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SUBCHAPTER C—UNINSPECTED VESSELS

PART 24—GENERAL PROVISIONS

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AUTHORITY: 46 U.S.C. 2113, 3306, 4104, 4302; Pub. L. 103–206; 107 Stat.2439; E.O. 12234; 45 FR 58801, 3 CFR, 1980 Comp., p. 277; Department of Homeland Security Delegation No. 0170.1.

SOURCE: CGFR 65–50, 30 FR 16650, Dec. 30, 1965, unless otherwise noted.

Subpart 24.01—Purpose

§ 24.01–1 Purpose of regulations.

The purpose of the regulations in this subchapter is to set forth uniform minimum requirements for uninspected commercial vessels, certain motor vessels, vessels propelled by sail carrying passengers for hire, and barges carrying passengers for hire.

[CGD 95–028, 62 FR 51196, Sept. 30, 1997]

§ 24.01–7 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 subpart 1.03 of this chapter.

[CGD 88–033, 54 FR 50380, Dec. 6, 1989]

Subpart 24.05—Application

§ 24.05–1 Vessels subject to the requirements of this subchapter.

(a) This subchapter is applicable to all vessels indicated in Column 5 of Table 24.05–1(a), and is applicable to all such U.S.-flag vessels, and to all such foreign-flag vessels, except as follows:

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

(2) Any vessel while laid up and dismantled and out of commission.

(3) 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 24.05-1(a)

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 5] or 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
(1) Motor, all vessels except 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 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.[7] 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[6] in addition to the crew, as restricted by the definition of passenger.[7]	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 98.	All vessels not covered by columns 2, 3, 4, and 6.	None.	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]

Table 24.05-1(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 5] or 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 passengers-for-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.[5]	iii) All vessels 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 is a submersible vessel.[7] E) Carry more than 12 passengers on an international voyage. F) Carry at least 1 passenger and are ferries.	All seagoing barges except those covered by columns 2 and 3.	All barges carrying passengers or passengers-for-hire except those covered by columns 3 and 6.	All seagoing barges engaged in oceanographic research.	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]

Table 24.05-1(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 5] or 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
(5)	Sail.[13] vessels ≤ 700 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 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.[7] 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[6] in addition to the crew, as restricted by the definition of passenger.[7]	All vessels carrying dangerous cargoes, when required by 46 CFR part 98.	All vessels not covered by columns 2, 3, 4, and 6.	None.	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]

(6)	Sail.[13] vessels > 700 gross tons.	All vessels carrying combustible or flammable liquid cargo in bulk.[5]	i) All vessels carrying passengers or passengers-for-hire, except recreational vessels.[7] ii) All ferries that carry at least 1 passenger.	All vessels carrying dangerous cargoes, when required by 46 CFR part 98.	None.	None.	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]

Table 24.05-1(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 5] or 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
(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.[7] 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[6] in addition to the crew, as restricted by the definition of passenger.[7]	All tugboats and towboats. All vessels carrying dangerous cargoes, when required by 46 CFR part 98.	All vessels not covered by columns 2, 3, 4, and 6.	None.	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]

Table 24.05-1(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 5] or 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
(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.[7] 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[6] 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; and ≥ 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 schoolships, 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 schoolships, 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 65–50, 30 FR 16650, Dec. 30, 1965, as amended by CGFR 67–33, 33 FR 1104, Jan. 27, 1968; CGFR 70–10, 35 FR 3707, Feb. 25, 1970; CGD 72–172R, 38 FR 3116, Mar. 28, 1973; CGD 73–96, 42 FR 49023, Sept. 26, 1977; CGD 86–033, 53 FR 36023, Sept. 16, 1988; 53 FR 46871, Nov. 21, 1988; CGD 90–008, 55 FR 30659, July 26, 1990; USCG–1999–5040, 67 FR 34768, May 15, 2002; USCG–2008–1107; 74 FR 63628, Dec. 4, 2009]

§ 24.05–5 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 of 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 a passenger vessel, and the changing of service or route 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.

(b) [Reserved]

Subpart 24.10—Definition of Terms Used in This Subchapter

SOURCE: USCG-1999–5040, 67 FR 34775, May 15, 2002, unless otherwise noted.

§ 24.10–1 Definitions.

Approved means approved by the Commandant, unless otherwise stated.

Barge means a non-self-propelled vessel.

Carrying freight for hire means the carriage of any goods, wares, or merchandise, or any other freight for a consideration, whether directly or indirectly flowing to the owner, charterer, operator, agent, or any other person interested in the vessel.

Coast Guard District Commander means an officer of the Coast Guard designated as such by the Commandant to command all Coast Guard activities within his or her district, which includes the inspection, enforcement, and administration of Subtitle II, Title 46 U.S. Code; Title 33 U.S. Code; and regulations issued under these statutes.

Commandant means the Commandant of the United States Coast Guard.

Consideration means an economic benefit, inducement, right, or profit, including pecuniary payment accruing to an individual, person, or entity but not including a voluntary sharing of the actual expenses of the voyage by monetary contribution or donation of fuel, food, beverage, or other supplies.

Headquarters means the Office of the Commandant, United States Coast Guard, Washington, DC.

International voyage means a voyage between a country to which SOLAS applies and a port outside that country. A country, as used in this definition, includes every territory for the international relations of which a contracting government to the convention is responsible or for which the United Nations is the administering authority. For the U.S., the term ''territory'' includes the Commonwealth of Puerto Rico, all possessions of the United States, and all lands held by the United States under a protectorate or mandate. For the purposes of this subchapter, vessels are not considered as being on an ''international voyage'' when solely navigating 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.

Marine inspector or *inspector* means any person from the civilian or military branch of the Coast Guard assigned under the direction of an Officer in Charge, Marine Inspection, or any other person designated to perform duties related to the inspection, enforcement, and administration of Subtitle II, Title 46 U.S. Code; Title 33 U.S. Code; and regulations issued under these statutes.

Motor vessel means any vessel more than 65 feet in length, which is propelled by machinery other than steam.

Motorboat means any vessel indicated in column five of Table 24.05–1(a) in § 24.05–1, 65 feet in length or less, which is equipped with propulsion machinery (including steam). The length must be measured from end-to-end over the deck, excluding sheer. This term includes a boat equipped with a detachable motor. For the purpose of this subchapter, motorboats are included under the term *vessel*, unless specifically noted otherwise.

(1) The various length categories of motorboats are as follows:

(i) Any motorboat less than 16 feet in length.

(ii) Any motorboat 16 feet or over and less than 26 feet in length.

(iii) Any motorboat 26 feet or over and less than 40 feet in length.

(iv) Any motorboat 40 feet or over and not more than 65 feet in length.

(2) The expression ''length must be measured from end-to-end over the deck excluding sheer'' 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. Bowsprits, bumpkins, rudders, outboard motor brackets, and similar fittings or attachments, are not to be included in the measurement. Length must be stated in feet and inches.

Oceans means a route that goes beyond 20 nautical miles offshore on any of the following waters:

(1) Any ocean.

(2) The Gulf of Mexico.

(3) The Caribbean Sea.

(4) The Bering Sea.

(5) The Gulf of Alaska.

(6) Such other similar waters as may be designated by a Coast Guard District Commander.

Officer in Charge, Marine Inspection or *OCMI* means any person from the civilian or military branch of the Coast Guard designated as such by the Commandant and who, under the direction of the Coast Guard District Commander, is in charge of an inspection zone for performance of duties related to the inspection, enforcement, and administration of Subtitle II, Title 46 U.S. Code; Title 33 U.S. Code; and regulations issued under these statutes.

Passenger means an individual carried on a vessel, except—

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

(2) The master; or

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

Passenger-for-hire means a passenger for whom consideration is contributed as a condition of carriage on the vessel, whether directly or indirectly flowing to the owner, charterer, operator, agent, or any other person having an interest in the vessel.

Survival craft, when used on an uninspected passenger vessel over 100 gross tons means a lifeboat, inflatable liferaft, inflatable buoyant apparatus, or small boat.

Vessel, as used in this subpart includes all vessels indicated in column five of Table 24.05–1(a) in § 24.05–1, unless otherwise noted in this subpart.

Uninspected passenger vessel means an uninspected vessel—

(1) Of at least 100 gross tons;

(i) Carrying not more than 12 passengers, including at least one passenger-for-hire; or

(ii) That is chartered with the crew provided or specified by the owner or the owner's representative and carrying not more than 12 passengers; and

(2) Of less than 100 gross tons;

(i) Carrying not more than six passengers, including at least one passenger-for-hire; or

(ii) That is chartered with the crew provided or specified by the owner or the owner's representative and carrying not more than six passengers.

Subpart 24.15—Equivalents

§ 24.15–1 Conditions under which equivalents 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.

§ 24.15–5 Canadian pleasure craft temporarily using navigable waters of the United States.

Uninspected Canadian pleasure craft (uninspected vessels) temporarily using navigable waters of the United States may carry in lieu of the equipment required by this subchapter, the equipment as required by the laws of the Dominion of Canada and the regulations of the Department of Transport, Ottawa, Canada.

[CGFR 65–50, 30 FR 16650, Dec. 30, 1965, as amended by CGD 95–028, 62 FR 51196, Sept. 30, 1997]

Subpart 24.20—General Marine Engineering Requirements

§ 24.20–1 Marine engineering details.

(a) All marine engineering details relative to the design, construction, and testing of boilers and machinery on steam-propelled motorboats of over 40 feet in length will be found in subchapter F (Marine Engineering) of this chapter.

PART 25—REQUIREMENTS

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AUTHORITY: 33 U.S.C. 1903(b); 46 U.S.C. 3306, 4102, 4302; Department of Homeland Security Delegation No. 0170.1.

SOURCE: CGFR 65–50, 30 FR 16653, Dec. 30, 1965, unless otherwise noted.

Subpart 25.01—Application

§ 25.01–1 Applicable to all vessels.

(a) The provisions of this part shall apply to all vessels except as specifically noted.

§ 25.01–3 Incorporation by reference.

(a) Certain material is incorporated by reference into this part with the approval of the Director of the Federal Register in accordance with 5 U.S.C. 552(a). To enforce any edition other than that specified in paragraph (b) of this section, the Coast Guard must publish notice of change in the FEDERAL REGISTER and make the material available to the public. All approved material is on file at the U.S. Coast Guard, Office of Vessel Activities (CG–543), 2100 2nd St. SW., Stop 7581, Washington, DC 20593–7581 or 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*. All material is available from the sources indicated in paragraph (b) of this section.

(b) The material approved for incorporation by reference in this part and the sections affected are:

American Boat and Yacht Council (ABYC)

613 Third Street, Suite 10, Annapolis, MD 21403

Standard A-1–78, Marine LPG-Liquefied Petroleum Gas Systems, December 15, 1978 ..... 25.45–2

Standard A-22–78, Marine CNG-Compressed Natural Gas Systems, December 15, 1978 ..... 25.45–2

Standard A-16–97, Electric Navigation Lights, July 1997 ..... 25.10–3

National Fire Protection Association (NFPA)

1 Batterymarch Park, Quincy, MA 02269

NFPA 302, Fire Protection Standard for Pleasure and Commercial Motor Craft, 1989 ..... 25.45–2

Society of Automotive Engineers (SAE)

400 Commonwealth Drive, Warrendale, PA 15096

SAE J–1928, Devices Providing Backfire Flame Control for Gasoline Engines in Marine Applications, June 1989 ..... 25.35–1

Underwriter's Laboratories (UL)

12 Laboratory Drive, Research Triangle Park, NC 27709

UL 1111, Marine Carburetor Flame Arrestors, June 1988 ..... 25.35–1

[CGD 88–032, 56 FR 35820, July 29, 1991, as amended by CGD 95–072, 60 FR 50461, Sept. 29, 1995; CGD 95–072, 60 FR 54106, Oct. 19, 1995; CGD 96–041, 61 FR 50726, Sept. 27, 1996; USCG–1999–6580, 66 FR 55091, Nov. 1, 2001; USCG–2009–0702, 74 FR 49225, Sept. 25, 2009; USCG–2010–0759, 75 FR 60002, Sept. 29, 2010]

§ 25.01–5 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 recordkeeping requirements in this subchapter by the Office of Management and Budget (OMB) pursuant to the Paperwork Reduction Act of 1980 (44 U.S.C. 3501 *et seq.*). The Coast Guard intends that this section comply with the requirements of 44 U.S.C. 3507(f), which requires that agencies display a current control number assigned by the Director of the OMB for each approved agency information collection requirement.

(b) *Display*.

46 CFR part or section where identified or described	Current OMB control No.
§ 25.45–2	1625–0099

[CGD 83–013, 54 FR 6401, Feb. 10, 1989 and CGD 83–013, 55 FR 3959, Feb. 6, 1990; USCG-2004–18884, 69 FR 58344, Sept. 30, 2004]

Subpart 25.10—Navigation Lights

SOURCE: USCG-1999–6580, 66 FR 55091, Nov. 1, 2001, unless otherwise noted.

§ 25.10–1 Applicability.

This subpart applies to vessel manufacturers, distributors, and dealers installing navigation lights on all uninspected commercial vessels, except those completed before November 7, 2002.

§ 25.10–2 Definitions.

As used in this subpart:

Dealer means any person who is engaged in the sale and distribution of vessels to purchasers who the seller in

good faith believes to be purchasing any such vessel for purposes other than resale.

Distributor means any person engaged in the sale and distribution of vessels for the purpose of resale.

Manufacturer means any person engaged in:

(1) The manufacture, construction, or assembly of vessels, or

(2) The importation of vessels into the United States for subsequent sale.

Navigation lights are those lights prescribed by the Navigation Rules (Commandant Instruction 16672.2 series) to indicate a vessel's presence, type, operation, and relative heading.

§ 25.10–3 Navigation light certification requirements.

(a) Except as provided by paragraph (b) of this section, each navigation light must—

(1) Meet the technical standards of the applicable Navigation Rules;

(2) Be certified by a laboratory listed by the Coast Guard to the standards of ABYC A-16 (incorporated by reference, see § 25.01–3), or equivalent, although portable battery-powered lights need only meet the requirements of the standard applicable to them; and

(3) Bear a permanent and indelible label stating the following:

(i) ''USCG Approval 33 CFR 183.810''

(ii) ''MEETS ____.'' (Insert the identification name or number of the standard under paragraph (a)(2) of this section, to which the light was type-tested.)

(iii) ''TESTED BY ____.'' (Insert the name or registered certification-mark of the laboratory listed by the Coast Guard that tested the fixture to the standard under paragraph (a)(2) of this section.)

(iv) Name of Manufacturer.

(v) Number of Model.

(vi) Visibility of the light in nautical miles (nm).

(vii) Date on which the light was type-tested.

(viii) Identification of bulb used in the compliance test.

(b) If a light is too small to attach the required label—

(1) Place the information from the label in or on the package that contains the light; and

(2) Mark each light ''USCG'' followed by the certified range of visibility in nautical miles, for example, ''USCG 2nm.'' Once installed, this mark must be visible without removing the light.

Subpart 25.25—Life Preservers and Other Lifesaving Equipment

SOURCE: CGD 72–172R, 38 FR 8117, Mar. 28, 1973, unless otherwise noted.

§ 25.25–1 Application.

This subpart applies to each vessel to which this part applies, except:

(a) Vessels used for noncommercial use;

(b) Vessels leased, rented, or chartered to another for the latter's noncommercial use;

(c) Commercial vessels propelled by sail not carrying passengers for hire; or

(d) Commercial barges not carrying passengers for hire.

§ 25.25–3 Definitions.

As used in this subpart:

(a) *Approved* means approved under subchapter Q of this chapter.

(b) *Use* means operate, navigate, or employ.

§ 25.25–5 Life preservers and other lifesaving equipment required.

(a) No person may operate a vessel to which this subpart applies unless it meets the requirements of this subpart.

(b) Each vessel not carrying passengers for hire, less than 40 feet in length must have at least one life preserver (Type I PFD), buoyant vest (Type II PFD), or marine buoyant device intended to be worn (Type III PFD), approved under subchapter Q of a suitable size for each person on board. Kapok and fibrous glass life preservers that do not have plastic-covered pad inserts as required by subparts 160.062 and 160.005 of this chapter are not acceptable as equipment required by this paragraph.

(c) Each vessel carrying passengers for hire and each vessel 40 feet in length or longer not carrying passengers for hire must have at least one life preserver approved under subchapter Q of a suitable size for each person on board. Kapok and fibrous glass life preservers which do not have

plastic-covered pad inserts as required by subparts 160.002 and 160.005 of this chapter are not acceptable as equipment required by this paragraph.

(d) In addition to the equipment required by paragraph (b) and (c) of this section, each vessel 26 feet in length or longer must have at least one approved ring life buoy, and each uninspected passenger vessel of at least 100 gross tons must have at least three ring life buoys. Ring life buoys must be constructed per subpart 160.050 of part 160 of this chapter. The exception is a ring life buoy that was approved prior to May 9, 1979, under former subpart 160.009 of part 160 of this chapter (see 46 CFR chapter I, revised as of October 1, 1979), which may be used as long as it is in good and serviceable condition.

(e) Each vessel not carrying passengers for hire may substitute an immersion suit for a life preserver, buoyant vest, or marine buoyant device required under paragraphs (b) or (c) of this section. Each immersion suit carried in accordance with this paragraph must be of a type approved under subpart 160.171 of this chapter.

(f) On each vessel, regardless of length and regardless of whether carrying passengers for hire, an approved commercial hybrid PFD may be substituted for a life preserver, buoyant vest, or marine buoyant device required under paragraphs (b) or (c) of this section if it is—

(1) Used in accordance with the conditions marked on the PFD and in the owner's manual;

(2) Labeled for use on commercial vessels; and

(3) In the case of a Type V commercial hybrid PFD, worn when the vessel is underway and the intended wearer is not within an enclosed space.

[CGD 72–172R, 38 FR 8117, Mar. 28, 1973, as amended by CGD 77–081, 47 FR 10558, Mar. 11, 1982; CGD 82–075a, 49 FR 4483, Feb. 7, 1984; CGD 78–174A, 51 FR 4350, Feb. 4, 1986; CGD 78–174, 60 FR 2485, Jan. 9, 1995; CGD 97–057, 62 FR 51042, Sept. 30, 1997; USCG-1999–5040, 67 FR 34775, May 15, 2002]

§ 25.25–7 Marking.

The lifesaving equipment required by this subpart must be legibly marked as specified in subchapter Q of this chapter.

§ 25.25–9 Storage.

(a) The lifesaving equipment designed to be worn required in § 25.25–5 (b), (c) and (e) must be readily accessible.

(b) Lifesaving equipment designed to be thrown required in § 25.25–5(d) must be immediately available.

[CGD 72–172R, 38 FR 8117, Mar. 28, 1973, as amended by CGD 82–075a, 49 FR 4483, Feb. 7, 1984]

§ 25.25–11 Condition.

The lifesaving equipment required by this subpart must be in serviceable condition.

§ 25.25–13 Personal flotation device lights.

(a) This section applies to vessels described in § 25.25–1 that engage in ocean, coastwise, or Great Lakes voyages.

(b) Each immersion suit carried in accordance with § 25.25–5(e), each life preserver, each marine buoyant device intended to be worn, and each buoyant vest must have a personal flotation device light that is approved under subpart 161.012 of this chapter.

(c) Each personal flotation device light required by this section must be securely attached to the front shoulder area of the immersion suit, life preserver, or other personal flotation device.

(d) If a personal flotation device light has a non-replaceable power source, the light must be replaced on or before the expiration date of the power source. If the light has a replaceable power source, the power source must be replaced on or before its expiration date and the light must be replaced when it is no longer serviceable.

[44 FR 38783, July 2, 1979, as amended by CGD 82–075a, 49 FR 4483, Feb. 7, 1984; CGD 97–057, 62 FR 51042, Sept. 30, 1997]

§ 25.25–15 Retroreflective material for personal flotation devices.

(a) Each life preserver, each marine buoyant device intended to be worn, and each buoyant vest carried on a vessel must have Type I retroreflective material that is approved under subpart 164.018 of this chapter.

(b) Each item required to have retroreflective material must have at least 200 sq. cm (31 sq. in.) of material attached to its front side, at least 200 sq. cm of material on its back side, and, if the item is reversible, at least 200 sq. cm of material on each of its reversible sides. The material attached on each side of the item must be divided equally between the upper quadrants of the side, and the material in each quadrant must be attached as closely as possible to the shoulder area of the item.

[CGD 76–028, 44 FR 38783, July 2, 1979, as amended by CGD 82–075a, 49 FR 4483, Feb. 7, 1984]

§ 25.25–17 Survival craft requirements for uninspected passenger vessels of at least 100 gross tons.

(a) Each uninspected passenger vessel of at least 100 gross tons must have adequate survival craft with enough capacity for all persons aboard and must meet one of the following requirements:

(1) An inflatable liferaft must be approved under 46 CFR part 160, subparts 160.051 or 160.151, and be equipped with an applicable equipment pack or be approved by another standard specified by the Commandant. Inflatable liferafts must be serviced at a servicing facility approved under 46 CFR part 160, subpart 160.151.

(2) An inflatable buoyant apparatus must be approved under 46 CFR part 160, subpart 160.010 or under another standard specified by the Commandant. An inflatable buoyant apparatus must be serviced at a servicing facility approved under 46 CFR part 160, subpart 160.151.

(b) If the vessel carries a small boat or boats, the capacity of the small boat or boat(s) may be counted toward the survival craft capacity required by this part. Such small boat or boat(s) must meet the requirements for safe loading and floatation in 33 CFR part 183.

[USCG-1999–5040, 67 FR 34776, May 15, 2002]

§ 25.25–19 Visual distress signals.

Each uninspected passenger vessel must meet the visual distress signal requirements of 33 CFR part 175 applicable to the vessel.

[USCG-1999–5040, 67 FR 34776, May 15, 2002]

Subpart 25.26—Emergency Position Indicating Radio Beacons (EPIRB)

SOURCE: CGD 87–016a, 58 FR 13367, Mar. 10, 1993, unless otherwise noted.

§ 25.26–1 Definitions.

As used in this subpart:

Berthing space means a space that is intended to be used for sleeping and is provided with installed bunks and mattresses.

EPIRB means an Emergency Position Indicating Radiobeacon which is Type Accepted by the Federal Communications Commission under requirements in 47 CFR parts 2 and 80.

Galley means a space that provides for the preparation and extended storage of food. This does not include small alcohol or propane stoves with limited cooking capability, or ice chests or similar devices that are intended for keeping small quantities of food for short durations.

High seas means the waters beyond a line three nautical miles seaward of the Territorial Sea Baseline as defined in 33 CFR 2.20.

Length means the length listed on a vessel's Certificate of Documentation or Certificate of Number.

Uninspected passenger vessel means a vessel which, when used for commercial service, is used solely to carry passengers for hire or to provide nonemergency assistance to boaters (assistance towing), and which is not inspected by the Coast Guard under any other 46 CFR subchapter.

NOTE: As an example, a vessel on a voyage involving catching fish which are to be sold, is a commercial fishing industry vessel for the purposes of the EPIRB regulations in this section, even if there are passengers on board during the voyage.

[CGD 87–016a, 58 FR 13367, Mar. 10, 1993, as amended by USCG–2007–29018, 72 FR 53964, Sept. 21, 2007]

§ 25.26–5 Commercial fishing industry vessels.

(a) The owner of a fishing vessel, a fish processing vessel, or a fish tender vessel, 11 meters (36 feet) or more in length, except for vessels described in paragraph (b) or (c) of this section, shall ensure that the vessel does not operate on the high seas or beyond three miles from the coastline of the Great Lakes unless it has on board a float-free, automatically activated Category 1 406 MHz EPIRB stowed in a manner so that it will float-free if the vessel sinks.

(b) The owner of a fishing vessel, fish processing vessel, or a fish tender vessel less than 11 meters (36 feet) in length, or 11 meters or more in length which has a builder's certification that the vessel is constructed with sufficient inherently buoyant material to keep the flooded vessel afloat, shall ensure that the vessel does not operate on the high seas or beyond three miles from the coastline of the Great Lakes, unless it has installed in a readily accessible location at or near the principal steering station—

(1) A manually activated Category 2 406 MHz EPIRB; or

(2) A float-free, automatically activated Category 1 406 MHz EPIRB.

(3) Until February 1, 1998, a 121.5/243.0 MHz EPIRB meeting § 25.26–30.

(c) The owner of a fishing vessel, fish processing vessel or a fish tender vessel 11 meters (36 feet) or more in length that does not have installed galley or berthing facilities, shall ensure that the vessel does not operate on the high seas or beyond three miles from the coastline of the Great Lakes unless it has on board a float-free, automatically activated Category 1 406 MHz EPIRB stowed in a manner so that it will float free if the vessel sinks.

[CGD 87–016a, 58 FR 13367, Mar. 10, 1993; 58 FR 27658, May 11, 1993, as amended by CGD 95–028, 62 FR 51196, Sept. 30, 1997; USCG-1998–4442, 63 FR 52189, Sept. 30, 1998]

§ 25.26–10 EPIRB requirements for uninspected passenger vessels.

(a) Uninspected passenger vessels less than 100 gross tons are not required to carry an EPIRB.

(b) The owner, operator, or master of an uninspected passenger vessel of at least 100 gross tons must ensure that the vessel does not operate beyond three miles from shore as measured from the territorial sea baseline seaward or more than three miles from the coastline of the Great Lakes, unless it has onboard a float-free, automatically activated Category 1 406 MHz EPIRB stowed in a manner so that it will float free if the vessel sinks.

[USCG-1999–5040, 67 FR 34776, May 15, 2002]

§ 25.26–20 Other manned uninspected commercial vessels.

(a) The owner of a manned uninspected commercial vessel 11 meters (36 feet) or more in length, other than a vessel under § 25.26–5 or § 25.26–10 or under paragraph (b) of this section, shall ensure that the vessel does not operate on the high seas or beyond three miles from the coastline of the Great Lakes, unless it has on board a float-free, automatically activated Category 1 406 MHz EPIRB stowed in a manner so that it will float free if the vessel sinks.

(b) The owner of a manned uninspected commercial vessel less than 11 meters (36 feet) in length, or 11 meters or more in length which has a builder's certification that the vessel is constructed with sufficient inherently buoyant material to keep the flooded vessel afloat, shall ensure that the vessel does not operate on the high seas or beyond three miles from the coastline of the Great Lakes, unless it has installed in a readily accessible location at or near the principal steering station—

(1) A manually activated Category 2 406 MHz EPIRB; or

(2) A float-free, automatically activated Category 1 406 MHz EPIRB.

[CGD 87–016a, 58 FR 13367, Mar. 10, 1993; 58 FR 27658, May 11, 1993, as amended by CGD 95–028, 62 FR 51196, Sept. 30, 1997; USCG-1998–4442, 63 FR 52189, Sept. 30, 1998]

§ 25.26–50 Servicing of EPIRBs.

(a) The master of each vessel required to have an EPIRB under this subpart shall ensure that each EPIRB on board is tested and serviced as required by this section.

(b) The EPIRB must be tested immediately after installation and at least once each month thereafter, unless it

is an EPIRB installed in a Coast Guard approved inflatable liferaft that is tested annually during the servicing of the liferaft by an approved servicing facility. The test shall be conducted in accordance with the manufacturer's instructions, using the visual or audio indicator on the EPIRB. If the EPIRB is not operating, it must be repaired or replaced with an operating EPIRB.

(c) The battery of the EPIRB must be replaced—

(1) Immediately after the EPIRB is used for any purpose other than being tested; and

(2) Before the expiration date that is marked on the battery.

[CGD 87–016a, 58 FR 13367, Mar. 10, 1993; 58 FR 27658, May 11, 1993]

§ 25.26–60 Exemptions.

(a) A skiff or work boat is not required to carry an EPIRB if—

(1) Its ''mother ship'' is required to carry an EPIRB under this subpart; and

(2) When not in use, the skiff or work boat is carried on board the mother ship.

(b) Each Coast Guard District Commander may, on a case-by-case basis, grant exemptions from the carriage requirements of EPIRBs in this subpart for certain geographic areas within the boundaries of his or her own district if the District Commander determines that an EPIRB will not significantly enhance the overall safety of the vessel and crew. Exemptions may be limited to specific time periods. Exemptions granted under this paragraph must be:

(1) Issued in writing by the cognizant Coast Guard District Commander for each individual application; and

(2) For geographic locations and may be limited to specific time periods.

Subpart 25.30—Fire Extinguishing Equipment

§ 25.30–1 Application.

(a) The provisions of this subpart, with the exception of § 25.30–90, shall apply to all vessels contracted for on or after November 19, 1952. Vessels contracted for prior to that date shall meet the requirements of § 25.30–90.

§ 25.30–5 General provisions.

(a) Where equipment in this subpart is required to be of an approved type, such equipment requires the specific approval of the Commandant. Such approvals are published in the FEDERAL REGISTER, and in addition, are contained in Coast Guard publication COMDTINST M16714.3 (Series), Equipment Lists.

(b) All hand portable fire extinguishers, semiportable fire extinguishing systems, and fixed fire extinguishing systems shall be of an approved type.

[CGFR 65–50, 30 FR 16653, Dec. 30, 1965, as amended by CGD 96–041, 61 FR 50726, Sept. 27, 1996]

§ 25.30–10 Hand-portable fire extinguishers and semi-portable fire-extinguishing systems.

(a) Hand portable fire extinguishers and semiportable fire extinguishing systems are 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) For the purpose of this subchapter, all required hand portable fire extinguishers and semiportable fire extinguishing systems are of the ''B'' type; i.e., suitable for extinguishing fires involving flammable liquids, greases, etc.

(c) The number designations for size run from ''I'' for the smallest to ''V'' for the largest. Sizes I and II are hand-portable fire extinguishers; sizes III, IV, and V are semi-portable fire-extinguishing systems, which must be fitted with hose and nozzle or other practical means to cover all portions of the space involved. Examples of the sizes for some of the typical hand-portable fire extinguishers and semi-portable fire-extinguishing systems appear in Table 25.30–10(C):

TABLE 25.30–10(C)

Classification	Foam, liters (gallons)	Carbon dioxide, kilograms (pounds)	Dry chemical, kilograms (pounds)
B-I	6.5 (1¾)	2 (4)	1 (2)
B-II	9.5 (2½)	7 (15)	4.5 (10)
B-III	45 (12)	16 (35)	9 (20)
B-IV	75 (20)	23 (50)	13.5 (30)

TABLE 25.30–10(C)—Continued

Classification	Foam, liters (gallons)	Carbon dioxide, kilograms (pounds)	Dry chemical, kilograms (pounds)
B-V	150 (40)	45 (100)	23 (50)

(d) All hand portable fire extinguishers and semiportable fire extinguishing systems shall have permanently attached thereto a metallic name plate 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 are not acceptable as equipment required by this subchapter.

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

(g) The use of dry chemical, stored pressure, fire extinguishers not fitted with pressure gauges or indicating devices, manufactured prior to January 1, 1965, may be permitted on motorboats and other vessels so long as such extinguishers are maintained in good and serviceable condition. The following maintenance and inspections are required for such extinguishers:

(1) When the date on the inspection record tag on the extinguishers shows that 6 months have elapsed since last weight check ashore, then such extinguisher is no longer accepted as meeting required maintenance conditions until reweighed ashore and found to be in a serviceable condition and within required weight conditions.

(2) If the weight of the container is ¼ ounce less than that stamped on container, it shall be serviced.

(3) If the outer seal or seals (which indicate tampering or use when broken) are not intact, the boarding officer or marine inspector will inspect such extinguisher to see that the frangible disc in neck of the container is intact; and if such disc is not intact, the container shall be serviced.

(4) If there is evidence of damage, use, or leakage, such as dry chemical powder observed in the nozzle or elsewhere on the extinguisher, the container shall be replaced with a new one and the extinguisher properly serviced or the extinguisher replaced with another approved extinguisher.

(h) The dry chemical, stored pressure, fire extinguishers without pressure gauges or indicating devices manufactured after January 1, 1965, shall not be labeled with the marine type label bed in § 162.028–4 of this title nor shall such extinguishers manufactured after January 1, 1965, be carried on board motorboats or other vessels as required equipment.

[CGFR 65–50, 30 FR 16653, Dec. 30, 1965, as amended by CGFR 68–32, 33 FR 5711, Apr. 12, 1968; CGFR 69–18, 34 FR 5723, Mar. 27, 1969; USCG-2000–6931, 68 FR 22611, Apr. 29, 2003; 69 FR 34068, June 18, 2004]

§ 25.30–15 Fixed fire-extinguishing systems.

(a) When a fixed fire-extinguishing system is installed, it must be a type approved or accepted by the Commandant (CG–521) or the Commanding Officer, U.S. Coast Guard Marine Safety Center.

(b) If the system is a carbon-dioxide type, then it must be designed and installed in accordance with subpart 76.15 of part 76 of subchapter H (Passenger Vessels) of this chapter.

[USCG-2000–6931, 69 FR 34069, June 18, 2004, as amended by USCG–2009–0702, 74 FR 49225, Sept. 25, 2009]

§ 25.30–20 Fire extinguishing equipment required.

(a) *Motorboats.* (1) All motorboats shall carry at least the minimum number of hand portable fire extinguishers set forth in Table 25.30–20(a)(1), except that motorboats less than 26 feet in length, propelled by outboard motors and not carrying passengers for hire, need not carry such portable fire extinguishers if the construction of such motorboats will not permit the entrapment of explosive or flammable gases or vapors.

TABLE 25.30–20(a)(1)

Length, feet	Minimum number of B-1 hand portable fire extinguishers required[1]	
	No fixed fire extinguishing system in machinery space	Fixed fire extinguishing system in machinery space
Under 16	1	0
16 and over, but under 26	1	0
26 and over, but under 40	2	1
40 and over, but not over 65	3	2

[1] One B-11 hand portable fire extinguisher may be substituted for two B-I hand portable fire extinguishers.

(2) The intent of this regulation is illustrated in Figure 25.30–20(a1) where fire extinguishers are required if any one or more of the specified conditions exist, and in Figure 25.30–20(a2) where specified conditions do not, in themselves, require that fire extinguishers be carried.

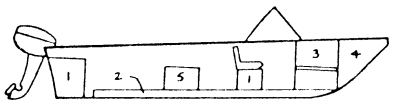

FIGURE 25.30–20(A1)

Fire extinguishers are required if any one or more of the following conditions exist (numbers identifying conditions are the same as those placed in Figure 25.30–20 (a1)):

1. Closed compartment under thwarts and seats wherein portable fuel tanks may be stored.
2. Double bottoms not sealed to the hull or which are not completely filled with flotation material.
3. Close living spaces.
4. Closed stowage compartments in which combustible or flammable materials are stowed.
5. Permanently installed fuel tanks.

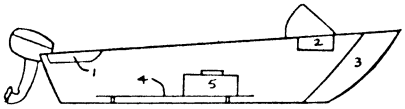

FIGURE 25.30–20(A2)

The following conditions do not, in themselves, require that fire extinguishers be carried (numbers identifying conditions are the same as those placed in Figure 25.30–20(a2)):

1. Bait wells.
2. Glove compartments.
3. Buoyant flotation material.
4. Open slatted flooring.
5. Ice chests.

(b) *Uninspected passenger vessels of at least 100 gross tons.* All uninspected passenger vessels of at least 100 gross tons must carry onboard hand-portable and semi-portable fire extinguishers per Table 76.50–10(a) in § 76.50–10 of this chapter.

(c) *Motor vessels.* (1) All motor vessels shall carry at least the minimum number of hand portable fire extinguishers set forth in Table 25.30–20(b) (1).

TABLE 25.30–20(b)(1)

Gross tonnage—		Minimum number of B-II hand portable fire extinguishers
Over	Not over	
.....	50	1
50	100	2
100	500	3
500	1,000	6
1,000	.....	8

(2) In addition to the hand portable fire extinguishers required by paragraph (b)(1) of this section, the following fire-extinguishing equipment shall be fitted in the machinery space:

(i) One Type B-II hand portable fire extinguisher shall be carried for each 1,000 B. H. P. of the main engines or fraction thereof. However, not more than 6 such extinguishers need be carried.

(ii) On motor vessels of over 300 gross tons, either one Type B-III semiportable fire-extinguishing system shall be fitted, or alternatively, a fixed fire-extinguishing system shall be fitted in the machinery space.

(3) The frame or support of each Type B-III fire extinguisher required by paragraph (b)(2)(ii) of this section must be welded or otherwise permanently attached to a bulkhead or deck.

(4) If an approved semiportable fire extinguisher has wheels and is not required by this section, it must be securely stowed when not in use to prevent it from rolling out of control under heavy sea conditions.

(d) *Barges carrying passengers.* (1) Every barge of 65 feet in length or less while carrying passengers when towed or pushed by a motorboat, motor vessel, or steam vessel shall be fitted with

hand portable fire extinguishers as required by Table 25.30–20(a)(1), depending upon the length of the barge.

(2) Every barge of over 65 feet in length while carrying passengers when towed or pushed by a motorboat, motor vessel, or steam vessel shall be fitted with hand portable fire extinguishers as required by Table 25.30–20(b)(1), depending upon the gross tonnage of the barge.

[CGFR 65–50, 30 FR 16653, Dec. 30, 1965, as amended by CGD 77–039, 44 FR 34132, June 14, 1979; CGD 97–057, 62 FR 51042, Sept. 30, 1997; USCG-1999–5040, 67 FR 34776, May 15, 2002]

§ 25.30–90 Vessels contracted for prior to November 19, 1952.

(a) Vessels contracted for prior to November 19, 1952, shall meet the applicable provisions of §§ 25.30–5 through 25.30–20 insofar as the number and general type of equipment is concerned. Existing items of equipment and installations previously approved but not meeting the applicable requirements for type approval may be continued in service so long as they are in good condition. All new installations and replacements shall meet the requirements of §§ 25.30–5 through 25.30–20.

(b) [Reserved]

Subpart 25.35—Backfire Flame Control

§ 25.35–1 Requirements.

(a) Every gasoline engine installed in a motorboat or motor vessel after April 25, 1940, except outboard motors, shall be equipped with an acceptable means of backfire flame control.

(b) Installations made before November 19, 1952, need not meet the detailed requirements of this subpart and may be continued in use as long as they are serviceable and in good condition. Replacements shall meet the applicable conditions in this section.

(c) Installations consisting of backfire flame arresters bearing basic Approval Nos. 162.015 or 162.041 or engine air and fuel induction systems bearing basic Approval Nos. 162.015 or 162.042 may be continued in use as long as they are serviceable and in good condition. New installations or replacements must meet applicable requirements of subpart 58.10 of this chapter.

[CGFR 65–50, 30 FR 16653, Dec. 30, 1965, as amended by CGD 88–032, 56 FR 35820, July 29, 1991]

Subpart 25.40—Ventilation

§ 25.40–1 Tanks and engine spaces.

(a) All motorboats or motor vessels, except open boats and as provided in paragraphs (d) and (e) of this section, the construction or decking over of which is commenced after April 25, 1940, and which use fuel having a flashpoint of 110 °F., or less, shall have at least two ventilator ducts, fitted with cowls or their equivalent, for the efficient removal of explosive or flammable gases from the bilges of every engine and fuel tank compartment. There shall be at least one exhaust duct installed so as to extend from the open atmosphere to the lower portion of the bilge and at least one intake duct installed so as to extend to a point at least midway to the bilge or at least below the level of the carburetor air intake. The cowls shall be located and trimmed for maximum effectiveness and in such a manner so as to prevent displaced fumes from being recirculated.

(b) As used in this section, the term *open boats* means those motorboats or motor vessels with all engine and fuel tank compartments, and other spaces to which explosive or flammable gases and vapors from these compartments may flow, open to the atmosphere and so arranged as to prevent the entrapment of such gases and vapors within the vessel.

(c) Boats built after July 31, 1980, which are manufactured or used primarily for noncommercial use; which are leased, rented, or chartered to another for the latter's noncommercial use; which are engaged in the carriage of six or fewer passengers; or which are in compliance with the requirements of 33 CFR part 183 are exempted from these requirements.

(d) Boats built after July 31, 1978, which are manufactured or used primarily for noncommercial use; which are rented, leased, or chartered to another for the latter's noncommercial use; or which engage in conveying six

or fewer passengers are exempted from the requirements of paragraph (a) for fuel tank compartments that:

(1) Contain a permanently installed fuel tank if each electrical component is ignition protected in accordance with 33 CFR 183.410(a); and

(2) Contain fuel tanks that vent to the outside of the boat.

[CGFR 65–50, 30 FR 16653, Dec. 30, 1965, as amended by CGD 76–082A, 44 FR 73047, Dec. 17, 1979; CGD 76–082A, 45 FR 7551, Feb. 4, 1980; CGD 95–012, 60 FR 48048, Sept. 18, 1995; CGD 95–028, 62 FR 51196, Sept. 30, 1997]

Subpart 25.45—Cooking, Heating, and Lighting Systems

§ 25.45–1 Heating and lighting systems on vessels carrying passengers for hire.

(a) No fuel may be used in any heating or lighting system on any vessel carrying passengers for hire without the approval of Commandant (CG–521), except—

(1) Alcohol, solid,

(2) Alcohol, liquid, combustible,

(3) Fuel oil, No. 1, No. 2, or No. 3,

(4) Kerosene,

(5) Wood or,

(6) Coal.

(b) Heating and lighting systems using alcohol must meet the following requirements:

(1) Containers of solidified alcohol must be properly secured to a fixed base.

(2) Fluid alcohol burners, where wet priming is used, must have—

(i) A catch pan of not less than ¾'' depth secured inside the frame of the stove; or

(ii) The metal protection under the stove flanged up at least ¾'' to form a pan.

(c) Heating and lighting systems using kerosene or fuel oil must meet the following requirements:

(1) Where wet priming is used, each system must have—

(i) A catch pan of not less than ¾'' depth secured inside the frame of the stove; or

(ii) The metal protection under the stove flanged up at least ¾'' to form a pan.

(2) Fuel tanks must be—

(i) Separated from the stove that they serve;

(ii) Mounted in a location open to the atmosphere or mounted inside a compartment that is vented to the atmosphere; and

(iii) Fitted with an outside fill and vent.

(d) Heating systems using wood or coal installed after August 9, 1989, shall be installed in accordance with the guidelines in chapter 6 of NFPA 302.

[CGD 83–013, 54 FR 6402, Feb. 10, 1989 and CGD 83–013, 55 FR 3959, Feb. 6, 1990; CGD 95–072, 60 FR 50461, Sept. 29, 1995; CGD 96–041, 61 FR 50726, Sept. 27, 1996; USCG–2009–0702, 74 FR 49225, Sept. 25, 2009]

§ 25.45–2 Cooking systems on vessels carrying passengers for hire.

(a) No fuel may be used in any cooking system on any vessel carrying passengers for hire without the approval of Commandant (CG–521) except those listed in § 25.45–1, subject to the requirements stated therein, and liquefied petroleum gas (LPG), or compressed natural gas (CNG).

(b) Cooking systems using LPG or CNG must meet the following requirements:

(1) The design, installation, and testing of each LPG system must meet ABYC A-1–78 or chapter 6 of NFPA 302.

(2) The design, installation, and testing of each CNG system must meet ABYC A-22–78 or chapter 6 of NFPA 302.

(3) Cooking systems using chapter 6 of NFPA 302 as the standard must meet the following additional requirements:

(i) The storage or use of CNG containers within the accommodation area, machinery spaces, bilges, or other enclosed spaces is prohibited.

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

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

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

(4) Continuous pilot lights or automatic glow plugs are prohibited for an LPG or CNG installation using ABYC A-1 or A-22 as the standard.

(5) CNG installations using ABYC A-22 as the standard must meet the following additional requirements:

(i) The stowage or use of CNG containers within the accommodation area, machinery spaces, bilges, or other enclosed spaces is prohibited.

(ii) The CNG cylinders, regulating equipment, and safety equipment must meet the installation, stowage, and testing requirements specified in paragraph 6–5.12 of NFPA 302.

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

(6) If the fuel supply line of an LPG or CNG system enters an enclosed space on the vessel, a remote shut-off valve must be installed that can be operated from a position adjacent to the appliance. The valve must be located between the fuel tank and the point where the fuel supply line enters the enclosed portion of the vessel. A power operated valve installed to meet this requirement must be of a type that will fail closed.

(7) The following variances from ABYC A-1.11.b(1) are allowed for CNG:

(i) The storage locker or housing access opening need not be in the top.

(ii) The locker or housing need not be above the waterline.

(8) The following variances from NFPA 302 are allowed:

(i) The storage locker or housing for CNG tank installations need not be above the waterline as required by paragraph 6–5.12.1.1(a).

(ii) Ignition protection need not be provided as required by paragraph 6–5.4.

NOTE TO §25.45–2: The ABYC and NFPA standards referenced in this section require the posting of placards containing safety precautions for gas cooking systems.

[CGD 83–013, 54 FR 6402, Feb. 10, 1989, as amended by CGD 83–013, 55 FR 3960, Feb. 6, 1990; CGD 95–072, 60 FR 50461, Sept. 29, 1995; CGD 96–041, 61 FR 50726, Sept. 27, 1996; USCG–2000–7790, 65 FR 58458, Sept. 29, 2000; USCG–2009–0702, 74 FR 49225, Sept. 25, 2009]

Subpart 25.50—Garbage Retention

§ 25.50–1 Criteria.

Each uninspected vessel must meet the garbage discharge, waste management plan, and placard requirements of 33 CFR part 151 applicable to the vessel.

NOTE: 33 CFR 151.67 prohibits the discharge of plastic or garbage mixed with plastic into the sea or the navigable waters of the United States. ''Plastic'' and ''garbage'' are defined in 33 CFR 151.05.

[CGD 88–002A, 56 FR 8880, Mar. 1, 1991]

PART 26—OPERATIONS

Subpart 26.01—Application

Sec.

26.01–1 Applicable to all vessels.

Subpart 26.03—Special Operating Requirements

26.03–1 Safety orientation.
26.03–2 Emergency instructions.
26.03–4 Charts and nautical publications.
26.03–6 Special permit.
26.03–8 Marine Event of National Significance special permits.
26.03–9 Voyage plans for uninspected passenger vessels of at least 100 gross tons.
26.03–10 Signaling light.

Subpart 26.08—Notice and Reporting of Casualty and Voyage Records

26.08–1 Notice and reporting of casualty and voyage records.

Subpart 26.15—Boarding

26.15–1 May board at any time.

Subpart 26.20—Exhibition of Coast Guard Credential

26.20–1 Must be available.

Subpart 26.25 [Reserved]

Subpart 26.30—Work Vest

26.30–1 Approved unicellular plastic foam work vests.
26.30–5 Use.
26.30–10 Stowage.

AUTHORITY: 46 U.S.C. 3306, 4104, 6101, 8105; Pub. L. 103–206, 107 Stat. 2439; E.O. 12234, 45 FR 58801, 3 CFR, 1980 Comp., p. 277; Department of Homeland Security Delegation No. 0170.1.

SOURCE: CGFR 65–50, 30 FR 16656, Dec. 30, 1965, unless otherwise noted.

Subpart 26.01—Application

§ 26.01–1 Applicable to all vessels.

(a) The provisions of this part shall apply to all vessels except as specifically noted.

Subpart 26.03—Special Operating Requirements

§ 26.03–1 Safety orientation.

(a) Before getting underway on any uninspected passenger vessel, the operator or master must ensure that suitable public announcements, instructive placards, or both, are provided in a manner that affords all passengers the opportunity to become acquainted with:

(1) Stowage locations of life preservers;

(2) Proper method of donning and adjusting life preservers of the type(s) carried on the vessel;

(3) The type and location of all lifesaving devices carried on the vessel; and

(4) The location and contents of the *Emergency Checkoff List* required by § 26.03–2.

(b) Vessels subject to this subpart engaged in tender service at yacht clubs and marinas, and vessels being demonstrated for a potential purchaser by a yacht broker, are excluded from the requirements of § 26.03–1 and § 26.03–2.

[CGD 78–009, 45 FR 11109, Feb. 19, 1980, as amended by USCG-1999–5040, 67 FR 34776, May 15, 2002]

§ 26.03–2 Emergency instructions.

(a) The operator or master of each uninspected passenger vessel must ensure that an emergency check-off list is posted in a prominent and accessible place to notify the passengers and remind the crew of precautionary measures that may be necessary if an emergency situation occurs.

(b) Except where any part of the emergency instructions are deemed unnecessary by the Officer in Charge, Marine Inspection, the emergency checkoff list must contain not less than the applicable portions of the sample emergency checkoff list which follows:

SAMPLE EMERGENCY CHECKOFF LIST

Measures to be considered in the event of:

(a) *Rough weather at sea or crossing hazardous bars.*

☐ All weathertight and watertight doors, hatches and airports closed to prevent taking water aboard.

☐ Bilges kept dry to prevent loss of stability.

☐ Passengers seated and evenly distributed.

☐ All passengers wearing life preservers in conditions of very rough seas or if about to cross a bar under hazardous conditions.

☐ An international distress call and a call to the Coast Guard over radiotelephone made if assistance is needed (if radiotelephone equipped).

(b) *Man overboard.*

☐ Ring buoy thrown overboard as close to the victim as possible.

☐ Lookout posted to keep the victim in sight.

☐ Crewmember, wearing a life preserver and lifeline, standing by ready to jump into the water to assist the victim back aboard.

☐ Coast Guard and all vessels in the vicinity notified by radiotelephone (if radiotelephone equipped).

☐ Search continued until after radiotelephone consultation with the Coast Guard, if at all possible.

(c) *Fire at Sea.*

☐ Air supply to the fire cut off by closing hatches, ports, doors, and ventilators, etc.

☐ Portable extinguishers discharged at the base of the flames of flammable liquid or grease fires or water applied to fires in combustible solids.

☐ If fire is in machinery spaces, fuel supply and ventilation shut off and any installed fixed firefighting system discharged.

☐ Vessel maneuvered to minimize the effect of wind on the fire.

☐ Coast Guard and all vessels in the vicinity notified by radiotelephone of the fire and vessel location (if radiotelephone equipped).

☐ Passengers moved away from fire and wearing life preservers.

(c) When in the judgment of the cognizant Officer in Charge, Marine Inspection, the operation of any vessel subject to this section does not present the hazards listed on the emergency checkoff list or when any vessel has no

suitable mounting surface, an exclusion from the requirements of § 26.03–2(a) and (b) is granted by letter.

[CGD 78–009, 45 FR 11109, Feb. 19, 1980, as amended by USCG-1999–5040, 67 FR 34776, May 15, 2002]

§ 26.03–4 Charts and nautical publications.

(a) As appropriate for the intended voyage, all vessels must carry adequate and up-to-date—

(1) Charts of appropriate scale to make safe navigation possible;

(2) ''U.S. Coast Pilot'' or similar publication;

(3) Coast Guard light list;

(4) Tide tables; and

(5) Current tables, or a river current publication issued by the U.S. Army Corps of Engineers, or a river authority.

(b) As an alternative, you may substitute extracts or copies from the publications in paragraph (a) of this section. This information must be applicable to the area transited.

[USCG-1999–5040, 67 FR 34776, May 15, 2002]

§ 26.03–6 Special permit.

(a) If the owner, operator, or agent donates the use of an uninspected passenger vessel to a charity for fundraising activities, and the vessel's activity would subject it to Coast Guard inspection, the OCMI may issue a special permit to the owner, operator, or agent for this purpose if, in the opinion of the OCMI, the vessel can be safely operated. Each special permit is valid for only one voyage of a donated vessel, which is used for a charitable purpose. Applications are considered and approved on a case-by-case basis.

(b) The criteria of § 176.204 of this chapter will apply to the issuance of a special permit. In addition, the owner, operator, or agent must meet each of these conditions—

(1) Any charity using a donated vessel must be a bona fide charity or a non-profit organization qualified under section 501(c)(3) of the Internal Revenue Code of 1986;

(2) All donations received from the fundraising must go to the named charity;

(3) The owner, operator, or agent may obtain a special permit for an individual vessel not more than four times in a 12-month period; and

(4) The owner, operator, or agent must apply to the local OCMI for a special permit prior to the intended voyage, allowing adequate time for processing and approval of the permit.

(c) Nothing in this part may be construed as limiting the OCMI from making such tests and inspections, both afloat and in dry-dock, that are reasonable and practicable to be assured of the vessel's seaworthiness and safety.

[USCG-1999–5040, 67 FR 34776, May 15, 2002]

§ 26.03–8 Marine Event of National Significance special permits.

(a) For a Marine Event of National Significance, as determined by the Commandant, U.S. Coast Guard, a vessel may be permitted to engage in excursions while carrying passengers-for-hire for the duration of the event. Event sponsors seeking this determination must submit a written request to the Commandant (CG–543) at least one year prior to the event.

(b) The owner, operator, or agent of a vessel that is registered as a participant in a Marine Event of National Significance may apply for a special permit to carry passengers-for-hire for the duration of the event. The master, owner, or agent of the vessel must apply to the Coast Guard OCMI who has jurisdiction over the vessel's first United States port of call. The OCMI may issue a Form CG-949 ''Permit to Carry Excursion Party'' if, in the opinion of the OCMI, the operation can be undertaken safely. The OCMI may require an inspection prior to issuance of a special permit to ensure that the vessel can safely operate under the conditions for which the permit is issued.

(c) The permit will state the conditions under which it is issued. These conditions must include the number of passengers-for-hire the vessel may carry, the crew required, the number and type of lifesaving and safety equipment required, the route and operating details for which the permit is issued, and the dates for which the permit will be valid.

(d) The permit must be displayed in a location visible to passengers.

(e) The carrying of passengers-for-hire during a Marine Event of National

Significance must comply with the regulations governing coastwise transportation of passengers under 19 CFR 4.50(b) and 19 CFR 4.80(a).

[USCG-1999–5040, 67 FR 34776, May 15, 2002, as amended by USCG-2004–18884, 69 FR 58344, Sept. 30, 2004; USCG–2009–0702, 74 FR 49225, Sept. 25, 2009]

§ 26.03–9 Voyage plans for uninspected passenger vessels of at least 100 gross tons.

(a) The master must prepare a voyage plan that includes a crew and passenger list before taking an uninspected passenger vessel of at least 100 gross tons on a Great Lake, an ocean, or an international voyage.

(b) Before departure, the master must communicate the voyage plan ashore, either verbally or in writing. The voyage plan must go to either the vessel's normal berthing location or a representative of the owner or managing operator of the vessel. The master, owner, or operator of the vessel must make the voyage plan available to the Coast Guard upon request.

[USCG-1999–5040, 67 FR 34777, May 15, 2002]

§ 26.03–10 Signaling light.

All vessels of over 150 gross tons, when engaged on an international voyage, shall be equipped with an efficient daylight signaling lamp in accordance with the requirements of subchapter J (Electrical Engineering) of this chapter.

[CGFR 68–32, 33 FR 5711, Apr. 12, 1968, as amended by CGD 97–057, 62 FR 51042, Sept. 30, 1997]

Subpart 26.08—Notice and Reporting of Casualty and Voyage Records

AUTHORITY: 46 U.S.C. 6101; 46 CFR 1.46.

§ 26.08–1 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 47535, Dec. 14, 1987; 53 FR 13117, Apr. 21, 1988]

Subpart 26.15—Boarding

§ 26.15–1 May board at any time.

(a) To facilitate the boarding of vessels by the commissioned, warrant, and petty officers of the U.S. Coast Guard in the exercise of their authority, every uninspected vessel, as defined in 46 U.S.C. 2101(43), if underway and upon being hailed by a Coast Guard vessel, must stop immediately and lay to, or must maneuver in such a way to permit the Coast Guard boarding officer to come aboard. Failure to permit a Coast Guard boarding officer to board a vessel or refusal to comply will subject the operator or owner of the vessel to the penalties provided in law.

(b) Coast Guard boarding vessels will be identified by the display of the Coast Guard ensign as a symbol of authority and the Coast Guard personnel will be dressed in Coast Guard uniform. The Coast Guard boarding officer upon boarding a vessel will identify himself to the master, owner, or operator and explain his mission.

[CGFR 65–50, 30 FR 16656, Dec. 30, 1965, as amended by CGD 72–132R, 38 FR 5750, Mar. 2, 1973; CGD 95–027, 61 FR 25997, May 23, 1996]

Subpart 26.20—Exhibition of Coast Guard Credential

§ 26.20–1 Must be available.

If a person operates a vessel that carries one or more passengers-for-hire, he or she is required to have a valid Coast Guard license or MMC officer endorsement suitable for the vessel's route and service. He or she must have the license or MMC in his or her possession and must produce it immediately upon the request of a Coast Guard boarding officer.

[USCG-1999–5040, 67 FR 34777, May 15, 2002, as amended by USCG–2006–24371, 74 FR 11264, Mar. 16, 2009]

Subpart 26.25 [Reserved]

Subpart 26.30—Work Vest

SOURCE: CGFR 68–65, 33 FR 19982, Dec. 28, 1968, unless otherwise noted.

§ 26.30–1 Approved unicellular plastic foam work vests.

(a) Buoyant work vests carried under the permissive authority of this subpart shall be of an approved type, and shall be constructed, listed, and labeled in accordance with subpart 160.053 of subchapter Q (Specifications) of this chapter.

§ 26.30–5 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.

(b) When carried, approved buoyant work vests shall not be accepted in lieu of any portion of the required number of approved lifesaving appliances required by § 25.25–10 of this subchapter.

§ 26.30–10 Stowage.

(a) The approved buoyant work vests shall be stowed separately from the regular stowage of required lifesaving equipment.

PART 27—TOWING VESSELS

Subpart A—General Provisions for Fire-Protection Measures and Fire-Suppression Equipment on Towing Vessels

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Subpart B—Fire-Protection Measures for Towing Vessels

27.201 What are the requirements for general alarms on towing vessels?
27.203 What are the requirements for fire detection on towing vessels?
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27.207 What are the requirements for fuel shut-offs on towing vessels?
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Subpart C—Fire-Suppression Equipment for Towing Vessels

27.301 What are the requirements for fire pumps, fire mains, and fire hoses on towing vessels?
27.303 What are the requirements for fire-extinguishing equipment on towing vessels in inland service, and on towing vessels in ocean or coastal service whose construction was contracted for before August 27, 2003?
27.305 What are the requirements for fire-extinguishing equipment on towing vessels in ocean or coastal service whose construction was contracted for on or after August 27, 2003?

AUTHORITY: 46 U.S.C. 3306, 4102 (as amended by Pub. L. 104–324, 110 Stat. 3901); Department of Homeland Security Delegation No. 0170.1.

SOURCE: USCG-2000–6931, 69 FR 34069, June 18, 2004, unless otherwise noted.

Subpart A—General Provisions for Fire-Protection Measures and Fire-Suppression Equipment on Towing Vessels

§ 27.100 What towing vessels does this part affect?

(a) You must comply with this part if your towing vessel operates on the navigable waters of the United States, unless your vessel is one exempt under paragraph (b) of this section.

(b) This part does not apply to you if your towing vessel is—

(1) Used solely for any of the following services or any combination of these services—

(i) Within a limited geographic area, such as a fleeting-area for barges or a commercial facility, and used for restricted service, such as making up or breaking up larger tows;

(ii) For harbor-assist;

(iii) For assistance towing as defined by 46 CFR 10.103;

(iv) For response to emergency or pollution;

(2) A public vessel that is both owned, or demise chartered, and operated by the United States Government or by a government of a foreign country; and that is not engaged in commercial service;

(3) A foreign vessel engaged in innocent passage; or

(4) Exempted by the Captain of the Port (COTP).

(c) If you think your towing vessel should be exempt from these requirements for a specified route, you should submit a written request to the appropriate COTP. The COTP will provide you with a written response granting or denying your request. The COTP will consider the extent to which unsafe conditions would result if your vessel lost propulsion because of a fire in the engine room.

(d) You must test and maintain all of the equipment required by this part in accordance with the attached nameplate or manufacturer's approved design manual.

§ 27.101 Definitions.

As used in this part—

Accommodation includes any:

(1) Messroom.

(2) Lounge.

(3) Sitting area.

(4) Recreation room.

(5) Quarters.

(6) Toilet space.

(7) Shower room.

(8) Galley.

(9) Berthing facility.

(10) Clothing-changing room.

Engine room means the enclosed area where any main-propulsion engine is located. It comprises all deck levels within that area.

Fixed fire-extinguishing system means:

(1) A carbon-dioxide system that satisfies 46 CFR subpart 76.15 and is approved by the Commandant;

(2) A manually-operated clean-agent system that satisfies the National Fire Protection Association (NFPA) Standard 2001 (incorporated by reference in § 27.102) and is approved by the Commandant; or

(3) A manually-operated water-mist system that satisfies NFPA Standard 750 (incorporated by reference in § 27.102) and is approved by the Commandant.

Fleeting-area means a separate location where individual barges are moored or assembled to make a tow. The barges are not in transport, but are temporarily marshaled, waiting for pickup by different vessels that will transport them to various destinations. A fleeting-area is a limited geographic area.

Harbor-assist means docking and undocking ships.

Limited geographic area means a local area of operation, usually within a single harbor or port. The local Captain of the Port (COTP) determines the definition of local geographic area for each zone.

Operating station means the principal steering station on the vessel, from which the vessel is normally navigated.

Towing vessel means a commercial vessel engaged in, or intending to engage in, pulling, pushing, or hauling alongside, or any combination of pulling, pushing, or hauling alongside.

Towing vessel in inland service means a towing vessel that is not in ocean or coastal service.

Towing vessel in ocean or coastal service means a towing vessel that operates beyond the baseline of the U.S. territorial sea.

We means the United States Coast Guard.

Work space means any area on the vessel where the crew could be present while on duty and performing their assigned tasks.

You means the owner of a towing vessel, unless otherwise specified.

§ 27.102 Incorporation by reference.

(a) Certain material is incorporated by reference into this part with the approval of the Director of the Federal Register—in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. To enforce any edition other than that specified in paragraph (b) of this section, the Coast Guard must publish notice of the change in the FEDERAL REGISTER and make the material available for inspection. All approved material is available at the U.S. Coast Guard, Office of Design and Engineering Standards (CG–521), 21002nd St. SW., Stop 7126, Washington, DC 20593–7126, or from the sources indicated in paragraph (b) of this section, or 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*.

(b) The material approved for incorporation by reference in this part and the sections affected are:

American Boat and Yacht Council (ABYC), 613 Third Street, Suite 10, Annapolis, MD 21403	
H–25–1986—Portable Fuel Systems for Flammable Liquids	27.211
H–33–1989—Diesel Fuel Systems	27.211
National Fire Protection Association (NFPA), 1 Batterymarch Park, Quincy, MA 02269–9101	
NFPA 302–1998—Fire Protection Standard for Pleasure, and Commercial Motorcraft	27.211
NFPA 750—Standard on Water Mist Fire Protection Systems, 2003 edition	27.101
NFPA 2001—Standard on Clean Agent Fire Extinguishing Systems, 2000 edition	27.101
Society of Automotive Engineers (SAE), 400 Commonwealth Drive, Warrendale, PA 15096–0001	
SAE J1475–1984—Hydraulic Hose Fitting for Marine Applications	27.211
SAE J1942–1989—Hose and Hose Assemblies for Marine Applications	27.211

[USCG–2000–6931, 69 FR 34069, June 18, 2004, as amended by USCG–2009–0702, 74 FR 49226, Sept. 25, 2009; USCG–2010–0759, 75 FR 60002, Sept. 29, 2010]

Subpart B—Fire-Protection Measures for Towing Vessels

§ 27.201 What are the requirements for general alarms on towing vessels?

(a) You must ensure that your vessel is fitted with a general alarm that:

(1) Has a contact-maker at the operating station that can notify persons on board in the event of an emergency.

(2) Is capable of notifying persons in any accommodation, work space, and the engine room.

(3) Has installed, in the engine room and any other area where background noise makes a general alarm hard to hear, a supplemental flashing red light that is identified with a sign that reads:

Attention General Alarm—When Alarm Sounds or Flashes Go to Your Station.

(4) Is tested at least once each week.

(b) You or the operator may use a public-address (PA) system or other means of alerting all persons on your towing vessel instead of a general alarm, if the system—

(1) Is capable of notifying persons in any accommodation, work space, and the engine room;

(2) Is tested at least once each week;

(3) Can be activated from the operating station; and

(4) Complies with paragraph (a)(3) of this section.

§ 27.203 What are the requirements for fire detection on towing vessels?

You must have a fire-detection system installed on your vessel to detect engine-room fires. Any owner of a vessel whose construction was contracted for before January 18, 2000, may use an existing engine-room-monitoring system (with fire-detection capability) instead of a fire-detection system, if the monitoring system is operable and complies with this section. You must ensure that—

(a) Each detector, each control panel, and each fire alarm are approved under 46 CFR subpart 161.002 or listed by an independent testing laboratory; except that, if you use an existing engine-room-monitoring system (with fire-detection capability), each detector must be listed by an independent testing laboratory;

(b) The system is installed, tested, and maintained in line with the manufacturer's design manual;

(c) The system is arranged and installed so a fire in the engine room automatically sets off alarms on a control panel at the operating station;

(d) The control panel includes—

(1) A power-available light;

(2) Both an audible alarm to notify crew at the operating station of fire and visible alarms to identify the zone or zones of origin of the fire;

(3) A means to silence the audible alarm while maintaining indication by the visible alarms;

(4) A circuit-fault detector test-switch; and

(5) Labels for all switches and indicator lights, identifying their functions;

(e) The system draws power from two sources, switchover from the primary

source to the secondary source being either manual or automatic;

(f) The system serves no other purpose, unless it is an engine-room-monitoring system (with fire-detection capability) installed on a vessel whose construction was contracted for before January 18, 2000; and

(g) The system is certified by a Registered Professional Engineer, or by a recognized classification society (under 46 CFR part 8), to comply with paragraphs (a) through (f) of this section.

§ 27.205 What are the requirements for internal communication systems on towing vessels?

(a) You must ensure that your vessel is fitted with a communication system between the engine room and the operating station that—

(1) Consists of either fixed or portable equipment, such as a sound-powered telephone, portable radios, or other reliable method of voice communication, with a main or reserve power supply that is independent of the electrical system on your towing vessel; and

(2) Provides two-way voice communication and calling between the operating station and either—

(i) The engine room; or

(ii) A location immediately adjacent to an exit from the engine room.

(b) Twin-screw vessels with operating-station control for both engines are not required to have internal communication systems.

(c) When the operating-station's engine controls and the access to the engine room are within 3 meters (10 feet) of each other and allow unobstructed visual contact between them, direct voice communication is acceptable instead of a communication system.

§ 27.207 What are the requirements for fuel shut-offs on towing vessels?

To stop the flow of fuel in the event of a break in the fuel line, you must have a positive, remote fuel-shut-off valve fitted on any fuel line that supplies fuel directly to an engine or generator. The valve must be near the source of supply (for instance, at the day tank, storage tank, or fuel-distribution manifold). Furthermore, it must be operable from a safe place outside the space where the valve is installed. Each remote valve control should be marked in clearly legible letters, at least 25 millimeters (1 inch) high, indicating the purpose of the valve and the way to operate it.

§ 27.209 What are the requirements for training crews to respond to fires?

(a) *Drills and instruction*. The master or person in charge of a vessel must ensure that each crewmember participates in drills and receives instruction at least once each month. The instruction may coincide with the drills, but need not. You must ensure that all crewmembers are familiar with their fire-fighting duties, and, specifically, with the following contingencies:

(1) Fighting a fire in the engine room and elsewhere on board the vessel, including how to—

(i) Operate all of the fire-extinguishing equipment on board the vessel;

(ii) Stop any mechanical ventilation system for the engine room and effectively seal all natural openings to the space to prevent leakage of the extinguishing agent; and

(iii) Operate the fuel shut-off for the engine room.

(2) Activating the general alarm.

(3) Reporting inoperative alarm systems and fire-detection systems.

(4) Putting on a fireman's outfit and a self-contained breathing apparatus, if the vessel is so equipped.

(b) *Alternative form of instruction*. The master or person in charge of a vessel may substitute, for the instruction required in paragraph (a) of this section, the viewing of video training materials concerning at least the contingencies listed in paragraph (a), followed by a discussion led by someone familiar with these contingencies. This instruction may occur either on board or off the vessel.

(c) *Participation in drills*. Drills must take place on board the vessel, as if there were an actual emergency. They must include—

(1) Participation by all crewmembers;

(2) Breaking out and using, or simulating the use of, emergency equipment;

(3) Testing of all alarm and detection systems; and

(4) Putting on protective clothing (by at least one person), if the vessel is so equipped.

(d) *Safety orientation.* The master or person in charge of a vessel must ensure that each crewmember who has not (i) participated in the drills required by paragraph (a) of this section, and (ii) received the instruction required by that paragraph, receives a safety orientation within 24 hours of reporting for duty.

(e) The safety orientation must cover the particular contingencies listed in paragraph (a) of this section.

§ 27.211 What are the specifications for fuel systems on towing vessels whose construction was contracted for on or after January 18, 2000?

(a) You must ensure that, except for the components of an outboard engine or of a portable bilge pump or fire pump, each fuel system installed on board the vessel complies with this section.

(b) *Portable fuel systems.* The vessel must not incorporate or carry portable fuel systems, including portable tanks and related fuel lines and accessories, except when used for outboard engines or when permanently attached to portable equipment such as portable bilge pumps or fire pumps. The design, construction, and stowage of portable tanks and related fuel lines and accessories must comply with ABYC H–25 (incorporated by reference in § 27.102).

(c) *Fuel restrictions.* Neither you nor the master or person in charge may use fuel other than bunker C or diesel, except for outboard engines, or where otherwise accepted by the Commandant (CG–521). An installation that uses bunker C, heavy fuel oil (HFO), or any fuel that requires pre-heating, must comply with subchapter F of this chapter.

(d) *Vent pipes for integral fuel tanks.* Each integral fuel tank must meet the requirements of this paragraph as follows:

(1) Each tank must have a vent that connects to the highest point of the tank, discharges on a weather deck through a bend of 180 degrees (3.14 radians), and is fitted with a 30-by-30-mesh corrosion-resistant flame screen. Vents from two or more tanks may combine in a system that discharges on a weather deck.

(2) The net cross-sectional area of the vent pipe for the tank must be—

(i) Not less than 312.3 square millimeters (0.484 square inches) for any tank filled by gravity; or

(ii) Not less than that of the fill pipe for any tank filled under pressure.

(e) *Fuel piping.* Except as permitted in paragraphs (e)(1), (2), and (3) of this section, each fuel line must be seamless and made of steel, annealed copper, nickel-copper, or copper-nickel. Each fuel line must have a wall thickness of not less than 0.9 millimeters (0.035 inch) except that—

(1) Aluminum piping is acceptable on an aluminum-hull vessel if it is installed outside the engine room and is at least Schedule 80 in thickness; and

(2) Nonmetallic flexible hose is acceptable if it—

(i) Is used in lengths of not more than 0.76 meters (30 inches);

(ii) Is visible and easily accessible;

(iii) Does not penetrate a watertight bulkhead;

(iv) Is fabricated with an inner tube and a cover of synthetic rubber or other suitable material reinforced with wire braid; and

(v) Either,—

(A) If it is designed for use with compression fittings, is fitted with suitable, corrosion-resistant, compression fittings, or fittings compliant with SAE J1475 (incorporated by reference in § 27.102); or,

(B) If it is designed for use with clamps, is installed with two clamps at each end of the hose. Clamps must not rely on spring tension and must be installed beyond the bead or flare or over the serrations of the mating spud, pipe, or hose fitting. Hose complying with SAE J1475 is also acceptable.

(3) Nonmetallic flexible hose complying with SAE J1942 (incorporated by reference in § 27.102) is also acceptable.

(f) A towing vessel of less than 24 meters (79 feet) in length may comply with any of the following standards for fuel systems rather than with those of paragraph (e) of this section:

(1) ABYC H–33 (incorporated by reference in § 27.102).

(2) Chapter 5 of NFPA 302 (incorporated by reference in § 27.102).

(3) 33 CFR chapter I, subchapter S (Boating Safety).

[USCG-2000–6931, 69 FR 34069, June 18, 2004, as amended by USCG–2009–0702, 74 FR 49226, Sept. 25, 2009]

Subpart C—Fire-Suppression Equipment for Towing Vessels

§ 27.301 What are the requirements for fire pumps, fire mains, and fire hoses on towing vessels?

By April 29, 2005, you must provide for your towing vessel either a self-priming, power-driven, fixed fire-pump, a fire main, and hoses and nozzles in accordance with paragraphs (a) through (c) of this section; or a portable pump, and hoses and nozzles, in accordance with paragraphs (d) and (e) of this section.

(a) The fixed fire-pump must be capable of—

(1) Delivering water simultaneously from the two highest hydrants, or from both branches of the fitting if the highest hydrant has a Siamese fitting, at a pitot-tube pressure of at least 344 kPa (50 psi) and a flow rate of at least 300 lpm (80 gpm); and

(2) Being energized remotely from a safe place outside the engine room and from the pump.

(b) All valves necessary for the operation of the fire main must be kept in the open position or must be capable of operation from the same place where the remote fire pump contol is located.

(c) The fire main must have a sufficient number of fire hydrants with attached hose to reach any part of the machinery space using a single length of fire hose.

(d) The hose must be lined commercial fire-hose, at least 40mm (1.5 inches) in diameter, 15 meters (50 feet) in length, and fitted with a nozzle made of corrosion-resistant material capable of providing a solid stream and a spray pattern.

(e) The portable fire pump must be self-priming and power-driven, with—

(1) A minimum capacity of at least 300 lpm (80 gpm) at a discharge gauge pressure of not less than 414 kPa (60 psi), measured at the pump discharge;

(2) A sufficient amount of lined commercial fire hose at least 40mm (1.5 inches) in diameter and 15 meters (50 feet) in length, immediately available to attach to it so that a stream of water will reach any part of the vessel; and

(3) A nozzle made of corrosion-resistant material capable of providing a solid stream and a spray pattern.

(f) You must stow the pump with its hose and nozzle outside of the machinery space.

§ 27.303 What are the requirements for fire-extinguishing equipment on towing vessels in inland service, and on towing vessels in ocean or coastal service whose construction was contracted for before August 27, 2003?

You must carry on your towing vessel both—

(a) The minimum number of hand-portable fire extinguishers required by subpart 25.30 of this part; and

(b) By April 29, 2005, either—

(1) An approved B-V semi-portable fire-extinguishing system to protect the engine room; or

(2) A fixed fire-extinguishing system installed to protect the engine room of the vessel.

§ 27.305 What are the requirements for fire-extinguishing equipment on towing vessels in ocean or coastal service whose construction was contracted for on or after August 27, 2003?

(a) You must carry on your towing vessel both—

(1) The minimum number of hand-portable fire extinguishers required by subpart 25.30 of this part; and

(2) An approved B-V semi-portable fire-extinguishing system to protect the engine room.

(b) You must have a fixed fire-extinguishing system installed to protect the engine room of the vessel.

(c) This section does not apply to any towing vessel pushing a barge ahead, or hauling a barge alongside, when the barge's coastwise or Great Lakes route is restricted (as indicated on its certificate of inspection), so that the barge may operate ''in fair weather only, within 12 miles of shore,'' or with words to that effect.

PART 28—REQUIREMENTS FOR COMMERCIAL FISHING INDUSTRY VESSELS

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28.895 Loadlines.
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28.905 Repairs and alterations.

AUTHORITY: 46 U.S.C. 3316, 4502, 4505, 4506, 6104, 10603; Department of Homeland Security Delegation No. 0170.1.

SOURCE: CGD 88–079, 56 FR 40393, Aug. 14, 1991, unless otherwise noted.

Subpart A—General Provisions

§ 28.10 Authority.

The regulations in this part are prescribed by the Commandant of the Coast Guard, pursuant to a delegation of authority by the Secretary of Homeland Security set forth in Department of Homeland Security Delegation No. 0170.1, to carry out the intent and purpose of 46 U.S.C. 3316 which authorizes the Secretary to rely on reports, documents, and certificates issued by the American Bureau of Shipping (ABS) or a similar United States classification society, or an agent of the ABS or similar society; sections 4502 and 4506 which require safety equipment and operational stability for certain vessels in the commercial fishing industry; section 6104 which requires the Secretary of Transportation to compile statistics concerning marine casualties compiled from vessel insurers and to delegate that authority to compile statistics from insurers to a qualified person; and section 10603 which requires seamen on commercial fishing industry vessels to give notice of illness, injury, or disability to their employer.

[CGD 88–079, 56 FR 40393, Aug. 14, 1991, as amended by USCG–2010–0759, 75 FR 60002, Sept. 29, 2010]

§ 28.20 OMB control numbers.

(a) This section collects and displays the control numbers assigned to information collection and recordkeeping requirements in this part by the Office of Management and Budget (OMB) pursuant to the Paperwork Reduction Act of 1980 (44 U.S.C. 3501 *et seq.*). This section complies with the 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.
§ 28.80	1625–0061
§ 28.90	1625–0061
§ 28.135	1625–0061
§ 28.165	1625–0061
§ 28.530	1625–0061
§ 28.710	1625–0061
§ 28.720	1625–0061

[CGD 88–079, 56 FR 40393, Aug. 14, 1991, as amended by USCG-2004–18884, 69 FR 58344, Sept. 30, 2004]

§ 28.30 Applicability.

(a) Except as provided in paragraph (b) of this section, this part is applicable to all United States flag vessels not inspected under this chapter that are commercial fishing, fish processing, or fish tender vessels. This includes vessels documented under the provisions of subchapter G of this chapter and vessels numbered by a State or the Coast Guard under the provisions of 33

CFR subchapter S. Certain regulations in this part apply only to limited categories of vessels. Specific applicability statements are provided at the beginning of those regulations.

(b) This part does not apply to a small boat or auxiliary craft that is deployed from a fishing industry vessel for the purpose of handling fishing gear.

[CGD 88–079, 56 FR 40393, Aug. 14, 1991; 56 FR 49822, Oct. 1, 1991, as amended by USCG-2004–18884, 69 FR 58344, Sept. 30, 2004; USCG–2004–18884, 69 FR 68089, Nov. 23, 2004]

§ 28.40 Incorporation by reference.

(a) Certain material is incorporated by reference into this part with the approval of the Director of the Federal Register in accordance with 5 U.S.C. 552(a). To enforce any edition other than that specified in paragraph (b) of this section, the Coast Guard must publish notice of change in the FEDERAL REGISTER and make the material available to the public. All approved material is on file at the U.S. Coast Guard, Office of Design and Engineering Standards (CG–521), 2100 2nd St. SW., Stop 7126, Washington, DC 20593–7126 or 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.* All material is available from the sources indicated in paragraph (b) of this section.

(b) The material approved for incorporation by reference in this part and the sections affected are:

American Boat and Yacht Council (ABYC),	
613 Third Street, Suite 10, Annapolis, MD 21403	
E–1–1972—Bonding of Direct Current Systems	28.345
E–8–1985—Alternating Current (AC) Electrical Systems on Boats.	28.345
E–9–1981—Recommended Practices and Standards Covering Direct Current (DC) Electrical Systems on Boats.	28.345
H–2–1989—Ventilation of Boats Using Gasoline	28.340
H–25–1986—Portable Fuel Systems for Flammable Liquids	28.335
H–33–1989—Diesel Fuel Systems	28.335
P–1–1986—Installation of Exhaust Systems for Propulsion and Auxiliary Engines.	28.380
American Society for Testing and Materials (ASTM),	
100 Barr Harbor Drive, West Conshohocken, PA 19428–2959.	
ASTM F 1321–92, Standard Guide for Conducting a Stability Test (Lightweight Survey and Inclining Experiment) to Determine the Light Ship Displacement and Centers of Gravity of a Vessel.	28.535
International Maritime Organization (IMO),	
Publications Section, 4 Albert Embankment, London SE1 7SR, United Kingdom:	
Resolution A.658(16) ''Use and Fitting of Retro-Reflective Materials on Life-Saving Appliances'', dated November 1989.	28.135
National Fire Protection Association (NFPA),	
1 Batterymarch Park, Quincy, MA 02269:	
70–1990—National Electrical Code (also known as ANSI/NFPA 70–1990).	28.350; 28.370; 28.865
302–1989—Pleasure and Commercial Motor Craft	28.335; 28.340; 28.345
17–1985—Dry Chemical Extinguishing Systems	28.330
17A-1986—Wet Chemical Extinguishing Systems	28.330
Society of Automotive Engineers (SAE),	
400 Commonwealth Drive, Warrendale, PA 15096;	
SAE J 1475–1984—Hydraulic Hose Fitting for Marine Applications.	28.880
SAE J 1942–1989—Hose and Hose Assemblies for Marine Applications.	28.405
Underwriters Laboratories, Inc. (UL),	
12 Laboratory Drive, Research Triangle Park, NC 27709–3995	
UL 217–1985—Single and Multiple Station Smoke Detectors	28.325; 28.830

UL 710–1990—Exhaust Hoods for Commercial Cooking Equipment. 28.330

[CGD 88–079, 56 FR 40393, Aug. 14, 1991, as amended by CGD 95–072, 60 FR 50461, Sept. 29, 1995; CGD 94–025, 60 FR 54444, Oct. 24, 1995; CGD 96–041, 61 FR 50726, Sept. 27, 1996; CGD 97–057, 62 FR 51042, Sept. 30, 1997; USCG-1999–5151, 64 FR 67176, Dec. 1, 1999; USCG–2009–0702, 74 FR 49226, Sept. 25, 2009; USCG–2010–0759, 75 FR 60002, Sept. 29, 2010]

§ 28.50 Definition of terms used in this part.

Accepted organization means an organization which has been designated by the Commandant for the purpose of examining commercial fishing industry vessels under the provisions of § 28.73.

Accommodations include:

(1) A messroom.
(2) A lounge.
(3) A sitting area.
(4) A recreation room.
(5) Quarters.
(6) A toilet space.
(7) A shower room.
(8) A galley.
(9) Berthing facilities.
(10) A clothing changing room.

Alcohol concentration means either grams of alcohol per 100 milliliters of blood, or grams of alcohol per 210 liters of breath.

Aleutian trade means the transportation of cargo, including fishery related products, for hire on board a fish tender vessel to or from a place in Alaska west of 153 degrees West longitude and east of 172 degrees East longitude if that place receives weekly common carrier service by water, to or from a place in the United States, except a place in Alaska.

Approved means approved by the Commandant unless otherwise stated.

Auxiliary Craft means a vessel that is carried onboard a commercial fishing vessel and is normally used to support fishing operations.

Boundary lines means the lines described in part 7 of this chapter. In general, they follow the trend of the seaward high water shorelines and cross entrances to small bays, inlets, and rivers. In some areas, they are along the 12-mile line that marks the seaward limits of the territorial sea and, in other areas, they come ashore.

Buoyant Apparatus means a buoyant apparatus approved by the Commandant.

Coast Guard Boarding Officer means a commissioned, warrant, or petty officer of the Coast Guard having authority to board any vessel under the Act of August 4, 1949, 63 Stat. 502, as amended (14 U.S.C. 89).

Coast Guard Representative means a person employed at the cognizant U.S. Coast Guard Sector Office or Marine Inspection Office, or an accepted organization, or a similarly qualified organization approved in examining commercial fishing industry vessels. Contact Office of Vessel Activities, Fishing Vessels Division, Commandant (CG-5433), U.S. Coast Guard, 2100 2nd St. SW., Stop 7581, Washington, DC 20593–7581 for a current list of accepted organizations or similarly qualified organizations.

Coastal Service Pack means equipment provided in liferafts approved by the Commandant for coastal service.

Coastal waters means coastal waters as defined in 33 CFR 175.105.

Coastline means the territorial sea baseline as defined in 33 CFR 2.20.

Cold water means water where the monthly mean low water temperature is normally 59 °F (15 °C) or less.

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

Commercial fishing industry vessel means a fishing vessel, fish tender vessel, or a fish processing vessel.

Currently corrected means corrected with changes contained in all Notice to Mariners published by the Defense Mapping Agency Hydrographic/Topographic Center.

Custom engineered means, when referring to a fixed gas fire extinguishing system, a system that is designed for a specific space requiring individual calculations for the extinguishing agent volume, flow rate, and piping, among other factors, for the space.

District Commander means an officer of the Coast Guard designated as such

by the Commandant to command all Coast Guard activities within a district.

Documented vessel means a vessel for which a Certificate of Documentation has been issued under the provisions of 46 CFR part 67.

Equipment Packs means equipment provided in liferafts approved by the Commandant.

Especially hazardous condition means a condition which may be life threatening or lead to serious injury if continued.

Fish means finfish, mollusks, crustaceans, and all other forms of marine animal and plant life, except marine mammals and birds.

Fish processing vessel means a vessel that commercially prepares fish or fish products other than by gutting, decapitating, gilling, skinning, shucking, icing, freezing, or brine chilling.

Fish tender vessel means a vessel that commercially supplies, stores, refrigerates, or transports fish, fish products, or materials directly related to fishing or the preparation of fish to or from a fishing, fish processing or fish tender vessel or a fish processing facility.

Fishing vessel means a vessel that commercially engages in the catching, taking, or harvesting of fish or an activity that can reasonably be expected to result in the catching, taking, or harvesting of fish.

Fishing Vessel Drill Conductor means an individual who meets the training requirements of 46 CFR 28.270(c) for conducting drills and providing instruction once a month to each individual on board those vessels to which Subpart C of this section applies.

Fishing Vessel Safety Instructor means an individual or organization that has been accepted by the local Officer-in-Charge, Marine Inspection to train Fishing Vessel Drill Conductors to conduct drills and provide instruction on those vessels to which subpart C of this part applies.

Gasoline as used in this part includes gasoline-alcohol blends and any other fuel having a flash point of 110 °F (43.3 °C) or lower.

Inflatable Buoyant Apparatus means an inflatable buoyant apparatus approved by the Commandant.

Inflatable Liferaft means an inflatable liferaft that is approved by the Commandant.

Length means the length listed on the vessel's Certificate of Documentation or Certificate of Number.

Lifeboat means a lifeboat approved by the Commandant.

Liferaft means a liferaft approved by the Commandant.

Major conversion means a conversion of a vessel that—

(1) Substantially changes the dimensions or carrying capacity of the vessel;

(2) Changes the type of the vessel;

(3) Substantially prolongs the life of the vessel; or

(4) Otherwise so changes the vessel that it is essentially a new vessel, as determined by the Commandant.

Mile means a nautical mile.

North Pacific Area means all waters of the North Pacific Ocean and Bering Sea north of 48°30′ north latitude including waters in contiguous bays, inlets, rivers, and sounds.

Officer in Charge, Marine Inspection (OCMI) means an officer of the Coast Guard who commands a Marine Inspection Zone described in 33 CFR part 3 or an authorized representative of that officer.

Open to the atmosphere means a space that has at least 15 square inches (9680 square millimeters) of open area directly exposed to the atmosphere for each cubic foot (0.0283 cubic meters) of net volume of the space.

Operating station means the principal steering station on the vessel from which the vessel is normally navigated.

Pre-engineered means, when referring to a fixed gas fire extinguishing system, a system that is designed and tested to be suitable for installation as a complete unit in a space of a set volume, without modification, regardless of the vessel on which installed.

Similarly qualified organization means an organization which has been designated by the Commandant for the purpose of classing or examining commercial fishing industry vessels under the provisions of § 28.76.

Switchboard means an electrical panel which receives power from a generator, battery, or other electrical

power source and distributes power directly or indirectly to all equipment supplied by the power source.

Warm water means water where the monthly mean low water temperature is normally more than 59 °F. (15° C.).

Watertight means designed and constructed to withstand a static head of water without any leakage, except that ''watertight'' for the purposes of electrical equipment means enclosed so that equipment does not leak when a stream of water from a hose with a nozzle one inch (25.4 millimeters) in diameter that delivers at least 65 gallons (246 liters) per minute is played on the enclosure from any direction from a distance of 10 feet (3 meters) for five minutes.

Weather deck means the uppermost deck exposed to the weather to which a weathertight sideshell extends.

Weathertight means that water will not penetrate into the unit in any sea condition.

[CGD 88–079, 56 FR 40393, Aug. 14, 1991]

EDITORIAL NOTE: For FEDERAL REGISTER citations affecting § 28.50, see the List of CFR Sections Affected, which appears in the Finding Aids section of the printed volume and on GPO Access.

§ 28.60 Exemption letter.

(a) *Types of exemptions*. (1) *Specific exemption* means an exemption for an individual commercial fishing industry vessel.

(2) *Class exemption* means an exemption for a class or fleet of commercial fishing industry vessels.

(b) *Exemption procedure*. A request for an exemption of either type must be in writing, have specific reasons for the request, and be sent to the Coast Guard District Office having jurisdiction over the waters where the vessel(s) will be operating. Coast Guard District geographical areas are described in 33 CFR part 3. The District Commander will review the request to determine that:

(1) Good cause exists for granting an exemption; and

(2) The safety of the vessel and those on board will not be adversely affected.

(c) The District Commander will either approve or deny the request in writing. In granting a request, the District Commander will specify the terms under which the exemption is granted and distribute the letter describing these terms to the party or parties requesting the exemption.

(d) *Exemption letter*. Exemption letters, or suitable copies, describing the terms under which the exemption is granted shall be maintained at all times on board each vessel to which any exemption applies.

(e) *Right of appeal*. Any person directly affected by a decision or action taken under this part may appeal in accordance with § 1.03 of this chapter.

(f)*Rescinding an exemption letter*. Exemptions granted may be rescinded by the District Commander if it is subsequently determined that the safety of the vessel and those onboard is adversely affected.

[CDG 96–046, 62 FR 46675, Sept. 4, 1997]

§ 28.65 Termination of unsafe operations.

(a) A Coast Guard Boarding Officer may direct the master or individual in charge of a vessel, with the concurrence of the District Commander, or staff authorized by the District Commander, to immediately take reasonable steps necessary for the safety of individuals on board the vessel if the Boarding Officer observes the vessel being operated in an unsafe manner and determines that an especially hazardous condition exists. This may include directing the master or individual in charge of the vessel to return the vessel to a mooring and remain there until the situation creating the especially hazardous condition is corrected or other specific action is taken.

(b) Hazardous conditions include, but are not limited to, operation with—

(1) An insufficient number of lifesaving equipment on board, to include serviceable Personal Flotation Devices (PFDs), serviceable immersion suits, or adequate survival craft capacity.

(2) An inoperable Emergency Position Indicating Radio Beacon (EPIRB) or radio communication equipment when required by regulation. There should be at least one operable means of communicating distress. When both are required, then at least one must be in operable condition to avoid termination of the voyage;

(3) Inadequate firefighting equipment on board;

(4) Excessive volatile fuel (gasoline or solvents) or volatile fuel vapors in bilges;

(5) Instability resulting from overloading, improper loading or lack of freeboard;

(6) Inoperable bilge system;

(7) Intoxication of the master or individual in charge of a commercial fishing vessel. An individual is intoxicated when he/she is operating a commercial fishing vessel and has an alcohol concentration of .04 percent, or the intoxicant's effect on the person's manner, disposition, speech, muscular movement, general appearance or behavior is apparent by observation;

(8) A lack of adequate operable navigation lights during periods of reduced visibility;

(9) Watertight closures missing or inoperable;

(10) Flooding or uncontrolled leakage in any space; or

(11) A missing or expired certificate of class, as required by 46 U.S.C. 4503(1), for a fish processing vessel.

(c) A Coast Guard Boarding Officer may direct the individual in charge of a fish processing vessel that is missing a Load Line Certificate, or that does not comply with the provisions of the Load Line Certificate issued by the American Bureau of Shipping or a similarly qualified organization, to return the vessel to a mooring and to remain there until the vessel obtains such a certificate.

[CGD 96–046, 61 FR 57273, Nov. 5, 1996, as amended at CGD 96–046, 62 FR 46676, Sept. 4, 1997; USCG-2004–18884, 69 FR 58344, Sept. 30, 2004]

§ 28.70 Approved equipment and material.

(a) Equipment and material that is required by this subchapter to be approved or of an approved type, must have been manufactured and approved in accordance with the design and testing requirements in Subchapter Q of this chapter or as otherwise specified by the Commandant.

(b) A listing of current and formerly approved equipment and materials may be found on the internet at: *http://cgmix.uscg.mil/equipment*. Each OCMI may be contacted for information concerning approved equipment.

[CGD 88–079, 56 FR 40393, Aug. 14, 1991, as amended by USCG-2004–18884, 69 FR 58344, Sept. 30, 2004]

§ 28.73 Accepted organizations.

An organization desiring to be designated by the Commandant as an accepted organization must request such designation in writing. As a minimum the organization must verify that it is an organization—

(a) With a Code of Ethics;

(b) Whose surveyors are familiar with the requirements of this chapter related to commercial fishing industry vessels;

(c) Whose surveyors are familiar with the operations and equipment on board commercial fishing industry vessels;

(d) Whose only interest in the fishing industry is in ensuring the safety of commercial fishing industry vessels and surveying commercial fishing industry vessels;

(e) That has grievance procedures;

(f) That has procedures for accepting and terminating membership of an individual, including minimum professional qualifications for surveyors;

(g) That maintains a roster of present and past accepted members and surveyors; and

(h) That has an Apprentice/Associate program for surveyors.

§ 28.76 Similarly qualified organizations.

An organization desiring to be designated by the Commandant as a similarly qualified organization must request such designation in writing. As a minimum the organization must verify that it—

(a) Publishes standards for vessel design and construction which are as widely available as and which are of similar content to the standards published by the ABS;

(b) Performs periodic surveys in a wide range of localities during and after construction to ensure compliance with published standards, including drydock examinations, in a manner similar to the ABS;

(c) Issues certificates testifying to compliance with the published standards;

(d) Has as its primary concern the survey and classification of vessels;

(e) Has no interest in owning or operating fishing, fish processing, or fish tender vessels; and

(f) Maintains records of surveys and makes such records available to the Coast Guard upon request in a manner similar to the ABS.

§ 28.80 Report of casualty.

(a) Except for a casualty which is required to be reported to the Coast Guard on Form CG 2692 in accordance with part 4 of this chapter, the owner, agent, operator, master, or individual in charge of a vessel involved in a casualty must submit a report in accordance with paragraph (c) of this section, as soon as possible after the casualty, to the underwriter of primary insurance for the vessel or to an organization listed in paragraph (d) of this section whenever the casualty involves any of the following.

(1) Loss of life.

(2) An injury that requires professional medical treatment (treatment beyond first aid) and that renders the individual unfit to perform his or her routine duties.

(3) Loss of a vessel.

(4) Damage to or by a vessel, its cargo, apparel or gear, except for fishing gear while not on board a vessel, or that impairs the seaworthiness of the vessel, or that is initially estimated at $2,500.00 or more.

(b) Each underwriter of primary insurance for a commercial fishing industry vessel must submit a report of each casualty involving that vessel to an organization listed in paragraph (d) of this section within 90 days of receiving notice of the casualty and whenever it pays a claim resulting from the casualty. Initial reports must be in accordance with paragraph (c) of this section. Subsequent reports must contain sufficient information to identify the casualty and any new or corrected casualty data.

(c) Each report of casualty must include the following information:

(1) The name and address of the vessel owner and vessel operator, if different than the vessel owner;

(2) The name and address of the underwriter of primary insurance for the vessel;

(3) The name, registry number, call sign, gross tonnage, year of build, length, and hull material of the vessel;

(4) The date, location, primary cause, and nature of the casualty;

(5) The specific fishery, intended catch, and length of fishery opening when applicable;

(6) The date that the casualty was reported to the underwriter of primary insurance for the vessel, or to an organization acceptable to the Commandant;

(7) The activity of the vessel at the time of the casualty;

(8) The weather conditions at the time of the casualty, if the weather caused or contributed to the cause of the casualty;

(9) The damages to or by the vessel, its apparel, gear, or cargo;

(10) The monetary amounts paid for damages;

(11) The name, birth date, social security number, address, job title, length of disability, activity at the time of injury, type of injury, and medical treatment required for each individual incapacitated for more than 72 hours, or deceased as a result of the casualty;

(12) The name, registry number, and call sign of every other vessel involved in the casualty; and

(13) The monetary amount paid for an injury or a death.

(d) A casualty to a commercial fishing industry vessel must be reported to an organization that has knowledge and experience in the collection and processing of statistical insurance data and that has been accepted by the Commandant to receive and process casualty data under this part. The Commandant has accepted for this purpose:

(1) Marine Index Bureau (a division of ISO Claim Search), Floor 22–8, 545 Washington Boulevard, Jersey City, NJ, 07310–1686.

(2) [Reserved]

NOTE: The Coast Guard intends to treat information collected under this section from underwriters of primary insurance as exempt

from disclosure under the Freedom of Information Act because it is commercial and financial information which, if disclosed, would be likely to cause substantial harm to the competitive position of the underwriter.

[CGD 88–079, 56 FR 40393, Aug. 14, 1991, as amended by CGD 96–046, 61 FR 57273, Nov. 5, 1996; USCG–2008–0906, 73 FR 56509, Sept. 29, 2008]

§ 28.90 Report of injury.

Each individual employed on a commercial fishing industry vessel must notify the master, individual in charge of the vessel, or other agent of the employer of each illness, disability, or injury suffered while in service to the vessel not later than seven days after the date on which the illness, disability, or injury arose.

§ 28.95 Right of appeal.

Any person directly affected by a decision or action taken under this part, by or on behalf of the Coast Guard, may appeal therefrom in accordance with part 1, subpart 1.03 of this chapter.

Subpart B—Requirements for All Vessels

§ 28.100 Applicability.

Each commercial fishing industry vessel must meet the requirements of this subpart, in addition to the requirements of parts 24, 25, and 26 of this chapter.

§ 28.105 Lifesaving equipment—general requirements.

(a) In addition to the requirements of this subpart, each commercial fishing industry vessel must comply with the requirements of part 25, subpart 25.25 of this chapter.

(b) Except as provided in § 28.120(d), each item of lifesaving equipment carried on board a vessel to meet the requirements of this part must be approved by the Commandant. Equipment for personal use which is not required by this part need not be approved by the Commandant.

§ 28.110 Life preservers or other personal flotation devices.

(a) Except as provided by § 28.305 of this chapter, each vessel must be equipped with at least one immersion suit, exposure suit, or wearable personal flotation device of the proper size for each individual on board as specified in table 28.110 and part 25, subpart 25.25 of this chapter. Notwithstanding the provisions of paragraphs (c) and (d) of § 25.25–1 of this chapter, each commercial fishing industry vessel propelled by sail or a manned barge employed in commercial fishing activities must meet the requirements of this paragraph.

(b) Each wearable personal flotation device must be stowed so that it is readily accessible to the individual for whom it is intended, from both the individual's normal work station and berthing area. If there is no location accessible to both the work station and the berthing area, an appropriate device must be stowed in both locations.

TABLE 28.110—PERSONAL FLOTATION DEVICES AND IMMERSION SUITS

Applicable waters	Vessel type	Devices required	Other regulations
Seaward of the Boundary Line and North of 32°N or South of 32°S; and Lake Superior.	Documented Vessel ..	Immersion suit or exposure suit.	28.135; 25.25–9(a); 25.25–13; 25.25–15.
Coastal Waters on the West Coast of the United States north of Point Reyes, CA; Beyond Coastal Waters, cold water; and Lake Superior.	All vessels	.....do	Do.
All other waters (Includes all Great Lakes except Lake Superior).	40 feet (12.2 meters) or more in length.	Type I, Type V commercial hybrid, immersion suit, or exposure suit.[1]	28.135; 25.25–5(e); 25.25–5(f); 25.25–9(a); 25.25–13; 25.25–15.
	Less than 40 feet (12.2 meters) in length.	Type I, Type II, Type III, Type V commercial hybrid, immersion suit, or exposure suit.[1]	Do.

[1] Certain Type V personal flotation devices are approved for substitution for Type I, II, or III personal flotation devices when used in accordance with the conditions stated in the Coast Guard approval table.

[CGD 88–079, 56 FR 40393, Aug. 14, 1991, as amended by CGD 88–079b, 57 FR 34189, Aug. 3, 1992; CGD 95–012, 60 FR 48048, Sept. 18, 1995; USCG-2000–7790, 65 FR 58458, Sept. 29, 2000]

§ 28.115 Ring life buoys.

(a) Except as provided in paragraph (b) of this section and § 28.305, each vessel must be equipped with a throwable flotation device or a ring life buoy as specified in table 28.115. If the vessel is equipped with a ring life buoy, at least one ring life buoy must be equipped with a line which is at least:

(1) 60 feet (18.3 meters) in length for a vessel less than 65 feet (19.8 meters) in length; or

(2) 90 feet (27.4 meters) in length for a vessel 65 feet (19.8 meters) or more in length.

(b) For each vessel less than 65 feet (19.8 meters) in length, an approved 20 inch (0.51 meters) or larger ring life buoy which is in serviceable condition and which was installed on board before September 15, 1991, may be used to meet the requirements of paragraph (a) of this section.

TABLE 28.115—THROWABLE FLOTATION DEVICES

Vessel length	Devices required
Less than 16 feet (4.9 meters).	None.
16 feet (4.9 meters) or more, but less than 26 feet (7.9 meters).	1 buoyant cushion, or ring life buoy (Type IV PFD).
26 feet (7.9 meters) or more, but less than 65 feet (19.8 meters).	1 ring life buoy approval number starting with 160.009 or 160.050; orange; at least 24 inch (0.61 meters) size.
65 feet (19.8 meters) or more.	3 ring life buoys, approval number 160.050; orange; at least 24 inch (0.61 meters) size.

NOTE: Certain Type V PFDs are approved for use in substitution for Type IV PFDs, when used in accordance with the conditions stated in the Coast Guard approval label.

[CGD 88–079, 56 FR 40393, Aug. 14, 1991; 56 FR 47679, Sept. 20, 1991; 56 FR 49822, Oct. 1, 1991; CGD 95–012, 60 FR 48048, Sept. 18, 1995]

§ 28.120 Survival craft.

(a) Except as provided in paragraphs (b) through (h) of this section and 28.305, each vessel must carry the survival craft specified in Table 28.120(a), Table 28.120(b), or Table 28.120(c), as appropriate for the vessel, in an aggregate capacity to accommodate the total number of individuals on board.

(b) The requirements of this section do not apply to vessels less than 10.97 meters (36 feet) in length with 3 or fewer individuals on board which operate within 12 miles of the coastline.

(c) A buoyant apparatus may be substituted instead of the requirements in this section for vessels 10.97 meters (36 feet) or more in length with 3 or fewer individuals on board which operate within 12 miles of the coastline.

(d) Each survival craft installed on board a vessel before September 15, 1991, may continue to be used to meet the requirements of this section provided the survival craft is—

(1) Of the same type as required in Tables 28.120(a), 28.120(b), or 28.120(c), as appropriate for the vessel type; and

(2) Maintained in good and serviceable condition.

(e) Each inflatable liferaft installed on board a vessel before September 15, 1991, may continue to be used to meet the requirements for an approved inflatable liferaft, provided the existing liferaft is—

(1) Maintained in good and serviceable condition as required by Table 28.140; and

(2) Equipped with the equipment pack required by Tables 28.120(a), 28.120(b), or 28.120(c), as appropriate for the vessel type. Where no equipment pack is specified in Tables 28.120(a), 28.120(b), or 28.120(c), a coastal service pack is the minimum required.

(f) A lifeboat may be substituted for any survival craft required by this section, provided it is arranged and equipped in accordance with part 199 of this chapter.

(g) The capacity of an auxiliary craft carried on board a vessel that is integral to and necessary for normal fishing operations will satisfy the requirements of this section for survival craft, except for an inflatable liferaft, provided the craft is readily accessible during an emergency and is capable of safely holding all individuals on board the vessel. If the auxiliary craft is equipped with a Coast Guard required capacity plate, the boat must not be

loaded so as to exceed the rated capacity.

(h) A vessel less than 10.97 meters (36 feet) in length that meets the flotation provisions of 33 CFR part 183 is exempt from the requirement for survival craft in paragraph (a) of this section for operation on—

(1) Any waters within 12 miles of the coastline.

(2) Rivers.

TABLE 28.120(a)—SURVIVAL CRAFT FOR DOCUMENTED VESSELS

Area	Vessel type	Survival craft required
Beyond 50 miles of coastline	All	Inflatable liferaft with SOLAS A pack.
Between 20–50 miles of coastline, *cold* waters	All	Inflatable liferaft with SOLAS B pack.
Between 20–50 miles of coastline, *warm* waters	All	Inflatable liferaft.
Beyond Boundary Line, between 12–20 miles of coastline, *cold* waters.	All	Inflatable liferaft.
Beyond Boundary Line, within 12 miles of coastline, *cold* waters.	10.97 meters (36 feet) or more in length.	Inflatable buoyant apparatus. See note 2.
Beyond Boundary Line, within 12 miles of coastline, *cold* waters.	Less than 10.97 meters (36 feet) in length.	Buoyant apparatus. See note 2.
Beyond Boundary Line, within 20 miles of coastline, *warm* waters.	All	Life float. See note 2.
Inside Boundary Line, *cold* waters; or Lakes, bays, sounds, *cold* waters; or Rivers, *cold* waters.	10.97 meters (36 feet) or more in length.	Inflatable buoyant apparatus. See note 2.
Inside Boundary Line, *cold* waters; or Lakes, bays, sounds, *cold* waters; or Rivers, *cold* waters.	Less than 10.97 meters (36 feet) in length.	Buoyant apparatus. See note 2.
Inside Boundary Line, *warm* waters; or Lakes, bays, sounds, *warm* waters; or Rivers, *warm* waters.	All	None.
Great Lakes, *cold* waters	10.97 meters (36 feet) or more in length.	Inflatable buoyant apparatus. See note 2.
Great Lakes, *cold* waters	Less than 10.97 meters (36 feet) in length.	Buoyant apparatus. See note 2.
Great Lakes, beyond 3 miles of coastline, *warm* waters	All	Buoyant apparatus. See note 2.
Great Lakes, within 3 miles of coastline, *warm* waters	All	None.

NOTE: 1. The hierarchy of survival craft in descending order is lifeboat, inflatable liferaft with SOLAS A pack, inflatable liferaft with SOLAS B pack, inflatable liferaft with coastal service pack, inflatable buoyant apparatus, life float, buoyant apparatus. A survival craft higher in the hierarchy may be substituted for any survival craft required in this table.

2. If a vessel carriers 3 or fewer individuals within 12 miles of the coastline, see § 28.120 (b) and (c) for carriage substitution.

TABLE 28.120(b)—SURVIVAL CRAFT FOR UNDOCUMENTED VESSELS WITH NOT MORE THAN 16 INDIVIDUALS ON BOARD

Area	Vessel type	Survival craft required
Beyond 20 miles of coastline	All	Inflatable buoyant apparatus.
Beyond Boundary Line, between 12–20 miles of coastline, *cold* waters.	All	Inflatable buoyant apparatus.
Beyond Boundary Line, within 12 miles of coastline, *cold* waters.	10.97 meters (36 feet) or more in length.	Buoyant apparatus.
Beyond Boundary Line, within 12 miles of coastline, *cold* waters.	Less than 10.97 meters (36 feet) in length.	Buoyant apparatus. See note 2.
Beyond Boundary Line, within 20 miles of coastline, *warm* waters.	All	Life float. See note 2.
Inside Boundary Line, *cold* waters; or Lakes, bays, sounds, *cold* waters; or rivers, *cold* water.	10.97 meters (36 feet) or more in length.	Buoyant apparatus.
Inside Boundary Line, *cold* waters; or Lakes, bays, sounds, cold waters; or Rivers, *cold* water.	Less than 10.97 meters (36 feet) in length.	Buoyant apparatus See note 2.
Inside Boundary Line, *warm* waters; or Lakes, bays, sounds, *warm* waters; or Rivers, *warm* waters.	All	None.
Great Lakes, *cold* waters	All	Buoyant apparatus. See note 2.
Great Lakes, beyond 3 miles of coastline *warm* waters	All	Buoyant apparatus. See note 2.
Great Lakes, within 3 miles of coastline *warm* waters	All	None.

NOTE: 1. The hierarchy of survival craft in descending order is lifeboat, inflatable liferaft with SOLAS A pack, inflatable liferaft with SOLAS B pack, inflatable liferaft with coastal service pack, inflatable buoyant apparatus, life float, buoyant apparatus. A survival craft higher in the hierarchy may be substituted for any survival craft required in this table.

2. If a vessel carries 3 or fewer individuals within 12 miles of the coastline, see § 28.120 (b) and (c) for carriage substitution.

TABLE 28.120(c)—SURVIVAL CRAFT FOR UNDOCUMENTED VESSELS WITH MORE THAN 16 INDIVIDUALS ON BOARD

Area	Vessel type	Survival craft required
Beyond 50 miles of coastline	All	Inflatable liferaft with SOLAS A pack.
Between 20–50 miles of coastline, *cold* waters	All	Inflatable liferaft with SOLAS B pack.
Between 20–50 miles of coastline, *warm* waters	All	Inflatable liferaft.
Beyond Boundary Line, between 12–20 miles of coastline, *cold* waters.	All	Inflatable liferaft.
Beyond Boundary Line, within 12 miles of coastline, *cold* waters.	10.97 meters (36 feet) or more in length.	Inflatable bouyant apparatus.
Beyond Boundary Line, within 12 miles of coastline, *cold* waters.	Less than 10.97 meters (36 feet) in length.	Buoyant apparatus.
Beyond Boundary Line, within 20 miles of coastline, *warm* waters.	All	Life float.
Inside Boundary Line, *cold* waters; or Lakes, bays, sounds, *cold* waters; or Rivers, *cold* waters.	10.97 meters (36 feet) or more in length.	Inflatable buoyant apparatus.
Inside Boundary Line, *cold* waters; or Lakes, bays, sounds, *cold* waters; or Rivers, *cold* waters.	Less than 10.97 meters (36 feet) in length.	Buoyant apparatus.
Inside Boundary Line, *warm* waters; or Lakes, bays, sounds, *warm* waters; or Rivers, *warm* waters.	All	None.
Great Lakes, *cold* waters	10.97 meters (36 feet) or more in length.	Inflatable buoyant apparatus.
Great Lakes, *cold* waters	Less than 10.97 meters (36 feet) in length.	Buoyant apparatus.
Great Lakes, beyond 3 miles of coastline *warm* waters	All	Buoyant apparatus.
Great Lakes, within 3 miles of coastline *warm* waters	All	None.

NOTE: 1. The hierarchy of survival craft in descending order is lifeboat, liferaft with SOLAS A pack, Inflatable liferaft with SOLAS A pack, liferaft with SOLAS B pack, Inflatable liferaft with SOLAS B pack, Inflatable liferaft with coastal service pack, inflatable buoyant apparatus, life float, buoyant apparatus. A survival craft higher in the hierarchy may be substituted for any survival craft required in this table.

[CGD 96–046, 61 FR 57273, Nov. 5, 1996; CGD 96–046, 61 FR 68162, Dec. 27, 1996, as amended by CGD 96–046, 62 FR 46676, Sept. 4, 1997; USCG-2002–13058, 67 FR 61278, Sept. 30, 2002]

§ 28.125 Stowage of survival craft.

(a) Each inflatable liferaft required to be equipped with a SOLAS A or a SOLAS B equipment pack must be stowed so as to float free and automatically inflate in the event the vessel sinks.

(b) Each inflatable liferaft, inflatable buoyant apparatus, and any auxiliary craft used in their place, must be kept readily accessible for launching or be stowed so as to float free in the event the vessel sinks.

(c) Each hydrostatic release unit used in a float-free arrangement must be approved under part 160, subpart 160.062 of this chapter.

(d) Each float-free link used with a buoyant apparatus or with a life float must be certified to meet part 160, subpart 160.073 of this chapter.

§ 28.130 Survival craft equipment.

(a) *General*. Each item of survival craft equipment must be of good quality, effective for the purpose it is intended to serve, and secured to the craft.

(b) *Inflatable liferafts*. Each inflatable liferaft must have one of the following equipment packs as shown by the markings on its container:

(1) Coastal Service;

(2) SOLAS B Pack (formerly ''Limited Service''); or

(3) SOLAS A Pack (formerly ''Ocean Service'').

(c) Each life float and buoyant apparatus must be fitted with a lifeline, pendants, a painter, and a floating electric water light approved under part 161 subpart 161.010 of this chapter.

(d) *Other survival craft*. A vessel must not carry survival craft other than inflatable liferafts, life floats, inflatable buoyant apparatus, or buoyant apparatus, such as lifeboats or rigid liferafts, unless the survival craft and launching equipment comply with the requirements for installation, arrangement, equipment, and maintenance contained in 46 CFR part 199.

[CGD 88–079, 56 FR 40393, Aug. 14, 1991, as amended by CGD 84–069, 63 FR 52813, Oct. 1, 1998]

§ 28.135 Lifesaving equipment markings.

(a) Except as provided in paragraph (d) of this section, lifesaving equipment carried aboard a vessel pursuant to the requirements of this subpart or part 25, subpart 25.25 of this chapter must be marked as specified in table 28.135.

(b) Lettering used in lifesaving equipment markings must be in block capital letters.

(c) Retroreflective markings required by this section must be with material approved under part 164, subpart 164.018 of this chapter. The arrangement of the retroreflective material must meet IMO Resolution A.658(16).

(d) A wearable personal flotation device must be marked with the name of either the vessel, the owner of the device, or the individual to whom it is assigned.

TABLE 28.135—LIFESAVING EQUIPMENT MARKINGS

Item	Markings Required	
	Name of vessel	Retroflective material
Wearable personal flotation device (Type I, II, III, or wearable Type V); Immersion suit or exposure suit.	See § 28.135(d)	Type I or Type II.
Ring life buoy	X	Type II.
Inflatable liferaft	See note	See note.
Inflatable buoyant apparatus	See note	See note.
Life float	X	Type II.
Buoyant apparatus	X	Type II.
Auxiliary craft	X	Type II.
EPIRB	X	Type II.

NOTE: No marking other than that provided by the manufacturer and the servicing facility is required.

[CGD 88–079, 56 FR 40393, Aug. 14, 1991; 56 FR 49822, Oct. 1, 1991, as amended by CGD 95–012, 60 FR 48048, Sept. 18, 1995]

§ 28.140 Operational readiness, maintenance, and inspection of lifesaving equipment.

(a) The master or individual in charge of a vessel must ensure that each item of lifesaving equipment must be in good working order, ready for immediate use, and readily accessible before the vessel leaves port and at all times when the vessel is operated.

(b) Each item of lifesaving equipment, including unapproved equipment, must be maintained and inspected in accordance with:

(1) Table 28.140 in this section;

(2) The servicing procedure under the subpart of this chapter applicable to the item's approval; and

(3) The manufacturer's guidelines.

(c) An inflatable liferaft or inflatable buoyant apparatus must be serviced no later than the month and year on its servicing sticker affixed under 46 CFR 160.151–57(n), and whenever the container is damaged or the container straps or seals are broken. It must be serviced at a facility specifically approved by the Commandant for the particular brand.

(d) An escape route from a space where an individual may be employed or an accommodation space must not be obstructed.

TABLE 28.140—SCHEDULED MAINTENANCE AND INSPECTION OF LIFESAVING EQUIPMENT

Item	Interval		Regulation
	Monthly	Annually	
(1) Inflatable wearable personal flotation device (Type V commercial hybrid).		Servicing	28.140
(2) Personal flotation devices, exposure suits and immersion suits.		Inspect, clean and repair as necessary.	28.140
(3) Buoyant apparatus and life floats		Inspect, clean and repair as necessary.	28.140
(4) Inflatable liferaft		Servicing [1]	28.140
(5) Inflatable buoyant apparatus		Servicing [1]	28.140

TABLE 28.140—SCHEDULED MAINTENANCE AND INSPECTION OF LIFESAVING EQUIPMENT—Continued

Item	Interval		Regulation
	Monthly	Annually	
(6) Hydrostatic release		Servicing [1]	28.140
(7) Disposable hydrostatic release		Replace on or before expiration date.	28.140
(8) Undated batteries		Replace	28.140
(9) Dated batteries [2] and other items		Replace on or before expiration date.	25.26–50, 28.140
(10) EPIRB	Test		25.26–50

[1] For a new liferaft or inflatable buoyant apparatus, the first annual servicing may be deferred to two years from the date of first packing if so indicated on the servicing sticker.
[2] Water activated batteries must be replaced whenever they are used.

[CGD 88–079, 56 FR 40393, Aug. 14, 1991; 56 FR 49822, Oct. 1, 1991, as amended at USCG-2001–11118, 67 FR 58540, Sept. 17, 2002; USCG-2004–18884, 69 FR 58344, Sept. 30, 2004]

§ 28.145 Distress signals.

Except as provided by 28.305, each vessel must be equipped with the distress signals specified in table 28.145.

TABLE 28.145—DISTRESS SIGNALS

Area	Devices required
Ocean, more than 50 miles from coastline.	3 parachute flares, approval series 160.136; plus 6 hand flares, approval series 160.121; plus 3 smoke signals, approval series 160.122.
Ocean, 3–50 miles from the coastline; or more than 3 miles from the coastline on the Great Lakes.	3 parachute flares, approval series 160.136, or 160.036; plus 6 hand flares, approval series 160.121 or 160.021; plus 3 smoke signals, approval series 160.122, 160.022, or 160.037.
Coastal waters, excluding the Great Lakes; or within 3 miles of the coastline on the Great Lakes.	Night visual distress signals consisting of one electric distress light, approval series 161.013 or 3 approved flares; plus Day visual distress signals consisting of one distress flag, approval series 160.072, or 3 approved flares, or 3 approved smoke signals.[1]

[1] If flares are carried, the same 3 flares may be counted toward meeting both the day and night requirement.

[CGD 88–079, 56 FR 40393, Aug. 14, 1991, as amended at 60 FR 48048, Sept. 18, 1995; USCG-2000–7790, 65 FR 58458, Sept. 29, 2000]

§ 28.150 Emergency Position Indicating Radio Beacons (EPIRBs).

Each vessel must be equipped with an emergency position indicating radio beacon (EPIRB) as required by 46 CFR part 25, subpart 25.26.

NOTE: Each vessel which uses radio communication equipment must have a Ship Radio Station License issued by the Federal Communications Commission, as set forth in 47 CFR part 80.

§ 28.155 Excess fire detection and protection equipment.

Installation of fire detection and protection equipment in excess of that required by the regulations in this subchapter is permitted provided that the excess equipment does not endanger the vessel or individuals on board in any way. The excess equipment must, at a minimum, be listed and labeled by an independent, nationally recognized testing laboratory and be in accordance with an appropriate industry standard for design, installation, testing, and maintenance.

§ 28.160 Portable fire extinguishers.

(a) Each vessel must meet the requirements of part 25, subpart 25.30 of this chapter.

(b) Each vessel 65 feet (19.8 meters) or more in length must be equipped with the minimum number, location, and type of portable fire extinguishers specified in table 28.160.

TABLE 28.160—PORTABLE FIRE EXTINGUISHERS FOR VESSELS 65 FEET (19.8 METERS) OR MORE IN LENGTH

Space	Classification	Quantity and location
Safety areas, communicating corridors	A-II	1 in each main corridor not more than 150 feet (49.2 meters) apart. (May be located in stairways.)
Pilothouse	C-I	2 in vicinity of exit.
Service spaces, galleys	B-II or C-II	1 for each 2,500 square feet (269.1 sq. meters) or fraction thereof suitable for hazards involved.
Paint lockers	B-II	1 outside space in vicinity of exit.
Accessible baggage and storerooms	A-II	1 for each 2,500 square feet (269.1 sq. meters) or fraction thereof located in the vicinity of exits, either inside or outside the spaces.
Work shops and similar spaces	A-II	1 outside the space in vicinity of exit.
Machinery spaces; Internal combustion propelling machinery.	B-II	1 for each 1,000 brake horsepower or fraction thereof but not less than 2 nor more than 6.
Electric propulsion motors or generator unit of open type.	C-II	1 for each propulsion motor generator unit.
Auxiliary spaces	B-II	1 outside the space in the vicinity of exit.
Internal combustion machinery	B-II	1 outside the space in the vicinity of exit.
Electric emergency motors or generators	C-II	1 outside the space in the vicinity of exit.

[CGD 88–079, 56 FR 40393, Aug. 14, 1991; 56 FR 47679, Sept. 20, 1991]

§ 28.165 Injury placard.

Each vessel must have posted in a highly visible location accessible to the crew a placard measuring at least 5 inches by 7 inches (127 millimeters by 178 millimeters) which reads:

Notice

Report All Injuries

United States law, 46 United States Code 10603, requires each seaman on a fishing vessel, fish processing vessel, or fish tender vessel to notify the master or individual in charge of the vessel or other agent of the employer regarding any illness, disability, or injury suffered by the seaman when in service to the vessel not later than seven days after the date on which the illness, disability, or injury arose.

Subpart C—Requirements for Documented Vessels That Operate Beyond the Boundary Lines or With More Than 16 Individuals On Board, or for Fish Tender Vessels Engaged in the Aleutian Trade

§ 28.200 Applicability.

Each documented commercial fishing industry vessel must meet the requirements of this subpart in addition to the requirements of subparts A and B of this part if it:

(a) Operates beyond the Boundary Lines;

(b) Operates with more than 16 individuals on board; or

(c) Is a fish tender vessel engaged in the Aleutian trade.

[CGD 94–025, 60 FR 54444, Oct. 24, 1995]

§ 28.205 Fireman's outfits and self-contained breathing apparatus.

(a) Each vessel that operates with more than 49 individuals on board must be equipped with at least two fireman's outfits stowed in widely separated locations.

(b) Each vessel that uses ammonia as a refrigerant must be equipped with at least two self-contained breathing apparatuses.

(c) A fireman's outfit must consist of one self-contained breathing apparatus with lifeline attached, one flashlight, a rigid helmet, boots, gloves, protective clothing, and one fire axe.

(d) At least one spare air bottle must be provided for each self-contained breathing apparatus.

(e) Each self-contained breathing apparatus must be approved by the Mine Safety and Health Administration (MSHA) and by the National Institute for Occupational Safety and Health (NIOSH), have as a minimum a 30 minute air supply, and a full facepiece.

§ 28.210 First aid equipment and training.

(a) Each vessel must have on board a complete first aid manual and medicine chest of a size suitable for the number of individuals on board in a readily accessible location.

(b) *First aid and cardiopulmonary resuscitation (CPR) course certification.* Certification in first aid and CPR must be as described in this paragraph.

(1) First aid—a certificate indicating completion of a first aid course from:

(i) The American National Red Cross ''Standard First Aid and Emergency Care'' or ''Multi-media Standard First Aid'' course; or

(ii) A course approved by the Coast Guard under § 10.205(h)(l)(ii) of this chapter.

(2) CPR—A certificate indicating completion of course from:

(i) The American National Red Cross;

(ii) The American Heart Association; or

(iii) A course approved by the Coast guard under § 10.205(h)(2)(iii) of this chapter.

(c) Each vessel that operates with more than 2 individuals on board must have at least 1 individual certified in first aid and at least 1 individual certified in CPR. An individual certified in both first aid and CPR will satisfy both of these requirements.

(d) Each vessel that operates with more than 16 individuals on board must have at least 2 individuals certified in first aid and at least 2 individuals certified in CPR. An individual certified in both first aid and CPR may be counted for both requirements.

(e) Each vessel that operates with more than 49 individuals on board must have at least 4 individuals certified in first aid and at least 4 individuals certified in CPR. An individual certified in both first aid and CPR may be counted for both requirements.

[CGD 88–079, 56 FR 40393, Aug. 14, 1991, as amended by CGD 95–012, 60 FR 48048, Sept. 18, 1995]

§ 28.215 Guards for exposed hazards.

(a) Each space on board a vessel must meet the requirements of this section.

(b) Suitable hand covers, guards, or railing must be installed in way of machinery which can cause injury to personnel, such as gearing, chain or belt drives, and rotating shafting. This is not meant to restrict necessary access to fishing equipment such as winches, drums, or gurdies.

(c) Each exhaust pipe from an internal combustion engine which is within reach of personnel must be insulated or otherwise guarded to prevent burns.

§ 28.225 Navigational information.

(a) Each vessel must have at least the following navigational information on board:

(1) Marine charts of the area to be transited, published by the National Ocean Service, the National Imagery and Mapping Agency, U.S. Army Corps of Engineers, or a river authority that—

(i) Are of a large enough scale and have enough detail to make safe navigation of the area possible; and

(ii) Are currently corrected.

(2) For the area to be transited, a currently corrected copy of, or applicable currently corrected extract from, each of the following publications:

(i) U.S. Coast Pilot; and

(ii) Coast Guard Light List.

(3) For the area to be transited, the current edition of, or applicable current extract from, each of the following publications:

(i) Tide tables promulgated by the National Ocean Service; and

(ii) Tidal current tables promulgated by the National Ocean Service, or a river current publication issued by the U.S. Corps of Engineers or a river authority.

(b) Each vessel of 39.4 feet (12 meters) or more in length that operates shoreward of the COLREG Demarcation Lines, as set forth in 33 CFR part 80, must carry on board and maintain for ready reference a copy of the Inland Navigation Rules, as set forth in 33 CFR chapter I, subchapter E.

[CGD 88–079, 59 FR 40393, Aug. 14, 1991, as amended by CGD 96–046, 61 FR 57275, Nov. 5, 1996; CGD 96–046, 62 FR 46677, Sept. 4, 1997; USCG-2001–10224, 66 FR 48619, Sept. 21, 2001]

§ 28.230 Compasses.

Each vessel must be equipped with an operable magnetic steering compass with a compass deviation table at the operating station.

§ 28.235 Anchors and radar reflectors.

(a) Each vessel must be fitted with an anchor(s) and chain(s), cable, or rope appropriate for the vessel and the waters of the intended voyage.

(b) Except for a vessel rigged with gear that provides a radar signature from a distance of 6 miles, each nonmetallic hull vessel must have a radar reflector.

§ 28.240 General alarm system.

(a) Except as provided in paragraph (f) of this section, each vessel with an accommodation space or a work space which is not adjacent to the operating station, must have an audible general alarm system with a contact-maker at the operating station suitable for notifying individuals on board in the event of an emergency.

(b) The general alarm system must be capable of notifying an individual in any accommodation space or work space where they may normally be employed.

(c) In a work space where background noise makes a general alarm system difficult to hear, a flashing red light must also be installed.

(d) Each general alarm bell and flashing red light must be identified with red lettering at least ½ inch (13 millimeters) high as follows:

Attention

General Alarm—When Alarm Sounds Go to Your Station.

(e) A general alarm system must be tested prior to operation of the vessel and at least once each week thereafter.

(f) A public address system or other means of alerting all individuals on board may be used in lieu of a general alarm system provided it complies with paragraphs (b), (c), and (e) of this section and can be activated from the operating station.

[CGD 88–079, 56 FR 40393, Aug. 14, 1991, as amended by CGD 95–012, 60 FR 48048, Sept. 18, 1995]

§ 28.245 Communication equipment.

(a) Except as provided in paragraphs (b) through (e) of this section, each vessel must be equipped as follows.

(1) Each vessel must be equipped with a VHF radiotelephone capable of transmitting and receiving on the frequency or frequencies within the 156–162 MHz band necessary to communicate with a public coast station or U.S. Coast Guard station serving the area in which the vessel is operating.

(2) Each vessel that operates more than 20 miles from the coastline, in addition to the VHF radiotelephone required by paragraph (a)(1) of this section, must be equipped with a radiotelephone transceiver capable of transmitting and receiving on frequencies in the 2–4 MHz band necessary to communicate with a public coast station or U.S. Coast Guard station serving the area in which the vessel is operating.

(3) Each vessel that operates more than 100 miles from the coastline, in addition to the communication equipment required by paragraph (a)(1) of this section must be equipped with a radiotelephone transceiver capable of transmitting and receiving on frequencies in the 2–27.5 MHz band necessary to communicate with a public coast station or U.S. Coast Guard station serving the area in which the vessel is operating.

(4) Each vessel that operates in waters contiguous to Alaska where no public coast station or U.S. Coast Guard station is within communications range of a VHF radio transceiver operating on the 156–162 MHz band or the 2–4 MHz band, in addition to the VHF radio communication equipment required by paragraph (a)(1) of this section, must be equipped with a radiotelephone transceiver capable of transmitting and receiving on frequencies in the 2–27.5 MHz band necessary to communicate with a public coast station or a U.S. Coast Guard station serving the area in which the vessel is operating.

(b) A single radio transceiver capable of meeting the requirements of paragraphs (a) (2) and (3), or paragraphs (a) (2), (3), and (4) of this section, is acceptable.

(c) Satellite communication capability with the system servicing the area in which the vessel is operating is acceptable as an alternative to the requirements of paragraphs (a)(2), (a)(3), or (a)(4) of this section.

(d) A cellular telephone capable of communicating with a public coast station or a U.S. Coast Guard station serving the area in which the vessel is operating is acceptable as an alternative to the requirements of paragraphs (a)(2), (a)(3), or (a)(4) of this section.

(e) A radiotelephone transceiver installed on board a vessel before September 15, 1991, capable of transmitting and receiving on frequencies on the 4–20 MHz band may continue to be used to satisfy the requirements of paragraphs (a)(3) and (a)(4) of this section.

(f) The principle operating position of the communication equipment must be at the operating station.

(g) Communication equipment must be installed to ensure safe operation of the equipment and to facilitate repair. It must be protected against vibration, moisture, temperature, and excessive currents and voltages. It must be located so as to minimize the possibility of water intrusion from windows broken by heavy seas.

(h) Communication equipment must comply with the technical standards and operating requirements issued by the Federal Communications Commission, as set forth in 47 CFR part 80.

NOTE: Each vessel which uses radio equipment to meet the communication requirements of this section must have a Ship Radio Station License issued by the Federal Communications Commission, as set forth in 47 CFR part 80.

(i) All communication equipment must be provided with an emergency source of power that complies with § 28.375.

§ 28.250 High water alarms.

On a vessel 36 feet (11.8 meters) or more in length, a visual and audible alarm must be provided at the operating station to indicate high water level in each of the following normally unmanned spaces:

(a) A space with a through-hull fitting below the deepest load waterline, such as the lazarette;

(b) A machinery space bilge, bilge well, shaft alley bilge, or other space subject to flooding from sea water piping within the space; and

(c) A space with a non-watertight closure, such as a space with a non-watertight hatch on the main deck.

§ 28.255 Bilge pumps, bilge piping, and dewatering systems.

(a) Each vessel must be equipped with a bilge pump and bilge piping capable of draining any watertight compartment, other than tanks and small buoyancy compartments, under all service conditions. Large spaces, such as enginerooms must be fitted with more than one suction line.

(b) In addition to the requirements of paragraph (a) of this section, a space used in the sorting or processing of fish in which water is used must be fitted with dewatering system capable of dewatering the space under normal conditions of list and trim at the same rate as water is introduced. Pumps used as part of the processing of fish do not count for meeting this requirement. The dewatering system must be interlocked with the pump(s) supplying water to the space, so that in the event of failure of the dewatering system, the water supply is inactivated.

(c) Except as provided by paragraph (f) of this section, each vessel 79 feet (24 meters) or more in length must be equipped with a fixed, self-priming, powered, bilge pump connected to a bilge manifold.

(d) If a bilge pump required by paragraph (a) of this section is portable, it must be provided with a suitable suction hose of adequate length to reach the bilges of each watertight compartment it must serve and with a discharge hose of adequate length to ensure overboard discharge. A portable pump must be capable of dewatering each space it serves at a rate of at least 2 inches (51 millimeters) of water depth per minute.

(e) Except for a fire pump required by § 28.315, a bilge pump may be used for other purposes.

(f) Except where an individual pump is provided for a separate space or for a portable pump, each individual bilge suction line must be led to a manifold. Each bilge suction line must be provided with a stop valve at the manifold and a check valve at some accessible point in the bilge line to prevent unintended flooding of a space.

(g) Each bilge suction line and dewatering system suction must be fitted with a suitable strainer to prevent clogging of the suction line.

Strainers must have an open area of not less than three times the open area of the suction line.

(h) Each vessel must comply with the oil pollution prevention requirements of 33 CFR parts 151 and 155.

§ 28.260 Electronic position fixing devices.

Each vessel 79 feet (24 meters) or more in length must be equipped with an electronic position fixing device capable of providing accurate fixes for the area in which the vessel operates.

§ 28.265 Emergency instructions.

(a) Except as provided in paragraphs (b) and (c) of this section, each vessel must have emergency instructions posted in conspicuous locations accessible to the crew.

(b) The instructions identified in paragraphs (d)(6), (d)(7), (d)(8), and (d)(9) of this section, may be kept readily available as an alternative to posting.

(c) On a vessel which operates with less than 4 individuals on board, the emergency instructions may be kept readily available as an alternative to posting.

(d) The emergency instructions required by this section must identify at least the following information, as appropriate for the vessel:

(1) The survival craft embarkation stations aboard the vessel and the survival craft to which each individual is assigned;

(2) The fire and emergency signal and the abandon ship signal;

(3) If immersion suits are provided, the location of the suits and illustrated instructions on the method for donning the suits;

(4) Procedures for making a distress call, such as:

(i) Make sure your communication equipment is on.

(ii) Select 156.8 MHz (VHF channel 16), 2182 kHz, or other distress frequency used in your area of operation. Note: VHF channel 16 and 2182 kHz on SSB are for emergency and calling purposes only.

(iii) Press microphone button and speaking slowly—clearly—calmly say:

''Mayday—Mayday—Mayday''

(iv) Say: ''This is the M/V (Insert name of your vessel), (Insert name of your vessel), (Insert name of your vessel), Over.''

(v) Release the microphone button briefly and listen for acknowledgment. If no one answers, repeat steps in paragraphs (d)(4) (iii) and (iv) of this section.

(vi) If there is still no answer, or if the Coast Guard or another vessel responds, say: ''Mayday—This is the M/V (Insert Name of Your Vessel).''

(vii) Describe your position using latitude and longitude coordinates, or range and bearing from a known point.

(viii) State the nature of the distress.

(ix) Give number of individuals aboard and the nature of any injuries.

(x) Estimate the present seaworthiness of your vessel.

(xi) Describe your vessel: (Insert length, color, hull type, trim, masts, power, and any additional distinguishing features).

(xii) Say: ''I will be listening on Channel 16/2182 (or other channel monitored).''

(xiii) End message by saying: ''This is (insert vessel's name and call sign).''

(xiv) If your situation permits, stand by the radio to await further communication with the Coast Guard or another vessel. If no answer, repeat, then try another channel.

(5) Essential action that must be taken in an emergency by each individual, such as:

(i) Making a distress call.

(ii) Closing of hatches, airports, watertight doors, vents, scuppers, and valves for intake and discharge lines which penetrate the hull, stopping of fans and ventilation systems, and operation of all safety equipment.

(iii) Preparing and launching of survival craft and rescue boats.

(iv) Fighting a fire.

(v) Mustering of personnel including—

(A) Seeing that they are properly dressed and have put on their lifejackets or immersion suits; and

(B) Assembling personnel and directing them to their appointed stations.

(vi) Manning of fire parties assigned to deal with fires.

(vii) Special duties required for the operation of fire fighting equipment.

(6) The procedures for rough weather at sea, crossing hazardous bars, flooding, and anchoring of the vessel, such as:

(i) Close all watertight and weathertight doors, hatches and airports to prevent taking water aboard or further flooding in the vessel.

(ii) Keep bilges dry to prevent loss of stability due to water in bilges. Use power driven bilge pump, hand pump, and buckets to dewater.

(iii) Align fire pumps to use as bilge pumps, if possible.

(iv) Check all intake and discharge lines which penetrate the hull for leakage.

(v) Personnel should remain stationary and evenly distributed.

(vi) Personnel should don lifejackets and immersion suits if the going becomes very rough, the vessel is about to cross a hazardous bar, or when otherwise instructed by the master or individual in charge of the vessel.

(7) The procedures for anchoring the vessel.

(8) The procedures to be used in the event an individual falls overboard, such as:

(i) Throw a ring life buoy as close to the individual as possible;

(ii) Post a lookout to keep the individual in the water in sight;

(iii) Launch the rescue boat and maneuver it to pick up the individual in the water;

(iv) Have a crewmember put on a lifejacket or immersion suit, attach a safety line to the crewmember, and have the crewmember standby to jump into the water to assist in recovering the individual in the water if necessary;

(v) If the individual overboard is not immediately located, notify the Coast Guard and other vessels in the vicinity; and

(vi) Continue searching until released by the Coast Guard.

(9) Procedures for fighting a fire, such as:

(i) Shut off air supply to the fire—close hatches, ports, doors, ventilators, and similar openings.

(ii) Deenergize the electrical systems supplying the affected space, if possible.

(iii) Immediately use a portable fire extinguisher or use water for fires in ordinary combustible materials. Do not use water on electrical fires.

(iv) If the fire is in a machinery space, shut off the fuel supply and ventilation system and activate the fixed extinguishing system, if installed.

(v) Maneuver the vessel to minimize the effect of wind on the fire.

(vi) If unable to control the fire, immediately notify the Coast Guard and other vessels in the vicinity.

(vii) Move personnel away from the fire, have them put on lifejackets, and if necessary, prepare to abandon the vessel.

[CGD 88–079, 56 FR 40393, Aug. 14, 1991, as amended by USCG–2010–0759, 75 FR 60002, Sept. 29, 2010]

§ 28.270 Instruction, drills, and safety orientation.

(a) *Drills and instruction.* The master or individual in charge of each vessel must ensure that drills are conducted and instruction is given to each individual on board at least once each month. Instruction may be provided in conjunction with drills or at other times and places provided it ensures that each individual is familiar with their duties and their responses to at least the following contingencies:

(1) Abandoning the vessel;

(2) Fighting a fire in different locations on board the vessel;

(3) Recovering an individual from the water;

(4) Minimizing the effects of unintentional flooding;

(5) Launching survival craft and recovering lifeboats and rescue boats;

(6) Donning immersion suits and other wearable personal flotation devices;

(7) Donning a fireman's outfit and a self-contained breathing apparatus, if the vessel is so equipped;

(8) Making a voice radio distress call and using visual distress signals;

(9) Activating the general alarm; and

(10) Reporting inoperative alarm systems and fire detection systems.

(b) *Participation in drills.* Drills must be conducted on board the vessel as if there were an actual emergency and must include participation by all individuals on board, breaking out and

using emergency equipment, testing of all alarm and detection systems, donning protective clothing, and donning immersion suits, if the vessel is so equipped.

(c) *Training*. No individual may conduct the drills or provide the instructions required by this section unless that individual has been trained in the proper procedures for conducting the activity.

(d) The viewing of videotapes concerning at least the contingencies listed in paragraph (a) of this section, whether on board the vessel or not, followed by a discussion led by an individual familiar with these contingencies will satisfy the requirement for instruction but not the requirement for drills in paragraph (b) of this section or for the safety orientation in paragraph (e) of this section.

(e) *Safety orientation*. The master or individual in charge of a vessel must ensure that a safety orientation is given to each individual on board that has not received the instruction and has not participated in the drills required by paragraph (a) of this section before the vessel may be operated.

(f) The safety orientation must explain the emergency instructions required by § 28.265 and cover the specific evolutions listed in paragraph (a) of this section.

NOTE: The individual conducting the drills and instruction need not be the master, individual in charge of the vessel, or a member of the crew.

[CGD 88–079, 56 FR 40393, Aug. 14, 1991, as amended by CGD 95–012, 60 FR 48048, Sept. 18, 1995; CGD 96–046, 61 FR 57275, Nov. 5, 1996, CGD 96–046, 62 FR 46677, Sept. 4, 1997; USCG-2002–13058, 67 FR 61278, Sept. 30, 2002]

§ 28.275 Acceptance criteria for instructors and course curricula.

(a) A Fishing Vessel Safety Instructor shall submit a detailed course curriculum that relates directly to the contingencies listed in § 28.270(a), or a letter certifying the use of the ''Personal Survival and Emergency Drills Course,'' a national standard curriculum, to the cognizant OCMI. This document can be ordered through the U.S. Marine Safety Association (USMSA), 5050 Industrial Road, Farmingdale, NJ 07727; telephone: (732) 751–0102; fax: (732) 751–0508; or e-mail: *usmsa@usmsa.org*. For the criteria of Fishing Vessel Safety Instructor, the following documentation shall be provided to the cognizant OCMI:

(1) Proof of at least 1 year of experience in a marine related field and experience that relates directly to the contingencies listed in § 28.270(a) including—

(i) Experience as an instructor; or

(ii) Training received in instructional methods; or

(2) A valid license or officer endorsement issued by the Coast Guard authorizing service as master of unispected fishing industry vessels and proof of experience that relates directly to the contingencies listed in 46 CFR 28.270(a) including—

(i) Experience as an instructor; or

(ii) Training received in instructional methods; or

(3) A valid license or officer endorsement issued by the Coast Guard authorizing service as a master of inspected vessels of 100 gross tons or more and proof of experience that relates directly to the contingencies listed in § 28.270(a) including—

(i) Experience as an instructor; or

(ii) Training received in instructional methods.

(b) Each OCMI will issue a letter of acceptance to all qualified individuals and will maintain a list of accepted instructors in his/her zone.

(c) Letters of acceptance shall be valid for a period of 5 years.

(d) Fishing Vessel Safety Instructors or the organization providing training shall issue documents to Fishing Vessel Drill Conductors upon successful completion of all required training.

[CGD 96–046, 61 FR 57275, Nov. 5, 1996, as amended by CGD 96–046, 62 FR 46677, Sept. 4, 1997; USCG-2001–10224, 66 FR 48619, Sept. 21, 2001; USCG-2004–18884, 69 FR 58344, Sept. 30, 2004; USCG–2008–0906, 73 FR 56509, Sept. 29, 2008; USCG–2006–24371, 74 FR 11264, Mar. 16, 2009]

EDITORIAL NOTE: At 74 FR 11264, Mar. 16, 2009, § 28.275 was amended; however, a portion of the amendment could not be incorporated due to inaccurate amendatory instruction.

Subpart D—Requirements for Vessels Which Have Their Keel Laid or Are at a Similar Stage of Construction on or After or Which Undergo a Major Conversion Completed on or After September 15, 1991, and That Operate With More Than 16 Individuals on Board

§ 28.300 Applicability and general requirements.

Each commercial fishing industry vessel which has its keel laid or is at a similar stage of construction, or which undergoes a major conversion completed on or after September 15, 1991, and that operates with more than 16 individuals on board, must comply with the requirements of this subpart in addition to the requirements of subparts A, B, and C of this part.

[USCG-2004–18884, 69 FR 58344, Sept. 30, 2004]

§ 28.305 Lifesaving and signaling equipment.

Each vessel to which this subpart applies must meet the requirements for life preservers, immersion suits, ring life buoys, distress signals, and survival craft in §§ 28.110, 28.115, 28.145 and table 28.120 (a), (b), or (c), as appropriate for the vessel type, on the date that its construction or major conversion is completed.

§ 28.310 Launching of survival craft.

A gate or other opening must be provided in the deck rails, lifelines, or bulwarks adjacent to the stowage location of each survival craft which weighs more than 110 pounds (489 Newtons), to allow the survival craft to be manually launched.

§ 28.315 Fire pumps, fire mains, fire hydrants, and fire hoses.

(a) Each vessel 36 feet (11.8 meters) or more in length must be equipped with a self-priming, power driven fire pump connected to a fixed piping system.

(1) A fire pump on a vessel 79 feet (24 meters) or more in length must be capable of delivering water simultaneously from the two highest hydrants, or from both branches of the fitting if the highest hydrant has a siamese fitting, at a pitot tube pressure of at least 50 psi (0.345 Newtons per square millimeter) and a flow rate of at least 80 gpm (303 liters per minute).

(2) Each vessel with a power driven fire pump must be equipped to permit energizing the fire main from the operating station and from the pump.

(b) *Fire main, hydrants, hoses and nozzles.* (1) A vessel required to have a fixed fire main system must have a sufficient number of fire hydrants to reach any part of the vessel using a single length of fire hose.

(2) A fire hose must be connected to each fire hydrant at all times the vessel is operating.

(3) A fire hose on a vessel less than 79 feet (24 meters) in length must be at least ⅝ inch (16 millimeters) nominal diameter, be of good commercial grade and be fitted with a nozzle of corrosion resistant material capable of providing a solid stream and a spray pattern.

(4) A fire hose on a vessel 79 feet (24 meters) or more in length must be lined commercial fire hose and be fitted with a nozzle made of corrosion resistant material capable of providing a solid stream and a spray pattern.

§ 28.320 Fixed gas fire extinguishing systems.

(a) *Requirements for vessels 79 feet (24 meters) or more in length.* A vessel 79 feet (24 meters) or more in length must be fitted with a fixed gas fire extinguishing system in the following enclosed spaces:

(1) A space containing an internal combustion engine of more than 50 horsepower;

(2) A space containing an oil fired boiler;

(3) An incinerator and;

(4) A space containing a gasoline storage tank.

(b) *System types and alternatives.* (1) A pre-engineered fixed gas fire extinguishing system may be installed only in a normally unoccupied machinery space, paint locker, or space containing flammable liquid stores that has a gross volume of not more than 33.98 cubic meters (1200 cubic feet).

(2) A fixed gas fire extinguishing system that is capable of automatic discharge upon heat detection may be installed only in a normally unoccupied space with a gross volume of not more

than 169.92 cubic meters (6000 cubic feet).

(3) A space with a gross volume exceeding 169.92 cubic meters (6000 cubic feet) must be fitted with a manually actuated and alarmed fixed gas fire extinguishing system.

(c) *General requirements.* (1) A fixed gas fire extinguishing system aboard a vessel must be approved by the Commandant and be custom engineered, unless the system meets the requirements for a pre-engineered fixed gas fire extinguishing system in paragraph (d) of this section.

(2) System components must be listed and labeled by an independent, nationally recognized testing laboratory for the system being installed.

(3) System design and installation must be in accordance with the Manufacturer's Marine Design, Installation, Operation, and Maintenance Manual approved for the system by the Commandant.

(4) A fixed gas fire extinguishing system may protect more than one space. The quantity of extinguishing agent must be at least sufficient for the largest space protected by the system.

(d) *Pre-engineered fixed gas fire extinguishing systems.* (1) A pre-engineered fixed gas fire extinguishing system must:

(i) Be approved by the Commandant;

(ii) Be capable of manual actuation from outside the space in addition to any automatic actuation devices; and

(iii) Automatically shut down all power ventilation systems serving the protected space and all engines that draw intake air from within the protected space.

(2) A vessel on which a pre-engineered fixed gas fire extinguishing system is installed must have the following equipment at the operating station:

(i) A visual alarm to indicate the discharge of the extinguishing agent;

(ii) An audible alarm to sound upon discharge of the extinguishing agent; and

(iii) A means to reset devices used to automatically shut down ventilation systems and engines as required by paragraph (d)(1)(iii) of this section.

[CGD 88–079, 56 FR 40393, Aug. 14, 1991, as amended by CGD 96–046, 61 FR 57275, Nov. 5, 1996]

§ 28.325 Fire detection systems.

(a) Each accommodation space must be equipped with an independent modular smoke detector or a smoke actuated fire detecting unit installed in accordance with 46 CFR part 76, subpart 76.33.

(b) An independent modular smoke detector must meet UL 217 and be listed as a ''Single Station Smoke Detector—Also suitable for use in Recreational Vehicles.''

§ 28.330 Galley hood and other fire protection equipment.

(a) Each vessel must be fitted with a grease extraction hood complying with UL 710 above each grill, broiler, and deep fat fryer.

(b) Each grease extraction hood must be equipped with a pre-engineered dry or wet chemical fire extinguishing system meeting the applicable sections of NFPA 17 or 17A and must be listed by an independent laboratory.

(c) A vessel 79 feet (24 meters) or more in length must have at least one fire axe located in or adjacent to the operating station.

§ 28.335 Fuel systems.

(a) *Applicability.* Except for the components of an outboard engine or portable bilge pump, each vessel must meet the requirements of this section.

(b) *Portable fuel systems.* Portable fuel systems including portable tanks and related fuel lines and accessories are prohibited except where used for outboard engines or portable bilge pumps. The design, construction, and stowage of portable tanks and related fuel lines and accessories must meet the requirements of ABYC H–25.

(c) *Fuel restrictions.* Except for outboard engines, the use of fuel other than bunker C or diesel is prohibited. An installation using bunker C must comply with the requirements of subchapter F of this chapter.

(d) *Vent pipes for integral fuel tanks.* Each integral fuel tank must meet the requirements of this paragraph.

(1) Each fuel tank must be fitted with a vent pipe connected to the highest point of the tank terminating in a 180 degree (3.14 radians) bend on a weather deck and fitted with a flame screen.

(2) Except where provision is made to fill a tank under pressure, the net cross-sectional area of the vent pipe for a fuel tank must not be less than 0.484 square inches (312.3 square millimeters).

(3) Where provision is made to fill a tank under pressure, the net cross-sectional area of the vent pipe must not be less than that of the fill pipe.

(e) *Fuel piping*. Except as permitted in paragraph (e)(1) and (e)(2) of this section, each fuel line must be seamless and must be of steel, annealed copper, nickel-copper, or copper-nickel. Each fuel line must have a wall thickness of not less than that of 0.035 inch (0.9 millimeters) except that:

(1) Aluminum piping is acceptable on an aluminum hull vessel provided it is installed outside the machinery space and is at least Schedule 80 in thickness; and

(2) Nonmetallic flexible hose is acceptable but must—

(i) Not be used in lengths of more than 30 inches (0.82 meters);

(ii) Be visible, easily accessible, and must not penetrate a watertight bulkhead;

(iii) Be fabricated with an inner tube and a cover of synthetic rubber or other suitable material reinforced with wire braid.

(iv) Be fitted with suitable, corrosion resistant, compression fittings; and

(v) Be installed with two clamps at each end of the hose, if designed for use with clamps. Clamps must not rely on spring tension and must be installed beyond the bead or flare or over the serrations of the mating spud, pipe, or hose fitting.

(f) A fuel line subject to internal head pressure from fuel in the tank must be fitted with a positive shutoff valve located at the tank which is operable from a safe location outside the space in which the valve is located.

(g) A vessel less than 79 feet (24 meters) in length may comply with one of the following standards in lieu of the requirements of paragraphs (e) and (f) of this section.

(1) ABYC H–33.

(2) Chapter 5 of NFPA 302.

(3) 33 CFR Chapter I, subchapter S (Boating Safety).

§ 28.340 Ventilation of enclosed engine and fuel tank spaces.

(a) *Applicability*. Each vessel with a gasoline outboard engine or gasoline storage tank must comply with the requirements of this section.

(b) *Ventilation of spaces containing gasoline*. Each space that contains a gasoline engine, a gasoline storage tank, or gasoline piping connected to an integral gasoline tank must be open to the atmosphere and so arranged as to prevent the entrapment of vapors or be ventilated by a mechanical exhaust system with a nonsparking fan. The fan motor must comply with 46 CFR 111.105–23.

(c) *Alternative standards*. A vessel less than 65 feet in length with ventilation installations in accordance with NFPA 302, chapter 2, section 2–2, or ABYC H–2 and 33 CFR part 183, subpart K, will be considered as meeting the requirements of this section.

§ 28.345 Electrical standards for vessels less than 79 feet (24 meters) in length.

(a) A vessel less than 79 feet (24 meters) in length with an alternating current electrical distribution system may comply with the requirements of ABYC E–8 and either paragraph (c) or (d) of this section, as applicable, in lieu of meeting the requirements of §§ 28.350 through 28.370.

(b) A vessel less than 79 feet (24 meters) in length with a direct current system may comply with the requirements of ABYC E–1, ABYC E–9, and either paragraph (c) or (d) of this section, as applicable, in lieu of meeting the requirements of §§ 28.350 through 28.370.

(c) In addition to paragraph (a) or (b) of this section, the vessel may comply with the requirements of NFPA 302, chapters 7 and 8.

(d) In addition to paragraph (a) or (b) of this section, the vessel may comply with the requirements of 33 CFR part 183, subpart I and § 28.370.

§ 28.350 General requirements for electrical systems.

(a) Electrical equipment exposed to the weather or in a location exposed to seas must be waterproof, watertight, or enclosed in a watertight housing.

(b) Aluminum must not be used for current carrying parts of electrical equipment or wiring.

(c) As far as practicable, electrical equipment must not be installed in lockers used to store paint, oil, turpentine, or other flammable or combustible liquid. If electrical equipment, such as lighting, is necessary in these spaces, it must be explosion-proof or intrinsically safe.

(d) Explosion-proof and intrinsically safe equipment must meet the requirements of 46 CFR part 111, subpart 111.105.

(e) Metallic enclosures and frames of electrical equipment must be grounded.

(f) Each vessel with a nonmetallic hull must have a continuous, non-current carrying grounding conductor which connects together the enclosures and frames of electrical equipment and which connects metallic items such as engines, fuel tanks, and equipment enclosures to a common ground point.

(g) The equipment grounding conductor must be sized in accordance with section 250–95 of NFPA Standard 70.

§ 28.355 Main source of electrical power.

(a) *Applicability*. Each vessel that relies on electricity to power any of the following essential loads must have at least two electrical generators to supply these loads:

(1) The propulsion system and its necessary auxiliaries and controls;

(2) Interior lighting;

(3) Steering systems;

(4) Communication systems;

(5) Navigation equipment and navigation lights;

(6) Fire protection or detection equipment;

(7) Bilge pumps; or

(8) General alarm system.

(b) Each generator must be attached to an independent prime mover.

§ 28.360 Electrical distribution systems.

(a) Each electrical distribution system which has a neutral bus or conductor must have the neutral bus or conductor grounded.

(b) A grounded electrical distribution system must have only one connection to ground. This ground connection must be at the switchboard or, on a nonmetallic vessel, at the common ground point.

§ 28.365 Overcurrent protection and switched circuits.

(a) Each power source must be protected against overcurrent. Overcurrent devices for generators must be set at a value not exceeding 115 percent of the generator full load rating.

(b) Except for a steering circuit, each circuit must be protected against both overload and short circuit. Each overcurrent device in a steering system power and control circuit must provide short circuit protection only.

(c) Each ungrounded current carrying conductor must be protected in accordance with its current carrying capacity by a circuit breaker or fuse at the connection to the switchboard or distribution panel bus.

(d) Each circuit breaker and each switch must simultaneously open all ungrounded conductors.

(e) The grounded conductor of a circuit must not be disconnected by a switch or an overcurrent device unless all ungrounded conductors of the circuit are simultaneously disconnected.

(f) Navigation light circuits must be separate, switched circuits having fused disconnect switches or circuit breakers so that only the appropriate navigation lights can be switched on.

(g) A separate circuit with overcurrent protection at the main distribution panel or switchboard must be provided for each radio installation.

§ 28.370 Wiring methods and materials.

(a) All cable and wire must have insulated, stranded copper conductors of the appropriate size and voltage rating for the circuit.

(b) Each conductor must be No. 22 AWG or larger. Conductors in power and lighting circuits must be No. 14 AWG or larger. Conductors must be

sized so that the voltage drop at the load terminals is not more than 10 percent.

(c) Cable and wiring not serving equipment in a high risk fire area such as a galley, laundry, or machinery space must be routed as far as practicable from these spaces. As far as practicable, cables serving duplicated essential equipment must be separated so that a casualty that affects one cable does not affect the other.

(d) Cable and wire for power and lighting circuits must:

(1) For circuits of less than 50 volts, meet 33 CFR 183.425 and 183.430; and

(2) For circuits of 50 volts or greater:

(i) Meet sections 310–13 and 310–15 of NFPA 70, except that asbestos insulated cable and dry location cable must not be used;

(ii) Be listed by Underwriters Laboratories Inc. as UL Boat or UL Marine Shipboard cable; or

(iii) Meet 46 CFR part 111, subpart 111.60.

(e) All metallic cable armor must be electrically continuous and grounded to the metal hull or the common ground point at each end of the cable run, except that final sub-circuits (those supplying loads) may be grounded at the supply end only.

(f) A wiring termination and connection must be made in a fire retardant enclosure such as a junction box, fixture enclosure, or panel enclosure. A fire retardant plastic enclosure is acceptable.

§ 28.375 Emergency source of electrical power.

(a) Each vessel must have an emergency source of electrical power which is independent of the main sources of electrical power and which is located outside the main machinery space.

(b) The emergency source of electrical power must be capable of supplying all connected loads continuously for at least 3 hours.

(c) Except as provided in paragraphs (d) and (e) of this section, the following electrical loads must be connected to the emergency source of power:

(1) Navigation lights;

(2) Steering systems;

(3) Bilge pumps;

(4) Fire protection and detection systems, including fire pumps;

(5) Communication equipment;

(6) General alarm system and;

(7) Emergency lighting.

(d) A vessel less than 36 feet (11.0 meters) in length need only supply communication equipment by an emergency source of electrical power if flashlights are provided.

(e) A vessel less than 79 feet (24 meters) in length which is not dependent upon electrical power for propulsion, including propulsion control systems or steering, need only supply emergency lighting, navigation equipment, general alarm system, and communication systems by the emergency source of power.

(f) Where the emergency source of power is a generator, the generator prime mover must have a fuel supply which is independent of other prime movers.

[CGD 88–079; 56 FR 40393, Aug. 14, 1991; 56 FR 49822, Oct. 1, 1991]

§ 28.380 General structural fire protection.

(a) *Fire hazards to be minimized.* Each vessel must be constructed so as to minimize fire hazards insofar as is reasonable and practicable.

(b) *Combustibles insulated from heated surfaces.* An internal combustion engine exhaust, galley uptake, electrical heating tape, or similar source of ignition must be kept clear of and suitably insulated from combustible material. A dry exhaust system for an internal combustion engine on a wooden or fiber reinforced plastic vessel must be installed in accordance with ABYC P–1.

(c) *Separation of machinery and fuel tank spaces from accommodation spaces.* (1) Each accommodation space must be separated from machinery and fuel tank spaces by a fire resistant boundary which will prevent the passage of vapors.

(2) Each pipe and cable penetration between an accommodation space and a machinery or a fuel tank storage space must be sealed.

(d) *Paint and flammable liquid lockers.* Each vessel carrying paint and flammable liquids must be equipped with a steel or a steel lined storage locker.

(e) *Insulation*. Except as provided in paragraphs (e)(1) and (e)(2) of this section, insulation must be noncombustible.

(1) In machinery spaces, combustible insulation may be used for pipe and machinery lagging.

(2) In cargo spaces and refrigerated compartments of service spaces, combustible insulation may be used.

(f) *Vapor barrier*. Where insulation of any type is used in spaces where flammable and combustible liquids or vapors are present, e.g., machinery spaces and paint lockers, a vapor barrier which covers the insulation must be provided.

(g) *Paint*. Nitrocellulose or other highly flammable or noxious fume producing paints or lacquers must not be used on the vessel.

(h) *Mattresses*. Polyurethane foam mattresses are prohibited.

NOTE: The U.S. Department of Commerce Standard for Mattress Flammability (FF4–72.16) in 16 CFR part 1632, subpart A, applies to each mattress.

(i) *Fiber reinforced plastic*. When the hull, a deck, deckhouse, or superstructure of a vessel is partially or completely constructed of fiber reinforced plastic, the resin used must be fire retardant.

(j) *Cooking areas*. Vertical or horizontal surfaces within 0.9144 meters (3 feet) of cooking appliances must be composed of noncombustible material or covered by noncombustible material. Curtains, draperies, or free hanging fabrics are not permitted within 0.9144 meters (3 feet) of cooking appliances.

[CGD 88–079, 56 FR 40393, Aug. 14, 1991; 56 FR 49822, Oct. 1, 1991, as amended by CGD 96–046, 61 FR 57275, Nov. 5, 1996; CGD 95–028, 62 FR 51197, Sept. 30, 1997]

§ 28.385 Structural fire protection for vessels that operate with more than 49 individuals on board.

(a) *Applicability*. Each vessel that operates with more than 49 individuals on board must comply with the requirements of this section in addition to the requirements of § 28.380.

(b) *Construction*. The hull, structural bulkheads, columns and stanchions must be composed of steel. Superstructures and deckhouses must be constructed of noncombustible material.

(c) *Protection of accommodation spaces*. A bulkhead or deck separating an accommodation space from a control station, machinery space, cargo space, or service space must be constructed of noncombustible material.

[CGD 88–079, 56 FR 40393, Aug. 14, 1991; 56 FR 49822, Oct. 1, 1991]

§ 28.390 Means of escape.

(a) Each space which is used by an individual on a regular basis or which is generally accessible to an individual must have at least two widely separated means of escape. At least one of the means of escape must be independent of watertight doors. Subject to the restrictions of this section, means of escape include normal exits and emergency exits, passageways, stairways, ladders, deck scuttles, and windows.

(b) At least one of the means of escape from each space must provide a satisfactory route to weather.

(c) Each door, hatch or scuttle used as a means of escape must be capable of being opened by one individual, from either side, in both light and dark conditions, must open towards the expected direction of escape from the space served, and if a watertight door be of the quick acting type.

(d) Each deck scuttle which serves as a means of escape, must be fitted with a quick-acting release and a device to hold the scuttle in an open position.

(e) Each foothold, handhold, ladder, or similar structure, provided to aid escape, must be suitable for use in emergency conditions and must be of rigid construction.

(f) A window or windshield of sufficient size and proper accessibility may be used as one of the required means of escape from an enclosed space.

[CGD 88–079, 56 FR 40393, Aug. 14, 1991, as amended by USCG–2008–0906, 73 FR 56509, Sept. 29, 2008]

§ 28.395 Embarkation stations.

Each vessel must have at least one designated survival craft embarkation station and any additional embarkation stations necessary so that an

embarkation station is readily accessible from each accommodation space and work space. Each embarkation station must be arranged to allow the safe boarding of survival craft.

§ 28.400 Radar and depth sounding devices.

(a) Each vessel must be fitted with a general marine radar system for surface navigation with a radar screen mounted at the operating station.

(b) Each vessel must be fitted with a suitable echo depth sounding device.

§ 28.405 Hydraulic equipment.

(a) Each hydraulic system must be so designed and installed that proper operation of the system is not affected by back pressure in the system.

(b) Piping and piping components must be designed with a burst pressure of not less than four times the system maximum operating pressure.

(c) Each hydraulic system must be equipped with at least one pressure relieving device set to relieve at the system's maximum operating pressure.

(d) All material in a hydraulic system must be suitable for use with the hydraulic fluid used and must be of such chemical and physical properties as to remain ductile at the lowest operating temperature likely to be encountered by the vessel.

(e) Except for hydraulic steering equipment, controls for hydraulic equipment must be located where the operator has an unobstructed view of the hydraulic equipment and the adjacent working area.

(f) Controls for hydraulic equipment must be so arranged that the operator is able to quickly disengage the equipment in an emergency.

(g) Hydraulically operated machinery must be equipped with a holding device to prevent uncontrolled movement due to loss of hydraulic system pressure.

(h) A nonmetallic flexible hose must only be used between two points of relative motion, including a pump and piping system, and must meet SAE J 1942.

(i) Each nonmetallic flexible hose and hose assembly must be installed in accordance with the manufacturer's rating and guidelines and must be limited to a length of not more that 30 inches (0.76 meters) in an application not subject to torsional loading.

§ 28.410 Deck rails, lifelines, storm rails, and hand grabs.

(a) Except as otherwise provided in paragraph (d) of this section, deck rails, lifelines, grab rails, or equivalent protection must be installed near the periphery of all weather decks accessible to individuals. Where space limitations make deck rails impractical, hand grabs may be substituted.

(b) The height of deck rail, lifelines, or bulwarks must be at least 39½ inches (1 meter) from the deck, except, where this height would interfere with the normal operation of the vessel, a lesser height may be substituted.

(c) All deck rails or lifelines must be permanently supported by stanchions at intervals of not more than 7 feet (2.3 meters). Stanchions must be through bolted or welded to the deck.

(d) Portable stanchions and lifelines may be installed in locations where permanently installed deck rails would impede normal fishing operations or emergency recovery operations.

(e) Deck rails or lifelines must consist of evenly spaced courses. The spacing between courses must not be greater than 15 inches (0.38 meters). The opening below the lowest course must not be more than 9 inches (0.23 meters). Lower courses are not required where all or part of the space below the upper rail is fitted with a bulwark, chain link fencing, wire mesh, or an equivalent.

(f) A suitable storm rail or hand grab must be installed where necessary in a passageway, at a deckhouse side, at a ladder, and a hatch where an individual might have normal access.

(g) A stern trawler must have doors, gates, or other protective arrangements at the top of the stern ramp at least as high as adjacent bulwarks or 39½ inches (1 meter), whichever is less.

[CGD 88–079, 56 FR 40393, Aug. 14, 1991; 56 FR 49822, Oct. 1, 1991]

Subpart E—Stability

§ 28.500 Applicability.

This subpart applies to each commercial fishing industry vessel which is 79 feet (24 meters) or more in length that is not required to be issued a load line

under subchapter E of this chapter and that—

(a) Has its keel laid or is at a similar stage of construction or undergoes a major conversion started on or after September 15, 1991;

(b) Undergoes alterations to the fishing or processing equipment for the purpose of catching, landing, or processing fish in a manner different than has previously been accomplished on the vessel—these vessels need only comply with § 28.501 of this subpart; or

(c) Has been substantially altered on or after September 15, 1991.

[CGD 88–079, 56 FR 40393, Aug. 14, 1991; 56 FR 47679, Sept. 20, 1991, as amended by CGD 88–079, 57 FR 364, Jan. 6, 1992]

§ 28.501 Substantial alterations.

(a) Except as provided in paragraph (b) of this section, a vessel that is substantially altered, including the cumulative effects of all alterations, need not comply with the remainder of this subpart, provided that it has stability instructions developed by a qualified individual which comply with § 28.530 (c) through (e).

(b) A vessel that is substantially altered in a manner which adversely affects its stability, including the cumulative effects of all alterations, need not comply with the remainder of this subpart, provided the stability instructions required by paragraph (a) of this section are based on loading conditions or operating restrictions, or both, which compensate for the adverse affects of the alterations.

(c) The following changes to a vessel's lightweight characteristics are considered to adversely affect vessel stability:

(1) An increase in the vertical center of gravity at lightweight by more than 2 inches (51 millimeters) compared to the original lightweight value.

(2) An increase or decrease of lightweight displacement by more than 3 percent of the original lightweight displacement.

(3) A shift of the longitudinal center of gravity of more than 1 percent of the vessel's length.

(d) In determining whether or not a vessel's stability has been adversely affected, a qualified individual must, at a minimum, consider the net effects on stability of any:

(1) Reduction of the downflooding angle;

(2) Increase in the maximum heeling moment caused by fishing gear or weight lifted over the side due to changes in lifting arrangement or capacity;

(3) Reduction in freeing port area;

(4) Increase in free surface effects, including increased free surface effects due to water on deck associated with any increase in length or height of bulwarks;

(5) Increase in projected wind area;

(6) Decrease in the angle of maximum righting arm;

(7) Decrease in the area under the righting arm curve; and

(8) Increase in the surface area on which ice can reasonably be expected to accumulate.

§ 28.505 Vessel owner's responsibility.

(a) Where a test or calculations are necessary to evaluate stability, it is the owner's responsibility to select a qualified individual to perform the test or calculations.

(b) Test results and calculations developed in evaluating stability must be maintained by the owner.

§ 28.510 Definition of stability terms.

Downflooding means the entry of seawater through any opening into the hull or superstructure of an undamaged vessel due to heel, trim, or submergence of the vessel.

Downflooding angle means the static angle from the intersection of the vessel's centerline and the waterline in calm water to the first opening that cannot be closed weathertight and through which downflooding can occur.

Flush deck means a continuous weather deck located at the uppermost sheer line of the hull.

Forward perpendicular means a vertical line corresponding to the intersection of the forward side of the vessel's stem and the vessel's waterline at the vessel's deepest operating draft.

Open boat means a vessel not protected from entry of water by means of a complete deck, or by a combination

of partial weather deck and superstructure which is seaworthy for the waters upon which the vessel operates.

Protected waters means sheltered waters presenting no special hazards such as most rivers, harbors, lakes, and similar waters as determined by the OCMI.

Qualified individual means an individual or an organization with formal training in and experience in matters dealing with naval architecture calculations.

Substantially altered means the vessel is physically altered in a manner that affects the vessel's stability and includes:

(1) Alterations that result in a change of the vessel's lightweight vertical center of gravity of more than 2 inches (51 millimeters), a change in the vessel's lightweight displacement of more than 3 percent, or an increase of more than 5 percent in the vessel's projected lateral area, as determined by tests or calculations;

(2) Alterations which change the vessel's underwater shape;

(3) Alterations which change a vessel's angle of downflooding; and

(4) Alterations which change a vessel's buoyant volume.

Well deck means a weather deck fitted with solid bulwarks that impede the drainage of water over the sides or an exposed recess in the weather deck extending one-half or more of the length of the vessel.

§ 28.515 Submergence test as an alternative to stability calculations.

(a) A vessel may comply with this section in lieu of the remainder of the requirements in this subpart. A certification plate installed under 33 CFR part 183, subpart B, is acceptable evidence of compliance with this section.

(b) A vessel which is fitted with inboard engines and loaded as described in paragraph (e) of this section must float in calm water, after being submerged for 18 hours, so that—

(1) For an open vessel, any portion of the vessel's gunwale is above the water's surface; or

(2) For a decked vessel, any portion of the main deck is above the water's surface.

(c) A vessel which is fitted with an outboard engine must be loaded as described in paragraph (e) of this section and must float in calm water after being submerged for 18 hours so that—

(1) The vessel has an equilibrium heel angle of less than 10°;

(2) Any portion of the vessel's hull is above the water's surface; and

(3) Any portion of the lowest 3 feet (0.91 meters) of the vessel's hull is not more than 6 inches (152 millimeters) below the water's surface as measured at the lowest point on the following—

(i) The gunwale, for an open boat; or

(ii) The main deck, for a decked vessel.

(d) A vessel which is fitted with an outboard engine must be loaded as described in paragraph (f) of this section and must survive the submergence described in paragraph (c) of this section, except that the equilibrium heel angle must not exceed 30° and the vessel must float with the lower end of the vessel not more than 12 inches (0.31 meters) below the water's surface in calm water.

(e) For the tests described in paragraphs (b) and (c) of this section, a vessel must be complete in all respects, except that machinery which would be damaged by water may be replaced with equivalent fixed weight in the same location as the machinery it replaces. The vessel must be loaded with weight to represent the most adverse loading condition. The most adverse loading condition normally includes the maximum weight of fish in its highest possible location. Weights must be substituted for operating personnel at 165 pounds (734 Newtons) per individual and may be substituted for fishing gear. The substitute weights may be located transversely so that the vessel floats level prior to being submerged. The two largest air chambers, or compartments of a decked vessel not used as fuel tanks, that contribute buoyancy to the vessel must be flooded.

(f) For the test described in paragraph (d) of this section, a vessel must be complete and loaded as described in paragraph (e) of this section, except

that the center of gravity of the equivalent maximum fish load must be located to one side of the vessel's centerline by a distance equal to one-fifth of the maximum transverse dimension of the fish storage space.

[CGD 88–079, 56 FR 40393, Aug. 14, 1991, as amended by USCG-2004–18884, 69 FR 58344, Sept. 30, 2004]

§§ 28.520–28.525 [Reserved]

§ 28.530 Stability instructions.

(a) *Intent.* The intent of this section is to ensure that vessel masters and individuals in charge of vessels are provided with enough stability information to allow them to maintain their vessel in a satisfactory stability condition. The rules provide maximum flexibility for owners and qualified individuals to determine how this information is conveyed, taking into consideration decisions by operating personnel must be made quickly and that few operating personnel in the commercial fishing industry have had specialized training in stability. Therefore, stability instructions should take into account the conditions a vessel may reasonably be expected to encounter and provide simple guidance for the operating personnel to deal with these situations.

(b) Each vessel must be provided with stability instructions which provide the master or individual in charge of the vessel with loading constraints and operating restrictions which maintain the vessel in a condition which meets the applicable stability requirements of this subpart.

(c) Stability instructions must be developed by a qualified individual.

(d) Stability instructions must be in a format easily understood by the master or individual in charge of the vessel. Units of measure, language, and rigor of calculations in the stability instructions must be consistent with the ability of the master or the individual in charge of the vessel. The format of the stability instructions may include, at the owner's discretion, any of the following:

(1) Simple loading instructions;

(2) A simple loading diagram with instructions;

(3) A stability booklet with sample calculations; or

(4) Any other appropriate format for providing stability instructions.

(e) Stability instructions must be developed based on the vessel's individual characteristics and may include the following, as appropriate for the format chosen for presentation:

(1) A general description of the vessel, including lightweight data;

(2) Instructions on the use of the information;

(3) General arrangement plans showing watertight compartments, closures, vents, downflooding angles, and allowable weights;

(4) Loading restrictions, such as diagrams, tables, descriptions or maximum KG curves;

(5) Sample loading conditions;

(6) General precautions for preventing unintentional flooding;

(7) Capacity plan or tank sounding tables showing tank and hold capacities, centers of gravity, and free surface effects;

(8) A rapid and simple means for evaluating any specific loading condition;

(9) The amount and location of fixed ballast;

(10) Any other necessary guidance for maintaining adequate stability under normal and emergency conditions;

(11) A general description of the stability criteria that are used in developing the instructions;

(12) Guidance on the use of roll limitation devices such as stabilizers; and

(13) Any other information the owner feels is important to the stability and operation of the vessel.

§ 28.535 Inclining test.

(a) Except as provided in paragraphs (b) and (c) of this section, each vessel for which the lightweight displacement and centers of gravity must be determined in order to do the calculations required in this subpart must have an inclining test performed.

(b) A deadweight survey may be substituted for the inclining test, if there is a record of an inclining test of a sister vessel. A vessel qualifies as a sister vessel if it is built to the same basic drawings and the undocumented weight difference between the two vessels is less than 3 percent of the lightweight displacement of the vessel which was

inclined and the location of the longitudinal center of gravity differs less than 1 percent of the vessel's length.

(c) A deadweight survey may be substituted for the inclining test, or the inclining test may be dispensed with, if an accurate estimate of the vessel's lightweight characteristics can be made and the precise location of the position of the vessel's vertical center of gravity is not necessary to ensure that the vessel has adequate stability in all probable loading conditions.

(d) ASTM F 1321 (incorporated by reference, see § 28.40), with the exception of Annexes A and B, may be used as guidance for any inclining test or deadweight survey conducted under this section.

[CGD 88–079, 56 FR 40393, Aug. 14, 1991, as amended by USCG-1999–5151, 64 FR 67176, Dec. 1, 1999]

§ 28.540 Free surface.

(a) When doing the stability calculations required by this subpart, the virtual rise in the vessel's vertical center of gravity due to liquids in tanks must be considered by calculating the following—

(1) For each type of consumable liquid, the maximum free surface effect of a tank, or a transverse pair of tanks, having the greatest free surface effect, in addition to a correction for service tanks; and

(2) The free surface effect of each partially filled tank and hold containing a liquid that is not a consumable or containing fish or a fish product that can shift as the vessel heels. This should include correction for any loose water within the vessel's hull associated with the processing of fish.

(b) The free surface effect of tanks fitted with cross connection piping must be calculated assuming the tanks are one common tank, unless valves that will be kept closed to prevent the transfer of liquids as the vessel heels are installed in the piping.

(c) The moment of transference method may be used in lieu of the inertia method when calculating free surface effects.

§ 28.545 Intact stability when using lifting gear.

(a) Each vessel which lifts a weight over the side, or that uses fishing gear that can impose an overturning moment on the vessel, such as trawls and seines, must meet the requirements of this section if that maximum heeling moment exceeds 0.67(W)(GM)(F/B), in foot-long tons (meter-metric tons), where:

W=displacement of the vessel with the lifted weight or the force on the fishing gear included, in long tons (metric tons);

GM=metacentric height with the lifted weight or force on the fishing gear included, in feet (meters);

F=freeboard to the lowest weather deck, measured at amidships in feet (meters); and

B=maximum beam, in feet (meters).

(b) Except as provided in paragraph (f) of this section, each vessel must meet the requirements of § 28.570 or have at least 15 foot-degrees (0.080 meter-radians) of area under the righting arm curve, after correcting the righting arms for the heeling arm caused by lifting or fishing gear, from the angle of equilibrium to the least of the following:

(1) The angle corresponding to the maximum righting arm;

(2) The angle of downflooding; or

(3) 40° (0.7 radians).

(c) The angle of intersection of the heeling arm curve resulting from the lifting moment or the moment of fishing gear and the righting arm curve must not be at an angle of more than 10° (0.17 radians).

(d) The heeling arm curve resulting from lifting must be calculated as the resultant of the upright heeling moment divided by the vessel's displacement multiplied by the cosine of the angle of heel.

(e) For the purposes of this section, the weight of suspended loads must be assumed to act at the tip of the boom unless the suspended load's transverse movement is restricted, such as by the use of sideboards.

(f) A vessel that operates on protected waters, as defined in § 170.050 of this chapter, must comply with the requirements of this section, except that the area described in paragraph (b) of

this section must be at least 10 foot-degrees (0.053 meter-radians).

§ 28.550 Icing.

(a) *Applicability*. Each vessel that operates north of 42° North latitude between November 15 and April 15 or south of 42° South latitude between April 15 and November 15 must meet the requirements of this section.

(b) Except as provided in paragraph (d) of this section, the weight of assumed ice on each surface above the waterline of a vessel which operates north of 66°30′ North latitude or south of 66° South latitude must be assumed to be at least:

(1) 6.14 pounds per square foot (30 Kilograms per square meter) of horizontal projected area which corresponds to a thickness of 1.3 inches (33 millimeters); and

(2) 3.07 pounds per square foot (15 Kilograms per square meter) of vertical projected area which corresponds to a thickness of 0.65 inches (16.5 millimeters).

(c) Except as provided in paragraph (d) of this section, the weight of assumed ice on a vessel that operates north of 42° North but south of 66°30′ North latitude or south of 42° South but north of 66° South latitude must be assumed to be at least one-half of the values required by paragraphs (b)(1) and (b)(2) of this section.

(d) The height of the center of gravity of the accumulated ice should be calculated according to the position of each corresponding horizontal surface (deck and gangway) and each other continuous surface on which ice can reasonably be expected to accumulate. The projected horizontal and vertical area of each small discontinuous surface such as a rail, a spar, and rigging with no sail can be accounted for by increasing the calculated area by 15 percent.

(e) The weight and location of ice must be included in the vessel's weight and centers of gravity in each condition of loading when performing the stability calculations required by this subpart.

[CGD 88–079, 56 FR 40393, Aug. 14, 1991; 56 FR 47679, Sept. 20, 1991]

§ 28.555 Freeing ports.

(a) Except as provided in paragraph (i) of this section, each decked vessel fitted with bulwarks must be fitted with freeing ports.

(b) Freeing ports must be located to allow the rapid clearing of water in all probable conditions of list and trim.

(c) Except as provided by paragraphs (d) through (h) of this section, the aggregate clear area of freeing ports on each side of the vessel must not be less than 0.71 plus 0.035 times the length of the bulwark, in meters, for area in square meters, or 7.6 plus 0.115 times the length of the bulwark, in feet, for the area in square feet. The length of bulwark need not exceed 0.7 times the overall length of the vessel.

(d) Except as provided in paragraphs (e) through (h) of this section, for bulwarks which exceed 20.11 meters (66 feet) in length, the aggregate clear area of freeing ports on each side of the vessel must not be less than 0.07 times the length of the bulwark, in meters, for an area in square meters (0.23 times the length of the bulwark in feet, for an area in square feet). The length of the bulwark need not exceed 0.7 times the overall length of the vessel.

(e) For a bulwark more than 4 feet (1.22 meters) in height, the freeing port area required by paragraphs (c) or (d) of this section must be increased in accordance with the following formula:

$i=[h-4]0.04q$, ($i=[h-1.722].04q$, for metric units), where:

i=increase in freeing port area, in square feet (square meters);

h=bulwark height, in feet (meters); and

q=length of bulwark exceeding 4 feet (1.22 meters) in height, in feet (meters).

(f) For a bulwark less than 3 feet (0.91 meters) in height, the required freeing port area, required by paragraph (c) or (d) of this section, may be decreased in accordance with the following formula:

$r=[3-h]0.04q$, ($r=[h-0.91-h]0.04q$), where:

r=permitted reduction in freeing port area, in square feet (square meters).

h=bulwark height, in feet (meters).

q=length of bulwark which is less than 3 feet (0.914 meters) in height, in feet (meters).

(g) For a vessel without sheer, the freeing port area must be increased by 50 percent.

(h) The area of the freeing ports on a vessel that operates on protected waters need only be 50 percent of the area required by paragraphs (c) or (d) of this section.

(i) Freeing port covers are permitted provided that the freeing port area required by this section is not diminished and the covers are constructed and fitted so that water will readily flow outboard but not inboard.

[CGD 88–079, 56 FR 40393, Aug. 14, 1991, as amended by CGD 96–046, 61 FR 57276, Nov. 5, 1996]

§ 28.560 Watertight and weathertight integrity.

(a) Each opening in a deck or a bulkhead that is exposed to weather must be fitted with a weathertight or a watertight closure device.

(b) Except as provided in paragraphs (c) through (f) of this section, each opening in a deck or a bulkhead that is exposed to weather must be fitted with a watertight coaming as follows:

(1) For a vessel 79 feet (24 meters) or more in length, the coaming must be at least 24 inches (0.61 meters) in height; or

(2) For a vessel less than 79 feet (24 meters) in length, the coaming must be at least 12 inches (0.30 meters) in height.

(c) A coaming to a fish hold that is under constant attention when the closure is not in place need only be 6 inches (0.15 meters) in height.

(d) The coaming of an opening fitted with a quick-acting watertight closure device need only be of sufficient height to accommodate the device.

(e) Except on an exposed forecastle deck, a coaming is not required on a deck above the lowest weather deck.

(f) Each window and portlight located below the first deck above the lowest weather deck must be provided with an inside deadlight. Each deadlight must be efficient, hinged, and arranged so that it can be effectively closed watertight.

(g) An opening in a vessel below the weather deck which is used for discharging water or debris resulting from processing or sorting operations must be fitted with a means to ensure the opening can be closed weathertight. This means of closing must be operable from a location which is outside the space containing the opening.

§ 28.565 Water on deck.

(a) Each vessel with bulwarks must comply with the requirements of this section.

(b) Except for a vessel that operates on protected waters, the residual righting energy, ''b'' in Figure 28.565, must not be less than the water on deck heeling energy, ''a'' in Figure 28.565.

(c) The water on deck heeling energy must be determined assuming the following:

(1) The deck well is filled to the top of the bulwark at its lowest point and the vessel heeled to the angle at which this point is immersed;

(2) Water does not run off through the freeing ports;

(3) Vessel trim and displacement are constant and equal to the values of the vessel without the water on deck; and

(4) Water in the well is free to run-off over the top of the bulwark.

(d) The residual righting energy is the righting energy from the value where the righting arm equals the water on deck heeling arm up to the lesser of the values of 40° (0.70 radians) of heel or the downflooding angle.

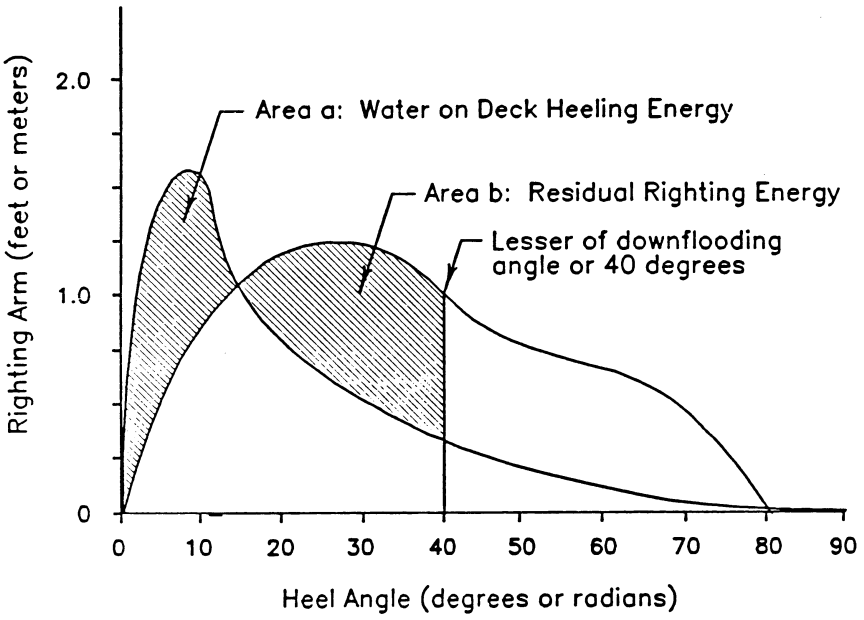

Figure 28.565

§ 28.570 Intact righting energy.

(a) Except as provided in paragraph (c) of this section, each vessel must have the following properties in each condition of loading:

(1) An initial metacentric height (GM) of at least 1.15 feet (0.35 meters);

(2) A righting arm (GZ) of at least 0.66 feet (0.2 meters) at an angle of heel not less than 30° (0.52 radians);

(3) A maximum righting arm that occurs at an angle of heel not less than 25° (0.44 radians);

(4) An area under each righting arm curve of at least 16.9 foot-degrees (0.090 meter-radians) up to the lesser of 40° (0.70 radians) or the angle of downflooding;

(5) An area under each righting arm curve of at least 10.3 foot-degrees (0.055 meter-radians) up to an angle of heel of 30° (0.52 radians);

(6) An area under each righting arm curve of at least 5.6 foot-degrees (0.030 meter-radians) between 30° (0.52 radians) and the lesser of 40° (0.70 radians) or the angle of downflooding; and

(7) Except as provided by paragraph (b) of this section, positive righting arms through an angle of heel of 60° (1.05 radians).

(b) In lieu of meeting the requirements of paragraph (a)(7) of this section, a vessel may comply with the following provisions:

(1) Hatches in the watertight/weathertight envelope must be normally kept closed at sea (e.g., the live tank hatch is only opened intermittently, under controlled conditions); or

(2) Unintentional flooding through these hatches must not result in progressive flooding to other spaces; and

(3) In all cases, a vessel must have positive righting arms through an angle of heel of at least 50° (0.87 radians) and the intact stability analysis must consider that spaces accessed by

such hatches to be flooded full or flooded to the level having the most detrimental effect on stability when free surface effects are considered.

(c) In lieu of meeting the requirements of paragraph (a) of this section, a vessel may comply with the provisions of § 170.173(c) of this chapter, provided that righting arms are positive to an angle of heel of not less than 50° (0.87 radians).

(d) For the purpose of paragraphs (a) and (c) of this section, at each angle of heel a vessel's righting arm must be calculated assuming the vessel is permitted to trim free until the trimming moment is zero.

§ 28.575 Severe wind and roll.

(a) Each vessel must meet paragraphs (f) and (g) of this section when subjected to the gust wind heeling arm and the angle of roll to windward as specified in this section.

(b) The gust wind heeling arm, L_w in figure 28.575 of this chapter, must be calculated by the following formula:

$$KE_n(V_n^2A_nZ_n)/W$$

where:

K=0.00216 when consistent English units are used or 1.113 when consistent metric units are used.

E_n=series summation notation where n varies from 1 to the number of elements in the series;

V_n=S[0.124LN(0.3048h_n)+0.772], in feet per second S[0.127LN(h_n)+0.772], in meters per second and is the wind speed for profile element ''n'' on a vessel;

S=64 (19.5, if metric units are used) for a vessel that operates on protected waters; or 85.3 (26, if metric units are used) for a vessel that operates on waters other than protected waters;

LN=natural logarithm;

h_n=the vertical distance from the centroid of area A_n to the waterline for profile element n, in feet (meters);

A_n=projected lateral area for profile element n, in square feet (square meters);

Z_n=the vertical distance between the centroid of A_n and a point at the center of the underwater lateral area or a point at approximately one-half of the draft, for profile element n, in feet; and

W=displacement of the loaded vessel, in pounds (Newtons).

(c) The angle of roll to windward, A_1, is measured from the equilibrium angle, A_{el}, and is calculated by the following formula:

A_1=109kXY[Square root of (rs)], in degrees,

where:

s,X,Y=factors from table 28.575;

r=0.73+0.6 Z_g/d;

Z_g=distance between the center of gravity and the waterline (+ above, − below), in feet (meters);

k=1.0 for round bilged vessels with no bilge keels or bar keels; 0.7 for vessels with sharp bilges, or the value from table 28.575 for vessels with a bar keel, bilge keels, or both;

B=molded breadth of the vessel, in feet (meters);

d=mean molded draft of the vessel, in feet (meters);

C_b=block coefficient;

A_k=aggregate area of bilge keels, the area of the lateral projection of a bar keel, or the sum of these areas, in square feet (square meters);

L=length, in feet (meters);

T=1.108 BC/square root of GM, in seconds; 2.0 BC/square root of GM, if metric units are used;

GM=metacentric height corrected for free surface effects, as explained in § 28.540, in feet (meters);

C=0.373+0.023(B/d)−0.000131L or 0.373+0.023(B/D)−0.00043L, if metric units are used.

(d) The angle of equilibrium, A_{el} in figure 28.575, is calculated by determining the lowest angle at which the gust wind heeling arm, L_w, is equal to the righting arm.

(e) The area ''b'' in figure 28.575 must be measured to the least of the following:

(1) The angle of downflooding, (A_f);

(2) The angle of the second intercept, A_{e2} in figure 28.575, of the wind heeling arm curve, L_w in figure 28.575, and the righting arm curve; or

(3) A heel angle of 50° (0.87 radians).

(f) The angle of equilibrium, A_{el} in figure 28.575, must not exceed 14° (0.24 radians).

(g) Area ''b'' in figure 28.575 must not be less than area ''a'' in figure 28.575.

TABLES 28.575—ROLL FACTORS

B/d	X
2.4	1.0
2.5	0.98
2.6	0.96
2.7	0.95
2.8	0.93
2.9	0.91
3.0	0.90
3.1	0.88
3.2	0.86

TABLES 28.575—ROLL FACTORS—Continued

B/d	X
3.3	0.84
3.4	0.82
3.5	0.80

Note. Intermediate values must be obtained by interpolation.

C_b	Y
0.45	0.75
0.50	0.82
0.55	0.89
0.60	0.95
0.93	0.97
0.70	1.0

Note. Intermediate values must be obtained by interpolation.

$100A_k/(LB)$	k
0	1.0
1.0	0.98
1.5	0.95
2.0	0.88
2.5	0.79
3.0	0.74
3.5	0.72
4.0	0.70

Note. Intermediate values must be obtained by interpolation.

T	S
6	0.100
7	0.098
8	0.093
12	0.065
14	0.053
16	0.044
18	0.038
20	0.035

Note: Intermediate values must be obtained by interpolation.

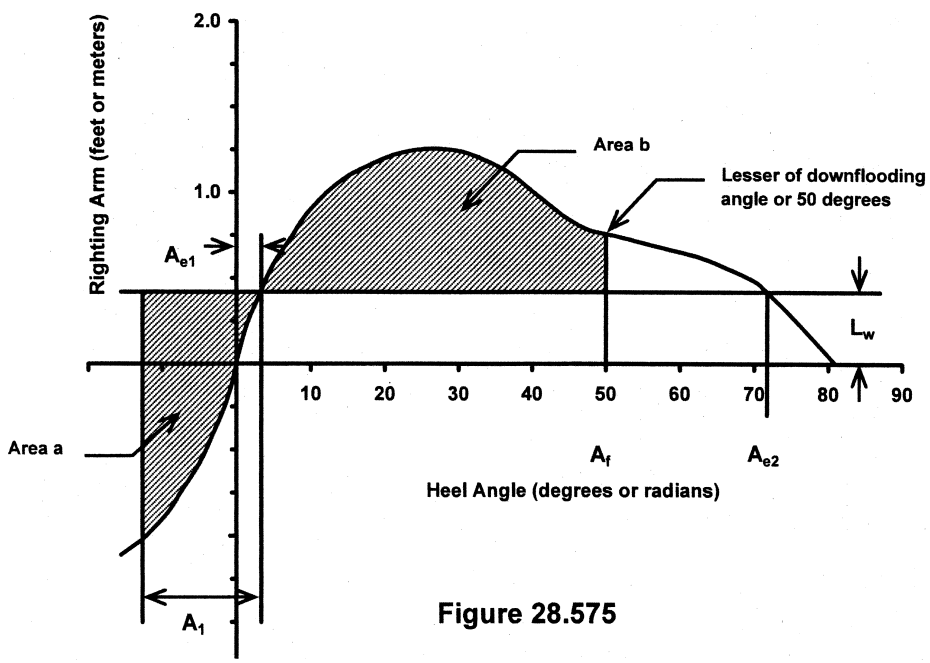

Figure 28.575

[56 FR 40393, Aug. 14, 1991, CGD 88–079; 56 FR 47679, Sept. 20, 1991, CGD 88–079, as amended by CGD 95–072, 60 FR 50461, Sept. 29, 1995; USCG-2004–18884, 69 FR 58344, Sept. 30, 2004; USCG–2008–0906, 73 FR 56509, Sept. 29, 2008]

§ 28.580 Unintentional flooding.

(a) *Applicability*. Except for an open boat that operates on protected waters and as provided by paragraph (i) of this section, each vessel built on or after September 15, 1991 must comply with the requirements of this section.

(b) *Collision bulkhead.* A watertight collision bulkhead must be fitted and must meet the following:

(1) Openings in the collision bulkhead must be kept to a minimum, and each must be fitted with a watertight closure device;

(2) A collision bulkhead must not be fitted with a door below the bulkhead deck;

(3) A penetration or opening in a collision bulkhead must be—

(i) Located as high and as far inboard as practicable; and

(ii) Fitted with a means to rapidly make it watertight which is operable from a location aft of the collision bulkhead;

(4) The collision bulkhead must be located at least 5 percent of the length from the forward perpendicular unless the vessel has a bulbous bow, in which case the forward reference point will be extended by half the distance between the vessel's forward perpendicular and the forwardmost point of the bulbous bow as shown in figure 28.580; and

(5) The collision bulkhead must not be stepped below the bulkhead deck.

(c) Each vessel must meet the survival conditions in paragraph (f) of this section in each condition of loading and operation with the extent and character of damage specified in paragraphs (d) and (e) of this section.

(d) *Extent and character of damage.* Except where a lesser extent of damage or a smaller penetration would be more disabling, in evaluating the damage stability of a vessel the following penetration must be assumed:

(1) Longitudinal extent—L/10, or 10 feet (3.05 meters) plus 0.03L, whichever is less. Transverse watertight bulkheads that are separated by at least this distance may be assumed to remain effective;

(2) Transverse extent—30 inches (0.76 meters) from the side measured at right angles to the centerline at the level of the deepest operating waterline; and

(3) Vertical extent—from the baseline upward without limit.

(e) Each space containing a through hull fitting, such as the lazarette and the engineroom, must be assumed to be flooded.

(f) *Survival conditions.* A vessel is presumed to survive the assumed damage and unintentional flooding described in paragraphs (d) and (e) of this section if:

(1) The angle of equilibrium after flooding does not exceed 25° (0.44 radians); and

(2) Through an angle of 20° (0.35 radians) beyond the angle of equilibrium after flooding, the following are met—

(i) The righting arm curve is positive;

(ii) The maximum righting arm is at least 4 inches (102 millimeters);

(iii) Each submerged opening is capable of being made weathertight; and

(iv) The heeling arm caused by deploying all fully loaded davit-launched survival craft on one side of a vessel does not exceed the righting arm at any angle of heel beyond the equilibrium angle when launching is assumed on the damaged side.

(g) *Permeability.* The permeability of each space must not be less than the following:

(1) For an accommodations space—95 percent;

(2) For a propulsion machinery space—85 percent;

(3) For a tightly packed storage space—60 percent;

(4) For a void or an auxiliary machinery space—95 percent;

(5) For an empty fish hold—95 percent;

(6) For a full fish hold—50 percent; and

(7) For tanks—95 percent (less if a tank must be full to attain the draft under consideration.)

(h) *Buoyancy of superstructure.* A deckhouse or a superstructure may be included in the buoyant volume of a vessel provided it is:

(1) Sufficiently strong to withstand the impact of waves;

(2) Fitted with a weathertight or watertight closure device for each opening;

(3) Equipped with an efficient, hinged, inside deadlight, for each window and each portlight, arranged so that it can be effectively closed watertight; and

(4) Fitted with interior access from the spaces below.

(i) A vessel may obtain and maintain a Load Line Certificate under subchapter E of this chapter in lieu of

meeting the requirements of paragraphs (c) through (g) of this section.

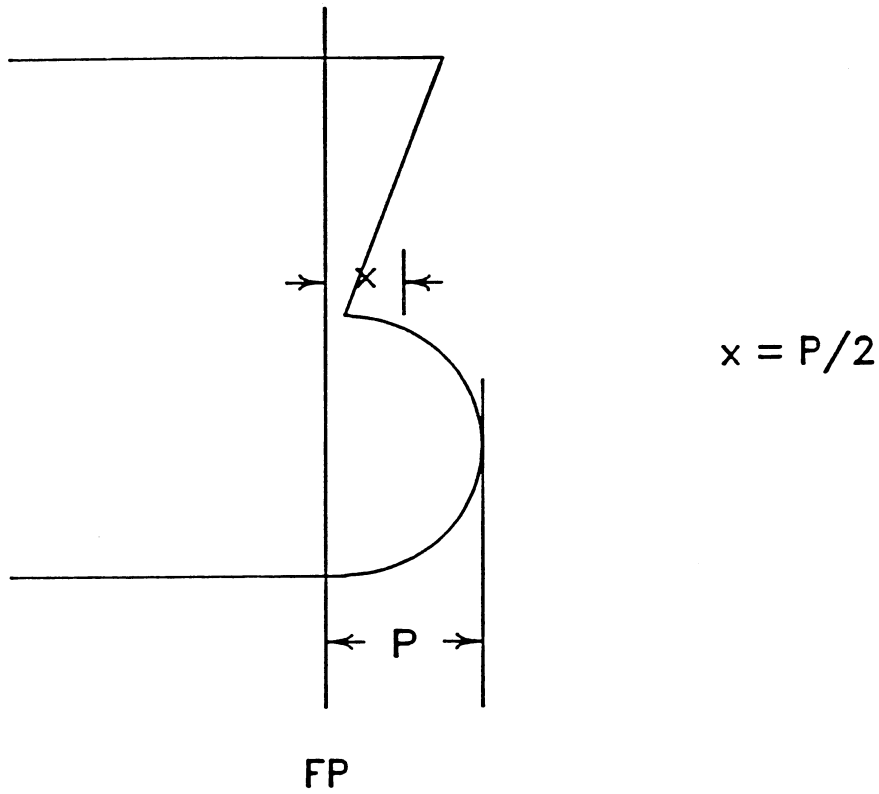

Figure 28.580

[CGD 88–079, 56 FR 40393, Aug. 14, 1991; 56 FR 47679, Sept. 20, 1991, as amended by CGD 88–079, 57 FR 364, Jan. 6, 1992]

§§ 28.590–28.630 [Reserved]

Subpart F—Fish Processing Vessel

§ 28.700 Applicability.

Each fish processing vessel which is not subject to inspection under the provisions of another subchapter of this chapter must meet the requirements of this subpart.

§ 28.710 Examination and certification of compliance.

(a) At least once in every two years each vessel must be examined for compliance with the regulations of this subchapter by the ABS, a similarly qualified organization, or a surveyor of an accepted organization.

(b) Each individual performing an examination under paragraph (a) of this section, upon finding the vessel to be in compliance with the requirements of this chapter, must provide a written certification of compliance to the owner or operator of the vessel.

(c) Each certification of compliance issued under paragraph (b) of this section must:

(1) Be signed by the individual that performed the examination;

(2) Include the name of the organization the individual performing the examination represents or the name of the accepted organization the individual belongs to; and

(3) State that the vessel has been examined and found to meet the specific requirements of this chapter.

(d) A certification of compliance issued under paragraph (b) of this section must be retained on board the vessel until superseded.

(e) A copy of the certification of compliance issued under paragraph (b) of this section must be forwarded by the organization under whose authority the examination was performed to the Coast Guard District Commander (Attention: Fishing Vessel Safety Coordinator) in charge of the district in which the examination took place.

§ 28.720 Survey and classification.

(a) Each vessel which is built after or which undergoes a major conversion completed after July 27, 1990, must be classed by the ABS, or a similarly qualified organization.

(b) Each vessel which is classed under paragraph (a) of this section must:

(1) Have on board a certificate of class issued by the organization that classed the vessel.

(2) Meet all survey and classification requirements prescribed by the organization that classed the vessel.

Subpart G—Aleutian Trade Act Vessels

SOURCE: CGD 94–025, 60 FR 54444, Oct. 24, 1995, unless otherwise noted.

§ 28.800 Applicability and general requirements.

(a) This subpart applies to each fish tender vessel engaged in the Aleutian trade that has not undergone a major conversion and:

(1) Was operated in Aleutian trade before September 8, 1990; or

(2) Was purchased to be used in the Aleutian trade before September 8, 1990, and entered into service in the Aleutian trade before June 1, 1992.

(b) Except as noted otherwise in this subpart, a vessel subject to this subpart must also comply with the requirements of subparts A, B, and C of this part.

(c) Each fish tender vessel engaged in the Aleutian trade that undergoes a major conversion after September 15, 1991 must comply with the additional requirements of subpart D.

(d) A fish tender vessel engaged in the Aleutian trade is subject to inspection under the provisions of 46 U.S.C. 3301 (1), (6), or (7) unless it:

(1) Is not more than 500 gross tons;

(2) Has an incline test performed by a marine surveyor; and

(3) Has written stability instructions posted on board the vessel.

§ 28.805 Launching of survival craft.

In addition to the survival craft requirements in subpart B, each vessel must have a gate or other opening in the deck rails, lifelines, or bulwarks adjacent to the stowage location of each survival craft which has a mass of more than 50 kilograms (110 pounds), so that the survival craft can be manually launched.

§ 28.810 Deck rails, lifelines, storm rails and hand grabs.

(a) Except as otherwise provided in paragraph (d) of this section, deck rails, lifelines, grab rails, or equivalent protection must be installed near the periphery of all weather decks accessible to individuals. Where space limitations make deck rails impractical, hand grabs may be substituted.

(b) The height of deck rails, lifelines, or bulkwarks must be at least 1 meter (39½ inches) from the deck, except where this height will interfere with the normal operation of the vessel, a lesser height may be substituted.

(c) All deck rails or lifelines must be permanently supported by stanchions at intervals of not more than 2.3 meters (7 feet). Stanchions must be through bolted or welded to the deck.

(d) Portable stanchions and lifelines may be installed in locations where permanently installed deck rails will impede normal cargo operations or emergency recovery operations.

(e) Deck rails or lifelines must consist of evenly spaced courses. The spacing between courses must not be greater than 0.38 meters (15 inches). The opening below the lowest course must not be more than 0.23 meters (9 inches). Lower courses are not required where all or part of the space below the upper rail is fitted with a bulwark, chain link fencing, wire mesh, or an equivalent.

(f) A suitable storm rail or hand grab must be installed where necessary in a passageway, at a deckhouse side, at a ladder, and a hatch where an individual might have access.

§ 28.815 Bilge pumps, bilge piping, and dewatering systems.

Instead of meeting the requirements of § 28.255, each vessel to which this subpart applies must meet the following requirements:

(a) Each vessel must be equipped with a fixed, self priming, powered, bilge pump, having a minimum capacity rating of 50 gallons per minute, connected to a bilge manifold and piping capable of draining any watertight compartment, other than tanks and small buoyancy compartments, under all service conditions. Large spaces, such as engine rooms and cargo holds must be fitted with more than one suction line.

(b) In addition, each vessel must be fitted with a fixed secondary or backup bilge pump having an independent and separate source of power from the pump required in paragraph (a) of this section. One of the bilge pumps may be attached to the propelling engine.

(c) A portable bilge pump may substitute for the secondary pump required above, as long as it meets the following:

(1) It must be self priming and provided with a suitable suction hose of adequate length to reach the bilges of each watertight compartment it must serve and be fitted with a built-in check valve and strainer.

(2) The portable pump must be of at least the same minimum capacity as that listed in paragraph (a) of this section and fitted with a discharge hose of adequate length to ensure overboard discharge from the lowest compartment in which it can serve.

(3) The portable pump must also be capable of being quickly and efficiently attached to the vessel's fixed bilge suction main and/or discharge piping (such as with ''camlocks'', etc.) for alternate emergency use.

(d) Except for suction lines attached to an individual pump provided for a separate space, or for a portable pump, each individual bilge suction line must be provided with a stop valve at the manifold and a check valve at some accessible point in the bilge line to prevent unintended flooding of a space.

(e) Each bilge suction line and dewatering system must be fitted with a suitable strainer to prevent clogging of the suction line. Strainers must have an open area of not less than three times the open area of the suction line.

(f) Except for a fire pump required by 46 CFR 28.820, a bilge pump may be used for other purposes.

(g) Each vessel must comply with the oil pollution prevention requirements of 33 CFR parts 151 and 155.

§ 28.820 Fire pumps, fire mains, fire hydrants, and fire hoses.

(a) Each vessel must be equipped with a self-priming, power driven fire

pump connected to a fixed piping system. This pump must be capable of delivering an effective stream of water from a hose connected to the highest outlet. The minimum capacity of the power fire pump shall be 50 gallons per minute at a pressure of not less than 60 pounds per square inch at the pump outlet.

(1) If multiple pumps are installed, they may be used for other purposes provided at least one pump is kept available for use on the fire system at all times.

(2) In addition, each vessel must be fitted with a portable fire pump having a minimum capacity of that specified in paragraph (a) of this section, capable of producing a stream of water having a throw of at least 12 meters (39.4 feet) from the nozzle, and capable of being connected to National Standard Fire Hose of the size utilized on board the vessel. If a vessel already has on board a portable pump satisfying the bilge system requirements of § 28.255(d), no additional portable pump is required as long as the portable pump is of sufficient size/capacity, and is properly equipped to handle both fire fighting and flood control.

(b) Each vessel must have a sufficient number of fire hydrants to reach any part of the vessel using a single length of hose.

(c) Each fire hydrant must have at least one length of fire hose connected to the outlet at all times, a spanner, and a hose rack or other device for stowing the hose at all times.

(1) All parts of the firemain located on exposed decks shall either be protected against freezing or be fitted with cutout valves and drain valves.

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

(3) Each length of fire hose must be a minimum of 3.83 centimeters (1½'') diameter lined commercial fire hose and be fitted with a nozzle made of corrosion resistant material capable of providing a solid stream and a spray pattern.

[CGD 94–025, 60 FR 54444, Oct. 24, 1995, as amended by USCG–2010–0759, 75 FR 60002, Sept. 29, 2010]

§ 28.825 Excess fire detection and protection equipment.

Instead of meeting the requirements of § 28.155, each vessel to which this subpart applies must meet the following requirements:

(a) Installation of fire detection and protection equipment in excess of that required by the regulations in this Subchapter is permitted provided that the excess equipment does not endanger the vessel or individuals on board in any way. The excess equipment must, at a minimum, be listed and labeled by an independent, nationally recognized testing laboratory and be in accordance with an appropriate industry standard for design, installation, testing, and maintenance.

(b) An existing fixed gas fire extinguishing system that is in excess of the required fire protection equipment required by subparts A, B, and C of this part, may remain in place and continue in service as long as all parts of the system are maintained in good condition to the satisfaction of the Coast Guard Representative, and subject to the following:

(1) A fixed fire extinguishing system capable of automatic discharge upon heat detection, may only be installed in a normally unoccupied space. For the purpose of this section, the machinery space aboard a fish tender operating in the Aleutian trade is considered occupied.

(2) A fixed fire extinguishing system must:

(i) Be capable of manual actuation from outside the space protected;

(ii) Produce an audible alarm to indicate the discharge of the extinguishing agent for 20 seconds before the extinguishing agent is released into the space;

(iii) The branch line valves of all fire extinguishing systems shall be plainly and permanently marked indicating the spaces serviced;

(iv) 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 5.08 centimeters (2 inches) high:

''HALON FIRE SYSTEM''
''CARBON DIOXIDE FIRE SYSTEM'' or
''FOAM FIRE SYSTEM'', as the case may be;

(v) Instructions for the operation of the system must be located in a conspicuous place at or near all pull boxes, stop valve controls, and in the agent storage space;

(vi) If the space or enclosure containing the supply or 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, and;

(vii) Be equipped with a sign at the alarm stating: ''WHEN ALARM SOUNDS—VACATE AT ONCE. CARBON DIOXIDE BEING RELEASED'', or list other fire extinguishing agent.

(3) Any modification, alteration, or new installation of a fixed gas fire extinguishing system must meet the additional requirements of subpart D of this part.

[CGD 94–025, 60 FR 54444, Oct. 24, 1995, as amended by USCG-2004–18884, 69 FR 58344, Sept. 30, 2004]

§ 28.830 Fire detection system.

(a) Each accommodation space must be equipped with an independent modular smoke detector or a smoke actuated fire detecting unit installed in accordance with § 76.33 of this chapter.

(b) An independent modular smoke detector must meet UL 217 and be listed as a ''Single Station Smoke Detector—Also Suitable for Use in Recreational Vehicles''.

§ 28.835 Fuel systems.

(a) Portable fuel systems including portable tanks and related fuel lines and accessories are prohibited except where used for outboard engines or portable bilge/fire pumps.

(b) Each integral fuel tank must be fitted with a vent pipe connected to the highest point of the tank terminating in a 180 degree (3.14 radians) bend on a weather deck and be fitted with a flame screen.

(c) Test cocks must not be fitted to fuel oil tanks.

(d) Valves for removing water or impurities from diesel fuel oil systems are permitted in the machinery space provided they are away from any potential sources of ignition. Such valves shall be fitted with caps or plugs to prevent leakage.

(e) Oil piping drains, strainers and other equipment subject to normal oil leakage must be fitted with drip pans or other means to prevent oil draining into the bilge.

(f) All nonmetallic filters and strainers must be fitted with a metal shield attached to their base in such a way as to prevent direct flame impingement in the case of a fire.

(g) Shutoff valves shall be installed in the fuel supply piping lines, one as close to each tank as practicable, and one as close to each fuel pump as practicable. Valves shall be accessible at all times.

(h) Fuel oil piping subject to internal head pressure from diesel oil in a tank must be fitted with a positive shutoff valve, installed to close against the flow at the tank. This valve is to be capable of remote actuation from outside the space in which the tank/piping is located, accessible at all times, and suitably marked.

(i) With the exception of paragraph (j) and (k) of this section, fuel piping shall be steel pipe, annealed seamless copper, brass, nickel copper, or copper nickel alloy tubing having a minimum wall thickness of 0.9 millimeters (0.035 inches).

(j) Flexible connections of a short length (no more than 762mm, (30 inches)), suitable metallic or nonmetallic flexible tubing or hose is permitted in the fuel supply line at or near the engine to prevent damage by vibration. If nonmetallic flexible hose is used it must:

(1) Not exceed the minimum length needed to allow for vibration;

(2) Be visible, easily accessible, and must not penetrate a watertight bulkhead;

(3) Be fabricated with an inner tube and outer-covering of synthetic rubber or other suitable material reinforced with wire braid;

(4) Be fitted with suitable, corrosion resistant, compression fittings; and

(5) Be installed with two hose clamps at each end of the hose, if designed for use with clamps. Clamps must not rely on spring tension and must be installed beyond the bead or flare or over the serrations of the mating spud, pipe, or hose fitting.

(k) Supply piping that conveys fuel oil or lubricating oil to equipment and is in close proximity of equipment or lines having an open flame or having parts operating above 260° C (500 °F) must be of seamless steel.

(l) Existing fuel oil piping may remain in service as long as it is serviceable to the satisfaction of the Coast Guard Representative. Any replacement, alterations, modifications or new installations to the fuel oil piping system must be made in accordance with the material requirements of this section.

§ 28.840 Means for stopping pumps, ventilation, and machinery.

All electrically driven fuel oil transfer pumps, fuel oil unit and service pumps, and ventilation fans shall be fitted with remote controls from a readily accessible position outside of the space concerned so that they may be stopped in the event of fire occurring in the compartment in which they are located. These controls shall be suitably protected against accidental operation or tampering and shall be suitably marked.

§ 28.845 General requirements for electrical systems.

(a) Electrical equipment exposed to the weather or in a location exposed to seas must be waterproof or watertight, or enclosed in a watertight housing.

(b) Aluminum must not be used for current carrying parts of electrical equipment or wiring.

(c) As far as practicable, electrical equipment must not be installed in lockers used to store paint, oil, turpentine, or other flammable or combustible liquids. If electrical equipment, such as lighting, is necessary in these spaces, it must be explosion-proof or intrinsically safe.

(d) Explosion-proof and intrinsically safe equipment must meet the requirements of § 111.105 of this chapter.

(e) Metallic enclosures and frames of electrical equipment must be grounded.

§ 28.850 Main source of electrical power.

(a) Applicability: Each vessel that relies on electricity to power any of the following essential loads must have at least two electrical generators to supply:

(1) The propulsion system and its necessary auxiliaries and controls;

(2) Interior lighting;

(3) Steering systems;

(4) Communication systems;

(5) Navigation equipment and navigation lights;

(6) Fire protection or detection equipment;

(7) Bilge pumps; and

(8) General alarm system.

(b) Each generator must be attached to an independent prime mover.

§ 28.855 Electrical distribution systems.

(a) Each electrical distribution system which has a neutral bus or conductor must have the neutral bus or conductor grounded.

(b) A grounded electrical distribution system must have only one connection to ground. This ground connection must be at the switchboard.

§ 28.860 Overcurrent protection and switched circuits.

(a) Each power source must be protected against overcurrent. Overcurrent devices for generators must be set at a value not exceeding 115 percent of the generator's full load rating.

(b) Except for a steering circuit, each circuit must be protected against both overload and short circuit. Each overcurrent device in a steering system power and control circuit must provide protection only.

(c) Each ungrounded current carrying conductor must be protected in accordance with its current carrying capacity by a circuit breaker or fuse at the connection to the switchboard or distribution panel bus.

(d) Each circuit breaker and each switch must simultaneously open all ungrounded conductors.

(e) The grounded conductor of a circuit must not be disconnected by a switch or an overcurrent device unless all ungrounded conductors of the circuit are simultaneously disconnected.

(f) Navigation light circuits must be separate, switched circuits having fused disconnect switches or circuit

breakers so that only the appropriate navigation lights can be switched on.

(g) A separate circuit with overcurrent protection at the main distribution panel or switchboard must be provided for each radio installation.

§ 28.865 Wiring methods and materials.

(a) All cable and wire must have insulated, stranded copper conductors of the appropriate size and voltage rating of the circuit.

(b) Each conductor must be No. 22 AWG or larger. Conductors in power and lighting circuits must be No. 14 AWG or larger. Conductors must be sized so that the voltage drop at the load terminals is not more than 10 percent.

(c) Cable and wiring not serving equipment in high risk fire areas such as a galley, laundry, or machinery space must be routed as far as practicable from these spaces. As far as practicable, cables serving duplicated essential equipment must be separated so that a casualty that affects one cable does not affect the other. Existing cables and wires may remain as routed; however, any replacement wiring, new cabling and/or alterations must be routed as specified above.

(d) No unused or dead ended cables may remain after the permanent removal or alteration of an electrical device.

(e) Cable and wire for power and lighting circuits must:

(1) For circuits of less than 50 volts, meet 33 CFR 183.425 and 183.430; and

(2) For circuits of 50 volts or greater:

(i) Meet section 310–13 and 310–15 of NFPA 70, except that asbestos insulated cable and dry location cable must not be used;

(ii) Be listed by Underwriters Laboratories Inc. as UL Marine Boat or UL Marine Shipboard cable; or

(iii) Meet § 111.60 of this chapter.

(f) All metallic cable armor must be electrically continuous and grounded to the metal hull or the common ground point at each end of the cable run, except that final sub-circuits (those supplying loads) may be grounded at the supply end only.

(g) Wiring terminations and connections must be made in a fire retardant enclosure such as a junction box, fixture enclosure, or panel enclosure.

(h) Existing cable and wire may remain in place and continue in use as long as it is deemed serviceable to the satisfaction of the Coast Guard Representative. Any new installation, replacement, modification or alteration must be done in accordance with the requirements of this section.

§ 28.870 Emergency source of electrical power.

(a) The following electrical loads must be connected to an independent emergency source of power capable of supplying all connected loads continuously for at least three hours:

(1) Navigation lights;

(2) Fire protection and detection systems;

(3) Communications equipment;

(4) General alarm system; and

(5) Emergency lighting;

(b) The emergency power source must be aft of the collision bulkhead, outside of the machinery space, and above the uppermost continuous deck.

(c) An emergency source of power supplied solely by storage battery must also meet the following requirements:

(1) Each battery must be a lead-acid or alkaline type and be able to withstand vessel pitch, vibration, roll, and exposure to a salt water atmosphere;

(2) A battery cell must not spill electrolyte when the battery is inclined at 30 degrees from the vertical;

(3) Each battery installation must be in a battery room, in a box on dock, or in a well ventilated compartment. The batteries must be protected from falling objects;

(4) Each battery tray must be secured to prevent shifting with the roll and pitch of the vessel and lined with a material that is corrosion resistant to the electrolyte of the battery;

(5) Each battery bank installation must be fitted with its own drip-proof charging system; and

(6) Each deck box used for battery storage must be weathertight, and have holes near the top to allow gas to escape.

§ 28.875 Radar, depth sounding, and auto-pilot.

(a) Each vessel must be fitted with a general marine radar system for surface navigation with a radar screen mounted at the operating station, and facilities on the bridge for plotting radar readings.

(b) Each vessel must be fitted with a suitable echo depth sounding device.

(c) Except as provided in 33 CFR § 164.15, when the automatic pilot is used in areas of high traffic density, conditions of restricted visibility, and all other hazardous navigational situations, the master or person in charge shall ensure that:

(1) It is possible to immediately establish manual control of the unit's steering:

(2) A competent person is ready at all times to take over steering control; and

(3) The changeover from automatic to manual steering and vice versa is made by, or under the supervision of, the officer of the watch.

§ 28.880 Hydraulic equipment.

(a) Each hydraulic system must be so designed and installed that proper operation of the system is not affected by back pressure in the system.

(b) Piping and piping components must be designed with a burst pressure of not less than four times the system's maximum operating pressure.

(c) Each hydraulic system must be equipped with at least one pressure relieving device set to relieve at the system's maximum operating pressure.

(d) All material in a hydraulic system must be suitable for use with the hydraulic fluid used and must be of such chemical and physical properties as to remain ductile at the lowest operating temperature likely to be encountered by the vessel.

(e) Except for hydraulic steering equipment, controls for operating hydraulic equipment must be located where the operator has an unobstructed view of the controls for operating hydraulic equipment and the adjacent work area. Protection shall be afforded to the operator of hydraulic equipment against falling or swinging objects and/or cargo.

(f) Controls for hydraulic equipment must be so arranged that the operator is able to quickly disengage the equipment in an emergency.

(g) Hydraulically operated machinery must be fail-safe or equipped with a holding device to prevent uncontrolled movement or sudden loss of control due to loss of hydraulic system pressure. A system is considered to be fail-safe if a component failure results in a slow and controlled release of the load so as not to endanger personnel.

(h) Nonmetallic flexible hose assemblies must only be used between two points of relative motion, limited to the least amount of length that will afford maximum multidirectional movement of the equipment served.

(i) Hose end fittings must comply with SAE J1475, (Hydraulic Hose Fittings For Marine Applications). Field attachable fittings must be installed following the manufacturer's recommended practice (method).

(j) Nonmetallic flexible hose shall be marked with the manufacturer's name or trademark, type or catalog number and maximum allowable working pressure.

(k) Existing hydraulic piping, nonmetallic hose assemblies, and components may be continued in service so long as they are maintained in good condition to the satisfaction of the Coast Guard Representative, but all new installations, or replacements shall meet the applicable specifications or requirements of this section.

§ 28.885 Cargo gear.

(a) The safe working load (SWL) for the assembled gear shall be marked on the heel of each cargo boom, crane, or derrick. These letters and figures are to be in contrasting colors to the background and at least one inch in height. The SWL is construed to be the load the gear is approved to lift, excluding the weight of the gear itself.

(b) All wire rope, chains, rings, hooks, links, shackles, swivels, blocks, and any other loose gear used or intended to be used in cargo loading or unloading must be commensurable with the SWL rating in paragraph (a) of this section. This gear shall be visually inspected by the vessel's captain or his designee at frequent intervals,

and in any event not less than once in each operating month.

(c) In addition to the inspection required in paragraph (b) of this section, a biennial, (every second year), thorough examination and proof load test, at a minimum of the SWL rating, shall be performed and witnessed by competent personnel. The proof load applied to the winches, booms, derricks, cranes and all associated gear shall be lifted with the ship's normal tackle with the boom or derrick at the lowest practicable angle. When the load has been lifted, it shall be swung as far as possible in both directions.

(d) After satisfactory completion of the tests and examinations required in paragraphs (b) and (c) of this section, all results and notations together with the date and location of each shall be maintained and available to Coast Guard representatives upon request.

§ 28.890 Examination and certification of compliance.

(a) At least once in every two years each ATA vessel must be examined for compliance with the regulations of this subchapter by the ABS, a similarly qualified organization, or a surveyor of an accepted organization.

(b) Each individual performing an examination under paragraph (a) of this section, upon finding the vessel to be in compliance with the requirements of this chapter, must provide written certification of compliance to the owner or operator of the vessel.

(c) Each certification of compliance issued under paragraph (b) of this section must:

(1) Be signed by the individual that performed the examination;

(2) Include the name of the organization the individual performing the examination represents or the name of the accepted organization the individual belongs to; and

(3) State that the vessel has been examined and found to meet the specific requirements of this chapter.

(d) A certification of compliance issued under paragraph (b) of this section must be retained on board the vessel until superseded.

(e) A copy of the certification of compliance issued under paragraph (b) of this section must be forwarded by the organization under whose authority the examination was performed to the Coast Guard District Commander (Attention: Fishing Vessel Safety Coordinator) in charge of the district in which the examination took place.

§ 28.895 Loadlines.

(a) A fish tender vessel of not more than 500 gross tons, engaged in the Aleutian trade, is not subject to the loadline provisions of 46 U.S.C. Chapter 51 if it is not on a foreign voyage and the vessel:

(1) Operated in this trade before September 8, 1990; or

(2) Was purchased to be used in this trade before September 8, 1990 and entered into service before June 1, 1992; and

(3) Has not undergone a major conversion; and

(4) Has not had a loadline assigned at any time before November 16, 1990.

(b) The exemption from the loadline provision of 46 U.S.C. Chapter 51 set forth in paragraph (a) of this section expires on January 1, 2003.

§ 28.900 Post accident inspection.

The requirements for providing notice and reporting of marine casualties are contained in part 4 of this chapter. The owner of or master of the vessel shall ensure that the survey guidance provided by a Coast Guard Representative is effectively carried out, 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 part.

§ 28.905 Repairs and alterations.

No repairs or alterations affecting the safety of the vessel with regard to the hull, machinery, or equipment, shall be made without the notification of a Coast Guard Representative.