Centennial Building, 1313 Sherman Street, Denver, Colorado 80203; Office of Surface Mining, Albuquerque Field Office, 219 Central Avenue, NW., Albuquerque, New Mexico 97102 and Office of Surface Mining, Administrative Record, Room 5315, 1100 "L" Street, NW., Washington, DC 20240

[FR Doc. 86-465 Filed 1-8-86; 8:45 am]

BILLING CODE 4310-05-M

DEPARTMENT OF TRANSPORTATION

Coast Guard

33 CFR Part 117

[CGD7 85-46]

Drawbridge Operation Regulations; Atlantic Intracoastal Waterway, SC

AGENCY: Coast Guard, DOT.

ACTION: Final rule.

SUMMARY: At the request of the South Carolina Department of Highways and Public Transportation the Coast Guard is changing the regulations governing the Wappoo Creek bridge, mile 470.8 at Charleston, by permitting the number of openings to be limited during certain periods. This change is being made because vehicular traffic yet still provide for the reasonable needs of navigation.

EFFECTIVE DATE: These regulations become effective on February 10, 1986.

FOR FURTHER INFORMATION CONTACT: Mr. Walt Paskowsky, (305) 536-4103.

SUPPLEMENTARY INFORMATION: On October 10, 1985 the Coast Guard published (50 FR 41366) a proposal to revise these regulations. The proposed regulations were also published in a public notice issued by Commander, Seventh Coast Guard District on October 22, 1985. In each notice interested persons were given until November 25, 1985 to submit comments.

Drafting Information

The drafters of these regulations are Mr. Walt Paskowsky, Bridge Administration Specialist, project officer, and Lieutenant Commander Ken Gray, project attorney.

Discussion of Comments

Four letters were received in response to the proposal. The City of Charleston supplied three separate comments. One comment supported the proposal but misinterpreted it as proposing already existing weekday "rush hour" restrictions. The other two comments advocated more restrictive regulations not justified by the data. The fourth comment, from the local chamber of commerce, supported the proposal.

Economic Assessment and Certification

These regulations are considered to be non-major under Executive Order 12291 on Federal Regulation and nonsignificant under the Department of Transportation regulatory policies and procedures (44 FR 11034; February 26, 1979).

The economic impact of these regulations is expected to be so minimal that a full regulatory evaluation is unnecessary. We conclude this because the regulations exempt tugs with tows. Since the economic impact of these regulations is expected to be minimal, the Coast Guard certifies that they will not a have a significant economic impact on a substantial number of small entities.

List of Subjects in 33 CFR Part 117

Bridges.

Regulations

In consideration of the foregoing, Part 117 of Title 33, Code of Federal Regulations is amended as follows:

PART 117—DRAWBRIDGE OPERATION REGULATIONS

1. The authority citation for Part 117 continues to read as follows:

Authority: 33 U.S.C. 499; 49 CFR 1.46 and 33 CFR 1.05-1(g).

2. Section 117.911(d) is revised to read as follows:

§ 117.911 Atlantic Intracoastal Waterway, Little River to Savannah River.

* * * * *

(d) *SR 171/700 bridge across Wappoo Creek, Mile 470.8 at Charleston.* The draw shall open on signal except that the draw need not open from 6:30 a.m. to 9 a.m. and from 4 p.m. to 6 p.m. Monday through Friday except federal holidays. On Saturdays, Sundays, and federal holidays from 2 p.m. to 6 p.m. the draw need open only on the hour and half-hour. In April, May, October, and November, Monday through Friday except federal holidays from 9 a.m. to 4 p.m. the draw need open only on the hour, 20 minutes past the hour, and 40 minutes past the hour.

* * * * *

Dated: December 24, 1985.

R.P. Cueroni,

Rear Admiral, U.S. Coast Guard, Commander, Seventh Coast Guard District.

[FR Doc. 86-470 Filed 1-8-86; 8:45 am]

BILLING CODE 4910-14-M

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 52

[A-1-FRL-2933-1]

Approval and Promulgation of Implementation Plans; New Hampshire

Correction

In FR Doc. 85-29659 beginning on page 51250 in the issue of Monday, December 16, 1985, on page 51250, second column, in the summary, sixteenth line, the FR citation is corrected to read "[49 FR 38104]".

BILLING CODE 1505-01-M

40 CFR Part 81

[A-4-FRL-2951-6; MS-010]

Designation of Areas for Air Quality Planning Purposes; Mississippi: Redefinition of TSP and SO_2 Attainment Areas

AGENCY: Environmental Protection Agency.

ACTION: Final rule.

SUMMARY: EPA today is changing the description of particulate matter and sulfur dioxide attainment areas in Mississippi at the request of the Mississippi Bureau of Pollution Control. This change, according to the State, will make it easier to track increment consumption in connection with the prevention of significant deterioration of air quality.

DATES: This action will be effective on March 10, 1986 unless notice is received within 30 days that adverse or critical comments will be submitted.

ADDRESSES: Copies of the materials submitted by Mississippi may be examined during normal business hours at the following locations:

Environmental Protection Agency, Region IV, Air Programs Branch, 345 Courtland Street, NE., Atlanta, Georgia 30365

Bureau of Pollution Control, Mississippi Department of Natural Resources, Post Office Box 10385, Jackson, Mississippi 39209

FOR FURTHER INFORMATION CONTACT: Al Yeast, EPA Region IV Air Programs Branch, at the Atlanta Address above, telephone (404) 881-2864 or FTS 257-2864.

SUPPLEMENTARY INFORMATION: On July 2, 1985, the Mississippi Bureau of Pollution Control asked that the designation of particulate and sulfur

dioxide attainment areas in 40 CFR 81.325 be changed from "Rest of State" to a listing of individual counties. This change, according to the State, will make it easier to track increment consumption in connection with the prevention of significant deterioration of air quality. EPA finds this request to be consistent with the provisions of section 107 of the Clean Air Act, and it is granted herewith.

The public should be advised that this action will be effective 60 days from the date of this Federal Register notice. However, if notice is received within 30 days that someone wishes to submit adverse or critical comments, this action will be withdrawn and two subsequent notices will be published before the effective date. One notice will withdraw the final action and another will begin a new rulemaking by announcing a proposal of the action and establishing a comment period.

Under section 307(b)(1) of the Act, petitions for judicial review of this action must be filed in the United States Court of Appeals for the appropriate circuit by March 10, 1986. This action may not be challenged later in proceedings to enforce its requirements. (See 307(b)(2).)

Under 5 U.S.C. 605(b), I certify that this redesignation does not have a significant economic impact on a substantial number of small entities. (See 46 FR 8709.)

The Office of Management and Budget (OMB) has exempted this rule from the requirements of section 3 of Executive Order 12291.

List of Subjects in 40 CFR Part 81

Air pollution control, National parks, Wilderness areas.

Dated: December 27, 1985.

Lee M. Thomas,

Administrator.

PART 81—[AMENDED]

Part 81 of Chapter 1, Title 40, Code of Federal Regulations, is amended as follows:

1. The authority citation for Part 81 continues to read as follows:

Authority: 42 U.S.C. 7401–7642.

2. In § 81.325 the attainment status designation tables for TSP and SO_2 are revised to read as follows:

§ 81.325 Mississippi.

TSP

Designated area	Does not meet primary standars	Does not meet secondary standards	Cannot be classified	Better than national standards
Adams County.				X
Alcorn County.				X
Amite County.				X
Attala County.				X
Benton County.				X
Bolivar County.				X
Calhoun County.				X
Carroll County.				X
Chickasaw County.				X
Choctaw County.				X
Clairborne County.				X
Clarke County.				X
Clay County.				X
Coahoma County.				X
Copiah County.				X
Covington County.				X
DeSoto County.				X
Forrest County.				X
Franklin County.				X
George County.				X
Greene County.				X
Grenada County.				X
Hancock County.				X
Harrison County.				X
Hinds County.				X
Holmes County.				X
Humphreys County.				X
Issaquena County.				X
Ittawamba County.				X
Jackson County.				X
Jasper County.				X
Jefferson County.				X
Jefferson Davis County.				X
Jones County.				X
Kemper County.				X
Lafayette County.				X
Lamar County.				X
Lauderdale County.				X
Lawerence County.				X
Leake County.				X
Lee County				X
Leflore County.				X

TSP—Continued

Designated area	Does not meet primary standars	Does not meet secondary standards	Cannot be classified	Better than national standards
Lincoln County.				X
Lowndes County.				X
Madison County.				X
Marion County.				X
Marshall County.				X
Monroe County.				X
Montgomery County.				X
Neshoba County.				X
Newton County.				X
Noxubee County.				X
Oktibbeha County.				X
Panola County.				X
Pearl River County.				X
Perry County.				X
Pike County.				X
Pontotoc County.				X
Prentiss County.				X
Quitman County.				X
Rankin County.				X
Scott County.				X
Sharkey County.				X
Simpson County.				X
Smith County.				X
Stone County.				X
Sunflower County.				X
Tallahatchie County.				X
Tate County.				X
Tippah County.				X
Tishomingo County.				X
Tunica County.				X
Union County.				X
Walthall County.				X
Warren County.				X
Washington County.				X
Wayne County.				X
Webster County.				X
Wilkinson County.				X
Winston County.				X
Yalobusha County.				X
Yazoo County.				X

SO_2

Designated area	Does not meet primary standards	Does not meet secondary standards	Cannot be classified	Better than national standards
Adams County.				X
Alcorn County.				X
Amite County.				X
Attala County.				X
Benton County.				X
Bolivar County.				X
Calhoun County.				X
Carroll County.				X
Chickasaw County.				X
Choctaw County.				X
Clairborne County.				X
Clarke County.				X
Clay County.				X
Coahoma County.				X
Copiah County.				X
Covington County.				X
DeSota County.				X
Forest County.				X
Franklin County.				X
George County.				X
Greene County.				X
Grenada County.				X
Hancock County.				X
Harrison County.				X
Hinds County.				X
Holmes County.				X
Humphreys County.				X
Issaquena County.				X
Ittawamba County.				X
Jackson County.				X
Jasper County.				X
Jefferson County.				X
Jefferson Davis County.				X
Jones County.				X
Kemper County.				X
Lafayette County.				X
Lamar County.				X
Lauderdale County.				X
Lawrence County.				X
Leake County.				X
Lee County.				X
Leflore County.				X
Lincoln County.				X
Lowndes County.				X

SO_2—Continued

Designated area	Does not meet primary standards	Does not meet secondary standards	Cannot be classified	Better than national standards
Madison County.				X
Marion County.				X
Marshall County.				X
Monroe County.				X
Monigomery County.				X
Neshoba County.				X
Newton County.				X
Noxubee County.				X
Oktibbeha County.				X
Panola County.				X
Pearl River County.				X
Perry County.				X
Pike County.				X
Pontotoc County.				X
Prentiss County.				X
Quitman County.				X
Rankin County.				X
Scott County.				X
Sharkey County.				X
Simpson County.				X
Smith County.				X
Stone County.				X
Sunflower County.				X
Taliahatchie County.				X
Tate County.				X
Tippah County.				X
Tishomingo County.				X
Tunica County.				X
Union County.				X
Walthall County.				X
Warren County.				X
Washington County.				X
Wayne County.				X
Webster County.				X
Wilkinson County.				X
Winston County.				X
Yalobusha County.				X
Yazoo County.				X

* * * * *

[FR Doc. 86-460 Filed 1-8-86; 8:45 am]

BILLING CODE 6560-50-M

DEPARTMENT OF TRANSPORTATION

Coast Guard

46 CFR Parts 169, 170, 171, and 173

[CGD 83-005]

Sailing School Vessel Regulations

AGENCY: Coast Guard, DOT.

ACTION: Final rule.

SUMMARY: The Coast Guard is establishing a new set of inspection regulations for sailing school vessels, as mandated by the Sailing School Vessel Act of 1982, Pub. L. 97-322. Current Coast Guard regulations do not consider the special characteristics, operating methods, and service of these vessels. These regulations establish minimum inspection standards necessary for the safe operation of sailing school vessels. Previously uninspected vessels that qualify under these standards may be able to carry more persons than currently allowed.

EFFECTIVE DATE: These regulations become effective on January 9, 1986. The incorporation by reference of certain publications listed in the regulations is approved by the Director of the Federal Register as of January 9, 1986.

FOR FURTHER INFORMATION CONTACT: Lieutenant John Astley (202-426-4431).

SUPPLEMENTARY INFORMATION: On 24 December 1984, the Coast Guard published a notice of proposed rulemaking (49 FR 49974) concerning these regulations. Interested parties were given until February 22, 1985 to submit comments. Seventeen letters were received.

Drafting Information

The principal drafters of this notice are LT John Astley, Office of Merchant Marine Safety and CDR R. Zabel, Office of Chief Counsel.

Discussion of Comments and Changes Made

General Comments

1. One general comment voiced by several commenters was that certain regulations are in excess of that required by Subchapter "T" (small passenger vessel regulations). In each instance the commenter recommended that the requirement reflect the wording found in Subchapter "T." In general this recommendation has not been adopted. The proposed regulations were specifically written for sailing school vessels and not for small passenger vessels. They are different types of vessels, each operating under different parameters which necessitate different safety requirements. In a few sections

where it appeared that a proposed requirement was excessive for a small sailing school vessel, the regulation has been modified. For this reason the following sections have been modified § 169.317, § 169.320, § 169.564(a)(3), § 169.613, § 169.615.

2. One commenter recommended that a public hearing be held to discuss the preamble and various substantive issues including manning, natural ventilation, subdivision and stability so as to avoid controversy and discussion at a later date. The Coast Guard has evaluated the merits of this proposal and determined that a public hearing is not warranted. It would delay the implementation of the regulations and cause unnecessary hardship on vessel owners, who are anxious to commence operations. Also, the majority of problem areas have been corrected in the final rule. If substantial problems still exist after implementation of the final rules, the Coast Guard will consider further rulemaking to deal with the problem.

3. Two commenters recommended that each sailing school vessel be required to carry a device which emits underwater warning signals. This device warns submarines that a sailing vessel is nearby. This recommendation has not been adopted. The Coast Guard is not aware of any reported instance of a submarine colliding with a sailing vessel because of the absence of engine and propeller noise. The cost of such a requirement can not be justified.

4. One commenter recommended that each person on board be required to demonstrate his or her ability to stay afloat. This recommendation has not been adopted. The lifesaving apparatus required to be on board is sufficient to ensure the safety of all persons in the event of an emergency. There is no demonstrated need to preclude nonswimmers from sailing on these vessels.

5. One commenter suggested prohibiting the use of alcoholic beverages aboard sailing school vessels. This recommendation has not been adopted. The issue is beyond the scope of the Notice of Proposed Rulemaking and cannot be addressed at this time. Although sailing school vessels have only recently been established as a separate category, sail vessels carrying passengers have been operating for years. There is no evidence that they have encountered more problems associated with the consumption of alcoholic beverages than any other category of vessel. No other vessels operate under a government regulation prohibiting the consumption of alcoholic beverages; however, the Coast Guard may take action against any licensed officer or documented crew member who is found to be incapable of performing his or her duties due to intoxication. In addition, the Coast Guard is conducting an extensive educational campaign concerning the hazards of mixing alcohol and boating and has initiated a separate rulemaking project to establish standards for defining intoxication.

6. One commenter recommended that a special provision be added to the regulations which authorizes the Officer in Charge, Marine Inspection (OCMI) to certificate replicas of historic vessels, even if they do not comply with all the regulations. This proposal has not been accepted. The sailing school vessel regulations are the minimum standards necessary for the safe operation of a sailing school vessel. To incorporate a provision as recommended would be condoning operations which may pose an unacceptable risk. Historic vessels were not necessarily safe vessels.

7. One commenter suggested that each lifeboat, liferaft, personal flotation device, and lifering buoy have an emergency position indicating radio beacon (EPIRB) attached. This recommendation has not been adopted. The regulations prescribe that each vessel, except those operating on protected waters, carry at least two EPIRBs, and this is comparable to existing EPIRB requirements for other inspected vessels.

8. One commenter recommended that all training vessels carry TINKER liferafts. This recommendation is not adopted. Any liferaft that is approved under Subpart 160.051 of Title 46, Code of Federal Regulations, and meets the requirements of § 169.513 of this chapter is acceptable.

9. The Coast Guard contemplated regulating the age and physical qualifications of sailing school students. The idea was addressed in the notice of proposed rulemaking preamble and open for public comment. Four of the five letters received, that addressed this issue, stated that these areas were outside of the Coast Guard's purview and best regulated by industry. The Coast Guard partially concurs. Although the agency has authority to regulate these areas, they are best governed by the individual program. Therefore, specific standards have not been developed. Each sailing school vessel operator will be allowed to decide what, it any, age and physical qualifications are necessary for the particular program. Section 169.205(a)(3) has been added to require that information concerning age and physical qualifications for students and instructors and the program's student-instructor ratio be submitted to the Coast Guard when an institution applies for certification as a sailing school vessel. The Coast Guard will use the information to determine the proper manning for the vessel's intended operation.

10. The Coast Guard was also contemplating requiring that each sailing school student sign a notification form acknowledging that he or she understands the specialized nature of the vessel and the applicable safety standards. Four commenters opposed the idea stating that this was outside the Coast Guard's jurisdiction. This is not true. In fact, the Sailing School Vessel Act of 1982, Pub. L. 97–322, dictates that each operator provide this information. However, requiring that this notification be in written form and signed by each student may be excessive. The desired effect of such a regulation can be obtained simply through statements in promotional literature and verbal notification. This is adequately covered by § 169.857. Therefore, a signed notification form has not been prescribed.

11. *Licensing/Manning*—One commenter stated that many of the smaller sailing school vessels are ketches and yawls. On these vessels the second mast is used for balancing purposes. It was recommended that the requirement for an additional seaman for such a mast be deleted. The Coast Guard concurs with this if the local OCMI believes that a ketch or yawl can be operated safely with a smaller crew. The recommended scales published in the NPRM are just that, recommended, and the local OCMI may deviate from them if he or she believes it is appropriate.

One commenter stated there is a shortage of sailing masters and mates and recommended requiring ocean operators in lieu of masters and mates on sailing school vessels in 100 to 200 gross ton category. This recommendation has not been adopted. Persons operating vessels of this size need to have more experience and be knowledgeable in areas beyond that required of an ocean operator. The ocean operator license is designed for people operating vessels of less than 100 gross tons.

Coast Guard statistics show that there are over 1,000 ocean operators in the United States. It is believed that these individuals can fairly easily upgrade their present licenses to master or mate sail or auxiliary sail. Part 10 ot Title 46, Code of Federal Regulations lays out the following time requirements for upgrading ocean operator licenses to master or mate:

Section	Ocean operator service [1]	Licenses	Tonnage
10.05-3	2 years	Master Oceans	300 gross tons.
10.05-7	2 years	Master Oceans	Dependent on experience.
10.05-5(a)(9)	1 year	Master Coastwise	300 gross tons.
10.05-28(a)(4)	1 year	Mate	Route and tonnage dependent on experience.
10.05-36(b)	No additional time	Mate	Route and tonnage dependent on experience.

[1] The service requirement includes a minimum of 6 months' experience on sail or auxiliary sail vessels.

One commenter stated that the Coast Guard's system of examination does not test for qualities which are of paramount importance on a sail vessel and recommended that the test be revised to emphasize sailing skills, lines, rigging, and weather. The Coast Guard partially concurs with this recommendation. An effort is being made to upgrade the sailing addendum for licenses and a new test is being devised for Able Seaman-Sail. These areas are under development, and anyone interested in providing information should contact Commandant (G-MVP). Even though there is room for improvement, the Coast Guard believes that the present examinations cover the minimum skills and knowledge necessary to safely operate a vessel.

One commenter suggested that the geographic limitation of 100 miles offshore for an ocean operator license be deleted to allow these individuals to go anywhere in the world. This recommendation has not been adopted. It is paramount that individuals operating vessels on extended offshore voyages have advanced experience and knowledge over that required of an ocean operator. The Coast Guard is willing to extend the limitation for a particular route depending on an individual's qualifications and if a need can be demonstrated. An examination covering certain subjects of importance for extended offshore service will be required in order to obtain this route endorsement. Each request will be handled on a case by case basis.

As stated in the Notice of Proposed Rulemaking, policy guidance for manning is found in the Coast Guard's Marine Safety Manual (MSM) Volume III. In determining the appropriate manning for a particular vessel the OCMI will consider the following guidance:

Interim Manning Guidance

Sailing school vessels must operate with properly licensed and certificated individuals as required by the statutes and regulations. These individuals provide the necessary base of experience to fulfill leadership roles during emergencies and to otherwise assure the vessel's safe handling.

In determining the manning needed to safely operate the vessel the Officer in Charge, Marine Inspection (OCMI), shall take into consideration the vessel's route and specific characteristics, including the number of masts, type of sails and number of persons needed for evolutions. Vessels equipped with more than one mast must carry a seaman (able seaman [AB] or deckhand as appropriate) for each mast and an additional AB for each square rigged mast. On ketches and yawls where the second mast is used for balancing purposes, the OCMI may waive the additional seaman, if it is believed that vessel can be operated safely with a smaller crew.

The maximum number of people needed in the deck crew will be figured on the above formula or that required by watchkeeping requirements, whichever is greater. On vessels 100 gross tons and above, except those navigating exclusively on rivers or lakes (except the Great Lakes), the unlicensed crew must hold merchant mariner's documents and at least 65% must be ABs. If propelling machinery is installed aboard seagoing sailing school vessels of 300 gross tons or more, a licensed engineer must be carried. On ocean or coastwise vessels of 100 gross tons or more, the three watch standard applies. Examples of what is envisioned for the various sizes of vessels are as follows:

MANNING EXAMPLES

Gross Tonnage	Protected Waters	Partially Protected & Exposed Waters
Less than 100 GT (single mast fore and after rig)	a) 1-Operator, 1-Deckhand* b) 2-Operators, 2-Deckhands	a) 1-Ocean Operator, 1-Deckhand* b) 2-Ocean Operators, 2-Deckhands
100 GT to less than 200 GT (two masted fore and after rig)	a) 1-Master, 2-AB's* b) 1-Master, 1-Mate, 2-AB's	1-Master, 2-Mates, 2-AB's, 1-O.S. (1 mate for vessels on voyages less than 24 hours)
200 GT to less than 300 GT (two masted, one with a square sail)	1-Master, 1-Mate, 2-AB's (mate counted towards total deck force required)	1-Master, 2-Mates, 2-AB's, 1-O.S. (mates counted towards total deck force required)
300 GT to 500 GT (three masted fore and aft with engine)	1-Master, 1-Mate, 3-AB's	1-Master, 2-Mates, 3-AB's, 1-Engineer
300 GT to 500 GT (three masted, square rig)	1-Master, 1-Mate, 5-AB's counted towards total deck force required)	1-Master, 2-Mates, 4-AB's (mates counted towards total deck force required)

*a) When away from a shoreside dock, or having sailing school students on board, or both, for not more than 12 hours in any 24-hours period.
b) When away from a shoreside dock, or having sailing school students on board, or both, for 12 or more hours in any 24-hour period.

Comment Concerning Specific Sections

Section 169.103(b)(5) This paragraph has been added to the final rule in order to clarify the situation where a vessel operates part of the time as a sailing school vessel and part of the time as a certificated passenger vessel. The sailing school vessel regulations are not applicable when a vessel is operating under a current valid certificate of inspection issued in accordance with the requirements of Subchapter "T" or "H."

Section 169.107 and 170.055(s) Definition of "Existing Vessel"—Four commenters stated that the proposed definition was unduly restrictive. It was stated that by insisting upon the target dates contained in the proposed regulations many existing vessels would be precluded from certification in contravention of the legislative intent. The biggest problem preventing certification is insufficient time. Normally, non-profit organizations are not set up in a manner which allows quick decisions, particularly when finances are involved. Also, obtaining tax-exempt status under section 501(c)(3) of the IRS Code can be a lengthy process. The Coast Guard recognizes these constraints and the definition has been amended in the final rules. For the purpose of these regulations, "existing vessel" is a sailing 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 11, 1988. This affords vessel owners time to consider the issue, establish a program, raise funds, obtain an IRS determination, and undergo inspection for certification.

The definition of a "new vessel" remains unchanged. For consistency, the definition for "new vessel" and "existing vessel" have been added to the section where all definitions governing this part are contained, § 169.107.

Section 169.107(h) One commenter pointed out that there was a conflict between the definition of an instructor and the wording in the preamble regarding manning. The definition contained in this section is correct and follows the definition contained in the law. An instructor can not serve as an officer, operator, or member of the crew required by regulation to be aboard the vessel.

Section 169.107(t) Pub. L. 98–577 necessitates a change to the definition of sailing instruction. The new wording found in the final rule reflects the language found in the law.

Section 169.112 This section has been added to the final rule in order to grant the Officer in Charge, Marine Inspection (CMI), greater flexibility in applying the regulations. This is necessary due to the unique construction and operating characteristics of sailing school vessels, particularly existing vessels. This section will allow OCMI's to realistically appraise the specifics of a given situation and determine if an adequate level of safety can be provided by an alternative means. It is intended that the section will allow OCMIs to address the unique, one-time cases that surface whenever new regulations are promulgated.

Section 169.121 One commenter wanted to add a paragraph to this section, which stated that the regulations for sailing school vessels superceded the loadline regulations. This is not possible. The Coast Guard does not have authority to amend the extent that the Loadline Act applies to sailing school vessels. In addition, loadline regulations are not seen by the Coast Guard as interfering with sailing school vessels.

Section 169.205(a)(4) One commenter recommended that this section requiring proof of nonprofit, tax-exempt status not be a condition for having a vessel certificated as a sailing school vessel. This comment has not been adopted. The regulations only apply when a qualified organization owns or demise charters, and operates a sailing school vessel. The nonprofit, tax-exempt organization status is required by statute. The Coast Guard will only inspect under these regulations sailing vessels operated by these institutions.

Section 169.213 One commenter recommends deleting this section providing for a permit to carry excursion parties, because it would allow sailing school vessels to carry persons other than those engaged in sail training. This comment has not been adopted, however the regulation has been modified to emphasize the intent of the section. Sailing school vessels are only authorized to carry sailing school students, sailing school instructors and guests. This section is intended to cover special situations where a sailing school vessel operator wants to carry additional persons or operate on an extended route on a one time basis. The permit acts as a temporary supplement to the vessel's Certificate of Inspection; it is not a means for circumventing inspection requirements. The applicable stability, lifesaving, and fire standards are not waived or relaxed.

Prior to issuing an excursion permit the OCMI will ensure that the vessel meets all applicable regulations and that a bona fide sailing instruction program is being conducted. It is not intended that this section will allow an operator to conduct a frivolous, cursory or unprofessional program even for a day.

Section 169.229(a)(1) Two commenters recommended extending the drydocking interval to 30 months to be consistent with a recently published Coast Guard rule. Another commenter recommended extending the interval to 36 months to be consistent with Subchapter "T" regulations. These recommendations have not been adopted. The maximum drydock interval for vessels operating in salt water is 24 months. This is currently the maximum interval for all Coast Guard certificated vessels, not just sailing school vessels. In a separate rulemaking project the Coast Guard is reexamining drydocking intervals for all vessels with a view toward standardizing requirements with those utilized by classification societies and the International Maritime Organization.

Section 169.305(a)(13) This section has been revised. In the final rule the regulation has been broken into two separate items, §§ 169.305(a)(13) and (a)(14). This was done in order to more fully explain what needs to be detailed in the required plans.

Section 169.305(c) Two commenters suggested expanding the scope of this paragraph to allow the OCMI to waive the submission of plans for an existing vessel which has a record of safe operation. This recommendation has been adopted. The final rule has been modified to allow the OCMI to waive submission of some of the required structural plans for existing vessels having a history of at least 5 years of safe operation.

Section 169.313(i)(3) Two commenters stated that the requirements for a vertical ladder rung to be at least 7 inches from the nearest object in the back is excessive. They recommended a minimum distance of three inches. This recommendation has been adopted.

Section 169.309 This section has been modified in the final rule. Two new paragraphs, which delineate the requirements for masts, spars, running rigging, etc., have been added. The paragraphs were added to explain what constitutes structural adequacy with regard to masting and rigging.

Section 169.315(c) Three commenters stated that this requirement setting minimum natural ventilation capacity was excessive. One recommendation was to change the formula to read: "V/A 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. A ratio of less than 1.4 is unacceptable." The recommended formula determines a value for the entire vessel rather than for each compartment as provided for in the proposal. This recommendation has been adopted, and the regulations have been amended accordingly. The formula is only used to determine the minimum capacity of a natural ventilation system. The system must still provide adequate ventilation to all compartments. Adoption of the recommended formula will reduce the number of openings in the hull and allow for increased design flexibility.

Section 169.317(d) One commenter suggested that "separate" berths not be required, as many vessels have double bunks which are suitable for more than one person. Although the regulations have not been modified, the recommendation is not categorically denied. The Coast Guard is concerned about the safety and welfare of all persons on board. Generally, double bunks are built into the hull structure whereby only one side has access to an aisle. With this type of arrangement, in an emergency, individual would have to climb over one another to gain access to the only avenue of escape. This is unacceptable. In the interest of safety and alleviating fatigue of the ship's company, each person should be assigned his or her own berth, which is of sufficient size, clear of obstructions, and immediately adjacent to an aisle. If an OCMI determines that a double bunk can satisfy these conditions, then special consideration, allowing a double bunk, can be granted under the new section, § 169.112.

Section 169.317(e) Four commenters stated that a 24 inch vertical distance between bunks is more appropriate for a sailing school vessel. The regulations have been amended to reflect this fact.

Sections 169.317(i) and 169.320 One commenter recommended deleting these sections concerning crew and hospital spaces as they are not suitable to the design and construction of sailing school vessels. This recommendation has been adopted. These sections were placed in the proposed regulations because under the law, 46 U.S.C. 11101, sailing school vessels were considered merchant vessels, and merchant vessels were required to have crew and hospital spaces. Pub. L. 98–557, October 30, 1984, amended 46 U.S.C. 11101 by stating that sailing school vessels are not considered merchant vessels of the United States. Therefore, the regulations are no longer required by statute, and they have been deleted from the final rule.

Section 169.319 Two commenters recommended reducing the required number of toilets and washbasins to one toilet and washbasin for every 20 persons. They felt that this was a more realistic ratio considering the typical design of a sailing vessel. This change has been made in the final rules.

Section 169.323(a)(1) The proposed regulations required all free-standing furniture to be constructed of noncombustible material. One commenter stated that many existing vessels have wooden free-standing tables and it would be expensive to replace them. It was further stated that little would be added to overall safety of the vessel by requiring the tables to be removed. It was recommended that this section only apply to new vessels. This recommendation has been adopted. While it is important to keep the amount of combustible material on board a vessel to a minimum, the added level of protection is not justified due to the costs involved with replacing this equipment on an existing vessel. The final rule has been changed to allow existing wooden furniture on existing vessels.

Section 169.515(b) One commenter stated that requiring liferafts in excess of that necessary to accommodate all persons on board is excessive. Another commenter recommended that the section only apply to vessels certificated for exposed water service. The final rules have been modified to reflect the later recommendation. Additional inflatable liferafts are required for each vessel certificated for exposed water service, where an added margin of safety is necessary.

Section 169.515(d) Much confusion arose over the term "open boat" as used in the proposed regulation. The paragraph was intended to exempt the unique boats and program operated by Hurricane Island Outward Bound School from the primary lifesaving equipment requirement due to the special construction of their boats. The Coast Guard has decided that exempting boats of special construction operated by a specific school from certain requirements is best addressed by the OCMI through the new special consideration section, § 169.112 and not by stating exceptions in the regulations. This paragraph has been deleted from the final rule.

Section 169.551(b) One commenter recommended modifying the regulations to reflect recent law change dealing with exposure suits. This comment has been adopted. Exposure suits are required on each vessel operating in certain exposed or partially protected waters and the exception for vessels with totally enclosed liferafts has been deleted.

Two commenters recommended deleting the requirement for exposure suits as they are expensive and unrealistic. This recommendation has not been adopted. Exposure suits are a necessary element of personnel safety. However the final rules have been modified to allow the substitution of Type V exposure personal flotation devices for the required exposure suits. These devices are less costly, easier to work in, and provide an adequate level of protection against hypothermia.

Section 169.555 The proposed regulations required each vessel certificated for exposed or partially protected waters to have an approved Class A EPIRB. One commenter recommended amending the requirement for vessels certificated for partially protected waters to require these vessels to carry Class C instead of Class A EPIRBs. This recommendation has been adopted. Also the commenter suggested that the proposed rule for EPIRBs in lifesaving apparatus be amended to allow Class C as well as Class B EPIRBs. This change has not been made. However, the final rules have been changed to require Class S EPIRBs in lifesaving apparatus. This reflects the latest Federal Communications Commission standard.

Section 169.564(a)(3) Three commenters recommended deleting the requirement for a fixed fire extinguishing system in galleys on small vessels. They stated that portable extinguishers provide ample coverage and in some cases are more effective than a fixed system. This recommendation has been adopted. The final rule only requires a fixed system for galleys on vessels greater than 90 feet in length. Smaller sailing school vessels will be required to have a B–II portable extinguisher for every 500 cubic feet of galley space.

Section 169.565(c) One commenter questioned whether fixed CO_2 extinguishing system controls can be located both inside and outside of the protected space. The proposed regulations require controls to be located outside the protected area only. The regulation remains as written in the proposed rules. Controls located inside the protected space can be dangerous and are not allowed.

Section 169.601 One commenter suggested adding a paragraph which authorizes the OCMI to accept departures from the regulations for equipment and arrangements on existing vessels. Although a paragraph has not been added to this section, the

recommendation has been adopted. A new section, § 169.112, has been added to the final rule. This section authorizes the OCMI to accept departures from the regulations whenever special circumstances or arrangements warrant doing so, and an adequate level of safety is provided. This applies to all vessels and all regulations, not just machinery and electrical requirements on existing vessels.

Sections 169.613 and 169.615 One commenter stated that the proposed regulations concerning fuel systems were excessive for small sailing vessels. The Coast Guard concurs with this statement. Accordingly, in the final rules, a new paragraph, which allows vessels of 65 feet and under to meet Subchapter "T" regulations, has been added to each of these sections.

Section 169.620 One commenter recommended deleting this requirement. Rudder stops are necessary to prevent damage or jamming when a vessel goes astern under power. They are probably not necessary on many sailing vessels. Therefore, this section has been deleted and § 169.618(b) has been amended to reflect that steering systems on vessels with an auxiliary means of propulsion must not jam at the vessel's maximum astern speed.

Section 169.652 One commenter recommended deleting requirements for bilge piping for vessels of 40 feet and under because sailing vessels of this size, except open boats, are impracticable for use in sail training and were not intended to be covered by the Sailing School Vessel Act of 1982. The Coast Guard disagrees, and the recommendation has not been adopted. The Act applies to vessels of less than 500 gross tons, not just those greater than 40 feet in length.

Section 169.654 Three comments dealing with this section on bilge pumps were received. The wording of this section, when read in conjunction with § 169.652, created confusion. The proposed regulations have been substantially modified to parallel the requirements for bilge piping and to eliminate inconsistency and confusion.

Section 169.668(d) One commenter stated that 10 inches of head room over batteries is not always possible on smaller vessels and recommended that the requirement only apply to vessels greater than 65 feet in length. The Coast Guard concurs with the intent of this recommendation. The requirement for 10 inches of head room over batteries has been deleted for all vessels subject to this section. The final rule requires that batteries be accessible so as to permit removal.

Section 169.672(b) The proposed regulations required that power and lighting circuits have stranded copper conductors. One commenter recommended allowing solid copper conductors on existing vessels which have operated safely for years. This recommendation has been adopted. There is no need to rewire vessels simply because they have solid vice stranded copper conductors. Stranded conductors will be required on new vessels only.

Section 169.678 Two commenters questioned the need for drip hoods and nonconducting hand rails on switch boards, particularly on smaller vessels. It was recommended that the requirements be similar to those contained in Subchapter "T." The Coast Guard concurs in part. The onerous requirements for working space area has been deleted from the final rule. The grab rail requirement has been modified to allow an exception where surrounding bulkheads and decks are of an insulating material such as fiberglass or wood. The requirement for drip hoods remains; drip hoods are needed to protect against falling liquid.

Section 169.703 Six comment letters were received on the subject of LPG/CNG cooking equipment. One letter included a summary of the thirty-eight comments received on a recently published proposed regulation on the carriage and use of liquefied and nonliquefied flammable gas on vessels carrying passengers (49 FR 10685). The majority of commenters favored permitting the use of Liquefied Petroleum Gas/Compressed Natural Gas (LPG/CNG) as a cooking medium. The primary sources of concern are the housing requirements for cylinders and the fact that CNG and LPG are governed by the same rules. It was also recommended that the National Fire Protection Association Standard (NFPA) No. 302 be adopted as an alternative to the American Boat and Yacht Council (ABYC) standards. The latter recommendation has been adopted. In view of the great similarities of the standards, the Coast Guard is adopting both ABYC and NFPA as the basic reference for LPG or CNG installations. However, due to a few differences between these standards which are considered significant, certain requirements are being added to each of them. Specifically, these requirements are as follows:

a. If NFPA 302 is used as the standard, then the following ABYC sections must also be complied with:

1. LPG or CNG must be odorized in accordance with A–1.5.d or A–22.5.b, respectively.

2. Ovens shall be equipped with a flame failure switch in accordance with A–1.10.b for LPG or A–22.10.b for CNG.

3. The marking and mounting of LPG cylinders shall be in accordance with A–1.6.b.

4. Only LPG cylinders of the vapor withdrawal type are permitted as specified in A–1.5.b.

b. If ABYC A–1 or A–22 is used as the standard for an LPG or CNG installation, then the following requirements shall also be met:

1. Pilot lights or glow plugs are prohibited.

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

c. If ABYC A–22 is used as the standard for a CNG installation, then the CNG cylinders, regulating equipment, and safety equipment shall meet the requirements of paragraphs 6–5.11.1, 2, 3, 5.11.5, and 5.11.8 of NFPA 302.

Almost all of the commenters recommended deleting the requirement for cylinders to be stored in a metal locker or housing on or above the weather deck. The reasons cited were lack of space, interference of the tank and fuel supply line with the rigging on sail vessels, that the metal cylinder enclosure would interfere with the working of the sails on sailboats, and the increased probability of the cylinder being damaged by wave action. All commenters suggested adoption of the ABYC standards for cylinder stowage without modification. After reevaluating this requirement and that contained in the ABYC and NFPA standards, it has been decided that the industry standards provide an adequate level of safety with one exception, the ABYC requirement for the stowage of CNG cylinders. Therefore the requirement to stow cylinders in metal enclosures located above the weather deck has been deleted to allow for the exceptions provided by the industry standards. Also the proposed requirements contained in § 169.703(c)(2) (ii) and (iii) have been deleted as they merely reiterated industry standards.

Regarding CNG cylinders, ABYC permits their stowage anywhere on the vessel while NFPA 302 requires them to be stowed similarily to LPG cylinders. Apparently, ABYC feels that any CNG which leaked from a cylinder stowed inside a vessel would rise to the top of the compartment and exit to the atmosphere via the ventilation system. Although this is true, the Coast Guard is in agreement with NFPA that the possibility of the CNG encountering an

ignition source before it exited the vessel is too great. Therefore, the Coast Guard is requiring that CNG cylinder stowage be similar to that for LPG as set forth in section 6-5.11.3 of NFPA 302.

One commenter recommended prohibiting the use of LPG. This comment has not been adopted. If installed in accordance with the regulations, LPG is as safe as CNG. There is no need to preclude LPG from the list of authorized cooking mediums.

One commenter recommended that each vessel utilizing LPG have a bilge blower system in the deepest area of the bilge. This recommendation has not been adopted. There is no need to install a bilge blower system if the LPG installation is designed and stowed in accordance with ABYC and NFPA standards.

Section 169.709(b) One commenter recommended deleting the requirement for vessels certificated for partially protected waters to carry an emergency compass. This recommendation has been adopted.

Section 169.711 One commenter stated that the regulation was unclear as to what constitutes acceptable emergency lighting. The statement was reinforced when the commenter recommended that vessels of less than 90 feet be allowed to employ a battery-powered emergency lighting system, subject to keeping flashlights readily available. The recommended change is unnecessary, since it is already authorized by the proposed rule. A lighting system that automatically shifts to battery power upon loss of the generator is an acceptable type of emergency lighting, and the proposed regulation requires that all vessels carry portable lights, such as flashlights, as a back-up. However, this confusion demonstrated the need for rewriting the section. The final rule has been rewritten so as to better delineate the types of emergency lighting sytems that are acceptable.

One commenter stated that small sail vessels have difficulty satisfying the proposed requirement for automatic actuation of the emergency lighting system. The Coast Guard recognizes the fact that on sailing school vessels, unlike on passenger vessels, the persons on board are familiar with the layout of the vessel, and the need to restore lighting rapidly is not as crucial. Under such conditions, there is no need to require automatically-actuated emergency lighting; a manually-controlled system will accomplish the same effect. Therefore, the requirement has been deleted from the final rule.

Section 169.715 One commenter stated that the proposed regulations concerning radio installations violate certain Federal Communications Commission (FCC) regulations. The Coast Guard concurs. Radiotelephone installations are under the jurisdiction of the FCC. The final rules have been modified to reflect this fact.

Section 169.741 One commenter recommended that the size of markings be at least 1" high and that a vessel's document number be used in lieu of the hailing port. This recommendation has not been adopted. There is no reason for prescribing the size of letters on personal flotation devices and ring lifebuoys. These markings are only there so that an individual can identify the vessel in distress. The reason for denying the document number recommendation is discussed below.

Section 169.748(a)(2) Two commenters recommended deleting the requirement for marking the vessel's hailing port on the stern and instead use the vessel's document number. The reason was to be consistent with a recently published Coast Guard notice of proposed rulemaking. This recommendation has not been adopted. The referenced material was a proposed change to the regulations not a final regulation. However, since the hull marking requirements for sailing school vessels are the same as other vessels, there is no need to duplicate the regulations in this rulemaking; they are already adequately covered in Part 67 of this chapter. Therefore, this section has been deleted from the final rule.

Sections 169.813, 169.815, 169.817, 169.821, 169.829, and 169.833 One commenter stated that these operational regulations are "big ship" requirements and should only apply to vessels greater than 65 feet in length and over 100 gross tons. This recommendation is not adopted except for § 169.815 concerning emergency signals. Smaller vessels are not required to have general alarms and whistles. Therefore, it is not reasonable to require that they utilize such equipment. This section has been modified so that it only applies to vessels of 100 gross tons and over. All the other sections remain unchanged. They are necessary and applicable for all vessels regardless of size.

Sections 169.813, 169.815, 169.817, 169.821, 169.823, 169.827, 169.829, 169.831, 169.833, 169.835, 169.841, and 169.857 One commenter stated that these operational regulation sections presume on the prerogatives of the vessel owner and master. The Coast Guard does not agree. Each of these requirements is necessary to ensure the safety of the vessel and the ship's company. The sections remain in the final rules.

Section 169.853 One commenter recommended only requiring the display of plans on vessels of 100 gross tons and over. This recommendation has been adopted. This requirement is only appropriate for larger vessels and the final rules have been modified accordingly.

Section 169.857 One commenter stated that the wording of the section, particularly the requirement to inform individuals that the vessel does not meet the same high level of safety standards required for an oceangoing passenger vessel, is offensive and subject to improper connotation, and recommended modification. The Coast Guard partially agrees to the extent that the notice requirement states that the vessel *does* not meet certain standards. The section has been reworded to eliminate this connotation but still advises the public that a sailing school vessel is not required to meet the same standards as a passenger vessel on a comparable route.

Section 171.055(d)(2) Several commenters thought that the definition for sail area was ambiguous and could be translated so as to excessively penalize a vessel with a lot of sail overlap. The definition has been changed in the final rule to clear ambiguity and to reflect the Coast Guard's interpretation of the definition.

Section 171.057 One commenter suggested that catamarans do not make suitable sailing school vessels. A sailing vessel, desiring to carry six or more sailing school students and or instructors and meeting these regulations may be certificated as a sailing school vessel, regardless of hull form. No change is made in the final rule.

Section 173.057(a) Several commenters suggested that the permissible mean length for allowing Class 1 watertight doors be increased above 90 feet. Recognizing the dimensions and arrangements of existing sailing vessels, this requirement has been changed to a mean length of 125 feet in the final rule.

Section 173.057(b) Several commenters objected to requirements for Class 1 watertight doors as inconvenient, excessive, and detracting from rather than contributing to safety. One commenter suggested marking the doors "CLOSE IN EMERGENCY" rather than "RECLOSE AFTER USE." The Coast Guard has reviewed numerous sinkings which could have been prevented by the maintenance of existing watertight integrity. No change is made in the final rule.

Section 173.058 Several commenters thought that double bottom requirements were excessive and should be eliminated for wooden vessels and for steel vessels less than 150–165 feet in length. The Coast Guard has not seen any supporting evidence of differences in bottom damage survivability between wooden and steel vessels. However, we agree that retrofitting existing vessels with double bottoms is an excessive requirement. Also, double bottom requirements for sailing vessels should not be more restrictive than those for other passenger carrying vessels. The final rule has been changed to reflect these positions.

Section 173.063 Six comments supported the American Sail Training Association's recommendations for reduced stability numerals used in the dynamic balance to downflooding and dynamic balance to knockdown criteria. These recommendations have been supported by a study of certain existing vessels. The study recommends that a vessel's required stability numerals for downflooding and knockdown be related to its angle of downflooding and range of stability, respectively. This method, with a size related modification, is included in the final rule.

One commenter suggested that required stability numerals should be higher for smaller vessels. This comment, with supporting documentation, showed that the relationship to size is best compared to displacement. The final rule has a multiplier applied to the required stability numeral which takes this into account.

Several commenters supported the American Sail Training Association's position that there is no weather related reason for requiring higher stability numerals on vessels operating in exposed waters than on vessels operating in protected or partially protected waters. The Coast Guard agrees; however, higher numerals are warranted for vessels operating in exposed waters for the following reasons:

(a) It is more difficult to seek shelter from a storm.

(b) Weather forecasting is less reliable.

(c) It is more difficult to obtain assistance.

Overall the stability numerals have been modified, however the final rule continues to require a slightly higher numeral for vessels operating in exposed waters.

The changes made in this section are based primarily on the recommendations of the American Sail Training Association. The properties of forty-nine sailing vessels of various configurations and sizes were analyzed to establish the downflooding and knockdown numerals. Of the known sailing school vessels only five would not meet the criteria in this final rule, and with relatively minor modifications three of the five could comply.

Paperwork Reduction Act

This rulemaking contains information collection requirements. These items have been submitted to the Office of Management and Budget for review under the provisions of the Paperwork Reduction Act of 1980 (44 U.S.C. 3501 et. seq.) and have been approved by OMB. The section numbers and corresponding control numbers are as follows: §§ 169.111, 169.201, 169.205, 169.211, 169.213, 169.215, 169.217, 169.233, 169.235, (OMB #2115–0517); 169.205 (OMB #2115–0007); 169–807 (OMB #2115–0003); 169.305 (OMB #2115–0095); 169.841 (OMB #2115–0071); 169.509 (OMB #2115–0132); 169.205, 169.218, 169.219, 169.813, 169.841, 169.857, (OMB #2115–0546).

Final Evaluation and Economic Certification

This final rule is considered to be non-major under Executive Order 12291 and nonsignificant under the DOT regulatory policies and procedures (44 FR 11034; February 26, 1979). A final regulatory evaluation has been prepared and placed in the rulemaking docket. It may be inspected or copied at Room 2110, 2100 Second Street SW., Washington, DC from 7:30 a.m. to 4:00 p.m. Copies may also be obtained by contacting the person listed in the "For Further Information Contact" paragraph.

The economic impact on industry is nonsignificant. As explained in the final evaluation, the proposed regulations afford vessel owners an alternative to the regulations that presently govern their operations. The Coast Guard does not have specific information on how many vessels will seek certification as sailing school vessels, although it is believed that as many as 100 vessels may request inspection. The final rule only requires vessel owners or operators deciding to engage in sailing school operations to have their vessels inspected under these regulations. Section 169.103 has been modified to clarify this point. The owner has the option of operating under existing regulations or the new sailing school vessel regulations. There would be no incentive to operate under the sailing school vessel regulations unless the vessel owner viewed them as either less costly or allowing greater operating flexibility. Also previously uninspected vessels may be able to carry more persons than previously allowed. Therefore, operation under these final regulations is in essence voluntary and no new costs will be imposed on the public.

It is expected that the owners of sailing school vessels will seek inspection under these regulations as they are more ideally suited to their operations. To the extent that the regulations are written specifically for sailing school vessels, the final rules provide a cost savings to the affected vessel operators. They permit the use of vessels currently not operating as inspected vessels. Many large wooden vessels, having histories of safe operation, which previously could not operate as inspected passenger vessels because of their construction, may now be able to operate as a sailing school vessel with over six students.

Since the impact of this final rule is expected to be minimal, the Coast Guard certifies that it will not have a significant economic impact on a substantial number of small entities.

The Coast Guard has assessed the environmental effects of these regulations and found no foreseeable significant impact on the environment.

These regulations are being made effective on publication. The Sailing School Vessel Act became effective on April 15, 1984. Full implementation of the Act is dependent on these regulations. Owners of vessels intended for operation as sailing school vessels have been hindered in carrying out modifications due to the lack of final standards. No vessel owner is required to comply with these regulations, and will elect to do so only to take advantage of the increased flexibility they afford. Therefore, the Coast Guard finds there is good cause, under 5 U.S.C. 553(d), to make these rules effective in less than 30 days after publication.

List of Subjects

46 CFR Part 169

Marine safety, Sailing school vessels, and Administrative practice and procedure.

46 CFR Part 170

Marine safety, Subdivision, Stability, Vessels, Tank vessels, Cargo vessels, Nuclear vessels, Passenger vessels, Oceanographic vessels, Sailing vessels, Nautical schools, Tugboats, Towboats, Mobile offshore drilling units, Barges, Grain, Oil and gas exploration, Hazardous material transportation, Gases, and Natural gases.

46 CFR Part 171

Marine safety, Subdivision, Stability, Vessels, Passenger vessels, Sailing vessels, Barges.

46 CFR Part 173

Marine safety, Subdivision, Stability, Vessels, Cargo vessels, Oceanographic vessels, Nautical vessels, Tugboats, Towboats, Barges.

For the reasons set out in the preamble, the Coast Guard amends Title 46, Code of Federal Regulations as follows:

1. By adding Part 169 to Subchapter R, "Nautical Schools" to read as follows:

PART 169—SAILING SCHOOL VESSELS

Subpart 169.100—General Provisions

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169.740 Liferafts and lifefloats.
169.741 Personal flotation devices and ring life buoys.
169.742 Firehose and axes.
169.743 Portable magazine chests.
169.744 Emergency position indicating radio beacon (EPIRB).
169.745 Escape hatches and emergency exists.
169.746 Fuel shut off valves.
169.747 Watertight doors and hatches.
169.750 Radio call sign.

Subpart 169.800—Operations

169.805 Exhibition of licenses.
169.807 Notice of casualty.
169.809 Charts and natural publications.
169.813 Station bills.
169.815 Emergency signals.
169.817 Master to instruct ship's company.
169.819 Manning of lifeboats and liferafts.
169.821 Patrol person.
169.823 Openings.
169.824 Compliance with provisions of Certificate of Inspection.
169.825 Wearing of safety belts.

Tests, Drills, and Inspections

169.826 Steering, communications and control.
169.827 Hatches and other openings.
169.829 Emergency lighting and power systems.
169.831 Emergency position indicating radio beacon (EPIRB).
169.833 Fire and boat drills.
169.837 Lifeboats, liferafts, and lifefloats.
169.839 Firefighting equipment.
169.841 Logbook entries.
169.847 Lookouts.
169.849 Posting placards containing instructions for launching and inflating inflatable liferafts.
169.853 Display of plans.
169.855 Pre-underway training.
169.857 Disclosure of safety standards.

Authority: 46 U.S.C. 3306, 49 CFR 1.46(b).

Subpart 169.100—General Provisions

§ 169.101 Purpose.

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).

§ 169.103 Applicability.

(a) This subchapter applies to each foreign and domestic vessel operating as a sailing school vessel except as follows:

(1) A vessel of a foreign nation signatory to the International Convention for the Safety of Life at Sea and which has on board a current valid Safety Certificate; or

(2) A vessel of a foreign nation having inspection laws approximating those of the United States together with reciprocal arrangements with the United States and which has on board a current valid certificate of inspection issued by its government.

(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; or

(5) Any vessel operating under the authority of a current valid certificate of inspection issued in accordance with the requirements of Subchapter H or T, 46 CFR Parts 70 thru 78 and Parts 175 thru 187, respectively.

(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.

§ 169.107 Definitions.

(a) "Approved" means accepted by the Commandant unless otherwise stated.

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

(c) "Commandant" means the Commandant of the Coast Guard or an authorized representative of the Commandant.

(d) "Existing vessel" means a sailing school vessel, whose keel was laid prior to (publication date), which applies for certification as a sailing school vessel prior to (one year from publication date), and whose initial inspection for certification is completed prior to (two years from publication date).

(e) "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.

(f) "Guest" means an individual on board a sailing school vessel who is not a member of the ship's company and has not contributed any consideration, either directly or indirectly, for carriage on the vessel. Guests are not considered passengers for the purpose of these regulations.

(g) "Headquarters" means the Office of the Commandant, United States Coast Guard, Washington, DC 20593.

(h) "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.

(i) "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.

(j) "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.

(k) "Master" means the senior licensed individual having command of the vessel.

(l) "New vessel" means a sailing school vessel which is not an existing vessel.

(m) "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.

(n) "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.

(o) "Passenger" means any person carried on board a vessel other than—

(1) The owner or his representative;

(2) The master and bona fide members of the crew who are engaged in the business of the vessel and paid for their services;

(3) Any employee of the owner of the vessel engaged in the business of the owner, except when the vessel is operating under a bareboat charter;

(4) Any employee of the bareboat charterer of the vessel engaged in the business of the bareboat charterer;

(5) Any quest; or

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

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

(q) "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.

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

(s) "Rules of the Road" means the statutory and regulatory rules governing navigation of vessels.

(t) "Sailing Instruction" means teaching, research, and practical experience in operating vessels propelled primarily by sail, and may include—

(1) Any subject related to that operation and the sea, including seamanship, navigation, oceanography, other nautical and marine sciences, and maritime history and literature; and

(2) When in conjunction with a subject referred to in paragraph (t)(1) of this paragraph, instruction in mathematics and language arts skills to sailing school student having learning disabilities.

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

(v) "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.

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

(x) "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.

(y) "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.

§ 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 Appeals.

Whenever any person directly interested in or affected by any decision or action of any Officer in Charge, Marine Inspection, feels aggrieved by such decision or action, he may appeal to the Coast Guard District Commander having jurisdiction, and to the Commandant under the provisions of section 2.01–70 of this title.

§ 169.115 Incorporation by reference.

(a) In this subchapter portions or the entire text of certain industrial standards and specifications are referred to as the governing requirements for materials, equipment, tests, or procedures to be followed. These standards and specification requirements specifically referred to in this subchapter are the governing requirements for the subject matters covered unless specifically limited,

modified, or replaced by other regulations in this subchapter.

(b) These materials are incorporated by reference into this part with the approval of the Director of the Federal Register. The Office of the Federal Register publishes a table, "Material Approved for Incorporation by Reference," which appears in the Finding Aids section of this volume. In that table is found citations to the particular sections of this part where the material is incorporated with the approval by the Director of the Federal Register. To enforce any edition other than the one listed in paragraph (c) of this section, notice of change must be published in the **Federal Register** and the material must be made available. All approved material is on file at the Office of the Federal Register, Washington, DC 20408 and at the U.S. Coast Guard, Merchant Vessel Inspection Division, Washington D.C. 20593.

(c) The materials approved for incorporation by reference in this part are:

(1) American Boat and Yacht Council (ABYC), P.O. Box 806, 190 Ketchum Ave., Amityvile, NY 11701
P-1-73—"Safe Installation of Exhaust Systems for Propulsion and Auxiliary Engines" (1973)
H-24.9 (g) and (h)—"Fuel Strainers and Fuel Filters" (1975)
H-2.5—"Ventilation of Boats Using Gasoline—Design and Construction" (1981)
A-1-78—"Marine LPG—Liquefied Petroleum Gas Systems"
A-3-70—"Recommended Practices and Standards Covering Galley Stoves"
A-22-78—"Marine CNG—Compressed Natural Gas Systems"

(2) National Bureau of Standards, c/o Superintendent of Documents, U.S. Government Printing Office, Washington D.C. 20402
Special Pub. 440 (SD Cat. No. C13.10:490), "Color: Universal Language and Dictionary of Names", 1976

(3) National Fire Protection Association (NFPA) Batterymarch Park, Quincy, MA 02269
302—"Pleasure and Commercial Motor Craft," Chapter 6 (1980)
306—"Control of Gas Hazards on Vessels" (1980)
70—"National Electrical Code," Article 310-8 and Table 310-13 (1980)

(4) Naval Publications and Forms Center, Customer Service Code 1052, 5801 Tabor Ave., Philadelphia, PA 19120
Federal Specification ZZ-H-451 "Hose, Fire, Woven-Jacketed Rubber or Cambric-Lined, with Couplings, F."

(5) Underwriters Laboratories, 333 Pfingsten road, Northbrook, IL 60062
UL 19-78—"Woven Jacketed, Rubber Lined Fire Hose"

§ 169.117 OMB Control numbers.

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.

46 CFR Part—	OMB control No.
169.111	2115-0517
169.201	2115-0517
169.205	2115-0007, 2115-0517, 2115-0546
169.211	2115-0517
169.213	2115-0517
169.215	2115-0517
169.217	2115-0517
169.218	2115-0546
169.219	2115-0546
169.233	2115-0517
169.235	2115-0517
169.305	2115-0095
169.509	2115-0132
169.807	2115-0003
169.813	2115-0546
169.841	2115-0546, 2115-0071
169.857	2115-0546

§ 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 How to obtain or renew.

(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) Certificates of inspection will be renewed by the issuance of new certificates 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.

§ 169.207 Period of validity.

(a) Certificates of inspection are issued for a period of two 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.

§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 When required.

At least one reinspection shall be made on each sailing school vessel holding a valid certificate of inspection. The inspection, when possible, will be made between the tenth and fourteenth month of the period for which the certificate is valid. The owner, operator, or master must contact the OCMI to arrange for this inspection.

§ 169.227 Scope.

The scope of the reinspection is the same as the inspection for certification.

Drydocking or Hauling Out

§ 169.229 When required.

(a) Unless otherwise authorized by the Commandant, each vessel must be drydocked or hauled out for examination at intervals not to exceed—

(1) 24 months if it is operated in salt water.

(2) 72 months if it operates exclusively in fresh water.

§ 169.231 Scope of drydock examination.

(a) The examination includes the underwater hull and appendages, propellers, shafting, stern bearings, rudders, through-hull fittings, sea valves and strainers, and is of sufficient scope to determine that these items are in a satisfactory condition for the service intended.

(b) The marine inspector may require any part or all of the propeller shafting to be drawn for examination of the shafting and stern bearing.

(c) Sea chests, sea valves, and sea strainers must be opened for internal examination.

§ 169.233 Notice.

The owner or operator shall notify the OCMI when the vessel is to be placed on a drydock.

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, "Control of Gas Hazards on Vessels," 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 vesssel by full observance of all requirements listed by the marine chemist in the certificate.

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, 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.

§ 169.241 Machinery.

(a) At each initial and subsequent inspection for certification the Coast Guard examines and tests 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.

§ 169.243 Electrical.

At each inspection for certification the following items are examined and tested to the extent necessary to determine that they are in proper operating condition, 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.

§ 169.245 Lifesaving equipment.

At each inspection for certification the following tests and inspections of lifesaving equipment are 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.

§ 169.247 Firefighting equipment.

(a) At each inspection for certification and at such other times as considered necessary all fire-extinguishing equipment is inspected to ensure it is in suitable condition. Tests may be necessary to determine the condition of the equipment. The inspector verifies that the tests and inspections required in Tables 169.247 (a)(1) and (a)(2) of this subchapter have been conducted by a qualified servicing facility at least once every twelve months.

(1) Hand portable fire extinguishers and semi-portable fire extinguishing systems are examined for excessive corrosion and general condition.

(2) All parts of the fixed fire-extinguishing systems are examined for

excessive corrosion and general condition.

(3) Piping, controls, valves, and alarms on all fire-extinguishing systems are 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.

TABLE 169.247(a)(1).—PORTABLE EXTINGUISHERS

Type unit	Test
Foam	Discharge. Clean hose and inside of extinguisher thoroughly. Recharge.
Carbon dioxide	Weigh cylinders. Recharge if weight loss exceeds 10 pct of weight of charge. Inspect hose and nozzle to be sure they are clear.
Dry chemical (cartridge-operated type).	Examine pressure cartridge and replace if end is punctured or if cartridge is otherwise determined to have leaked or to be in unsuitable condition. Inspect hose and nozzle to see they are clear. Insert charged cartridge. Be sure dry chemical is free-flowing (not caked) and chamber contains full charge.
Dry chemical (stored pressure).	See that pressure gage is in operating range. If not, or if seal is broken, weigh or otherwise determine that full charge of dry chemical is in extinguisher. Recharge if pressure is low or if dry chemical is needed.
HALON 1211 or HALON 1301).	See that pressure gage, if provided, is in operating range. Recharge if pressure is low. Weigh cylinder. Recharge if weight loss exceeds 10 pct of weight of charge. Inspect hose and nozzle to ensure they are clear.

TABLE 169.247(a)(2).—FIXED SYSTEMS

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

§ 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 the steering apparatus is inspected and operationally tested to determine that its condition is satisfactory and that it is fit for the service intended.

§ 169.253 Miscellaneous systems and equipment.

(a) At each inspection for certification 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.

§ 169.255 Sanitary inspection.

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

§ 169.257 Unsafe practices.

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

(b) At each inspection for certification 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.

§ 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 tan 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.

§ 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 can not 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.

§ 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: $V/A > 1.4$ 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 on 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.

§ 169.321 Motion picture projectors and film.

Motion picture projectors may use only acetate or slowburning films. Nitrocellulose film is prohibited.

§ 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 of a type approved under Subpart 160.051 of this chapter.

(2) The inflatable liferaft and liferaft container must show on or near their respective nameplates, marking approved by the Coast Guard that contains—

(i) An approval number consisting of "160.051/" followed by a number that is greater than 49 followed by a revision number (e.g. 160.051/50/1); or

(ii) An approval number consisting of "160.051/" followed by a number that is smaller than 50 that is followed by a revision number (e.g. 160.051/48/1); the words "MOD TEMP," and the date that an inspector found that the liferaft met § 160.051–5(c)(4) of this chapter.

(3) Each inflatable liferaft must be marked "Ocean Service," except that inflatable liferafts on vessels operating on protected waters or partially protected waters may be marked "Limited Service."

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

§ 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.

Lifeboats must be equipped in accordance with Table 169.527. This equipment is described in § 169.529.

TABLE 169.527

Letter identification and item	Exposed and partially protected waters	Protected waters
a—Bailer	1	None
b—Bilge pump	1	None
c—Boathooks	2	1
d—Bucket	2	1
e—Compass and mounting	1	None
f—Ditty bag	1	None
g—Drinking cup	1	None
h—Fire extinguisher (motor-propelled lifeboats only)	2	2
i—First-aid kit	1	None
j—Flashlight	1	None
k—Hatchet	2	1
l—Heaving line	2	None
m—Jackknife	1	None
n—Ladder, lifeboat, gunwale	1	None
o—Lantern	1	1
p—Lifeline	1	1
q—Life preservers	2	2
r—Locker	1	None
s—Mast and sail (oar-propelled lifeboats only)	1	None
t—Matches (boxes)	2	1
u—Mirror, signaling	2	None
v—Oars (units)	1	1
w—Oil, illuminating (quarts)	1	None
x—Oil, storm, (gallons)	1	None
y—Painter	2	1
z—Plug	1	1
aa—Provisions (per person)	2	None
bb—Rowlocks (units)	1	1
cc—Rudder and tiller	1	None
dd—Sea anchor	1	None
ee—Signals, distress, floating orange smoke	2	None
ff—Signals, distress, red hand flare (units)	1	None
gg—Signals, distress, red parachute flare (units)	1	None
hh—Tool kit (motor-propelled lifeboats only)	1	1
ii—Water (quarts per person)	3	None
jj—Whistle, signaling	1	None
kk—Fishing kit	1	None
ll—Cover, protecting	1	None
mm—Signals, lifesaving	1	None

§ 169.529 Description of lifeboat equipment.

(a) *Bailer.* The bailer must have a lanyard attached and must be of sufficient size and suitable for bailing.

(b) *Bilge pump.* Bilge pumps must be approved under Subpart 160.044 of this chapter. They must be of the size given in Table 169.529(b) depending upon the capacity of the lifeboat as determined by the six-tenths rule as described in § 160.035–9(b) of this chapter.

TABLE 169.529(b)

Capacity of lifeboat, cubic feet		Bilge pump size
Over—	Not over—	
	330	1
330	700	2
700		3

(c) *Boathooks.* Boathooks must be of the single hook ballpoint type. Boathook handles must be of clear grained white ash, or equivalent, and of a length and diameter as given in Table 169.529(c).

TABLE 169.529(c)

Length of lifeboat, feet		Boathook handles	
Over—	Not over—	Diameter, inches	Length, feet
	23	1.50	8
23	29	1.75	10
29		2	12

(d) *Bucket.* Each bucket must be of heavy gage galvanized iron, or other suitable corrosion-resistant metal, of not less than 2-gallon capacity, and must have a 6-foot lanyard of 12-thread manila or equivalent attached.

(e) *Compass and mounting.* The compass and mounting must be of an approved type.

(f) *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 marline spike.

(g) *Drinking cups.* Drinking cups must be enamel coated or plastic, graduated in milliliters or ounces, and provided with lanyards 3 feet in length.

(h) *Fire extinguishers.* Each fire extinguisher must be an approved Type B–C, Size I. One must be attached to each end of the lifeboat.

(i) *First-aid kit.* The first-aid kit must be approved under Subpart 160.041 of this chapter.

(j) *Flashlights.* Each flashlight must be approved under Subpart 161.008 of this chapter. Three spare cells (or one 3-cell battery) and two spare bulbs, stowed in a watertight container, must be provided with each flashlight. Batteries must be replaced yearly during the annual stripping, clearing, and overhaul of the lifeboat.

(k) *Hatchets.* Hatchets must be approved under Subpart 160.013 of this chapter. They must be attached to the lifeboat by individual lanyards and be readily available for use, one at each end of the lifeboat.

(l) *Heaving line.* The heaving line must be of adequate strength, 10 fathoms in length, and 1 inch in circumference. It must remain buoyant after being submerged for 24 hours.

(m) *Jackknife.* The jackknife must be approved under Subpart 160.043 of this chapter.

(n) *Ladder, lifeboat gunwale.* The lifeboat gunwale ladder must consist of 3 flat wood steps with cut outs for hand holds. The steps must be spaced 12 inches apart and fastened with ⅝ inch diameter manila rope or equivalent. Each rope end must be tied inside the lifeboat at about amidships with the ladder stowed on top of the side benches and ready for immediate use.

(o) *Lantern.* The lantern must contain sufficient oil to burn for at least 9 hours, and be ready for immediate use. In totally enclosed lifeboats, an interior lighting system may be used in lieu of a lantern.

(p) *Lifeline.* The lifeline must be properly secured to both sides of the lifeboat along its entire length, festooned in bights not longer than 3 feet, with a seine float in each bight. The float may be omitted if the line is of an inherently buoyant material and absorbs little or no water. The lifeline must be of a size and strength not less than ⅜-inch diameter manila. The bights must hang to within 12 inches of the water when the lifeboat is light.

(q) *Life preservers.* Life preservers must be of an approved type. These preservers are in addition to those required by § 169.539 of this chapter.

(r) *Locker.* The locker must be suitable for the storage and preservation of the small items of equipment required under § 169.527.

(s) *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 169.529(s). 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). Rigging must consist of galvanized wire rope not less than three-sixteenths inch in diameter. The mast and sail must be protected by a suitable cover.

TABLE 169.529(s)

Length of lifeboat, feet		Standing lug sail									Commercial designation number	Mast [1]			Yard [1]		
		Area, square feet	Luff and head lengths		Leach length		Foot length		Clew to throat		Ounces per square yard		Length	Diameter, inches	Length		Diameter, inches
Over—	Not over—		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.

(t) *Matches.* A box of friction matches in a watertight container, stowed in an equipment locker or secured to the underside of the stern thwart if no locker is fitted, must be provided.

(u) *Mirrors, signaling.* Signaling mirrors must be of an approved type.

(v) *Oars.* A unit, consisting of a complement of rowing oars and steering oar, must be provided for each lifeboat in accordance with Table 169.529(v) except that motor-propelled and hand-propelled lifeboats need only be equipped with four rowing oars and one steering oar. In any case, the emergency lifeboats must be provided with the full complement of oars prescribed by the table. All oars must be buoyant.

TABLE 169.529(v)

Length of lifeboat (feet)		Number of oars—		Length of oars (feet)—	
Over—	Not over—	Rowing	Steering	Rowing	Steering
	15	4	1	8	9
15	19	6	1	10	11
19	21	6	1	11	12
21	23	6	1	12	13
23	25	8	1	13	14
25	27	8	1	14	15
27		8	1	15	16

(w) *Oil, illuminating.* One quart of illuminating oil must be provided in a metal container if a lantern is carried.

(x) *Oil, storm.* One gallon of vegetable, fish, or animal oil must be

provided in a suitable metal container so constructed as to permit a controlled distribution of oil on the water, and so arranged that it can be attached to the sea anchor.

(y) *Painter.* Painters must be of manila rope not less than 2¾ inches in circumference, or equivalent, and of a length not less than 3 times the distance between the deck on which the lifeboat is stowed and the light draft of the vessel. For lifeboats on vessels certificated for exposed or partially protected water service, one of the painters must have a long eye splice and be attached to the thwart with a toggle. The other painter must be attached to the stem.

(z) *Plug.* The automatic drain required in the lifeboat must be provided with a cap or plug attached to the lifeboat by a suitable chain.

(aa) *Provisions.* Approved emergency rations must be provided, consisting of 10,000 kJ (2390 calories) for each person the lifeboat is approved to carry. The provisions must be stowed in lockers or other compartments providing suitable protection.

(bb) *Rowlocks.* A unit, consisting of sufficient rowlocks and rowlock sockets for each oar required by Table 169.529(w) plus 2 additional rowlocks must be provided. The rowlocks must be attached to the lifeboat by separate chains so as to be available for immediate use, except that the 2 additional spare rowlocks must be carried in the equipment locker or stowed near the stern if no locker is fitted. The rowlocks and rowlock sockets must be distributed so as to provide the maximum amount of single banked oars practicable.

(cc) *Rudder and tiller.* The rudder and tiller must be constructed in accordance with § 160.035–3(t) of this chapter.

(dd) *Sea anchor.* The sea anchor must be of an approved type.

(ee) *Signals, distress, floating orange smoke.* The floating orange smoke distress signals must be approved under subpart 160.022 of this chapter. The signals must be replaced no later than the first annual stripping, cleaning, and overhaul of the lifeboat after the date of expiration.

(ff) *Signals, distress, red hand flare.* A unit consists of twelve hand red flare distress signals approved under Subpart 160.021 or 160.023 of this chapter and stored in a watertight container. Signals must be replaced no later than the first annual stripping, cleaning, and overhaul of the lifeboat after the date of expiration.

(gg) *Signals, distress, red parachute flare.* A unit consists of twelve parachute red flare distress signals with an approved means of projection approved under Subparts 160.024 and 160.028 respectively; or twelve approved hand-held rocket-propelled parachute red flare distress signals approved under Subpart 160.036. Flares must be stored in a portable watertight container. Flares must be replaced no later than the first annual stripping, cleaning, and overhaul of the lifeboat after the date of expiration.

(hh) *Tool kit.* The tool kit must consist of at least the following tools in a suitable container:

(1) One 12-once ball peen hammer.

(2) One screwdriver with 6-inch blade.

(3) One pair 8-inch slip joint pliers.

(4) One 8-inch adjustable end wrench.

(ii) *Water.* (1) For each person the lifeboat is certified to carry, there must be provided three quarts of drinking water in containers approved under Subpart 160.026. Water must be replaced no later than the first annual stripping, cleaning, and overhaul of the lifeboat after date of expiration.

(2) One or more desalting kits, approved under Subpart 160.058 of this chapter, may be used as a substitute for one-third of the drinking water required.

(3) The drinking water must be stowed in drinking water tanks, lockers, or other compartments providing suitable protection.

(jj) *Whistle, signaling.* The whistle must be of the ball-type or multi-tone type, of corrosion resistant construction, with a 36-inch lanyard attached, and in good working order.

(kk) *Fishing kit.* The fishing kit must be approved under Subpart 160.061 of this chapter.

(ll) *Cover, protecting.* The cover must be of highly visible color and capable of protecting the occupants against exposure.

(mm) *Table of lifesaving signals.* The table of lifesaving signals must be in accordance with the provisions of Chapter V, Regulation 16, of the International Convention for Safety of Life at Sea, 1974, and must be printed on water resistant paper.

§ 169.531 Required equipment for liferafts.

Each liferaft must be fitted with the equipment required by and described in § 160.051–7(c) of Subchapter Q (Specifications) of this chapter.

§ 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 either—

(a) a Type I approved under Subpart 160.055, 160.002, or 160.005 of Subchapter Q (specification) of this chapter; or

(b) a Type V approved specifically for sailing school vessel use under Subpart 160.064 or 160.077 of Subchapter Q of this chapter; or

(c) a Type II approved under Subparts 160.047, 160.052, or 160.060 or a Type III approved under Subpart 160.064 if the vessel carries exposure suits or Type V

exposure PFDs, in accordance with section 169.551.

§ 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 life buoys 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 160.071 or a Type V exposure PFD approved under Subpart 160.053.

§ 169.533 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 prachute red flare distress signals.

(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 S EPIRB for every twenty-five persons onboard, for use in the lifeboats and liferafts.

§ 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	[3] 1
120 feet or greater	[2] 2	[3] 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 greater must have lined commercial firehose that conform to Underwriters' Laboratories, Inc. Standard 19 or Federal Specification ZZ–H–451. 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.

§ 169.564 Fixed extinguishing system, general.

(a) Fixed carbon dioxide or halogenated extinguishing systems must be installed to protect the following spaces—

(1) The machinery and fuel tank spaces of all vessels, except where machinery and fuel tank spaces are so open to the atmosphere as to make the use of a fixed system ineffective;

(2) The paint and oil rooms and similar hazardous spaces; and

(3) The galley stove area, for vessels 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 or halogenated type and installed to the satisfaction of the Officer in Charge, Marine Inspection.

§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.

(3) *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 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 169.567(a) and other provisions of this subpart.

TABLE 169.567(a)

Space protected	Total number extinguishers required	Type extinguishers permitted		Coast Guard classification
		Medium	Minimum size	
Living space and open boats	1 per 1,000 cu. ft. of space	Halon 1211 or 1301	2½ pounds	B-I.
		Foam	1¼ gallons	
		Carbon dioxide	4 pounds	
		Dry Chemical	2 pounds	
Propulsion machinery space with fixed CO_2 or halon system.	1	Foam	1¼ gallons	
		Carbon dioxide	4 pounds	
		Dry chemical	2 pounds	
		Halon 1211 or 1301	2½ pounds	
Propulsion machinery space without fixed CO_2 or halon system.	2	Foam	2½ gallons	
		Carbon dioxide	15 pounds	B-II.
		Dry chemical	10 pounds	
		Halon 1211 or 1301	10 pounds	
Galley (without fixed system)	1 per 500 cu. ft	Foam	2½ gallons	
		Carbon dioxide	15 pounds	
		Dry chemical	10 pounds	
		Halon 1211 or 1301	10 pounds	

(b) The Officer in Charge, Marine Inspection, may permit the use of any approved fire extinguishers, including semiportable extinguishers, which provide equivalent fire protection.

(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.

(g) Each vessel must carry spare charges for at least 50 percent of each size and variety of hand portable extinguishers required. For units that can not be readily recharged on the vessel, one spare extinguisher for each classification carried onboard must be provided in lieu of spare charges.

§ 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.

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 Grid cooler installations

(a) Hull penetrations for grid cooler installations must be made through a cofferdam or at a sea chest.

(b) Grid 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 grid cooler hull penetration must be equipped with a shutoff valve.

§ 169.609 Exhaust systems.

Engine exhaust installations and associated cooling sytems 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 constucted 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.

§ 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) Each gasoline engine must be equipped with an approved means of backfire flame control. Installations of backfire flame arresters or engine air and fuel induction systems bearing basic Approval No. 162.015 may be continued in use as long as they are servicable and in good condition. New installations or replacements must meet one of the following requirements:

(1) The backfire flame arrester must be approved under Subpart 162.041 of this chapter. The flame arrester must be secured to the air intake with a flametight connection.

(2) The engine air and fuel induction system must provide adequate protection from propagation of backfire flame to the atmosphere equivalent to that provided by an approved backfire flame arrester. A gasoline engine utilizing an air and fuel induction system, and operated without an approved backfire flame arrester, must have the installation approved, tested and labelled in accordance with Subpart 162.042 of this chapter.

(3) The carburetor or the engine air induction system must have an attachment which disperses engine backfire flames to the atmosphere outside the vessel in such a manner that

the flames will not endanger the vessel, persons on board, or nearby vessels and structures. Each attachment must be of metallic construction with flametight connections and firmly secured to withstand vibration, shock, and engine backfire. These installations do not require formal approval and labelling, but must be accepted by the OCMI.

(d) Where manufacturers wish to produce vessels having an integrated engine-vessel design, the installation must be approved under Subpart 162.043 of this chapter.

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 section 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 System

§ 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 section 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 connnected 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 sections 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 of 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 praticable, 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.

§ 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.

(a) 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 make 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 § 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 § 132.64(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.

§ 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 continous 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.

§ 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 approved fireman's outfit consisting of—

(1) An approved-contained breathing apparatus with belt and lifeline;

(2) An approved flame safety lamp;

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

(4) One fire ax;

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

(6) A rigid helmet which provides effective protection against impact; and

(7) 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.

§ 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 alarm.

Each carbon dioxide alarm must be conspicuously identified: "WHEN ALARM SOUNDS—VACATE AT ONCE. CARBON DIOXIDE BEING RELEASED."

§ 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," or "HALON FIRE EXTINGUISHING SYSTEM," as appropriate.

§ 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.

§ 169.742 Firehose and axes.

Each fire hose and axe 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.

Subpart 169.800—Operations

§ 169.805 Exhibition of licenses.

Licensed personnel on any vessel subject to this subchapter shall have their licenses in their possession and available for examination at all times when the vessel is being operated.

§ 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, three 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 thorughly overhauled once every twelve months.

(4) Each inflatable liferaft has been serviced at an approved facility every 12 months or not later than the next vessel; inspection for certification if the time since the date of the last servicing does not exceed 15 months.

§ 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.

§ 169.841 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.

PART 170—STABILITY REQUIREMENTS FOR ALL INSPECTED VESSELS

2. The authority citation for Part 170 is revised to read as follows:

Authority: 43 U.S.C. 1333(d); 46 U.S.C. 3306 and 3703; 46 App. U.S.C. 86, 88a; 50 U.S.C. 198; E.O. 12234, 45 FR 58801; 49 CFR 1.46(b), (n)(6), (z).

3. In § 170.055, by adding new paragraphs (h)(6), (s) and (t) to read as follows:

§ 170.055 Definitions concerning a vessel.

* * * * *

(h) * * *

(6) "Mean length" is the average of the length between perpendiculars (LBP) and the length on deck (LOD).

* * * * *

(s) "Existing sailing school vessel" means a sailing vessel whose keel was laid prior to (publication date), which has an application for initial inspection for certification as a sailing school vessel on file with the Coast Guard prior to (one year from publication date), and whose initial inspection for certification is completed prior to (two years from publication date).

(t) "New sailing school vessel" means a sailing school vessel which is not an existing sailing school vessel.

4. In § 170.070 by adding a new paragraph (b)(5) to read as follows:

§ 170.070 Applicability.

* * * * *

(b) * * *

(5) A sailing school vessel that is an open boat that complies with the requirements in § 173.063(e) of this subchapter.

5. In § 170.105, by adding a new paragraph (b)(5) to read as follows:

§ 170.105 Applicability.

* * * * *

(b)* * *

(5) A sailing school vessel that is an open boat that complies with the requirements in § 173.063(e) of this subchapter.

6. In § 170.160, by adding a new paragraph (b)(4) to read as follows:

§ 170.160 Specific Applicability.

* * * * *

(b) * * *

(4) A sailing school vessel that is an open boat that complies with the requirements in § 173.063(e) of this subchapter.

* * * * *

7. In § 170.245, by revising introductory text to paragraph (b) to read as follows:

§ 170.245 Foam flotation material.

* * * * *

(b) If foam is used to comply with § 171.070(d), § 171.095(c), or § 173.063(e) of this subchapter, the following applies:

* * * * *

PART 171—SPECIAL RULES PERTAINING TO VESSELS CARRYING PASSENGERS

8. The authority citation for Part 171 is revised to read as follows:

Authority: 46 U.S.C. 1333(d); 46 U.S.C. 3306 and 3703; 46 App. U.S.C. 86, 88a; 50 U.S.C. 198; E.O. 12234, 45 FR 58801; 49 CFR 1.46(b), (n)(6), (z).

9. In § 171.001, by revising paragraph (b) to read as follows:

§ 171.001 Applicability.

* * * * *

(b) Specific sections of this part also apply to nautical school ships, sailing school vessels, oceanographic vessels, and nuclear vessels. The applicable sections are listed in Subparts C and D of Part 173 and Subpart D of Part 174 of this subchapter.

10. In § 171.035, by adding paragraph (a)(5) to read as follows:

§ 171.035 Intact stability requirements for a sailing vessel or an auxiliary sailing vessel.

(a) * * *

(5) A sailing school vessel that carries a combined total of six or more sailing school students or instructors.

* * * * *

§ 171.055 [Amended]

11. In 171.055 by changing the definition for area in paragraph (d)(2) to read as follows:

A = the projected lateral area or silhouette in square feet (meters) of the portion of the vessel above the waterline computed with all sail set and trimmed flat. Sail overlap areas need not be included except parachute type spinnakers which are to be added regardless of overlap.

12. By revising introductory text in §§ 171.057 (a) and (b) to read as follows:

§ 171.057 Intact stability requirements for a sailing catamaran.

(a) A sailing vessel that operates on protected waters must be designed to satisfy the following equation:

* * * * *

(b) A sailing vessel that operates on partially protected or exposed waters must be designed to satisfy the following equation:

* * * * *

PART 173—SPECIAL RULES PERTAINING TO VESSEL USE

13. The authority citation for Part 173 is revised to read as follows:

Authority: 46 U.S.C. 1333(d); 46 U.S.C. 3306 and 3703; 46 App. U.S.C. 86, 88a; 50 U.S.C. 198; E.O. 12234, 45 FR 58801; 49 CFR 1.46(b), (n)(6), (z).

§ 173.055 [Redesignated as § 173.051]

14. By redesignating § 173.055 *Public nautical school ships* as § 173.051.

§ 173.060 [Redesignated as § 173.052]

15. By redesignating § 173.060 *Civilian nautical school ships* as § 173.052.

16. By adding § 173.053–§ 173.063 to read as follows:

§ 173.053 Sailing school vessels.

(a) In addition to the requirements in §§ 173.054 through 173.063, each sailing school vessel must comply with the provisions of Subpart A of Part 171 of this subchapter.

(b) In addition to regular passengers, for the purpose of complying with §§ 171.070 through 171.073 and § 171.080, the following will also be counted as passengers:

(1) Sailing school students

(2) Sailing school instructors

(3) Guests

§ 173.054 Watertight subdivision and damage stability standards for new sailing school vessels.

(a) Each new sailing school vessel which has a mean length greater than 75 feet (22.8 meters) *or* which carries more than 30 persons must comply with—

(1) Section 171.040(a)(1);

(2) Sections 171.070 through 171.073; and

(3) Section 171.080 for Type II subdivision and damage stability.

(b) Each new sailing school vessel which has a mean length of 75 feet (22.8 meters) or less and carries more than 30 persons must comply with either—

(1) Section 171.040(a)(1) and 171.043; or

(2) Section 171.040(a)(1), §§ 171.070 through 171.073, and § 171.080.

(c) Each new sailing school vessel which does not carry more than 30 persons must have a collision bulkhead unless it has a mean length less than 40 feet (12.2 meters) and is certificated for protected or partially protected waters service only.

§ 173.055 Watertight subdivision and damage stability standards for existing sailing school vessels.

(a) Except as provided in paragraph (c) of this section, an existing sailing school vessel which carries more than 49 persons must be fitted with a collision bulkhead and any additional bulkheads necessary to provide one compartment subdivision.

(b) Except as provided in paragraph (c) of this section, an existing sailing school vessel which has a mean length greater than 65 feet (19.8 meters), must be fitted with additional transverse watertight bulkheads necessary to provide one compartment subdivision, when the following Subdivision Numerals are exceeded:

(1) For vessels to be operated on Exposed Waters:

$$L \times N > 4000$$

(2) For vessels to be operated on Partially Protected Waters:

$$L \times N > 4500$$

(3) For vessels to be operated on Protected Waters:

$$L \times N > 5000$$

where L is the mean length and N is the number of persons on board

(c) An existing sailing school vessel which is required to meet a one compartment subdivision standard and has a mean length of 90 feet (27.4 meters) or less may, instead of one compartment subdivision, be fitted with a collision bulkhead and sufficient air tankage or other internal buoyancy to maintain the fully-loaded vessel afloat with positive stability in the flooded condition.

(d) Except as provided in paragraph (e) of this section, an existing sailing school vessel which has a mean length greater than 65 feet (19.8 meters) must be fitted with a collision bulkhead.

(e) On an existing sailing school vessel, operating on protected waters, which has a mean length of 90 feet (27.4 meters) or less with no other requirement for subdivision, the collision bulkhead may be omitted.

(f) An existing sailing school vessel, operating on exposed waters, which has a mean length of 65 feet (19.8 meters) or less and is carrying more than 15 persons, must be fitted with a collision bulkhead.

§ 173.056 Collision and other watertight bulkheads.

(a) Collision bulkheads required by this section must comply with the requirements in § 171.085 of this subchapter.

(b) Each sailing school vessel required to meet paragraph (a) of § 173.054 must comply with the machinery space bulkhead requirements in § 171.095 of this subchapter.

§ 173.057 Permitted locations for Class 1 watertight doors.

(a) Class I doors are permitted in any location on a sailing school vessel which has a mean length of 125 feet (38.1 meters) or less.

(b) Class I doors fitted in accordance with § 170.270 of this subchapter shall additionally be marked in two-inch letters "RECLOSE AFTER USE", and be provided with a remote position indicator at the main navigating station of the vessel.

§ 173.058 Double bottom requirements.

Each new sailing school vessel which has a mean length greater than 165 feet (50.3 meters) and is certificated for exposed water service must comply with the double bottom requirements in §§ 171.105 through 171.109, inclusive, of this subchapter.

§ 173.059 Penetrations and openings in watertight bulkheads.

Penetrations and openings in watertight bulkheads must comply with the requirements in Subpart E of Part 171 of this subchapter.

§ 173.060 Openings in the side of a vessel below the bulkhead or weather deck.

(a) Openings in the side of a vessel below the bulkhead or weather deck

must comply with the requirements in Subpart F of Part 171 of this subchapter.

(b) In addition to the requirements in paragraph (a) of this section, each sailing school vessel which has a mean length greater than 90 feet must comply with the requirements in § 56.50–95 of Subchapter F of this chapter.

§ 173.061 Watertight integrity above the margin line.

The watertight integrity of each sailing school vessel above the margin line must comply with the requirements in Subpart G of Part 171 of this subchapter.

§ 173.062 Drainage of weather deck.

The weather deck of each sailing school vessel must be provided with drainage in accordance with the requirements in Subpart H of Part 171 of this subchapter.

§ 173.063 Intact stability requirements.

(a) Except as provided in this section, each sailing school vessel must meet the intact stability requirements in § 171.035 of this subchapter.

(b) In applying the requirements in § 170.170 and § 171.050 of this subchapter, the value of "T" is equal to the angle of heel at which the deck edge is immersed or ⅓ of the downflooding angle, whichever is less.

(c) In applying the requirements of § 171.055(d) (1) and (2) of this subchapter—

(1) The value "X" is equal to 0.6 long tons/square foot (9.8 metric tons/square meter).

(2) For a vessel in service on protected or partially protected waters, values "Y" and "Z" are determined from graphs 173.063 (a) and (b) and multiplied by the multiplier in graph 173.063(e).

(3) For a vessel in service on exposed waters, "Y" and "Z" are determined from graphs 173.063 (c) and (d) and multiplied by the multiplier from graph 173.063(e).

(4) To convert required numerals to units of "metric tons/square meter," multiply by 10.94.

(d) Each vessel of the open boat type that is required to comply with the requirements in § 171.035 (d) through (h) of this subchapter, may instead comply with the requirements in paragraph (e) of this section.

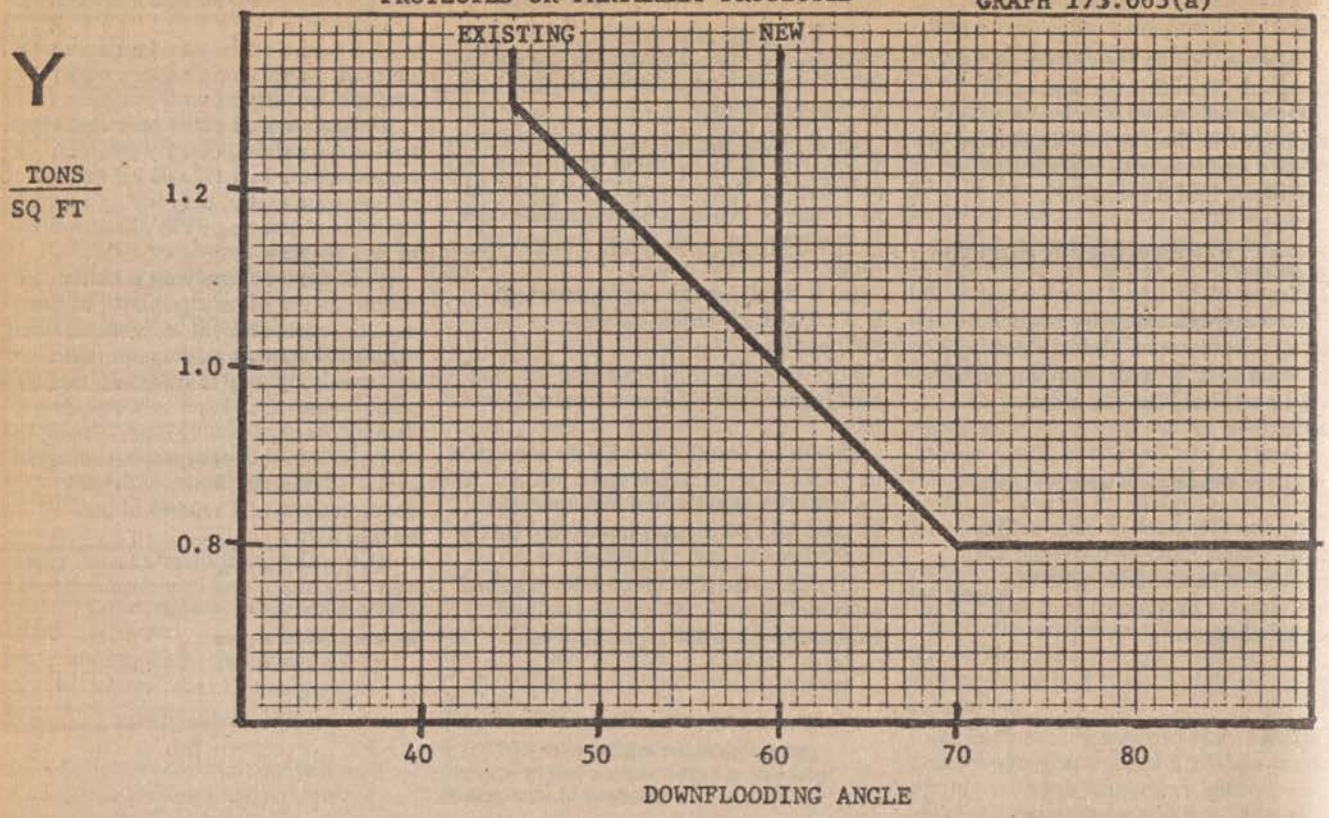
(e) In lieu of complying with the requirements of paragraph (b) of this section, an open boat may be provided with sufficient air tankage or other internal buoyancy to maintain the vessel afloat when the vessel is completely flooded or capsized. If foam is used to comply with this paragraph, it must be installed in accordance with the requirements in § 170.245 of this subchapter.

(f) A sailing school catamaran must meet the intact stability requirements in § 171.057.

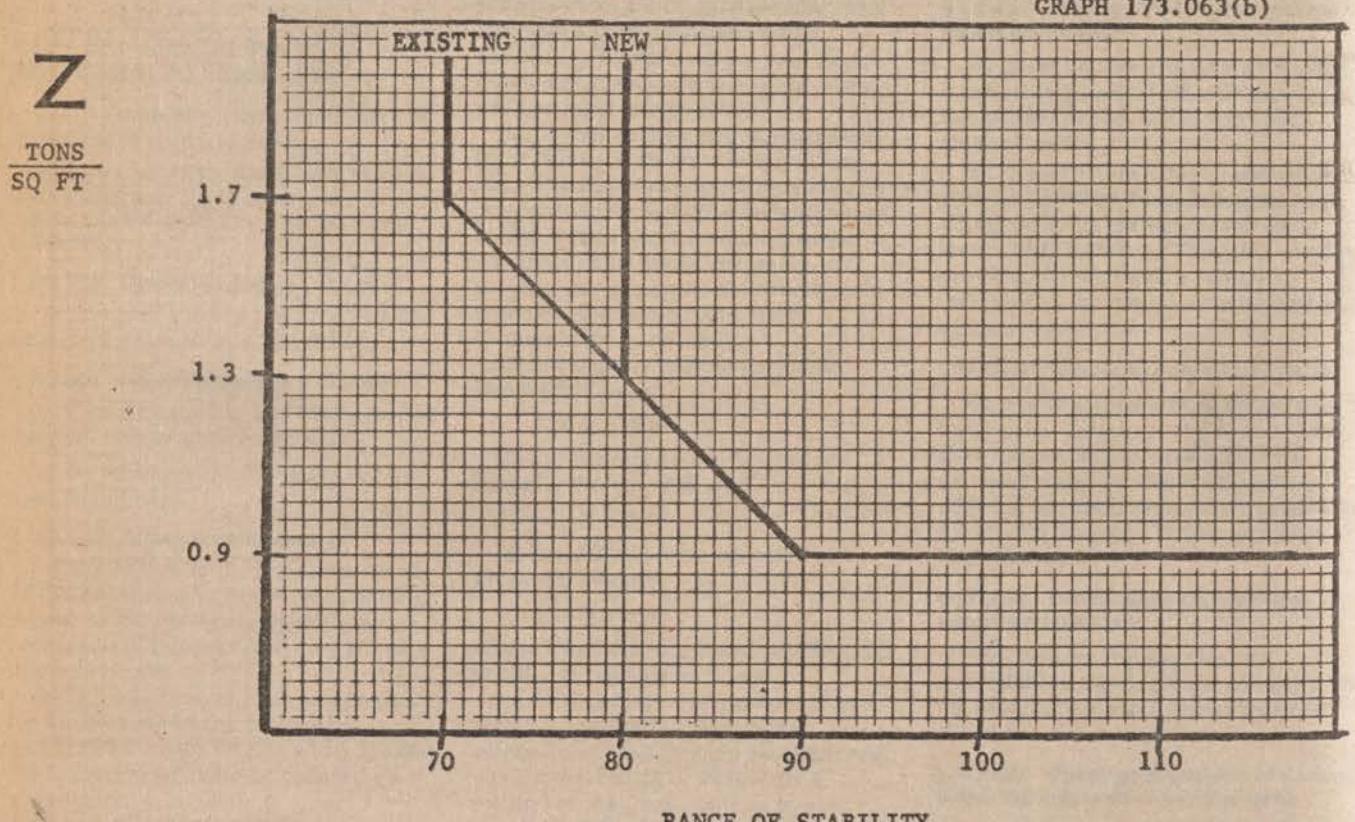
BILLING CODE 4910-14-M

PROTECTED OR PARTIALLY PROTECTED

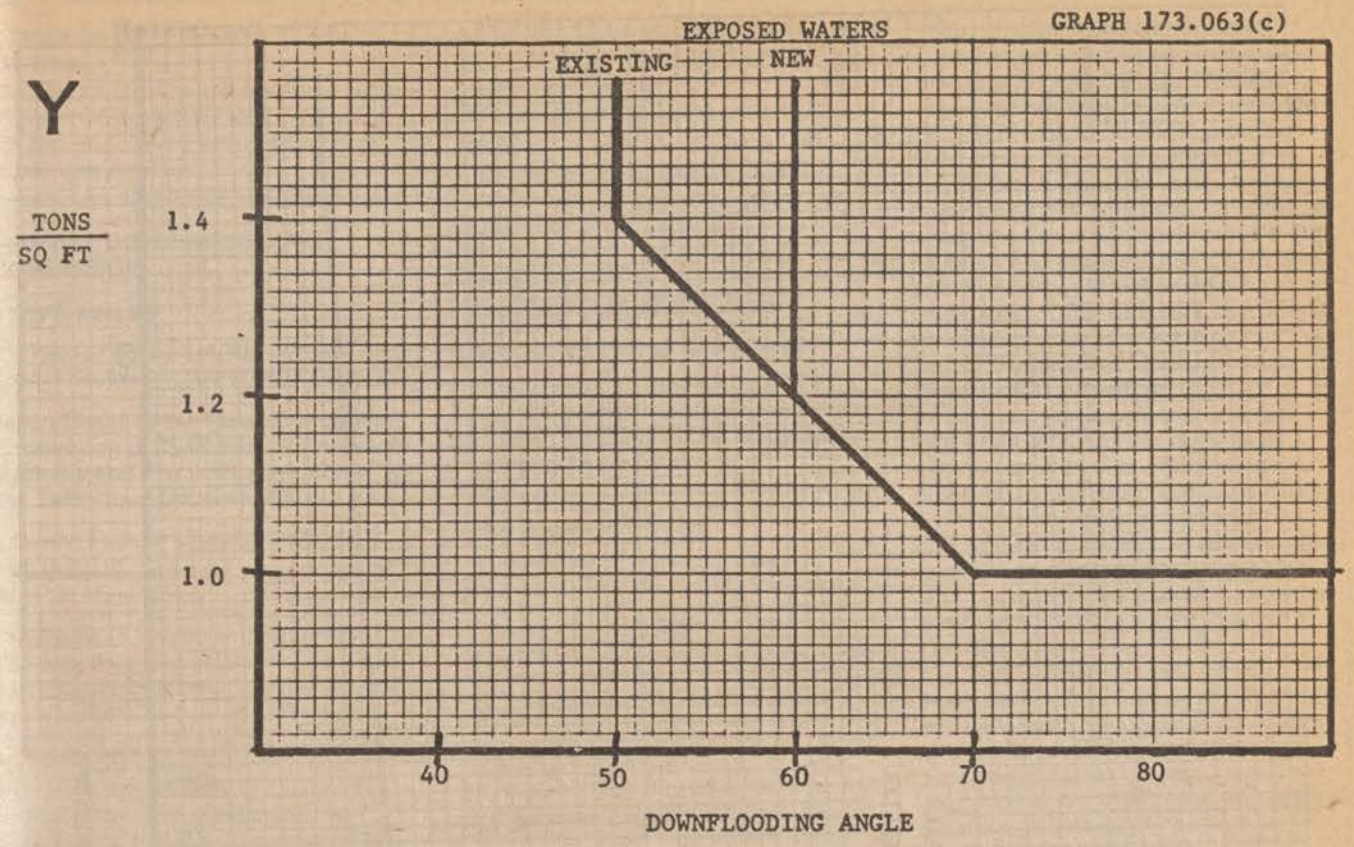
GRAPH 173.063(a)



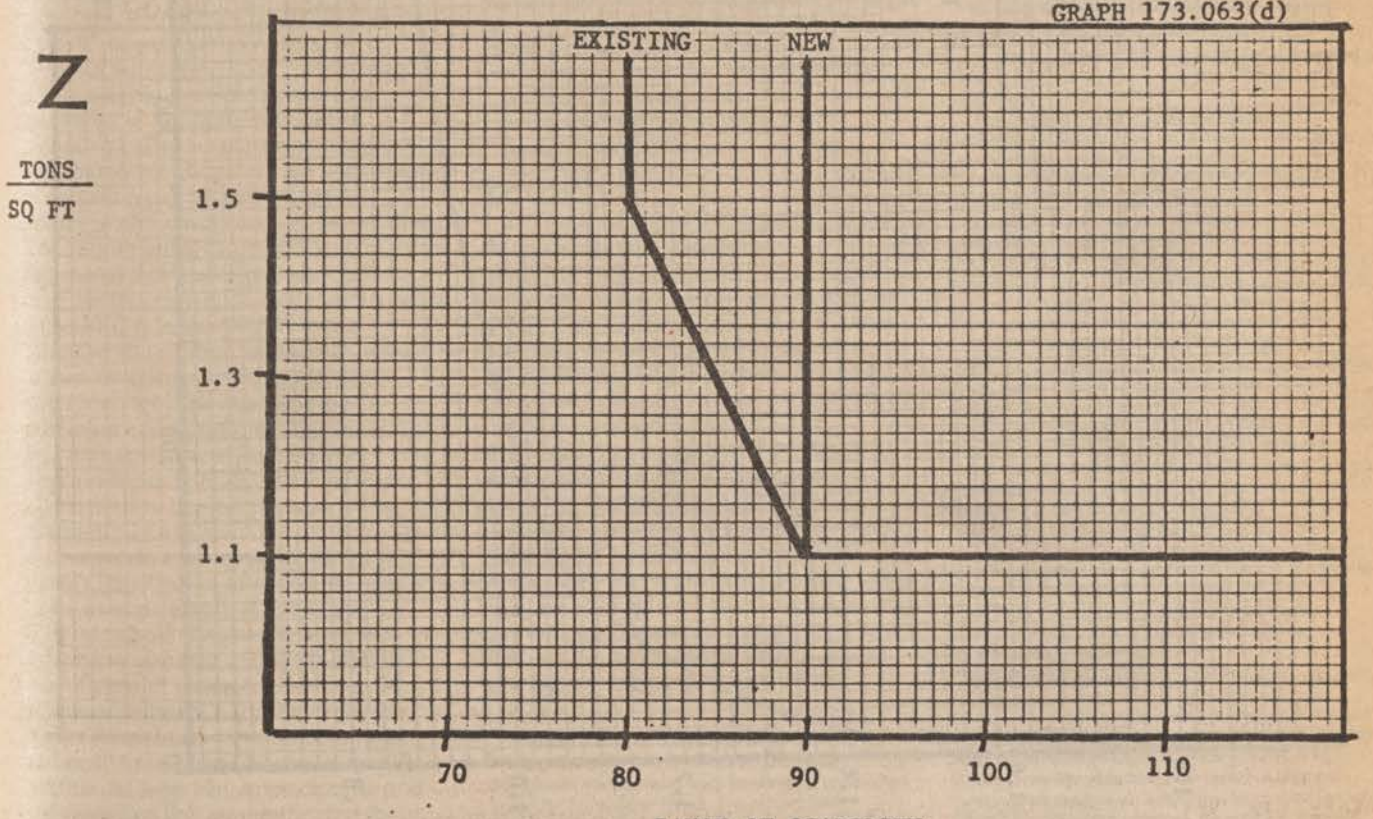
GRAPH 173.063(b)

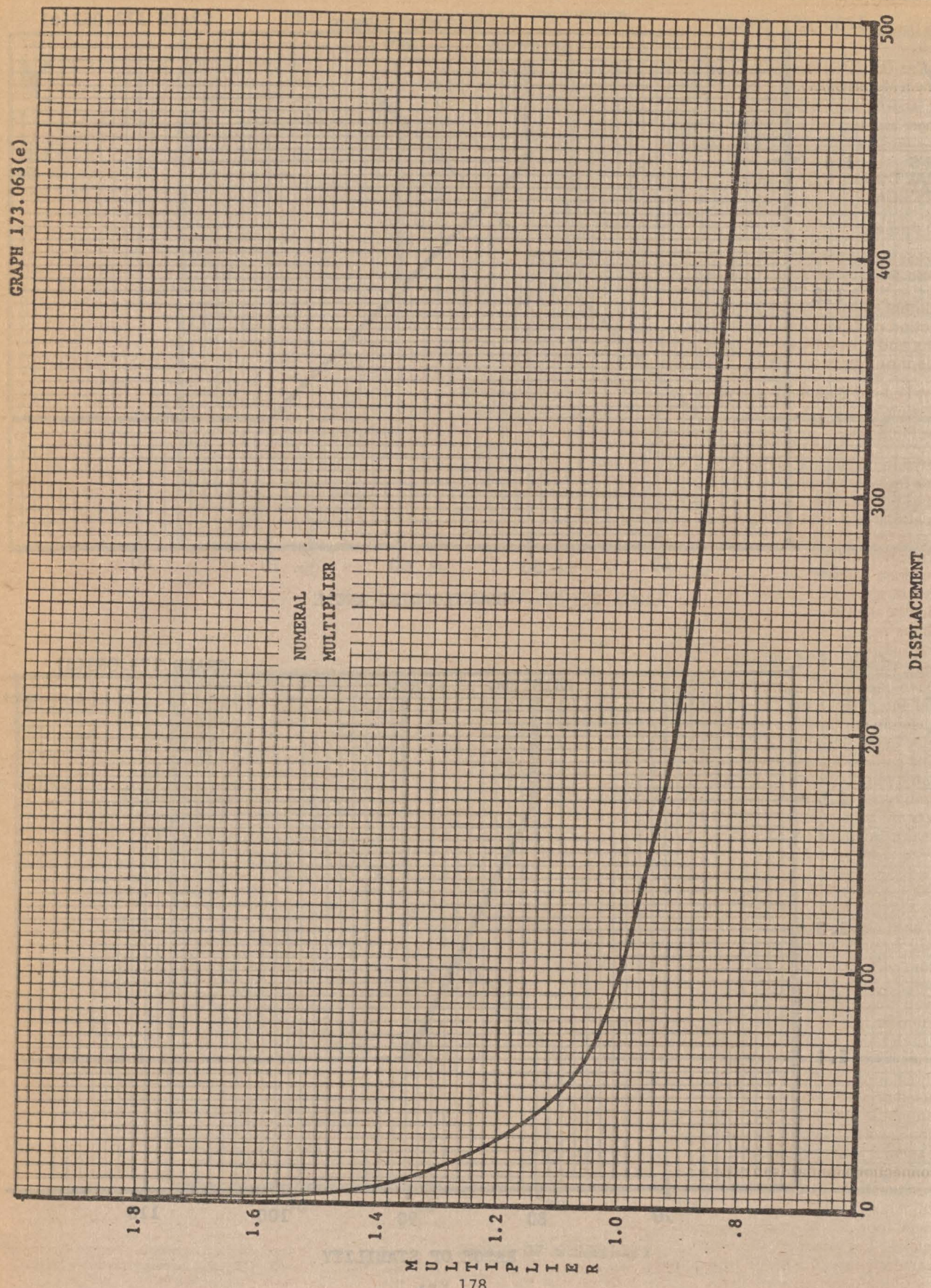


GRAPH 173.063(c)



GRAPH 173.063(d)





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BILLING CODE 4910-14-C

Dated: December 31, 1985.

J.W. Kime,

Commodore, U.S. Coast Guard, Chief, Office of Merchant Marine Safety.

[FR Doc. 86-176 Filed 1-8-86; 8:45 am]

BILLING CODE 4910-14-M

FEDERAL COMMUNICATIONS COMMISSION

47 CFR Part 68

[CC Docket No. 81-216; RM-2845; et al; CC Docket No. 84-490; RM-4458; FCC 85-580]

Amendment of the Rules Concerning Connection of Telephone Equipment, Systems and Protective Apparatus to the Telephone Network; Etc.

AGENCY: Federal Communications Commission.

ACTION: Final rules.

SUMMARY: In response to several petitions for rulemaking, the Commission has made several technical modifications to Part 68 of the rules, which sets forth the technical standards for registration and interconnection to the telephone network of customer provided terminal equipment. Specifically, the FCC has: reduced the dc on-hook resistance specified in § 68.312(b)(1)(i) from 10 megohms to 5 megohms; amended § 68.200(j)(1) and § 68.502 to permit registration of terminal equipment with "make busy" leads, used in multiple answering machines to facilitate transfer of incoming calls to successive lines; eliminated requirements for registration of certain types of cords, passive adapters and cross-connect panels from § 68.200(h); amended § 68.300 to require registered terminal equipment labeling to show its country of origin; amended § 68.200(j) to make PR/PC leads attached to terminal equipment subject to Part 68 standards for hazardous voltages, signal power limitations, minimum call durations requirements and leakage current limitations; approved a new RJ38X jack to allow alarm dialers to alert the user when the alarm dialer has been disconnected from the network; amended § 68.200(j) to permit registration of specialty adapters to be used primarily to connect programmable data modems to key telephone systems and PBXs without use of special jacks; created Part 68 interconnection standards to permit direct connection of terminal equipment to Local Area Data Channels, specified additional loop simulator circuits and off-premises line simulator circuits in §68.3; amended section 68.318 to require as a condition of registration that automatic dialing equipment terminate calling to a particular number after 15 successive attempts.

EFFECTIVE DATE: February 10, 1986.

ADDRESS: Federal Communications Commission, Washington, DC 20554.

FOR FURTHER INFORMATION CONTACT: Patrick Donovan, Federal Communications Commission, Washington, DC 20554 (202)-634-1832.

SUPPLEMENTARY INFORMATION:

List of Subjects in 47 CFR Part 68

Administrative practice and procedures, Communications common carriers, Communications equipment, Reporting and recordkeeping requirements, Telephone.

Third Report and Order

In the matter of petitions seeking amendment of Part 68 of the Commission's Rules Concerning Connection of Telephone Equipment, Systems and Protective Apparatus to the Telephone Network; Notice of Inquiry into Standards for Inclusion of One and Two-Line Business and Residential Premises Wiring and Party Line Service in Part 68 of the Comission's Rules; CC Docket No. 81-216, RM-2845, RM-2930, RM-3195, RM-3206, RM-3227, RM-3283, RM-3316, RM-3329, RM-3348, RM-3501, RM-3526, RM-3530, RM-4054; and petition to amend Part 68 of the Commission's Rules to Permit Registration of Terminal Equipment for Connection to Voiceband Private Line Channels that Utilize Loop Start, Ringdown or Inband Signaling and Voiceband Metallic Private Line Channels; CC Docket No. 84-490, Rm-4458.

Adopted October 30, 1985.

Released November 4, 1985.

By the Commission.

Introduction

1. The above-captioned petitions for rulemaking request diverse modifications, additions and deletions to Part 68 of the Commission's rules, 47 C.F.R. Part 68.[1] For the most part, these petitions raise technical engineering issues concerning interconnection of terminal equipment to the nationwide telephone network. In *Notice of Proposed Rulemaking*, CC Docket No. 84-490, FCC 84-230, released May 23, 1984, the Commission requested comment on issues raised in RM-4458 concerning amendments to Part 68 applicable to private line channels using loop start, ringdown or inband signaling. In *Notice of Proposed Rulemaking and Notice of Inquiry* in CC Docket No. 81-216 (*First Notice*), 85 F.C.C. 2d 868 (1981), the Commission requested comment on issues raised in the other petitions for rulemaking captioned above including *inter alia*, a proposed reduction in dc on-hook impedance limitations, proposed installation requirements for cross-connect panels, interconnection standards for terminal equipment connected to local area data chanels, and proposed country of origin labeling for registered terminal equipment.[2] Comment was also sought in the *First Notice* on various amendments to Part 68 proposed by the Commission *sua sponte*. The Commission's proposals concerned registration of terminal equipment power supplies, elimination of the abbreviated registration requirements for extension cords, electrically transparent adapters and connectorized panels, registration of test equipment and consistency with equipment radio emission standards under Part 15.[3] In this *Third Report and Order* we evaluate the parties' comments in response to these notices of proposed rulemaking and make final disposition of the issues raised which were not resolved in earlier stages of this proceeding. We will discuss the various issues raised *seriatum*.

Contentions and Discussion

2. *RM-2845.* In this petition, CCL proposes that the dc on-hook resistance requirement of § 68.312(b)1)(i), On-hook

[1] Part 68 provides the technical and procedural standards under which telephone terminal equipment and systems may be directly connected to the nationwide network. For a complete background to Part 68, see Memorandum Opinion and Order (Fourth Report) in Docket Nos. 19528, 20774 and 21182, 70 F.C.C. 2d 1800 (1979).

[2] Comments in response to the NPRM in CC Docket 81-216 were filed by: American Telephone & Telegraph Co. (AT&T), Communications Certification Laboratory (CCL), Communications Workers of America (CWA), Control Q, Inc. (Control Q), Crest Industries (Crest), Datapoint Corp. (Datapoint), Dictaphone Corp. (Dictaphone), Dynascan Corp. (Dynascan), Electronics Industries Association (EIA), Electra Company (Electra), GTE Service Corp. (GTE), Independent Data Communications Manfacturers Association (IDCMA), International Business Machines Corp. (IBM), Lanier Business Products, Inc. (Lanier), Mura Corp. (Mura), J.P. Neil (Neil), National Telephone Cooperative Association (NTCA), North American Telephone Association (NATA), Northern Telecom, Inc. (NTI), Rolm Corp. (Rolm), Southern Pacific Communications Co. (SPCC), Tandy Corp. (Tandy), Technidyne Corp. (Technidyne), Tone Commander Systems (Tone Commander), Utilities Telecommunications Council (UTC) and Wilcom Products, Inc. (Wilcom). Comments and/or Reply Comments were received for CC Docket No. 84-490 from ATT-Information Systems (ATT-IS), Bell Operating Companies (BOCs), Department of Defense (DoD), GTE, IDCMA, and Rockwell International (Rockwell).

[3] In previous decisions in CC Docket 81-216 the Comission has established rules for customer-installed non-system premises wiring, *First Report and Order*, FCC 84-182, 49 F.R. 21719, May 23, 1984, *reconsideration pending*, and adopted Part 68 interconnection standards for network channel terminating equipment employed in connection with digital transmission services, *Second Report and Oder*, FCC 84-522, released November 26, 1984, *reconsideration pending*.