

§ 111.12-5

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permanent magnet or a residual-magnetism-type exciter that has the capability of voltage build-up after two months of no operation.

[USCG-2003-16630, 73 FR 65196, Oct. 31, 2008]

§ 111.12-5 Construction and testing of generators.

Each generator must meet the applicable requirements for construction and testing in section 4-8-3 of the ABS Steel Vessel Rules (incorporated by reference; see 46 CFR 110.10-1) except that each one for a mobile offshore drilling unit must meet the requirements in part 4, chapter 3, section 4 of the ABS MODU Rules (incorporated by reference; see 46 CFR 110.10-1).

[USCG-2003-16630, 73 FR 65196, Oct. 31, 2008]

§ 111.12-7 Voltage regulation and parallel operation.

Voltage regulation and parallel operation must meet:

(a) For AC systems: sections 4-2-3/7.5.2, 4-2-4/7.5.2, 4-8-3/3.13.2, and 4-8-3/3.13.3 of the ABS Steel Vessel Rules (incorporated by reference; see 46 CFR 110.10-1);

(b) For DC systems: section 4-8-3/3.13.3(c) of the ABS Steel Vessel Rules, and IEC 60092-202 and IEC 60092-301 (both incorporated by reference; see 46 CFR 110.10-1); and

(c) For mobile offshore drilling units: Part 4, Chapter 3, section 4/3.21.2, 4/3.21.3, 4/3.23.2, and 4/3.23.3 of the ABS MODU Rules (incorporated by reference; see 46 CFR 110.10-1).

[USCG-2003-16630, 73 FR 65196, Oct. 31, 2008, as amended by USCG-2013-0671, 78 FR 60153, Sept. 30, 2013]

§ 111.12-9 Generator cables.

(a) The current-carrying capacity of generator cables must not be:

(1) Less than 115 percent of the continuous generator rating; or

(2) Less than 115 percent of the overload for a machine with a 2 hour or greater overload rating.

(b) Generator cables must not be in the bilges.

§ 111.12-11 Generator protection.

(a) *Applicability.* This section applies to each generator except a propulsion generator.

(b) *General.* Each ship's service generator and emergency generator must be protected by an individual, tripfree, air circuit breaker whose tripping characteristics can be set or adjusted to closely match the generator capabilities and meet the coordination requirements of Subpart 111.51. Each circuit breaker must contain the trips required by this section.

(c) *Type of trips.* A circuit breaker for a generator must:

(1) Open upon the shutting down of the prime mover;

(2) Have longtime overcurrent trips or relays set as necessary to coordinate with the trip settings of the feeder circuit breakers; and

(3) Not have an instantaneous trip with the exception that an instantaneous trip is required if:

(i) Three or more alternating-current generators can be paralleled; or

(ii) The circuit breaker is for a direct current generator.

(d) *Setting of longtime overcurrent trips.* The pickup setting of the longtime overcurrent trip of a generator circuit breaker must not be larger than:

(1) 115 percent of the generator rating for a continuous rated machine; or

(2) 115 percent of the overload rating for a machine with a 2-hour or greater overload rating.

(e) *Setting of instantaneous trips.* The instantaneous trip of a generator circuit breaker must be set above, but as close as practicable to, the maximum asymmetrical short circuit available from any one of the generators that can be paralleled.

(f) *Reverse-power and reverse-current trips.* Each generator arranged for parallel operation must have reverse-power or reverse-current trips.

(g) *Location.* A ship's service generator overcurrent protective device must be on the ship's service generator switchboard. The generator and its switchboard must be in the same space. (For the purposes of this section, the following are not considered separate from the machinery space: (1) A control room that is inside of the machinery casing and (2) a dedicated switchgear and semiconductor rectifier (SCR) compartment on a mobile offshore drilling unit that is separate from but