

§ 111.83-5 Bottom entrance and protected enclosures.

Each shore connection box must have a bottom entrance for the shore connection cable. The box must provide protection to the shore connection when the connection is in use.

Subpart 111.85—Electric Oil Immersion Heaters**§ 111.85-1 Electric oil immersion heaters.**

Each oil immersion heater must have the following:

- (a) An operating thermostat.
- (b) Heating elements that have no electrical contact with the oil.
- (c) A high temperature limiting device that:
 - (1) Opens all conductors to the heater;
 - (2) Is manually reset; and
 - (3) Actuates at a temperature below the flashpoint of the oil.
- (d) Either—
 - (1) A low-fluid-level device that opens all conductors to the heater if the operating level drops below the manufacturer's recommended minimum safe level; or
 - (2) A flow device that opens all conductors to the heater if there is inadequate flow.

[CGD 74-125A, 47 FR 15236, Apr. 8, 1982, as amended by CGD 94-108, 61 FR 28283, June 4, 1996]

Subpart 111.87—Electric Air Heating Equipment**§ 111.87-1 Applicability.**

This subpart applies to electrically energized units or panels for heating a room or compartment. This subpart does not apply to electrically energized units for heating the air in an enclosed apparatus, such as a motor or controller.

§ 111.87-3 General requirements.

- (a) Each electric heater must meet UL safety and construction standards or equivalent standards under § 110.20-1 of this chapter.
- (b) Each heater element must be an enclosed type. The heater element case

or jacket must be of a corrosion-resistant material.

(c) Each heater must have a thermal cutout of the manually-reset type that prevents overheating and must have a thermal regulating switch.

(d) Each heater for bulkhead mounting must have its top slanted or otherwise designed to prevent hanging anything on the heater. If a heater is portable, it must have a clip or bracket to hold the heater in a fixed position.

(e) The external temperature of a heater enclosing case must not be over 125 degrees C, except that the external temperature of the enclosing case of a flush-mounted heater must not be over 100 degrees C. If a heater is mounted on or next to a deck or bulkhead, the heater must not cause the temperature of the nearest deck or bulkhead to be over 55 degrees C. For test purposes, an ambient temperature of 25 degrees C must be used.

[CGD 74-125A, 47 FR 15236, Apr. 8, 1982, as amended by CGD 94-108, 61 FR 28283, June 4, 1996; 61 FR 33045, June 26, 1996; 61 FR 36608, July 11, 1996]

Subpart 111.91—Elevators and Dumbwaiters**§ 111.91-1 Power, control, and interlock circuits.**

Each electric power, control, and interlock circuit of an elevator or dumbwaiter must meet ANSI/ASME A17.1 and A17.1A.

[CGD 74-125A, 47 FR 15236, Apr. 8, 1982, as amended by CGD 94-108, 61 FR 28283, June 4, 1996]

Subpart 111.95—Electric Power-Operated Boat Winches**§ 111.95-1 Applicability.**

(a) The electric installation of each electric power-operated boat winch must meet the requirements in this subpart, except that limit switches must be adapted to the installation if there are no gravity davits.

(b) The provisions of this subpart supplement the requirements for boat winches in other parts of this chapter under which vessels are certificated

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and in subchapter Q, Equipment approvals.

[CGD 74-125A, 47 FR 15236, Apr. 8, 1982, as amended by CGD 94-108, 61 FR 28283, June 4, 1996]

§ 111.95-3 General requirements.

(a) Each electrical component (e.g., enclosure, motor controller, or motor) must be constructed to the appropriate NEMA or IEC degree of protection requirement for the service and environment in which it is installed.

(b) Each main line emergency disconnect switch, if accessible to an unauthorized person, must have a means to lock the switch in the open-circuit position with a padlock or its equivalent. The switch must not lock in the closed-circuit position.

[CGD 94-108, 61 FR 28283, June 4, 1996]

§ 111.95-7 Wiring of boat winch components.

(a) If the motor controller of a boat winch power unit is next to the winch, the main line emergency switch must disconnect all parts of the boat winch power unit, including the motor controller and limit switches, from all sources of potential. Other power circuit switches must be connected in series with the main line emergency switch and must be ahead of the motor controller. The main line emergency switch must be the motor and controller disconnect required by Subpart 111.70 and must have a horsepower rating of at least that of the winch motor.

(b) If the motor controller of a boat winch power unit is remote from the winch, there must be a switch at the controller that can disconnect the entire winch electric installation from all sources of potential. The switch must be in series with and on the supply side of the main line emergency switch.

(c) Each davit arm limit switch, whether connected in the power circuit or in the control circuit, must disconnect all ungrounded conductors of the circuit controlled.

(d) If one motor is used with two winches, there must be a main line emergency switch, a clutch interlock switch, and a master switch for each winch, except that a single main line emergency switch located as required

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by paragraph (e) of this section may be used for both winches. The main line emergency switches must be connected, in series, ahead of the motor controller. The master switches must be connected in parallel and each, in series, with the corresponding clutch interlock switch for that winch. Each clutch interlock switch must open the circuit to its master switch, except when the power unit is clutched to the associated winch. There must be a means to prevent the power unit from being clutched to both winches simultaneously.

(e) The main line emergency disconnect switch must be adjacent to the master switch, within reach of the winch operator, accessible to the person in charge of the boat stowage, and for gravity davit installations, in a position from which the movement of boat davit arms can be observed as they approach the final stowed position.

[CGD 74-125A, 47 FR 15236, Apr. 8, 1982, as amended by CGD 94-108, 61 FR 28283, June 4, 1996]

Subpart 111.97—Electric Power-Operated Watertight Door Systems

§ 111.97-1 Applicability.

This subpart applies to electric power-operated watertight door systems required under Subpart H of Part 170 of this chapter.

[CGD 79-023, 48 FR 51008, Nov. 4, 1983]

§ 111.97-3 General requirements.

Each watertight door operating system must meet Subpart H, §170.270 of this chapter.

[CGD 74-125A, 47 FR 15236, Apr. 8, 1982, as amended by USCG-2000-7790, 65 FR 58462, Sept. 29, 2000]

§ 111.97-5 Electric and hydraulic power supply.

(a) Each electric motor-driven door operating system must have the same source of power as the emergency lighting and power system.

(b) The temporary emergency power source and the final emergency power