

## § 111.33-1

space as a battery emergency power source.

(d) Each alternating-current emergency switchboard must have the equipment required by paragraphs (c) through (e) of this section.

(e) For each connected emergency generator, each emergency switchboard must have:

(1) A circuit breaker that meets § 111.12-11;

(2) A disconnect switch or link for each emergency generator conductor, except for a switchboard with a draw out or plug-in type generator circuit breaker that disconnects:

(i) Each generator conductor; and

(ii) If there is a switch in the generator neutral, each ungrounded conductor; and

(3) A pilot lamp connected between the generator and circuit breaker.

(f) For each emergency generator that is not excited from a variable voltage or rotary amplifier exciter that is controlled by a voltage regulator unit acting on the exciter field, each emergency switchboard must have:

(1) A generator field rheostat;

(2) A double pole field switch;

(3) Discharge clips; and

(4) A discharge resistor.

(g) Each emergency switchboard must have the following:

(1) An ammeter with a selector switch that connects the ammeter to show the current for each phase.

(2) A voltmeter with a selector switch that connects the voltmeter to show:

(i) Generator voltage of each phase; and

(ii) Bus voltage of one phase.

(3) Ground detection that meets subpart 111.05 for the emergency lighting system.

(4) A frequency meter.

(5) An exciter field rheostat.

(6) A voltage regulator and a voltage regulator functional cut-out switch.

(h) Each direct-current emergency switchboard must have the:

(1) Equipment under § 111.30-27 (b) through (d); and

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(2) Ground detection under subpart 111.05 for the emergency lighting system.

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### Subpart 111.33—Power Semiconductor Rectifier Systems

#### § 111.33-1 General.

This subpart is applicable to all power semiconductor rectifier systems. In addition to the regulations contained in this subpart, the requirements of §§ 111.30-11, 111.30-19 and 111.30-21 of this part must be met, if applicable.

#### § 111.33-3 Nameplate data.

(a) Each semiconductor rectifier system must have a nameplate of durable material affixed to the unit that meets the requirements of—

(1) Section 45.11 of IEEE Std 45; or

(2) IEC 92-304 (clause 8).

(b) Each semiconductor rectifier system must have a nameplate containing the words "marine semiconductor rectifier," and the following information:

(1) Manufacturer's name and address.

(2) Manufacturer's serial number.

(3) Type.

(4) Rated AC volts.

(5) Rated AC amperes.

(6) Number of phases.

(7) Frequency.

(8) Rated DC volts.

(9) Rated DC amperes.

(10) Ambient temperature range.

(11) Duty cycle.

(12) Cooling medium.

(c) If, on small rectifiers, the information required by paragraph (a) of this section cannot be shown because of space limitations, the nameplate must be at least large enough to contain the manufacturer's name and serial number. The remaining information must be shown on the schematic diagram.

[CGD 74-125A, 47 FR 15236, Apr. 8, 1982, as amended by CGD 94-108, 61 FR 28279, June 4, 1996]