

§ 129.390

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(g) Each conductor must be protected in accordance with its current-carrying capacity. If the allowable current-carrying capacity does not correspond to a standard size of device, the next larger overcurrent device may be used, provided it is less than 150 percent of the conductor's current-carrying capacity.

(h) An overcurrent device must be installed to protect each motor conductor and control apparatus against overcurrent due to short circuit or ground fault. Each overcurrent device must be capable of carrying the starting current of the motor.

(i) An emergency switch must be provided in each normally ungrounded main supply conductor from a battery. The switch must be accessible from the battery and located as close as practicable to it.

(j) No grounded conductor of a circuit may be disconnected by a switch or circuit breaker unless the ungrounded conductors are all simultaneously disconnected.

(k) A means of disconnect must be provided on the supply side of and adjacent to each fuse, to de-energize the fuse for inspection and maintenance.

(l) A way for locking the means of disconnect open must be provided unless the means of disconnect for a fused circuit is within sight of the equipment that the circuit supplies.

(m) Each fuse must be of the cartridge type and be listed by Underwriters Laboratories (UL) or another independent laboratory recognized by the Commandant.

(n) Each circuit breaker must meet UL 489 and be of the manually-reset type designed for—

- (1) Inverse delay;
- (2) Instantaneous short-circuit protection; and
- (3) Switching duty if the breaker is used as a switch.

(o) Each circuit breaker must indicate whether it is open or closed.

§ 129.390 Shore power.

Each vessel that has an electrical system operating at more than 50 volts and has provisions for receiving shore power must meet the requirements of this section:

(a) A shore-power-connection box or receptacle must be permanently installed at a convenient location.

(b) A cable connecting the shore-power-connection box or receptacle to the switchboard or main distribution panel must be permanently installed.

(c) A circuit breaker must be provided at the switchboard or main distribution panel for the shore-power connection.

(d) The circuit breaker, required by paragraph (c) of this section, must be interlocked with the feeder circuit breakers for the vessel's power sources to preclude the vessel's power sources and shore power from energizing the vessel's switchboard simultaneously, except in cases where system devices permit safe momentary paralleling of OSV power with shore power.

§ 129.395 Radio installations.

A separate circuit, with overcurrent protection at the switchboard, must be provided for at least one radio installation. Additional radios, if installed, may be powered from a local lighting power source, such as the pilothouse lighting panel, provided each radio power source has a separate overcurrent protection device.

Subpart D—Lighting Systems

§ 129.410 Lighting fixtures.

(a) Each globe, lens, or diffuser of a lighting fixture must have a high-strength guard or be made of high-strength material, except in accommodations, the pilothouse, the galley, or similar locations where the fixture is not subject to damage.

(b) No lighting fixture may be used as a connection box for a circuit other than the branch circuit supplying the fixture.

(c) Each lighting fixture must be installed as follows:

(1) Each lighting fixture and lampholder must be fixed. No fixture may be supported by the screw shell of a lampholder.

(2) Each pendant-type lighting fixture must be suspended by and supplied through a threaded rigid-conduit stem.

(3) Each tablelamp, desk lamp, floorlamp, or similar equipment must be so secured in place that it cannot be

displaced by the roll, pitch, or heave or by the vibration of the vessel.

(d) Each lighting fixture in an electrical system operating at more than 50 volts must comply with UL 595, "Marine Type Electric Lighting Fixtures." A lighting fixture in an accommodation space, radio room, galley, or similar interior space may comply with UL 57, "Electric Lighting Fixtures," UL 1570, "Fluorescent Lighting Fixtures," UL 1571, "Incandescent Lighting Fixtures," UL 1572, "High Intensity Discharge Lighting Fixtures," UL 1573, "Stage and Studio Lighting Units," or UL 1574, "Track Lighting Systems," as long as the general marine requirements of UL 595 are satisfied.

§ 129.420 Branch circuits for lighting on OSVs of 100 or more gross tons.

On each vessel of 100 or more gross tons, each branch circuit for lighting must comply with §111.75-5 of this chapter, except that—

(a) Appliance loads, electric-heater loads, and isolated small-motor loads may be connected to a lighting-distribution panelboard; and

(b) Branch circuits, other than for lighting, connected to the lighting-distribution panelboard permitted by paragraph (a) of this section may have fuses or circuit breakers rated at more than 30 amperes.

§ 129.430 Navigational lighting.

(a) Each vessel of less than 100 gross tons and less than 19.8 meters (65 feet) in length must have navigational lighting in compliance with the applicable navigation rules.

(b) Each vessel of 100 or more gross tons, or 19.8 meters (65 feet) or more in length, must have navigational lighting in compliance with the applicable navigation rules and with §111.75-17(d) of this chapter.

§ 129.440 Emergency lighting.

(a) A vessel of less than 100 gross tons must have adequate emergency lighting fitted along the line of escape to the main deck from accommodations and working (machinery) spaces below the main deck.

(b) The emergency lighting required by paragraph (a) of this section must

automatically actuate upon failure of the main lighting. Unless a vessel is equipped with a single source of power for emergency lighting, it must have individual battery-powered lighting that is—

(1) Automatically actuated upon loss of normal power;

(2) Not readily portable;

(3) Connected to an automatic battery-charger; and

(4) Of enough capacity for 6 hours of continuous operation.

§ 129.450 Portable lighting.

Each vessel must be equipped with at least two operable, portable, battery-powered lights. One of these lights must be located in the pilothouse, another at the access to the engine room.

Subpart E—Miscellaneous Electrical Systems

§ 129.510 Lifeboat winches.

Each lifeboat winch operated by electric power must comply with subparts 111.95 and be approved under approval series in subparts 160.015 or 160.151 of this chapter.

[CGD 82-004 and CGD 86-074, 62 FR 49332, Sept. 19, 1997, as amended by USCG-2011-0618, 76 FR 60754, Sept. 30, 2011]

§ 129.520 Hazardous areas.

(a) No OSV that carries flammable or combustible liquid with a flashpoint of below 140 °F (60 °C), or carries hazardous cargoes on deck or in integral tanks, or is involved in servicing wells, may have electrical equipment installed in pump rooms, in hose-storage spaces, or within 3 meters (10 feet) of a source of vapor on a weather deck unless the equipment is explosion-proof or intrinsically safe under §111.105-9 or 111.105-11 of this chapter.

(b) No electrical equipment may be installed in any locker used to store paint, oil, turpentine, or other flammable liquid unless the equipment is explosion-proof or intrinsically safe under §111.105-9 or §111.105-11 of this chapter.

(c) Equipment that is explosion-proof and intrinsically safe must comply with subpart 111.105 of this chapter.