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(c) The capacity of the ship's service generating sources must be sufficient for supplying the ship's service loads without the use of a generating source which is dependent upon the speed or direction of the main propelling engines or shafting.

(d) Operating generators must provide a continuous and uninterrupted source of power for the ship's service load under normal operational conditions. Any vessel speed change or throttle movement must not cause a ship's service load power interruption.

(e) Vessels with electric propulsion that have two or more constant-voltage generators which supply both ship's service and propulsion power do not need additional ship's service generators provided that with any one propulsion/ship's service generator out of service the capacity of the remaining generator(s) is sufficient for the electrical loads necessary to provide normal operational conditions of propulsion and safety, and minimum comfortable conditions of habitability.

(f) A generator driven by a main propulsion unit (such as a shaft generator) which is capable of providing electrical power continuously, regardless of the speed and direction of the propulsion shaft, may be considered one of the ship's service generating sets required by § 111.10–3. A main-engine-dependent generator which is not capable of providing continuous electrical power may be utilized as a supplemental generator provided that a required ship's service generator or generators having sufficient capacity to supply the ship's service loads can be automatically brought on line prior to the main-engine-dependent generator tripping offline due to a change in the speed or direction of the main propulsion unit.

[CGD 94–108, 61 FR 28277, June 4, 1996; 61 FR 36787, July 12, 1996]

§ 111.10–5 Multiple energy sources.

Failure of any single generating set energy source such as a boiler, diesel, gas turbine, or steam turbine must not cause all generating sets required in § 111.10–3 to be inoperable.

§ 111.10–7 Dead ship.

(a) The generating plant of each self-propelled vessel must provide the electrical services necessary to start the main propulsion plant from a dead ship condition.

(b) If the emergency generator is used for part or all of the electric power necessary to start the main propulsion plant from a dead ship condition, the emergency generator must be capable of providing power to all emergency lighting, emergency internal communications systems, and fire detection and alarm systems in addition to the power utilized for starting the main propulsion plant. Additional requirements are in § 112.05–3(c) of this chapter.

[CGD 74–125A, 47 FR 15236, Apr. 8, 1982, as amended by CGD 94–108, 61 FR 28277, June 4, 1996]

§ 111.10–9 Ship's service supply transformers; two required.

If transformers are used to supply the ship's service distribution system required by this subpart for ships and mobile offshore drilling units, there must be at least two installed, independent power transformers. With the largest transformer out of service, the capacity of the remaining units must be sufficient to supply the ship service loads.

NOTE TO § 111.10–9: A ship's service supply system would consist of transformers, overcurrent protection devices, and cables, and would normally be located in the system between a medium voltage bus and a low voltage ship's service switchboard.

[CGD 94–108, 61 FR 28277, June 4, 1996; 61 FR 33045, June 26, 1996]

Subpart 111.12—Generator Construction and Circuits

§ 111.12–1 Prime movers.

(a) Prime movers must meet section 58.01–5 and 46 CFR subpart 58.10 except that those for mobile offshore drilling units must meet Part 4, Chapter 3, sections 4/3.17 and 4/3.19 of the ABS MODU Rules (incorporated by reference; see 46 CFR 110.10–1). Further requirements for emergency generator prime movers are in 46 CFR subpart 112.50.

(b) Each generator prime mover must have an overspeed device that is independent of the normal operating governor and adjusted so that the speed