter to meet a reference standard or military specification.

NOTE TO PARAGRAPH (n): This equipment evaluation is generally performed by the Commanding Officer, Marine Safety Center, and includes items such as circuit breakers, switches, lighting fixtures, air heating equipment, busways, outlet boxes, and junction boxes. Items required to meet an IEEE, IEC, NEMA, UL, ANSI, or other industry standard or a military specification are considered acceptable if manufacturer's certification of compliance is indicated on a material list or plan. However, if the standards require third-party testing and listing or certification, proof of listing or certification by an independent laboratory must also be submitted.

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(o) Detailed analysis showing compliance with the MC cable requirements in §111.60-23(b) of this chapter.

[CGD 74-125A, 47 FR 15232, Apr. 8, 1982, as amended by CGD 81-030, 53 FR 17846, May 18, 1988; CGD 94-108, 61 FR 28275, June 4, 1996; 62 FR 23907, May 1, 1997]

### § 110.25-3 Procedure for submitting plans.

(a) The plans required by §110.25-1 must be submitted to one of the following Coast Guard offices:

(1) Commanding Officer, U.S. Coast Guard Marine Safety Center (MSC), 400 Seventh St., SW., Washington, DC 20590-0001.

(2) The Officer in Charge, Marine Inspection at or nearest the place where the vessel is to be built.

(b) [Reserved]

(c) Three copies of each plan are required so that one can be returned to the submitter. If the submitter desires additional copies of approved plans, he should submit enough for the necessary distribution.

NOTE: The Coast Guard and the American Bureau of Shipping (ABS) coordinate plan review for vessels classed by the ABS in order to eliminate duplication of effort. An applicant for plan review of a vessel that is classed by the ABS should consult Commanding Officer, Marine Safety Center, to determine applicable procedures for submitting plans.

[CGD 74-125A, 47 FR 15232, Apr. 8, 1982, as amended by CGD 82-063b, 48 FR 4781, Feb. 3, 1983; CGD 85-048b, 51 FR 15498, Apr. 24, 1986; CGD 88-070, 53 FR 34534, Sept. 7, 1988; CGD 89-025, 54 FR 19571, May 8, 1989; CGD 95-072, 60 FR 50465, Sept. 29, 1995; CGD 94-108, 61 FR 28275, June 4, 1996; CGD 96-041, 61 FR 50730, Sept. 27, 1996]

EDITORIAL NOTE: By CGD 96-041, 61 FR 50730, Sept. 27, 1996, paragraph (a)(1) of §110.25-3 was amended by removing the word "(G-MSC)". However, by CGD 94-108, 61 FR 28275, June 4, 1996, the word "(G-MSC)" was removed and the word "(MSC)" was added in its place.

### Subpart 110.30—Testing and Inspection

#### § 110.30-1 General.

(a) This section supplements the general requirements for testing and inspecting vessels in other parts of this chapter.

(b) In the inspection of electric equipment and installations, the rules of the American Bureau of Shipping for materials and construction, and the certificate of classification that refers to them, except as otherwise provided by this subchapter, are accepted as standard.

(c) This subpart must not be construed to imply that shop tests or factory inspections of electric apparatus or equipment of the types conducted by the American Bureau of Shipping are conducted by the Coast Guard. Shop tests of electric apparatus or equipment are conducted by the Coast Guard only when required by this chapter or when requested, either by the manufacturer, shipbuilder, owner, or the Coast Guard, and agreed to by all.

[CGD 74-125A, 47 FR 15232, Apr. 8, 1982, as amended by CGD 94-108, 61 FR 28275, June 4, 1996]

#### § 110.30-3 Initial inspection.

The initial inspection, which may be a series of inspections during the construction of the vessel, includes a complete inspection of the electric installation and electric equipment or apparatus. The inspection is to determine that the arrangement, materials, and their installations meet this chapter and the approved plans. The inspection also is to determine that the workmanship of all equipment and apparatus and the installation is satisfactory.

#### § 110.30-5 Inspection for certification.

Electric installations and electric equipment must be inspected at the inspection for certification and periodic inspection to determine mechanical and electrical condition and performance. Particular note must be made of circuits added or modified after the original issuance of the Certificate of Inspection.

[USCG 1999-4976, 65 FR 6504, Feb. 9, 2000]

#### § 110.30-7 Repairs or alterations.

The Officer in Charge, Marine Inspection must be notified before—

(a) Alterations or modifications that deviate from approved plans; or