

§ 112.05-3

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§ 112.05-3 Main-emergency bus-tie.

Each bus-tie between a main switchboard and an emergency switchboard must:

(a) Disconnect automatically upon loss of potential at the emergency switchboard;

(b) Be arranged to prevent parallel operation of an emergency power source with any other source of electric power, except for interlock systems for momentary transfer of loads; and

(c) If arranged for feedback operation, open automatically upon overload of the emergency power source before the emergency power source is tripped off the line from the overload.

§ 112.05-5 Emergency power source.

(a) The emergency power source must meet table 112.05-5(a) and have the capacity to supply all loads that are simultaneously connected to it, except a load on a bus-tie to the main switchboard or non-required loads that are connected in accordance with §112.05-1(c).

TABLE 112.05-5(a)

Size of vessel and service	Type of emergency power source or lighting	Period of operation and minimum capacity of emergency power
Passenger vessels: Ocean, Great Lakes, or coastwise; or on an international voyage.  Other than Ocean, Great Lakes, or coastwise and not on an international voyage.	Temporary emergency power source; and final emergency power source (automatically connected storage battery or an automatically started generator).  Final emergency power source (automatically connected storage battery or an automatically started generator).	36 hours. <sup>1 2</sup>  8 hours or twice the time of run, whichever is less. <sup>2</sup>
Cargo vessels; miscellaneous self-propelled vessels; tankships; barges with sleeping accommodations for more than 6 persons; mobile offshore drilling units; and oceanographic vessels: Ocean, Great Lakes, or coastwise and 500 GT or more; or on an international voyage and 500 GT or more; or all waters and 1600 GT or more. Ocean, Great Lakes, or coastwise and less than 500 GT; or other than ocean, Great Lakes, or coastwise, 300 GT or more but less than 1600 GT, and not on an international voyage..	Final emergency power source (automatically connected storage battery or an automatically started generator).  Emergency lighting provided by an automatically connected or manually controlled storage battery; automatically or manually started generator; or relay-controlled, battery-operated lanterns. <sup>3 4</sup> .	18 hours. <sup>1 2</sup>  6 hours or twice the time of run, whichever is less.

<sup>1</sup> A 12-hour power supply may be especially considered for vessels engaged regularly in voyages of short duration.  
<sup>2</sup> The capacity for the operation of the steering gear, as required by §111.93, is for a period of 30 minutes continuous operation.  
<sup>3</sup> The emergency lighting requirements of § 112.15-1 (b), (c), (f), and (g) must be met.  
<sup>4</sup> Requirements of Subpart 112.39 must be met by the relay-controlled, battery-operated lanterns.

(b) The emergency power source must be independent of the ship's service lighting and powerplant and propulsion plant, except for the compressed air starting means allowed in §112.50-7(c)(3)(i). A stop control for an emergency generator must be only in the space that has the emergency generator, except a remote mechanical reach rod is permitted for the fuel oil shut-off valve to an independent fuel oil tank located in the space.

(c) The complete emergency installation must function at full rated power when the vessel is upright or inclined to the maximum angle of heel that results from the assumed damage defined

in 33 CFR part 155 or in subchapter S of this chapter for the specific vessel type or 22.5 degrees, whichever is greater; when the trim of the ship is 10 degrees, either in the fore or aft direction, or is in any combination of angles within those limits.

(d) The emergency power source, its associated transforming equipment, and the emergency switchboard must be located aft of the collision bulkhead, outside of the machinery casing, and above the uppermost continuous deck. Each compartment containing this equipment must be readily accessible from the open deck and must not contain machinery not associated with,