or replacement of wire and cable, on an existing vessel, which are completed to
the satisfaction of the cognizant Officer in Charge, Marine Inspection
(OCMI) on or after March 11, 1996, must comply with this part. Replacement of
existing equipment, not including wire or cable, installed on the vessel prior
to March 11, 1996 need not comply with the regulations in this part.

§ 183.130 Alternative standards.

(a) A vessel, other than a high speed
craft, of not more than 19.8 meters (65
feet) in length carrying not more than
12 passengers, may comply with the
following requirements instead of com-
plying with the requirements of this
part in their entirety:

(1) Section 183.420; and

(2) The following American Boat and
Yacht Council (ABYC) Projects where
applicable:

(i) E–8, ‘‘Alternating Current (AC)
Electrical Systems on Boats;’’

(ii) E–9, ‘‘Direct Current (DC) Elec-
trical Systems on Boats;’’ and

(iii) A–16, ‘‘Electrical Navigation
Lights.’’

(b) A vessel with an electrical instal-
laction operating at less than 50 volts
may meet the requirements in 33 CFR
183.430 instead of those in §183.340 of
this part.

[CGD 85–080, 61 FR 997, Jan. 10, 1996; 61 FR
20557, May 7, 1996, as amended by CGD 97–057,

Subpart B—General Requirements

§ 183.200 General design, installation,
and maintenance requirements.

Electrical equipment on a vessel
must be installed and maintained to:

(a) Provide services necessary for
safety under normal and emergency
conditions;

(b) Protect passengers, crew, other
persons, and the vessel from electrical
hazards, including fire, caused by or
originating in electrical equipment,
and electrical shock;

(c) Minimize accidental personnel
contact with energized parts; and

(d) Prevent electrical ignition of
flammable vapors.

§ 183.210 Protection from wet and
corrosive environments.

(a) Electrical equipment used in the
following locations must be dripproof:

(1) A machinery space;

(2) A location normally exposed to
splashing, water washdown, or other
wet conditions within a galley, a laun-
dry, or a public washroom or toilet
room that has a bath or shower; or

(3) Another space with a similar
moisture level.

(b) Electrical equipment exposed to
the weather must be watertight.

(c) Electrical equipment exposed to
corrosive environments must be of
suitable construction and corrosion-re-
sistant.

§ 183.220 General safety provisions.

(a) Electrical equipment and installa-
tions must be suitable for the roll,
pitch, and vibration of the vessel un-
derway.

(b) All equipment, including switch-
es, fuses, lampholders, etc., must be
suitable for the voltage and current
utilized.

(c) Electrical equipment exposed to
corrosive environments must be of
suitable construction and corrosion-re-
sistant.

§ 183.230 Temperature ratings.

Temperature ratings of electrical
equipment must meet the requirements
of 46 CFR 111.01–15.


Subpart C—Power Sources and
Distribution Systems

§ 183.310 Power sources.

(a)(1) Each vessel that relies on elec-
tricity to power the following loads
must be arranged so that the loads can
be energized from two sources of elec-
tricity:
(i) The vital systems listed in §182.710 of this chapter;
(ii) Interior lighting except for decorative lights;
(iii) Communication systems including a public address system required under §184.610 of this chapter; and
(iv) Navigation equipment and lights.

(2) A vessel with batteries of adequate capacity to supply the loads specified in paragraph (a)(1) of this section for three hours, and a generator or alternator driven by a propulsion engine, complies with the requirement in paragraph (a)(1) of this section.

(b) Where a ship service generator driven by a propulsion engine is used as a source of electrical power, a vessel speed change, throttle movement or change in direction of the propeller shaft rotation must not interrupt power to any of the loads specified in paragraph (a)(1) of this section.

§ 183.320 Generators and motors.

(a) Each generator and motor must be:

(1) In a location that is accessible, adequately ventilated, and as dry as practicable; and

(2) Mounted above the bilges to avoid damage by splash and to avoid contact with low lying vapors.

(b) Each generator and motor must be designed for an ambient temperature of 50 °C (122 °F) except that:

(1) If the ambient temperature in the space where a generator or motor will be located will not exceed 40 °C (104 °F) under normal operating conditions, the generator or motor may be designed for an ambient temperature of 40 °C (104 °F); and

(2) A generator or motor designed for 40 °C (104 °F) may be used in 50 °C (122 °F) ambient locations provided the generator or motor is derated to 80 percent of the full load rating, and the rating or setting of the overcurrent devices is reduced accordingly.

(c) A voltmeter and an ammeter, which can be used for measuring voltage and current of a generator that is in operation, must be provided for a generator rated at 50 volts or more. For each alternating current generator, a means for measuring frequency must also be provided.

(d) Each generator must have a nameplate attached to it containing the information required by Article 445 of NFPA 70 (incorporated by reference; see 46 CFR 175.600), and for a generator derated in accordance with paragraph (b)(2) of this section, the derated capacity.

(e) Each motor must have a nameplate attached to it containing the information required by Article 430 of NFPA 70, and for a motor derated in accordance with paragraph (b)(2) of this section, the derated capacity.

(f) Each generator must be protected by an overcurrent device set value not exceeding 115 percent of the generator full load rating.

§ 183.322 Multiple generators.

When a vessel is equipped with two or more generators to supply ship’s service power, the following requirements must be met:

(a) Each generator must have an independent prime mover; and

(b) The generator circuit breakers must be interlocked to prevent the generators from being simultaneously connected to the switchboard, except for the circuit breakers of a generator operated in parallel with another generator when the installation meets §§111.12–11(f) and 111.30–25(d) in subchapter J of this chapter.

§ 183.324 Dual voltage generators.

(a) A dual voltage generator installed on a vessel shall be of the grounded type, where:

(1) The neutral of a dual voltage system must be solidly connected at the switchboard’s neutral bus; and

(2) The neutral bus shall be connected to ground.

(b) The neutral of a dual voltage system must be accessible for checking the insulation resistance of the generator to ground before the generator is connected to the bus.

(c) Ground detection must be provided that:

(1) For an alternating current system, meets §111.05–27 in subchapter J of this chapter; and