

SUBCHAPTER U—OCEANOGRAPHIC RESEARCH VESSELS

PART 188—GENERAL PROVISIONS

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AUTHORITY: 46 U.S.C. 2113, 3306; Pub. L. 103-206, 107 Stat. 2439; 49 U.S.C. 5103, 5106; E.O. 12234, 45 FR 58801, 3 CFR, 1980 Comp., p. 277; Department of Homeland Security Delegation No. 0170.1.

SOURCE: CGFR 67-83, 33 FR 1113, Jan. 27, 1968, unless otherwise noted.

Subpart 188.01—Authority and Purpose

§ 188.01-1 Purpose of regulations.

The purpose of the regulations in this subchapter is to set forth uniform minimum requirements for oceanographic research vessels designated in accordance with §3.10-1 of this title and subject to Coast Guard inspection requirements. The regulations are necessary

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to carry out the provisions of applicable laws governing inspection and certification of oceanographic research vessels and have the force of law.

[CGD 95-028, 62 FR 51219, Sept. 30, 1997]

§ 188.01-3 Scope of regulations.

The regulations in this subchapter contain requirements for materials, design, construction, equipment, life-saving appliances and procedures, fire protection, and fire prevention procedures, inspection and certification, and special operational requirements for oceanographic research vessels, including the handling, use, and control of explosives and other dangerous articles or substances.

[CGFR 67-83, 33 FR 1113, Jan. 27, 1968, as amended by CGD 77-081, 46 FR 56204, Nov. 16, 1981; CGD 95-028, 62 FR 51219, Sept. 30, 1997]

§ 188.01-7 Right of appeal.

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

[CGD 88-033, 54 FR 50382, Dec. 6, 1989]

§ 188.01-15 OMB control numbers assigned pursuant to the Paperwork Reduction Act.

(a) *Purpose.* This section collects and displays the control numbers assigned to information collection and record-keeping 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

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requirements of 44 U.S.C. 3507(f), which requires that agencies display a current control number assigned by the Director of the OMB for each approved agency information collection requirement.

(b) *Display.*

46 CFR part or section where identified or described	Current OMB control No.
§ 189.40-3	1625-0032
§ 189.40-5	1625-0032
§ 196.15-7	1625-0064
§ 196.15-18	1625-0064

[CGD 88-072, 53 FR 34298, Sept. 6, 1988, as amended by CGD 89-037, 57 FR 41828, Sept. 11, 1992; USCG-2004-18884, 69 FR 58351, Sept. 30, 2004]

Subpart 188.05—Application

§ 188.05-1 Vessels subject to requirements of this subchapter.

(a) This subchapter is applicable to all U.S.-flag vessels indicated in Column 6 of Table 188.05-1(a) to the extent prescribed by applicable laws and the regulations in this subchapter, except as follows:

- (1) Any foreign vessel.
- (2) Any vessel operating exclusively on inland waters which are not navigable waters of the United States.
- (3) Any vessel while laid up and dismantled and out of commission.
- (4) With the exception of vessels of the U.S. Maritime Administration, any vessel with title vested in the United States and which is used for public purposes.

Table 188.05-1(a)

Method of propulsion, qualified by size or other limitation.	Vessels inspected and certificated under--		Vessels subject to the provisions of--			
	Subchapter D--Tank Vessels. ²	Subchapter H--Passenger Vessels ^{2,3,4} and Subchapter K or T--Small Passenger Vessels. ^{2,3, and 4}	Subchapter I--Cargo and Miscellaneous Vessels. ^{2 and 5}	Subchapter C--Uninspected Vessels. ^{2,3,6 7, and 8}	Subchapter U--Oceanographic Vessels. ^{2,3,6 7, and 9}	Subchapter O--Certain Bulk and Dangerous Cargoes. ¹⁰
<p>Column 1</p> <p>(1) Motor, all vessels except seagoing motor vessels ≥ 300 gross tons.</p>	<p>Column 2</p> <p>All vessels carrying combustible or flammable liquid cargo in bulk.³</p>	<p>Column 3</p> <p>i) All vessels carrying more than 12 passengers on an international voyage, except recreational vessels not engaged in trade.⁷</p> <p>ii) All vessels < 100 gross tons that-- A) Carry more than 6 passengers-for-hire whether chartered or not, or B) Carry more than 6 passengers when chartered with the crew provided, or C) Carry more than 12 passengers when chartered with no crew provided, or D) Carry at least 1 passenger-for-hire and are submersible vessels.¹ E) Carry more than 6 passengers and are ferries.</p> <p>iii) All vessels ≥ 100 gross tons that-- A) Carry more than 12 passengers-for-hire whether chartered or not, or B) Carry more than 12 passengers when chartered with the crew provided, or C) Carry more than 12 passengers when chartered with no crew provided, or D) Carry at least 1 passenger-for-hire and are submersible vessels.¹ E) Carry at least 1 passenger and are ferries.</p> <p>iv) These regulations do not apply to-- A) Recreational vessels not engaged in trade. B) Documented cargo or tank vessels issued a permit to carry 16 or fewer persons in addition to the crew. C) Fishing vessels not engaged in ocean or coastwise service. Such vessels may carry persons on the legitimate business of the vessel⁶ in addition to the crew, as restricted by the definition of passenger.</p>	<p>Column 4</p> <p>All vessels > 15 gross tons carrying freight-for-hire, except those covered by columns 2 and 3. All vessels carrying dangerous cargoes, when required by 46 CFR part 96.</p>	<p>Column 5</p> <p>All vessels not covered by columns 2, 3, 4, and 6.</p>	<p>Column 6</p> <p>None.</p>	<p>Column 7</p> <p>All vessels carrying cargoes in bulk that are listed in part 153, table 1, or part 154, table 4, or unlisted cargoes that would otherwise be subject to these parts.¹²</p>

Table 188.05-1(a) (continued)

Method of propulsion, qualified by size or other limitation. ¹	Vessels inspected and certificated under--			Vessels subject to the provisions of--		
	Subchapter D--Tank Vessels. ²	Subchapter H--Passenger Vessels. ^{2, 3, 4} and Subchapter K or T--Small Passenger Vessels. ^{2, 3, and 4}	Subchapter I--Cargo and Miscellaneous Vessels. ^{2 and 5}	Subchapter C--Uninspected Vessels. ^{2, 3, 6, 7, and 8}	Subchapter U--Oceanographic Vessels. ^{2, 3, 6, 7, and 9}	Subchapter O--Certain Bulk and Dangerous Cargoes. ¹⁰
Column 1	Column 2	Column 3	Column 4	Column 5	Column 6	Column 7
(2) Motor, seagoing motor vessels > 300 gross tons.	All vessels carrying combustible or flammable liquid cargo in bulk. ⁵	i) All vessels carrying more than 12 passengers on an international voyage, except recreational vessels not engaged in trade. ⁷ ii) All ferries < 100 gross tons carrying more than 6 passengers and all ferries ≥ 100 gross tons that carry at least 1 passenger. iii) These regulations do not apply to-- A) Recreational vessels not engaged in trade. B) Documented cargo or tank vessels issued a permit to carry 16 or fewer persons in addition to the crew. C) Fishing vessels not engaged in ocean or coastwise service may carry persons on the legitimate business of the vessel ⁶ in addition to the crew, as restricted by the definition of passenger. ⁷	All vessels, including recreational vessels, not engaged in trade. This does not include vessels covered by columns 2 and 3, and vessels engaged in the fishing industry.	All vessels not covered by columns 2, 3, 4, 6, and 7.	All vessels engaged in oceanographic research.	All vessels carrying cargoes in bulk that are listed in part 153, table 1, or part 154, table 4, or unlisted cargoes that would otherwise be subject to these parts. ¹²
(3) Non-self-propelled vessels < 100 gross tons.	All vessels carrying combustible or flammable liquid cargo in bulk. ⁵	i) All vessels that-- A) Carry more than 6 passengers-for-hire whether chartered or not, or B) Carry more than 6 passengers when chartered with the crew provided, or C) Carry more than 12 passengers when chartered with no crew provided, or D) Carry at least 1 passenger-for-hire and is a submersible vessel. ⁷ E) Carry more than 12 passengers on an international voyage. F) Carry more than 6 passengers and are ferries.	All seagoing barges except those covered by columns 2 and 3.	All barges carrying passengers or hire except those covered by column 3.	None.	All tank barges carrying cargoes listed in Table 151.05 of this chapter or unlisted cargoes that would otherwise be subject to part 151. ^{1, 11, and 12}

(4) Non-self-propelled vessels ≥ 100 gross tons.	All vessels carrying combustible or flammable liquid cargo in bulk. ³	<p>iii) All vessels that--</p> <p>A) Carry more than 12 passengers-for-hire whether chartered or not, or</p> <p>B) Carry more than 12 passengers when chartered with the crew provided, or</p> <p>C) Carry more than 12 passengers when chartered with no crew provided, or</p> <p>D) Carry at least 1 passenger-for-hire and is a submersible vessel,⁷</p> <p>E) Carry more than 12 passengers on an international voyage,</p> <p>F) Carry at least 1 passenger and are ferries.</p>	All seagoing barges except those covered by columns 2 and 3.	All barges carrying passengers or hire except those covered by columns 3 and 6.	All seagoing barges engaged in oceanographic research.	All tank barges carrying cargoes listed in Table 15 I.05 of this chapter or unlisted cargoes that would otherwise be subject to part 151, ^{1, 11, and 12}
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Table 188.05-1(a) (continued)

Method of propulsion, qualified by size or other limitation.	Vessels inspected and certificated under-- Subchapter H--Passenger Vessels, ^{2, 3, 4} and Subchapter K or T--Small Passenger Vessels. ^{2, 3, and 4}	Vessels subject to the provisions of-- Subchapter I-- Cargo and Miscellaneous Vessels. ^{2, and 5}	Vessels subject to the provisions of-- Subchapter C-- Uninspected Vessels. ^{2, 3, 6, 7, and 9}	Subchapter O-- Certain Bulk and Dangerous Cargoes. ^{8, 10}		
<p>Column 1</p> <p>(5) Sail,³ vessels ≤ 700 gross tons.</p>	<p>Column 2</p> <p>All vessels carrying combustible or flammable liquid cargo in bulk.³</p>	<p>Column 3</p> <p>i) All vessels carrying more than 12 passengers on an international voyage, except recreational vessels not engaged in trade.⁷</p> <p>ii) All vessels < 100 gross tons that-- A) Carry more than 6 passengers-for-hire whether chartered or not, or B) Carry more than 6 passengers when chartered with the crew provided, or C) Carry more than 12 passengers when chartered with no crew provided, or D) Carry at least 1 passenger-for-hire and are submersible vessels,⁷ E) Carry more than 6 passengers and are ferries.</p> <p>iii) All vessels ≥ 100 gross tons that-- A) Carry more than 12 passengers-for-hire whether chartered or not, or B) Carry more than 12 passengers when chartered with the crew provided, or C) Carry more than 12 passengers when chartered with no crew provided, or D) Carry at least 1 passenger-for-hire and are submersible vessels.⁷ E) Carry at least 1 passenger and are ferries.</p> <p>iv) These regulations do not apply to-- A) Recreational vessels not engaged in trade. B) Documented cargo or tank vessels issued a permit to carry 16 or fewer persons in addition to the crew. C) Fishing vessels, not engaged in ocean or coastwise service. Such vessels may carry persons on the legitimate business of the vessel⁶ in addition to the crew, as restricted by the definition of passenger.¹</p>	<p>Column 4</p> <p>All vessels carrying dangerous cargoes, when required by 46 CFR part 98.</p>	<p>Column 5</p> <p>All vessels not covered by columns 2, 3, 4, and 6.</p>	<p>Column 6</p> <p>None.</p>	<p>Column 7</p> <p>All vessels carrying cargoes in bulk that are listed in part 153, table 1, or part 154, table 4, or unlisted cargoes that would otherwise be subject to these parts.¹²</p>

<p>(6) Sail¹³ vessels > 700 gross tons.</p>	<p>All vessels carrying combustible or flammable liquid cargo in bulk.³</p>	<p>i) All vessels carrying passengers or passengers-for-hire, except recreational vessels. ii) All ferries that carry at least 1 passenger.</p>	<p>All vessels carrying dangerous cargoes, when required by 46 CFR part 98.</p>	<p>None.</p>	<p>None.</p>	<p>All vessels carrying cargoes in bulk that are listed in part 153, table 1, or part 154, table 4, or unlisted cargoes that would otherwise be subject to these parts.¹²</p>
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Table 188.05-1(a) (continued)

Method of propulsion, qualified by size or other limitation.	Subchapter D--Tank Vessels. ²	Subchapter H--Passenger Vessels ^{2, 3, 4} and Subchapter K or T--Small Passenger Vessels. ^{2, 3, and 4}	Subchapter I--Miscellaneous Cargo and Vessels. ^{2 and 5}	Subchapter C--Uninspected Vessels. ^{2, 3, 6, 7, and 8}	Subchapter O--Certain Bulk and Dangerous Cargoes. ¹⁰	
<p>Column 1</p> <p>(7) Steam, vessels ≤ 19.8 meters (65 feet) in length.</p>	<p>Column 2</p> <p>All vessels carrying combustible or flammable liquid cargo in bulk.⁵</p>	<p>Column 3</p> <p>i) All vessels carrying more than 12 passengers on an international voyage, except recreational vessels not engaged in trade.⁷</p> <p>ii) All vessels < 100 gross tons that--</p> <p>A) Carry more than 6 passengers-for-hire whether chartered or not, or</p> <p>B) Carry more than 6 passengers when chartered with the crew provided, or</p> <p>C) Carry more than 12 passengers when chartered with no crew provided, or</p> <p>D) Carry at least 1 passenger-for-hire and are submersible vessels.⁷</p> <p>E) Carry more than 6 passengers and are ferries.</p> <p>iii) All vessels ≥ 100 gross tons that--</p> <p>A) Carry more than 12 passengers-for-hire whether chartered or not, or</p> <p>B) Carry more than 12 passengers when chartered with the crew provided, or</p> <p>C) Carry more than 12 passengers when chartered with no crew provided, or</p> <p>D) Carry at least 1 passenger-for-hire and are submersible vessels.⁷</p> <p>E) Carry at least 1 passenger and are ferries.</p> <p>iv) These regulations do not apply to--</p> <p>A) Recreational vessels not engaged in trade.</p> <p>B) Documented cargo or tank vessels issued a permit to carry 16 or fewer persons in addition to the crew.</p> <p>C) Fishing vessels not engaged in ocean or coastwise service. Such vessels may carry persons on the legitimate business of the vessel⁶ in addition to the crew, as restricted by the definition of passenger.</p>	<p>Column 4</p> <p>All tugboats and towboats. All vessels carrying dangerous cargoes, when required by 46 CFR part 98.</p>	<p>Column 5</p> <p>All vessels not covered by columns 2, 3, 4, and 6.</p>	<p>Column 6</p> <p>None.</p>	<p>Column 7</p> <p>All vessels carrying cargoes in bulk that are listed in part 153, table 1, or part 154, table 4, or unlisted cargoes that would otherwise be subject to these parts.¹²</p>

Table 188.05-1(e) (continued)

Method of propulsion, qualified by size or other limitation. ¹	Vessels inspected and certificated under--		Vessels subject to the provisions of--			
	Subchapter D--Tank Vessels. ²	Subchapter H--Passenger Vessels ^{2, 3, 4} and Subchapter K or T--Small Passenger Vessels. ^{2, 3, and 4}	Subchapter I--Miscellaneous Vessels. ^{2 and 5}	Subchapter C--Uninspected Vessels. ^{2, 3, 6, 7, and 8}	Subchapter U--Oceanographic Vessels. ^{2, 3, 6, 7, and 9}	Subchapter O--Certain Bulk and Dangerous Cargoes. ¹⁰
Column 1	Column 2	Column 3	Column 4	Column 5	Column 6	Column 7
(7) Steam, vessels > 19.8 meters (65 feet) in length.	All vessels carrying combustible or flammable liquid cargo in bulk. ⁵	i) All vessels carrying more than 12 passengers on an international voyage, except recreational vessels not engaged in trade. ⁷ ii) All vessels < 100 gross tons that-- A) Carry more than 6 passengers-for-hire whether chartered or not, or B) Carry more than 6 passengers when chartered with the crew provided, or C) Carry more than 12 passengers when chartered with no crew provided, or D) Carry at least 1 passenger-for-hire and are submersible vessels. ⁷ E) Carry more than 6 passengers and are ferries. iii) All vessels ≥ 100 gross tons that-- A) Carry more than 12 passengers-for-hire whether chartered or not, or B) Carry more than 12 passengers when chartered with the crew provided, or C) Carry more than 12 passengers when chartered with no crew provided, or D) Carry at least 1 passenger-for-hire and are submersible vessels. E) Carry at least 1 passenger and are ferries. iv) These regulations do not apply to-- A) Recreational vessels not engaged in trade. B) Documented cargo or tank vessels issued a permit to carry 16 or fewer persons in addition to the crew. C) Fishing vessels not engaged in ocean or coastwise service. Such vessels may carry persons on the legitimate business of the vessel ⁸ in addition to the crew, as restricted by the definition of passenger. ⁷	All vessels not covered by columns 2, 3, 6, and 7.	None.	All vessels engaged in oceanographic research.	All vessels carrying cargoes in bulk that are listed in part 153, table 1, or part 154, table 4, or unlisted cargoes that would otherwise be subject to these parts. ¹²

Key to symbols used in this table: ≤ means less than or equal to; > means greater than; < means less than; ≥ means greater than or equal to.

Footnotes:

- 1 Where length is used in this table, it means the length measured from end to end over the deck, excluding sheer. This expression means a straight line measurement of the overall length from the foremost part of the vessel to the aftermost part of the vessel, measured parallel to the centerline.
- 2 Subchapters E (Load Lines), F (Marine Engineering), J (Electrical Engineering), N (Dangerous Cargoes), S (Subdivision and Stability), and W (Lifesaving Appliances and Arrangements) of this chapter may also be applicable under certain conditions. The provisions of 49 CFR parts 171–179 apply whenever packaged hazardous materials are on board vessels (including motorboats), except when specifically exempted by law.
- 3 Public nautical schools, other than vessels of the Navy and Coast Guard, must meet the requirements of part 167 of subchapter R (Nautical Schools) of this chapter, Civilian nautical schools, as defined by 46 U.S.C. 1331, must meet the requirements of subchapter H (Passenger Vessels) and part 168 of subchapter R (Nautical Schools) of this chapter.
- 4 Subchapter H (Passenger Vessels) of this chapter covers only those vessels of 100 gross tons or more, subchapter T (Small Passenger Vessels) of this chapter covers only those vessels of less than 100 gross tons, and subchapter K (Small Passenger Vessels) of this chapter covers only those vessels less than 100 gross tons carrying more than 150 passengers or overnight accommodations for more than 49 passengers.
- 5 Vessels covered by subchapter H (Passenger Vessels) or I (Cargo and Miscellaneous Vessels) of this chapter, where the principal purpose or use of the vessel is not for the carriage of liquid cargo, may be granted a permit to carry a limited amount of flammable or combustible liquid cargo in bulk. The portion of the vessel used for the carriage of the flammable or combustible liquid cargo must meet the requirements of subchapter D (Tank Vessels) in addition to the requirements of subchapter H (Passenger Vessels) or I (Cargo and Miscellaneous Vessels) of this chapter.
- 6 Any vessel on an international voyage is subject to the requirements of the International Convention for Safety of Life at Sea, 1974 (SOLAS).
- 7 The terms "passenger(s)" and "passenger(s)-for-hire" are as defined in 46 U.S.C. 2101(21)(21a). On oceanographic vessels, scientific personnel onboard shall not be deemed to be passengers nor seamen, but for calculations of lifesaving equipment, etc., must be counted as persons.
- 8 Boilers and machinery are subject to examination on vessels over 40 feet in length.
- 9 Under 46 U.S.C. 441 an oceanographic research vessel " * * * being employed exclusively in instruction in oceanography or limnology, or both, or exclusively in oceanographic research, * * * Under 46 U.S.C. 443, "an oceanographic research vessel shall not be deemed to be engaged in trade or commerce." If or when an oceanographic vessel engages in trade or commerce, such vessel cannot operate under its certificate of inspection as an oceanographic vessel, but shall be inspected and certificated for the service in which engaged, and the scientific personnel aboard then become persons employed in the business of the vessel.
- 10 Bulk dangerous cargoes are cargoes specified in table 151.01-10(b); in table 1 of part 153, and in table 4 of part 154 of this chapter.
- 11 For manned tankbarges, see § 151.01-10(c) of this chapter.
- 12 See § 151.01-15, 153.900(d), or 154.30 of this chapter as appropriate
- 13 Sail vessel means a vessel with no auxiliary machinery on board. If the vessel has auxiliary machinery, refer to motor vessels.

[CGFR 67–83, 33 FR 1113, Jan. 27, 1968, as amended at 42 FR 49027, Sept. 26, 1977; 43 FR 968, Jan. 5, 1978; CGD 77–081, 46 FR 56204, Nov. 16, 1981; CGD 86–033, 53 FR 36026, Sept. 16, 1988; 53 FR 46871, Nov. 21, 1988; CGD 90–008, 55 FR 30664, July 26, 1990; USCG–1999–5040, 67 FR 34800, May 15, 2002; USCG–2008–1107, 74 FR 63664, Dec. 4, 2009]

§ 188.05-2 Exemptions from inspection laws for oceanographic research vessels and terms and conditions which apply in lieu thereof.

(a) The oceanographic research vessel shall comply with 49 CFR parts 171-179 whenever applicable, except to the extent as specifically provided otherwise in this subchapter.

(b) In order not to inhibit the mission of vessels subject to this subchapter, the Coast Guard will not require plan approval of design nor inspection of scientific equipment except to the extent specifically provided otherwise in this subchapter. However, it is the responsibility of the owner to have incorporated into the design and to maintain such equipment to applicable safety standards.

[CGFR 67-83, 33 FR 1113, Jan. 27, 1968, as amended by CGD 77-081, 46 FR 56204, Nov. 16, 1981; CGD 86-033, 53 FR 36026, Sept. 16, 1988; CGD 95-028, 62 FR 51219, Sept. 30, 1997]

§ 188.05-3 New vessels and existing vessels for the purpose of application of regulations in this subchapter.

(a) *New vessels.* In this application of the regulations in this subchapter, a new vessel is meant to be one, the construction of which is contracted for on or after March 1, 1968, or the major alteration of a vessel is contracted for on or after March 1, 1968, or the conversion of any vessel not previously inspected and certificated by the Coast Guard which is contracted for on or after March 1, 1968.

(b) *Existing vessels.* In the application of the regulations in this subchapter an existing vessel is meant to be one which is holding a valid certificate of inspection as an oceanographic research vessel on March 1, 1968.

(c) *Other vessels.* When it is desired to have a vessel, which has been used in trade or for recreational purposes, initially inspected and certificated as an oceanographic research vessel on or after March 1, 1968, such vessel shall be subject to all the requirements governing a vessel contracted for on or after March 1, 1968. However, if such vessel has a current certificate of inspection as a passenger, tank, cargo, or miscellaneous vessel, the Commandant may authorize its inspection and cer-

tification under this subchapter as a vessel contracted for prior to March 1, 1968, subject to those requirements necessitated by change in service.

[CGFR 67-83, 33 FR 1113, Jan. 27, 1968, as amended by CGD 77-081, 46 FR 56204, Nov. 16, 1981]

§ 188.05-5 Specific application noted in text.

(a) At the beginning of the various parts, subparts, and sections, a more specific application is generally given for the particular portion of the text involved. This application sets forth the types, sizes, or services or vessels to which the text pertains, and in many cases limits the application of the text to vessels contracted for before or after a specific date. As used in this subchapter, the term "vessels contracted for" includes not only the contracting for the construction of a vessel, but also the contracting for a material alteration to a vessel, the contracting for the conversion of a vessel to an oceanographic research vessel, and the changing of area of operation of a vessel if such change increases or modifies the general requirements for the vessel or increases the hazards to which it might be subjected.

[CGFR 67-83, 33 FR 1113, Jan. 27, 1968, as amended by CGD 77-081, 46 FR 56204, Nov. 16, 1981]

§ 188.05-7 Ocean or unlimited coastwise vessels on inland and Great Lakes routes.

(a) Vessels inspected and certificated for ocean or unlimited coastwise routes shall be considered suitable for navigation insofar as the provisions of this subchapter are concerned on any inland routes, including the Great Lakes.

§ 188.05-10 Application to vessels on an international voyage.

(a) Except as provided in paragraphs (b), (c), and (d) of this section, the regulations in this subchapter that apply to a vessel on an "international voyage" apply to a vessel that—

(1) Is mechanically propelled and of at least 500 gross tons; and

(2) Is engaged on a voyage—

(i) From a country to which the International Convention for Safety of Life at Sea, 1974, (SOLAS 74) applies, to

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a port outside that country or the reverse;

(ii) From any territory, including the Commonwealth of Puerto Rico, all possessions of the United States, and all lands held by the United States under a protectorate or mandate, whose international relations are the responsibility of a contracting SOLAS 74 government, or which is administered by the United Nations, to a port outside that territory or the reverse; or

(iii) Between the contiguous states of the United States and the states of Hawaii or Alaska or between the states of Hawaii and Alaska.

(b) The regulations that apply to a vessel on an "international voyage" in this subchapter do not apply to a vessel that—

(1) Solely navigates the Great Lakes and the St. Lawrence River as far east as a straight line drawn from Cap des Rosiers to West Point, Anticosti Island and, on the north side of Anticosti Island, the 63rd Meridian; or

(2) Is numbered in accordance with 46 U.S.C. Chapter 123.

(c) The Commandant or his authorized representative may exempt any vessel on an international voyage from the requirements of this subchapter if the vessel—

(1) Makes a single international voyage in exceptional circumstances; and

(2) Meets safety requirements prescribed for the voyage by the Commandant.

(d) The Commandant or his authorized representative may exempt any vessel from the construction requirements of this subchapter if the vessel does not proceed more than 20 nautical miles from the nearest land in the course of its voyage.

[CGD 72-131R, 38 FR 29320, Oct. 24, 1973, as amended by CGD 80-123, 45 FR 64586, Sept. 30, 1980; CGD 90-008, 55 FR 30664, July 26, 1990; CGD 84-069, 61 FR 25312, May 20, 1996; CGD 95-028, 62 FR 51219, Sept. 30, 1997]

§ 188.05-33 Scientific personnel—interpretive rulings.

(a) Scientific personnel on oceanographic research vessels are not considered to be seamen or passengers, but are considered as "persons" when requirements are based on total persons on board.

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(b) Scientific personnel on such vessels shall not be required to possess seamen's documents nor shall they be required to sign shipping articles.

[CGFR 67-83, 33 FR 1113, Jan. 27, 1968, as amended by CGD 77-081, 46 FR 56204, Nov. 16, 1981]

§ 188.05-35 Load lines—interpretive ruling.

(a) Certificated vessels shall be subject to the applicable provisions of the Load Line Acts, and regulations in Subchapter E (Load Lines) of this chapter.

Subpart 188.10—Definition of Terms Used in This Subchapter

§ 188.10-1 Anniversary date.

The term *anniversary date* means the day and the month of each year, which corresponds to the date of expiration of the Certificate of Inspection.

[USCG-1999-4976, 65 FR 6509, Feb. 9, 2000]

§ 188.10-2 Approved.

This term means approved by the Commandant unless otherwise stated.

[CGFR 67-83, 33 FR 1113, Jan. 27, 1968. Redesignated by USCG-1999-4976, 65 FR 6509, Feb. 9, 2000]

§ 188.10-3 Approved container.

This term means a container which is properly labeled, marked and approved by DOT for the commodity which it contains.

[CGFR 67-83, 33 FR 1113, Jan. 27, 1968, as amended by CGD 86-033, 53 FR 36026, Sept. 16, 1988]

§ 188.10-5 Barge.

This term means any non-self-propelled vessel.

§ 188.10-6 Captain of the Port.

This term means an officer of the Coast Guard designated as such by the Commandant and who, under the superintendence and direction of the Coast Guard District Commander, gives immediate direction to Coast Guard law enforcement activities within his assigned area. In addition, the

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District Commander shall be the Captain of the Port with respect to remaining areas in his district not assigned to officers designated by the Commandant as Captain of the Port.

§ 188.10-7 Chemical stores.

This term means those chemicals intended for use in the performance of the vessel's scientific activities and is further defined in § 194.05-3.

§ 188.10-9 Chemical storeroom.

This term refers to any compartment specifically constructed or modified for the stowage of chemical stores and so designated and identified.

§ 188.10-11 Chemistry laboratory.

This term includes any space in which experiments are conducted or chemicals are used for scientific purposes in conjunction with the research mission of the vessel, and is so identified.

§ 188.10-13 Coast Guard District Commander.

This term means an officer of the Coast Guard designated as such by the Commandant to command all Coast Guard activities within the officer's district, which include the inspections, enforcement, and administration of Subtitle II of Title 46, U.S. Code, Title 46 and Title 33 U.S. Code, and regulations issued under these statutes.

[CGD 95-028, 62 FR 51219, Sept. 30, 1997]

§ 188.10-15 Coastwise.

Under this designation shall be included all vessels normally navigating the waters of any ocean or the Gulf of Mexico 20 nautical miles or less offshore.

§ 188.10-17 Combustible liquid.

This term includes any liquid whose flashpoint, as determined by an open cup tester, is above 80 °F.

§ 188.10-19 Commandant.

This term means the Commandant of the Coast Guard.

§ 188.10-21 Compressed gas.

This term includes any material or mixture having in the container an ab-

solute pressure exceeding 40 p.s.i. at 70 °F.; or regardless of the pressure at 70 °F., having an absolute pressure exceeding 104 p.s.i. at 130 °F.; or any liquid flammable material having a vapor pressure exceeding 40 p.s.i. absolute at 100 °F. as determined by the Reid method covered by the American Society for Testing Materials Method of Test for Vapor Pressure of Petroleum Products (D-323). Compressed gases are discussed in more detail in 49 CFR parts 171-179.

[CGFR 67-83, 33 FR 1113, Jan. 27, 1968, as amended by CGD 86-033, 53 FR 36026, Sept. 16, 1988]

§ 188.10-23 Corrosive liquids.

(a) This term includes those acids, alkaline caustic liquids, and other corrosive liquids which, when in contact with living tissues, will cause severe damage of such tissues, by chemical action; or in case of leakage, will materially damage or destroy other freight by chemical action, or are liable to cause fire when in contact with organic matter or with certain chemicals.

(b) A corrosive substance may be:

(1) Solid, such as iodine; or,

(2) Liquid, such as acids, or caustic soda solution; or,

(3) Gaseous, such as chlorine or sulfur dioxide.

§ 188.10-25 Explosive.

This term means a chemical compound or mixture, the primary purpose of which is to function by explosion; *i.e.*, with substantially instantaneous release of gas and heat. Explosives are discussed in more detail in 49 CFR parts 171-179.

[CGFR 67-83, 33 FR 1113, Jan. 27, 1968, as amended by CGD 86-033, 53 FR 36026, Sept. 16, 1988]

§ 188.10-27 Flammable liquid.

This term includes any liquid whose flashpoint, as determined by an open cup tester, is 80 °F. or below.

§ 188.10-31 Great Lakes.

Under this designation shall be included all vessels navigating the Great Lakes.

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§ 188.10-33 Headquarters.

This term means the Office of the Commandant, U.S. Coast Guard, 2100 2nd St., SW., Stop 7000, Washington, DC 20593-7000.

[CGFR 67-83, 33 FR 1113, Jan. 27, 1968, as amended by CGD 88-070, 53 FR 34538, Sept. 7, 1988; USCG-2009-0702, 74 FR 49240, Sept. 25, 2009]

§ 188.10-35 International voyage.

(a) This section describes those voyages which are considered to be "international voyages" for the purposes of this subchapter.

(b) Except as provided in paragraph (c) of this section, the term "international voyage" as used in this subchapter shall have the same meaning as that contained in Regulation 2(d), Chapter I of the International Convention for Safety of Life at Sea, 1974, *i.e.*, *International voyage* means a voyage from a country to which the present convention applies to a port outside such country, or conversely."

(c) The International Convention for Safety of Life at Sea, 1974, does not apply to vessels "solely navigating the Great Lakes of North America and the River St. Lawrence as far east as a straight line drawn from Cap de Rosiers to West Point, Anticosti Island and, on the north side of Anticosti Island, the 63d Meridian." Accordingly, such vessels shall not be considered as being on an "international voyage" for the purpose of this subchapter.

(d) In addition, although voyages between the continental United States and Hawaii or Alaska, and voyages between Hawaii and Alaska are not "international voyages" under the provisions of the International Convention for Safety of Life at Sea, 1974, such voyages are similar in nature and shall be considered as "international voyages" for the purposes of this subchapter.

[CGFR 67-83, 33 FR 1113, Jan. 27, 1968, as amended by CGD 80-123, 45 FR 64586, Sept. 30, 1980; CDG 90-008, 55 FR 30664, July 26, 1990]

§ 188.10-37 Label.

This term means the label required by 49 CFR part 172 to be affixed to con-

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tainers of explosives or other hazardous materials.

[CGD 86-033, 53 FR 36026, Sept. 16, 1988]

§ 188.10-39 Lakes, bays, and sounds.

Under this designation shall be included all vessels navigating the waters of any of the lakes, bays, or sounds, other than the waters of the Great Lakes.

§ 188.10-41 Liquefied compressed gas.

This term means a gas which, under the charged pressure, is partially liquid at a temperature of 70 °F.

§ 188.10-43 Liquefied flammable gas.

This term means any flammable gas having a Reid vapor pressure exceeding 40 p.s.i. which has been liquefied.

§ 188.10-45 Marine inspector or inspector.

These terms mean any person from the civilian or military branch of the Coast Guard assigned under the superintendence and direction of an Officer in Charge, Marine Inspection, or any other person as may be designated for the performance of duties with respect to the inspections, enforcement, and administration of Subtitle II of Title 46, U.S. Code, Title 46 and Title 33 U.S. Code, and regulations issued under these statutes.

[CGD 95-028, 62 FR 51219, Sept. 30, 1997]

§ 188.10-49 Numbered vessel.

This term means a vessel which is numbered under the provisions of 46 U.S.C. Chapter 123.

[CGD 95-028, 62 FR 51219, Sept. 30, 1997]

§ 188.10-51 Ocean.

Under this designation shall be included all vessels navigating the waters of any ocean, or the Gulf of Mexico more than 20 nautical miles offshore.

§ 188.10-53 Oceanographic research vessel.

The term *oceanographic research vessel* means a vessel that the Secretary finds is being employed only in instruction in oceanography or limnology, or both, or only in oceanographic or

limnological research, including those studies about the sea such as seismic, gravity meter, and magnetic exploration and other marine geophysical or geological surveys, atmospheric research, and biological research.

[CGD 84-069, 61 FR 25312, May 20, 1996]

§ 188.10-55 Officer in Charge, Marine Inspection.

This term means any person from the civilian or military branch of the Coast Guard designated as such by the Commandant and who, under the superintendence and direction of the Coast Guard District Commander, is in charge of an inspection zone for the performance of duties with respect to the inspections, enforcement, and administration of Subtitle II of Title 46, U.S. Code, Title 46 and Title 33 U.S. Code, and regulations issued under these statutes.

[CGD 95-028, 62 FR 51219, Sept. 30, 1997]

§ 188.10-56 Pilot boarding equipment and point of access.

(a) *Pilot boarding equipment* means a pilot ladder, accommodation ladder, pilot hoist, or combination of them as required by this subchapter.

(b) *Point of access* means the place on deck of a vessel where a person steps onto or off of pilot boarding equipment.

[CGD 79-032, 49 FR 25455, June 21, 1984]

§ 188.10-57 Portable tank.

This phrase means a container having a capacity greater than 110 gallons, which is independent of the vessel's structure.

§ 188.10-59 Recognized classification society.

This term means the American Bureau of Shipping or other classification society recognized by the Commandant.

§ 188.10-61 Rivers.

Under this designation shall be included all vessels whose navigation is restricted to rivers and/or canals exclusively, and to such other waters as may be so designated by the Coast Guard District Commander.

§ 188.10-65 Seagoing barge.

A seagoing barge is a nonself-propelled vessel of at least 100 gross tons making voyages beyond the Boundary Line (as defined in 46 CFR part 7).

[CGD 95-028, 62 FR 51219, Sept. 30, 1997]

§ 188.10-67 Scientific equipment.

This term means equipment installed or carried on board an oceanographic research vessel and not normally required for the operation of a vessel or its machinery or for the navigation of the vessel, and which is used primarily in the gathering of scientific data or samples or in processing, analyzing, preserving, or storing such data or samples.

[CGFR 67-83, 33 FR 1113, Jan. 27, 1968, as amended by CGD 77-081, 46 FR 56204, Nov. 16, 1981]

§ 188.10-69 Scientific laboratory.

This term means those spaces on board an oceanographic research vessel used primarily for scientific experimentation or research, and are so identified.

§ 188.10-71 Scientific personnel.

This term means those persons who are aboard an oceanographic research vessel solely for the purpose of engaging in scientific research, or in instructing, or receiving instruction, in oceanography or limnology, and shall not be considered seamen under the provisions of Title 46, United States Code.

[CGFR 67-83, 33 FR 1113, Jan. 27, 1968, as amended by CGD 77-081, 46 FR 56204, Nov. 16, 1981; CGD 97-057, 62 FR 51050, Sept. 30, 1997]

§ 188.10-73 Ships' stores and supplies.

This term means any article or substance which is used on board a vessel subject to the appropriate portions of part 147 of Subchapter N (Dangerous Cargoes) of this chapter for the upkeep and maintenance of the vessel; or for the safety or comfort of the vessel, its passengers or crew; or for the operation or navigation of the vessel (except fuel for its own machinery).

[CGFR 67-83, 33 FR 1113, Jan. 27, 1968, as amended by CGD 86-033, 53 FR 36026, Sept. 16, 1988]

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§ 188.10-75 Undocumented vessel.

This term means any vessel which is not required to have, and does not have, a valid marine document issued by the U.S. Coast Guard.

§ 188.10-77 Vessel.

Where the word "vessel" is used in this subchapter, it shall be considered to include all inspected and certificated oceanographic research vessels as listed in Column 7 of Table 188.05-1(a).

[CGFR 67-83, 33 FR 1113, Jan. 27, 1968, as amended by CGD 77-081, 46 FR 56204, Nov. 16, 1981]

Subpart 188.15—Equivalentents

§ 188.15-1 Conditions under which equivalentents may be used.

(a) Where in this subchapter it is provided that a particular fitting, material, appliance, apparatus, or equipment, or type thereof, shall be fitted or carried in a vessel, or that any particular provision shall be made or arrangement shall be adopted, the Commandant may accept in substitution therefor any other fitting, material, apparatus, or equipment, or type thereof, or any other arrangement: *Provided*, That he shall have been satisfied by suitable trials that the fitting, material, appliance, apparatus, or equipment, or type thereof, or the provision or arrangement is at least as effective as that specified in this subchapter.

(b) In any case where it is shown to the satisfaction of the Commandant that the use of any particular equipment, apparatus, or arrangement not specifically required by law is unreasonable or impracticable, the Commandant may permit the use of alternate equipment, apparatus, or arrangement to such an extent and upon such conditions as will insure, to his satisfaction, a degree of safety consistent with the minimum standards set forth in this subchapter.

§ 188.15-5 Design of vessels.

(a) In order not to inhibit design and application the Commandant may accept vessels of unusual, unique, special, or exotic design, both new and for conversion, after it is shown to his satis-

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faction that such a vessel is at least as safe as any vessel which meets the standards required by this subchapter.

Subpart 188.20—General Marine Engineering Requirements

§ 188.20-1 Marine engineering details.

(a) The marine engineering details shall be in accordance with Subchapter F (Marine Engineering) of this chapter.

Subpart 188.25—General Electrical Engineering Requirements

§ 188.25-1 Electrical engineering details.

(a) The electrical engineering details shall be in accordance with subchapter J (Electrical Engineering) of this chapter.

Subpart 188.27—Lifesaving Appliances and Arrangements

§ 188.27-1 Lifesaving appliances and arrangements.

All lifesaving appliances and arrangements shall be in accordance with the requirements for special purpose vessels in subchapter W (Lifesaving Appliances and Arrangements) of this chapter.

[CGD 84-069, 61 FR 25312, May 20, 1996]

Subpart 188.35—American Bureau of Shipping's Standards

§ 188.35-1 Standards to be used.

(a) Where in this subchapter an item, or method of construction, or testing is required to meet the standards established by the American Bureau of Shipping, the current standards in effect at the time of construction of the vessel, or otherwise as applicable, shall be used.

(b) The current standards of other recognized classification societies may also be accepted upon approval by the Commandant.

§ 188.35-5 Where obtainable.

(a) The standards established by the American Bureau of Shipping are usually published annually and may be

purchased from the American Bureau of Shipping, ABS Plaza, 16855 Northchase Drive, Houston, TX 77060.

(b) These standards may also be examined at the Office of the Commandant (CG-543), U.S. Coast Guard, 2100 2nd St. SW., Stop 7581, Washington, DC 20593-7581, or at the Office of any Coast Guard District Commander or Officer in Charge, Marine Inspection.

[CGFR 67-83, 33 FR 1113, Jan. 27, 1968, as amended by CGD 88-070, 53 FR 34538, Sept. 7, 1988; 53 FR 37570, Sept. 27, 1988; 53 FR 44011, Nov. 1, 1988; CGD 95-072, 60 FR 50469, Sept. 29, 1995; CGD 96-041, 61 FR 50735, Sept. 27, 1996; USCG-2000-7790, 65 FR 58465, Sept. 29, 2000; USCG-2009-0702, 74 FR 49240, Sept. 25, 2009]

PART 189—INSPECTION AND CERTIFICATION

Subpart 189.01—Certificate of Inspection

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Subpart 189.35—Weight Handling Gear

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Subpart 189.40—Drydocking

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- 189.40-3 Drydock examination, internal structural examination, cargo tank internal examination, and underwater survey intervals.
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- 189.43-1 When required.

Subpart 189.45—Repairs and Alterations

- 189.45-1 Notice required.
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Subpart 189.55—Plan Approval

- 189.55-1 General.

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- 189.55-5 Plans and specifications required for new construction.
- 189.55-10 Plans required for alterations of existing vessels.
- 189.55-15 Procedure for submittal of plans.
- 189.55-20 Number of plans required.

Subpart 189.60—Certificates Under International Convention for Safety of Life at Sea, 1974

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- 189.60-5 Cargo Ship Safety Construction Certificate.
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- 189.60-25 Exemption Certificate.
- 189.60-30 Safety Management Certificate.
- 189.60-35 Availability of Certificates.
- 189.60-40 Duration of Convention certificates.
- 189.60-45 American Bureau of Shipping.

AUTHORITY: 33 U.S.C. 1321(j); 46 U.S.C. 2113, 3306, 3307; E.O. 12234, 45 FR 58801, 3 CFR, 1980 Comp., p. 277; E.O. 12777, 56 FR 54757, 3 CFR, 1991 Comp., p. 351; Department of Homeland Security Delegation No. 0170.1.

SOURCE: CGFR 67-83, 33 FR 1118, Jan. 27, 1968, unless otherwise noted.

Subpart 189.01—Certificate of Inspection

§ 189.01-1 When required.

(a) Except as noted in this subpart or subpart 189.05 of this part, no vessel subject to inspection and certification shall be operated without a valid certificate of inspection.

§ 189.01-5 Posting.

(a) The original certificate of inspection shall, in general, be framed under glass or other transparent material and posted in a conspicuous place where it will be most likely to be observed. On other vessels such as barges, where the framing of the certificate under glass would be impracticable, the original certificate of inspection shall be kept on board to be shown on demand.

§ 189.01-10 Period of validity for a Certificate of Inspection.

(a) A Certificate of Inspection is valid for 5 years. Application may be made by the master, owner, or agent for inspection and issuance of a new certificate of inspection at any time

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during the period of validity of the current certificate.

(b) Certificates of inspection may be revoked or suspended by the Coast Guard where such process is authorized by law. This may occur if the vessel does not meet the requirements of law or regulations in this chapter or if there is a failure to maintain the safety requirements requisite to the issuance of a certificate of inspection.

(c)(1) In the case of the following vessels, modification of the period of validity of the certificate of inspection will be permitted as set forth in this paragraph:

(i) Non-self-propelled vessels of 100 gross tons and over proceeding on the high seas or ocean for the sole purpose of changing place of employment.

(ii) Non-self-propelled vessels of 100 gross tons and over making rare or infrequent voyages on the high seas or ocean and returning to the port of departure.

(2) The certificate of inspection may be issued for a specific period of time to cover a described situation or for one voyage only but not to exceed 5 years. The certificate of inspection will include the conditions under which the vessel must operate. Unless the vessel is in compliance with this subchapter insofar as it applies to seagoing barges of 100 gross tons and over, such vessel shall not carry any person on board while underway, and the certificate of inspection will be endorsed as an unmanned seagoing barge.

[CGFR 67-83, 33 FR 1118, Jan. 27, 1968, as amended by CGFR 68-82, 33 FR 18911, Dec. 18, 1968; CGD 95-012, 60 FR 48052, Sept. 18, 1995; 60 FR 50120, Sept. 28, 1995; USCG-1999-4976, 65 FR 6509, Feb. 9, 2000]

§ 189.01-15 Temporary certificate.

(a) If necessary to prevent delay of the vessel, a temporary certificate of inspection, Form CG-854, shall be issued pending the issuance and delivery of the regular certificate of inspection. Such temporary certificate shall be carried in the same manner as the regular certificate and shall in all ways be considered the same as the regular certificate of inspection which it represents.

Subpart 189.05—Permit To Proceed to Another Port for Repair

§ 189.05–1 When issued.

(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.

§ 189.05–5 To whom issued.

(a) Such permit will only be issued upon the written application of the master, owner, or agent of the vessel.

§ 189.05–10 Conditions of permit.

(a) The permit will state upon its face the conditions under which it is issued.

§ 189.05–15 Posting.

(a) The permit shall be carried in a manner similar to that described in § 189.01–5 for a certificate of inspection.

Subpart 189.15—Inspection of Vessels

§ 189.15–1 Standards in inspection of hulls, boilers, and machinery.

In the inspection of hulls, boilers, and machinery of vessels, the standards established by the American Bureau of Shipping, see part 188, subpart 188.35 of this chapter, respecting material and construction of hulls, boilers, and machinery, and certificate of classification referring thereto, except where otherwise provided for by the rules and regulations in this subchapter, subchapter E (Load Lines), subchapter F (Marine Engineering), subchapter J (Electrical Engineering), and subchapter W (Lifesaving Appliances and Arrangements) of this chapter shall be accepted as standard by the inspectors.

[CGD 84–069, 61 FR 25312, May 20, 1996]

§ 189.15–5 Alternate compliance.

(a) In place of compliance with other applicable provisions of this subchapter, the owner or operator of a vessel subject to plan review and inspection under this subchapter for initial issuance or renewal of a Certificate of

Inspection may comply with the Alternate Compliance Program provisions of 46 CFR part 8.

(b) For the purposes of this section, a list of authorized classification societies, including information for ordering copies of approved classification society rules and supplements, is available from Commandant (CG–521), 2100 2nd St., SW., Stop 7126, Washington, DC 20593–7126; telephone (202) 372–1371; or fax (202) 372–1925. Approved classification society rules and supplements are incorporated by reference into 46 CFR 8.110(b).

[74 FR 20419, May 4, 2009, as amended by USCG–2009–0702, 74 FR 49240, Sept. 25, 2009]

Subpart 189.20—Initial Inspection

§ 189.20–1 Prerequisite of certificate of inspection.

(a) The initial inspection is a prerequisite of the issuance of the original certificate of inspection.

§ 189.20–5 When made.

(a) The initial inspection will only be made upon the written application of the owner or builder of the vessel to the Officer in Charge, Marine Inspection, on Form CG–3752, Application for Inspection of U.S. Vessel, at or nearest the port where the vessel is located.

§ 189.20–10 Plans.

(a) Before application for inspection is made, and before construction is started, the owner or builder shall have plans approved by the Commandant indicating the proposed arrangement and construction of the vessel.

(b) The procedure for submitting plans and the list of plans to be supplied is set forth in subpart 189.55 of this part.

§ 189.20–15 Scope of inspection.

(a) The initial inspection, which may consist of a series of inspections during the construction of a vessel, shall include a complete inspection of the structure, machinery, and equipment, except scientific equipment which does not affect the safety of the vessel or personnel, but including the outside of the vessel's bottom, and the inside and

outside of the boilers and unfired pressure vessels. The inspection shall be such as to insure that the arrangements, materials, and scantlings of the structure, boilers and other pressure vessels and their appurtenances, piping, main and auxiliary machinery, electrical installations, lifesaving appliances, fire detecting and extinguishing equipment, pilot boarding equipment, pollution prevention equipment, and other equipment fully comply with the applicable regulations for such vessel and are in accordance with approved plans, and determine that the vessel is in possession of a valid certificate issued by the Federal Communications Commission, if any. The inspection shall be such as to ensure that the workmanship of all parts of the vessel and its equipment is in all respects satisfactory and that the vessel is provided with lights, means of making sound signals, and distress signals as required by applicable statutes and regulations.

(b) When equipment other than scientific equipment is installed which is not required by the applicable regulations in this subchapter, that equipment shall be inspected and tested as may be required for such equipment by the Officer in Charge, Marine Inspection, to assure safety.

(1) The electrical or pressure connections to the ship's supply shall be designed to marine standards and shall be free of personnel hazards.

(2) Scientific equipment will not be inspected but will be examined for external hazards associated with connection to the vessel, dangerous moving parts, extremes in temperature and shock.

[CGFR 67–83, 33 FR 1118, Jan. 27, 1968, as amended by CGFR 68–82, 33 FR 18911, Dec. 18, 1968; CGD 71–161R, 37 FR 28263, Dec. 21, 1972; CGD 82–036, 48 FR 654, Jan. 6, 1983; CGD 79–032, 49 FR 25455, June 21, 1984; CGD 95–012, 60 FR 48052, Sept. 18, 1995; 60 FR 50120, Sept. 28, 1995]

§ 189.20–20 Specific tests and inspections.

The applicable tests and inspections as set forth in subpart 189.25 of this part shall be made at this time. In addition, the following specific tests and

inspections shall be made by the marine inspector.

(a) For inspection procedures of lifesaving appliances and arrangements, see subchapter W (Lifesaving Appliances and Arrangements) of this chapter.

(b) Installation of carbon dioxide extinguishing piping. See § 193.15–15 of this subchapter.

(c) Marine engineering equipment and systems. See Subchapter F (Marine Engineering) of this chapter.

(d) Electrical engineering equipment and systems. See Subchapter J (Electrical Engineering) of this chapter.

[CGFR 67–83, 33 FR 1118, Jan. 27, 1968, as amended by CGD 84–069, 61 FR 25312, May 20, 1996]

§ 189.20–25 Chemical and explosive hazards.

(a) If installed, the marine inspector shall examine the laboratories, storerooms, magazines, vans, and chests to insure that hazards are minimized.

Subpart 189.25—Inspection for Certification

§ 189.25–1 Prerequisite of reissuance of certificate of inspection.

(a) An inspection for certification is a prerequisite of the reissuance of a certificate of inspection.

§ 189.25–5 Application for a Certificate of Inspection.

You must submit a written application for an inspection for certification to the cognizant OCMI. To renew a Certificate of Inspection, you must submit an application at least 30 days before the expiration of the tank vessel's current certificate. You must use Form CG–3752, Application for Inspection of U.S. Vessel, and submit it to the OCMI at, or nearest to, the port where the vessel is located. When renewing a Certificate of Inspection, you must schedule an inspection for certification within the 3 months before the expiration date of the current Certificate of Inspection.

[USCG–1999–4976, 65 FR 6509, Feb. 9, 2000]

§ 189.25-10 Scope of inspection.

(a) The inspection for certification shall include an inspection of the structure, boilers, and other pressure vessels, machinery, and equipment. The inspection shall be such as to insure that the vessel, as regards the structure, boilers, and other pressure vessels and their appurtenances, piping, main and auxilliary machinery, electrical installations, life-saving appliances, fire detecting and extinguishing equipment, pilot boarding equipment, pollution prevention equipment, and other equipment, is in satisfactory condition and fit for the service for which it is intended, and that it complies with the applicable regulations for such vessel, and determine that the vessel is in possession of a valid certificate issued by the Federal Communications Commission, if required. The lights, means of making sound signals, and distress signals carried by the vessel shall also be subject to the above-mentioned inspection for the purpose of ensuring that they comply with the requirements of the applicable statutes and regulations.

(b) When equipment other than scientific equipment is installed which is not required by the applicable regulations in this subchapter, that equipment shall be inspected and tested as may be required for such equipment by the Officer in Charge, Marine Inspection, to assure safety.

(1) Scientific equipment and their electrical or pressure connection to the ship's supply and laboratories may be checked to ascertain that they are maintained free of hazards.

[CGFR 67-83, 33 FR 1118, Jan. 27, 1968, as amended by CGFR 68-82, 33 FR 18911, Dec. 18, 1968; CGD 71-161R, 37 FR 28263, Dec. 21, 1972; CGD 82-036, 48 FR 655, Jan. 6, 1983; CGD 79-032, 49 FR 25455, June 21, 1984; CGD 95-012, 60 FR 48052, Sept. 18, 1995; 60 FR 50120, Sept. 28, 1995]

§ 189.25-15 Lifesaving equipment.

For inspection procedures of life-saving appliances and arrangements, see subchapter W (Lifesaving Appliances and Arrangements) of this chapter.

[CGD 84-069, 61 FR 25312, May 20, 1996]

§ 189.25-20 Fire-extinguishing equipment.

(a) At each inspection for certification, periodic inspection, and at such other times as considered necessary the inspector shall determine that all fire-extinguishing equipment is in suitable condition and he may require such tests as are considered necessary to determine the condition of the equipment. The inspector shall determine if the tests and inspections required by §196.15-60 of this subchapter have been conducted. At each inspection for certification and periodic inspection the inspector shall conduct the following tests and inspections of fire-extinguishing equipment:

(1) All hand portable fire extinguishers and semiportable fire-extinguishing systems shall be checked as noted in Table 189.25-20(a)(1). In addition, the hand portable fire-extinguishers and semiportable fire-extinguishing systems shall be examined for excessive corrosion and general condition.

TABLE 189.25-20(a)(1)

Type unit	Test
Soda acid	Discharge. Clean hose and inside of extinguisher thoroughly. Recharge.
Foam	Discharge. Clean hose and inside of extinguisher thoroughly. Recharge.
Pump tank (water or antifreeze).	Discharge. Clean hose and inside of extinguisher thoroughly. Recharge with clean water or antifreeze.
Cartridge operated (water, antifreeze, or loaded stream).	Examine pressure cartridge and replace if end is punctured or if cartridge is otherwise determined to have leaked or to be in unsuitable condition. Remove liquid. Clean hose and inside of extinguisher thoroughly. Recharge with water, solution, or antifreeze. Insert charged cartridge.
Carbon dioxide	Weigh cylinders. Recharge if weight loss exceeds 10 percent of weight of charge. Inspect hose and nozzle to be sure they are clear. ¹
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 type).	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.

TABLE 189.25–20(a)(1)—Continued

Type unit	Test
Vaporizing liquid ²	

¹ Cylinders must be tested and marked and all flexible connections and discharge hoses of semiportable carbon dioxide and halon extinguishers must be tested or renewed as required in §§ 147.60 and 147.65 of this chapter.

² Vaporizing-liquid type fire extinguishers containing carbon tetrachloride or chlorobromomethane or other toxic vaporizing liquids are not permitted.

(2) Fixed fire-extinguishing systems shall be checked as noted in Table 189.25–20(a)(2). In addition, all parts of the fixed fire-extinguishing systems shall be examined for excessive corrosion and general conditions.

TABLE 189.25–20(a)(2)

Type system	Test
Foam	Systems utilizing a soda solution shall have such solution replaced. In all cases, ascertain that powder is not caked.
Carbon dioxide	Weigh cylinders. Recharge if weight loss exceeds 10 percent of weight of charge. ¹

¹ Cylinders must be tested and marked and all flexible connections on fixed carbon dioxide and halon systems must be tested or renewed as required in §§ 147.60 and 147.65 of this chapter.

(3) On all fire-extinguishing systems all piping, controls, valves, and alarms shall be checked to ascertain that the system is in operating condition.

(4) The fire main system shall be operated and the pressure checked at the outlets having the greatest pressure drop between the fire pumps and the nozzles which may not always be the most remote and highest outlets. All firehoses shall be subjected to a test pressure equivalent to the maximum pressure to which they may be subjected in service, but not less than 100 p.s.i.

[CGFR 67–83, 33 FR 1118, Jan. 27, 1968, as amended by CGD 78–154, 44 FR 13492, Mar. 12, 1979; CGD 84–044, 53 FR 7752, Mar. 10, 1988; USCG–1999–4976, 65 FR 6509, Feb. 9, 2000]

§ 189.25–25 Hull equipment.

(a) At each inspection for certification and periodic inspection the inspector shall conduct the following tests and inspections of hull equipment:

(1) All watertight doors shall be operated locally by manual power and also by hydraulic or electric power if so fitted. Where remote control is fitted,

the doors shall also be operated by the remote control apparatus.

(2) The remote controls of all valves shall be operated.

(3) An examination of installed weight, handling gear and related shipboard records shall be made to ascertain the condition and suitability of the equipment for the service intended. In conducting this examination the marine inspector shall be guided by the provisions of subpart 189.35. Current valid certificates and registers, issued by a recognized nonprofit organization or association approved by the Commandant, may be accepted as prima facie evidence of the condition and suitability of the weight handling gear. Weight handling gear certificates and registers will not be issued by the Coast Guard.

[CGFR 67–83, 33 FR 1118, Jan. 27, 1968, as amended by USCG–1999–4976, 65 FR 6509, Feb. 9, 2000]

§ 189.25–30 Electrical engineering equipment.

(a) For inspection procedures of Electrical Engineering equipment and systems, see Subchapter J (Electrical Engineering) of this chapter.

§ 189.25–35 Marine engineering equipment.

(a) For inspection procedures of Marine Engineering equipment and systems, see Subchapter F (Marine Engineering) of this chapter.

§ 189.25–38 Pollution prevention.

At each inspection for certification and periodic inspection, the inspector shall examine the vessel to determine that it meets the vessel design and equipment requirements for pollution prevention in 33 CFR part 155, subpart B.

[CGD 71–161R, 37 FR 28263, Dec. 21, 1972; USCG–1999–4976, 65 FR 6509, Feb. 9, 2000]

§ 189.25–40 Sanitary inspection.

(a) At each inspection for certification and periodic inspection, the quarters, toilets, and washing spaces, galleys, serving pantries, lockers, etc.,

shall be examined by the marine inspector to be assured that they are in a sanitary condition.

[CGFR 67-83, 33 FR 1118, Jan. 27, 1968, as amended by USCG-1999-4976, 65 FR 6509, Feb. 9, 2000]

§ 189.25-45 Fire hazards.

At each inspection for certification and periodic inspection, the inspector shall examine the tank tops and bilges in the machinery spaces to see that there is no accumulation of oil which might create a fire hazard.

[CGFR 67-83, 33 FR 1118, Jan. 27, 1968, as amended by USCG-1999-4976, 65 FR 6509, Feb. 9, 2000]

§ 189.25-47 Chemical and explosive hazards.

(a) The marine inspector shall inspect every chemistry laboratory, scientific laboratory, and chemical store-room during each inspection for certification and periodic inspection.

(b) Magazines, vans, and chests shall be inspected during each inspection for certification and periodic inspection.

[CGFR 67-83, 33 FR 1118, Jan. 27, 1968, as amended by USCG-1999-4976, 65 FR 6509, Feb. 9, 2000; 65 FR 11904, Mar. 7, 2000]

§ 189.25-50 Inspector not limited.

(a) Nothing in this subpart shall be construed as limiting the inspector from making such tests or inspections as he deems necessary to be assured of the safety and seaworthiness of the vessel.

Subpart 189.27—Annual and Periodic Inspections

§ 189.27-1 Annual inspection.

(a) Your vessel must undergo an annual inspection within the 3 months before or after each anniversary date, except as specified in §189.27-5.

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

(c) The scope of the annual inspection is the same as the inspection for certification, as specified in §189.25-10, but in less detail unless the cognizant marine inspector finds deficiencies or

determines that a major change has occurred since the last inspection. If deficiencies are found or a major change to the vessel has occurred, the marine inspector will conduct an inspection more detailed in scope to ensure that the vessel is in satisfactory condition and fit for the service for which it is intended. If your vessel passes the annual inspection, the marine inspector will endorse your current Certificate of Inspection.

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

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

[USCG-1999-4976, 65 FR 6509, Feb. 9, 2000]

§ 189.27-5 Periodic inspection.

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

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

(c) The scope of the periodic inspection is the same as that for the inspection for certification, as specified in §189.25-10. The OCMI will insure that the vessel is in satisfactory condition and fit for the service for which it is intended. If your vessel passes the periodic inspection, the marine inspector will endorse your current Certificate of Inspection.

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

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

[USCG-1999-4976, 65 FR 6509, Feb. 9, 2000]

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§ 189.27-10 Certificate of Inspection: Conditions of validity.

To maintain a valid Certificate of Inspection, you must complete your annual and periodic inspections within the periods specified in §§189.27-1 and 189.27-5 respectively, and your Certificate of Inspection must be endorsed.

[USCG-1999-4976, 65 FR 6509, Feb. 9, 2000]

Subpart 189.30—Inspection After Accident

§ 189.30-1 General or partial survey.

(a) A survey, either general or partial, according to the circumstances, shall be made every time an accident occurs or a defect is discovered which affects the safety of the vessel or the efficacy or completeness of its life-saving appliances, firefighting or other equipment, or whenever any important repairs or renewals are made. The survey shall be such as to insure that the necessary repairs or renewals have been effectively made, that the material and the workmanship of such repairs or renewals are in all respects satisfactory, and that the vessel complies in all respects with the regulations in this subchapter.

Subpart 189.33—Sanitary Inspections

§ 189.33-1 When made.

(a) An inspection of quarters, toilet and washing spaces, serving pantries, galleys, etc., shall be made at least once in every month. If the route of the vessel is such that it is away from a U.S. port for more than 1 month, an inspection shall be conducted at least once every trip.

Subpart 189.35—Weight Handling Gear

§ 189.35-1 Application.

(a) The requirements of this subpart shall apply to all weight handling gear installed on oceanographic research vessels except weight handling gear designated to handle primary life-saving equipment. Weight handling gear designated for this use shall meet the applicable portions of Subchapter I

(Cargo and Miscellaneous Vessels) of this chapter.

(b) Weight handling gear placed under the inspection and testing required for cargo gear by the classification society or cargo gear bureaus recognized in Subchapter I (Cargo and Miscellaneous Vessels) of this chapter may be considered as having met the intent of this subpart.

§ 189.35-3 Intent.

(a) In recognition of the special nature of oceanographic research vessel operations, it is intended that maximum flexibility be given to the owner or operator in complying with the safety requirements for weight handling gear in this subpart. The primary interest of the Coast Guard shall extend to hazards associated with the connections to the vessel, dangerous moving parts, extremes in temperature and shock hazards.

§ 189.35-5 Tests.

(a) An installation load test and safety assessment shall be conducted by the owner or operator. Section 189.35-13 may be used as a guide for the safety assessment. It shall be the responsibility of the owner or operator to notify the Officer in Charge, Marine Inspection, of the time and place of the installation tests when occurring in a port of the United States to permit a marine inspector to witness the tests if desired. Subsequent owner or operator conducted tests may be required at the time of the vessel's inspection periods if a visual examination or review of the equipment record reveals evidence of an unsafe condition. Tests should normally consist of exercising the equipment as a unit with a proof load 25 percent in excess of the equipment's normal working load, however manufacturer's design limitations should not be exceeded. Consideration shall be given to the plans of loading when conducting these tests. Braking, safety and limiting devices shall be tested whenever feasible.

§ 189.35-7 Examinations.

(a) Examination of weight handling gear will normally consist of a visual examination with access covers removed. Suitability of the equipment

for the service intended will be emphasized. Disassembly of the equipment will be required only when there is evidence of a deficiency or an unsafe condition. Non-destructive tests, such as radiography, ultrasonic, electronic, or other methods may be used if appropriate, however will not be required.

§ 189.35-9 Plans.

(a) Plans will not normally be required, however depending on the use of the weight handling gear, submission of plans or other technical information may be required by the Officer in Charge, Marine Inspection. Unless an unsafe condition is in evidence, vessel operations will not be delayed while plans or other technical information are under review. Plans, when required, shall normally include:

(1) One line electrical diagrams showing appropriate overload protection as currently required by subchapter J (Electrical Engineering) of this chapter.

(2) Plans showing hydraulic or pneumatic equipment.

(3) Stress and/or arrangement diagrams with supporting design calculations as appropriate to the specific equipment in question.

(b) When weight handling gear is built to a recognized code or specification, plans or other technical data will not normally be required. Purchase specification or vendor's information may be accepted in lieu of design calculations if sufficiently definitive of materials, design (safety) factors and operating limitations.

(c) Design information, when required, will be evaluated against the following minimum design criteria:

(1) Wet Weight Handling Gear: Wet gear shall be considered to consist of gear used to lower equipment, apparatus or objects beneath the surface of the water or for trailing objects, where the wire rope or cable is payed out beneath the surface and becomes part of the line pull at the head sheave or winch drum. Wet gear shall be designed, as a minimum, to withstand and operate in excess of the breaking strength of the strongest section or wire to be used in any condition of loading. The safety factor for all metal structural parts shall be a minimum of

1.5; *i.e.*, the yield strength of the material shall be at least 1.5 times the calculated stresses resulting from application of a load equal to the nominal breaking strength of the strongest section or wire rope to be used. Suitable assumptions for the actual loading conditions shall be used in the design of wet gear. The lead of the wire rope from the head sheave or winch drum shall be considered to vary from the vertical and in azimuth in a manner to represent the most adverse loading condition.

(2) Other weight handling gear will be evaluated on the basis of the standards of a recognized organization or association recognized by the Commandant under § 31.10-6.

(3) Hydraulic or pneumatic systems will be evaluated on the basis of Subchapter F (Marine Engineering) of this chapter.

[CGFR 67-83, 33 FR 1118, Jan. 27, 1968, as amended by CGFR 69-116, 35 FR 6863, Apr. 30, 1970; CGD 95-028, 62 FR 51219, Sept. 30, 1997]

§ 189.35-11 Special cases.

(a) If the above safety requirements defeat the purpose of any particular piece of weight handling gear, consideration will be given to a relaxation of the requirements.

§ 189.35-13 Master's responsibility.

(a) The master of the vessel shall ensure the following:

(1) The gear is properly installed and secure.

(2) Suitable safety guards are installed in way of rotating machinery, hazardous cable runs and at other appropriate locations.

(3) Operating limitations are posted in an appropriate manner.

(4) Only qualified operators are permitted to operate the weight handling gear. The master shall designate the operators.

(5) A minimum number of persons are allowed in the immediate area.

(6) The installation does not violate the approved trim and stability information.

(7) A suitable permanent record is maintained on the equipment as appropriate showing such items as inspections, tests, important repairs and casualties experienced. This record shall

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be made available to the Officer in Charge, Marine Inspection, upon request.

(b) Prior to a vessel's departure, an entry shall also be made in the official logbook that the ship's weight handling gear is in compliance with the applicable requirements in this subchapter.

§ 189.35–15 Major installations.

(a) Where the installation of weight handling gear requires modifications to the vessel's structure or affects the stability in a manner which cannot be assessed by the information contained in the approved trim and stability information, appropriate plans and information shall be submitted for approval. The installation shall then be inspected by the Officer in Charge, Marine Inspection for conformance with the approved installation plans and information.

§ 189.35–90 Weight handling gear manufactured prior to March 1, 1968.

(a) Weight handling gear manufactured prior to March 1, 1968, will be accepted on the basis of appropriate tests and examinations should plans or other technical information not be available.

Subpart 189.40—Drydocking

§ 189.40–1 Definitions relating to hull examinations.

As used in this part—

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

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

(c) *Underwater survey* means the examination, while the vessel is afloat, of all accessible parts of the vessel's un-

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derwater body and all through-hull fittings.

[CGD 84–024, 52 FR 39656, Oct. 23, 1987, as amended at 53 FR 32232, Aug. 24, 1988; CGD 95–028, 62 FR 51220, Sept. 30, 1997]

§ 189.40–3 Drydock examination, internal structural examination, cargo tank internal examination, and underwater survey intervals.

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

(1) Vessels that operate in salt water must undergo two drydock and two internal structural examinations within any five year period. No more than three years may elapse between any two examinations.

(2) Vessels that operate in fresh water at least six months in every 12 month period since the last drydock examination must undergo drydock and internal structural examinations at intervals not to exceed five years.

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

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

(d) Each vessel under paragraph (a) of this section that is less than 15 years of age may be considered for an underwater survey instead of alternate drydock examinations, provided the vessel is fitted with an effective hull protection system. Vessel owners or operators must apply to the Officer in Charge, Marine Inspection, for approval of underwater surveys instead of alternate drydock examinations for each vessel. The application must include the following information:

(1) The procedure to be followed in carrying out the underwater survey.

(2) The location where the underwater survey will be accomplished.

(3) The method to be used to accurately determine the diver location relative to the hull.

(4) The means that will be provided for examining through-hull fittings.

(5) The means that will be provided for taking shaft bearing clearances.

(6) The condition of the vessel, including the anticipated draft of the vessel at the time of the survey.

(7) A description of the hull protection system.

(e) Vessels otherwise qualifying under paragraph (d) of this section, that are 15 years of age or older, may be considered for continued participation in or entry into the underwater survey program on a case-by-case basis if—

(1) Before the vessel's next scheduled drydocking, the owner or operator submits a request for participation or continued participation to Commandant (CG-543);

(2) During the vessel's next drydocking after the request is submitted, no appreciable hull deterioration is indicated as a result of a complete set of hull gaugings; and

(3) The results of the hull gauging and the results of the Coast Guard drydock examination together with the recommendation of the Officer in Charge, Marine Inspection, are submitted to Commandant (CG-543) for final approval.

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

(g) The Commandant (CG-543) may authorize extensions to the examination intervals specified in paragraphs (a) and (b) of this section.

[CGD 84-024, 52 FR 39656, Oct. 23, 1987, as amended at 53 FR 32232, Aug. 24, 1988; CGD 95-072, 60 FR 50469, Sept. 29, 1995; CGD 96-041, 61 FR 50735, Sept. 27, 1996; CGD 95-028, 62 FR 51220, Sept. 30, 1997; USCG-2009-0702, 74 FR 49240, Sept. 25, 2009]

§ 189.40-5 Notice and plans required.

(a) The master, owner, operator, or agent of the vessel shall notify the Officer in Charge, Marine Inspection,

whenever the vessel is to be drydocked regardless of the reason for drydocking.

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

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

[CGD 84-024, 52 FR 39657, Oct. 23, 1987]

Subpart 189.43—Integral Fuel Oil Tank Examinations

§ 189.43-1 When required.

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

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

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

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

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

[CGD 84-024, 52 FR 39657, Oct. 23, 1987, as amended at 53 FR 32232, Aug. 24, 1988]

Subpart 189.45—Repairs and Alterations

§ 189.45-1 Notice required.

(a) No repairs or alterations affecting the stability or safety of the vessel with regard to the hull, machinery, and equipment shall be made without the knowledge of the Officer in Charge, Marine Inspection.

(b) Drawings of alterations shall be approved before work is started unless deemed unnecessary by the Officer in Charge, Marine Inspection.

(c) Drawings will not be required for repairs in kind.

(d) Notice is not required for repairs or alterations to scientific equipment where the stability or safety of the vessel with regard to the hull and machinery or equipment is not affected.

§ 189.45-5 Inspection required.

(a) An inspection, either general or partial depending upon the circumstances, shall be made whenever any important repairs or alterations are undertaken.

Subpart 189.50—Special Operating Requirements

§ 189.50-1 Inspection and testing required when making alterations, repairs, or other such operations involving riveting, welding, burning, or like fire-producing actions.

(a) The provisions of “Standard for the Control of Gas Hazards on Vessels To Be Repaired,” NFPA No. 306, published by National Fire Protection Association, 1 Batterymarch Park, Quincy, MA 02269, shall be used as a guide in conducting the inspections and issuance of certificates required by this section.

(b) Until an inspection has been made to determine that such operation can be undertaken with safety, no alterations, repairs, or other such operations involving riveting, burning, welding, or like fire-producing actions shall be made:

(1) Within or on the boundaries of tanks which have been used to carry combustible liquids or chemicals; or,

(2) Within spaces adjacent to tanks which have been used to carry Grade D combustible liquids, except where the distance between such tanks and the work to be performed is not less than twenty-five (25) feet; or,

(3) Within or on the boundaries of fuel tanks; or,

(4) Within or on the boundaries of tanks carrying Grade B or Grade C flammable liquids or within spaces adjacent to such tanks; or,

(5) To pipelines, heat coils, pumps, fittings, or other appurtenances connected to such fuel tanks.

(c) Such inspections shall be made and evidenced as follows:

(1) In ports or places in the United States or its territories and possessions the inspection shall 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 or their representative shall select a person who, in the case of an individual vessel, shall be authorized to make such inspection. If the inspection indicates that such operations

can be undertaken with safety, a certificate setting forth the fact in writing and qualified as may be required, shall be issued by the certified marine chemist or the authorized person before the work is started. Such qualifications shall include any requirements as may be deemed necessary to maintain, insofar as can reasonably be done, the safe conditions in the spaces certified throughout the operation and shall include such additional tests and certifications as considered required. Such qualifications and requirements shall include precautions necessary to eliminate or minimize hazards that may be present from protective coatings or residues from cargoes.

(2) When not in such a port or place, and a marine chemist or such person authorized by the Officer in Charge, Marine Inspection, is not reasonably available, the inspection shall be made by the senior officer in the crew present and a proper entry shall be made in the vessel's logbook.

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

[CGFR 67-83, 33 FR 1118, Jan. 27, 1968, as amended by CGD 95-072, 60 FR 50469, Sept. 29, 1995]

Subpart 189.55—Plan Approval

§ 189.55-1 General.

(a) The following list of required plans in §189.55-5 is general in character, but includes all plans which normally show construction and safety features coming under the cognizance of the Coast Guard. In the case of a particular vessel, all of the plans enumerated may not be applicable and it is intended that only those plans and specifications be submitted as will clearly show the vessel's arrangements, construction and required equipment.

(b) In the following list of required plans in §189.55-5, the items which must be approved by the American Bureau of Shipping for vessels classed by that organization are indicated by an asterisk. When prints bearing record of such approval by the American Bureau of Shipping are forwarded to the Coast Guard they will in general be accepted as satisfactory except insofar as the law or the Coast Guard regulations contain requirements which are not covered by the American Bureau of Shipping.

§ 189.55-5 Plans and specifications required for new construction.

(a) *General.* (1) Specifications.

(2) General arrangement plan of decks, holds, inner bottoms, etc., and including inboard and outboard profile.

(b) *Hull structure.*¹(1) *Inner bottom plating and framing.

(2) *Midship section.

(3) *Shell plating and framing.

(4) *Stem, stern frame, and rudder.

(5) *Structural deck plans for strength decks.

(6) *Pillars and girders.

(7) *Watertight and oiltight bulkheads.

(8) *Foundations for main machinery and boilers.

(9) *Arrangement of ports, doors, and airports in shell plating.

(10) *Hatch coamings and covers in weather and watertight decks.

(11) *Details of hinged subdivision watertight doors and operating gear.

(12) *Scuppers and drains penetrating shell plating.

(13) Weight handling gear when required by the Officer in Charge, Marine Inspection, as provided for by §189.35-9.

(c) *Subdivision and stability.* Plans required by part 170 of this chapter.

(d) *Fire control.* (1) General arrangement plans showing for each deck the control stations, the various fire sections enclosed by fire resisting bulkheads, the arrangement of the alarm and extinguishing systems, the fire extinguishers, means of access to different compartments and decks and the ventilation system including location

¹The asterisk (*) indicates items which may require approval by the American Bureau of Shipping for vessels classed by that society.

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of ventilation shutdowns, positions of dampers and the number identifying each system.

(2) Ventilation diagram including dampers and other fire control features.

(3) Details of alarm systems.

(4) Details of extinguishing systems, including fire mains, carbon dioxide, foam and sprinkling systems.

(e) *Marine engineering.* For plans required for marine engineering equipment and systems. See Subchapter F (Marine Engineering) of this chapter.

(f) *Electrical engineering.* For plans required for electrical engineering, equipment, and systems, see Subchapter J (Electrical Engineering) of this chapter.

(g) *Lifesaving equipment.* These plans are to show the location and arrangement of embarkation decks, all overboard discharges and projections in way of launching lifeboats, weights of lifeboats fully equipped and loaded, working loads of davits and winches, types and sizes of falls, the manufacturer's name and identification for all equipment, and all other relevant and necessary information.

(1) Arrangement of lifeboats.

(2) Arrangement of davits.

(3) Location and stowage of liferafts and buoyant apparatus.

(h) *Accommodations for crewmembers and scientific personnel.* Arrangement plans showing accommodations, ventilation, escapes, hospitals, and sanitary facilities for all crewmembers and scientific personnel.

(i) *Magazines and magazine vans.* (1) All plans relating to the arrangement, construction, ventilation, and fire protection system for magazines and magazine vans. (The plans required for magazines and magazine vans to be installed or carried on a vessel after the vessel is in operation, are set forth in subpart 195.11 of this subchapter.)

(2) Ventilation and sprinkler system calculations for magazines and magazine vans.

(j) For vessels of 100 meters (328 feet) or more in length contracted for on or after September 7, 1990, a plan must be included which shows how visibility from the navigation bridge will meet

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the standards contained in § 190.02–15 of this subchapter.

[CGFR 67–83, 33 FR 1118, Jan. 27, 1968, as amended by CGD 79–023, 48 FR 51052, Nov. 4, 1983; CGD 85–099, 55 FR 32249, Aug. 8, 1990; CGD 88–032, 56 FR 35829, July 29, 1991; 56 FR 46354, Sept. 11, 1991; 56 FR 50754, Oct. 8, 1991]

§ 189.55–10 Plans required for alterations of existing vessels.

(a) In the event of alterations involving the safety of the vessel, the applicable plans shall be submitted for approval covering the proposed work except as modified by § 189.45–1.

§ 189.55–15 Procedure for submittal of plans.

(a) As the relative location of shipyards, design offices, and Coast Guard offices vary throughout the country, no specific routing will be required in the submittal of plans. In general, one of the following procedures would apply, but in a particular case, if a more expeditious procedure can be used, there will be no objection to its adoption.

(1) The plans may be submitted to the Officer in Charge, Marine Inspection, in the district in which the vessel is to be built. This procedure will be most expeditious in the case of those offices where personnel and facilities are available for examination and approval of plans locally.

(2) The plans may be submitted by visitors directly to the Commanding Officer, U.S. Coast Guard Marine Safety Center, 1900 Half Street, SW., Suite 1000, Room 525, Washington, DC 20024, or transmitted by mail to: Commanding Officer, U.S. Coast Guard Marine Safety Center, 2100 2nd St., SW., Stop 7102, Washington, DC 20593–7102, in a written or electronic format. Information for submitting the VSP electronically can be found at <http://www.uscg.mil/HQ/MSC>. In this case, the plans will be returned directly to the submitter, with a copy of the action being forwarded to the interested Officer in Charge, Marine Inspection.

(3) In the case of classed vessels, upon specific request by the submitter, the American Bureau of Shipping will arrange to forward the necessary plans to the Coast Guard indicating its action thereon. In this case, the plans will be

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returned as noted in paragraph (a)(2) of this section.

[CGFR 67–83, 33 FR 1118, Jan. 27, 1968]

EDITORIAL NOTE: For FEDERAL REGISTER citations affecting §189.55–15, see the List of CFR Sections Affected, which appears in the Finding Aids section of the printed volume and at www.fdsys.gov.

§ 189.55–20 Number of plans required.

(a) Three copies of each plan are normally required so that one can be returned to the submitter. If the submitter desires additional approved plans, a suitable number should be submitted to permit the required distribution.

[CGFR 67–83, 33 FR 1118, Jan. 27, 1968, as amended by CGFR 69–116, 35 FR 6862 Apr. 30, 1970]

Subpart 189.60—Certificates Under International Convention for Safety of Life at Sea, 1974

§ 189.60–1 Application.

The provisions of this subpart shall apply to all oceanographic research vessels on an international voyage. (See §188.05–10 of this subchapter.)

[CGD 95–012, 60 FR 48052, Sept. 18, 1995; 60 FR 50120, Sept. 28, 1995]

§ 189.60–5 Cargo Ship Safety Construction Certificate.

(a) All vessels on an international voyage are required to have a Cargo Ship Safety Construction Certificate. This certificate shall be issued by the U.S. Coast Guard or the American Bureau of Shipping to certain vessels on behalf of the United States of America as provided in Regulation 12, Chapter I, of the International Convention for Safety of Life at Sea, 1974.

(b) All such vessels shall meet the applicable requirements of this chapter for vessels on an international voyage.

[CGFR 67–83, 33 FR 1118, Jan. 27, 1968, as amended by CGD 90–008, 55 FR 30665, July 26, 1990]

§ 189.60–10 Cargo Ship Safety Equipment Certificate.

(a) All vessels on an international voyage are required to have a Cargo Ship Safety Equipment Certificate.

(b) All such vessels shall meet the applicable requirements of this chapter for vessels on an international voyage.

§ 189.60–15 Cargo Ship Safety Radio Certificate.

Every vessel equipped with a radio installation on an international voyage must have a Cargo Ship Safety Radio Certificate. Each radio installation must meet the requirements of the Federal Communication Commission and the International Convention for Safety of Life at Sea.

[USCG–1999–4976, 65 FR 6510, Feb. 9, 2000]

§ 189.60–25 Exemption Certificate.

(a) A vessel may be exempted by the Commandant from complying with certain requirements of the Convention under his administration upon request made in writing to him and transmitted via the Officer in Charge, Marine Inspection.

(b) When an exemption is granted to a vessel by the Commandant under and in accordance with the Convention, an Exemption Certificate describing such exemption shall be issued through the appropriate Officer in Charge, Marine Inspection, in addition to other required certificates.

§ 189.60–30 Safety Management Certificate.

All vessels to which 33 CFR part 96 applies on an international voyage must have a valid Safety Management Certificate and a copy of their company's valid Document of Compliance certificate on board.

[CGD 95–073, 62 FR 67515, Dec. 24, 1997]

§ 189.60–35 Availability of Certificates.

The Convention certificates must be on board the vessel and readily available for examination at all times.

[USCG–1999–4976, 65 FR 6510, Feb. 9, 2000]

§ 189.60–40 Duration of Convention certificates.

(a) The following certificates are valid for a period of not more than 60 months (5 years).

(1) A Cargo Ship Safety Construction Certificate.

(2) A Cargo Ship Safety Equipment Certificate.

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(3) A Safety Management Certificate.

(4) A Cargo Ship Safety Radio Certificate.

(b) An Exemption certificate must not be valid for longer than the period of the certificate to which it refers.

(c) A Convention certificate may be withdrawn, revoked, or suspended at any time when it is determined that the vessel is no longer in compliance with applicable requirements. (See § 2.01-70 of this chapter for procedures governing appeals.)

[USCG-1999-4976, 65 FR 6510, Feb. 9, 2000]

§ 189.60-45 American Bureau of Shipping.

(a) The American Bureau of Shipping, with its home office at ABS Plaza, 16855 Northchase Drive, Houston, TX 77060, is hereby designated as an organization duly authorized to issue the "Cargo Ship Safety Construction Certificate" to certain oceanographic research vessels on behalf of the United States of America as provided in Regulation 12, Chapter I, of the International Convention for Safety of Life at Sea, 1974, and Executive Order 12234 and the certificate shall be subject to the requirements in this subpart. The American Bureau of Shipping is authorized to place the official seal of the United States of America on the certificate. This designation and delegation to the American Bureau of Shipping shall be in effect until terminated by proper authority and notice of cancellation is published in the FEDERAL REGISTER.

(b) At the option of the owner or agent of a vessel on an international voyage and on direct application to the American Bureau of Shipping, the Bureau may issue to such vessel a Cargo Ship Safety Construction Certificate, having a period of validity of not more than 60 months after ascertaining that the vessel:

(1) Has met the applicable requirements of the Convention; and

(2) Is currently classed by the Bureau and classification requirements have been dealt with to the satisfaction of the Bureau.

(c) When the Bureau determines that a vessel to which it has issued a Cargo Ship Safety Construction Certificate no longer complies with the Bureau's

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applicable requirements for classification, the Bureau shall immediately furnish to the Coast Guard all relevant information, which will be used by the Coast Guard to determine whether or not to withdraw, revoke or suspend the Cargo Ship Safety Construction Certificate.

[CGFR 67-83, 33 FR 1118, Jan. 27, 1968, as amended by CGD 77-081, 46 FR 56204, Nov. 16, 1981; CGD 90-008, 55 FR 30665, July 26, 1990; CGD 96-041, 61 FR 50735, Sept. 27, 1996; USCG-2000-7790, 65 FR 58465, Sept. 29, 2000]

PART 190—CONSTRUCTION AND ARRANGEMENT

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Subpart 190.25—Rails and Guards

- 190.25-1 Application.
- 190.25-5 Where rails required.
- 190.25-10 Storm rails.
- 190.25-15 Guards in dangerous places.
- 190.25-90 Vessels contracted for prior to July 1, 1969.

AUTHORITY: 46 U.S.C. 2113, 3306; E.O. 12234, 45 FR 58801, 3 CFR, 1980 Comp., p. 277; Department of Homeland Security Delegation No. 0170.1.

SOURCE: CGFR 67-83, 33 FR 1125, Jan. 27, 1968, unless otherwise noted.

Subpart 190.01—Hull Structure

§ 190.01-1 Application.

(a) The provisions of this subpart, with the exception of § 190.01-90, shall apply to all vessels contracted for on or after March 1, 1968.

(b) Vessels contracted for prior to March 1, 1968, shall meet the requirements of § 190.01-90.

§ 190.01-5 Vessels subject to load line.

(a) For vessels assigned a load line, see Subchapter E (Load Lines) of this

chapter for special requirements as to strength, closure of openings, etc.

§ 190.01-10 Structural standards.

(a) In general, compliance with the standards established by the American Bureau of Shipping, see subpart 188.35 of this subchapter, will be considered as satisfactory evidence of the structural efficiency of the vessel. However, in special cases, a detailed analysis of the entire structure or some integral part may be made by the Coast Guard to determine the structural requirements.

§ 190.01-15 Special consideration.

(a) Special consideration will be given to the structural requirements for small vessels or vessels of an unusual design not contemplated by the rules of the American Bureau of Shipping.

§ 190.01-90 Vessels contracted for prior to March 1, 1968.

(a) Existing structure previously approved will be considered satisfactory so long as it is maintained in good condition to the satisfaction of the Officer in Charge, Marine Inspection. Minor repairs and alterations may be made to the same standards as the original construction.

(b) Conversions, major alterations, new installations, and replacements, shall meet the applicable specifications in this subpart for new vessels.

Subpart 190.02—Navigation Bridge Visibility

§ 190.02-1 Navigation bridge visibility.

Each oceanographic research vessel which is 100 meters (328 feet) or more in length and contracted for on or after September 7, 1990, must meet the following requirements:

(a) The field of vision from the navigation bridge, whether the vessel is in a laden or unladen condition, must be such that:

(1) From the conning position, the view of the sea surface is not obscured forward of the bow by more than the lesser of two ship lengths or 500 meters (1640 feet) from dead ahead to 10 degrees on either side of the vessel. Within this arc of visibility any blind sector

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caused by cargo, cargo gear, or other permanent obstruction must not exceed 5 degrees.

(2) From the conning position, the horizontal field of vision extends over an arc from at least 22.5 degrees abaft the beam on one side of the vessel, through dead ahead, to at least 22.5 degrees abaft the beam on the other side of the vessel. Blind sectors forward of the beam caused by cargo, cargo gear, or other permanent obstruction must not exceed 10 degrees each, nor total more than 20 degrees, including any blind sector within the arc of visibility described in paragraph (a)(1) of this section.

(3) From each bridge wing, the field of vision extends over an arc from at least 45 degrees on the opposite bow, through dead ahead, to at least dead astern.

(4) From the main steering position, the field of vision extends over an arc from dead ahead to at least 60 degrees on either side of the vessel.

(5) From each bridge wing, the respective side of the vessel is visible forward and aft.

(b) Windows fitted on the navigation bridge must be arranged so that:

(1) Framing between windows is kept to a minimum and is not installed immediately in front of any work station.

(2) Front windows are inclined from the vertical plane, top out, at an angle of not less than 10 degrees and not more than 25 degrees.

(3) The height of the lower edge of the front windows is limited to prevent any obstruction of the forward view previously described in this section.

(4) The height of the upper edge of the front windows allows a forward view of the horizon at the conning position, for a person with a height of eye of 1.8 meters (71 inches), when the vessel is at a forward pitch angle of 20 degrees.

(c) Polarized or tinted windows must not be fitted.

[CGD 85-099, 55 FR 32249, Aug. 8, 1990]

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Subpart 190.03—Subdivision and Stability

§ 190.03-1 General.

Each vessel must comply with the applicable requirements in Subchapter S of this chapter.

[CGD 79-023, 48 FR 51053, Nov. 4, 1983]

Subpart 190.05—General Fire Protection

§ 190.05-1 Application.

(a) The provisions of this subpart shall apply to all vessels, except as noted otherwise in this subpart.

(b) Non-self-propelled vessels of less than 300 gross tons shall not be subject to the provisions of this subpart.

§ 190.05-3 Fire hazards to be minimized.

(a) The general construction of the vessel shall be such as to minimize fire hazards.

§ 190.05-5 Woodwork insulated from heated surfaces.

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

§ 190.05-10 Chemical storeroom and lamp room construction.

(a) Chemical storerooms, lamp, paint, and oil lockers and similar compartments shall be constructed of steel or shall be wholly lined with metal.

§ 190.05-15 Segregation of spaces containing the emergency source of electric power.

(a) When a compartment containing the emergency source of electric power, or vital components thereof, adjoins a space containing either the ship's service generators or machinery necessary for the operation of the ship's service generators, all common bulkheads and/or decks shall be protected by approved "structural insulation" or other approved material. This protection shall be such as to be capable of preventing an excessive temperature rise in the space containing the

emergency source of electric power, or vital components thereof, for a period of at least 1 hour in the event of fire in the adjoining space. Bulkheads or decks meeting Class A-60 requirements, as defined by §72.05-10 of Subchapter H (Passenger Vessels) of this chapter, will be considered as meeting the requirements of this paragraph.

§ 190.05-20 Segregation of chemical laboratories and chemical storerooms.

(a) The provisions of this section shall apply to all vessels contracted for on or after March 1, 1968.

(b) Chemical storerooms shall not be located in horizontal proximity to nor below accommodation or safety areas.

(c) Chemical storerooms shall not be located adjacent to the collision bulkhead, nor boundary divisions of the boilerroom, engineroom, galley, or other high fire hazard area.

(d) Chemical laboratories shall not be located adjacent to nor immediately below safety areas. Wherever possible they shall be similarly separated from accommodation spaces and high fire hazard areas such as the galley.

Subpart 190.07—Structural Fire Protection

§ 190.07-1 Application.

(a) The provisions of this subpart, with the exception of §190.07-90, shall apply to all vessels of 4,000 gross tons and over carrying not more than 150 persons and contracted for on or after March 1, 1968.

(b) The provisions of this subpart, with the exception of §190.07-90, shall apply to all vessels of 300 gross tons and over, but less than 4,000 gross tons, carrying in excess of 16 persons in the scientific party but not more than 150 persons and contracted for on or after March 1, 1968.

(c) Vessels contracted for prior to March 1, 1968, shall meet the requirements of §190.07-90.

(d) Those vessels which carry more than 150 persons shall meet the requirements in §§72.05-5 through 72.05-60 of Subchapter H (Passenger Vessels) of this chapter.

§ 190.07-5 Definitions.

(a) *Standard fire tests.* A *standard fire test* is one which develops in the test furnace a series of time temperature relationships as follows:

- 5 minutes—1,000 °F.
- 10 minutes—1,300 °F.
- 30 minutes—1,550 °F.
- 60 minutes—1,700 °F.

(b) *A Class divisions.* Bulkheads or decks of the *A Class* shall be composed of steel or equivalent metal construction, suitably stiffened and made intact with the main structure of the vessel; such as shell, structural bulkheads, and decks. They shall be so constructed, that if subjected to the standard fire test, they would be capable of preventing the passage of flame and smoke for 1 hour.

(c) *B Class bulkheads.* Bulkheads of the *B Class* shall be constructed with approved incombustible materials and made intact from deck to deck and to shell or other boundaries. They shall be so constructed that, if subjected to the standard fire test, they would be capable of preventing the passage of flame for one-half hour.

(d) *C Class divisions.* Bulkheads or decks of the *C Class* shall be constructed of approved incombustible materials, but need meet no requirements relative to the passage of flame.

(e) *Steel or other equivalent metal.* Where the term *steel or other equivalent metal* is used in this subpart, it is intended to require a material which, by itself or due to insulation provided, has structural and integrity qualities equivalent to steel at the end of the applicable fire exposure.

(f) *Approved material.* Where in this subpart approved materials are required, they refer to materials approved under the applicable subparts of part 164 of Subchapter Q (Specifications) of this chapter, as follows:

Deck coverings	164.006
Structural insulation	164.007
Bulkhead panels	164.008
Incombustible materials	164.009
Interior finish	164.012

[CGFR 67-83, 33 FR 1125, Jan. 27, 1968, as amended by CGD 74-155, 41 FR 17910, Apr. 29, 1976]

§ 190.07-10 Construction.

(a) The hull, superstructure, structural bulkheads, decks, and deckhouses shall be constructed of steel. Alternately, the Commandant may permit the use of other suitable material in special cases, having in mind the risk of fire.

(b) The boundary bulkheads of general laboratory areas, chemical storerooms, galleys, paint and lamp lockers and emergency generator rooms shall be of "A" class construction.

(1) Permanently installed divisional bulkheads between laboratories spaces within a general laboratory area may be of B or C class construction.

(2) Temporary divisional bulkheads between laboratory spaces within a general laboratory area may be constructed of combustible materials when they are necessary to facilitate a specific scientific mission.

(c) The boundary bulkheads and decks separating the accommodations and control stations from hold and machinery spaces, galleys, main pantries, laboratories, and storerooms, other than small service lockers, shall be of "A" Class construction.

(1) The boundary bulkheads and decks separating general laboratory areas of 500 square feet or less from accommodations and control stations shall be of "A-15" Class construction as defined by § 72.05-10 of Subchapter H (Passenger Vessels) of this chapter.

(2) The boundary bulkheads and decks separating general laboratory areas of over 500 square feet from accommodations and control stations shall be of "A-30" Class construction as defined by § 72.05-10 of Subchapter H (Passenger Vessels) of this chapter.

(d) Within the accommodation and service areas the following conditions shall apply:

(1) Corridor bulkheads in accommodation spaces shall be of the "A" or "B" Class intact from deck to deck. Stateroom doors in such bulkheads may have a louver in the lower half.

(2) Elevator, dumbwaiter, stairtower, and other trunks shall be of "A" Class construction.

(3) Bulkheads not already specified to be of "A" or "B" Class construction may be of "A", "B", or "C" Class construction.

(4) The integrity of any deck in way of a stairway, shall be maintained by means of "A" or "B" class bulkheads and doors at one level. The integrity of a stairtower shall be maintained by "A" class doors at every level. The door shall be of the self-closing type. Holdback hooks will not be permitted. However, magnetic holdbacks operated from the bridge or other suitable remote control positions are acceptable.

(5) Interior stairs, including stringers and treads, shall be of steel.

(6) Except for washrooms and toilet spaces, deck coverings within accommodation spaces shall be of an approved type. However, overlays for leveling or finishing purposes which do not meet the requirements for an approved deck covering may be used in thicknesses not exceeding three-eighths of an inch.

(7) Ceilings, linings, and insulation, including pipe and duct laggings, shall be approved incombustible materials.

(8) Any sheathing, furring, or holding pieces incidental to the securing of any bulkhead, ceiling, lining, or insulation shall be of approved incombustible materials.

(9) Bulkheads, linings, and ceiling may have a combustible veneer within a room not to exceed two twenty-eighths of an inch in thickness. However, combustible veneers, trim, decorations, etc., shall not be used in corridors or hidden spaces. This is not intended to preclude the use of an approved interior finish or a reasonable number of coats of paint.

(e) Nitrocellulose or other highly flammable or noxious fume-producing paints or lacquers shall not be used.

(f) The provisions of paragraphs (d) (1) through (9) of this section apply to control spaces on vessels whose initial Application for Inspection is submitted to an Officer in Charge, Marine Inspection on or after June 15, 1987.

[CGFR 67-83, 33 FR 1125, Jan. 27, 1968, as amended by CGD 84-073, 52 FR 18364, May 15, 1987; 52 FR 22751, June 15, 1987]

§ 190.07-90 Vessels contracted for prior to March 1, 1968.

(a) Existing structure arrangements and materials previously approved will be considered satisfactory so long as they are maintained in good condition

to the satisfaction of the Officer in Charge, Marine Inspection. Minor repairs and alterations may be made to the same standards as the original construction.

(b) Conversions, major alterations, new installations, and replacements shall comply with the applicable specifications and requirements in this subpart for new vessels.

Subpart 190.10—Means of Escape

§ 190.10-1 Application.

(a) The provisions of this subpart, with the exception of § 190.10-90, shall apply to all vessels other than non-self-propelled vessels of less than 300 gross tons, contracted for on or after March 1, 1968.

(b) Vessels contracted for prior to March 1, 1968, shall meet the requirements of § 190.10-90.

(c) Non-self-propelled vessels of less than 300 gross tons shall not be subject to the provisions of this subpart.

§ 190.10-5 Two means required.

(a) There shall be at least two means of escape from all general areas where the crew or scientific personnel may be quartered or normally employed. At least one of these two means of escape shall be independent of watertight doors and hatches, except for quick acting watertight doors giving final access to weather decks.

§ 190.10-10 Location.

(a) The two means of escape shall be as remote as practicable so as to minimize the possibility of one incident blocking both escapes.

§ 190.10-15 Vertical ladders not accepted.

(a) Vertical ladders and deck scuttles shall not in general be considered satisfactory as one of the required means of escape. However, where it is demonstrated that the installation of a stairway would be impracticable, a vertical ladder may be used as the second means of escape.

§ 190.10-20 No means for locking doors.

(a) No means shall be provided for locking door giving access to either of

the two required means of escape except that crash doors or locking devices, capable of being easily forced in an emergency, may be employed provided a permanent and conspicuous notice to this effect is attached to both sides of the door. This paragraph shall not apply to outside doors to deckhouses where such doors are locked by key only and such key is under the control of one of the vessel's officers.

§ 190.10-25 Stairway size.

(a) Stairways shall be of sufficient width having in mind the number of persons having access to such stairs for escape purposes.

(b) All interior stairways, other than those within the machinery spaces, shall have minimum width of 28 inches. The angle of inclination with the horizontal of such stairways shall not exceed 50°.

(c) Special consideration for relief may be given if it is shown to be unreasonable or impracticable to meet the requirements in this section.

§ 190.10-30 Dead end corridors.

(a) Dead end corridors, or the equivalent, more than 40 feet in length shall not be permitted.

§ 190.10-35 Public spaces.

(a) In all cases, public spaces having a deck area of over 300 square feet shall have at least two exits. Where practicable, these exits shall give egress to different corridors, rooms, or spaces to minimize the possibility of one incident blocking both exits.

§ 190.10-40 Access to lifeboats.

(a) The stairways, corridors, and doors shall be so arranged as to permit a ready and direct access to the various lifeboat and liferaft embarkation areas.

§ 190.10-45 Weather deck communications.

(a) Vertical communication shall be provided between the various weather decks by means of permanent inclined ladders.

§ 190.10-90 Vessels contracted for prior to March 1, 1968.

(a) Existing arrangements previously approved will be considered satisfactory so long as they are maintained in good condition to the satisfaction of the Officer in Charge, Marine Inspection. Minor repairs and alterations may be made to the same standards as the original design: *Provided*, That in no case will a greater departure from the standards of §§ 190.10-5 through 190.10-45 be permitted than presently exists. Nothing in this paragraph shall be construed as exempting any vessel from having two means of escape from all main compartments where persons on board may be quartered or normally employed.

Subpart 190.15—Ventilation

§ 190.15-1 Application.

(a) The provisions of this subpart, with the exception of § 190.15-90, shall apply to all vessels other than non-self-propelled vessels of less than 300 gross tons, contracted for on or after March 1, 1968.

(b) Vessels contracted for prior to March 1, 1968, shall meet the requirements of § 190.15-90.

(c) Non-self-propelled vessels of less than 300 gross tons shall not be subject to the provisions of this subpart.

§ 190.15-5 Vessels using fuel having a flashpoint of 110 °F. or lower.

(a) Spaces containing machinery which uses, or tanks which contain, fuel having a flashpoint of 110 °F. or lower shall have natural supply and mechanical exhaust ventilation as required by this section.

(b) The mechanical exhaust system shall be such as to assure the air changes as noted in Table 190.15-5(b) depending on the size of the space.

TABLE 190.15-5(b)

Size of space, cubic feet		Minute per air change
Over	Not over	
.....	500	2
500	1000	3
1000	1500	4
1500 .....	.....	5

(c) Exhaust blower motors, unless of a totally enclosed, explosion-proof type, shall be located outside of the ducts and outside of the compartment required to be ventilated. Exhaust blower motors if mounted in any compartment shall be located as high above the bilge as practicable. Blower blades shall be nonsparking with reference to their housings.

(d) Exhaust blower switches shall be located outside of any space required to be ventilated by this section, and shall be of the type interlocked with the ignition switch so that the blowers are started before the engine ignition is switched on. A red warning sign at the switch shall state that the blowers shall be operated prior to starting the engines for a sufficient time to insure at least one complete change of air in the compartments.

(e) The area of the ducts shall be such as to limit the air velocity to a maximum of 2,000 feet per minute. Ducts may be of any shape: *Provided*, That in no case shall one cross section dimension exceed twice the other.

(f) At least two inlet ducts shall be located at one end of the compartment and they shall extend to the lowest part of the compartment or bilge on each side. Similar exhaust ducts shall be led to the mechanical exhaust system from the lowest part of the compartment or bilge on each side of the compartment at the end opposite from that at which the inlet ducts are fitted. These ducts shall be so installed that ordinary collection of water in the bilge will not close off the ducts.

(g) All ducts shall be of steel construction and reasonably gastight from end to end. The ducts shall lead as direct as possible and be properly fastened and supported.

(h) All supply ducts shall 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 shall be increased to compensate for the area of the screen wire. Dampers shall not be fitted in the supply ducts. Cowls or scoops shall be kept open at all times except when the stress of weather is such as to endanger the vessel if the openings are not temporarily closed. Supply and exhaust openings shall not

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be located where the natural flow of air is unduly obstructed, or adjacent to possible sources of vapor ignition, nor shall they be so located that exhaust air may be taken into the supply vents.

(i) Provision shall be made for closing all cowls or scoops when the fixed carbon dioxide system is operated.

§ 190.15-10 Ventilation for closed spaces.

(a) All enclosed spaces within the vessel shall be properly vented or ventilated. Means shall be provided to close off all vents and ventilators.

(b) Means shall be provided for stopping all fans in ventilation systems serving the chemical laboratories, scientific laboratories, chemical storerooms, and machinery spaces and for closing all doorways, ventilators, and annular spaces around funnels and other openings to such spaces, from outside these spaces, in case of fire.

(c) See §§194.15-5 and 194.20-5 of this subchapter for ventilation of chemical laboratories, scientific laboratories, and storerooms.

§ 190.15-15 Ventilation for living spaces and quarters.

(a) All living spaces shall be adequately ventilated in a manner suitable to the purpose of the space.

(b) All spaces used as quarters for crewmembers and scientific personnel shall be ventilated by a mechanical system unless it can be shown that a natural system will provide adequate ventilation. By a natural system is meant those spaces so located that the windows, ports, skylights, etc., and doors to passageways can be kept open and thereby provide adequate ventilation under all ordinary conditions of weather.

§ 190.15-90 Vessels contracted for prior to March 1, 1968.

(a) Existing arrangements previously approved will be considered satisfactory so long as they are maintained in good condition to the satisfaction of the Officer in Charge, Marine Inspection. Minor repairs and alterations may be made to the same standards as the original design: *Provided*, That in no case will a greater departure from the standards of §§190.15-5 through

190.15-15 be permitted than presently exists.

Subpart 190.20—Accommodations for Officers, Crew, and Scientific Personnel

SOURCE: CGD 95-027, 61 FR 26011, May 23, 1996, unless otherwise noted.

§ 190.20-1 Application.

(a) Except as noted below, the provisions of this subpart apply to all vessels contracted for on or after March 1, 1968.

(b) Vessels contracted for prior to March 1, 1968, must meet the requirements of § 190.20-90.

§ 190.20-5 Intent.

(a) The accommodations provided for officers, crew, and scientific personnel on all vessels must be securely constructed, properly lighted, heated, drained, ventilated, equipped, located, arranged, and, where practicable, shall be insulated from undue noise, heat, and odors.

(b) Provided the intent of this subpart is met, consideration may be given by the Officer in Charge, Marine Inspection to relax the requirements relating to the size and separation of accommodations for scientific personnel.

§ 190.20-10 Location of crew spaces.

(a) Crew quarters must not be located farther forward in the vessel than a vertical plane located at 5 percent of the vessel's length abaft the forward side of the stem at the designated summer load water line. However, for vessels in other than ocean or coastwise service, this distance need not exceed 8.5 meters (28 feet). For purpose of this paragraph, the vessel's length shall be as defined in §43.15-1 of subchapter E (Load Lines) of this chapter. Unless approved by the Commandant, no section of the deck head of the crew spaces may be below the deepest load line.

(b) There must be no direct communication, except through solid, close fitted doors or hatches between crew spaces and chain lockers, or machinery spaces.

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§ 190.20-15 Construction.

All crew spaces are to be constructed and arranged in a manner suitable to the purpose for which they are intended and so they can be kept in a clean, workable and sanitary condition.

§ 190.20-20 Sleeping accommodations.

(a) Where practicable, each licensed officer must be provided with a separate stateroom.

(b) Sleeping accommodations for the crew must be divided into rooms, no one of which must berth more than 4 persons.

(c) Each room must be of such size that there are at least 2.78 square meters (30 square feet) of deck area and a volume of at least 5.8 cubic meters (210 cubic feet) for each person accommodated. The clear head room must be not less than 190 centimeters (75 inches). In measuring sleeping accommodations any furnishings contained therein for the use of the occupants are not to be deducted from the total volume or from the deck area.

(d) Each person shall have a separate berth and not more than one berth may be placed above another. The berth must be composed of materials not likely to corrode. The overall size of a berth must not be less than 68 centimeters (27 inches) wide by 190 centimeters (75 inches) long, except by special permission of the Commandant. Where two tiers of berths are fitted, the bottom of the lower berth must not be less than 30 centimeters (12 inches) above the deck. The berths must not be obstructed by pipes, ventilating ducts, or other installations.

(e) A locker must be provided for each person accommodated in a room.

§ 190.20-25 Washrooms and toilet rooms.

(a) There must be provided at least 1 toilet, 1 washbasin, and 1 shower or bathtub for each 8 members or portion thereof in the crew to be accommodated who do not occupy rooms to which private or semi-private facilities are attached.

(b) The toilet rooms and washrooms must be located convenient to the sleeping quarters of the crew to which they are allotted but must not open di-

rectly into such quarters except when they are provided as private or semi-private facilities.

(c) All washbasins, showers, and bathtubs must be equipped with adequate plumbing, including hot and cold running water. All toilets must be installed with adequate plumbing for flushing. Where more than 1 toilet is located in a space or compartment, each toilet must be separated by partitions.

§ 190.20-30 Messrooms.

(a) Messrooms must be located as near to the galley as is practicable except where the messroom is equipped with a steam table.

(b) Each messroom must seat the number of persons expected to eat in the messroom at one time.

§ 190.20-35 Hospital space.

(a) Except as specifically modified by paragraph (f) of this section, each vessel which in the ordinary course of its trade makes voyages of more than 3 days duration between ports and which carries a crew of 12 or more, must be provided with a hospital space. This space must be situated with regard to the comfort of the sick so that they may receive proper attention in all weather.

(b) The hospital must be suitably separated from other spaces and must be used for the care of the sick and for no other purpose.

(c) The hospital must be fitted with berths in the ratio of 1 berth to every 12 members of the crew or portion thereof who are not berthed in single occupancy rooms, but the number of berths need not exceed 6. Where all single occupancy rooms are provided, the requirement for a separate hospital may be withdrawn, provided that 1 stateroom is fitted with a bunk accessible from both sides.

(d) [Reserved]

(e) The hospital must have a toilet, washbasin, and bathtub or shower conveniently situated. Other necessary suitable equipment such as a clothes locker, a table and a seat must be provided.

(f) On vessels in which the crew is berthed in single occupancy rooms, a

hospital space will not be required, provided that 1 room must be designated and fitted with use as a treatment or isolation room. This room must meet the following standards:

(1) The room must be available for immediate medical use; and

(2) A washbasin with hot and cold running water must be installed either in or immediately adjacent to the space and other required sanitary facilities must be conveniently located.

§ 190.20-40 Other spaces.

Each vessel shall have—

(a) Sufficient facilities where the crew may wash and dry their own clothes, including at least 1 sink supplied with hot and cold fresh water;

(b) Recreation spaces; and

(c) A space or spaces of adequate size on the open deck to which the crew has access when off duty.

§ 190.20-45 Lighting.

Each berth must have a light.

§ 190.20-50 Heating and cooling.

(a) All manned spaces must be adequately heated and cooled in a manner suitable to the purpose of the space.

(b) Radiators and other heating apparatus must be so placed and shielded, where necessary, to avoid risk of fire, danger or discomfort to the occupants. Pipes leading to radiators or heating apparatus must be insulated where those pipes create a hazard to persons occupying the space.

§ 190.20-55 Insect screens.

Provisions must be made to protect the crew quarters against the admission of insects.

§ 190.20-90 Vessels contracted for prior to March 1, 1968.

Existing structures, arrangements, materials, and facilities previously approved will be considered satisfactory so long as they are maintained in good condition to the satisfaction of the Officer in Charge, Marine Inspection. Minor repairs and alterations may be made to the same standards as the original construction, provided that in no case will a greater departure from the standards of §§190.20-5 through

190.20-55 be permitted than presently exists.

Subpart 190.25—Rails and Guards

§ 190.25-1 Application.

(a) The provisions of this subpart with the exception of §190.25-90, apply to all vessels contracted for on or after July 1, 1969.

(b) Vessels contracted for prior to July 1, 1969 shall meet the requirements of §190.25-90.

[CGFR 69-72, 34 FR 17503, Oct. 29, 1969]

§ 190.25-5 Where rails required.

(a) All vessels shall have efficient guard rails or bulwarks on decks and bridges. The height of rails or bulwarks shall be at least 39½ inches from the deck. At exposed peripheries of the freeboard and superstructure decks, the rails shall be in at least three courses, including the top. The opening below the lowest course shall not be more than 9 inches. The courses shall not be more than 15 inches apart. In the case of ships with rounded gunwales the guard rail supports shall be placed in the flat of the deck. On other decks and bridges the rails shall be in at least two courses, including the top, approximately evenly spaced. If it can be shown to the satisfaction of the Officer in Charge, Marine Inspection, that the installation of rails of such height will be unreasonable and impracticable, having regard to the business of the vessel, rails of a lesser height or in some cases grab rails may be accepted and inboard rails may be eliminated if the deck is not generally accessible.

(b) Where it can be shown to the satisfaction of the Commandant that a vessel is engaged exclusively in voyages of a sheltered nature, the provisions of paragraph (a) of this section may be relaxed.

[CGFR 69-72, 34 FR 17503, Oct. 29, 1969]

§ 190.25-10 Storm rails.

(a) On vessels in ocean and coastwise service, suitable storm rails shall be installed in all passageways and at the deckhouse sides where persons on board might have normal access. Storm rails shall be installed on both

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sides of passageways which are 6 feet or more in width.

§ 190.25-15 Guards in dangerous places.

(a) Suitable hand covers, guards, or rails shall be installed in way of all exposed and dangerous places such as gears, machinery, etc.

§ 190.25-90 Vessels contracted for prior to July 1, 1969.

(a) Existing structures, arrangements, materials, and facilities previously approved will be considered satisfactory so long as they are maintained in good condition to the satisfaction of the Officer in Charge, Marine Inspection. Minor repairs and alterations may be made to the same standards as the original construction: *Provided*, That in no case will a greater departure from the standards of §§190.25-5 through 190.25-15 be permitted than presently exists.

[CGFR 67-83, 33 FR 1125, Jan. 27, 1968, as amended by CGFR 69-72, 34 FR 17503, Oct. 29, 1969]

PARTS 191-192 [RESERVED]

PART 193—FIRE PROTECTION EQUIPMENT

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- 193.15-30 Alarms.
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- 193.15-90 Installations contracted for prior to March 1, 1968.

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- 193.30-1 Application.

Subpart 193.50—Hand Portable Fire Extinguishers and Semiportable Fire Extinguishing Systems, Arrangements and Details

- 193.50-1 Application.
- 193.50-5 Classification.
- 193.50-10 Location.
- 193.50-15 Spare charges.
- 193.50-20 Semiportable fire extinguishers.
- 193.50-90 Vessels contracted for prior to March 1, 1968.

Subpart 193.60—Fire Axes

- 193.60-1 Application.
- 193.60-5 Number required.
- 193.60-10 Location.

AUTHORITY: 46 U.S.C. 2213, 3102, 3306; E.O. 12234, 45 FR 58801, 3 CFR, 1980 Comp., p. 277; Department of Homeland Security Delegation No. 0170.1.

SOURCE: CGFR 67-83, 33 FR 1145, Jan. 27, 1968, unless otherwise noted.

Subpart 193.01—Application

§ 193.01-1 General.

(a) The provisions of this part shall apply to all vessels other than non-self-propelled vessels of less than 300 gross tons.

(b) Non-self-propelled vessels of less than 300 gross tons shall not be subject to the provisions of this part, except as provided otherwise by §§193.01-5 and 193.50-1.

§ 193.01-3 Incorporation by reference.

(a) Certain material is incorporated by reference into this part with the approval of the Director of the Federal

Register under 5 U.S.C. 552(a) and 1 CFR part 51. To enforce any edition other than that specified in this section, the Coast Guard must publish notice of change in the FEDERAL REGISTER and the material must be available to the public. All approved material is available for inspection at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call 202-741-6030 or go to http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html. Also, it is available for inspection at the Coast Guard, Office of Design and Engineering Standards (CG-521), 2100 2nd St., SW., Stop 7126, Washington, DC 20593-7126, 202-372-1405, and is available from the sources listed below.

(b) American Society for Testing and Materials (ASTM), 100 Barr Harbor Drive, West Conshohocken, PA 19428-2959, telephone 610-832-9585, <http://www.astm.org>.

(1) ASTM F 1121-87 (1993), Standard Specification for International Shore Connections for Marine Fire Applications, incorporation by reference approved for § 193.10-10.

(2) [Reserved]

(c) National Fire Protection Association (NFPA), 1 Batterymarch Park, Quincy, MA 02269-9101, telephone 800-344-3555, <http://www.nfpa.org>.

(1) NFPA 13-1996, Standard for the Installation of Sprinkler Systems, incorporation by reference approved for § 193.30-1.

(2) [Reserved]

[USCG-2009-0702, 74 FR 49240, Sept. 25, 2009]

§ 193.01-5 Equipment installed but not required.

(a) On all vessels, including non-self-propelled vessels of less than 300 gross tons, where fire detecting or extinguishing systems or equipment are not required, but are installed, the system or equipment and its installation shall meet the requirements of this part.

Subpart 193.05—Fire Detecting and Extinguishing Equipment, Where Required

§ 193.05-1 Fire detecting, manual alarm, and supervised patrol systems.

(a) Fire detecting, manual alarm, and supervised patrol systems are not required, but if installed, the systems shall meet the applicable requirements of part 76 of Subchapter H (Passenger Vessels) of this chapter.

§ 193.05-5 Fire main system.

(a) Fire pumps, hydrants, hose, and nozzles shall be installed on all manned vessels.

(b) Except as provided for in § 193.10-10(e), the fire main must be a pressurized or a remotely controlled system.

(c) The arrangements and details of the fire main system shall be as set forth in subpart 193.10.

[CGFR 67-83, 33 FR 1145, Jan. 27, 1968, as amended by CGD 75-031, 40 FR 48349, Oct. 15, 1975]

§ 193.05-10 Fixed fire extinguishing systems.

(a) Approved fire extinguishing systems shall be installed in those locations delineated in this section.

(b) A fixed carbon dioxide or other approved system shall be installed in all lamp and paint lockers, oil rooms, and similar spaces.

(c) Fire extinguishing systems shall be provided for internal combustion engine installations in accordance with the following:

(1) Enclosed spaces containing gasoline engines shall have fixed carbon dioxide systems.

(2) If a fire extinguishing system is installed to protect an internal combustion or gas turbine installation, the system shall be of the carbon dioxide type.

(3) On vessels of 1,000 gross tons and over, a fixed carbon dioxide system shall be installed in all spaces containing internal combustion or gas turbine main propulsion machinery, auxiliaries with an aggregate power of 1,000 b. hp. or greater, or their fuel oil units, including purifiers, valves, and manifolds.

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(d) A fixed carbon dioxide system shall be installed in all chemical store-rooms.

(e) On vessels of 1,000 gross tons and over, a fixed carbon dioxide, or foam system shall be installed in all spaces containing oil fired boilers, either main or auxiliary, or their fuel oil units, valves, or manifolds in the line between the settling tanks and the boilers. The arrangement and details of the foam system shall be as set forth in part 95 of Subchapter I (Cargo and Miscellaneous Vessels) of this chapter.

(f) Where an enclosed ventilating system is installed for electric propulsion motors or generators, a fixed carbon dioxide extinguishing system shall be installed in such system.

(g) The arrangements and details of the fixed carbon dioxide extinguishing systems shall be as set forth in subpart 193.15.

(h) Additional specific requirements for fire extinguishing systems for spaces containing explosives and other dangerous articles or substances are in part 194 of this subchapter.

§ 193.05-15 Hand portable fire extinguishers and semiportable fire extinguishing systems.

(a) Approved hand portable fire extinguishers and semiportable fire extinguishing systems shall be installed on all manned vessels as set forth in subpart 193.50.

Subpart 193.10—Fire Main System, Details

§ 193.10-1 Application.

(a) The provisions of this subpart, with the exception of § 193.10-90, shall apply to all vessels contracted for on or after March 1, 1968.

(b) Vessels contracted for prior to March 1, 1968, shall meet the requirements of § 193.10-90.

§ 193.10-5 Fire pumps.

(a) Vessels shall be equipped with independently driven fire pumps in accordance with Table 193.10-5(a).

TABLE 193.10-5(a)

Gross tons		Min-imum number of pumps	Hose and hydrant size, inches	Nozzle orifice size, inches	Length of hose, feet
Over	Not over				
	100	1	1 1/2	1 1/2	50
100	1,000	1	1 1/2	5/8	50
1,000	1,500	2	1 1/2	5/8	50
1,500	.....	2	2 1/2	2 7/8	≥ 50

¹On vessels of 65 feet in length or less, 3/4-inch hose of good commercial grade together with a commercial garden hose nozzle may be used. The pump may be hand operated and the length of hose shall be sufficient to assure coverage of all parts of the vessel.

²75 feet of 1 1/2-inch hose and 5/8-inch nozzle may be used where specified by § 193.10-10(b) for interior locations and 50 feet 1 1/2-inch hose may be used in exterior locations on vessels in other than ocean or coastwise services.

(b) On vessels of 1,000 gross tons and over on an international voyage, each required fire pump, while delivering water through the fire main system at a pressure corresponding to that required by paragraph (c) of this section, shall have a minimum capacity of at least two-thirds of that required for an independent bilge pump. However, in no case shall the capacity of each fire pump be less than that otherwise required by this section.

(c) Each pump must be capable of delivering water simultaneously from the outlets having the greatest pressure drop from the five pumps to the nozzles which may not always be the two highest outlets, at a Pitot tube pressure of not less than 50 p.s.i. Where 1 1/2-inch hose is permitted in lieu of 2 1/2-inch hose by footnote 2 of Table 193.10-5(a), the pump capacity shall be determined on the same basis as if 2 1/2-inch hose had been permitted. Where 3/4-inch hose is permitted by Table 193.10-5(a), the Pitot tube pressure may not be less than 35 p.s.i.

(d) Fire pumps shall be fitted on the discharge side with relief valves set to relieve at 25 p.s.i. in excess of the pressure necessary to maintain the requirements of paragraph (c) of this section or 125 p.s.i., whichever is greater. Relief valves may be omitted if the pumps, operating under shutoff conditions, are not capable of developing a pressure exceeding this amount.

(e) Fire pumps shall be fitted with a pressure gage on the discharge side of the pumps.

(f) Fire pumps may be used for other purposes provided at least one of the required pumps is kept available for

use on the fire system at all times. In no case shall a pump having connection to an oil line be used as a fire pump. Branch lines connected to the fire main for purposes other than fire and deck wash shall be so arranged that adequate water can be made continuously available for firefighting purposes.

(g) The total area of the pipes leading from a pump shall not be less than the discharge area of the pump.

(h) On vessels with oil fired boilers, either main or auxiliary, or with internal combustion propulsion machinery, where 2 fire pumps are required, they shall be located in separate spaces, and the arrangement, pumps, sea connections, and sources of power shall be such as to insure that a fire in any one space will not put all of the fire pumps out of operation. However, where it is shown to the satisfaction of the Commandant that it is unreasonable or impracticable to meet this requirement due to the size or arrangement of the vessel, or for other reasons, the installation of a total flooding carbon dioxide system may be accepted as an alternate method of extinguishing any fire which would affect the powering and operation for the required fire pumps.

(i) Except as provided for in §193.10-10(e), a sufficient number of hose streams for fire fighting purposes must be immediately available from the fire main at all times by either of the following methods:

(1) *Maintenance of water pressure.* (i) Water pressure must be maintained on the fire main at all times by the continuous operation of:

(A) One of the fire pumps; or

(B) Another suitable pump capable of supplying one hose stream at a Pitot tube pressure of not less than 50 p.s.i. (35 p.s.i. for ¾-inch hose); or,

(C) A pressure tank capable of supplying one hose stream at a Pitot tube pressure of not less than 50 p.s.i. (35 p.s.i. for ¾-inch hose) for five minutes.

(ii) An audible alarm must be installed to sound in a continuously manned space if the pressure in the fire main drops to less than that necessary to maintain the minimum Pitot tube pressures specified in §193.10-5(i)(1)(i).

(2) *Remote control of fire pumps.* (i) At least one fire pump must be capable of remote activation and control.

(ii) If the fire pump is in a continuously manned machinery space, the controls for operating it and the controls for all necessary valves must be located on the manned operating platform in that space.

(iii) If the fire pump is in an unmanned machinery space, the controls for its operation and the controls for all necessary valves must be located in:

(A) The fire control station, if any; or,

(B) The bridge, if there is no fire control station; or,

(C) A readily accessible space acceptable to the Officer in Charge, Marine Inspection.

[CGFR 67-83, 33 FR 1145, Jan. 27, 1968, as amended by CGD 75-031, 40 FR 48349, Oct. 15, 1975; CGD 95-028, 62 FR 51220, Sept. 30, 1997]

§ 193.10-10 Fire hydrants and hose.

(a) The size of fire hydrants, hose, and nozzles and the length of hose required shall be as noted in Table 193.10-5(a).

(b) In lieu of the 2½-inch hose and hydrants specified in Table 193.10-5(a), on vessels over 1,500 gross tons, the hydrants in interior locations may have siamese connections for 1½-inch hose. In these cases the hose shall be 75 feet in length, and only one hose will be required at each fire station; however, if all such stations can be satisfactorily served with 50-foot lengths, 50-foot hose may be used.

(c) On vessels of 500 gross tons and over there must be at least one shore connection to the fire main available to each side of the vessel in an accessible location. Suitable cutout valves and check valves must be provided for furnishing the vessel's shore connections with couplings mating those on the shore fire lines. Vessels of 500 gross tons and over on an international voyage, must be provided with at least one international shore connection complying with ASTM F 1121 (incorporated by reference, see §193.01-3). Facilities must be available enabling an international shore connection to be used on either side of the vessel.

(d) Fire hydrants must be of sufficient number and so located that any

part of the vessel, other than main machinery spaces, may be reached with at least 2 streams of water from separate outlets, at least one of which must be from a single length of hose. In main machinery spaces, all portions of such spaces must be capable of being reached by at least 2 streams of water, each of which must be from a single length of hose from separate outlets; however, this requirement need not apply to shaft alleys containing no assigned space for the stowage of combustibles. Fire hydrants must be numbered as required by §196.37-15 of this subchapter.

(e) All parts of the fire main located on exposed decks shall either be protected against freezing or be fitted with cutout valves and drain valves so that the entire exposed parts of such piping may be shut off and drained in freezing weather. Except when closed to prevent freezing, such valves shall be sealed open.

(f) The outlet at the fire hydrant shall be limited to any position from the horizontal to the vertical pointing downward, so that the hose will lead horizontally or downward to minimize the possibility of kinking.

(g) Each fire hydrant shall be provided with a single length of hose with nozzle attached and a spanner. A suitable hose rack or other device shall be provided for the proper stowage of the hose. If the hose is not stowed in the open or behind glass so as to be readily seen, the enclosures shall be marked in accordance with §196.37-15 of this subchapter.

(h) Fire hose shall be connected to the outlets at all times. However, at open decks where no protection is afforded to the hose in heavy weather, the hose may be temporarily removed from the hydrant and stowed in an accessible nearby location.

(i) Each fire hydrant must have at least 1 length of firehose. Each firehose must have a combination solid stream and water spray nozzle that is approved under subpart 162.027 of this subchapter, except 19 millimeters (3/4 inch) hose may have a garden hose nozzle that is bronze or metal with strength and corrosion resistance equivalent to bronze. Combination solid stream and water spray nozzles

previously approved under subpart 162.027 of this chapter may be retained so long as they are maintained in good condition to the satisfaction of the Officer in Charge, Marine Inspection.

(j) When the firehose nozzle in the below locations was previously approved under subpart 162.027 of this chapter, a low-velocity water spray applicator, also previously approved under subpart 162.027, of this chapter must be installed as follows:

(1) At least 1 length of firehose on each fire hydrant outside and in the immediate vicinity of each laboratory;

(2) Each firehose in each propulsion machinery space containing oil-fired boiler, internal combustion machinery, or oil fuel unit on a vessel of 1000 gross tons or more—the length of each applicator must be 1.2 meters (4 feet).

(k) Fixed brackets, hooks, or other means for stowing an applicator must be next to each fire hydrant that has an applicator under paragraph (j) of this section.

(l) Firehose shall not be used for any other purpose than fire extinguishing, drills, and testing.

(m) Fire hydrants, nozzles, and other fittings shall have threads to accommodate the hose connections noted in this paragraph. Firehose and couplings shall be as follows:

(1) Couplings shall be of brass, bronze, or other equivalent metal. National Standard firehose coupling threads shall be used for the 1½-inch and 2½-inch sizes, *i.e.*, 9 threads per inch for 1½-inch hose and 7½ threads per inch for 2½-inch hose.

(2) Unlined hose shall not be used in the machinery spaces.

(3) Where ¾-inch hose is permitted by Table 193.10-5(a), the hose and couplings shall be of good commercial grade.

(4) Each section of fire hose used after January 1, 1980 must be lined commercial fire hose that conforms to Underwriters' Laboratories, Inc. Standard 19 or Federal Specification ZZ-H-451E. Hose that bears the label of Underwriters' Laboratories, Inc. as lined fire hose is accepted as conforming to this requirement. Each section of replacement fire hose or any section of new fire hose placed aboard a vessel after January 1, 1977 must also conform

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to the specification required by this paragraph.

[CGFR 67-83, 33 FR 1145, Jan. 27, 1968, as amended by CGD 74-60, 41 FR 43152, Sept. 30, 1976; CGD 76-086, 44 FR 2394, Jan. 11, 1979; CGD 88-032, 56 FR 35830, July 29, 1991; CGD 95-027, 61 FR 26012, May 23, 1996; USCG-2000-7790, 65 FR 58465, Sept. 29, 2000]

§ 193.10-15 Piping.

(a) All piping, valves, and fittings, shall meet the applicable requirements of Subchapter F (Marine Engineering) of this chapter.

(b) All distribution cut-off valves shall be marked as required by § 196.37-10 of this subchapter.

(c) For vessels on an international voyage, the diameter of the fire main shall be sufficient for the effective distribution of the maximum required discharge from two fire pumps operating simultaneously. This requirement is in addition to § 193.10-5(c). The discharge of this quantity of water through hoses and nozzles at a sufficient number of adjacent hydrants must be at a minimum Pitot tube pressure of 50 pounds per square inch.

[CGFR 67-83, 33 FR 1145, Jan. 27, 1968, as amended by CGD 75-031, 40 FR 48349, Oct. 15, 1975]

§ 193.10-90 Installations contracted for prior to March 1, 1968.

Installations contracted for prior to March 1, 1968, must meet the following requirements:

(a) Except as specifically modified by this paragraph, vessels must comply with the requirements of §§ 193.10-5 through 193.10-15 insofar as the number and general type of equipment is concerned.

(b) Existing equipment, except firehose nozzles and low-velocity water spray applicators, previously approved but not meeting the applicable requirements of §§ 193.10-5 through 193.10-15, may be continued in service so long as they are maintained in good condition to the satisfaction of the Officer in Charge, Marine Inspection. Minor repairs, alterations, and replacements may be permitted to the same standards as the original installations. However, all new installations or major replacements must meet the applicable

requirements in this subpart for new installations.

(c) Vessels must comply with the general requirements of § 193.10-5 (c) through (g), § 193.10-10 (d) through (m), and § 193.10-15 insofar as is reasonable and practicable.

(d) Each firehose nozzle must meet § 193.10-10(i), and each low-velocity water spray applicator must meet § 193.10-10(j).

[CGD 95-027, 61 FR 26013, May 23, 1996]

Subpart 193.15—Carbon Dioxide Extinguishing Systems, Details

§ 193.15-1 Application.

(a) The provisions of this subpart shall apply to all new installations contracted for on or after March 1, 1968.

(b) Installations contracted for prior to March 1, 1968, shall meet the requirements of § 193.15-90.

(c) The requirements of this subpart are based on a "high pressure system," *i.e.*, one in which the carbon dioxide is stored in liquid form at atmospheric temperature. Details for "low pressure systems," *i.e.*, those in which the carbon dioxide is stored in liquid form at a continuously controlled low temperature, may be specifically approved by the Commandant where it is demonstrated that a comparable degree of safety and fire extinguishing ability is achieved.

§ 193.15-5 Quantity, pipe sizes, and discharge rates.

(a) *General.* The amount of carbon dioxide required for each space shall be as determined by paragraphs (b) through (d) of this section.

(b) *Total available supply.* A separate supply of carbon dioxide need not be provided for each space protected. The total available supply shall be at least sufficient for the space requiring the greatest amount.

(c) *Enclosed ventilation systems for rotating electrical propulsion equipment.* (1) The number of pounds of carbon dioxide required for the initial charge shall be equal to the gross volume of the system divided by 10 for systems having a volume of less than 2,000 cubic feet, and

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divided by 12 for systems having a volume of 2,000 cubic feet or more.

(2) In addition to the amount required by paragraph (c)(1) of this section there shall be sufficient carbon dioxide available to permit delayed discharges of such quantity as to maintain at least a 25-percent concentration until the equipment can be stopped. If the initial discharge is such as to achieve this concentration until the equipment is stopped, no delayed discharge need be provided.

(3) The piping for the delayed discharge shall not be less than 1/2-inch standard pipe, and no specific discharge rate need be applied to such systems. On small systems, this pipe may be incorporated with the initial discharge piping.

(4) The piping for the initial charge shall be in accordance with Table 193.15-5(d)(4), and the discharge of the required amount shall be completed within 2 minutes.

(d) *Machinery spaces, paint lockers, tanks, chemical storerooms, and similar spaces.* (1) Except as provided in paragraph (d)(3) of this section, the number of pounds of carbon dioxide required for each space shall be equal to the gross volume of the space divided by the appropriate factor noted in Table 193.15-5(d)(1). If fuel can drain from the compartment being protected to an adjacent compartment, or if the compartments are not entirely separate, the requirements for both compartments shall be used to determine the amount of carbon dioxide to be provided. The carbon dioxide shall be arranged to discharge into both such compartments simultaneously.

TABLE 193.15-5(d)(1)
[Gross volume of compartment, cubic feet]

Over	Not over	Factor
.....	500	15
500	1,600	16
1,600	4,500	18
4,500	50,000	20
50,000 .....	.....	22

(2) For the purpose of the requirements of this paragraph, the volume of the machinery space shall be taken as exclusive of the normal machinery casing unless the boiler, internal combustion machinery, or fuel oil installa-

tions extend into such space, in which case the volume shall be taken to the top of the casing or the next material reduction in casing area, whichever is lower. "Normal machinery casing" and "material reduction in casing area" shall be defined as follows:

(i) By "normal machinery casing" shall be meant a casing the area of which is not more than 40 percent of the maximum area of the machinery space.

(ii) By "material reduction in casing area" shall be meant a reduction to at least 40 percent of the casing area.

(3) For vessels on an international voyage contracted for on or after May 26, 1965, the amount of carbon dioxide required for a space containing propulsion boilers or internal combustion propulsion machinery shall be as given by paragraphs (d)(1) and (2) of this section or by dividing the entire volume, including the casing, by a factor of 25, whichever is the larger.

(4) Branch lines to the various spaces shall be as noted in Table 193.15-5(d)(4).

TABLE 193.15-5(d)(4)

Maximum quantity of carbon dioxide required, pounds	Minimum pipe size, inches
100	1/2
225	3/4
300	1
600	1 1/4
1,000	1 1/2
2,450	2
2,500	2 1/2
4,450	3
7,100	3 1/2
10,450	4
15,000	4 1/2

(5) Distribution piping within the space shall be proportioned from the supply line to give proper distribution to the outlets without throttling.

(6) The number, type, and location of discharge outlets shall be such as to give a uniform distribution throughout the space.

(7) The total area of all discharge outlets shall not exceed 85 percent nor be less than 35 percent of the normal cylinder outlet area or the area of the supply pipe, whichever is smaller. The nominal cylinder outlet area in square inches shall be determined by multiplying the factor 0.0022 by the number

of pounds of carbon dioxide required, except that in no case shall this outlet area be less than 0.110 square inch.

(8) The discharge of at least 85 percent of the required amount of carbon dioxide shall be complete within 2 minutes.

§ 193.15-10 Controls.

(a) Except as noted in § 193.15-20(b), all controls and valves for the operation of the system shall be outside the space protected and shall not be located in any space that might be cut off or made inaccessible in the event of fire in any of the spaces protected.

(b) If the same cylinders are used to protect more than one hazard, a manifold with normally closed stop valves shall be used to direct the carbon dioxide into the proper space. If cylinders are used to protect only one hazard, a normally closed stop valve shall be installed between the cylinders and the hazard except for systems of the type indicated in § 193.15-5(d) which contain not more than 300 pounds of carbon dioxide.

(c) One of the stations controlling the system for the main machinery space and the chemical storerooms shall be located as convenient as practicable to one of the main escapes from these spaces. All control stations and the individual valves and controls shall be marked as required by §§ 196.37-10 and 196.37-13 of this subchapter.

(d) Systems of the type indicated in § 193.15-5(d) shall be actuated by one control operating the valve to the space and a separate control releasing at least the required amount of carbon dioxide. These two controls shall be located in a box or other enclosure clearly identified for the particular space. Those systems installed without a stop valve shall be operated by one control releasing at least the required amount of carbon dioxide.

(e) Where provisions are made for the simultaneous release of a given amount of carbon dioxide by operation of a remote control, provisions shall also be made for manual control at the cylinders. Where gas pressure from pilot cylinders is used as a means for releasing the remaining cylinders, not less than two pilot cylinders shall be used for systems consisting of more than

two cylinders. Each of the pilot cylinders shall be capable of manual control at the cylinder, but the remaining cylinders need not be capable of individual manual control.

(f) Systems of the type indicated in § 193.15-5(d), other than systems for tanks, which are of more than 300 pounds of carbon dioxide, shall be fitted with an approved delayed discharge so arranged that the alarm will be sounded for at least 20 seconds before the carbon dioxide is released into the space. Such systems of not more than 300 pounds of carbon dioxide shall also have a similar delayed discharge, except for those systems for tanks and for spaces which have a suitable horizontal escape.

(g) All distribution valves and controls shall be of an approved type. All controls shall be suitably protected.

(h) Complete but simple instructions for the operation of the systems must be located in a conspicuous place at or near all pull boxes, stop valve controls and in the CO₂ cylinder storage room. On systems in which the CO₂ cylinders are not within the protected space, these instructions must also include a schematic diagram of the system and instructions detailing alternate methods of discharging the system should the manual release or stop valve controls fail to operate. Each control valve to branch lines must be marked to indicate the related space served.

(i) If the space or enclosure containing the carbon dioxide supply for controls is to be locked, a key to the space or enclosure shall be in a break-glass-type box conspicuously located adjacent to the opening.

[CGFR 67-83, 33 FR 1145, Jan. 27, 1968, as amended by CGD 74-100R, 40 FR 6209, Feb. 10, 1975]

§ 193.15-15 Piping.

(a) The piping, valves, and fittings shall have a bursting pressure of not less than 6,000 pounds per square inch.

(b) All piping, in nominal sizes not over $\frac{3}{4}$ inch shall be at least Schedule 40 (standard weight) and in nominal sizes over $\frac{3}{4}$ inch, shall be at least Schedule 80 (extra heavy).

(c) All piping valves, and fittings of ferrous materials shall be protected inside and outside against corrosion unless specifically approved otherwise by the Commandant.

(d) A pressure relief valve or equivalent set to relieve between 2,400 and 2,800 pounds per square inch shall be installed in the distribution manifold or such other location as to protect the piping in the event that all branch line shutoff valves are closed.

(e) All dead-end lines shall extend at least 2 inches beyond the last orifice and shall be closed with cap or plug.

(f) All piping, valves, and fittings shall be securely supported, and where necessary, protected against injury.

(g) Drains and dirt traps shall be fitted where necessary to prevent the accumulation of dirt or moisture. Drains and dirt traps shall be located in accessible locations where possible.

(h) Piping shall be used for no other purpose except that it may be incorporated with the fire-detecting system.

(i) Piping passing through living quarters shall not be fitted with drains or other openings within such spaces.

(j) Installation test requirements are:

(1) Upon completion of the piping installation, and before the cylinders are connected, a pressure test shall be applied as set forth in this paragraph. Only carbon dioxide or other inert gas shall be used for this test.

(2) The piping from the cylinders to the stop valves in the manifold shall be subjected to a pressure of 1,000 pounds per square inch. With no additional gas being introduced to the system, it shall be demonstrated that the leakage of the system is such as not to permit a pressure drop of more than 150 pounds per square inch per minute for a 2-minute period.

(3) The individual branch lines to the various spaces protected shall be subjected to a test similar to that described in the preceding subparagraph with the exception that the pressure used shall be 600 pounds per square inch in lieu of 1,000 pounds per square inch. For the purpose of this test, the distribution piping shall be capped within the space protected at the first joint ahead of the nozzles.

(4) In lieu of the tests prescribed in the preceding paragraphs in this para-

graph, small independent systems protecting spaces such as emergency generator rooms, lamp lockers, chemical storerooms, etc., may be tested by blowing out the piping with air at a pressure of at least 100 pounds per square inch.

§ 193.15-20 Carbon dioxide storage.

(a) Except as provided in paragraph (b) of this section, the cylinders shall be located outside the spaces protected, and shall not be located in any space that might be cut off or made inaccessible in the event of a fire in any of the spaces protected.

(b) Systems of the type indicated in § 193.15-5(d), consisting of not more than 300 pounds of carbon dioxide, may have cylinders located within the space protected. If the cylinder stowage is within the space protected, the system shall be arranged in an approved manner to be automatically operated by a heat actuator within the space in addition to the regular remote and local controls.

(c) The space containing the cylinders shall be properly ventilated and designed to preclude an anticipated ambient temperature in excess of 130 °F.

(d) Cylinders shall be securely fastened and supported, and where necessary, protected against injury.

(e) Cylinders shall be so mounted as to be readily accessible and capable of easy removal for recharging and inspection. Provisions shall be available for weighing the cylinders.

(f) Where subject to moisture, cylinders shall be so installed as to provide a space of at least 2 inches between the flooring and the bottom of the cylinders.

(g) Cylinders shall be mounted in an upright position or inclined not more than 30 degrees from the vertical. However, cylinders which are fitted with flexible or bent siphon tubes may be inclined not more than 80 degrees from the vertical.

(h) Where check valves are not fitted on each independent cylinder discharge, plugs or caps shall be provided for closing outlets when cylinders are removed for inspection or refilling.

(i) All cylinders used for storing carbon dioxide must be fabricated, tested,

and marked in accordance with the requirements of §§ 147.60 and 147.65 of this chapter.

[CGFR 67-83, 33 FR 1145, Jan. 27, 1968, as amended by CGD 84-044, 53 FR 7753, Mar. 10, 1988]

§ 193.15-25 Discharge outlets.

(a) Discharge outlets shall be of an approved type.

§ 193.15-30 Alarms.

(a) Space normally accessible to persons on board while the vessel is being navigated which are protected by a carbon dioxide extinguishing system and are required to be fitted with a delayed discharge system other than paint and lamp lockers and similar small spaces, shall be fitted with an approved audible alarm which will be automatically sounded when the carbon dioxide is admitted to the space. The alarm shall be conspicuously and centrally located and shall be marked as required by § 196.37-9 of this subchapter. Such alarms shall be so arranged as to sound during the 20-second delay period prior to the discharge of carbon dioxide into the space, and the alarm shall depend on no source of power other than the carbon dioxide.

§ 193.15-35 Enclosure openings.

(a) Where mechanical ventilation is provided for spaces which are protected by carbon dioxide extinguishing systems provisions shall be made so that the ventilation system is automatically shut down with the operation of the system to that space.

(b) Where natural ventilation is provided for spaces protected by a carbon dioxide extinguishing system, provisions shall be made for easily and effectively closing off the ventilation.

(c) Means shall be provided for closing all other openings to the space protected from outside such space. In this respect, relatively tight doors, shutters, or dampers shall be provided for openings in the lower portion of the space. The construction shall be such that openings in the upper portion of the space can be closed off either by permanently installed means or by the use of canvas or other material which is normally carried by the vessel.

§ 193.15-40 Pressure relief.

(a) Where necessary, relatively tight compartments such as refrigeration spaces, paint lockers, etc., shall be provided with suitable means for relieving excessive pressure accumulating within the compartment when the carbon dioxide is injected.

§ 193.15-90 Installations contracted for prior to March 1, 1968.

(a) Installations contracted for prior to March 1, 1968, shall meet the following requirements:

(1) Existing arrangements, materials, and facilities previously approved shall be considered satisfactory so long as they meet the minimum requirements of this paragraph and they are maintained in good condition to the satisfaction of the Officer in Charge, Marine Inspection. Minor repairs, alterations, and replacements may be permitted to the same standards as the original installations. However, all new installations or major replacements shall meet the applicable requirements in this subpart for new installations.

(2) The details of the systems shall be in general agreement with §§ 193.15-5 through 193.15-40 insofar as is reasonable and practicable, with the exception of § 193.15-5(d) (1), (2), and (4), covering machinery spaces, etc., which systems may be installed in accordance with paragraphs (a) (3) through (6) of this section.

(3) In boilerrooms, the bilges shall be protected by a system discharging principally below the floorplates. Perforated pipe may be used in lieu of discharge nozzles for such systems. The number of pounds of carbon dioxide shall be equal to the gross volume of the boilerroom taken to the top of the boilers divided by 36. In the event of an elevated boilerroom which drains to the machinery space, the system shall be installed in the engine room bilge and the gross volume shall be taken to the flat on which the boilers are installed.

(4) In machinery spaces where main propulsion internal combustion machinery is installed, the number of pounds of carbon dioxide required shall be equal to the gross volume of the space taken to the under side of the

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deck forming the hatch opening divided by 22.

(5) In miscellaneous spaces other than cargo or main machinery spaces the number of pounds of carbon dioxide required shall be equal to the gross volume of the space divided by 22.

(6) Branch lines to the various spaces other than cargo and similar spaces shall be as noted in Table 193.15-90(a)(6). This table is based on cylinders having discharge outlets and siphon tubes of 3/8-inch diameter.

TABLE 193.15-90(a)(6)

Number of cylinders		Nominal pipe size, inches
Over	Not over	
.....	2	1/2—standard.
2	4	3/4—standard.
4	6	1—extra heavy.
6	12	1 1/4—extra heavy.
12	16	1 1/2—extra heavy.
16	27	2—extra heavy.
27	39	2 1/2—extra heavy.
39	60	3—extra heavy.
60	80	3 1/2—extra heavy.
80	104	4—extra heavy.
104	165	5—extra heavy.

Subpart 193.30—Automatic Sprinkler Systems

§ 193.30-1 Application.

Automatic sprinkling systems shall comply with NFPA 13-1996.

[CGD 95-028, 62 FR 51220, Sept. 30, 1997]

Subpart 193.50—Hand Portable Fire Extinguishers and Semiportable Fire Extinguishing Systems, Arrangements and Details

§ 193.50-1 Application.

(a) The provisions of this subpart, with the exception of §193.50-90, shall apply to all vessels, including non-self-propelled vessels of less than 300 gross tons, contracted for on or after March 1, 1968.

(b) All vessels other than unmanned barges contracted for prior to March 1, 1968, shall meet the requirements of §193.50-90.

(c) All unmanned barges are exempted from the requirements in this subpart. However, if such barges carry on board hand portable fire extinguishers

and semiportable fire extinguishing systems, then such equipment shall be in accordance with this subpart for manned barges.

§ 193.50-5 Classification.

(a) Hand portable fire extinguishers and semiportable fire extinguishing systems shall be classified by a combination letter and number symbol. The letter indicating the type of fire which the unit could be expected to extinguish and the number indicating the relative size of the unit.

(b) The types of fire will be designated as follows:

(1) "A" for fires in ordinary combustible materials where the quenching and cooling effects of quantities of water, or solutions containing large percentages of water, are of first importance.

(2) "B" for fires in flammable liquids, greases, etc., where a blanketing effect is essential.

(3) "C" for fires in electrical equipment where the use of nonconducting extinguishing agent is of first importance.

(c) The number designations for size will start with "I" for the smallest to "V" for the largest. Sizes I and II are considered hand portable fire extinguishers and sizes III, IV, and V are considered semiportable fire extinguishing systems which shall be fitted with suitable hose and nozzle or other practicable means so that all portions of the space concerned may be covered. Examples of size graduations for some of the typical hand portable and semiportable fire extinguishing systems are set forth in Table 193.50-5(c).

TABLE 193.50-5(c)

Classification		Soda-acid and water, gals.	Foam, gals.	Carbon dioxide, lbs.	Dry chemical, lbs.
Type	Size				
A	II	2 1/2	2 1/2	.....	.....
B	I .....	.....	1 1/4	4	2
B	II .....	.....	2 1/2	15	10
B	III .....	.....	12	35	20
B	IV .....	.....	20	50	30
B	V .....	.....	40	100	50
C	I .....	.....	.....	4	2
C	II .....	.....	.....	15	10

(d) All hand portable fire extinguishers and semiportable fire extinguishing systems shall have permanently attached thereto a metallic nameplate giving the name of the item, the rated capacity in gallons, quarts, or pounds, the name and address of the person or firm for whom approved, and the identifying mark of the actual manufacturer.

(e) Vaporizing liquid type fire extinguishers containing carbon tetrachloride or chlorobromomethane or other toxic vaporizing liquids shall not be permitted.

§ 193.50-10 Location.

(a) Approved hand portable fire extinguishers and semiportable fire extinguishing systems shall be installed in

accordance with Table 193.50-10(a). The location of the equipment shall be to the satisfaction of the Officer in Charge, Marine Inspection. Nothing in this paragraph shall be construed as limiting the Officer in Charge, Marine Inspection, from requiring such additional equipment as he deems necessary for the proper protection of the vessel.

(b) Semiportable fire extinguishing systems shall be located in the open so as to be readily seen.

(c) If hand portable fire extinguishers are not located in the open or behind glass so that they may be readily seen, they may be placed in enclosures together with the firehose, provided such enclosures are marked as required by § 196.37-15 of this subchapter.

TABLE 193.50-10(a)—HAND PORTABLE FIRE EXTINGUISHER AND SEMI-PORTABLE FIRE EXTINGUISHING SYSTEMS

Space	Classification (see § 193.50-5)	Quantity and location
<i>Safety Areas¹</i>		
Wheelhouse or fire control room .....	.....	None required.
Stairway and elevator enclosures .....	.....	Do.
Communicating corridors	A-II	1 in each main corridor not more than 150 feet apart. (May be located in stairways.)
Lifeboat embarkation and lowering stations .....	.....	None required.
Radio room	C-I ²	2 in vicinity of exit. ²
<i>Accommodations¹</i>		
Staterooms, toilet spaces, public spaces, offices, lockers, isolated storerooms, and pantries open decks, etc.	.....	None required.
<i>Service spaces</i>		
Galleys	B-II or C-II	1 for each 2,500 square feet or fraction thereof suitable for hazards involved.
<i>Machinery spaces</i>		
Paint and lamp rooms	B-II	1 outside space in vicinity of exit.
Accessible baggage, mail, and specie rooms, and storerooms.	A-II	1 for each 2,500 square feet or fraction thereof located in vicinity of exits, either inside or outside the spaces.
Carpenter shop and similar spaces	A-II	1 outside the space in vicinity of exit.
Coal-fired boilers: Bunker and boiler space .....	.....	None required.
Oil-fired boilers: Spaces containing oil-fired boilers, either main or auxiliary, or their fuel-oil units.	B-II	2 required. ³
	B-V	1 required. ⁴
Internal combustion or gas turbine propelling machinery spaces.	B-II	1 for each 1,000 brake horsepower, but not less than 2 nor more than 6. ⁵
	B-III	1 required. ^{6,7}
Electric propulsive motors or generators of open type.	C-II	1 for each propulsion motor or generator unit.
Enclosed ventilating systems for motors and generators of electric propelling machinery.	.....	None required.
Auxiliary spaces:		
Internal combustion gas turbine	B-II	1 outside the space in vicinity of exit. ⁷
Electric emergency motors or generators ..	C-II	1 outside the space in vicinity of exit. ⁸
Steam .....	.....	None required.
Trunks to machinery spaces .....	.....	Do.
Fuel tanks .....	.....	Do.

TABLE 193.50-10(a)—HAND PORTABLE FIRE EXTINGUISHER AND SEMI-PORTABLE FIRE EXTINGUISHING SYSTEMS—Continued

Space	Classification (see § 193.50-5)	Quantity and location
<i>Scientific spaces</i>		
Chemistry laboratory or scientific laboratory	C-II	1 dry chemical and 1 carbon dioxide for each 300 square feet or fraction thereof, with one (1) of each kind located in the vicinity of the exit.
Chemical storeroom	C-II	Same as for the chemistry laboratory.

¹ Two B-I hand portable fire extinguishers may be substituted for 1 B-II.
² For vessels on an international voyage, substitute 1 C-II in vicinity of exit.
³ Vessels of less than 1,000 gross tons require 1.
⁴ Vessels of less than 1,000 gross tons may substitute 1 B-IV.
⁵ Only 1 required for motorboats.
⁶ If oil burning donkey boiler fitted in space, the B-V previously required for the protection of the boiler may be substituted. Not required where a fixed carbon dioxide system is installed.
⁷ Not required on vessels of less than 300 gross tons if fuel has a flash-point higher than 110 °F.
⁸ Not required on vessels of less than 300 gross tons.

(d) Hand portable fire extinguishers and their stations shall be numbered in accordance with §196.37-15 of this subchapter.

(e) Hand portable or semiportable extinguishers, which are required on their nameplates to be protected from freezing, shall not be located where freezing temperatures may be expected.

§ 193.50-15 Spare charges.

(a) For all vessels spare charges shall be carried for at least 50 percent of each size and each variety, *i.e.*, foam, soda-acid, carbon dioxide, etc., of hand portable fire extinguishers required by §193.50-10(a). However, if the unit is of such variety that it cannot be readily recharged by the vessel's personnel, one spare unit of the same classification shall be carried in lieu of spare charges for all such units of the same size and variety.

(b) Spare charges shall be so packaged as to minimize the hazards to personnel while recharging the units. Acid shall be contained in a Crown stopper type of bottle.

§ 193.50-20 Semiportable fire extinguishers.

(a) The frame or support of each size III, IV, and V fire extinguisher required by Table 193.50-10(a) must be welded or otherwise permanently attached to a bulkhead or deck.

(b) If an approved size III, IV, or V fire extinguisher has wheels and is not required by Table 193.50-10(a), it must be securely stowed when not in use to

prevent it from rolling out of control under heavy sea conditions.

[CGD 77-039, 44 FR 34133, June 14, 1979]

§ 193.50-90 Vessels contracted for prior to March 1, 1968.

(a) Vessels contracted for prior to March 1, 1968, shall meet the following requirements:

(1) Except as specifically modified by this paragraph, the requirements of §§193.50-5 through 193.50-15 shall be complied with insofar as the number and general type of equipment is concerned.

(2) Existing installations previously approved, but not meeting the applicable requirements of §§193.50-5 through 193.50-15 may be continued in service so long as they are maintained in good condition to the satisfaction of the Officer in Charge, Marine Inspection, and they are in general agreement with the degree of safety prescribed by Table 193.50-10(a). Minor modifications may be made to the same standard as the original installation: *Provided*, That in no case will a greater departure from the standards of Table 193.50-10(a) be permitted than presently exists.

(3) All new equipment and installations shall meet the applicable requirements in this subpart for new vessels.

Subpart 193.60—Fire Axes

§ 193.60-1 Application.

(a) The provisions of this subpart shall apply to all vessels other than unmanned barges.

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(b) Unmanned barges are exempted from the requirements in this subpart. However, if such barges carry on board fire axes, then such equipment shall be in accordance with this subpart for manned barges.

§ 193.60-5 Number required.

(a) All vessels shall carry at least the minimum number of fire axes as set forth in Table 193.60-5(a). Nothing in this paragraph shall be construed as limiting the Officer in Charge, Marine Inspection, from requiring such additional fire axes as he deems necessary for the proper protection of the vessel.

TABLE 193.60-5(a)

Gross tons		Number of axes
Over	Not over	
.....	50	1
50	200	2
200	500	4
500	1,000	6
1,000 .....	.....	8

§ 193.60-10 Location.

(a) Fire axes shall be distributed throughout the spaces available to persons on board so as to be most readily available in the event of emergency.

(b) If fire axes are not located in the open, or behind glass, so that they may be readily seen, they may be placed in enclosures together with the firehose, provided such enclosures are marked as required by §196.37-15 of this subchapter.

PART 194—HANDLING, USE, AND CONTROL OF EXPLOSIVES AND OTHER HAZARDOUS MATERIALS

Subpart 194.01—Application

Sec.

194.01-1 General.

Subpart 194.05—Stowage and Marking

- 194.05-1 General.
- 194.05-3 Chemical stores.
- 194.05-5 Chemicals in the chemistry laboratory.
- 194.05-7 Explosives—Detail requirements.
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- 194.05-13 Corrosive liquids as chemical stores—Detail requirements.
- 194.05-15 Compressed gases as chemical stores—Detail requirements.
- 194.05-17 Poisonous articles as chemical stores—Detail requirements.
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Subpart 194.10—Magazines

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- 194.10-5 Type and location.
- 194.10-10 Integral magazine construction.
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Subpart 194.15—Chemistry Laboratory and Scientific Laboratory

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- 194.15-7 Fire protection.
- 194.15-9 Storage.
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Subpart 194.20—Chemical Stores and/or Storerooms

- 194.20-1 General.
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Subpart 194.90—Vessels Contracted for Prior to March 1, 1968

- 194.90-1 Requirements.

AUTHORITY: 46 U.S.C. 2103, 2113, 3306; 49 U.S.C. App. 1804; E.O. 12234, 45 FR 58801, 3 CFR, 1980 Comp., p. 277; Department of Homeland Security Delegation No. 0170.1.

SOURCE: CGFR 67-83, 33 FR 1151, Jan. 27, 1968, unless otherwise noted.

Subpart 194.01—Application**§ 194.01-1 General.**

(a) The provisions of this part, with the exception of subpart 194.90, shall apply to all vessels other than non-self-propelled vessels of less than 300 gross tons contracted for on or after March 1, 1968.

(b) Non-self-propelled vessels of less than 300 gross tons shall not be subject to the provisions of this part except as provided otherwise by paragraph (c) of this section.

(c) Non-self-propelled vessels of less than 300 gross tons shall be governed by the applicable portions of 49 CFR parts 171-179, and the applicable portions of 33 CFR parts 6 and 121 to 126, inclusively. Alternately, the owner, at his option, may comply with the provisions of this part.

(d) Vessels contracted for prior to March 1, 1968, shall meet the requirements of subpart 194.90.

[CGFR 67-83, 33 FR 1151, Jan. 27, 1968, as amended by CGD 86-033, 53 FR 36026, Sept. 16, 1988]

Subpart 194.05—Stowage and Marking**§ 194.05-1 General.**

(a) The master shall be held responsible for and shall require the proper handling, stowage, and marking of all chemical stores and reagents.

(b) Chemical stores shall be stowed in a chemical storeroom in approved drums, barrels, or other packages, properly marked and labeled, as prescribed by 49 CFR part 172 for those specific commodities, except that those chemical stores excluded from the storeroom by §§194.20-15 and 194.20-17, and those chemical stores not desired to be located in a chemical storeroom, shall be stored in accordance with the appropriate provisions of 49 CFR part 176 insofar as such regulations apply to cargo vessels.

(c) Ships' stores shall be regulated in accordance with the appropriate provisions of part 147 of Subchapter N (Dangerous Cargoes) of this chapter.

[CGFR 67-83, 33 FR 1151, Jan. 27, 1968, as amended by CGD 86-033, 53 FR 36027, Sept. 16, 1988]

§ 194.05-3 Chemical stores.

(a) Chemical stores are those chemicals which possess one or more of the following properties and shall be classed, marked and labeled in accordance with 49 CFR part 172:

- (1) Explosives.
- (2) Flammable liquids.
- (3) Flammable solids.
- (4) Oxidizing materials.
- (5) Corrosive materials.
- (6) Compressed gasses.
- (7) Poisons.
- (8) Combustible liquids.
- (9) Other Regulated Materials (DOT Hazard Class "ORM").

(b) Substances for use in the chemistry laboratory, or to be stored in the chemical storeroom and generally covered under paragraph (a) of this section but not specifically listed by name in 49 CFR 172.101 must be approved by the Commandant (CG-522) prior to being carried on board a vessel.

[CGD 86-033, 53 FR 36027, Sept. 16, 1988, as amended by CGD 97-057, 62 FR 51051, Sept. 30, 1997; USCG-2009-0702, 74 FR 49240, Sept. 25, 2009]

§ 194.05-5 Chemicals in the chemistry laboratory.

(a) Small working quantities of chemical stores in the chemistry laboratory which have been removed from the approved shipping container need not be marked or labeled as required by 49 CFR part 172. Reagent containers in the laboratory shall be marked to show at least the following:

- (1) Common chemical name.
- (2) Hazards, if any; e.g., flammable, poison, etc.

(b) In the interest of facilitating scientific activities, no restrictions are intended which will limit the variety of chemical stores which may be used in the chemistry laboratory. With the knowledge and approval of the master, the laboratory supervisor may be responsible for stowage and use of materials within the laboratory and chemical storeroom.

(c) Reagent containers shall be properly secured against shifting and spillage. Insofar as practical all reagents

shall be stowed in suitable, unbreakable containers.

[CGFR 67–83, 33 FR 1151, Jan. 27, 1968, as amended by CGD 86–033, 53 FR 36027, Sept. 16, 1988]

§ 194.05–7 Explosives—Detail requirements.

(a) Except as otherwise provided by this part, Division 1.1 and 1.2 (explosive) materials (as defined in 49 CFR 173.50) and blasting-caps must be carried in magazines specifically fitted for that purpose as described by subpart 194.10 of this part.

(b) Class 1 (explosive) materials (as defined in 49 CFR 173.50) must be identified by their appropriate DOT classification.

(c)(1) Compatibility of magazine stowage shall be in accordance with 49 CFR 176.144.

(2) Magazine chests, magazine vans, and deck stowage areas shall be separated by a distance of at least 25 feet if their contents are incompatible with each other. Reduction of this distance to allow for special configurations will be permitted only if specifically approved by the Commandant.

(d) On-deck stowage of unfused depth-charges or other unfused-case-type Class 1 (explosive) materials (as defined in 49 CFR 173.50) is authorized as follows:

(1) Stowage shall be in a location reasonably protected from the full force of boarding seas.

(2) Stowage shall be protected from direct exposure to the sun by overhead decks, awnings, or tarpaulins. Decks shall be constructed of incombustible materials; awnings and tarpaulins shall be fire-resistant and/or flame proof fabric.

(3) Items shall be properly secured by using existing vessel structures such as bulwarks, hatch coamings, shelter deck and poop bulkheads as part boundaries and effectively closing in the items by fitting angle bar closing means secured by bolting to clips or other parts of the ship's structure. Lashing of deck stowage is permitted provided eye pads or other suitable means are fitted to secure such lashings and provided the individual items are of such a configuration as to prevent slippage of the lashings. Shoring and dunnage may be used

as necessary to further facilitate the security of the stowage.

(4) Stowage area shall be selected so as to provide for safe access to all internal spaces and to all parts of the deck required to be used in navigation and working of the vessel. Stowage shall not be on or under the bridge, or navigating deck, or within a distance, in a horizontal plane, of 25 feet of an operating or embarkation point of any lifeboat or raft. Reduction of this distance to allow for special configurations will be permitted only if specifically approved by the Commandant.

[CGFR 67–83, 33 FR 1151, Jan. 27, 1968, as amended by CGD 86–033, 53 FR 36027, Sept. 16, 1988; CGD 92–050, 59 FR 39966, Aug. 5, 1994; CGD 97–057, 62 FR 51051, Sept. 30, 1997]

§ 194.05–9 Flammable liquid chemical stores—Detail requirements.

(a) Flammable liquids as chemical stores and reagents are governed by subparts 194.15 and 194.20.

(b) Other flammable liquids are regulated by the appropriate portions of 49 CFR parts 172, 173, and 176 or part 147 of Subchapter N (Dangerous Cargoes) of this chapter.

[CGFR 67–83, 33 FR 1151, Jan. 27, 1968, as amended by CGD 86–033, 53 FR 36027, Sept. 16, 1988; 53 FR 46872, Nov. 21, 1988]

§ 194.05–11 Flammable solids and oxidizing materials—Detail requirements.

(a) Flammable solids and oxidizing materials used as chemical stores and reagents are governed by subparts 194.15 and 194.20.

(b) Oxidizing materials used as blasting agents are regulated by the appropriate portions of 49 CFR parts 172, 173, and 176.

[CGFR 67–83, 33 FR 1151, Jan. 27, 1968, as amended by CGD 86–033, 53 FR 36027, Sept. 16, 1988; 53 FR 46872, Nov. 21, 1988]

§ 194.05–13 Corrosive liquids as chemical stores—Detail requirements.

(a) Corrosive liquids as chemical stores and reagents are governed by subparts 194.15 and 194.20.

(b) Other corrosive liquids are regulated by the appropriate portions of 49 CFR parts 172, 173, and 176 or part 147 of

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Subchapter N (Dangerous Cargoes) of this chapter.

[CGFR 67–83, 33 FR 1151, Jan. 27, 1968, as amended by CGD 86–033, 53 FR 36027, Sept. 16, 1988]

§ 194.05–15 Compressed gases as chemical stores—Detail requirements.

(a) Compressed gases as chemical stores and reagents are governed by subparts 194.15 and 194.20.

(b) Other compressed gases are regulated in accordance with the appropriate portions of 49 CFR parts 172, 173, and 176 or part 147 of Subchapter N (Dangerous Cargoes) of this chapter.

[CGFR 67–83, 33 FR 1151, Jan. 27, 1968, as amended by CGD 86–033, 53 FR 36027, Sept. 16, 1988]

§ 194.05–17 Poisonous articles as chemical stores—Detail requirements.

(a) Poisonous articles as chemical stores and reagents shall be governed by subparts 194.15 and 194.20.

(b) Other poisonous articles shall be regulated by the appropriate portions of 49 CFR parts 172, 173, and 176 or part 147 of Subchapter N (Dangerous Cargoes) of this chapter.

[CGFR 67–83, 33 FR 1151, Jan. 27, 1968, as amended by CGD 86–033, 53 FR 36027, Sept. 16, 1988]

§ 194.05–19 Combustible liquids as chemical stores—Detail requirements.

(a) Combustible liquid chemical stores and reagents shall be governed by subparts 194.15 and 194.20.

(b) Other combustible liquids shall be regulated by the appropriate portions of 49 CFR parts 172, 173, and 176 or part 147 of Subchapter N (Dangerous Cargoes) of this chapter.

[CGFR 67–83, 33 FR 1151, Jan. 27, 1968, as amended by CGD 86–033, 53 FR 36027, Sept. 16, 1988]

§ 194.05–21 Other regulated materials.

(a) Other Regulated Materials (DOT Hazard Class “ORM”) as chemical stores and reagents shall be governed by appropriate portions of subparts 194.15 and 194.20 of this part.

(b) Other Regulated Materials (DOT Hazard Class “ORM”) which are not chemical stores and reagents shall be

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regulated by the appropriate portions of 49 CFR parts 172, 173, and 176.

[CGD 86–033, 53 FR 36027, Sept. 16, 1988]

Subpart 194.10—Magazines

§ 194.10–1 Application.

(a) The provisions of this subpart apply to the construction of integral magazines, magazine vans, and magazine chests.

(b) Loading, loading procedures, shipper’s requirements, and other features not related to the construction of magazines shall be in accordance with the applicable provisions of 49 CFR parts 173 and 176 and 33 CFR part 6 and parts 121 to 126, inclusive.

[CGFR 67–83, 33 FR 1151, Jan. 27, 1968, as amended by CGD 86–033, 53 FR 36027, Sept. 16, 1988]

§ 194.10–5 Type and location.

(a) *Integral magazines.* (1) Magazines shall be of permanent construction located below the freeboard deck and where practicable below the waterline.

(2) Magazines shall not be located in horizontal proximity to or below accommodation spaces.

(3) Magazines shall not be located adjacent to the collision bulkhead, nor in bearing with a bulkhead forming the boilerroom, engine room, gallery, or other high fire hazard area boundary. If it is necessary to construct the magazine in proximity to these areas, a cofferdam space of at least 2 feet shall be provided between the bulkhead or deck involved and the magazine. Such a cofferdam shall be provided with suitable ventilation and shall not be used for storage purposes.

(b) *Magazine vans.* (1) Magazine vans may be installed on deck in a location protected from boarding seas. The location selected shall not impair access to accommodations or other spaces necessary to the safe working and navigation of the vessel and shall not be within 15 feet of ventilation terminals emitting warm air or hazardous vapors, such as from galleys and pump rooms, or within 10 feet of any unshielded radio apparatus or antenna lead.

(2) Magazine vans may be installed below decks in holds provided the hold

location meets the location requirements for integral magazines. The cofferdam requirement of paragraph (a)(3) of this section is considered as fulfilled if the van is of steel construction. Holds so utilized shall not be used for stowage of other hazardous materials covered by 49 CFR parts 171-179. The stowage of other explosives or oxidizing materials in the same hold is permitted in accordance with the requirements of 49 CFR part 176.

(c) *Magazine chests.* (1) Magazine chests shall be located on the weather decks in a position suitable for jettisoning the contents.

(2) Magazine chests shall be set off at least 4 inches from decks and deckhouse.

(3) Magazine chests shall not be located within 15 feet of ventilation terminals emitting warm air or hazardous vapors, such as from galleys and pump-rooms.

(4) Magazine chests intended for the stowage of blasting caps, detonators, or boosters, in addition to the requirements in this paragraph, shall not be stowed within 10 feet of any unshielded radio apparatus or antenna leads.

[CGFR 67-83, 33 FR 1151, Jan. 27, 1968, as amended by CGD 86-033, 53 FR 36027, Sept. 16, 1988]

§ 194.10-10 Integral magazine construction.

(a) Magazines shall be of permanent watertight construction. Bulkheads and decks, including the deck overhead, which are common with store-rooms or workshops shall be of A-15 construction as defined by § 72.05-10 of Subchapter H (Passenger Vessels) of this chapter. Flush construction shall be employed where practicable.

(b) Where the shell or unsheathed weather decks form boundaries of the magazine spaces suitable approved incombustible thermal insulation shall be provided to prevent condensation of moisture.

(c) Where a tank top forms the magazine deck it shall be insulated with an approved deck covering to prevent condensation of moisture. Tank top man-holes shall not be installed in magazines.

(d) Light fixtures shall be of an approved type equipped with globes and

guards. Control of the lighting system shall be from a location external to the magazine. An indicator light shall be provided at the switch location to indicate when the lighting circuits are energized. Other electrical equipment and wiring shall not be installed within or pass through the magazine. Electrical cables enclosed in a watertight trunk are permitted.

(e) Piping, other than fresh or salt water service and drainage system, shall not be routed through magazines except as required for the magazines themselves. Other piping systems enclosed in a watertight trunk are permitted.

(f) Access doors for the magazine, or magazine groups, shall be of substantial watertight construction and be provided with means whereby they may be securely locked.

(g) Racks, stanchions, battens, and other devices shall be installed to provide rigid and safe stowage of explosives in their approved shipping containers with a minimum of dunnage.

(h) Decks shall be covered with a permanent nonslip nonspark covering.

§ 194.10-15 Magazine van construction.

(a) Vans shall be of substantial metal construction. Their interior shall be insulated with an approved incombustible insulation to the standards required for A-15 divisional bulkheads as prescribed in part 72 of Subchapter H (Passenger Vessels) of this chapter. The interior shall be lined flush with incombustible materials.

(b) Lighting fixtures, if installed, shall be of an approved type equipped with globes and guards. All electrical installations shall meet the applicable requirements of Subchapter J (Electrical Engineering) of this chapter. The electrical terminals for connections to the ship's electrical system shall be of watertight construction and bear a label plate denoting the power requirement of the van.

(c) Access doors and ventilation closures shall be of watertight construction. Doors shall be provided with means whereby they may be securely locked.

(d) Vans shall be provided with suitable pads and clips for securing to the

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deck and for installation of wire rope sway braces.

(e) Vans shall bear a label plate stating light weight, gross weight and weight of explosives. Gross weight shall not exceed 250 pounds per square foot of deck area.

§ 194.10-20 Magazine chest construction.

(a) Magazine chests shall be of watertight metal construction with flush interior. The body and lid shall have a minimum thickness of 1/8 inch.

(b) Permanent sun shields shall be provided for sides and top including the lid. These shall have a minimum thickness of 1/8-inch aluminum or 16-gage steel. Side shields shall be offset from the body a distance of 1 inch. The top shield shall be offset a distance of 1 1/2 inches. Sun shields may be omitted when chests are installed "on deck protected," shielded from direct exposure to the sun.

(c) Chests shall be limited to a gross capacity of 100 cubic feet.

(d) Chests shall be secured to the vessel's structure by means of permanently installed foundation clips or bolts or a combination thereof. Lashings will not be acceptable.

(e) Chests shall be provided with substantial hasps and staples for locking purposes.

§ 194.10-25 Ventilation.

(a) *Integral magazines.* (1) All integral magazines shall be provided with natural or mechanical ventilation. Design calculations shall be submitted demonstrating that the system has sufficient capacity to maintain the magazine temperature below 100 °F. with 88 °F. weather air. Mechanical cooling may be used where ventilation requirements exceed 1,500 cubic feet per minute.

(2) Ventilation systems shall be of watertight construction and shall serve no other space. Weather cowls shall be provided with a double layer of wire screen of not less than 1/8-inch mesh. Metal watertight closures shall be provided for use when the ventilation system is not in operation. A 2-inch IPS bypass with check valve shall be provided in parallel with at least one of

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the ventilation closures to prevent pressure buildup.

(b) *Magazine vans.* (1) All magazine vans shall be provided with natural ventilation sufficient to maintain the inside air temperature below 130 °F. with an assumed outside temperature of 115 °F.

(2) Ventilation supply weather openings shall be located at least 6 feet above the deck. Exhaust terminals shall be located in the van overhead. Louvers or weather cowls with a double layer of wire screen of not less than 1/8-inch mesh shall be provided for protection of weather openings.

§ 194.10-30 Magazine sprinklers.

(a) *Sprinkler system required.* (1) A manual control, hydraulic control, or automatic sprinkler system shall be installed in each magazine or magazine group. The control valve shall generally be in accordance with Specification MIL-V-17501 insofar as materials and test fittings are concerned. All systems shall be remotely operable from a control station on the freeboard deck and manually operable at the control valve location.

(2) Where automatic systems are installed sprinkler heads shall be of the open head design so as to permit either manual or automatic operation.

(3) Sprinkler systems shall be designed in accordance with the requirements of part 76 of Subchapter H (Passenger Vessels) of this chapter. Minimum total system capacity shall be based on 0.8 gallon per minute per square foot of overhead area.

(4) The normally required fire pumps may be used for magazine sprinkling purposes. However, the use of the magazine sprinkling system shall not interfere with the simultaneous use of the fire main system.

(b) *Magazine vans.* (1) A manual control sprinkler system shall be installed in each magazine van. The system shall be connected to the nearest fire main outlet by jumper hose. The hose shall be protected from physical damage by a grating or similar arrangement. The fire station valve shall serve as the sprinkler control valve.

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(2) Sprinkler systems shall be designed in accordance with the requirements of part 76 of Subchapter H (Passenger Vessels) of this chapter, except that the system capacity shall be sufficient to provide a coverage of 0.4 gallon per minute per square foot of overhead area.

[CGFR 67-83, 33 FR 1151, Jan. 27, 1968, as amended by CGD 82-063b, 48 FR 4783, Feb. 3, 1983]

§ 194.10-35 Labeling.

(a) Labeling shall be in 3-inch block type lettering. Letters shall be red or white, whichever provides the better contrast against the background. On small chests the labeling size may be reduced to that consistent with the size of the chest so that the inscription may be placed in its entirety on the side or top.

(b) The access door to magazines and magazine vans shall bear the inscription:

MAGAZINE

KEEP OPEN LIGHTS AND FIRE AWAY

KEEP DOOR CLOSED

REMOVE MATCHES AND LIGHTERS
PRIOR TO ENTERING

(c) Magazine chests shall be marked in a conspicuous location, preferably the top, with the inscription:

MAGAZINE CHEST

KEEP OPEN LIGHTS AND FIRE AWAY

(d) Magazine chests used for blasting caps, detonators, or boosters shall be marked in a conspicuous location with the inscription as appropriate:

BLASTING CAP LOCKER

or

DETONATOR LOCKER

or

BOOSTER LOCKER

KEEP OPEN LIGHTS AND FIRE AWAY

(e) Magazine van, unless specifically approved as a portable magazine under provisions of 49 CFR 176.137 shall bear the additional statements on each side:

MAGAZINE

WARNING

DO NOT LIFT WITH CONTENTS

(f) Control locations for magazine sprinkler systems, in addition to the operating instructions required by §76.20-20 of Subchapter H (Passenger Vessels) of this chapter shall bear the inscription:

MAGAZINE SPRINKLER CONTROL

[CGFR 67-83, 33 FR 1151, Jan. 27, 1968, as amended by CGD 86-033, 53 FR 36027, Sept. 16, 1988; CGD 97-057, 62 FR 51051, Sept. 30, 1997]

Subpart 194.15—Chemistry Laboratory and Scientific Laboratory

§ 194.15-1 General.

(a) Chemical and scientific laboratories shall be considered service areas, and as such shall be subject to the applicable requirements of §190.07-10(d).

(1) Incombustible materials shall be used, insofar as is reasonable and practicable, for permanently installed laboratory furnishings and equipment, such as desks, file and storage cabinets, waste paper baskets, work benches, chair frames, etc. Working surfaces where chemical stores are used shall be of incombustible material.

(2) Combustible materials may be used for other working surfaces and for temporary furnishings and equipment installed to facilitate a specific scientific mission.

(b) Storage of all equipment, materials, etc., and cleanliness shall be consistent with sound laboratory practices. All items shall be securely stowed.

(c) Provision shall be made for rapid removal of chemical spills and protection of the deck. In areas where chemicals will commonly be used, the deck shall be covered with a nonskid masonry or other suitably resistant material so fashioned that spillage will be contained and easily removed.

(d) The access doors to the laboratory shall bear the inscription "Chemical Laboratory", or "Scientific Laboratory", in lettering meeting requirements of §194.10-35(a).

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§ 194.15-3 Responsibility.

(a) With the knowledge and approval of the master, the senior member of the scientific party embarked may supervise the safety and operation of the chemical laboratory.

(b) The laboratory supervisor shall:

(1) Maintain the highest standards of safe working conditions.

(2) Provide safeguards against hazardous undertakings.

(3) Educate personnel working in the laboratory spaces to be alert for hazards.

§ 194.15-5 Ventilation.

(a) Operations, reactions or experiments which produce toxic, noxious or corrosive vapors shall be conducted under a suitably installed fume hood. The fume hood shall be equipped with an independent power exhaust ventilation system which terminates so as to prevent fumes from entering other portions of the vessel. The exhaust system of the fume hood shall be compatible with the ventilation system of the laboratory to prevent fumes from backing-up within the fume hood system. The terminals shall be equipped with acceptable flame screens.

(b) Chemical laboratories shall be equipped with power ventilation system of the exhaust type serving the entire laboratory for use in the event of spills or other emergencies. The system shall have a capacity sufficient to effect a complete change of air in not more than 4 minutes based upon the volume of the compartment.

(1) Power ventilation units shall have nonsparking impellers and shall not produce a source of vapor ignition in either the compartment or the ventilation system associated with the compartment.

(2) The power ventilation system shall be interlocked with any other ventilation or air-conditioning system serving the laboratory in a manner to prevent the circulation of vapors to other spaces.

(3) This ventilation system shall be independent of any other ventilation system in the vessel. It shall serve no other space. It shall be of watertight construction.

(4) Ventilation exhaust outlets shall terminate more than 6 feet from any

opening to the interior part of the vessel and from any possible source of vapor ignition.

(5) The control for the power ventilation system shall be conveniently located and marked in a manner to clearly identify the purpose of the control.

(c) Ventilation of air conditioning systems serving the chemical laboratory shall be designed so that air cannot be recirculated into an accommodation space.

§ 194.15-7 Fire protection.

(a) If a fixed or semiportable fire-fighting system is installed, it shall meet the applicable requirements in part 193 of this subchapter. Other fire-fighting systems will be given special consideration by the Commandant.

(b) Portable fire extinguishers are required in accordance with Table 193.50-10(a) of this subchapter.

§ 194.15-9 Storage.

(a) Chemical stores mentioned in § 194.05-3 may be stored in small working quantities in the laboratory provided their containers are labeled in accordance with § 194.05-5(a).

(b) Chemical stores in greater than small laboratory working quantities shall be stored in approved containers in the chemical storeroom as prescribed in § 194.05-1(b).

(c) All material stored in any laboratory shall be securely stowed for sea with due consideration for chemical compatibility and safety standards.

§ 194.15-11 Flushing systems.

(a) Working spaces in which chemical stores are used shall be equipped with a fresh water supply shower.

(b) There shall be a provision for flushing away chemical spills.

§ 194.15-15 Chemicals other than compressed gases.

Chemicals, including those listed in 49 CFR part 172, may be stored in small working quantities in the chemical laboratory.

[CGD 86-033, 53 FR 36027, Sept. 16, 1988]

§ 194.15-17 Compressed gases other than inert gases.

(a) When, in consideration for a particular operation, compressed gases are

needed within the laboratory, the cylinders may be temporarily installed in the laboratory, provided no more than one (1) cylinder of each gas is in the laboratory simultaneously. When transporting compressed gas cylinders to, from, or within the vessel, the cylinder valves shall be capped or otherwise protected in accordance with 49 CFR 173.301(g).

(b) Cylinders temporarily installed in the laboratory shall be securely stowed for sea. Appropriate safety signs shall be displayed and safety precautions observed.

(c) Oxygen and acetylene cylinders for use in ship's maintenance shall not be stored in the laboratory.

(d) Systems providing gas for bunsen burners or similar semipermanent/permanent installations shall be installed in accordance with subpart 195.03 of part 195.

[CGFR 67-83, 33 FR 1151, Jan. 27, 1968, as amended by CGD 86-033, 53 FR 36027, Sept. 16, 1988]

§ 194.15-19 Electrical.

(a) All electrical equipment located within 18 inches of the deck of the chemical laboratory shall be in accordance with the applicable requirements of Subchapter J (Electrical Engineering) of this chapter for Class I, Division 2, hazardous locations. Electrical equipment located 18 inches or more above the deck may be of a type suitable for wet or dry locations in accordance with Subchapter J.

Subpart 194.20—Chemical Stores and/or Storerooms

§ 194.20-1 General.

(a) The chemical storerooms shall be considered to be service areas and as such shall be subject to the applicable requirements of § 190.07-10(d).

(1) Installed equipment, such as shelves and cabinets, shall be constructed of incombustible materials.

(2) The access doors to the storeroom shall bear the inscription "Chemical Storeroom."

(b) Storage and cleanliness shall be consistent with good chemical stowage practices.

(c) The deck of the chemical storeroom shall be of a nonskid material suitably resistant to chemical spills. Provision shall be made for the containment and removal of chemical spills.

(d) Chemical reactions and experiments shall not be conducted in the chemical storeroom.

(e) A storeroom, when used as a chemical storeroom, shall be exclusively for the stowage of chemical stores.

(f) All doors shall open in the direction of escape.

(g) Movement of chemical stores to, or from, the storeroom shall be accomplished utilizing suitable, portable containers. In no event shall piping systems, or similar arrangements, be permitted for transfer of chemical stores between the storeroom and the area in which the chemical stores are to be used.

§ 194.20-3 Responsibility.

(a) With the knowledge and approval of the master the senior member of the scientific party embarked may supervise the safety and operation of the chemical storerooms.

(b) The chemical storeroom supervisor shall:

(1) Maintain the highest standards of safe working conditions.

(2) Provide safeguards against hazardous undertakings.

(3) Educate personnel working in, and near, the storeroom to be alert for hazards.

§ 194.20-5 Ventilation.

(a) Chemical storerooms shall be equipped with a power ventilation system of exhaust type. The system shall have a capacity sufficient to effect a complete change of air in not more than 4 minutes based upon the volume of the compartment.

(1) Power ventilation units shall have nonsparking impellers and shall not produce a source of vapor ignition in either the compartment or the ventilation system associated with the compartment.

(2) This ventilation system shall be independent of any other ventilation system. It shall serve no other space in

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the vessel. It shall be of watertight construction.

(3) Inlets to exhaust ducts shall be provided and located at points where concentration of vapors may be expected. Ventilation exhaust outlets shall terminate more than 6 feet from any opening to the interior part of the vessel and from any possible source of vapor ignition. Terminals shall be fitted with acceptable flame screens.

(4) The control for the power ventilation system shall be conveniently located and marked in a manner to clearly identify the purpose of the control.

(b) Provisions shall be made so that the chemical storeroom will be ventilated before it is entered. An Indicator shall be provided outside the space to show that ventilation is being provided. In addition, the storeroom shall be marked "Danger—Ventilate Before Entering."

§ 194.20-7 Fire protection.

(a) Each chemical storeroom shall be protected by a fixed automatic carbon dioxide extinguishing system installed in accordance with subpart 193.15 of part 193 of this subchapter.

(b) Portable fire extinguishers are required in accordance with Table 193.50-10(a) of this subchapter.

§ 194.20-9 Storage.

(a) Chemical stores shall be stored in the chemical storeroom as prescribed in § 194.05-1(b).

(b) All items stored in the storeroom shall be secured against shifting and with due consideration for chemical compatibility and safety standards.

(1) Items shall not be stowed on the deck.

(2) Shelving shall be so constructed as to provide a clear space of at least 4 inches between the bottom shelf and the deck.

§ 194.20-11 Flushing systems.

(a) Provision shall be made for flushing away chemical spills.

(b) If a drainage system is installed, it shall be separate from any other drainage system.

§ 194.20-15 Chemical stores other than compressed gases.

(a) Flammable liquids are excluded from the storeroom unless contained in properly marked and labeled metal safety cans not in excess of 5 gallons of each kind. Refer to subpart 194.05 for applicable requirements governing quantities greater than 5 gallons.

(b) Combustible liquids in approved portable drums, barrels or containers not in excess of 55 gallons of each kind may be stored in the storeroom. Refer to subpart 194.05 for applicable requirements governing quantities greater than 55 gallons.

(c) Containers when used for dispensing flammable and combustible liquids shall be equipped with automatic closing valves.

(d) Poisons listed in 49 CFR part 172 may be stored in approved containers in the chemical storeroom.

(e) Explosives and oxidizing materials not for use in the chemical laboratory shall not be stored in the chemical storeroom.

(f) Chemical stores specifically mentioned in 49 CFR part 172 may be carried in the chemical storeroom.

[CGFR 67-83, 33 FR 1151, Jan. 27, 1968, as amended by CGD 86-033, 53 FR 36027, Sept. 16, 1988]

§ 194.20-17 Compressed gases.

(a) Nonflammable compressed gases (excluding oxygen) may be securely stowed in the storeroom: *Provided*, That no more than eight (8) cylinders total are stowed simultaneously in the same chemical storeroom.

(b) Flammable compressed gases and oxygen shall be stowed in accordance with 49 CFR part 176, subpart H.

(c) Compressed gas cylinders shall have valve protection in accordance with 49 CFR 173.301(g) and shall be safely stowed in a vertical position in suitable racks.

[CGFR 67-83, 33 FR 1151, Jan. 27, 1968, as amended by CGD 86-033, 53 FR 36027, Sept. 16, 1988]

§ 194.20-19 Piping and electrical requirements.

(a) Piping, electrical equipment, and wiring shall not be installed within or

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pass through a chemical storeroom except as required for the chemical storeroom itself.

(b) The electrical installation shall be in accordance with the applicable requirements of Subchapter J (Electrical Engineering) of this chapter for Class I, Division 1, Group C hazardous locations.

Subpart 194.90—Vessels Contracted for Prior to March 1, 1968

§ 194.90-1 Requirements.

(a) Vessels contracted for prior to March 1, 1968, shall meet the following requirements:

(1) Existing arrangements, materials, and facilities previously approved but not meeting the applicable requirements of subparts 194.05 through 194.20 may be continued in service so long as they are maintained in good condition to the satisfaction of the Officer in Charge, Marine Inspection. Minor repairs, alterations, and replacements may be permitted to the same standards as the original design: *Provided*, That in no case will a greater departure from the standards of subparts 194.05 through 194.20 be permitted than presently exists.

(2) All new installations, major alterations, and major replacements shall meet the applicable requirements in this part for new vessels.

(3) The general requirements of subparts 194.05 through 194.20 shall apply unless in the opinion of the Officer in Charge, Marine Inspection, it is unreasonable or impracticable, or the arrangement or construction of the vessel makes it unnecessary.

PART 195—VESSEL CONTROL AND MISCELLANEOUS SYSTEMS AND EQUIPMENT

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195.01-1 General.

195.01-3 Incorporation by reference.

Subpart 195.03—Marine Engineering Systems

195.03-1 Installation and details.

Subpart 195.05—Electrical Engineering and Interior Communications Systems

195.05-1 Installation and details.

Subpart 195.06—Lifesaving Appliances and Arrangements

195.06-1 Lifesaving appliances and arrangements.

Subpart 195.07—Anchors, Chains, and Hawsers

195.07-1 Application.

195.07-5 Ocean, coastwise, or Great Lakes service.

195.07-10 Lakes, bays, and sounds, or river service.

195.07-90 Vessels contracted for prior to March 1, 1968.

Subpart 195.09—Scientific Equipment

195.09-1 Application.

195.09-5 General.

Subpart 195.11—Portable Vans and Tanks

195.11-1 Application.

195.11-5 Scope.

195.11-10 Design and construction of portable vans.

195.11-15 Plan approval and inspection.

195.11-20 Marking and label plate.

195.11-25 Loading and stowage.

195.11-30 Portable tanks.

Subpart 195.17—Radar

195.17-1 When required.

Subpart 195.19—Magnetic Compass and Gyrocompass

195.19-1 When required.

Subpart 195.27—Sounding Equipment

195.27-1 When required.

Subpart 195.30—Protection From Refrigerants

195.30-1 Application.

195.30-5 General.

195.30-15 Self-contained breathing apparatus.

195.30-90 Vessels contracted for before November 23, 1992.

Subpart 195.35—Fireman's Outfit

195.35-1 Application.

195.35-5 General.

195.35-10 Fireman's outfit.

195.35-15 Stowage.

195.35-20 Spare charges.

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195.35-90 Vessels contracted for before November 23, 1992.

Subpart 195.40—Pilot Boarding Equipment

195.40-1 Pilot boarding equipment.

AUTHORITY: 46 U.S.C. 2113, 3306, 3307; 49 U.S.C. App. 1804; E.O. 12234, 45 FR 58801, 3 CFR, 1980 Comp., p. 277; Department of Homeland Security Delegation No. 0170.1.

SOURCE: CGFR 67-83, 33 FR 1156, Jan. 27, 1968, unless otherwise noted.

Subpart 195.01—Application

§ 195.01-1 General.

(a) The provisions of this part shall apply to all vessels except as specifically noted in this part.

§ 195.01-3 Incorporation by reference.

(a) Certain materials are incorporated by reference into this part with the approval of the Director of the Federal Register in accordance with 5 U.S.C. 552(a). To enforce any edition other than the one listed in paragraph (b) of this section, notice of the change must be published in the FEDERAL REGISTER and the material made available to the public. All approved material is on file at the Office of the Federal Register, Washington, DC 20408, and at the U.S. Coast Guard, Office of Design and Engineering Standards, (CG-521), 2100 2nd St., SW., Stop 7126, Washington, DC 20593-7126, and is available from the address indicated in paragraph (b).

(b) The material approved for incorporation by reference in this part, and the sections affected is:

*American Society for Testing and
Materials (ASTM)*

100 Barr Harbor Drive, West Conshohocken,
PA 19428-2959.

ASTM F 1014-92, Standard Specification for
Flashlights on Vessels—195.35-5

[CGD 82-042, 53 FR 17706, May 18, 1988, as
amended by CGD 96-041, 61 FR 50735, Sept. 27,
1996; CGD 97-057, 62 FR 51051, Sept. 30, 1997;
USCG-1999-5151, 64 FR 67187, Dec. 1, 1999;
USCG-2009-0702, 74 FR 49241, Sept. 25, 2009]

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Subpart 195.03—Marine Engineering Systems

§ 195.03-1 Installation and details.

(a) The installation of all systems of a marine engineering nature, together with the details of design, construction, and installation, shall be in accordance with the requirements of Subchapter F (Marine Engineering) of this chapter. Systems of this type include the following:

Steering Systems.
Bilge and Ballast Systems.
Tank Vent and Sounding Systems.
Overboard Discharges and Shell Connections.
Pipe and Pressure Systems.
Liquefied Petroleum Gas Systems.

Subpart 195.05—Electrical Engi- neering and Interior Commu- nications Systems

§ 195.05-1 Installation and details.

(a) The installation of all systems of an electrical engineering or interior communication nature, together with the details of design, construction, and installation shall be in accordance with the requirements of Subchapter J (Electrical Engineering) of this chapter. Systems of this type include the following:

Ship's Service Generating Systems.
Ship's Service Power Distribution Systems.
Ship's Lighting Systems.
Electric Propulsion and Propulsion Control
Systems.
Emergency Lighting and Power Systems.
Electric Lifeboat Winch Systems.
Electric Steering Gear and Steering Control
Systems.
Fire Detecting and Alarm Systems.
Sound Powered Telephone and Voice Tube
Systems.
Engine Order Telegraph Systems.
Rudder Angle Indicator Systems.
Refrigerated Spaces Alarm Systems.
Navigation Lights Systems.
Daylight Signaling Lights.
Miscellaneous Machinery Alarms and Con-
trols.
General Alarm Systems.

Subpart 195.06—Lifesaving Appliances and Arrangements

§ 195.06-1 Lifesaving appliances and arrangements.

All lifesaving appliances and arrangements shall be in accordance with the requirements for special purpose vessels in subchapter W (Lifesaving Appliances and Arrangements) of this chapter.

[CGD 84-069, 61 FR 25312, May 20, 1996]

Subpart 195.07—Anchors, Chains, and Hawasers

§ 195.07-1 Application.

(a) The provisions of this subpart, with the exception of §195.07-90, shall apply to all vessels other than unmanned barges, contracted for on or after March 1, 1968.

(b) Vessels other than unmanned barges contracted for prior to March 1, 1968 shall meet the requirements of §195.07-90.

§ 195.07-5 Ocean, coastwise, or Great Lakes service.

(a) Vessels in ocean, coastwise, or Great Lakes service shall be fitted with anchors, chains, and hawsers which shall be in general agreement with the standards established by the American Bureau of Shipping, see subpart 188.35 of part 188 of this subchapter.

(b) In addition to the provisions of paragraph (a) of this section, the following requirements and alternatives also apply:

(1) The American Bureau of Shipping rules relating to anchor equipment are mandatory, not a guide.

(2) Vessels under 200 feet (61 meters) in length and with an American Bureau of Shipping equipment number of less than 150 may be equipped with either:

(i) One anchor of the tabular weight and one-half the tabulated length of anchor chain listed in the applicable standard, or

(ii) Two anchors of one-half the tabular weight with the total length of anchor chain listed in the applicable standard provided both anchors are in a position that allows for ready use at all times and the windlass is capable of heaving in either anchor.

(c) Standards of other recognized classification societies may be used, in lieu of those established by the American Bureau of Shipping, upon approval by the Commandant.

[CGFR 67-83, 33 FR 1156, Jan. 27, 1968, as amended by CGD 87-013, 53 FR 20624, June 6, 1988]

§ 195.07-10 Lakes, bays, and sounds, or river service.

(a) Vessels in lakes, bays, and sounds, or river service shall be fitted with such ground tackle and hawsers as deemed necessary by the Officer in Charge, Marine Inspection, depending upon the size of the vessel and the waters on which it operates.

§ 195.07-90 Vessels contracted for prior to March 1, 1968.

(a) Vessels contracted for prior to March 1, 1968, shall meet the following requirements:

(1) Existing arrangements, materials, installations, and facilities previously accepted or approved shall be considered satisfactory for the same service so long as they are maintained in good condition to the satisfaction of the Officer in Charge, Marine Inspection. If the service of the vessel is changed, the suitability of the equipment will be established by the Officer in Charge, Marine Inspection.

(2) Minor repairs, alterations and replacements may be permitted to the same standards as the original installations. However, all new installations, major alterations, or major replacements shall meet the applicable requirements in this subpart for new vessels.

Subpart 195.09—Scientific Equipment

§ 195.09-1 Application.

(a) The provisions of this subpart shall apply to all vessels.

§ 195.09-5 General.

(a) All scientific equipment shall be designed to good commercial standards for such appliances, where applicable. Their electrical and pressure connections to the ship's supply shall be designed to marine standards.

(b) It shall be the responsibility of the owner to assure that the scientific equipment and their electrical or pressure connections to the ship's supply are maintained in such a manner as to be free of personnel hazards which may be caused by shock, temperature extremes, and moving parts.

Subpart 195.11—Portable Vans and Tanks

§ 195.11-1 Application.

(a) The provisions of this subpart shall apply to all vessels.

§ 195.11-5 Scope.

(a) The provisions in this subpart contain requirements for the design, construction, and stowage of portable vans, or tanks, which may be carried on board vessels. As used in this subpart, portable vans and tanks, are intended to include those temporary structures which may be carried aboard a vessel for a limited period of time and which are not permanently attached to the vessel.

(b) Special consideration may be given to the approval of portable structures which have been used for other purposes prior to proposed use on these vessels.

(c) As used in this subpart, portable vans, magazines, chests, etc., are intended to include those temporary structures which may be carried aboard a vessel for a limited period of time and which are not permanently attached to the vessel. The use, arrangement, and handling of such portable structures shall be approved by the Officer in Charge, Marine Inspection, prior to placement on board the vessel.

§ 195.11-10 Design and construction of portable vans.

(a) The design and material selection shall incorporate consideration of forces and environmental conditions to which the structure, attachments, and attachment points will be exposed.

(b) Steel, aluminum or other substantial material suitable for a marine environment may be used for construction of the basic van box.

(c) Accommodation vans are those intended to provide increased accommo-

dation and related spaces of a temporary nature aboard a vessel. They shall, insofar as is reasonable and practicable, meet the applicable requirements of this subchapter for means of escape, arrangement, interior construction, and electrical installations.

(d) Power vans are those outfitted with electrical power generating machinery or batteries providing electrical power for other vans or to scientific equipment. They shall insofar as is reasonable and practicable meet the applicable requirements of this subchapter for pressure piping, electrical, fire extinguishing and ventilation systems.

(e) Vans for the use or storage of chemical stores as defined in § 194.05-3 of this subchapter shall be constructed and outfitted in accordance with the applicable requirements of this subchapter.

(f) Vans containing scientific equipment are considered as within the definition of § 188.10-67 of this subchapter.

§ 195.11-15 Plan approval and inspection.

(a) Accommodation, power and chemical stores vans are subject to normal plan submission procedures of subpart 189.55 and to initial construction inspection. They must be inspected at each inspection for certification and periodic inspection.

(b) Vans which have not undergone plan review and initial inspection may be accepted on a single voyage basis by the OCMI provided that they are in good condition and are free of hazards to personnel.

[CGFR 67-83, 33 FR 1156, Jan. 27, 1968, as amended by USCG-1999-4976, 65 FR 6510, Feb. 9, 2000]

§ 195.11-20 Marking and label plate.

(a) All vans shall be provided with a label plate stating light weight, gross weight, and power requirements where applicable.

(b) For vans subject to inspection label plates shall provide space for the date of initial inspection, the marine inspector's initials, and stamp. Space shall also be provided for the reinspection stamping.

§ 195.11-25 Loading and stowage.

(a) Vans required to be inspected and bearing a current inspection stamp may be accepted for loading and stowage by the master of the vessel who shall insure that the van is in good condition.

(1) Vans containing scientific equipment and nonhazardous stores may be accepted by the master of the vessel subject to his inspection to determine that electrical and pressure connections are in good condition and adequate for the service intended.

(b) The master shall insure that all vans are securely stowed and attached to the vessel to prevent shifting in a seaway. Portable vans to be occupied during the vessel's operation shall be securely attached to the vessel by welding, bolting, or equivalent means.

(c) Vans shall be located with due regard to access and to prevent recirculation of the discharge from the exhaust systems of the vessel.

(d) The loading of vans shall be in accordance with the stability requirements of the vessel.

(e) Prior to a vessel's departure, an entry shall be made in the official logbook for each portable van placed on board that such van and its stowage are in compliance with the applicable requirements in this subchapter.

§ 195.11-30 Portable tanks.

(a) All portable tanks, whether hazardous or nonhazardous commodities, shall be loaded and stowed in accordance with the stability requirements of the vessel.

(b) Portable tanks for flammable or combustible liquids in bulk (see §188.05-30(b) of this subchapter) shall not be carried on vessels.

(c) Portable tanks containing other hazardous materials shall be in accordance with the requirements of 49 CFR parts 171-179.

[CGFR 67-83, 33 FR 1156, Jan. 27, 1968, as amended by CGD 86-033, 53 FR 36027, Sept. 16, 1988]

Subpart 195.17—Radar**§ 195.17-1 When required.**

All mechanically propelled vessels of 1,600 gross tons and over in ocean or

coastwise service must be fitted with a marine radar system for surface navigation. Facilities for plotting radar readings must be provided on the bridge.

[CGD 75-074, 42 FR 5965, Jan. 31, 1977]

Subpart 195.19—Magnetic Compass and Gyrocompass**§ 195.19-1 When required.**

(a) All mechanically propelled vessels in ocean or coastwise service must be fitted with a magnetic compass.

(b) All mechanically propelled vessels of 1,600 gross tons and over in ocean or coastwise service must be fitted with a gyrocompass in addition to the magnetic compass.

(c) Each vessel must have an illuminated repeater for the gyrocompass required under paragraph (b) that is at the main steering stand unless the gyrocompass is illuminated and is at the main steering stand.

[CGD 75-074, 42 FR 5965, Jan. 31, 1977]

Subpart 195.27—Sounding Equipment**§ 195.27-1 When required.**

(a) All mechanically propelled vessels of 500 gross tons and over shall be fitted with an efficient electronic deep-sea sounding apparatus and another independent means of obtaining deep-sea soundings, which may be a deep-sea hand lead.

[CGFR 67-83, 33 FR 1156, Jan. 27, 1968, as amended by CGD 75-074, 42 FR 5965, Jan. 31, 1977]

Subpart 195.30—Protection From Refrigerants

SOURCE: CGD 86-036, 57 FR 48327, Oct. 23, 1992, unless otherwise noted.

§ 195.30-1 Application.

(a) This subpart, except §195.30-90, applies to each vessel that is contracted for on or after November 23, 1992, and is equipped with any refrigeration unit using—

(1) Ammonia to refrigerate any space with a volume of more than 20 cubic feet; or

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(2) Fluorocarbons to refrigerate any space with a volume of more than 1000 cubic feet.

(b) Each vessel that is contracted for before November 23, 1992, must satisfy §195.30-90 if it is equipped with any refrigeration unit using—

(1) Ammonia to refrigerate any space with a volume of more than 20 cubic feet, or

(2) Fluorocarbons to refrigerate any space with a volume of more than 1000 cubic feet.

§ 195.30-5 General.

(a) Each self-contained breathing apparatus must be of the pressure-demand, open-circuit type, approved by the Mine Safety and Health Administration (MSHA) and by the National Institute for Occupational Safety and Health (NIOSH), and have at a minimum a 30-minute air supply, a full facepiece, and a spare charge.

(b) All equipment shall be maintained in an operative condition, and it shall be the responsibility of the master and chief engineer to ascertain that a sufficient number of the crew are familiar with the operation of the equipment.

§ 195.30-15 Self-contained breathing apparatus.

(a) Each vessel must have a self-contained breathing apparatus for use as protection against gas leaking from a refrigeration unit.

(b) The self-contained breathing apparatus required by paragraph (a) of this section may be one of those required by §195.35-10.

§ 195.30-90 Vessels contracted for before November 23, 1992.

Vessels contracted for before November 23, 1992, must meet the following requirements:

(a) Each vessel must satisfy §§195.30-5 through 195.30-15 concerning the number of items and method of stowage of equipment.

(b) Items of equipment previously approved, but not meeting the applicable specifications set forth in §195.30-5, may continue in service as long as they are maintained in good condition to the satisfaction of the Officer in Charge, Marine Inspection; but each

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item in an installation or a replacement must meet all applicable specifications.

(c) Each respirator must either satisfy §195.30-5(a) or be a self-contained compressed-air breathing apparatus previously approved by MSHA and NIOSH under part 160, subpart 160.011, of this chapter.

[CGD 86-036, 57 FR 48327, Oct. 23, 1992, as amended by CGD 95-028, 62 FR 51220, Sept. 30, 1997]

Subpart 195.35—Fireman's Outfit

§ 195.35-1 Application.

(a) This subpart, except §195.35-90, applies to each vessel, other than an unmanned barge, contracted for on or after November 23, 1992.

(b) Each vessel, other than an unmanned barge, contracted for before November 23, 1992, must satisfy §195.35-90.

(c) All unmanned barges are exempt from the requirements in this subpart. However, if any unmanned barge carries a fireman's outfit, the outfit must meet the requirements in this subpart for such outfits aboard manned barges.

[CGD 86-036, 57 FR 48327, Oct. 23, 1992]

§ 195.35-5 General.

(a) All flame safety lamps shall be of an approved type, constructed in accordance with subpart 160.016 of part 160 of Subchapter Q (Specifications) of this chapter.

(b) Each self-contained breathing apparatus must be of the pressure-demand, open-circuit type, approved by the Mine Safety and Health Administration (MSHA) and by the National Institute for Occupational Safety and Health (NIOSH), and have at a minimum a 30-minute air supply and a full facepiece.

(c) Flashlights shall be Type II or Type III, constructed and marked in accordance with ASTM F 1014 (incorporated by reference, see §195.01-3).

(d) All lifelines shall be of steel or bronze wire rope. Steel wire rope shall be either inherently corrosion-resistant, or made so by galvanizing or tinning. Each end shall be fitted with a hook with keeper having throat opening which can be readily slipped over a

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5/8-inch bolt. The total length of the lifeline shall be 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 shall have a minimum breaking strength of 1,500 pounds.

(e) All equipment shall be maintained in an operative condition, and it shall be the responsibility of the master and chief engineer to ascertain that a sufficient number of the crew are familiar with the operation of the equipment.

(f) Boots and gloves shall be of rubber or other electrically nonconducting material.

(g) The helmet shall provide effective protection against impact.

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

[CGFR 67-83, 33 FR 1156, Jan. 27, 1968, as amended by CGFR 69-72, 34 FR 17504, Oct. 29, 1969; CGD 82-042, 53 FR 17706, May 18, 1988; CGD 86-036, 57 FR 48327, Oct. 23, 1992; USCG-1999-5151, 64 FR 67187, Dec. 1, 1999]

§ 195.35-10 Fireman's outfit.

(a) Each fireman's outfit must consist of one self-contained breathing apparatus, one lifeline with a belt or a suitable harness, one flashlight, one flame safety lamp, one rigid helmet, boots and gloves, protective clothing, and one fire ax.

(b) Every vessel shall carry at least two fireman's outfits. The fireman's outfits must be stored in widely separated, accessible locations.

[CGFR 69-72, 34 FR 17504, Oct. 29, 1969, as amended by CGD 75-074, 42 FR 5965, Jan. 31, 1977; CGD 86-036, 57 FR 48327, Oct. 23, 1992]

§ 195.35-15 Stowage.

(a) Equipment shall be stowed in a convenient, accessible location as determined by the master, for use in case of emergency.

§ 195.35-20 Spare charges.

(a) A complete recharge shall be carried for each self-contained breathing apparatus, and a complete set of spare batteries shall be carried for each

flashlight. The spares shall be stowed in the same location as the equipment it is to reactivate.

§ 195.35-90 Vessels contracted for before November 23, 1992.

Vessels contracted for before November 23, 1992, must meet the following requirements:

(a) Each vessel must satisfy §§ 195.35-5 through 195.35-20 concerning the number of items and method of stowage of equipment.

(b) Items of equipment previously approved, but not meeting the applicable specifications set forth in § 195.35-5, may continue in service as long as they are maintained in good condition to the satisfaction of the Officer in Charge, Marine Inspection; but each item in an installation or a replacement must meet all applicable specifications.

(c) Each respirator must either satisfy § 195.35-5(b) or be a self-contained compressed-air breathing apparatus previously approved by MSHA and NIOSH under part 160, subpart 160.011, of this chapter.

[CGD 86-036, 57 FR 48327, Oct. 23, 1992, as amended by CGD 95-028, 62 FR 51220, Sept. 30, 1997]

Subpart 195.40—Pilot Boarding Equipment

§ 195.40-1 Pilot boarding equipment.

(a) This section applies to each vessel that normally embarks or disembarks a pilot from a pilot boat or other vessel.

(b) Each vessel must have suitable pilot boarding equipment available for use on each side of the vessel. If a vessel has only one set of equipment, the equipment must be capable of being easily transferred to and rigged for use on either side of the vessel.

(c) Pilot boarding equipment must be capable of resting firmly against the vessel's side and be secured so that it is clear from overboard discharges.

(d) Each vessel must have lighting positioned to provide adequate illumination for the pilot boarding equipment and each point of access.

(e) Each vessel must have a point of access that has—

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(1) A gateway in the rails or bulwark with adequate handholds; or

(2) Two handhold stanchions and a bulwark ladder that is securely attached to the bulwark rail and deck.

(f) The pilot boarding equipment required by paragraph (b) of this section must include at least one pilot ladder approved under subpart 163.003 of this chapter. Each pilot ladder must be of a single length and capable of extending from the point of access to the water's edge during each condition of loading and trim, with an adverse list of 15°.

(g) Whenever the distance from the water's edge to the point of access is more than 30 feet, access from a pilot ladder to the vessel must be by way of an accommodation ladder or equally safe and convenient means.

(h) Pilot hoists, if used, must be approved under subpart 163.002 of this chapter.

[CGD 79-032, 49 FR 25455, June 21, 1984]

PART 196—OPERATIONS

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196.07-1 Notice and reporting of casualty and voyage records.

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- 196.80-1 Master's responsibility.

Subpart 196.85—Magazine Control

- 196.85-1 Magazine operation and control.

Subpart 196.95—Pilot Boarding Operations

- 196.95-1 Pilot boarding operations.

AUTHORITY: 33 U.S.C. 1321(j); 46 U.S.C. 2213, 3306, 5115, 6101; E.O. 12777, 56 FR 54757, 3 CFR, 1991 Comp., p. 351; E.O. 12234, 45 FR 58801, 3 CFR, 1980 Comp., p. 277; Department of Homeland Security Delegation No. 0170.1.

SOURCE: CGFR 67-83, 33 FR 1158, Jan. 27, 1968, unless otherwise noted.

Subpart 196.01—Application

§ 196.01-1 General.

(a) The provisions of this part shall apply to all vessels except as specifically noted in this part.

Subpart 196.05—Notice to Mariners and Aids to Navigation

§ 196.05-1 Duty of officers.

(a) Licensed deck officers are required to acquaint themselves with the latest information published by the Coast Guard and the National Imagery and Mapping Agency regarding aids to navigation. Neglect to do so is evidence of neglect of duty. It is desirable that all vessels have available in the pilot-house for convenient reference at all times a file of the applicable Notice to Mariners.

(b) Weekly Notices to Mariners (Great Lakes Edition) as published by the Commander, 9th Coast Guard District, contains announcements and information on changes in aids to navigation and other marine information affecting the safety of navigation on the Great Lakes. These notices may be obtained free of charge, by making application to Commander, 9th Coast Guard District.

(c) Weekly Notices to Mariners (worldwide coverage) are prepared jointly by the National Imagery and Mapping Agency, National Ocean Service, and the U.S. Coast Guard. They include changes in aids to navigation in assembled form for the 1st, 5th, 7th, Greater Antilles Section, 8th, 11th, 13th, 14th, and 17th Coast Guard Districts. Foreign marine information is also included in these notices. These notices are available without charge from the National Imagery and Mapping Agency, U.S. Collector of Customs of the major seaports in the United States and are also on file in the U.S. Consulates where they may be inspected.

[CGFR 67-83, 33 FR 1158, Jan. 27, 1968, as amended by CGFR 68-32, 33 FR 5729, Apr. 12, 1968; CGD 95-028, 62 FR 51220, Sept. 30, 1997; USCG-2001-10224, 66 FR 48621, Sept. 21, 2001]

§ 196.05–5

§ 196.05–5 Charts and nautical publications.

As appropriate for the intended voyage, all vessels except barges, and vessels operating exclusively on rivers, 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;
- (g) Current tables; and
- (h) All other nautical publications necessary.¹

[CGD 75–074, 42 FR 5965, Jan. 31, 1977]

Subpart 196.07—Notice and Reporting of Casualty and Voyage Records

§ 196.07–1 Notice and reporting of casualty and voyage records.

The requirements for providing notice and reporting of marine casualties and for retaining voyage records are contained in part 4 of this chapter.

[CGD 84–099, 52 FR 47536, Dec. 14, 1987]

Subpart 196.12—Stability Letter

§ 196.12–1 Posting.

If a stability letter is issued in accordance with the requirements in § 170.120 of this chapter, it must be posted under glass or other suitable transparent material in the pilothouse of the vessel.

[CGD 79–023, 48 FR 51053, Nov. 4, 1983]

Subpart 196.13—Station Bills

§ 196.13–1 Muster lists, emergency signals, and manning.

The requirements for muster lists, emergency signals, and manning must be in accordance with subchapter W (Lifesaving Appliances and Arrangements) of this chapter.

[CGD 84–069, 61 FR 25313, May 20, 1996]

¹For United States vessels in or on the navigable waters of the United States, see 33 CFR 164.33.

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Subpart 196.15—Test, Drills, and Inspections

§ 196.15–1 Application.

(a) The provisions of this subpart shall apply to all vessels.

§ 196.15–3 Steering gear, whistle, and means of communication.

(a) On all vessels making a voyage of more than 48 hours duration, the entire steering gear, the whistle, and the means of communication between the bridge or pilothouse and engine room shall be examined and tested by an officer of the vessel within a period of not more than 12 hours prior to departure. On all other vessels similar examinations and tests shall be made at least once in every week.

(b) The date of the test and the condition of the equipment shall be noted in the official logbook.

§ 196.15–5 Drafts.

(a) The master of every vessel on an ocean, coastwise, or Great Lakes voyage shall enter the drafts of the vessel, forward and aft, in the official logbook when leaving port.

(b) On vessels subject to the requirements of Subchapter E (Load Lines) of this chapter at the time of departure from port on an ocean, coastwise, or Great Lakes voyage, the master shall insert in the official logbook a statement of the position of the loadline mark, port, and starboard, in relation to the surface of the water in which the vessel is then floating.

(1) When an allowance for draft is made for density of the water in which the vessel is floating, this density is to be noted in the official logbook.

§ 196.15–7 Verification of vessel compliance with applicable stability requirements.

(a) After loading and prior to departure and at all other times necessary to assure the safety of the vessel, the master shall determine that the vessel complies with all applicable stability requirements in the vessel's trim and stability book, stability letter, Certificate of Inspection, and Load Line Certificate, as the case may be, and then enter an attestation statement of the verification in the log book. The vessel

may not depart until it is in compliance with these requirements.

(b) When determining compliance with applicable stability requirements the vessel's draft, trim, and stability must be determined as necessary and any stability calculations made in support of the determination must be retained on board the vessel for the duration of the voyage.

[CGD 89-037, 57 FR 41828, Sept. 11, 1992]

§ 196.15–10 Sanitation.

(a) It shall be the duty of the master and chief engineer to see that the vessel, and, in particular, the quarters are in a clean and sanitary condition. The chief engineer shall be responsible only for the sanitary condition of the engineering department.

§ 196.15–15 Examination of boilers and machinery.

(a) It shall be the duty of the chief engineer when he assumes charge of the boilers and machinery of a vessel to examine them thoroughly. If any parts thereof are in unsatisfactory condition, or if the safety-valve seals are broken, the fact shall immediately be reported to the master, owner, or agent, and the Officer in Charge, Marine Inspection.

§ 196.15–18 Loading doors.

(a) The master of a vessel fitted with loading doors shall assure that all loading doors are closed watertight and secured during the entire voyage except that—

(1) If a door cannot be opened or closed while the vessel is at a dock, it may be open while the vessel approaches and draws away from the dock, but only as far as necessary to enable the door to be immediately operated.

(2) If needed to operate the vessel, or embark and disembark passengers when the vessel is at anchor in protected waters, loading doors may be open provided that the master determines that the safety of the vessel is not impaired.

(b) For the purposes of this section, "loading doors" include all weather-tight ramps, bow visors, and openings used to load personnel, equipment, cargo, and stores, in the collision bulk-

head, the side shell, and the boundaries of enclosed superstructures that are continuous with the shell of the vessel.

(c) The master shall enter into the log book the time and door location of every closing of the loading doors.

(d) The master shall enter into the log book any opening of the doors in accordance with paragraph (a)(2) of this section setting forth the time of the opening of the doors and the circumstances warranting this action.

[CGD 89-037, 57 FR 41828, Sept. 11, 1992]

§ 196.15–20 Hatches and other openings.

(a) It shall be the responsibility of the master to assure himself that all exposed hatches and other openings in the hull of his vessel are closed, made properly watertight by the use of tarpaulins, gaskets or similar devices, and in all respects properly secured for sea before leaving protected waters.

(b) The openings to which this section applies are as follows:

- (1) Exposed hatches.
- (2) Gangway and other ports fitted below the freeboard deck.
- (3) Port lights that are not accessible during navigation, including the dead lights for such port lights.

(c) The master at his discretion may permit hatches or other openings to remain uncovered or open, or to be uncovered or opened for reasonable purposes such as ship's maintenance while the vessel is being navigated: *Provided*, That in his opinion existing conditions warrant such action.

(d) In the event the master employs the discretionary provisions of this section after leaving port he shall cause appropriate entries to be made in the official log or equivalent thereof setting forth the time of uncovering, opening, closing or covering of the hatches or other openings to which this section applies and the circumstances warranting the action taken.

(e) The discretionary provisions of this section shall not relieve the master of his responsibility for the safety of his vessel, equipment or persons on board.

§ 196.15-30 Emergency lighting and power systems.

(a) Where fitted, it shall be the duty of the master to see that the emergency lighting and power systems are operated and inspected at least once in each week that the vessel is navigated to be assured that the system is in proper operating condition.

(b) Internal combustion engine driven emergency generators shall be operated under load for at least 2 hours, at least once in each month that the vessel is navigated.

(c) Storage batteries for emergency lighting and power systems shall be 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 the tests and the condition and performance of the apparatus shall be noted in the official logbook.

§ 196.15-35 Emergency training, musters, and drills.

Onboard training, musters, and drills must be in accordance with subchapter W (Lifesaving Appliances and Arrangements) of this chapter.

[CGD 84-069, 61 FR 25313, May 20, 1996]

§ 196.15-55 Requirements for fuel oil.

(a) It shall be the duty of the chief engineer to cause an entry in the log to be made of each supply of fuel oil received on board, stating the quantity received, the name of the vendor, the name of the oil producer, and the flashpoint (closed cup test) for which it is certified by the producer.

(b) It shall be the further duty of the chief engineer to cause to be drawn and sealed and suitably labeled at the time the supply is received on board, a half-pint sample of each lot of fuel oil. These samples shall be preserved until the particular supply of oil is exhausted.

§ 196.15-60 Firefighting equipment, general.

(a) It shall be the duty of the owner, master, or person in charge to see that the vessel's firefighting equipment is at all times ready for use and that all

such equipment required by the regulations in this subchapter is provided, maintained, and replaced as indicated.

(b) It shall be the duty of the owner, master, or person in charge to require and have performed at least once in 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 Tables 189.25-20(a)(1) and 189.25-20(a)(2) in §189.25-20(a) of this subchapter. The owner, master, or person in charge shall keep records of such 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. Such records shall be made available to the marine inspector upon request and shall be kept for the period of validity of the vessel's current certificate of inspection. Where practicable these records should be kept in or with the vessel's logbook. The conduct of these tests and inspections does not relieve the owner, master, or person in charge of his responsibility to maintain this firefighting equipment in proper condition at all times.

Subpart 196.19—Maneuvering Characteristics**§ 196.19-1 Data required.**

For each ocean and coastwise vessel of 1,600 gross tons or over, the following apply:

(a) The following maneuvering information must be prominently displayed in the pilothouse on a fact sheet:

(1) For full and half speed, a turning circle diagram to port and starboard that shows the time and the distance of advance and transfer required to alter the course 90 degrees with maximum rudder angle and constant power settings.

(2) The time and distance to stop the vessel from full and half speed while maintaining approximately the initial heading with minimum application of rudder.

(3) For each vessel with a fixed propeller, a table of shaft revolutions per

minute for a representative range of speeds.

(4) For each vessel with a controllable pitch propeller a table of control settings for a representative range of speeds.

(5) For each vessel that is fitted with an auxiliary device to assist in maneuvering, such as a bow thruster, a table of vessel speeds at which the auxiliary device is effective in maneuvering the vessel.

(b) The maneuvering information must be provided in the normal load and normal light condition with normal trim for a particular condition of loading assuming the following—

(1) Calm weather—wind 10 knots or less, calm sea;

(2) No current;

(3) Deep water conditions—water depth twice the vessel's draft or greater; and

(4) Clean hull.

(c) At the bottom of the fact sheet, the following statement must appear:

WARNING

The response of the (name of the vessel) may be different from those listed above if any of the following conditions, upon which the maneuvering information is based, are varied:

(1) Calm weather—wind 10 knots or less, calm sea;

(2) No current;

(3) Water depth twice the vessel's draft or greater.

(4) Clean hull; and

(5) Intermediate drafts or unusual trim.

(d) The information on the fact sheet must be:

(1) Verified six months after the vessel is placed in service; or

(2) Modified six months after the vessel is placed into service and verified within three months thereafter.

(e) The information that appears on the fact sheet may be obtained from:

(1) Trial trip observations;

(2) Model tests;

(3) Analytical calculations;

(4) Simulations;

(5) Information established from another vessel of similar hull form, power, rudder and propeller; or

(6) Any combination of the above.

The accuracy of the information in the fact sheet required is that attainable by ordinary shipboard navigation equipment.

(f) The requirements for information for fact sheets for specialized craft such as semi-submersibles, hydrofoils, hovercraft and other vessels of unusual design will be specified on a case by case basis.

[CGD 73-78, 40 FR 2689, Jan. 15, 1975]

Subpart 196.20—Whistling

§ 196.20-1 Unnecessary whistling prohibited.

(a) The unnecessary sounding of the vessel's whistle is prohibited within any harbor limits of the United States.

Subpart 196.25—Searchlights

§ 196.25-1 Improper use prohibited.

(a) No person shall flash or cause to be flashed the rays of a searchlight or other blinding light onto the bridge or into the pilothouse of any vessel underway.

Subpart 196.27—Lookouts

§ 196.27-1 Master's and officer's responsibility.

(a) Nothing in this part shall exonerate any master or officer in command from the consequences of any neglect to keep a proper lookout or the neglect of any precaution which may be required by the ordinary practice of seamen or by the special circumstances of the case.

Subpart 196.30—Reports of Accidents, Repairs, and Unsafe Equipment

§ 196.30-1 Repairs to boilers and pressure vessels.

(a) Before making any repairs to boilers or unfired pressure vessels, the Chief Engineer shall submit a report covering the nature of the repairs to the Officer in Charge, Marine Inspection, at or nearest to the U.S. port where the repairs are to be made.

§ 196.30-5 Accidents to machinery.

(a) In the event of an accident to a boiler, unfired pressure vessel, or machinery tending to render the further use of the item unsafe until repairs are

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made, or if by ordinary wear such items become unsafe, a report shall be made by the Chief Engineer immediately to the Officer in Charge, Marine Inspection, or if at sea, immediately upon arrival at port.

§ 196.30-10 Notice required before repair.

(a) No repairs or alterations, except in an emergency, shall be made to any lifesaving or fire detecting or extinguishing equipment without advance notice to the Officer in Charge, Marine Inspection. When emergency repairs or alterations have been made, notice shall be given to the Officer in Charge, Marine Inspection, as soon as practicable.

§ 196.30-20 Breaking of safety valve seal.

(a) If at any time it is necessary to break the seal on a safety valve for any purpose, the Chief Engineer shall advise the Officer in Charge, Marine Inspection, at the next port of call, giving the reason for breaking the seal and requesting that the valve be examined and adjusted by an inspector.

Subpart 196.33—Communication Between Deckhouses

§ 196.33-1 When required.

On all vessels navigating in other than protected waters, where the distance between deckhouses is more than 46 meters (150 feet) a fixed means of facilitating communication between both ends of the vessel, such as a raised fore and aft bridge or side tunnels, must be provided. Previously approved arrangements may be retained so long as they are maintained in good condition to the satisfaction of the Officer in Charge, Marine Inspection.

[CGD 95-027, 61 FR 26013, May 23, 1996]

Subpart 196.34—Work Vests

§ 196.34-1 Application.

(a) Provisions of this subpart shall apply to all vessels.

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§ 196.34-5 Approved types of work vests.

(a) Each buoyant work vest carried under the permissive authority of this section must be approved under—

- (1) Subpart 160.053 of this chapter; or
- (2) Subpart 160.077 of this chapter as a commercial hybrid PFD.

[CGD 78-174A, 51 FR 4352, Feb. 4, 1986]

§ 196.34-10 Use.

(a) Approved buoyant work vests are considered to be items of safety apparel and may be carried aboard vessels to be worn by crew members when working near or over the water under favorable working conditions. They shall be used under the supervision and control of designated ship's officers. When carried, such vests shall not be accepted in lieu of any portion of the required number of approved life preservers and shall not be substituted for the approved life preservers required to be worn during drills and emergencies.

§ 196.34-15 Shipboard stowage.

(a) The approved buoyant work vests shall be stowed separately from the regular stowage of approved life preservers.

(b) The locations for the stowage of work vests shall be such as not to be easily confused with that for approved life preservers.

§ 196.34-20 Shipboard inspections.

(a) Each work vest shall be subject to examination by a marine inspector to determine its serviceability. If found to be satisfactory, it may be continued in service, but shall not be stamped by a marine inspector with a Coast Guard stamp. If a work vest is found not to be in a serviceable condition, then such work vest shall be removed from the vessel. If a work vest is beyond repair, it shall be destroyed or mutilated in the presence of a marine inspector so as to prevent its continued use as a work vest.

§ 196.34-25 Additional requirements for hybrid work vests.

(a) In addition to the other requirements in this subpart, commercial hybrid PFD's must be—

(1) Used, stowed, and maintained in accordance with the procedures set out in the manual required for these devices by §160.077-29 of this chapter and any limitations(s) marked on them; and

(2) Of the same or similar design and have the same method of operation as each other hybrid PFD carried on board.

[CGD 78-174A, 51 FR 4352, Feb. 4, 1986]

Subpart 196.35—Logbook Entries

§ 196.35-1 Application.

(a) Except as specifically noted, the provisions of this subpart shall apply to all manned vessels.

§ 196.35-3 Logbooks and records.

(a) The master or person in charge of an oceanographic research vessel that is required by 46 U.S.C. 11301 to have an official logbook may maintain the logbook on form CG-706 or in the owner's format for an official logbook. Such logs must be kept available for a review for a period of 1 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. When the voyage is completed, the master or person in charge shall file the logbook with the Officer in Charge, Marine Inspection.

(b) The master or person in charge of a vessel that is not required by 46 U.S.C. 11301 to have an official logbook, shall maintain, on board, an unofficial logbook or record in any form desired for the purposes of making entries therein as required by law or regulations in this subchapter. Such logs or records are not filed with the Officer in Charge, Marine Inspection, but must be kept available for review by a marine inspector for a period of 1 year after the date to which the records refer. Separate records of tests and inspections of fire fighting equipment must be maintained with the vessel's logs for the period of validity of the vessel's certificate of inspection.

[CGD 95-027, 61 FR 26013, May 23, 1996]

§ 196.35-5 Actions required to be logged.

The actions and observations noted in this section shall be entered in the official logbook. This section contains no requirements which are not made in other portions of this subchapter, the items being merely grouped together for convenience.

(a) Onboard training, musters, and drills: held in accordance with subchapter W (Lifesaving Appliances and Arrangements) of this chapter.

(b) Steering gear, whistle, and means of communication. Prior to departure. See § 196.15-3.

(c) Drafts and load line marks. Prior to leaving port, ocean, coastwise, and Great Lakes service only. See § 196.15-5.

(d) Verification of vessel compliance with applicable stability requirements. After loading and prior to departure and at all other times necessary to assure the safety of the vessel. See § 196.15-7.

(e) Loading doors. Where applicable, every closing and any opening when not docked. See § 196.15-18.

(f) Emergency lighting and power systems. Weekly and semiannually. See § 196.15-30.

(g) Fuel oil data: Upon receipt of fuel oil on board. See § 196.15-55.

(h) Hatches and other openings. All openings and closings required by § 196.15-20.

(i) Magazines and magazine chests. Maximum and minimum temperatures as required by § 196.85-1(b).

(j) Portable vans, prior to departure. See § 195.11-25(e) of this subchapter.

(k) Weight handling gear, prior to departure. See § 189.35-13(b) of this subchapter.

[CGFR 67-83, 33 FR 1158, Jan. 27, 1988, as amended by CGD 89-037, 57 FR 41828, Sept. 11, 1992; CGD 84-069, 61 FR 25313, May 20, 1996]

Subpart 196.36—Display of Plans

§ 196.36-1 When required.

(a) All manned vessels shall have permanently exhibited for the guidance of the officer in charge of the vessel, general arrangement plans showing for each deck the various fire retardant bulkheads together with particulars of the fire-detecting, manual alarm and

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fire extinguishing systems, fire doors, means of ingress to the different compartments, the ventilating systems including the positions of the dampers, the location of the remote means of stopping the fans, and the identification of the fans serving each section.

Subpart 196.37—Markings for Fire and Emergency Equipment, etc.

§ 196.37-1 Application.

(a) The provisions of this subpart shall apply to all vessels.

§ 196.37-3 General.

(a) It is the intent of this subpart to provide such markings as are necessary for the guidance of the persons on board in case of an emergency. In any specific case, and particularly on small vessels, where it can be shown to the satisfaction of the Officer in Charge, Marine Inspection, that the prescribed markings are unnecessary for the guidance of the persons on board in case of emergency, such markings may be modified or omitted.

(b) In addition to English, notices, directional signs, etc., shall be printed in languages appropriate to the service of the vessel.

(c) Where in this subpart red letters are specified, letters of a contrasting color on a red background will be accepted.

§ 196.37-5 General alarm bell contact makers.

(a) Each general alarm contact maker must be marked in accordance with requirements in Subchapter J (Electrical Engineering Regulations) of this chapter.

[CGD 74-125a, 47 FR 15279, Apr. 8, 1982]

CROSS REFERENCE: See also §113.25-20 of Subchapter J (Electrical Engineering) of this chapter.

§ 196.37-7 General alarm bells.

(a) All general alarm bells shall be identified by red lettering at least ½ inch high: "GENERAL ALARM—WHEN BELL RINGS GO TO YOUR STATION."

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§ 196.37-9 Carbon dioxide alarm.

(a) All carbon dioxide alarms shall be conspicuously identified: "WHEN ALARM SOUNDS—VACATE AT ONCE. CARBON DIOXIDE BEING RE-LEASED."

§ 196.37-10 Fire extinguishing system branch lines.

(a) The branch line valves of all fire extinguishing systems shall be plainly and permanently marked indicating the spaces served.

§ 196.37-13 Fire extinguishing system controls.

(a) The control cabinets or spaces containing valves or manifolds for the various fire extinguishing systems shall be distinctly marked in conspicuous red letters at least 2 inches high: "CARBON DIOXIDE FIRE APPARATUS," or "FOAM FIRE APPARATUS," etc., as the case may be.

§ 196.37-15 Firehose stations.

(a) Each fire hydrant shall be identified in red letters and figures at least 2 inches high "FIRE STATION NO. 1", "2", "3", etc. Where the hose is not stowed in the open or behind glass so as to be readily seen, this identification shall be so placed as to be readily seen from a distance.

§ 196.37-20 Self-contained breathing apparatus and gas masks.

(a) Lockers or spaces containing self-contained breathing apparatus shall be marked "SELF-CONTAINED BREATHING APPARATUS".

§ 196.37-23 Hand portable fire extinguishers.

(a) Each hand portable fire extinguisher shall be marked with a number and the location where stowed shall be marked with a corresponding number at least ½ inch high. Where only one type and size of hand portable fire extinguisher is carried, the numbering may be omitted.

§ 196.37-25 Emergency lights.

(a) All emergency lights shall be marked with a letter "E" at least ½ inch high.

§ 196.37-33 Instructions for changing steering gear.

(a) Instructions in at least ½ inch letters and figures shall be posted in the steering engine room, relating in order, the different steps to be taken in changing to the emergency steering gear. Each clutch, gear, wheel, lever, valve, or switch which is used during the changeover shall be numbered or lettered on a metal plate or painted so that the markings can be recognized at a reasonable distance. The instructions shall indicate each clutch or pin to be “in” or “out” and each valve or switch which is to be “opened” or “closed” in shifting to any means of steering for which the vessel is equipped. Instructions shall be included to line up all steering wheels and rudder amidship before changing gears.

§ 196.37-35 Rudder orders.

(a) At all steering stations, there shall be installed a suitable notice on the wheel or device or in such other position as to be directly in the helmsman’s line of vision, to indicate the direction in which the wheel or device must be turned for “right rudder” and for “left rudder”.

§ 196.37-37 Markings for lifesaving appliances, instructions to passengers, and stowage locations.

Lifesaving appliances, instructions to passengers, and stowage locations must be marked in accordance with subchapter W (Lifesaving Appliances and Arrangements) of this chapter.

[CGD 84-069, 61 FR 25313, May 20, 1996]

§ 196.37-47 Portable magazine chests.

(a) Portable magazine chests shall be marked in letters at least 3 inches high:

PORTABLE MAGAZINE CHEST

— FLAMMABLE —

KEEP LIGHTS AND FIRE AWAY.

Subpart 196.40—Markings on Vessels**§ 196.40-1 Application.**

(a) The provisions of this subpart shall apply to all vessels except as specifically noted.

§ 196.40-5 Hull markings.

Vessels shall be marked as required by parts 67 and 69 of this chapter.

[CGD 72-104R, 37 FR 14233, July 18, 1972; 37 FR 18537, Sept. 13, 1972]

§ 196.40-10 Draft marks and draft indicating systems.

(a) All vessels must have draft marks plainly and legibly visible upon the stem and upon the sternpost or rudderpost or at any place at the stern of the vessel as may be necessary for easy observance. The bottom of each mark must indicate the draft.

(b) The draft must be taken from the bottom of the keel to the surface of the water at the location of the marks.

(c) In cases where the keel does not extend forward or aft to the location of the draft marks, due to raked stem, or cutaway skeg, the datum line from which the draft shall be taken shall be obtained by projecting the line of the bottom of keel forward, or aft, as the case may be, to the location of the draft marks.

(d) In cases where a vessel may have a skeg or other appendage extending locally below the line of the keel, the draft at the end of the vessel adjacent to such appendage shall be measured to a line tangent to the lowest part of such appendage and parallel to the line of the bottom of the keel.

(e) Draft marks must be separated so that the projections of the marks onto a vertical plane are of uniform height equal to the vertical spacing between consecutive marks.

(f) Draft marks must be painted in contrasting color to the hull.

(g) In cases where draft marks are obscured due to operational constraints or by protrusions, the vessel must be

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fitted with a reliable draft indicating system from which the bow and stern drafts can be determined.

[CGFR 67-83, 33 FR 1158, Jan. 27, 1988, as amended by CGD 89-037, 57 FR 41828, Sept. 11, 1992]

§ 196.40-15 Load line marks.

(a) Vessels assigned a load line shall have the deck line and the load line marks permanently marked or embossed as required by Subchapter E (Load Lines) of this chapter.

Subpart 196.43—Placard of Lifesaving Signals

SOURCE: CGD 95-027, 61 FR 26013, May 23, 1996, unless otherwise noted.

§ 196.43-1 Application.

The provisions of this subpart apply to all vessels on an international voyage, and all other vessels of 150 gross tons or over in ocean, coastwise, or Great Lakes service.

§ 196.43-5 Availability.

On all vessels to which this subpart applies there must be readily available to the deck officer of the watch a placard containing instructions for the use of the lifesaving signals set forth in regulation 16, chapter V, of the International Convention for Safety of Life at Sea, 1974. These signals must be used by vessels or persons in distress when communicating with lifesaving stations and maritime rescue units.

Subpart 196.45—Carrying of Excess Steam

§ 196.45-1 Master and chief engineer responsible.

(a) It shall be the duty of the master and the engineer in charge of the boilers of any vessel to require that a steam pressure is not carried in excess of that allowed by the certificate of inspection and to require that the safety valves, once set and sealed by the inspector, are in no way tampered with or made inoperative except as provided in § 196.30-20.

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Subpart 196.50—Compliance With Provisions of Certificate of Inspection

§ 196.50-1 Master or person in charge responsible.

(a) It shall be the duty of the master or other person in charge of the vessel to 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 other person in charge of the vessel, at 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.

Subpart 196.53—Exhibition of Credential

§ 196.53-1 Officers.

All officers on a vessel must have their licenses or officer endorsements conspicuously displayed.

[USCG-2006-24371, 74 FR 11267, Mar. 16, 2009]

Subpart 196.80—Explosive Handling Plan

§ 196.80-1 Master's responsibility.

(a) It shall be the responsibility of the master to have prepared, signed, and prominently posted in conspicuous locations, operating procedures, plans, and safety precautions for all operations involving the use of explosives.

(b) The operating procedures referred to in paragraph (a) of this section shall include and set forth the special duties and stations of appropriate qualified persons for various operations involving the use of explosives. Assignment of such persons shall be commensurate with their experience and training.

(c) A copy of the operating procedures, plans and safety precautions required by paragraph (a) of this section and all subsequent changes or revisions shall be forwarded to the Officer in Charge, Marine Inspection, issuing the certificate of inspection for review.

Subpart 196.85—Magazine Control**§ 196.85-1 Magazine operation and control.**

(a) Keys to magazine spaces and magazine chests shall be kept in the sole control or custody of the Master or one delegated qualified person at all times. Test fittings for magazine sprinkler systems shall be kept in a locked cabinet under the custody of the Master.

(b) Whenever explosives are stored in magazines and magazine chests they shall be inspected daily. Magazine inspection results and corrective action, when taken, shall be noted in the ship's log daily. Maximum and minimum temperatures for the previous 24-hour period shall be recorded in the ship's log along with general magazine condition and corrective action taken when necessary.

(c) The magazine sprinkler controls shall be tested monthly. Test results and all corrective actions taken shall be recorded in the ship's log.

(d) The Master shall limit access to the magazines, or the contents thereof, to persons who can document 3 months on board ship training in the use of explosives. This shall not be construed as prohibiting access to the Master or others designated by the Master.

Subpart 196.95—Pilot Boarding Operations**§ 196.95-1 Pilot boarding operations.**

(a) The master shall ensure that pilot boarding equipment is maintained as follows:

(1) The equipment must be kept clean and in good working order.

(2) Each damaged step or spreader step on a pilot ladder must be replaced in kind with an approved replacement step or spreader step, prior to further use of the ladder. The replacement step or spreader step must be secured by the method used in the original construction of the ladder, and in accordance with manufacturer instructions.

(b) The master shall ensure compliance with the following during pilot boarding operations:

(1) Only approved pilot boarding equipment may be used.

(2) The pilot boarding equipment must rest firmly against the hull of the vessel and be clear of overboard discharges.

(3) Two man ropes, a safety line and an approved lifebuoy with an approved water light must be at the point of access and be immediately available for use during boarding operations.

(4) Rigging of the equipment and embarkation/debarkation of a pilot must be supervised in person by a deck officer.

(5) Both the equipment over the side and the point of access must be adequately lit during the night operations.

(6) If a pilot hoist is used, a pilot ladder must be kept on deck adjacent to the hoist and available for immediate use.

[CGD 79-032, 49 FR 25455, June 21, 1984]