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(iii) Fire detecting system and smoke detecting system plans;

(iv) Sprinkler system diagram and calculations; and

(v) Portable fire extinguisher types, sizes and locations;

(7) Fuel tanks;

(8) Piping systems including: bilge, ballast, hydraulic, sanitary, compressed air, combustible and flammable liquids, vents, soundings, and overflows;

(9) Hull penetrations and shell connections;

(10) Marine sanitation device model number, approval number, connecting wiring and piping; and

(11) Lines and offsets, curves of form, cross curves of stability, and tank capacities including size and location on vessel; and

(12) On sailing vessels:

(i) Masts, including integration into the ship's structure; and

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

(c) For a vessel of not more than 19.8 meters (65 feet) in length, the owner may submit specifications, sketches, photographs, line drawings or written descriptions instead of any of the required drawings, provided the required information is adequately detailed and acceptable to the cognizant OCMI.

(d) An owner may submit any plans, manuals, or calculations, required to be submitted to the OCMI under this part, to the Commanding Officer (MSC), Attn: Marine Safety Center, U.S. Coast Guard Stop 7410, 4200 Wilson Boulevard Suite 400, Arlington, VA 20598-7410. Three copies of all documents are required to be submitted for Marine Safety Center plan approval.

(e) For a vessel, the construction of which was begun prior to approval of the plans and information required by paragraphs (a) and (b) of this section, the cognizant OCMI may require any additional plans and information, manufacturers' certifications of construction, testing including reasonable destructive testing, and inspections, which the OCMI determines are necessary to verify that the vessel com-

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plies with the requirements of this subchapter.

[CGD 85-080, 61 FR 961, Jan. 10, 1996, as amended by USCG-2004-18884, 69 FR 58351, Sept. 30, 2004; USCG-2007-29018, 72 FR 53968, Sept. 21, 2007; USCG-2009-0702, 74 FR 49240, Sept. 25, 2009; USCG-2013-0671, 78 FR 60164, Sept. 30, 2013]

§ 177.210 Plans for sister vessels.

(a) Plans are not required for a vessel that is a sister vessel, provided:

(1) Approved plans for the original vessel are on file at the Marine Safety Center or in the files of the cognizant OCMI;

(2) The owner of the plans authorizes their use for the new construction of the sister vessel;

(3) The regulations used for the original plan approval have not changed since the original approval; and

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

(b) If approved plans for the original vessel are not on file at the MSC or with the cognizant OCMI, the vessel owner shall submit plans as described in § 177.202 of this part.

Subpart C—Hull Structure

§ 177.300 Structural design.

Except as otherwise allowed by this subpart, a vessel must comply with the structural design requirements of one of the standards listed below for the hull material of the vessel.

(a) Wooden hull vessels: Lloyd's Yachts and Small Craft (incorporated by reference, see 46 CFR 175.600);

(b) Steel hull vessels:

(1) Lloyd's Yachts and Small Craft; or

(2) ABS Steel Vessel Rules (<61 Meters)(incorporated by reference, see 46 CFR 175.600);

(c) Fiber reinforced plastic vessels:

(1) Lloyd's Yachts and Small Craft;

(2) ABS Plastic Vessel Rules (incorporated by reference, see 46 CFR 175.600); or

(3) ABS High Speed Craft (incorporated by reference, see 46 CFR 175.600);

(d) Aluminum hull vessels:

(1) Lloyd's Yachts and Small Craft; or

(i) For a vessel of more than 30.5 meters (100 feet) in length: ABS Aluminum Vessel Rules (incorporated by reference, see 46 CFR 175.600); or

(ii) For a vessel of not more than 30.5 meters (100 feet) in length: ABS Steel Vessel Rules (<61 Meters), with the appropriate conversions from the ABS Aluminum Vessel Rules; or
(2) ABS High Speed Craft;

(e) Steel hull vessels operating in protected waters: ABS Steel Vessel Rules (Rivers/Intracoastal) (incorporated by reference, see 46 CFR 175.600).

[USCG-2003-16630, 73 FR 65205, Oct. 31, 2008]

§ 177.310 Satisfactory service as a design basis.

When scantlings for the hull, deckhouse, and frames of the vessel differ from those specified by the standards listed in § 177.300 of this part, and the owner can demonstrate that the vessel, or another vessel approximating the same size, power, and displacement, has been built to such scantlings and has been in satisfactory service insofar as structural adequacy is concerned for a period of at least 5 years, such scantlings may be approved by the cognizant OCMI instead of the scantlings required by the applicable standards specified in § 177.300 of this part.

§ 177.315 Vessels of not more than 19.8 meters (65 feet) in length carrying not more than 12 passengers.

The scantlings for a vessel of not more than 19.8 meters (65 feet) in length carrying not more than 12 passengers that do not meet the standards in § 177.300 or § 177.310 may be approved by the cognizant OCMI if the builder of the vessel establishes to the satisfaction of the OCMI that the design and construction of the vessel is adequate for the intended service.

§ 177.330 Sailing vessels.

The design, materials, and construction of masts, posts, yards, booms, bowsprits, and standing rigging on a sailing vessel must be suitable for the intended service. The hull structure must be adequately reinforced to ensure sufficient strength and resistance to plate buckling. The cognizant OCMI may require the owner to submit de-

tailed calculations on the strength of the mast, post, yards, booms, bowsprits, and standing rigging to the Marine Safety Center for evaluation.

§ 177.340 Alternate design considerations.

When the structure of vessel is of novel design, unusual form, or special materials, which cannot be reviewed or approved in accordance with § 177.300, § 177.310 or § 177.315, the structure may be approved by the Commanding Officer, Marine Safety Center, when it can be shown by systematic analysis based on engineering principles that the structure provides adequate safety and strength. The owner shall submit detailed plans, material component specifications, and design criteria, including the expected operating environment, resulting loads on the vessel, and design limitations for such vessel, to the Marine Safety Center.

Subpart D—Fire Protection

§ 177.405 General arrangement and outfitting.

(a) *Fire hazards to be minimized.* The general construction of the vessel must be such as to minimize fire hazards insofar as it is reasonable and practicable.

(b) *Combustibles insulated from heated surfaces.* Internal combustion engine exhausts, boiler and galley uptakes, and similar sources of ignition must be kept clear of and suitably insulated from combustible material. Dry exhaust systems for internal combustion engines on wooden or fiber reinforced plastic vessels must be installed in accordance with ABYC P-1 (incorporated by reference, see 46 CFR 175.600).

(c) *Separation of machinery and fuel tank spaces from accommodation spaces.* Machinery and fuel tank spaces must be separated from accommodation spaces by boundaries that prevent the passage of vapors.

(d) *Paint and flammable liquid lockers.* Paint and flammable liquid lockers must be constructed of steel or equivalent material, or wholly lined with steel or equivalent material.

(e) *Vapor barriers.* Vapor barriers must be provided where insulation of