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purpose of the space and route of the vessel.

(b) When mechanical ventilation is provided for sleeping rooms, washrooms, toilet rooms, hospital spaces, and messrooms, these spaces must be supplied with fresh air equal to at least 10 times the volume of the room each hour.

§ 168.15–55 Screening.

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The Officer in Charge, Marine Inspection, shall inspect the quarters of every such vessel at least once in each month or at such time as the vessel enters an American port and shall satisfy himself that such vessel is in compliance with the regulations in this part.

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AUTHORITY: 33 U.S.C. 1321(j); 46 U.S.C. 3306, 6101; Pub. L. 103–206, 107 Stat. 2439; E.O. 11735, 38 FR 21243, 3 CFR, 1971–1975 Comp., p. 793; DHS Delegation 00170.1, Revision No. 01.4; § 169.117 also issued under the authority of 44 U.S.C. 3507.

SOURCE: CGD 83–005, 51 FR 896, Jan. 9, 1986, unless otherwise noted.

Subpart 169.100—General Provisions

§ 169.101 Purpose; preemptive effect.

The regulations in this part set forth uniform requirements which are suited to the particular characteristics and specialized operations of sailing school vessels as defined in Title 46, United

States Code section 2101(30). The regulations in this part have preemptive effect over State or local regulations in the same field.

[CGD 83–005, 51 FR 896, Jan. 9, 1986, as amended by USCG–2006–24797, 77 FR 33889, June 7, 2012]

§ 169.103 Applicability.

(a) This subchapter applies to each domestic vessel operating as a sailing school vessel.

(b) This subchapter does not apply to—

(1) Any vessel operating exclusively on inland waters, which are not navigable waters of the United States;

(2) Any vessel while laid up, dismantled, and out of service;

(3) Any vessel with title vested in the United States and which is used for public purposes except vessels of the U.S. Maritime Administration;

(4) Any vessel carrying one or more passengers;

(5) Any vessel operating under the authority of a current valid certificate of inspection issued per the requirements of 46 CFR chapter I, subchapter H or T, 46 CFR parts 70 through 78 and parts 175 through 187, respectively; or

(6) Any foreign vessel.

(c) A vessel which engages in trade or commerce or carries one or more passengers, cannot operate under a certificate of inspection as a sailing school vessel, but must meet the rules and regulations governing the service in which it is engaged.

[CGD 83–005, 51 FR 896, Jan. 9, 1986, as amended by USCG–1999–5040, 67 FR 34799, May 15, 2002]

§ 169.107 Definitions.

Anniversary date means the day and the month of each year, which corresponds to the date of expiration of the Certificate of Inspection.

Approved means accepted by the Commandant unless otherwise stated.

Coast Guard District Commander means an officer of the Coast Guard designated by the Commandant to command all Coast Guard activities within a district.

Commandant means the Commandant of the Coast Guard or an authorized representative of the Commandant.

Demise charter means a legally binding document for a term of one year or more under which for the period of the charter, the party who leases or charters the vessel, known as the demise or bareboat charterer, assumes legal responsibility for all of the incidents of ownership, including insuring, manning, supplying, repairing, fueling, maintaining and operating the vessel. The term demise or bareboat charterer is synonymous with ''owner pro hac vice''.

Existing vessel means a sailing school vessel, whose keel was laid prior to (January 9, 1986), which applies for certification as a sailing school vessel prior to (January 9, 1987), and whose initial inspection for certification is completed prior to (January 9, 1988).

Exposed Waters means waters more than 37 kilometers (20 nautical miles) from the mouth of a harbor of safe refuge, or other waters the Officer in Charge, Marine Inspection determines to present special hazards due to weather or other circumstances.

Headquarters means the Commandant (CG–ENG), Attn: Office of Design and Engineering Systems, U.S. Coast Guard Stop 7509, 2703 Martin Luther King Jr. Avenue SE., Washington, DC 20593–7509.

Instructor means any person who is aboard a sailing school vessel for the purpose of providing sailing instruction and is not an officer, operator, or member of the crew required by regulation to be aboard the vessel, and has not paid any consideration, either directly or indirectly for his or her carriage on the vessel.

Length means the mean length. It is the mean or average between length on deck (LOD) and length between perpendiculars (LBP). *Length on deck* (LOD) means the length between the forward-most and after-most points on the weather deck, excluding sheer. *Length between perpendiculars* (LBP) means the horizontal distance between the perpendiculars taken at the forward-most and after-most points on a vessel's waterline corresponding to the deepest operating draft.

Marine Inspector means any person from the civilian or military branch of the Coast Guard assigned by the Officer in Charge, Marine Inspection or any other person designated by the Coast

Guard to perform duties with respect to the inspection, enforcement, and administration of vessel safety and navigation laws and regulations.

Master means the senior credentialed individual having command of the vessel.

New vessel means a sailing school vessel which is not an existing vessel.

Officer In Charge, Marine Inspection (OCMI) means any person from the civilian or military branch of the Coast Guard designated as such by the Commandant and who, under the direction of the Coast Guard District Commander, is in charge of the inspection zone in which the vessel is located for the performance of duties with respect to the inspections, enforcement, and administration of vessel safety and navigation laws and regulations.

Partially Protected Waters means—

(1) Waters within 37 kilometers (20 nautical miles) of a harbor of safe refuge, unless determined by the OCMI to be exposed waters; and

(2) Those portions of rivers, harbors, lakes, etc. which the OCMI determines not to be sheltered.

Passenger on a sailing school vessel means an individual carried on the vessel except—

(1) The owner or an individual representative of the owner or, in the case of a vessel under charter, an individual charterer or individual representative of the charterer;

(2) The master;

(3) A member of the crew engaged in the business of the vessel, who has not contributed consideration for carriage, and who is paid for onboard services;

(4) An employee of the owner of the vessel engaged in the business of the owner, except when the vessel is operating under a demise charter;

(5) An employee of the demise charterer of the vessel engaged in the business of the demise charterer; or

(6) A sailing school instructor or sailing school student.

Protected Waters means sheltered waters presenting no special hazards such as most rivers, harbors, lakes, etc.

Qualified Organization means an educational organization, State, or political subdivision of a State that owns or demise charters, and operates a sailing school vessel for the purpose of providing sailing instruction. The educational organization must satisfy the requirements of section 501(c)(3) of the Internal Revenue Code of 1954 and must be exempt from tax under section 501(a) of such Code, as now or hereafter amended.

Recognized Classification Society means the American Bureau of Shipping or other classification society recognized by the Commandant.

Rules of the Road means the statutory and regulatory rules governing navigation of vessels.

Sailing instruction means teaching, research, and practical experience in operating vessels propelled primarily by sail, and may include any subject related to that operation and the sea, including seamanship, navigation, oceanography, other nautical and marine sciences, and maritime history and literature. In conjunction with any of those subjects, ''sailing instruction'' also includes instruction in mathematics and language arts skills to a sailing school student with a learning disability.

Sailing School Student means any person who is aboard a sailing school vessel for the purpose of receiving sailing instruction.

Sailing School Vessel means a vessel of less than 500 gross tons, carrying six or more individuals who are sailing school students or sailing school instructors, principally equipped for propulsion by sail even if the vessel has an auxiliary means of propulsion, and owned or demise chartered and operated by a qualified organization during such times as the vessel is operated exclusively for the purposes of sailing instruction.

Ship's Company means the officers and crew of a sailing school vessel, sailing school students, and sailing school instructors.

Watertight means designed and constructed to withstand a static head of water without any leakage, except that *watertight equipment* means enclosed equipment constructed so that a stream of water from a hose (not less than 1 inch in diameter) under head of about 35 feet from a distance of about 10 feet, and for a period of 5 minutes, can be played on the apparatus without leakage.

Weathertight means that water will not penetrate into the unit in any sea condition, except that *weathertight equipment* means equipment constructed or protected so that exposure to a beating rain will not result in the entrance of water.

[CGD 83–005, 51 FR 897, Jan. 9, 1986; 51 FR 3785, Jan. 30, 1986, as amended by USCG–1999–4976, 65 FR 6507, Feb. 9, 2000; USCG–1999–5040, 67 FR 34799, May 15, 2002; USCG–2006–24371, 74 FR 11266, Mar. 16, 2009; USCG–2012–0832, 77 FR 59788, Oct. 1, 2012; USCG–2013–0671, 78 FR 60163, Sept. 30, 2013]

§ 169.109 Equivalents.

Substitutes for a fitting, appliance, apparatus, or equipment, may be accepted by the Commandant if the substituted item is as effective and consistent with the requirements and minimum safety standards specified in this subchapter.

§ 169.111 Administrative procedures.

(a) Upon receipt of a written application for inspection, the Officer in Charge, Marine Inspection assigns a marine inspector to inspect the vessel at a mutually agreed upon time and place.

(b) The owner or a representative shall be present during the inspection.

(c) If during the inspection, the vessel or its equipment is found not to conform to the requirements of law or the regulations in this subchapter, the marine inspector lists all requirements which have not been met and presents the list to the owner or a representative.

(d) In any case where the owner of a vessel or his representative desires further clarification of, or reconsideration of any requirement placed against his vessel, he may discuss the matter with the Officer in Charge, Marine Inspection.

§ 169.112 Special consideration.

In applying the provisions of this part, the Officer in Charge, Marine Inspection, may give special consideration to departures from the specific requirements when special circumstances or arrangements warrant such departures and an equivalent level of safety is provided.

§ 169.113 Right of appeal.

Any person directly affected by a decision or action taken under this part, by or on behalf of the Coast Guard, may appeal therefrom in accordance with subpart 1.03 of this chapter.

[CGD 88–033, 54 FR 50381, Dec. 6, 1989]

§ 169.115 Incorporation by reference.

(a) Certain material is incorporated by reference into this part with the approval of the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. All approved incorporation by reference (IBR) material is available for inspection at the Coast Guard Headquarters and at the National Archives and Records Administration (NARA). Contact the Coast Guard at: Commandant (CG–ENG–4), U.S. Coast Guard Stop 7509, 2703 Martin Luther King Jr. Avenue SE, Washington, DC 20593–7509; email: *typeapproval@uscg.mil;* website: *www.dco.uscg.mil/CG–ENG–4/*. For information on the availability of this material at NARA, email: *fr.inspection@nara.gov;* website: *www.archives.gov/federal-register/cfr/ibr-locations.html*. The material may be obtained from the source(s) in the following paragraph(s) of this section.

(b) American Boat and Yacht Council (ABYC), 613 Third St, Suite 10, Annapolis, MD 21403, 410–990–4460, *http://www.abycinc.org*.

(1) A–1–78, Marine LPG—Liquefied Petroleum Gas Systems, IBR approved for § 169.703(c).

(2) A–3–70, Recommended Practices and Standards Covering Galley Stoves, IBR approved for § 169.703(a).

(3) A–22–78, Marine CNG—Compressed Natural Gas Systems, IBR approved for § 169.703(c).

(4) H–2.5, Ventilation of Boats Using Gasoline—Design and Construction, 1981, IBR approved for § 169.629.

(5) H–24.9 (g) and (h)—''Fuel Strainers and Fuel Filters'' (1975), IBR approved for § 169.629.

(6) P–1–73, Safe Installation of Exhaust Systems for Propulsion and Auxiliary Engines, 1973, IBR approved for § 169.609.

(c) DLA Document Services, Building 4D, 700 Robbins Avenue, Philadelphia, PA 19111, *http://quicksearch.dla.mil*.

(1) Federal Specification ZZ–H–451, Hose, Fire, Woven-Jacketed Rubber or Cambric-Lined, with Couplings, F, IBR approved for § 169.563(c).

(2) [Reserved]

(d) National Fire Protection Association (NFPA), 1 Batterymarch Park, Quincy, MA 02169, 617–770–3000, *http://www.nfpa.org*.

(1) NFPA 10, Standard for Portable Fire Extinguishers, 2010 Edition, effective December 5, 2009, IBR approved for § 169.247(a).

(2) NFPA 70, National Electrical Code, Article 310–8 and Table 310–13, 1980, IBR approved for § 169.672(a).

(3) NFPA 302, Pleasure and Commercial Motor Craft, Chapter 6, 1980, IBR approved for § 169.703(c).

(4) NFPA 306, Control of Gas Hazards on Vessels, 1980, IBR approved for § 169.236(a).

(e) The Textile Color Card Association of the United States, Inc. 200 Madison Avenue, New York. (For availability of this material, contact the Coast Guard—see paragraph (a) of this section.)

(1) Cable No. 70072, Standard Color Card of America, Ninth edition, 1941 for § 169.529(b).

(2) [Reserved]

(f) UL (formerly Underwriters Laboratories), 12 Laboratory Drive, P.O. Box 13995, Research Triangle Park, NC 27709, 919–549–1400, *http://www.ul.com*.

(1) UL 19, Standard for Safety for Lined Fire Hose and Hose Assemblies, Twelfth Edition, approved November 30, 2001, IBR approved for § 169.563(c).

(2) [Reserved]

[USCG–2012–0196, 81 FR 48294, July 22, 2016, as amended by USCG–2020–0107, 87 FR 68305, Nov. 14, 2022]

§ 169.117 OMB control numbers.

(a) *Purpose*. This section collects and displays the control numbers assigned to information collection and recordkeeping requirements in this subchapter by the Office of Management and Budget (OMB) pursuant to the Paperwork Reduction Act of 1980 (44 U.S.C. 3501 *et seq.*). The Coast Guard intends that this section comply with the requirements of 44 U.S.C. 3507(f) which requires that agencies display a current control number assigned by the Director of OMB for each approved agency information collection requirement.

(b) *Display*.

46 CFR part—	OMB control No.
§ 169.111	1625–0002
§ 169.201	1625–0002
§ 169.205	1625–0002, 1625–0014, 1625–0018, 1625–0032, and 1625–0038
§ 169.211	1625–0002
§ 169.213	1625–0002
§ 169.215	1625–0002
§ 169.217	1625–0002
§ 169.218	1625–0002, 1625–0014, 1625–0018, 1625–0032, and 1625–0038
§ 169.219	1625–0002, 1625–0014, 1625–0018, 1625–0032, and 1625–0038
§ 169.233	1625–0032
§ 169.235	1625–0002
§ 169.305	1625–0038, 1625–0064
§ 169.509	1625–0035, 1625–0038
§ 169.807	1625–0001
§ 169.813	1625–0002, 1625–0014, 1625–0018, 1625–0032, and 1625–0038
§ 169.840	1625–0064
§ 169.841	1625–0002, 1625–0014, 1625–0018, 1625–0032, and 1625–0038
§ 169.857	1625–0002, 1625–0014, 1625–0018, 1625–0032, and 1625–0038.

[CGD 83–005, 51 FR 896, Jan. 9, 1986, as amended by CGD 88–072, 53 FR 34298, Sept. 6, 1988; CGD 89–037, 57 FR 41824, Sept. 11, 1992; USCG–2004–18884, 69 FR 58350, Sept. 30, 2004]

§ 169.119 Vessel status.

For the purpose of 46 U.S.C. 11101, 46 App. U.S.C. 291 and 46 App. U.S.C. 883 a sailing school vessel is not deemed a merchant vessel or a vessel engaged in trade or commerce.

§ 169.121 Loadlines.

Sailing school vessels must meet the applicable loadline regulations contained in Subchapter E (Load Lines) of this chapter.

Subpart 169.200—Inspection and Certification

CERTIFICATE OF INSPECTION

§ 169.201 When required.

(a) No sailing school vessel shall be operated without a valid Certificate of Inspection, Form CG–3753.

(b) Except as noted in this subpart, each sailing school vessel inspected

and certificated under the provisions of this subchapter must, during the tenure of the certificate, be in full compliance with the terms of the certificate when carrying six or more individuals who are sailing school students or sailing school instructors.

(c) If necessary to prevent delay of the vessel, a temporary Certificate of Inspection, Form CG–854, is issued pending the issuance and delivery of the regular Certificate of Inspection, Form CG–3753. The temporary certificate is carried in the same manner as the regular certificate and is considered the same as the regular certificate of inspection which it represents.

§ 169.203 Description.

The certificate of inspection issued to a vessel describes the vessel, the route which it may travel, the minimum manning requirements, the major lifesaving equipment carried, the minimum fire extinguishing equipment and life preservers required to be carried, the maximum number of sailing school students and instructors and the maximum number of persons which may be carried, the name of the owner and operator, and such conditions of operations as may be determined by the Officer in Charge, Marine Inspection.

§ 169.205 Obtaining or renewing a Certificate of Inspection.

(a) A qualified organization attempting to obtain or renew a certificate of inspection for a vessel must submit to the Coast Guard Officer in Charge, Marine Inspection located in or nearest the port at which the inspection is to be made, the following—

(1) An application for inspection on Form CG–3752; and

(2) Evidence that the vessel has been designated as a sailing school vessel or an application for designation, as set forth in § 169.218; and

(3) Information concerning the program's age and physical qualifications for students and instructors and the ratio of students to instructors.

(b) The application for initial inspection of a vessel being newly constructed or converted must be submitted prior to the start of such construction or conversion.

(c) The construction, arrangement and equipment of all vessels must be acceptable to the cognizant Officer in Charge, Marine Inspection, as a prerequisite of the issuance of the initial certificate of inspection. Acceptance will be based on the information, specifications, drawings and calculations available to the Officer in Charge, Marine Inspection, and on the successful completion of an initial inspection for certification.

(d) You must submit a written application for an inspection for certification to the cognizant Officer in Charge, Marine Inspection. To renew a Certificate of Inspection, you must submit an application at least 30 days before the expiration of the vessel's current certificate. Applications are available at any U.S. Coast Guard Sector Office or Marine Inspection Office. When renewing a Certificate of Inspection, you must schedule an inspection for certification within the 3 months before the expiration date of the current Certificate of Inspection.

(e) The condition of the vessel and its equipment must be acceptable to the cognizant Officer in Charge, Marine Inspection, as a prerequisite of the certificate of inspection renewal. Acceptance will be based on the condition of the vessel as found at the inspection for certification.

[CGD 83–005, 51 FR 896, Jan. 9, 1986, as amended by USCG–1999–4976, 65 FR 6507, Feb. 9, 2000; USCG–2006–25556, 72 FR 36330, July 2, 2007]

§ 169.207 Period of validity for a Certificate of Inspection.

(a) A Certificate of Inspection is valid for 5 years.

(b) Certificates of inspection may be revoked, or suspended and withdrawn by the Officer in Charge, Marine Inspection, at any time for noncompliance with the provisions of this subchapter or requirements established thereunder.

[CGD 83–005, 51 FR 896, Jan. 9, 1986, as amended by USCG–1999–4976, 65 FR 6507, Feb. 9, 2000]

§ 169.209 Routes permitted.

(a) The area of operation for each vessel is designated by the Officer in Charge, Marine Inspection and recorded on its Certificate of Inspection. Each area of operation is described on

the Certificate of Inspection under the major headings ''exposed waters,'' ''partially protected waters,'' or ''protected waters,'' as applicable. Further limitations imposed or extensions granted are described by reference to bodies of waters, geographical points, distance from geographical points, distances from land, depths of channel, seasonal limitations, etc.

(b) Operation of vessels on routes of lesser severity than those specifically described or designated on the Certificate of Inspection are permitted, unless expressly prohibited on the Certificate of Inspection. The general order of severity is: exposed, partially protected, and protected waters.

§ 169.211 Permit to proceed for repair.

(a) The Officer in Charge, Marine Inspection, may issue a permit to proceed to another port for repair, Form CG–948, to a vessel if in his judgment it can be done with safety even if the Certificate of Inspection of the vessel has expired or is about to expire.

(b) The permit is issued only upon the written application of the master, owner, or agent of the vessel.

(c) The permit states upon its face the conditions under which it is issued and that guests may not be carried when operating under the permit. The permit must be carried in a manner similar to that described in § 169.217(a) for a certificate of inspection.

§ 169.213 Permit to carry excursion party.

(a) A vessel may be permitted to engage in a temporary excursion operation with a greater number of persons and/or on a more extended route than permitted by its certificate of inspection when in the opinion of the Officer in Charge, Marine Inspection, the operation can be undertaken with safety. A ''Permit To Carry Excursion Party'' Form CG–949, is a prerequisite of such an operation.

(b) Any Officer in Charge, Marine Inspection, having jurisdiction may issue a permit to carry an excursion party upon the written application of the operator, owner or agent of the vessel.

(c) The OCMI will reevaluate the vessel's sailing instruction program to ensure that the permit fits within the scope of the training program and that the vessel continues to meet the definition of a sailing school vessel.

(d) The OCMI may require an inspection prior to the issuance of a permit to carry an excursion party.

(e) The permit states upon its face the conditions under which it is issued, a reminder about the prohibition against carrying passengers, the number of persons the vessel may carry, the crew required, and additional lifesaving or safety equipment required, the route for which the permit is granted, and the dates on which the permit is valid.

(f) The permit must be carried with the certificate of inspection. Any vessel operating under a permit to carry an excursion party must be in full compliance with the terms of its certificate of inspection as supplemented by the permit.

§ 169.215 Certificate of inspection amendment.

(a) An amended certificate of inspection may be issued at any time by any Officer in Charge, Marine Inspection. The amended certificate of inspection replaces the original. An amended certificate of inspection may be issued to authorize and record a change in the character of a vessel or in its route, equipment, ownership, operator, etc., from that specified in the current certificate of inspection.

(b) A request for an amended certificate of inspection must be made to the Officer in Charge, Marine Inspection, by the master, operator, owner, or agent of the vessel at any time there is a change in the character of a vessel or in its route, equipment, ownership, operation etc., as specified in its current certificate of inspection.

(c) The OCMI may require an inspection prior to the issuance of an amended certificate of inspection.

§ 169.217 Posting.

The certificate of inspection must be framed under glass or other suitable transparent material and posted in a conspicuous place on the vessel except on open boats where the certificate may be retained in a watertight container, which is secured to the vessel.

LETTER OF DESIGNATION

§ 169.218 Procedures for designating sailing school vessels.

(a) Upon written request by a qualified institution, a determination is made by the OCMI whether the vessel may be designated as a sailing school vessel.

(b) The request should contain sufficient information to allow the OCMI to make this determination. At a minimum the following items must be submitted:

(1) A detailed description of the vessel, including its identification number, owner, and charterer.

(2) A specific operating plan stating precisely the intended use of the vessel and the intended course of instruction for sailing school students.

(3) A copy of the Internal Revenue Service designation as a non-profit, tax-exempt, organization under sections 501(a) and 501(c)(3) of the Internal Revenue Code.

(4) An affidavit certifying that the owner or charterer has financial resources to meet any liability incurred for death or injury to sailing school students or sailing school instructors on voyages aboard the vessel, in an amount not less than $50,000 for each student and instructor.

(5) Any additional information as requested by the Officer in Charge, Marine Inspection.

(c) If a designation is granted it is indicated on the certificate of inspection and remains valid for the duration of the certificate, provided all operating conditions remain unchanged.

(d) In the event of a change, the institution must advise the OCMI who issued the designation. After reviewing the pertinent information concerning the change, the OCMI shall determine if the vessel is eligible to retain its designation as a sailing school vessel.

§ 169.219 Renewal of letter of designation.

At least 60 days prior to the expiration date of the certificate of inspection, a request for renewal must be submitted in the same manner as described in § 169.218. If the request for renewal is submitted to the OCMI who made the initial determination and all operating conditions remain unchanged, the information need not be resubmitted.

INSPECTION FOR CERTIFICATION

§ 169.220 General.

(a) An inspection is required before the issuance of a certificate of inspection.

(b) An inspection for certification is not made until after receipt of the information required in § 169.205(a) of this subchapter.

§ 169.221 Initial inspection for certification.

(a) The initial inspection includes an inspection of the hull structure, yards, masts, spars, rigging, sails, machinery, and equipment, including unfired pressure vessels.

(b) The initial inspection of a vessel being newly constructed or converted normally consists of a series of inspections during the construction or conversion.

(c) The inspection ensures that the vessel and its equipment comply with the regulations in this subchapter to the extent they are applicable to the vessel being inspected, and are in accordance with approved plans. The inspection also ensures that the materials, workmanship and condition of all parts of the vessel and its machinery and equipment are in all respects satisfactory for the service intended, and that the vessel is in possession of a valid certificate issued by the Federal Communications Commission, if required.

(d) Before construction is started, the owner, operator, or builder must develop plans indicating the proposed arrangement and construction of the vessel. This list of plans to be developed and the required disposition of these plans are set forth in § 169.305.

§ 169.222 Scope of inspection for certification.

Items normally included in an Inspection for Certification are:

(a) Structure.

(b) Watertight integrity.

(c) Pressure vessels and appurtenances.

(d) Piping.

(e) Auxiliary machinery.

(f) Steering apparatus.

(g) Electrical installations.

(h) Lifesaving appliances.

(i) Navigation equipment.

(j) Fire detecting and extinguishing systems.

(k) Pollution prevention equipment.

(l) Sanitary conditions.

(m) Fire hazards.

(n) Verification of valid certificates issued by the Federal Communications Commission.

(o) Lights and signals required by navigation rules.

(p) Bilge and ballast systems.

(q) Rigging, yards, masts, spars, and sails.

§ 169.223 Subsequent inspections for certification.

An inspection for renewal of a certificate of inspection includes an inspection of the structure, machinery, yards, spars, masts, rigging, sails, and equipment. The inspection ensures that the vessel is in satisfactory condition, fit for the service intended and complies with the applicable regulations in this subchapter.

REINSPECTION

§ 169.225 Annual inspection.

(a) Your vessel must undergo an annual inspection within 3 months before or after each anniversary date, except as specified in § 169.226.

(b) You must contact the cognizant Officer in Charge, Marine Inspection to schedule an inspection at a time and place which he or she approves. No written application is required.

(c) The scope of the annual inspection is the same as the inspection for certification as specified in § 169.222 but in less detail unless the cognizant marine inspector finds deficiencies or determines that a major change has occurred since the last inspection. If deficiencies are found or a major change to the vessel has occurred, the marine inspector will conduct an inspection more detailed in scope to ensure that the vessel is in satisfactory condition and fit for the service for which it is intended. If your vessel passes the annual inspection, the marine inspector will endorse your current Certificate of Inspection.

(d) If the annual inspection reveals deficiencies in your vessel's maintenance, you must make any or all repairs or improvements within the time period specified by the Officer in Charge, Marine Inspection.

(e) Nothing in this subpart limits the marine inspector from conducting such tests or inspections he or she deems necessary to be assured of the vessel's seaworthiness.

[USCG–1999–4976, 65 FR 6507, Feb. 9, 2000]

§ 169.226 Periodic inspection.

(a) Your vessel must undergo a periodic inspection within 3 months before or after the second or third anniversary of the date of your vessel's Certificate of Inspection. This periodic inspection will take the place of an annual inspection.

(b) You must contact the cognizant Officer in Charge, Marine Inspection to schedule an inspection at a time and place which he or she approves. No written application is required.

(c) The scope of the periodic inspection is the same as that for the inspection for certification, as specified in § 169.222. The Officer in Charge, Marine Inspection will insure that the vessel is in satisfactory condition and fit for the service for which it is intended. If your vessel passes the periodic inspection, the marine inspector will endorse your current Certificate of Inspection.

(d) If the periodic inspection reveals deficiencies in your vessel's maintenance, you must make any or all repairs or improvements within the time period specified by the Officer in Charge, Marine Inspection.

(e) Nothing in this subpart limits the marine inspector from conducting such tests or inspections he or she deems necessary to be assured of the vessel's seaworthiness.

[USCG–1999–4976, 65 FR 6507, Feb. 9, 2000]

§ 169.227 Certificate of Inspection: Conditions of validity.

To maintain a valid Certificate of Inspection, you must complete your annual and periodic inspections within the periods specified in §§ 169.225 and

169.226 respectively and your Certificate of Inspection must be endorsed.

[USCG–1999–4976, 65 FR 6507, Feb. 9, 2000]

DRYDOCKING OR HAULING OUT

§ 169.229 Drydock examination, internal structural examination, and underwater survey intervals.

(a) Except as provided for in paragraphs (b) through (e) of this section, each vessel must undergo drydock and internal structural examinations as follows:

(1) If your vessel operates in saltwater, it must undergo two drydock examinations and two internal structural examinations within any 5-year period unless it has been approved to undergo an underwater survey (UWILD) under § 169.230 of this part. No more than 3 years may elapse between any two examinations.

(2) If your vessel operated in fresh water at least 50 percent of the time since your last drydocking, it must undergo a dry dock and internal structural examination at intervals not to exceed 5 years unless it has been approved to undergo an underwater survey (UWILD) under § 169.230 of this part.

(b) Vessels with wooden hulls must undergo two drydock and two internal structural examinations within any five year period regardless of the type of water in which they operate. No more than three years may elapse between any two examinations.

(c) If, during an internal structural examination damage or deterioration to the hull plating or structural members is discovered, the Officer in Charge, Marine Inspection, may require the vessel to be drydocked or otherwise taken out of service to further assess the extent of the damage and to effect permanent repairs.

(d) Each vessel which has not met with the applicable examination schedules in paragraphs (a) through (c) of this section because it is on a voyage, must undergo the required examinations upon completion of the voyage.

(e) The Commandant (CG–CVC) may authorize extensions to the examination intervals specified in paragraphs (a) and (b) of this section.

[CGD 84–024, 52 FR 39656, Oct. 23, 1987, as amended at 53 FR 32232, Aug. 24, 1988; CGD 95–072, 60 FR 50468, Sept. 29, 1995; CGD 96–041, 61 FR 50734, Sept. 27, 1996; USCG–2000–6858, 67 FR 21083, Apr. 29, 2002; USCG–2009–0702, 74 FR 49239, Sept. 25, 2009; USCG–2012–0832, 77 FR 59788, Oct. 1, 2012]

§ 169.230 Underwater Survey in Lieu of Drydocking (UWILD).

(a) The Officer in Charge, Marine Inspection (OCMI), on a case-by-case basis, may approve an underwater survey instead of a drydock examination at alternating intervals if your vessel is—

(1) Less than 15 years of age;

(2) A steel or aluminum hulled vessel;

(3) Fitted with an effective hull protection system; and

(4) Listed in § 169.229(a)(1) or (2) of this part.

(b) For vessels less than 15 years of age, you must submit an application for an underwater survey to the OCMI at least 90 days before your vessel's next required drydock examination. The application must include—

(1) The procedure for carrying out the underwater survey;

(2) The time and place of the underwater survey;

(3) The method used to accurately determine the diver's or remotely operated vehicle's (ROV) location relative to the hull;

(4) The means for examining all through-hull fittings and appurtenances;

(5) The condition of the vessel, including the anticipated draft of the vessel at the time of survey;

(6) A description of the hull protection system; and

(7) The name and qualifications of any third party examiner.

(c) If your vessel is 15 years old or older, the cognizant District Commander, on a case-by-case basis, may approve an underwater survey instead of a drydock examination at alternating intervals. You must submit an application for an underwater survey to the OCMI at least 90 days before your vessel's next required drydock examination. You may be allowed this option if—

(1) The vessel is qualified under paragraphs (a)(2) through (4) of this section;

(2) Your application includes the information in paragraphs (b)(1) through (b)(7) of this section; and

(3) During the vessel's drydock examination, preceding the underwater survey, a complete set of hull gaugings was taken and they indicated that the vessel was free from appreciable hull deterioration.

(d) After the drydock examination required by paragraph (c)(3) of this section, the OCMI submits a recommendation for future underwater surveys, the results of the hull gauging, and the results of the Coast Guards' drydock examination results to the cognizant District Commander, for review.

[USCG–2000–6858, 67 FR 21083, Apr. 29, 2002]

§ 169.231 Definitions relating to hull examinations.

As used in the part—

(a) *Drydock examination* means hauling out a vessel or placing a vessel in a drydock or slipway for an examination of all accessible parts of the vessel's underwater body and all through-hull fittings, sea chests, sea valves, sea strainers, and valves for the emergency bilge suction.

(b) *Underwater survey* means the examination of the vessel's underwater hull including all through-hull fittings and appurtenances, while the vessel is afloat.

(c) *Internal structural examination* means an examination of the vessel while afloat or in drydock and consists of a complete examination of the vessel's main strength members, including the major internal framing, the hull plating, voids, and ballast tanks, but not including cargo or fuel oil tanks.

[CGD 84–024, 52 FR 39656, Oct. 23, 1987, as amended at 53 FR 32232, Aug. 24, 1988; USCG–2000–6858, 67 FR 21084, Apr. 29, 2002]

§ 169.233 Notice and plans required.

(a) The master, owner, operator, or agent of the vessel shall notify the Officer in Charge, Marine Inspection, whenever the vessel is to be drydocked regardless of the reason for drydocking.

(b) Each vessel, except barges, that holds a Load Line Certificate must have on board a plan showing the vessel's scantlings. This plan must be made available to the Coast Guard marine inspector whenever the vessel undergoes a drydock examination or internal structural examination or whenever repairs are made to the vessel's hull.

(c) Each barge that holds a Load Line Certificate must have a plan showing the barge's scantlings. The plan need not be maintained on board the barge but must be made available to the Coast Guard marine inspector whenever the barge undergoes a drydock examination or internal structural examination or whenever repairs are made to the barge's hull.

[CGD 84–024, 52 FR 39656, Oct. 23, 1987]

§ 169.234 Integral fuel oil tank examinations.

(a) Each fuel oil tank with at least one side integral to the vessel's hull and located within the hull (''integral fuel oil tank'') is subject to inspection as provided in this section. The owner or operator of the vessel shall have the tanks cleaned out and gas freed as necessary to permit internal examination of the tank or tanks designated by the marine inspector. The owner or operator shall arrange for an examination of the fuel tanks of each vessel during an internal structural examination at intervals not to exceed five years.

(b) Integral non-double-bottom fuel oil tanks need not be cleaned out and internally examined if the marine inspector is able to determine by external examination that the general condition of the tanks is satisfactory.

(c) Double-bottom fuel oil tanks on vessels less than 10 years of age need not be cleaned out and internally examined if the marine inspector is able to determine by external examination that the general condition of the tanks is satisfactory.

(d) All double-bottom fuel oil tanks on vessels 10 years of age or older but less than 15 years of age need not be cleaned out and internally examined if the marine inspector is able to determine by internal examination of at least one forward double-bottom fuel oil tank, and by external examination of all other double-bottom fuel oil

tanks on the vessel, that the general condition of the tanks is satisfactory.

(e) All double-bottom fuel oil tanks on vessels 15 years of age or older need not be cleaned out and internally examined if the marine inspector is able to determine by internal examination of at least one forward, one amidships, and one aft double-bottom fuel oil tank, and by external examination of all other double-bottom fuel oil tanks on the vessel, that the general condition of the tanks is satisfactory.

[CGD 84–024, 52 FR 39656, Oct. 23, 1987, as amended at 53 FR 32232, Aug. 24, 1988]

REPAIRS AND ALTERATIONS

§ 169.235 Permission required.

(a) Repairs or alterations to the hull, machinery, or equipment which affects the safety of the vessel may not be made without the knowledge and approval of the Officer in Charge, Marine Inspection.

(b) Drawings, sketches or written specifications describing the alterations in detail must be submitted to the OCMI. Proposed alterations must be approved by the Officer in Charge, Marine Inspection, before work is started.

(c) Drawings are not required for repairs or replacements in kind.

§ 169.236 Inspection and testing required.

(a) The provisions of NFPA 306, (incorporation by reference, see § 169.115) are used as a guide in conducting the inspections and issuing certificates required by this section.

(b) Until an inspection has been made to determine that the operations can be undertaken safely, no alterations, repairs, or other operations involving riveting, welding, burning, or other fire-producing actions may be made—

(1) Within or on the boundaries of fuel tanks; or

(2) To pipelines, heating coils, pumps, fittings, or other appurtenances connected to fuel tanks.

(c) Inspections must be conducted as follows:

(1) In ports or places in the United States or its territories and possessions, the inspection must be made by a marine chemist certificated by the National Fire Protection Association; however, if the services of such certified marine chemist are not reasonably available, the Officer in Charge, Marine Inspection, upon the recommendation of the vessel owner and his contractor on their representative, may authorize a person to inspect the particular vessel. If the inspection indicates that the operations can be undertaken with safety, a certificate setting forth this fact in writing must be issued by the certified marine chemist or the authorized person before the work is started. The certificate must include any requirements necessary to reasonably maintain safe conditions in the spaces certified throughout the operation, including any precautions necessary to eliminate or minimize hazards that may be present from protective coatings or residues from cargoes.

(2) When not in a port or place in the United States or its territories and possessions, and when a marine chemist or a person authorized by the Officer in Charge, Marine Inspection, is not reasonably available, the senior officer present shall conduct the inspection and enter the results of the inspection in the vessel's logbook.

(d) It is the responsibility of the senior officer present to secure copies of certificates issued by the certified marine chemist or a person authorized by the Officer in Charge, Marine Inspection. It is the responsibility of the senior officer present, insofar as the persons under his control are concerned, to maintain a safe condition on the vessel by full observance of all requirements listed by the marine chemist in the certificate.

[CGD 83–005, 51 FR 896, Jan. 9, 1986, as amended by USCG–2012–0196, 81 FR 48295, July 22, 2016]

INSPECTIONS

§ 169.237 Inspection standards.

Vessels are inspected for compliance with the standards required by this subchapter. Items not covered by standards in this subchapter must be in accordance with good marine practice and acceptable to the Officer in Charge, Marine Inspection.

§ 169.239 Hull.

At each inspection for certification and periodic inspection, the vessel must be afloat and ready for the following tests and inspections of the hull structure and its appurtenances:

(a) All accessible parts of the exterior and interior of the hull, the watertight bulkheads, and weather deck are examined. Where the internals of the vessel are completely concealed, sections of the lining or ceiling may be removed or the parts otherwise probed or exposed so that the inspector may be satisfied as to the condition of the hull structure.

(b) All watertight closures in the hull, decks and bulkheads are examined and operated.

(c) The condition of the superstructure, masts, and similar arrangements constructed on the hull is checked. All spars, standing rigging, running rigging, blocks, fittings, and sails, including storm sails are inspected.

(d) All railings and bulwarks and their attachment to the hull structure are inspected. Special attention is paid to ensure that guards or rails are provided in all dangerous places.

(e) All weathertight closures above the weather deck are inspected. The provisions for drainage of sea water from the exposed decks are checked.

[CGD 83–005, 51 FR 896, Jan. 9, 1986, as amended by USCG–1999–4976, 65 FR 6508, Feb. 9, 2000]

§ 169.241 Machinery.

(a) At each inspection for certification and periodic inspection, the marine inspector will examine and test the following items to the extent necessary, to determine that they are in proper operating condition and fit for the service for which they are intended:

(1) *Engine starting system.* Alternate methods of starting are checked.

(2) *Engine control mechanisms.* Mechanisms are operationally tested and visually examined.

(3) *Auxiliary machinery.* All machinery essential to the routine operation of the vessel is checked.

(4) *Fuel systems.* Tanks, tank vents and other appurtenances, piping and pipe fittings are examined. The fuel systems for the auxiliary propulsion engines and all other fuel systems installed are checked. All valves in the fuel lines are tested by operating locally and at remote operating positions.

(5) *Sea valves and bulkhead closure valves.* All overboard discharge and intake valves are checked.

(6) *Bilge and drainage systems.* The means provided for pumping bilges are operationally tested. All suction strainers are examined.

(b) During all inspections special attention is paid to ensure that no fire hazards exist and that guards or protective devices are provided in all hazardous places.

[CGD 83–005, 51 FR 896, Jan. 9, 1986, as amended by USCG–1999–4976, 65 FR 6508, Feb. 9, 2000]

§ 169.243 Electrical.

At each inspection for certification and periodic inspection, the marine inspector will examine and test the following items to the extent necessary, to determine that they are in proper operating condition, in safe electrical condition, and fit for the service for which they are intended:

(a) *Electrical cable.* All cable is examined as far as practicable without undue disturbance of the cable or electrical apparatus.

(b) *Overload or circuit protective devices.* Circuit breakers are tested by manual operation and fuses examined visually. The ratings of fuses are checked to determine suitability for the service intended.

(c) *Rotating machinery.* Rotating electrical machinery essential to the routine operation of the vessel is examined.

(d) *Generators, etc.* All generators, motors, lighting fixtures and circuit interrupting devices located in spaces or areas which may contain flammable vapors are checked.

(e) *Storage batteries.* Batteries are checked for condition and security of stowage.

(f) *Fire detection and alarm system.* Electrical apparatus, which operates as part of or in conjunction with a fire detection or alarm system installed on board the vessel, is operationally tested. The test is applied, in a manner to

simulate, as closely as practicable, the actual operation in case of fire.

[CGD 83–005, 51 FR 896, Jan. 9, 1986, as amended by USCG–1999–4976, 65 FR 6508, Feb. 9, 2000]

§ 169.245 Lifesaving equipment.

At each inspection for certification and periodic inspection the following tests and inspections of lifesaving equipment will be conducted:

(a) All air tank buoyant units of all lifesaving appliances are tested for airtightness.

(b) Each lifeboat is lowered to near the water and loaded with its allowed capacity, evenly distributed throughout the length. The total weight used is at least equal to the allowed capacity of the lifeboat considering persons to weigh 75 kg (165 pounds) each. The lifeboat is then lowered into the water until it is afloat and released from the falls.

(c) Each personal flotation device is examined to determine its serviceability. If found to be satisfactory, it is stamped ''Passed,'' together with the date and the port. If found to be unsatisfactory, the personal flotation device must be removed from the vessel's equipment and repaired. If it is beyond repair it must be destroyed in the presence of the Coast Guard inspector.

(d) Each lifeboat winch electrical control apparatus is opened and inspected.

(e) Where gravity davits are installed, it must be demonstrated that the lifeboat can be swung out and lowered from any stopped position by merely releasing the brake on the lifeboat winch. The use of force to start the davits or the lifeboat winch is not permitted.

(f) Inflatable liferaft containers are examined for defects and the inspector verifies that the inflatable liferafts and hydraulic releases, if installed, have been serviced at an approved facility in accordance with the provisions of subparts 160.051 and 160.062, respectively, of this chapter.

(g) All other items of lifesaving equipment are examined to determine that they are in suitable condition.

[CGD 83–005, 51 FR 896, Jan. 9, 1986, as amended by USCG–1999–4976, 65 FR 6508, Feb. 9, 2000]

§ 169.247 Fire fighting equipment.

(a) At each inspection for certification and periodic inspection and at such other times as considered necessary, all fire extinguishing equipment must be inspected to ensure it is in suitable condition. Tests may be necessary to determine the condition of the equipment. The inspector must verify that the following tests and inspections have been conducted by a qualified servicing facility at least once every 12 months:

(1) Portable fire extinguishers and semi-portable fire extinguishing systems must be inspected and maintained in accordance with NFPA 10 (incorporated by reference, see § 169.115) as amended here:

(i) Certification or licensing as fire extinguisher servicing agency by a state or local authority having jurisdiction will be accepted by the Coast Guard as meeting the personnel certification requirements of NFPA 10 for annual maintenance and recharging of extinguishers.

(ii) Monthly inspections required by NFPA 10 may be conducted by the owner, operator, person-in-charge, or a designated member of the crew.

(iii) Non-rechargeable or non-refillable extinguishers must be inspected and maintained in accordance with NFPA 10; however, the annual maintenance need not be conducted by a certified person and can be conducted by the owner, operator, person-in-charge, or a designated member of the crew.

(iv) The owner or managing operator must provide satisfactory evidence of the required servicing to the marine inspector. If any of the equipment or records have not been properly maintained, a qualified servicing facility must perform the required inspections, maintenance procedures, and hydrostatic pressure tests. A tag issued by a qualified servicing organization, and attached to each extinguisher, may be accepted as evidence that the necessary maintenance procedures have been conducted.

(2) All parts of the fixed fire extinguishing systems must be examined for excessive corrosion and general condition. Table 169.247(a)(1) of this section provides detailed inspection and test requirements of fixed systems.

(3) Piping, controls, valves, and alarms on all fire extinguishing systems must be checked to be certain the system is in operating condition.

(4) The fire main system is operated and the pressure checked at the most remote and highest outlets.

(5) Each firehose is subjected to a test pressure equivalent to its maximum service pressure.

(b) [Reserved]

TABLE 169.247(a)(1)—FIXED SYSTEMS

Type of system	Test
Carbon dioxide or HALON 1301	Weigh cylinders. Recharge if weight loss exceeds 10 percent of weight of the charge.

[USCG–2012–0196, 81 FR 48295, July 22, 2016]

§ 169.249 Pressure vessels.

Pressure vessels must meet the requirements of part 54 of this chapter. The inspection procedures for pressure vessels are contained in subpart 61.10 of this chapter.

§ 169.251 Steering apparatus.

At each inspection for certification and periodic inspection the steering apparatus is inspected and operationally tested to determine that its condition is satisfactory and that it is fit for the service intended.

[CGD 83–005, 51 FR 896, Jan. 9, 1986, as amended by USCG–1999–4976, 65 FR 6508, Feb. 9, 2000]

§ 169.253 Miscellaneous systems and equipment.

(a) At each inspection for certification and periodic inspection all items in the ship's outfit, such as ground tackle, navigation lights, compass, etc., which are required to be carried by the regulations in this subchapter are examined and tested as necessary to determine that they are fit the service intended.

(b) Approved work vests, where carried, are inspected as provided in § 169.556.

[CGD 83–005, 51 FR 896, Jan. 9, 1986, as amended by USCG–1999–4976, 65 FR 6508, Feb. 9, 2000]

§ 169.255 Sanitary inspection.

At each inspection for certification, periodic inspection, and annual inspection quarters, toilet and washing spaces, galleys, serving pantries, lockers, etc., are examined to determine that they are serviceable and in a sanitary condition.

[CGD 83–005, 51 FR 896, Jan. 9, 1986, as amended by USCG–1999–4976, 65 FR 6508, Feb. 9, 2000]

§ 169.257 Unsafe practices.

(a) At each inspection for certification, periodic inspection, annual inspection, and at every other vessel inspection all observed unsafe practices and hazardous situations must be corrected.

(b) At each inspection for certification, periodic inspection, annual inspection, and at every other vessel inspection the bilges and other spaces are examined to see that there is no accumulation of oil or other matter which might create a fire hazard.

[CGD 83–005, 51 FR 896, Jan. 9, 1986, as amended by USCG–1999–4976, 65 FR 6508, Feb. 9, 2000]

§ 169.259 Limitations of inspections.

The OCMI may require that a vessel and its equipment meet any test or inspection deemed necessary to determine that they are suitable for the service in which they are to be employed.

Subpart 169.300—Construction and Arrangement

PLANS

§ 169.305 Plans required.

(a) Except as provided in paragraphs (b) and (c) of this section the owner or builder shall, before the start of construction or before the initial inspection of the vessel, submit to the Officer in Charge, Marine Inspection of the inspection zone where the vessel is to be

inspected, at least one copy of each of the following plans:

(1) Midship section.

(2) Outboard profile.

(3) Inboard profile.

(4) Arrangement of decks.

(5) Lifesaving equipment installation and arrangement.

(6) Machinery installation.

(7) Electrical installation.

(8) Fire control plan.

(9) Fuel tanks.

(10) Piping systems.

(11) Hull penetrations and shell connections.

(12) Lines and offsets, curves of form, and capacities of the tanks including size and location on vessel.

(13) Masts, including integration into the ship's structure.

(14) Rigging plan showing sail areas and centers of effort as well as the arrangement, dimensions, and connections of the standing rigging.

(b) For vessels less than 65 feet in length, the owner may submit specifications, sketches, photographs, line drawings or written descriptions in lieu of any of the required drawings provided the required information is adequately detailed and acceptable to the Officer in Charge, Marine Inspection.

(c) The Officer in Charge, Marine Inspection, may waive submission of some or all of the structural plans called for by paragraph (a) of this section for an existing vessel with a history of at least 5 years of safe operation, or if the design and construction of the vessel are essentially similar to a vessel which has a proven record of safe operation in similar service upon similar waters.

§ 169.307 Plans for sister vessels.

Plans are not required for any vessel which is a sister ship to a vessel, provided that—

(a) The approved plans for the original vessels are already on file at any Marine Inspection Office;

(b) The owner of the plans authorizes their use for the new construction;

(c) The regulations have not changed since the original plan approval; and

(d) There are no major modifications to any of the systems used.

HULL STRUCTURE

§ 169.309 Structural standards.

(a) Compliance with the standards established by a recognized classification society will, in general, be considered satisfactory evidence of the structural adequacy of a vessel.

(b) Masts, posts and other supporting structures are to have adequate strength to withstand the highest loadings imposed by the sail systems during all normal and emergency conditions. Particular attention must be given to the integration of the masts and rigging into the hull structure. The hull structure must be adequately reinforced and stiffened locally to ensure sufficient strength and resistance to plate buckling.

(c) The design, materials, and construction of masts, yards, booms, bowsprits, and standing rigging must be suitable for the intended service. Detailed calculations with respect to the strength of the sail system may be required. Approval by a recognized classification society may be considered satisfactory evidence of the adequacy of the sail system.

(d) When scantlings differ from established standards and it can be demonstrated that a craft approximating the same size, power and displacement has been built to the proposed scantlings and has been in satisfactory service, insofar as structural adequacy is concerned, for a period of a least 5 years, the proposed scantling may be approved. A detailed structural analysis may be required.

(e) Special consideration will be given to the structural requirements of vessels not contemplated by the standards of a recognized classification society and to the use of materials not specially included in these standards.

§ 169.311 Fire protection.

(a) The general construction of the vessel must be designed to minimize fire hazards. Each vessel which carries more than 100 persons or has overnight accommodations for more than 49 persons must meet the requirements of subpart 72.05 of this chapter. Each vessel which is certificated to carry 100 persons or less or had overnight accommodations for less than 50 persons

must meet the requirements of § 169.323.

(b) A fire detector, listed by a recognized testing laboratory, must be installed in each unmanned engine space.

(c) Smoke detectors, listed by a recognized testing laboratory, must be installed in each berthing compartment, sail locker, and public area.

(d) Internal combustion engine exhausts, boiler and galley uptakes, and similar sources of ignition must be kept clear of and suitably insulated from any woodwork or other combustible matter.

(e) Lamp, paint, oil lockers and similar compartments must be constructed of metal or wholly lined with metal.

[CGD 83–005, 51 FR 897, Jan. 9, 1986; 51 FR 3785, Jan. 30, 1986]

§ 169.313 Means of escape.

(a) Except as provided by paragraph (f) of this section, there must be at least two means of escape from all areas generally accessible to persons onboard. At least one means of escape must be independent of watertight doors and lead directly to the open deck. Windows and windshields of sufficient size and proper accessibility may be used as one avenue of escape.

(b) The two means of escape must be as widely separated as practical to minimize the possibility of one incident blocking both escapes.

(c) Except as provided by paragraph (d) of this section, a vertical ladder and deck scuttle may not be designated as one of the means of escape.

(d) A vertical ladder and deck scuttle may be used as a second means of escape if—

(1) The primary means of escape is an enclosed stairtower or stairway;

(2) The installation of two stairways is impracticable;

(3) The scuttle is located where it cannot be interfered with; and

(4) The scuttle is fitted with a quick-acting release and a hold-back to hold the scuttle in an open position.

(e) The required means of escape must not have locking devices.

(f) Where the length of the compartment is less than 12 feet, one vertical means of escape is acceptable provided that—

(1) There is no source of fire in the space, such as a galley stove, heater, etc., and the vertical escape is remote from the engine or fuel tank space, and

(2) The arrangement is such that the installation of two means of escape does not materially improve the safety of the vessel or those on board.

(g) Dead end corridors or the equivalent, more than 40 feet in length are prohibited.

(h) Each means of escape must be of adequate size to accommodate rapid evacuation.

(i) Each vertical ladder must have rungs that are:

(1) At least 16 inches in length;

(2) Not more than 12 inches apart, uniform for the length of the ladder;

(3) At least 3 inches from the nearest permanent object in back of the ladder; and

(4) Except when unavoidable obstructions are encountered, there must be at least 4½ inches clearance above each rung.

[CGD 83–005, 51 FR 896, Jan. 9, 1986, as amended by USCG–2014–0688, 79 FR 58287, Sept. 29, 2014]

§ 169.315 Ventilation (other than machinery spaces).

(a) All enclosed spaces within the vessel must be properly ventilated in a manner suitable for the purpose of the space.

(b) A means must be provided to close off all vents and ventilators.

(c) Living spaces must be ventilated by a mechanical system unless it can be shown that a natural system will provide adequate ventilation in all ordinary weather conditions. Provided that paragraph (a) of this section is satisfied, a vessel having only a natural ventilation system must satisfy the following: $V/A \geq 1.4$ where V is the total area of the vents in square inches and A is the product in square feet of the vessel's design waterline length times its maximum beam.

LIVING SPACES

§ 169.317 Accommodations.

(a) Quarters must have sufficient fresh air, light and heat. Quarters must not be located forward of the collision

bulkhead or farther forward in the vessel than a vertical plane located at 5 percent of the vessel's loadline length abaft the forward side of the stem. The space must not be located totally below the deepest load waterline.

(b) Bulkheads separating accommodations from machinery spaces, paint lockers, storerooms, washrooms, and toilet facilities are to be odorproof.

(c) All quarters are to be properly drained, odorproof and protected from heat and noise.

(d) Each person on board must have a separate berth which is of sufficient size and generally clear of all pipes, ventilation ducts and other installations.

(e) Each bunk must be constructed of wood, fiberglass or metal. If fitted with a mattress, the mattress must be covered with material which has been treated to give it fire resistant properties and which will provide the mattress with a reasonably smooth surface. There must be a minimum vertical distance between bunks of 24 inches.

(f) A means of access must be provided for each berthing arrangement where the upper berth is more than 60 inches above the deck.

(g) The construction and arrangement must allow free and unobstructed access to each berth. Each berth must be immediately adjacent to an aisle leading to a means of escape from the living area.

(h) A properly arranged hammock may be used as a berth.

§ 169.319 Washrooms and toilets.

(a) Sailing school vessels must have one toilet and one washbasin for every 20 persons. Each toilet and washbasin must have adequate plumbing.

(b) Each washroom and toilet room must properly drain and the scupper to the washroom must be of sufficient size and situated in the lowest part of the space.

(c) Each sailing school vessel must meet the applicable requirements of Title 33, Code of Federal Regulations, part 159.

§ 169.323 Furniture and furnishings.

Each sailing school vessel certificated to carry 100 persons or less or having overnight accommodations for less than 50 persons must meet the following requirements:

(a) Except as provided by paragraph (b) of this section, all free-standing furniture must be constructed of noncombustible material. Upholstery and padding used in furniture must be of fire resistant materials.

(b) Existing solid wooden furniture may be retained on existing vessels.

(c) Draperies must be fabricated of fire resistant fabrics.

(d) Rugs and carpets must be of wool or other material having equivalent fire resistant qualities.

(e) Trash receptacles must be constructed of non-combustible materials with solid sides and bottoms and have solid noncombustible covers.

RAILS AND GUARDS

§ 169.327 Deck rails.

(a) All rails or lifelines must be at least 30 inches high and permanently supported by stanchions at intervals of not more than 7 feet. Stanchions must be through bolted or welded to the deck.

(b) Rails or lifelines must consist of evenly spaced courses. The spacing between courses must not be greater than 12 inches. The opening below the lowest course must not be more than 9 inches. Lower rail courses are not required where all or part of the space below the upper rail is fitted with a bulwark, chain link fencing, wire mesh, or an equivalent.

(c) Small vessels of the open type and vessels of unusual construction must have rails or equivalent protection as considered necessary by the Officer in Charge, Marine Inspection.

§ 169.329 Storm rails.

Suitable storm rails or hand grabs must be installed where necessary in all passageways, at deckhouse sides, and at ladders and hatches where persons might have normal access.

§ 169.331 Guards in hazardous locations.

Each exposed hazard, such as gears or machinery, must be properly protected with covers, guards, or rails.

Subpart 169.400—Watertight Integrity, Subdivision, and Stability

§ 169.401 Applicability.

Each vessel must meet the applicable requirements in Subchapter S, parts 170–174, of this chapter.

Subpart 169.500—Lifesaving and Firefighting Equipment

LIFESAVING EQUIPMENT—GENERAL

§ 169.505 Equipment installed but not required.

Each item of lifesaving equipment installed on board a vessel must be of an approved type.

§ 169.507 Responsibility of master.

The master or operator shall ensure that the lifeboats, liferafts, davits, falls, personal flotation devices, and other lifesaving appliances are at all times ready for use, and that all equipment required by the regulations in this subchapter is provided, maintained, serviced, and replaced as indicated.

§ 169.509 Approval for repairs and alterations.

No extensive repairs or alterations, except in an emergency, may be made to any item of lifesaving equipment without advance notice to the Officer in Charge, Marine Inspection. Repairs and alterations must be made to the original standard of construction and tested in the manner specified in this subpart and applicable requirements in Subchapter Q of this chapter. Emergency repairs or alterations must be reported as soon as practicable to the nearest Officer in Charge, Marine Inspection.

PRIMARY LIFESAVING EQUIPMENT

§ 169.513 Types of primary equipment.

(a) *Lifeboats*. Each lifeboat must be of a type approved under subpart 160.035 of this chapter. Installation and arrangement of each lifeboat including davits and winches must meet the requirements of part 94 of this chapter.

(b) *Inflatable liferafts*. (1) Each inflatable liferaft must be a SOLAS A inflatable liferaft approved under part 160, subpart 160.151, of this chapter, except that inflatable liferafts on vessels operating on protected or partially protected waters may be SOLAS B inflatable liferafts approved under part 160, subpart 160.151, of this chapter.

(2) Each approved inflatable liferaft on the vessel on September 30, 2002, may be used to meet the requirements of this part as long as it is continued in use on the vessel, and is in good and serviceable condition.

(c) *Life floats*. Each lifefloat must be of a type approved under subpart 160.027 of this subchapter.

[CGD 83–005, 51 FR 896, Jan. 9, 1986, as amended by USCG–2001–11118, 67 FR 58541, Sept. 17, 2002]

§ 169.515 Number required.

(a) Except as provided in paragraph (c) of this section, each vessel must have sufficient lifeboats or inflatable liferafts to accommodate all persons on board .

(b) Each vessel certificated for exposed waters must have additional inflatable liferafts to accommodate 25% of the persons on board or the number of persons accommodated in the largest lifeboat or liferaft, whichever is greater.

(c) Vessels certificated for protected waters only may carry lifefloats of a combined capacity to accommodate all persons on board in lieu of the lifeboats and inflatable liferafts required in paragraph (a) of this section.

§ 169.517 Rescue boat.

All vessels certificated for exposed or partially protected waters service must have a suitable motor rescue boat, except when a motor lifeboat is provided or when, in the opinion of the Officer in Charge, Marine Inspection, the vessel is of such design and operating characteristics that the vessel itself provides a satisfactory man overboard rescue platform.

§ 169.519 Availability.

(a) Each lifeboat, inflatable liferaft, and lifefloat must be kept in good working order and be readily available.

(b) The decks on which lifeboats, liferafts, and lifefloats are carried must be kept clear of obstructions which could interfere with the immediate boarding

and launching of the lifesaving appliances.

§ 169.521 Stowage.

(a) *General*. Each lifeboat, inflatable liferaft, and lifefloat must be stowed so that—

(1) It is capable of being launched within 10 minutes or, in the case of vessels having one compartment subdivision, 30 minutes;

(2) It does not impede the launching or handling of other lifesaving appliances;

(3) It does not impede the marshaling of persons at the embarkation stations, or their embarkation; and

(4) It is capable of being put in the water safely and rapidly even under unfavorable conditions of list and trim.

(b) *Lifeboat stowage*. Each lifeboat must be stowed to meet the following requirements:

(1) Each lifeboat must be attached to a separate set of davits.

(2) Lifeboats must not be stowed in the bow of the vessel nor so far aft as to be endangered by the propellers or overhang of the stern.

(3) Lifeboats must be stowed so that it is not necessary to lift them in order to swing out the davits.

(4) Means must be provided for bringing the lifeboats against the ship's side and holding them there so that persons may safely embark, unless the lifeboats are arranged for boarding at the stowage position.

(5) Lifeboats must be fitted with skates or other suitable means to facilitate launching against an adverse list of up to 15 degrees. However, skates may be dispensed with if, in the opinion of the Commandant, the arrangements ensure that the lifeboats can be satisfactorily launched without them.

(6) Means must be provided outside the machinery space to prevent the discharge of water into the lifeboats while they are being lowered.

(c) *Inflatable liferaft stowage*. Inflatable liferafts must be stowed so that they will float free in the event of the vessel sinking. Stowage and launching arrangements must be to the satisfaction of the Officer in Charge, Marine Inspection.

(d) *Life float stowage*. Each life float must be stowed to meet the requirements of this paragraph.

(1) Each life float must be secured to the vessel by a painter and a float-free link that is—

(i) Certified to meet subpart 160.073 of this chapter;

(ii) Of proper strength for the size of the life float as indicated on its identification tag; and

(iii) Secured to the painter at one end and secured to the vessel on the other end.

(2) The means by which the float-free link is attached to the vessel must—

(i) Have a breaking strength of at least the breaking strength of the painter.

(ii) If synthetic, be of a dark color or of a material certified to be resistant to deterioration from ultraviolet light; and

(iii) If metal, be corrosion resistant.

(3) If the life float does not have a painter attachment fitting, a means for attaching the painter must be provided by a wire or line that—

(i) Encircles the body of the device;

(ii) Will not slip off;

(iii) Has a breaking strength that is at least the breaking strength of the painter; and

(iv) If synthetic, is of a dark color or is of a material certified to be resistant to deterioration from ultraviolet light.

(4) The float-free link described in paragraphs (d)(1) and (d)(2) of this section is not required if the vessel operates solely in waters that have a depth less than the length of the painter.

(5) If the vessel carries more than one life float, the life floats may be grouped and each group secured by a single painter, provided that—

(i) The combined weight of each group of life floats does not exceed 400 pounds;

(ii) Each life float is individually attached to the painter by a line that meets paragraphs (d)(2) and (d)(3) of this section and which is long enough so that each can float without contacting any other life float in the group; and

(iii) The strength of the float-free link and the strength of the painter under paragraphs (d)(1)(ii) and (d)(2) of

this section is determined by the combined capacity of the group of life floats.

(6) Each life float, as stowed, must be capable of easy launching. Life floats weighing over 400 pounds must not require lifting before launching.

(7) Life floats must be secured to the vessel only by a painter and lashings that can be easily released or by hydraulic releases. They must not be stowed in more than four tiers. When stowed in tiers, the separate units must be kept apart by spacers.

(8) There must be means to prevent shifting.

(e) *Hydraulic Releases.* Each hydraulic release used in the installation of any inflatable liferaft or life float must meet subpart 160.062 of this chapter.

EQUIPMENT FOR PRIMARY LIFESAVING APPARATUS

§ 169.525 General.

(a) Equipment for primary lifesaving apparatus must kept in good condition.

(b) Lifeboats, inflatable liferafts and lifefloats must be fully equipped before the vessel is navigated and throughout the voyage.

(c) No person may stow in any lifeboat, inflatable liferaft, or lifefloat any article not required by this subpart unless the article is authorized by the OCMI, in good working order, and properly stowed so as not to reduce the seating capacity, the space available to the occupants, or adversely affect the seaworthiness of the livesaving apparatus.

(d) Loose equipment, except boathooks in lifeboats, must be securely attached to the lifesaving appliance to which it belongs.

§ 169.527 Required equipment for lifeboats.

(a) All lifeboats must be equipped in accordance with table 1 to 46 CFR 199.175 except as provided in paragraphs (b) and (c) of this section.

(b) The following equipment must be carried in addition to the equipment required under 46 CFR 199.175:

(1) Cover;

(2) Ditty bag; and

(3) Mast and sail.

(c) If operating on protected waters, lifeboat equipment need only to consist of the following:

(1) Boathook—(1);

(2) Bucket—(1);

(3) Fire extinguisher—(2) U.S. Coast Guard-approved Type B:C (motor propelled lifeboats only);

(4) Hatchet—(1);

(5) Lifeline—(1);

(6) Oar unit—(1);

(7) Painter—(1);

(8) Plug—(1);

(9) Oarlock unit—(1); and

(10) Toolkit (motor propelled lifeboats only).

[USCG–2020–0107, 87 FR 68306, Nov. 14, 2022; 88 FR 51737, Aug. 4, 2023]

§ 169.529 Description of lifeboat equipment.

(a) All lifeboat equipment must meet the requirements under 46 CFR 199.175, except as provided in paragraph (b) of this section.

(b) The following equipment, carried in addition to the equipment required under 46 CFR 199.175, must meet the following requirements:

(1) *Cover, protecting.* The cover must be of highly visible color and capable of protecting the occupants against exposure. A cover is not required for fully enclosed lifeboats.

(2) *Ditty bag.* The ditty bag must consist of a canvas bag or equivalent and must contain a sailmaker's palm, needles, sail twine, marline, and marlin spike, except that motor-propelled lifeboats need not carry a ditty bag.

(3) *Mast and sail.* A unit, consisting of a standing lug sail together with the necessary spars and rigging, must be provided in accordance with table 1 to this section, except that motor-propelled lifeboats need not carry a mast or sails. The sails must be of good quality canvas, or other material acceptable to the Commandant, colored Indian Orange (Cable No. 70072, Standard Color Card of America; incorporated by reference, see § 169.115). Rigging must consist of galvanized wire rope not less than 3/16-inch in diameter. The mast and sail must be protected by a suitable cover.

TABLE 1 TO § 169.529

Length of lifeboat, feet		Standing lug sail										Commercial designation number	Mast[1]			Yard[1]		
Over—	Not over—	Area, square feet	Luff and head lengths		Leach length		Foot length		Clew to throat		Ounces per square yard		Length		Diameter, inches	Length		Diameter, inches
			Feet	Inches	Feet	Inches	Feet	Inches	Feet	Inches			Feet	Inches		Feet	Inches	
.....	17	58	5	11	12	1	8	10	10	10	14.35	10	11	2	3	6	11	2
17	19	74	6	8	13	8	10	0	12	2	14.35	10	12	6	3	7	8	2
19	21	93	7	5	15	1	11	2	13	8	14.35	10	13	10	3½	8	5	2½
21	23	113	8	3	16	11	12	4	15	1	14.35	10	15	2	3½	9	3	2½
23	25	135	9	0	18	6	13	6	16	6	14.35	10	16	6	4	10	0	3
25	27	158	9	9	20	0	14	7	17	10	17.50	8	17	10	4	10	9	3
27	29	181	10	5	21	5	15	7	19	1	17.50	8	19	2	4½	11	5	3¼
29	31	203	11	0	22	8	16	6	20	3	20.74	6	20	6	4½	12	0	3¼
31[2]																		

[1] Mast lengths measured from heel to center of upper halyard sheave. Mast diameters measured at thwart. Mast and yard shall be of clear-grained spruce, fir, or equivalent.

[2] Subject to special consideration.

[USCG–2020–0107, 87 FR 68306, Nov. 14, 2022]

§ 169.535 Required equipment for lifefloats.

Each lifefloat must be equipped in accordance with Table 169.535. The equipment is described in § 169.537.

TABLE 169.535

Letter identification and Item	Number required for each lifefloat	
	Exposed and partially protected water	Protected water
(a) Boathook	1	1
(b) Lifeline	1	1
(c) Paddles	4	4
(d) Painter	1	1
(e) Water light	1	None

§ 169.537 Description of equipment for lifefloats.

(a) *Boathook*. Each boathook must be of the single hook ball point type. Boathook handles must be of clear grained white ash, or equivalent, not less than 6 feet long and 1½ inches in diameter.

(b) *Lifeline and pendants*. The lifeline and pendants must be as furnished by the manufacturer with approved life floats. Replacement lifelines and pendants must meet the requirements in subpart 160.010 of this chapter.

(c) *Paddles*. Paddles must be not less than 5 feet long.

(d) *Painter*. The painter must—

(1) Be at least 30m (100 ft.) long, but not less than 3 times the distance between the deck on which the life float(s) are stowed and the light draft of the vessel,

(2) Have a breaking strength of at least 6.7 KN (1500 lbs.), except that if the capacity of the life float is 50 persons or more, the breaking strength must be at least 13.4 KN (3000 lbs.),

(3) Be of a dark color, if synthetic, or of a type certified to be resistant to deterioration from ultraviolet light, and

(4) Be stowed in such a way it runs freely when the life float floats away from the sinking vessel.

(e) *Water light*. The water light must be approved under subpart 161.010 of this chapter. The water light must be attached to the lifefloat by a 12-thread manila or equivalent synthetic lanyard 3 fathoms in length.

PERSONAL FLOTATION DEVICES

§ 169.539 Type required.

All personal flotation devices (PFDs) must be:

(a) Approved under subpart 160.002, 160.005, 160.055, or 160.255 of subchapter Q (specification) of this chapter;

(b) Approved specifically for sailing school vessel use under subpart 160.064, 160.077, or 160.264 of Subchapter Q of this chapter; or

(c) Approved under subparts 160.047, 160.052, or 160.060 of part 160 of this chapter or approved under subpart 160.064 or 160.264 of part 160 of this chapter if the vessel carries exposure suits or exposure PFDs, in accordance with § 169.551.

[USCG–2022–0120, 89 FR 97401, Dec. 6, 2024]

§ 169.541 Number required.

Each vessel must be provided with an approved adult personal flotation device of an appropriate size for each person carried. In addition, unless the service is such that children are never carried, there must be provided an approved personal flotation device of a suitable size for each child carried.

§ 169.543 Distribution and stowage.

(a) Personal flotation devices must be distributed through the upper part of the vessel in protected places convenient to the persons on board.

(b) If practicable, personal flotation device containers must be designed to allow the PFDs to float free.

(c) Personal flotation devices for children, when provided, must be stowed separately.

(d) Lockers, boxes, and closets in which PFDs are stowed must not be capable of being locked.

§ 169.545 Markings.

(a) Each personal flotation device must be marked with the vessel's name.

(b) Where PFDs are stowed so that they are not readily visible to persons onboard, the containers in which they are stowed must be marked ''adult personal flotation devices'' or ''child personal flotation devices'', as appropriate, and with the number contained

therein, in at least 1-inch letters and figures.

(c) Each personal flotation device carried on vessels certificated for exposed or partially protected waters service must have a light approved under subpart 161.012 of this chapter. The light must be securely attached to the front shoulder area of the personal flotation device.

(d) Each personal flotation device must have at least 200 sq. cm. (31 sq. in.) of retroreflective material attached on its front side and at least 200 sq. cm. on its back side. If the personal flotation device is reversible, retroreflective material must be applied as described above on both sides.

(e) Retroreflective material required by this section must be Type I material that is approved under subpart 164.018 of this chapter.

ADDITIONAL LIFESAVING EQUIPMENT

§ 169.549 Ring lifebuoys and water lights.

(a)(1) The minimum number of life buoys and the minimum number to which water lights must be attached must be in accordance with the following table:

TABLE 169.549(a)(1)

Length of vessel	Minimum number of buoys	Minimum number of buoys with waterlights attached
Under 100	2	1
100 feet to less than 200 ft	4	2
200 feet to less than 300 ft	6	2
300 feet to less than 400 ft	12	4
400 feet to less than 600 ft	18	9

(2) One lifebuoy on each side of a vessel must have an attached line at least 15 fathoms in length.

(b) All lifebuoys must be placed where they are readily accessible. They must be capable of being readily cast loose.

(c)(1) All ring lifebuoys must be approved under subpart 160.050 or 160.064 of this chapter and be international orange in color.

(2) Each water light must be approved under subpart 161.010 of this chapter.

§ 169.551 Exposure suits.

(a) This section applies to each vessel operating in exposed or partially protected waters service except those—

(1) Operating on routes between 32° N and 32° S in the Atlantic Ocean.

(2) Operating on routes between 35° N and 35° S latitude in all other waters.

(b) Each vessel to which this section applies must have for each person on board an exposure suit approved under subpart 160.171 or a Type V exposure PFD approved under subpart 160.053.

[CGD 83–005, 51 FR 896, Jan. 9, 1986, as amended by CGD 95–072, 60 FR 50468, Sept. 29, 1995]

§ 169.553 Pyrotechnic distress signals.

(a) All pyrotechnic distress signals must be of an approved type.

(b) Replacement must be made no later than the first inspection for certification or reinspection after the date of expiration.

(c) Except as otherwise provided in this section, each vessel must carry the following pyrotechnic distress signals:

(1) 6 hand red flare distress signals, and 6 hand orange smoke distress signals; or,

(2) 12 hand held rocket propelled parachute red flare distress signals.

(d) [Reserved]

(e) All pyrotechnic distress signals must be carried near the helm or in a location considered suitable by the Officer in Charge, Marine Inspection.

(f) All pyrotechnic distress signals must be stowed in a portable watertight container.

§ 169.555 Emergency position indicating radio beacon (EPIRB).

(a) Each vessel certificated for exposed waters must have an approved Class A emergency position indicating radiobeacon (EPIRB), and each vessel certificated for partially protected waters must have an approved Class C emergency position indicating radiobeacon (EPIRB). The required EPIRB must be—

(1) Operational;

(2) Stowed where it is readily accessible for testing and use; and

(3) Stowed in a manner so that it will float free if the vessel sinks.

(b) Each vessel must have an additional Class B EPIRB for every twenty-

five persons onboard, for use in the lifeboats and liferafts.

[CGD 83–005, 51 FR 896, Jan. 9, 1986; 51 FR 10632, Mar. 28, 1986]

§ 169.556 Work vests.

(a) Buoyant work vests carried under the permissive authority of this section must be approved under subpart 160.053 of this chapter.

(b) Approved buoyant work vests are items of safety apparel and may be carried aboard vessels to be worn by persons when working near or over the water under favorable working conditions. Work vests are not accepted in lieu of any of the required number of approved personal flotation devices and must not be worn during drills and emergencies.

(c) The approved buoyant work vests must be stowed separately from personal flotation devices, and in locations where they will not be confused with personal flotation devices.

(d) Each work vest is subject to examination by a marine inspector to determine its serviceability. If a work vest is found not to be in a serviceable condition, then it must be repaired or removed from the vessel. If a work vest is beyond repair, it must be destroyed in the presence of the marine inspector.

FIREFIGHTING EQUIPMENT

§ 169.559 Fire pumps.

(a) Each sailing school vessel must be equipped with fire pumps as required in Table 169.559(a).

TABLE 169.559(a)—FIRE PUMPS

Length	Exposed and partially protected water service	Protected water service
65 feet but less than 90 feet	[1] 1	0
90 feet but less than 120 feet	[2] 1	[1] 1
120 feet or greater	[3] 2	[1] 1

[1] May be driven off a propulsion engine and may be used as a bilge pump.
[2] Must be driven by a source of power independent of the propulsion engine and may be used as a bilge pump.
[3] One pump may be driven off a propulsion unit and one pump may be used as a bilge pump. Pumps must be located in separate spaces.

(b) Fire pump capacity must be in accordance with the following:

Vessel length	Minimum capacity
Less than 90 ft	5.5 m^3/hr (25 gpm).
90 feet but less than 120 ft	11.0 m^3/hr (50 gpm).
Greater than 120 ft	14.3 m^3/hr (66.6 gpm).

(c) Each fire pump must be fitted with a pressure gage on the discharge side of the pump.

(d) Each vessel must have a hand operated portable fire pump having a capacity of at least 1.1 m^3/hr (5 gpm). This pump must be equipped with suction and discharge hose suitable for use in firefighting.

§ 169.561 Firemain.

(a) Each vessel required to be provided with a power-driven fire pump must also be provided with a fire main, hydrants, hoses and nozzles.

(b) Fire hydrants must be of sufficient number and located so that any part of the vessel may be reached with an effective stream of water from a single length of hose.

(c) All piping, valves, and fittings must be in accordance with good marine practice and suitable for the purpose intended.

§ 169.563 Firehose.

(a) One length of firehose must be provided for each fire hydrant required.

(b) Vessels less than 90 feet in length must have commercial firehose or equivalent of not over 1½ inch diameter or garden hose of not less than ⅝ inch nominal inside diameter. If garden hose is used, it must be of a good commercial grade constructed of an inner rubber tube, plies of braided cotton reinforcement and an outer rubber cover, or of equivalent material, and must be fitted with a commercial garden hose nozzle of good grade bronze or equivalent metal.

(c) Vessels of 90 feet or more must have lined commercial firehose that conforms to UL 19 or Federal Specification ZZ–H–451(incorporated by reference, see § 169.115). The firehose must be fitted with a combination nozzle approved under § 162.027 of this chapter.

(d) Each length of firehose must be a single piece 50 feet long.

(e) Firehose must be connected to the hydrants at all times, except that, on

open decks where no protection is afforded to the hose, it may be temporarily removed from the hydrant in heavy weather and stowed in an accessible nearby location.

[CGD 83–005, 51 FR 896, Jan. 9, 1986, as amended by USCG–2012–0196, 81 FR 48295, July 22, 2016]

§ 169.564 Fixed extinguishing system, general.

(a) A fixed carbon dioxide, Halon 1301, or clean agent extinguishing system must be installed to protect the following spaces:

(1) Any vessel machinery or fuel tank space, except where the space is so open to the atmosphere as to make the use of a fixed system ineffective;

(2) Any paint or oil room, or similar hazardous space; and

(3) Any galley stove area on a vessel greater than 90 feet in length and certificated for exposed or partially protected water service.

(b) Each fixed extinguishing system must be of an approved carbon dioxide, Halon 1301, halogenated, or clean agent type and installed to the satisfaction of the Officer in Charge, Marine Inspection.

[USCG–2006–24797, 77 FR 33890, June 7, 2012]

§ 169.565 Fixed carbon dioxide system.

(a) The number of pounds of carbon dioxide required for each space protected must be equal to the gross volume of the space divided by the appropriate factor in Table 169.565(a).

TABLE 169.565(a)

Gross volume of compartment, cubic feet		Factor
Over—	Not over—	
0	500	15
500	1,600	16
1,600	4,500	18
4,500		20

(b) A separate supply of carbon dioxide is not required for each space protected. The total available supply must be sufficient for the space requiring the greatest amount.

(c) *Controls.* (1) Each control and valve for the operation of the system must be outside the spaces protected and accessible at all times.

(2) Each branch line must be fitted with an approved shutoff valve. Each valve must be kept closed at all times except to operate the particular system.

(3) The arrangements must be such that the entire charge to any space can be introduced into the space by the operation of one valve selecting the space, and one control for releasing the required amount of fire extinguishing agent. The release control must be of an approved type and located adjacent to the branch line shutoff valve.

(4) Complete but simple instructions for the operation of the system must be located in a conspicuous place at or near the releasing control device.

(5) Each control valve to branch lines must be labeled to indicate the space served.

(d) *Piping.* (1) The pipe and fittings for the extinguishing systems must be in accordance with the system manufacturer's approved design manual.

(2) Each pipe, valve, and fitting of ferrous materials must be galvanized.

(3) Each dead-end line must extend at least 2 inches beyond the last orifice and must be closed with cap or plug.

(4) Each pipe, valve, and fitting must be securely supported and, where necessary, protected against injury.

(5) Drains and dirt traps must be fitted where necessary to prevent accumulation of dirt or moisture. Each drain and dirt trap must be located in accessible locations but not in accommodation spaces.

(e) *Discharge outlets.* (1) The area of discharge outlets shall be as specified in the manufacturer's approved design manual.

(2) The discharge of the required amount of carbon dioxide must be complete within two minutes.

(f) *Cylinders.* (1) Each cylinder must be securely fastened and supported, and where necessary protected against injury. Cylinders must be located outside the space protected.

(2) Each cylinder must be mounted in an upright position or inclined not more than 30° from the vertical, except that cylinders which are fitted with flexible or bent siphon tubes may be inclined not more than 80° from the vertical.

(3) Each cylinder used for storing extinguishing agent must be approved and marked in accordance with Department of Transportation regulations.

(4) Each cylinder must be mounted so it is readily accessible and capable of easy removal for recharging and inspection. Cylinders must be capable of being weighed in place.

(5) Where subject to moisture, cylinders must be installed so that a space of at least 2 inches is provided between the flooring and the bottom of the cylinders.

(6) Each cylinder storage area must be properly ventilated and the temperature inside must not exceed 130 °F.

(g) Provision must be made by means of plugs, covers, dampers, etc., to prevent the admission of air into the space protected.

(h) Systems must be fitted with a delayed discharge and an alarm bell arranged so the alarm sounds for at least twenty seconds before the carbon dioxide is released into the space.

§ 169.567 Portable fire extinguishers.

(a) The minimum number of portable fire extinguishers required on each vessel is determined by the Officer in Charge, Marine Inspection, in accordance with table 1 to § 169.567(a) and other provisions of this subpart.

TABLE 1 TO § 169.567(a)—REQUIRED PORTABLE FIRE EXTINGUISHERS

Space	Portable fire extinguishers	
	Minimum required rating	Quantity and location
Propulsion machinery space without fixed extinguishing system.	40–B:C	2.
Propulsion machinery space with fixed extinguishing system.	40–B:C	1 in the vicinity of the exit.
Living space and open boats	2–A	1 per 1,000 cubic foot of space.
Galley (without fixed system)	40–B:C	1 per 500 cubic foot.
Spare Units	2–A	10 percent of the required number rounded up.
	40–B:C	10 percent of the required number rounded up.

(b) Table 1 to § 169.567(a) indicates the minimum required classification for each space listed. Extinguishers with larger numerical ratings or multiple letter designations may be used if the extinguishers meet the requirements of the table.

(c) All portable fire extinguishers installed on vessels must be of an approved type.

(d) Portable fire extinguishers must be stowed in a location convenient to the space protected.

(e) Portable fire extinguishers must be installed and located to the satisfaction of the Officer in Charge, Marine Inspection.

(f) Portable fire extinguishers which are required to be protected from freezing must not be located where freezing temperatures may be expected.

[CGD 83–005, 51 FR 897, Jan. 9, 1986; 51 FR 3785, Jan. 30, 1986, as amended by USCG–2014–0688, 79 FR 58287, Sept. 29, 2014; USCG–2012–0196, 81 FR 48295, July 22, 2016; USCG–2020–0519, 89 FR 76706, Sept. 18, 2024]

§ 169.568 Exemptions to the requirements of portable fire extinguishers required for vessels constructed before August 22, 2016.

Vessels contracted for before August 22, 2016, must meet the following requirements:

(a) Previously installed portable and semi-portable fire extinguishers with extinguishing capacities smaller than what is required in this subpart need not be replaced and may be continued in service so long as they are maintained in good condition to the satisfaction of the Officer in Charge, Marine Inspection.

(b) All new equipment and installations must meet the applicable requirements in this part for new vessels.

[USCG–2020–0519, 89 FR 76707, Sept. 18, 2024]

§ 169.569 Fire axes.

(a) Each vessel must carry at least the number of fire axes set forth in Table 169.569(a). The Officer in Charge, Marine Inspection may require additional fire axes necessary for the proper protection of the vessel.

TABLE 169.569(a)

Length		Number of axes
Over	Not over	
	65	0
65	90	1
90	120	2
120	150	3
150	.....	4

(b) Fire axes must be stowed so as to be readily available in the event of emergency.

(c) If fire axes are not located in the open or behind glass, they must be placed in marked enclosures containing the fire hose.

§ 169.570 Lockout valves.

(a) A lockout valve must be provided on any carbon dioxide extinguishing system protecting a space over 6,000 cubic feet in volume and installed or altered after [July 9, 2013. ''Altered'' means modified or refurbished beyond the maintenance required by the manufacturer's design, installation, operation and maintenance manual.

(b) The lockout valve must be a manually operated valve located in the discharge manifold prior to the stop valve or selector valves. When in the closed position, the lockout valve must provide complete isolation of the system from the protected space or spaces, making it impossible for carbon dioxide to discharge in the event of equipment failure during maintenance.

(c) The lockout valve design or locking mechanism must make it obvious whether the valve is open or closed.

(d) A valve is considered a lockout valve if it has a hasp or other means of attachment to which, or through which, a lock can be affixed, or it has a locking mechanism built into it.

(e) The master or person-in-charge must ensure that the valve is locked open at all times, except while maintenance is being performed on the extinguishing system, when the valve must be locked in the closed position.

(f) Lockout valves added to existing systems must be approved by the Commandant as part of the installed system.

[USCG–2006–24797, 77 FR 33890, June 7, 2012]

§ 169.571 Odorizing units.

Each carbon dioxide extinguishing system installed or altered after July 9, 2013, must have an approved odorizing unit to produce the scent of wintergreen, the detection of which will serve as an indication that carbon dioxide gas is present in a protected area and any other area into which the carbon dioxide may migrate. ''Altered'' means modified or refurbished beyond the maintenance required by the manufacturer's design, installation, operation and maintenance manual.

[USCG–2006–24797, 77 FR 33890, June 7, 2012]

Subpart 169.600—Machinery and Electrical

§ 169.601 General.

(a) The regulations in this subpart contain requirements for the design, construction and installation of machinery on sailing school vessels.

(b) Machinery must be suitable in type and design for the purpose intended. Installations of an unusual type and those not addressed by this subpart are subject to the applicable regulations in Subchapter F (Marine Engineering) and Subchapter J (Electrical Engineering) of this chapter.

(c) The use of liquefied inflammable gases, such as propane, methane, butane, etc., as fuel, except for cooking purposes, is prohibited.

INTERNAL COMBUSTION ENGINE INSTALLATIONS

§ 169.605 General.

(a) Generators, starting motors, and other spark producing devices must be mounted as high above the bilges as practicable.

(b) Gages to indicate engine cooling water temperature, exhaust cooling water temperature and engine lubricating oil pressure must be provided and located in plain view.

(c) All electrical components of the engine must be protected in accordance with § 183.410 of Title 33, Code of Federal Regulations to prevent ignition of flammable vapors.

§ 169.607 Keel cooler installations.

(a) Except as provided in this section, keel cooler installations must meet the requirements of § 56.50–96 of this chapter.

(b) Approved metallic flexible connections may be located below the deepest load waterline if the system is a closed loop below the waterline and its vent is located above the waterline.

(c) Fillet welds may be used in the attachment of channels and half round pipe sections to the bottom of the vessel.

(d) Short lengths of approved nonmetallic flexible hose may be used at machinery connections fixed by hose clamps provided that—

(1) The clamps are of a corrosion resistant material;

(2) The clamps do not depend on spring tension for their holding power; and

(3) Two clamps are used on each end of the hose or one hose clamp is used and the pipe ends are expanded or beaded to provide a positive stop against hose slippage.

§ 169.608 Non-integral keel cooler installations.

(a) Hull penetrations for non-integral keel cooler installations must be made through a cofferdam or at a sea chest.

(b) Non-integral keel coolers must be suitably protected against damage from debris and grounding by recessing the unit into the hull or by the placement of protective guards.

(c) Each non-integral keel cooler hull penetration must be equipped with a shutoff valve.

[CGD 83–005, 51 FR 896, Jan. 9, 1986, as amended by USCG–2000–7790, 65 FR 58464, Sept. 29, 2000]

§ 169.609 Exhaust systems.

Engine exhaust installations and associated cooling systems must be built in accordance with the requirements of American Boat and Yacht Council, Inc. Standard P–1, ''Safe Installation of Exhaust Systems for Propulsion and Auxiliary Machinery'' and the following additional requirements:

(a) All exhaust installations with pressures in excess of 15 pounds per square inch gage or employing runs passing through living or working spaces must meet the material specifications of part 56 of Title 46, Code of Federal Regulations.

(b) Horizontal dry exhaust pipes are permitted if they do not pass through living or berthing spaces, terminate above the deepest load waterline, are arranged to prevent entry of cold water from rough seas, and are constructed of corrosion resistant material at the hull penetration.

(c) When the exhaust cooling system is separate from the engine cooling system, a suitable warning device must be provided to indicate a failure of water flow in the exhaust cooling system.

[CGD 83–005, 51 FR 896, Jan. 9, 1986, as amended by USCG–2014–0688, 79 FR 58287, Sept. 29, 2014]

§ 169.611 Carburetors.

(a) This section applies to all vessels having gasoline engines.

(b) Each carburetor other than a down-draft type, must be equipped with integral or externally fitted drip collectors of adequate capacity and arranged so as to permit ready removal of fuel leakage. Externally fitted drip collectors must be covered with flame screens.

(c) All gasoline engines must be equipped with an acceptable means of backfire flame control. Installations of backfire flame arresters bearing basic Approval Nos. 162.015 or 162.041 or engine air and fuel induction systems bearing basic Approval Nos. 162.015 or 165.042 may be continued in use as long as they are serviceable and in good

condition. New installations or replacements must meet the applicable requirements of part 58, subpart 58.10 (Internal Combustion Engine Installations) of this chapter.

[CGD 83–005, 51 FR 896, Jan. 9, 1986, as amended by CGD 88–032, 56 FR 35827, July 29, 1991]

FUEL SYSTEMS

§ 169.613 Gasoline fuel systems.

(a) Except as provided in paragraph (b) each gasoline fuel system must meet the requirements of § 56.50–70 of this chapter

(b) Each vessel of 65 feet and under must meet the requirements of §§ 182.15–25, 182.15–30, 182.15–35 and 182.15–40 of this chapter.

§ 169.615 Diesel fuel systems.

(a) Except as provided in paragraph (b) each diesel fuel system must meet the requirements of § 56.50–75 of this chapter.

(b) Each vessel of 65 feet and under must meet the requirements of §§ 182.20–22, 182.20–25, 182,20–30, 182.20–35 and 182.20–40 of this chapter.

STEERING SYSTEMS

§ 169.618 General.

(a) Each vessel must have an effective steering system.

(b) The steering system must be designed to withstand all anticipated loading while under sail, including shocks to the rudder. Additionally, the steering system on vessels with an auxiliary means of propulsion must not be susceptible to damage or jamming at the vessel's maximum astern speed.

(c) The main steering gear must be capable of moving the rudder from hard-over to hard-over at an average rate of not less than 2⅓° per second with the vessel at design service speed (ahead).

§ 169.619 Reliability.

(a) Except where the OCMI judges it impracticable, the steering system must—

(1) Provide continued or restored steering capability in the event of a failure or malfunction of any single steering system component other than the rudder or rudder stock;

(2) Be independent of other systems, including auxiliary propulsion machinery; and

(3) Be operable in the event of localized fire or flooding.

(b) A main and independent auxiliary steering gear must be provided, except when—

(1) A small vessel uses a tiller or direct mechanical linkage as the primary means of controlling the rudder; or

(2) Installation of an auxiliary steering gear is not possible.

NOTE: A partial reduction of normal steering capability as a result of malfunction or failure is acceptable. This reduction should not be below that necessary for the safe navigation of the vessel.

(c) The strength and reliability of any component that is not provided in duplicate must be suitable to the cognizant OCMI. Where redundant or backup equipment or components are provided to meet the requirements of paragraphs (a) and (b) of this section, the following must be provided:

(1) A means to readily transfer from the failed equipment or component to the backup.

(2) Readily available tools or equipment necessary to make the transfer.

(3) Instructions for transfer procedures, posted at the main steering location.

(4) A means to steady the rudder while making the transfer.

§ 169.621 Communications.

A reliable means of voice communications must be provided between the main steering location and each alternate steering location.

§ 169.622 Rudder angle indicators.

Each vessel must have a rudder angle indicator at the main steering location that meets the requirements of § 113.40–10 of this chapter, except where a tiller or direct mechanical linkage is the primary means of controlling the rudder.

§ 169.623 Power-driven steering systems.

(a) Power-driven steering systems must have means to be brought into operation from a dead ship condition, without external aid. The system must automatically resume operation after an electric power outage.

(b) Control of power-driven steering systems from the main steering control location must include, as applicable—

(1) Control of any necessary ancillary device (motor, pump, valve, etc.);

(2) A pilot light to indicate operation of each power unit; and

(3) Visual and audible alarms to indicate loss of power to the control system or power units and overload of electric motors.

(c) Overcurrent protection for steering system electric circuits must meet § 111.93–11 of this chapter, as applicable.

VENTILATION

§ 169.625 Compartments containing diesel machinery.

(a) Spaces containing machinery must be fitted with adequate dripproof ventilators, trunks, louvers, etc., to provide sufficient air for proper operation of the propulsion and auxiliary engines.

(b) Air-cooled propulsion and auxiliary engines installed below deck must be fitted with air intake ducts or piping from the weather deck. The ducts or piping must be arranged and supported to safely sustain stresses induced by weight and engine vibration and to minimize transfer of vibration to the supporting structure. Prior to installing ventilation for the engines, plans or sketches showing the machinery arrangement including air intakes, exhaust stack, method of attachment of ventilation ducts to the engine, location of spark arresting mufflers and capacity of ventilation blowers must be submitted to the OCMI for approval.

(c) Spaces containing machinery must be fitted with at least two ducts to furnish natural or mechanical supply and exhaust ventilation. One duct must extend to a point near the bottom of the compartment, and be installed so that the ordinary collection of water in the bilge will not trap the duct. Where forced ventilation is installed, the duct extending to the bottom of the compartment must be the exhaust. The total inlet area and the total outlet area of ventilation ducts must be not less than one square inch for each foot of beam of the vessel. These minimum areas must be increased when such ducts are considered part of the air supply to the engines.

(d) All ducts must be of rigid permanent noncombustible construction, properly fastened, supported, and reasonably gastight from end to end.

(e) All supply ducts for ventilation purposes must be provided with cowls or scoops having a free area not less than twice the required duct area. When the cowls or scoops are screened, the mouth area must be increased to compensate for the area of the screen wire. Dampers are prohibited in supply ducts. Cowls or scoops must be kept open at all times except when weather would endanger the vessel if the openings were not temporarily closed. Supply and exhaust openings must not be located where the natural flow of air is unduly obstructed, or adjacent to possible sources of vapor ignition, and must not be located where exhaust air may be taken into the supply vents.

§ 169.627 Compartments containing diesel fuel tanks.

Unless they are adequately ventilated, enclosed compartments or spaces containing diesel fuel tanks and no machinery must be provided with a gooseneck vent of not less than 2½ inches in diameter. The vent opening must not be located adjacent to possible sources of vapor ignition.

§ 169.629 Compartments containing gasoline machinery or fuel tanks.

Spaces containing gasoline machinery or fuel tanks must have natural supply and mechanical exhaust ventilation meeting the requirements of American Boat and Yacht Council Standard H–2.5, ''Design and Construction; Ventilation of Boats Using Gasoline.

§ 169.631 Separation of machinery and fuel tank spaces from accommodation spaces.

(a) Machinery and fuel tank spaces must be separated from accommodation spaces by watertight or vapor tight bulkheads of double diagonal wood, marine plywood, steel plate, or equivalent construction.

(b) On vessels less than 90 feet in length, segregation may be by means of a watertight or vapor tight engine box.

PIPING SYSTEMS

§ 169.640 General.

(a) Vital piping systems, as defined in § 169.642 of this subpart, must meet the material and pressure design requirements of Subchapter F of this chapter.

(b) Except as provided in this paragraph, nonmetallic piping system materials must meet the applicable requirements of 46 CFR 56.60–25.

(1) Rigid nonmetallic materials are acceptable for use in bilge, ballast, and machinery-connected piping systems on vessels less than 120 feet in length, provided that bilge and fire systems do not use the same piping.

(2) Nonmetallic piping is prohibited in fuel systems except where flexible hose is permitted.

(3) Rigid nonmetallic materials may be used in non-vital systems.

§ 169.642 Vital systems.

For the purpose of this part, the following are considered vital systems—

(a) A marine engineering system identified by the OCMI as being crucial to the survival of the vessel or to the protection of the personnel on board; and

(b) On vessels greater than 120 feet in length—

(1) Bilge system;

(2) Ballast system;

(3) Fire protection system;

(4) Fuel oil system; and

(5) Steering and steering control system.

BILGE SYSTEMS

§ 169.650 General.

All vessels must be provided with a satisfactory arrangement for draining any compartment, other than small buoyancy compartments, under all practical conditions. Sluice valves are not permitted in watertight bulkheads except as specified in § 169.652(a).

§ 169.652 Bilge piping.

(a) All vessels of 26 feet in length and over must be provided with individual bilge lines and suction for each compartment except that the space forward of the collision bulkhead may be serviced by a sluice valve or portable bilge pump if the arrangement of the vessel is such that ordinary leakage can be removed this way.

(b) The bilge pipe on vessels 65 feet in length and under must be not less than one inch nominal pipe size. On vessels greater than 65 but less than 120 feet in length the bilge pipe must be not less than one and one-half inches. Piping on vessels of 120 feet or greater or of 100 gross tons or greater must meet the requirements contained in § 56.50–50 of this chapter.

(c) Each bilge suction must be fitted with a suitable strainer having an open area not less than three times the area of the bilge pipe.

(d) Each individual bilge suction line must be led to a central control point or manifold. Each line must be provided with a stop valve at the control point or manifold and a check valve at some accessible point in the bilge line, or a stop-check valve located at the control point or manifold.

(e) Each bilge pipe piercing the collision bulkhead must be fitted with a screw-down valve located on the forward side of the collision bulkhead and operable from above the weather deck.

§ 169.654 Bilge pumps.

(a) Vessels of less than 65 feet in length must have a portable hand bilge pump having a maximum capacity of 5 gpm.

(b) In addition to the requirements of paragraph (a) of this section, vessels of 26 feet but less than 40 feet in length must have a fixed hand bilge pump or fixed power bilge pump having a minimum capacity of 10 gpm. If a fixed hand pump is installed, it must be operable from on deck.

(c) In addition to the requirements of paragraph (a) of this section, vessels of 40 feet but less than 65 feet must have a fixed power bilge pump having a minimum capacity of 25 gpm.

(d) Vessels of 65 feet in length but less than 120 feet and under 100 gross tons must have two fixed power bilge pumps having a combined minimum capacity of 50 gpm.

(e) Vessels of 120 feet or greater and vessels of 100 gross tons and over must have two fixed power pumps meeting the capacity requirements of § 56.50–55(c) of this chapter.

(f) Each power driven bilge must be self priming.

(g) Each fixed bilge pump required by this section must be permanently connected to the bilge main.

(h) Bilge pumps may also be connected to the firemain provided that the bilge system and firemain system may be operated simultaneously.

ELECTRICAL

§ 169.662 Hazardous locations.

Electrical equipment must not be installed in lockers that are used to store paint, oil, turpentine, or other flammable liquids unless the equipment is explosion-proof or intrinsically safe in accordance with § 111.105–9 or § 111.105–11 of this chapter.

ELECTRICAL INSTALLATIONS OPERATING AT POTENTIALS OF LESS THAN 50 VOLTS ON VESSELS OF LESS THAN 100 GROSS TONS

§ 169.664 Applicability.

The requirements in this subpart apply to electrical installations operating at potentials of less than 50 volts on vessels of less than 100 gross tons.

§ 169.665 Name plates.

Each generator, motor and other major item f power equipment must be provided with a name plate indicating the manufacturer's name, its rating in volts and amperes or in volts and watts and, when intended for connection to a normally grounded supply, the grounding polarity.

§ 169.666 Generators and motors.

(a) Each vessel of more than 65 feet in length having only electrically driven fire and bilge pumps must have two generators. One of these generators must be driven by a means independent of the auxiliary propulsion plant. A generator that is not independent of the auxiliary propulsion plant must meet the requirements of § 111.10–4(c) of this chapter.

(b) Each generator and motor must be in a location that is accessible, adequately ventilated, and as dry as practicable.

(c) Each generator and motor must be mounted as high as practicable above the bilges to avoid damage by splash and to avoid contact with low lying vapors.

(d) Each generator must be protected from overcurrent by a circuit breaker, fuse or an overcurrent relay.

§ 169.667 Switchboards.

(a) Each switchboard must be in as dry a location as practicable, accessible, protected from inadvertent entry, and adequately ventilated. All uninsulated current carrying parts must be mounted on nonabsorbent, noncombustible, high dielectric insulating material.

(b) Each switchboard must be—

(1) Totally enclosed; and

(2) Of the dead front type.

(c) Each ungrounded conductor of a circuit must have at the point of attachment to the power source either—

(1) A Circuit breaker; or

(2) A switch and fuse.

(d) Each switch other than one mounted on a switchboard must be of the enclosed type.

[CGD 83–005, 51 FR 896, Jan. 9, 1986, as amended by USCG–2014–0688, 79 FR 58287, Sept. 29, 2014]

§ 169.668 Batteries.

(a) Each battery must be in a location that allows the gas generated in charging to be easily dissipated by natural or induced ventilation.

(b) Except as provided in paragraph (c) of this section, a battery must not be located in the same compartment with a gasoline tank or gasoline engine.

(c) If compliance with paragraph (b) of this section is not practicable, the battery must be effectively screened by a cage or similar structure to minimize the danger of accidental spark through dropping a metal object across the terminals.

(d) Each battery must be located as high above the bilges as practicable and secured against shifting with motion of the vessel. Each battery and battery connection must be accessible so as to permit removal.

(e) All connections must be made to battery terminals with permanent type connectors. Spring clips or other temporary type clamps may not be used.

(f) Each battery must be located in a tray of lead or other suitable material resistant to deteriorating action by the electrolyte.

(g) Each battery charger intended for connection to a commercial supply voltage must employ a transformer of the isolating type. An ammeter that is readily visible must be included in the battery charger circuit.

(h) A voltage dropping resistor, provided for charging a battery, must be mounted in a ventilated noncombustible enclosure that prevents hazardous temperatures at adjacent combustible materials.

(i) The main supply conductor from the battery must have an emergency switch, located as close as practicable to the battery, that opens all ungrounded conductors.

(j) If a storage battery is not in the same compartment and adjacent to the panel or box that distributes power to the various lighting, motor and appliance branch circuits, the storage battery lead must be fused at the battery.

§ 169.669 Radiotelephone equipment.

A separate circuit from the switchboard must be provided for each radiotelephone installation.

§ 169.670 Circuit breakers.

Each circuit breaker must be of the manually reset type designed for—

(a) Inverse time delay;

(b) Instantaneous short circuit protection; and

(c) Repeated opening of the circuit without damage to the circuit breaker.

§ 169.671 Accessories.

Each light, receptacle and switch exposed to the weather must be watertight and must be constructed of corrosion-resistant material.

§ 169.672 Wiring for power and lighting circuits.

(a) Wiring for power and lighting circuits must have copper conductors, of 14 AWG or larger, and—

(1) Meet Article 310–8 and Table 310–13 of the National Electrical Code;

(2) Be listed as ''50 volt boat cable''; or

(3) Meet subpart 111.60 of this chapter.

(b) Wiring for power and lighting circuits on new vessels must have stranded conductors.

(c) Conductors must be sized so that—

(1) They are adequate for the loads carried; and

(2) The voltage drop at the load terminals is not more than 10 percent.

§ 169.673 Installation of wiring for power and lighting circuits.

(a) Wiring must be run as high as practicable above the bilges.

(b) Wiring, where subject to mechanical damage, must be protected.

(c) A wiring joint or splice must be mechanically secure and made in a junction box or enclosure.

(d) Unless a splice is made by an insulated pressure wire connector, it must be thoroughly soldered and taped with electrical insulating tape or the soldered joint must be otherwise protected to provide insulation equivalent to that of the conductors joined.

(e) Where ends of stranded conductors are to be clamped under terminal screws, they must be formed and soldered unless fitted with pressure terminal connectors.

(f) Conductors must be protected from overcurrent in accordance with their current-carrying capacities.

(g) Conductors supplying motors and motor operated appliances must be protected by a separate overcurrent device that is responsive to motor current. This device must be rated or set at not more than 125 percent of the motor full-load current rating.

(h) On metallic vessels the enclosures and frames of all major electrical equipment must be permanently grounded to the metal hull of the vessel by the mounting bolts or other means. Cable armor must not be used as the normal grounding means.

(i) On nonmetallic vessels, the enclosures and frames of major electrical equipment must be bonded together to a common ground by a normally noncurrent carrying conductor.

(j) For grounded systems the negative polarity of the supply source must be grounded to the metal hull or, for nonmetallic vessels, connected to the common ground.

(k) On a nonmetallic vessel, where a ground plate is provided for radio equipment it must be connected to the common ground.

(l) For grounded systems, hull return must not be used except for engine starting purposes.

ELECTRICAL INSTALLATIONS OPERATING AT POTENTIALS OF 50 VOLTS OR MORE ON VESSELS OF LESS THAN 100 GROSS TONS

§ 169.674 Applicability.

The requirements in this subpart apply to electrical installations operating at potentials of 50 volts or more, on vessels of less than 100 gross tons.

§ 169.675 Generators and motors.

(a) Each generator and motor must be fitted with a nameplate of corrosion-resistant material marked with the following information as applicable:

(1) Name of manufacturer.

(2) Manufacturer's type and frame designation.

(3) Output in kilowatts or horsepower rating.

(4) Kind of rating (continuous, intermittent, etc.).

(5) Revolutions per minute at rated load.

(6) Amperes at rated load.

(7) Voltage.

(8) Frequency if applicable.

(9) Number of phases, if applicable.

(10) Type of winding (for direct-current motors).

(b) Each vessel of more than 65 feet in length having only electrically driven fire and bilge pumps must have two generators. One of these generators must be driven by a means independent of the auxiliary propulsion plant. A generator that is not independent of the auxiliary propulsion plant must meet the requirements of § 111.10–4(c) of this chapter.

(c) Each generator and motor must be in a location that is accessible, adequately ventilated, and as dry as practicable.

(d) Each generator and motor must be mounted as high as practicable above the bilges to avoid damage by splash and to avoid contact with low lying vapors.

(e) Each motor for use in a location exposed to the weather must be of the watertight or waterproof type or must be enclosed in a watertight housing. The motor enclosure or housing must be provided with a check valve for drainage or a tapped hole at the lowest part of the frame for attaching a drain pipe or drain plug.

(f) Except as provided in paragraphs (g) and (h) of this section, each generator and motor for use in a machinery space must be designed for an ambient temperature of 50 degrees C. (122 degrees F.).

(g) A generator or motor may be designed for an ambient temperature of 40 degrees C. (104 degrees F.) if the vessel is designed so that the ambient temperature in the machinery space will not exceed 40 degrees C. under normal operating conditions.

(h) A generator or motor designed for 40 degrees C. may be used in a 50 degrees C. ambient location provided it is derated to 80 percent of full load rating, and the rating or setting of the overcurrent device is reduced accordingly. A nameplate specifying the derated capacity must be provided for each motor and generator.

(i) A voltmeter and an ammeter must be provided that can be used for measuring voltage and current of each generator that is in operation. For each alternating-current generator a means for measuring frequency must also be provided. Additional control equipment and measuring instruments must be provided, if needed, to ensure satisfactory operation of each generator.

§ 169.676 Grounded electrical systems.

(a) Except as provided in paragraph (b) of this section, each electrical system must meet subpart 111.05 of this chapter.

(b) Ground detection is not required.

§ 169.677 Equipment protection and enclosure.

(a) Except as provided in this section, all electrical equipment including motors, generators, controllers, distribution panels, consoles, etc., must be at least dripproof and protected.

(b) Equipment mounted on a hinged door of an enclosure must be constructed or shielded so that no live

parts of the door mounted equipment will be exposed to accidental contact by a person with the door open and the circuit energized.

(c) Any cabinet, panel, or box containing more than one source of potential in excess of 50 volts must be fitted with a sign warning personnel of this condition and identifying the circuits to be disconnected to remove all the potentials in excess of 50 volts.

(d) Each distribution panelboard must be enclosed.

§ 169.678 Main distribution panels and switchboards.

(a) A distribution panel to which the generator leads are connected, and from which the electric leads throughout the vessel directly or indirectly receive their electric power is a switchboard.

(b) Each switchboard must have a driphood or an equivalent means of protecting against falling liquid.

(c) Nonconductive deck materials, mats, or gratings must be provided in front of each switchboard.

(d) If the switchboard is accessible from the rear, nonconductive deck material, mats, or gratings must be provided in the rear of the switchboard.

(e) Metal cases of instruments and secondary windings of instrument transformers must be grounded.

(f) Each switchboard must be placed in a location that is accessible, adequately ventilated, and as dry as practicable. All uninsulated current carrying parts must be mounted on nonabsorbent, noncombustible, high dielectric insulating material.

(g) Each switchboard must be of the dead front type.

(h) Each switchboard must have front and, if accessible from the back, rear non-conducting hand rails except on vessels where the surrounding bulkheads and decks are of an insulating material such as fiberglass or wood.

§ 169.679 Wiring for power and lighting circuits.

Wiring for each power and lighting circuit must meet subpart 111.60 of this chapter.

§ 169.680 Installation of wiring for power and lighting circuits.

(a) Wiring must be run as high as practicable above the bilges.

(b) Each cable installed where particularly susceptible to damage such as locations in way of doors, hatches, etc, must be protected by removable metal coverings, angle irons, pipe, or other equivalent means. All metallic coverings must be electrically continuous and grounded to the metal hull or common ground, and all coverings such as pipe that may trap moisture must be provided with holes for drainage. Where cable protection is carried through a watertight deck or bulkhead, the installation must maintain the watertight integrity of the structure.

(c) Each cable entering a box or fitting must be protected from abrasion, and must meet the following requirements:

(1) Each opening through which conductors enter must be adequately closed.

(2) Cable armor must be secured to the box or fitting.

(3) In damp or wet locations, each cable entrance must be watertight.

(d) The enclosures of all equipment must be permanently grounded to the metal hull of the vessel by the mounting bolts or other means. Cable armor must not be used as the normal grounding means.

(e) On a nonmetallic vessel, the enclosures must be bonded to a common ground by a normal noncurrent carrying conductor.

(f) On a nonmetallic vessel, where a ground plate is provided for radio equipment it must be connected to the common ground.

(g) Except as provided in paragraph (i) of this section, each armored cable must have a metallic covering that is—

(1) Electrically and mechanically continuous; and

(2) Grounded at each end of the run to—

(i) The metal hull; or

(ii) The common ground required by paragraph (e) of this section on nonmetallic vessels.

(h) In lieu of being grounded at each end of the run as required by paragraph (g) of this section, final sub-circuits

may be grounded at the supply end only.

(i) All equipment, including switches, fuses, lampholders, etc., must be of a type designed for the proper potential and be so identified.

(j) Except as provided in paragraph (l) of this section, each junction box, connection box, and outlet box, must have an internal depth of at least 1½ inches.

(k) For a box incorporated in a fixture having a volume of not less than 20 cubic inches, the depth may be decreased to not less than 1 inch.

(l) Each conductor, except a fixture wire within a box, must have a free space computed using the volume per conductor given in Table 169.680(l). If a fitting or device such as a cable clamp, hickey, switch or receptacle is contained in the box, each fitting or device must count as one conductor.

TABLE 169.680(l)

Size of conductor A.W.G.	Free space for each conductor in box, cubic inches
14	2.0
12	2.25
8	2.50
1	3.0

(m) Each junction box, connection box, and outlet box for use in a damp or wet location must be of watertight construction.

(n) Each lighting fixture must be constructed in accordance with the requirements of Subchapter J of this chapter.

(o) A separate circuit from the switchboard must be provided for each radiotelephone installation.

(p) Knife switches must be so placed or designed that gravity or vibration will not tend to close them. Knife switches, unless of the double throw type, must be connected so that the blades are dead when the switch is in the open position.

(q) Circuits must be connected to the fuse end of switches and to the coil end of circuit breakers, except that generator leads or incoming feeders may be connected to either end of circuit breakers.

(r) Receptacle outlets and attachment plugs for the attachment of portable lamps, tools, and similar apparatus supplied as ship's equipment and operating at 100 volts or more, must provide a grounding pole and a grounding conductor in the portable cord to ground the non-current carrying metal parts of the apparatus.

(s) Receptacle outlets of the type providing a grounded pole must be of a configuration that will not permit the dead metal parts of portable apparatus to be connected to a live conductor.

§ 169.681 Disconnect switches and devices.

(a) Externally operable switches or circuit breakers must be provided for motor and controller circuits and must open all ungrounded conductors of the circuit.

(b) If the disconnect means is not within sight of the equipment that the circuit supplies, means must be provided for locking the disconnect device in the ''open'' position.

(c) For circuits protected by fuses, the disconnect switch required for fuses in § 169.683(b) of this chapter is adequate for disconnecting the circuit from the supply.

(d) The disconnect means may be in the same enclosure with motor controllers.

(e) Disconnect means must be provided to open all conductors of generator and shore power cables.

[CGD 83–005, 51 FR 896, Jan. 9, 1986; 51 FR 10632, Mar. 28, 1986]

§ 169.682 Distribution and circuit loads.

(a) Except as provided in paragraph (b) of this section, the connected load on a lighting branch circuit must not exceed 80 percent of the rating of the overcurrent protective device, computed using the greater of—

(1) The lamp sizes to be installed; or

(2) 50 watts per outlet.

(b) Circuits supplying electrical discharge lamps must be computed using the ballast input current.

(c) The branch circuit cables for motor and lighting loads must be no smaller than No. 14 AWG.

§ 169.683 Overcurrent protection, general.

(a) Overcurrent protection must be provided for each ungrounded conductor for the purpose of opening the

electric circuit if the current reaches a value that causes an excessive or dangerous temperature in the conductor or conductor insulation.

(b) Disconnect means must be provided on the supply side of and adjacent to all fuses for the purpose of deenergizing the fuses for inspection and maintenance purposes. All disconnect means must open all ungrounded conductors of the circuit simultaneously.

(c) Each conductor, including a generator lead and shore power cable, must be protected in accordance with its current-carrying capacity.

(d) If the allowable current-carrying capacity of a conductor does not correspond to a standard size fuse, the next larger size or rating may be used but not exceeding 150 percent of the allowable current-carrying capacity of the conductor.

(e) Plug (screw in type) fuses and fuseholders must not be used in circuits exceeding 125 volts between conductors. The screw shell of plug type fuseholders must be connected to the load of the circuit. Edison base fuses may not be used.

(f) If the allowable current-carrying capacity of the conductor does not correspond to a standard rating of circuit breakers, the next larger rating not exceeding 150 percent of the allowable current-carrying capacity of the conductor may be used.

(g) Lighting branch circuits must be protected against overcurrent either by fuses or circuit breakers rated at not more than 20 amperes.

(h) Each circuit breaker must be of the manually reset type designed for—

(1) Inverse time delay;

(2) Instantaneous short circuit protection; and

(3) Repeated opening of the circuit in which it is to be used without damage to the circuit breaker.

(i) Circuit breakers must indicate whether they are in the open or closed position.

(j) Devices such as instruments, pilot lights, ground detector lights, potential transformers, etc. must be supplied by circuits protected by overcurrent devices.

(k) Each generator must be protected with an overcurrent device set at a value not exceeding 15 percent above the full-load rating for continuous rated machines or the overload rating for special rated machines.

§ 169.684 Overcurrent protection for motors and motor branch circuits.

(a) Except as provided in paragraph (d) of this section, each motor must be provided with running protection against overcurrent. A protective device integral with the motor that is responsive to motor current or to both motor current and temperature may be used.

(b) The motor branch circuit conductors, the motor control apparatus, and the motors must be protected against overcurrent due to short circuits or grounds with overcurrent devices.

(c) The motor branch circuit overcurrent device must be capable of carrying the starting current of the motor.

(d) Each manually started continuous duty motor, rated at one horsepower or less, that is within sight from the starter location, is considered as protected against overcurrent by the overcurrent device protecting the conductors of the branch circuit.

[CGD 83–005, 51 FR 896, Jan. 9, 1986, as amended by USCG–2014–0688, 79 FR 58287, Sept. 29, 2014]

§ 169.685 Electric heating and cooking equipment.

(a) Each electric space heater for heating rooms and compartments must be provided with thermal cutouts to prevent overheating. Each heater must be so constructed and installed as to prevent the hanging of towels, clothing, etc., on the heater, and to prevent overheating of heater parts and adjacent bulkheads or decks.

(b) All electric cooking equipment, attachments, and devices, must be of rugged construction and so designed as to permit complete cleaning, maintenance, and repair.

(c) Doors for electric cooking equipment must be provided with heavy duty hinges and locking devices to prevent accidental opening in heavy seas.

(d) Electric cooking equipment must be mounted to prevent dislodgment in heavy seas.

(e) For each grill or similar type cooking equipment, means must be

provided to collect grease or fat and to prevent spillage on wiring or the deck.

(f) Where necessary for safety of personnel, grab rails must be provided. Each electric range must be provided with sea rails with suitable barriers to resist accidental movement of cooking pots.

§ 169.686 Shore power.

If a shore power connection is provided it must meet the following requirements:

(a) A shore power connection box or receptacle and a cable connecting this box or receptacle to the main distribution panel must be permanently installed in an accessible location.

(b) The shore power cable must be provided with a disconnect means located on or near the main distribution panel.

ELECTRICAL INSTALLATIONS ON VESSELS OF 100 GROSS TONS AND OVER

§ 169.687 General.

Except as provided in this subpart, electrical installations on vessels of 100 gross tons and over must meet the requirements of parts 110–113 of this chapter.

§ 169.688 Power supply.

(a) The requirements of this section apply in lieu of subpart 111.10 of this chapter.

(b) If a generator is used to provide electric power for any vital system listed in § 169.642 of this subchapter, at least two generating sets must be provided. At least one required generating set must be independent of the auxiliary propulsion machinery. A generator that is not independent of the auxiliary propulsion plant must meet the requirements of § 111.10–4(c) of this chapter. With any one generating set stopped, the remaining set(s) must provide the power necessary for each of the following:

(1) Normal at sea load plus starting of the largest vital system load that can be started automatically or started from a space remote from the main distribution panel (switchboard).

(2) All vital systems simultaneously with nonvital loads secured.

(c) The adequacy of ship service generators must be demonstrated to the satisfaction of the OCMI during the initial inspection required by § 169.221 of this subchapter.

§ 169.689 Demand loads.

Demand loads must meet § 111.60–7 of this chapter except that smaller demand loads for motor feeders are acceptable if the cable is protected at or below its current-carrying capacity.

§ 169.690 Lighting branch circuits.

Each lighting branch circuit must meet the requirements of § 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 in excess of 30 amperes may be supplied from a lighting distribution panelboard.

§ 169.691 Navigation lights.

Navigation light systems must meet the requirements of § 111.75–17 of this chapter except the requirements of § 111.75–17 (a) and (c).

§ 169.692 Remote stop stations.

In lieu of the remote stopping systems required by subpart 111.103 of this chapter, remote stop stations must be provided as follows:

(a) A propulsion shutdown in the pilothouse for each propulsion unit,

(b) A bilge slop or dirty oil discharge shutdown at the deck discharge,

(c) A ventilation shutdown located outside the space ventilated, and

(d) A shutdown from outside the engineroom for the fuel transfer pump, fuel oil service pump, or any other fuel oil pump.

§ 169.693 Engine order telegraph systems.

An engine order telegraph system is not required.

Subpart 169.700—Vessel Control, Miscellaneous Systems, and Equipment

§ 169.703 Cooking and heating.

(a) Cooking and heating equipment must be suitable for marine use. Cooking installations must meet the requirements of ABYC Standard A–3, ''Recommended Practices and Standards Covering Galley Stoves.''

(b) The use of gasoline for cooking, heating or lighting is prohibited on all vessels.

(c) The use of liquefied petroleum gas (LPG) or compressed natural gas (CNG) is authorized for cooking purposes only.

(1) The design, installation and testing of each LPG system must meet either ABYC A–1 or Chapter 6 of NFPA 302.

(2) The design, installation, and testing of each CNG system must meet either Chapter 6 of NFPA 302 or ABYC A–22.

(3) The stowage of each cylinder must comply with the requirements for the stowage of cylinders of liquefied or non-liquefied gases used for heating, cooking, or lighting in part 147 of this chapter.

(4) If the fuel supply line enters an enclosed space on the vessel, a remote shutoff valve must be installed which can be operated from a position adjacent to the appliance. The valve must be a type that will fail closed, and it must be located between the regulator and the point where the fuel supply enters the enclosed portion of the vessel.

(5) If Chapter 6 of NFPA 302 is used as the standard, then the following additional requirements must also be met:

(i) LPG or CNG must be odorized in accordance with ABYC A–1.5.d or A–22.5.b, respectively.

(ii) Ovens must be equipped with a flame failure switch in accordance with ABYC A–1.10.b for LPG or A–22.10.b for CNG.

(iii) The marking and mounting of LPG cylinders must be in accordance with ABYC–1.6.b.

(iv) LPG cylinders must be of the vapor withdrawal type as specified in ABYC A–1.5.b.

(6) If ABYC A–1 or A–22 is used as the standard for an LPG on CNG installation, then pilot lights or glow plugs are prohibited.

(7) If ABYC A–22 is used as the standard for a CNG installation, then the following additional requirements must also be met:

(i) The CNG cylinders, regulating equipment, and safety equipment must meet the installation, stowage, and testing requirements of paragraphs 6–5.11.1, 2, 3; 6–5.11.5; and 6–5.11.8 of NFPA 302.

(ii) The use or stowage of stoves with attached cylinders is prohibited as specified in paragraph 6–5.1 of NFPA 302.

§ 169.705 Mooring equipment.

Each vessel must be fitted with ground tackle and hawsers deemed necessary by the Officer in Charge, Marine Inspection, depending upon the size of the vessel and the waters on which it operates.

§ 169.709 Compass.

(a) Each vessel must be fitted with a magnetic steering compass.

(b) Each vessel certificated for exposed water service must have an emergency compass in addition to the one required in paragraph (a).

§ 169.711 Emergency lighting.

(a) Each vessel must be equipped with a suitable number of portable battery lights.

(b) Each vessel of 100 gross tons and over must satisfy the emergency lighting requirements for a miscellaneous self-propelled vessel as contained in part 112 of this chapter.

(c) Each vessel of less than 100 gross tons that has accommodation spaces located below the main deck must have permanently installed lighting which is connected to a single emergency power source or permanently installed, relay-controlled, battery-operated lanterns. The lighting or lanterns must be fitted along the avenues of escape, in the wheelhouse, and in the engine compartment.

(1) A single emergency power source, if provided, must be independent of the normal power source and must be either a generator or a storage battery.

(d) The emergency power source and batteries for individual, battery-operated, lanterns must have the capacity to supply all connected loads simultaneously for at least 6 hours of continuous operations. If the emergency lighting is provided by battery power, then an automatic battery charger that maintains the battery(s) in a fully charged condition must be provided.

(e) The emergency lighting system must be capable of being fully activated from a single location.

§ 169.713 Engineroom communication system.

An efficient communication system must be provided between the principal steering station and the engineroom on vessels which are not equipped with pilothouse controls if, in the opinion of the Officer in Charge, Marine Inspection, this is necessary for proper operation of the vessel.

§ 169.715 Radio.

(a) Radiotelegraph and radiotelephone installations are required on certain vessels. Details of these requirements and the details of the installations are contained in regulations of the Federal Communications Commission (FCC) in Title 47, Code of Federal Regulations, part 83.

(b) A valid certificate issued by the FCC is evidence that the radio installation is in compliance with the requirements of that agency.

§ 169.717 Fireman's outfit.

(a) Each vessel greater than 120 feet but less than 150 feet in length must carry one fireman's outfit consisting of—

(1) One pressure-demand, open-circuit, self-contained breathing apparatus, approved by the National Institute for Occupational Safety and Health (NIOSH) and having at a minimum a 30-minute air supply and a full facepiece; but a self-contained compressed-air breathing apparatus previously approved under part 60, subpart 160.011, of this chapter may continue in use as required equipment if it was part of the vessel's equipment on November 23, 1992, and as long as it is maintained in good condition to the satisfaction of the Officer in Charge, Marine Inspection;

(2) One lifeline with a belt or a suitable harness;

(3) One approved flame safety lamp;

(4) One flashlight listed by an independent testing laboratory as suitable for use in hazardous locations;

(5) One fire ax;

(6) Boots and gloves of rubber or other electrically nonconducting material;

(7) A rigid helmet that provides effective protection against impact; and

(8) Protective clothing.

(b) Each vessel 150 feet or greater must carry two fireman's outfits. The outfits must be stowed in widely separated accessible locations.

(c) Lifelines must be of steel or bronze wire rope. Steel wire rope must be either inherently corrosion resistant or made so by galvanizing or thinning. Each end must be fitted with a hook with keeper having a throat opening which can be readily slipped over a ⅝-inch bolt. The total length of the lifeline is dependent upon the size and arrangement of the vessel, and more than one line may be hooked together to achieve the necessary length. No individual length of lifeline may be less than 50 feet in length. The assembled lifeline must have a minimum breaking strength of 1,500 pounds.

(d) A complete recharge must be carried out for each self-contained breathing apparatus and a complete set of spare batteries and bulb must be carried for each flashlight. The spares must be stowed in the same location as the equipment it is to reactivate.

(e) Protective clothing must be constructed of material that will protect the skin from the heat of fire and burns from scalding steam. The outer surface must be water resistant.

[CGD 83–005, 51 FR 896, Jan. 9, 1986, as amended by CGD 86–036, 57 FR 48326, Oct. 23, 1992; USCG–2020–0519, 89 FR 76707, Sept. 18, 2024]

§ 169.721 Storm sails and halyards (exposed and partially protected waters only).

(a) Unless clearly unsuitable, each vessel must have one storm trysail of appropriate size. It must be sheeted independently of the boom and must have neither headboard nor battens.

(b) Each vessel having headsails must also have one storm head sail of appropriate size and strength.

(c) Each vessel must have at least two halyards, each capable of hoisting a sail.

§ 169.723 Safety belts.

Each vessel must carry a harness type safety belt conforming to Offshore Racing Council (ORC) standards for each person on watch or required to work the vessel in heavy weather.

§ 169.725 First aid kit.

Each vessel must carry an approved first aid kit, constructed and fitted in accordance with subpart 160.041 of this chapter.

§ 169.726 Radar reflector.

Each nonmetallic vessel less than 90 feet in length must exhibit a radar reflector of suitable size and design while underway.

MARKINGS

§ 169.730 General alarm bell switch.

On vessels of 100 gross tons and over there must be a general alarm bell switch in the pilothouse, clearly and permanently identified by lettering on a metal plate or with a sign in red letters on a suitable background: ''GENERAL ALARM''

§ 169.731 General alarm bells.

On vessels of 100 gross tons and over each general alarm bell must be identified by red lettering at least ½ inch high: ''GENERAL ALARM—WHEN BELL RINGS GO TO YOUR STATION.''

§ 169.732 Carbon dioxide and clean agent alarms.

(a) Each carbon dioxide or clean agent fire extinguishing alarm must be conspicuously marked: ''WHEN ALARM SOUNDS VACATE AT ONCE. CARBON DIOXIDE OR CLEAN AGENT BEING RELEASED.''.

(b) Each entrance to a space storing carbon dioxide cylinders, a space protected by carbon dioxide systems, or any space into which carbon dioxide might migrate must be conspicuously marked as follows:

(1) Spaces storing carbon dioxide—''CARBON DIOXIDE GAS CAN CAUSE INJURY OR DEATH. VENTILATE THE AREA BEFORE ENTERING. A HIGH CONCENTRATION CAN OCCUR IN THIS AREA AND CAN CAUSE SUFFOCATION.''.

(2) Spaces protected by carbon dioxide—''CARBON DIOXIDE GAS CAN CAUSE INJURY OR DEATH. WHEN ALARM OPERATES OR WINTERGREEN SCENT IS DETECTED, DO NOT ENTER UNTIL VENTILATED. LOCK OUT SYSTEM WHEN SERVICING.'' The reference to wintergreen scent may be omitted for carbon dioxide systems not required to have odorizing units and not equipped with such units.

(3) Spaces into which carbon dioxide might migrate—''CARBON DIOXIDE GAS CAN CAUSE INJURY OR DEATH. DISCHARGE INTO NEARBY SPACE CAN COLLECT HERE. WHEN ALARM OPERATES OR WINTERGREEN SCENT IS DETECTED VACATE IMMEDIATELY.'' The reference to wintergreen scent may be omitted for carbon dioxide systems not required to have odorizing units and not equipped with such units.

[USCG–2006–24797, 77 FR 33890, June 7, 2012]

§ 169.733 Fire extinguishing branch lines.

Each branch line valve of every fire extinguishing system must be plainly and permanently marked indicating the spaces served.

§ 169.734 Fire extinguishing system controls.

Each control cabinet or space containing valves or manifolds for the various fire extinguishing systems must be distinctly marked in conspicuous red letters at least 2 inches high: ''CARBON DIOXIDE FIRE EXTINGUISHING SYSTEM,'' ''HALON EXTINGUISHING SYSTEM,'' or ''CLEAN AGENT EXTINGUISHING SYSTEM,'' as appropriate.

[USCG–2006–24797, 77 FR 33890, June 7, 2012]

§ 169.735 Fire hose stations.

Each fire hydrant must be identified in red letters and figures at least two inches high ''FIRE STATION NO. 1,''

''2,'' ''3,'' etc. Where the hose is not stowed in the open or readily seen behind glass, this identification must be placed so as to be readily seen from a distance.

§ 169.736 Self-contained breathing apparatus.

Each locker or space containing self-contained breathing apparatus must be marked ''SELF-CONTAINED BREATHING APPARATUS.''

§ 169.737 Hand portable fire extinguishers.

Each hand portable fire extinguisher must be marked with a number, and the location where it is stowed must be marked with a corresponding number. The marks must be at least ½ inch high. Where only one type and size of hand portable fire extinguisher is carried, the numbering may be omitted.

§ 169.738 Emergency lights.

Each emergency light must be marked with a letter ''E'' at least ½ inch high.

§ 169.739 Lifeboats.

(a) The name and port of the vessel marked on its stern as required by § 67.15 of this chapter must be plainly marked or painted on each side of the bow of each lifeboat in letters not less than 3 inches high.

(b) Each lifeboat must have its number plainly marked or painted on each side of the bow in figures not less than 3 inches high. The lifeboats on each side of the vessel must be numbered from forward aft, with the odd numbers on the starboard side.

(c) The cubical contents and number of persons allowed to be carried in each lifeboat must be plainly marked or painted on each side of the bow of the lifeboat in letters and numbers not less than 1½ inches high. In addition, the number of persons allowed must be plainly marked or painted on top of at least 2 thwarts in letters and numbers not less than 3 inches high.

(d) Each oar must be conspicuously marked with the vessel's name.

(e) Where mechanical disengaging apparatus is used, the control effecting the release of the lifeboat must be painted bright red and must have thereon in raised letters either the words—''DANGER-LEVER DROPS BOAT'', or the words—''DANGER-LEVER RELEASES HOOKS''.

(f) The top of thwarts, side benches and footings of lifeboats must be painted or otherwise colored international orange. The area in way of the red mechanical disengaging gear control lever, from the keel to the side bench, must be painted or otherwise colored white, to provide a contrasting background for the lever. This band of white should be approximately 12 inches wide depending on the internal arrangements of the lifeboat.

§ 169.740 Liferafts and lifefloats.

(a) Rigid type liferafts and lifefloats, together with their oars and paddles, must be conspicuously marked with the vessel's name and port of the vessel as marked on its stern as required by § 67.15 of this chapter.

(b) The number of persons allowed on each rigid type liferaft and lifefloat must be conspicuously marked or painted thereon in letters and numbers at least 1½ inches high.

(c) There must be stenciled in a conspicuous place in the immediate vicinity of each inflatable liferaft the following:

INFLATABLE LIFERAFT NO_____

_____PERSONS CAPACITY

These markings must not be placed on the inflatable liferaft containers.

§ 169.741 Personal flotation devices and ring life buoys.

Each personal flotation device and ring life buoy must be marked with the vessel's name.

§ 169.743 Portable magazine chests.

Portable magazine chests must be marked in letters at least 3 inches high: ''PORTABLE MAGAZINE CHEST—FLAMMABLE—KEEP LIGHTS AND FIRE AWAY.''

§ 169.744 Emergency position indicating radio beacon (EPIRB).

Each EPIRB must be marked with the vessel's name.

§ 169.745 Escape hatches and emergency exits.

Each escape hatch and other emergency exit must be marked on both sides using at least 1-inch letters: ''EMERGENCY EXIT, KEEP CLEAR'', unless the markings are deemed unnecessary by the Officer in Charge, Marine Inspection.

§ 169.746 Fuel shutoff valves.

Each remote fuel shutoff station must be marked in at least 1-inch letters indicating purpose of the valves and direction of operation.

§ 169.747 Watertight doors and hatches.

Each watertight door and watertight hatch must be marked on both sides in at least 1-inch letters: ''WATERTIGHT DOOR—CLOSE IN EMERGENCY'' or ''WATERTIGHT HATCH—CLOSE IN EMERGENCY'', unless the markings are deemed unnecessary by the Officer in Charge, Marine Inspection.

§ 169.750 Radio call sign.

Each vessel certificated for exposed or partially protected water service must have its radio call sign permanently displayed or readily available for display upon its deck or cabin top in letters at least 18 inches high.

§ 169.755 Draft marks and draft indicating systems.

(a) All vessels must have draft marks plainly and legibly visible upon the stem and upon the sternpost or rudderpost or at any place at the stern of the vessel as may be necessary for easy observance. The bottom of each mark must indicate the draft.

(b) The draft must be taken from the bottom of the keel to the surface of the water at the location of the marks.

(c) In cases where the keel does not extend forward or aft to the location of the draft marks, due to a raked stem or cut away skeg, the draft must be measured from a line projected from the bottom of the keel forward or aft, as the case may be, to the location of the draft marks.

(d) In cases where a vessel may have a skeg or other appendage extending locally below the line of the keel, the draft at the end of the vessel adjacent to such appendage must be measured to a line tangent to the lowest part of such appendage and parallel to the line of the bottom of the keel.

(e) Draft marks must be separated so that the projections of the marks onto a vertical plane are of uniform height equal to the vertical spacing between consecutive marks.

(f) Draft marks must be painted in contrasting color to the hull.

(g) In cases where draft marks are obscured due to operational constraints or by protrusions, the vessel must be fitted with a reliable draft indicating system from which the bow and stern drafts can be determined.

[CGD 89–037, 57 FR 41824, Sept. 11, 1992]

Subpart 169.800—Operations

§ 169.805 Exhibition of merchant mariner credentials.

Officers on any vessel subject to this subchapter must have their license or merchant mariner credential in their possession and available for examination at all times when the vessel is being operated.

[CGD 83–005, 51 FR 896, Jan. 9, 1986, as amended by USCG–2006–24371, 74 FR 11266, Mar. 16, 2009]

§ 169.807 Notice of casualty.

(a) The owner, agent, master, or person in charge of a vessel involved in a marine casualty shall give notice as soon as possible to the nearest Coast Guard Marine Safety or Marine Inspection Office, whenever the casualty involves any of the following:

(1) Each accidental grounding and each intentional grounding which also meets any of the other reporting criteria or creates a hazard to navigation, the environment or the safety of the vessel;

(2) Loss of main propulsion or primary steering or any associated component or control system which causes a reduction of the maneuvering capabilities of the vessel. Loss means that systems, components, sub-system or control systems do not perform the specified or required function;

(3) An occurrence materially and adversely affecting the vessel's seaworthiness or fitness for service or

route, including but not limited to fire, flooding, or failure or damage to fixed fire extinguishing systems, lifesaving equipment, auxiliary power generating equipment, Coast Guard approved equipment or bilge pumping systems;

(4) Loss of life;

(5) Injury causing a person to remain incapacitated for a period in excess of 72 hours; or

(6) An occurrence resulting in damage to property in excess of $25,000.00. Damage includes the cost necessary to restore the property to the service condition which existed prior to the casualty but does not include the cost of salvage, gas freeing, drydocking, or demurrage.

(b) The notice must include the name and official number of the vessel involved, the name of the vessel's owner or agent, nature, location and circumstances of the casualty, nature and extent of injury to persons, and the damage to property.

(c) In addition to the notice required, the person in charge of the vessel shall report in writing or in person, as soon as possible to the Officer in Charge, Marine Inspection at the port in which the casualty occurred or nearest the port of first arrival. Casualties must be reported on Form CG–2692.

(d) The owner, agent, master, or other person in charge of any vessel involved in a marine casualty shall retain for three years the voyage records of the vessel such as both rough and smooth deck and engineroom logs, navigation charts, navigation work books, compass deviation cards, gyrocompass records, record of draft, aids to mariners, radiograms sent and received, the radio log, and crew, sailing school student, instructor, and guest lists. The owner agent, master, or other officer in charge, shall make these records available to a duly authorized Coast Guard officer or employee for examination upon request.

(e) Whenever a vessel collides or is connected with a collision with a buoy or other aid to navigation under the jurisdiction of the Coast Guard, the person in charge of the vessel shall report the accident to the nearest Officer in Charge, Marine Inspection. A report on Form CG–2692 is not required unless any of the results listed in paragraph (b) of this section occur.

§ 169.809 Charts and nautical publications.

As appropriate for the intended voyage, all vessels must carry adequate and up-to-date—

(a) Charts;

(b) Sailing directions;

(c) Coast pilots;

(d) Light lists;

(e) Notices to mariners;

(f) Tide tables; and

(g) Current tables.

§ 169.813 Station bills.

(a) A station bill (muster list) shall be prepared and signed by the master of the vessel. The master shall ensure that the bill is posted in conspicuous locations throughout the vessel, particularly in the living spaces, before the vessel sails.

(b) The station bill must set forth the special duties and duty station of each member of the ship's company for the various emergencies. The duties must, as far as possible, be comparable with the regular work of the individual. The duties must include at least the following and any other duties necessary for the proper handling of a particular emergency:

(1) The closing of airports, watertight doors, scuppers, sanitary and other discharges which lead through the vessel's hull below the margin line, etc., the stopping of fans and ventilating systems, and the operating of all safety equipment.

(2) The preparing and launching of lifeboats and liferafts.

(3) The extinguishing of fire.

(4) The mustering of guests, if carried, including the following:

(i) Warning the guests.

(ii) Seeing that they are dressed and have put on their personal flotation devices in a proper manner.

(iii) Assembling the guests and directing them to the appointed stations.

(iv) Keeping order in the passageways and stairways and generally controlling the movement of the guests.

(v) Seeing that a supply of blankets is taken to the lifeboats.

§ 169.815 Emergency signals.

(a) The station bill must set forth the various signals used for calling the ship's company to their stations and for giving instructions while at their stations.

(b) On vessels of 100 gross tons and over the following signals must be used.

(1) The first alarm signal must be a continuous blast of the vessel's whistle for a period of not less than 10 seconds supplemented by the continuous ringing of the general alarm bells for not less than 10 seconds.

(2) For dismissal from fire alarm stations, the general alarm must be sounded three times supplemented by three short blasts of the vessel's whistle.

(3) The signal for boat stations or boat drill must be a succession of more than six short blasts, followed by one long blast, of the vessel's whistle supplemented by a comparable signal on the general alarm bells.

(4) For dismissal from boat stations, there must be three short blasts of the whistle.

(c) Where whistle signals are used for handling the lifeboats, they must be as follows:

(1) To lower lifeboats, one short blast.

(2) To stop lowering the lifeboats, two short blasts.

§ 169.817 Master to instruct ship's company.

The master shall conduct drills and give instructions as necessary to insure that all hands are familiar with their duties as specified in the station bill.

§ 169.819 Manning of lifeboats and liferafts.

(a) The provisions of this section shall apply to all vessels equipped with lifeboats and/or liferafts.

(b) The master shall place a licensed deck officer, an able seaman, or a certificated lifeboatman in command of each lifeboat or liferaft. Each lifeboat or liferaft with a prescribed complement of 25 or more persons must have one additional certificated lifeboatman.

(c) The person in charge of each lifeboat or liferaft shall have a list of its assigned occupants, and shall see that the persons under his orders are acquainted with their duties.

§ 169.821 Patrol person.

(a) The master shall designate a member of the ship's company to be a roving patrol person, whenever the vessel is operational.

(b) The roving patrol person shall frequently visit all areas to ensure that safe conditions are being maintained.

§ 169.823 Openings.

(a) Except as provided in paragraph (b) of this section, all watertight doors in subdivision bulkheads, hatches, and openings in the hull must be kept closed during the navigation of the vessel.

(b) The master may permit hatches or other openings to be uncovered or opened for reasonable purposes such as ship's maintenance, when existing conditions warrant the action and the openings can readily be closed.

§ 169.824 Compliance with provisions of certificate of inspection.

The master or person in charge of the vessel shall see that all of the provisions of the certificate of inspection are strictly adhered to. Nothing in this subpart shall be construed as limiting the master or person in charge of the vessel, on his own responsibility, from diverting from the route prescribed in the certificate of inspection or taking such other steps as he deems necessary and prudent to assist vessels in distress or for other similar emergencies.

§ 169.825 Wearing of safety belts.

The master of each vessel shall ensure that each person wears an approved safety harness when aloft or working topside in heavy weather.

TESTS, DRILLS, AND INSPECTIONS

§ 169.826 Steering, communications and control.

The master shall test the vessel's steering gear, signaling whistle, engine controls, and communications equipment prior to getting underway.

§ 169.827 Hatches and other openings.

The master is responsible for seeing that all hatches, openings in the hull, and watertight doors are properly closed tight.

§ 169.829 Emergency lighting and power systems.

(a) Where fitted, the master shall have the emergency lighting and power systems operated and inspected at least once in each week that the vessel is navigated to ensure that the system is in proper operating condition.

(b) The master shall have the internal combustion engine driven emergency generators operated under load for at least 2 hours at least once in each month that the vessel is navigated.

(c) The master shall have the storage batteries for emergency lighting and power systems tested at least once in each 6-month period that the vessel is navigated to demonstrate the ability of the storage battery to supply the emergency loads for the specified period of time.

(d) The date of each test and the condition and performance of the apparatus must be noted in the official logbook.

§ 169.831 Emergency position indicating radio beacon (EPIRB).

The master shall ensure that—

(a) The EPIRB required in § 169.555 of this subchapter is tested monthly, using the integrated test circuit and output indicator, to determine that it is operative; and

(b) The EPIRB's battery is replaced after the EPIRB is used and before the marked expiration date.

§ 169.833 Fire and boat drills.

(a) When the vessel is operating, the master shall conduct a fire and boat drill each week. The scheduling of drills is at the discretion of the master except that at least one fire and boat drill must be held within 24 hours of leaving a port if more than 25 percent of the ship's company have been replaced at that port.

(b) The fire and boat drill must be conducted as if an actual emergency existed. All persons on board including guests shall report to their respective stations and be prepared to perform the duties specified in the station bill.

(1) Fire pumps must be started and a sufficient number of outlets used to ascertain that the system is in proper working order.

(2) All rescue and safety equipment must be brought from the emergency equipment lockers and the persons designated must demonstrate their ability to use the equipment.

(3) All watertight doors which are in use while the vessel is underway must be operated.

(4) Weather permitting, lifeboat covers and strongbacks must be removed, plugs or caps put in place, boat ladders secured in position, painters led forward and tended, and other life saving equipment prepared for use. The motor and hand-propelling gear of each lifeboat, where fitted, must be operated for at least 5 minutes.

(5) In port, every lifeboat must be swung out, if practicable. The unobstructed lifeboats must be lowered to the water and the ship's company must be exercised in the use of the oars or other means of propulsion. Although all lifeboats may not be used in a particular drill, care must be taken that all lifeboats are given occasional use to ascertain that all lowering equipment is in proper order and the crew properly trained. The master shall ensure that each lifeboat is lowered to the water at least once every 3 months.

(6) When the vessel in underway, and weather permitting, all lifeboats must be swung out to ascertain that the gear is in proper order.

(7) The person in charge of each lifeboat and liferaft shall have a list of its crew and shall ensure that the persons under his or her command are acquainted with their duties.

(8) Lifeboat equipment must be examined at least once a month to ensure that it is complete.

(9) The master shall ensure that all persons on board fully participate in these drills and that they have been instructed in the proper method of donning and adjusting the personal flotation devices and exposure suits used and informed of the stowage location of these devices.

(c) The master shall have an entry made in the vessel's official logbook

relative to each fire and boat drill setting forth the date and hour, length of time of the drill, numbers on the lifeboats swung out and numbers on those lowered, the length of time that motor and hand-propelled lifeboats are operated, the number of lengths of hose used, together with a statement as to the condition of all fire and lifesaving equipment, watertight door mechanisms, valves, etc. An entry must also be made to report the monthly examination of the lifeboat equipment. If in any week the required fire and boat drills are not held or only partial drills are held, an entry must be made stating the circumstances and extend of the drills held.

(d) A copy of these requirements must be framed under glass or other transparent material and posted in a conspicuous place about the vessel.

§ 169.837 Lifeboats, liferafts, and lifefloats.

(a) The master or person in charge shall ensure that the lifeboats, rescue boats, liferafts, and lifefloats, are properly maintained at all times, and that all equipment for the vessel required by the regulations in this subchapter is provided, maintained, and replaced as indicated or when necessary and no less frequently than required by paragraph (b) of this section.

(b) The master shall ensure that:

(1) Each lifeboat has been stripped, cleaned and thoroughly overhauled at least once in each year.

(2) The fuel tanks of motor propelled lifeboats have been emptied and fuel changed once every twelve months.

(3) Each lifefloat has been cleaned and thoroughly overhauled once every twelve months.

(4) Each inflatable liferaft has been serviced at a facility specifically approved by the Commandant for the particular brand, and in accordance with servicing procedures meeting the requirements of part 160, part 160.151, of this chapter—

(i) No later than the month and year on its servicing sticker affixed under 46 CFR 160.151–57(n), except that servicing may be delayed until the next scheduled inspection of the vessel, provided that the delay does not exceed 5 months; and

(ii) Whenever the container is damaged or the container straps or seals are broken.

[CGD 83–005, 51 FR 896, Jan. 9, 1986, as amended by USCG–2001–11118, 67 FR 58541, Sept. 17, 2002; USCG–2014–0688, 79 FR 58287, Sept. 29, 2014]

§ 169.839 Firefighting equipment.

(a) The master or person in charge shall ensure that the vessel's firefighting equipment is at all times ready for use and that all firefighting equipment required by the regulations in this subchapter is provided, maintained, and replaced as indicated.

(b) The master or person in charge shall have performed at least once every 12 months the tests and inspections of all hand portable fire extinguishers, semiportable fire extinguishing systems, and fixed fire extinguishing systems on board as described in § 169.247 of this subchapter. The master or person in charge shall keep records of the tests and inspections showing the dates when performed, the number and/or other identification of each unit tested and inspected, and the name(s) of the person(s) and/or company conducting the tests and inspections. These records must be made available to the marine inspectors upon request and must be kept for the period of validity of the vessel's current certificate of inspection. Conducting these tests and inspections does not relieve the master or person in charge of his responsibility to maintain this firefighting equipment in proper condition at all times.

§ 169.840 Verification of vessel compliance with applicable stability requirements.

(a) After loading and prior to departure and at all other times necessary to assure the safety of the vessel, the master shall determine that the vessel complies with all applicable stability requirements in the vessel's trim and stability book, stability letter, Certificate of Inspection, and Load Line Certificate, as the case may be, and then enter an attestation statement of the verification in the log book. The vessel may not depart until it is in compliance with these requirements.

(b) When determining compliance with applicable stability requirements the vessel's draft, trim, and stability must be determined as necessary and any stability calculations made in support of the determination must be retained on board the vessel for the duration of the voyage.

[CGD 89–037, 57 FR 41825, Sept. 11, 1992]

§ 169.841 Logbook entries.

(a) Each vessel subject to the inspection provisions of this subchapter must have an official logbook.

(b) The master shall place all entries required by law or regulation in the logbook.

(c) A Coast Guard form ''Official Logbook'' may be utilized or the owner may utilize his own format for an official logbook. The logs must be kept available for review by the Coast Guard for a period of one year after the date to which the records refer or for the period of validity of the vessel's current certificate of inspection, whichever is longer.

(d) All tests, drills, inspections and notifications required in this subchapter must be entered in the official logbook.

(e) Prior to getting underway the master shall enter in the logbook the name of each sailing school student, sailing school instructor, and guest onboard, and the fact that each person was notified of the applicable safety standards for sailing school vessels as required by § 169.857 of this chapter.

§ 169.847 Lookouts.

Nothing in this part exonerates any master or officer of the watch from the consequences of any neglect to keep a proper lookout.

§ 169.849 Posting placards containing instructions for launching and inflating inflatable liferafts.

Every vessel equipped with inflatable liferafts must have posted in conspicuous places readily accessible to the ship's company and guests approved placards containing instructions for launching and inflating inflatable liferafts. The number and location of such placards for a particular vessel shall be determined by the Officer in Charge, Marine Inspection.

§ 169.853 Display of plans.

(a) Each vessel of 100 gross tons and over must have permanently exhibited for the guidance of the master, general arrangement plans for each deck showing the fire control stations, the various sections enclosed by fire resisting bulkheads, the sections enclosed by fire retarding bulkheads, together with the particulars of the fire alarms, detecting systems, fire extinguishing appliances, means of access to different compartments, ventilation systems and the position of dampers and remote stops.

(b) Plans must clearly show for each deck the boundaries of the watertight compartments, the openings therein with the means of closure and the position of any controls, and the arrangements for the correction of any list due to flooding.

§ 169.855 Pre-underway training.

Prior to getting underway the master shall ensure that each sailing school student and sailing school instructor, who has not previously been instructed, is instructed in the handling of sails, emergency procedures, nautical terms, location and use of lifesaving and firefighting equipment, and the general layout of the vessel.

§ 169.857 Disclosure of safety standards.

(a) This section applies to all sailing school vessels and all promotional literature or advertisements offering passage or soliciting sailing school students or instructors for voyages on sailing school vessels.

(b) Each item of promotional literature or advertisement that offers passage or solicits students or instructors of voyages onboard a sailing school vessel must contain the following information:

(1) The name of the vessel;

(2) The country of registry;

(3) A statement detailing the role and responsibility of a sailing school student or instructor; and

(4) A statement that the vessel is inspected and certificated as a sailing school vessel and is not required to meet the same safety standards required of a passenger vessel on a comparable route.

(c) Before getting underway the master shall ensure that each sailing school student, sailing school instructor, and guest, who has not previously been notified, is notified of the specialized nature of sailing school vessels and that the applicable safety requirements for these vessels are not the same as those applied to passenger vessels.