(3) Fire load calculations of accommodations and service spaces, if required in §116.427 of this part;

(4) Emergency evacuation plan required in §116.520, of this part with drawings showing embarkation stations, areas of refuge, and escape routes;

(5) Machinery installation, including but not limited to:

(i) Propulsion and propulsion control, including shaft details;

(ii) Steering and steering control, including rudder details;

(iii) Ventilation diagrams; and

(iv) Engine exhaust diagram;

(6) Electrical installation including, but not limited to:

(i) Elementary one-line diagram of the power system;

(ii) Cable lists;

(iii) Bills of materials;

(iv) Type and size of generators and prime movers;

(v) Type and size of generator cables, bus-tie cables, feeders, and branch circuit cables;

(vi) Power, lighting, and interior communication panelboards with number of circuits and rating of energy consuming devices;

(vii) Type and capacity of storage batteries;

(viii) Rating of circuit breakers and switches, interrupting capacity of circuit breakers, and rating and setting of overcurrent devices;

(ix) Electrical plant load analysis; and

(x) For a vessel of more than 19.8 meters (65 feet) in length with overnight accommodations for more than 49 passengers, an overcurrent protective device coordination analysis if the information required by paragraph (a)(8)(i) through (a)(8)(ix) of this section is not considered adequate by the Commanding Officer, Marine Safety Center to review the electrical system of the vessel;

(7) Lifesaving equipment locations and installation;

(8) Fire protection equipment installation including, but not limited to:

(i) Fire main system plans and calculations;

(ii) Fixed gas fire extinguishing system plans and calculations;

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

(iv) Sprinkler system diagram and calculations; and

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

(9) Fuel tanks;

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

(11) Hull penetrations and shell connections;

(12) Marine sanitation device model number, approval number, connecting wiring and piping:

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

(14) 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, 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 complies with the requirements of this subchapter.

[CGD 85–080, 61 FR 900, Jan. 10, 1996; 61 FR 24464, May 15, 1996]

§116.210 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 original vessel are not on file at the Marine Safety Center (MSC) or with the cognizant OCMI, the vessel owner shall submit plans as described in §116.202 of this part.

Subpart C—Hull Structure

§ 116.300 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) Steel hull vessels:

(1) Rules and Regulations for the Classification of Yachts and Small Craft, Lloyd's Register of Shipping (Lloyd's); or

(2) Rules for Building and Classing Steel Vessels Under 61 Meters (200 Feet) in Length, American Bureau of Shipping (ABS);

(b) Aluminum hull vessels:

(1) Rules and Regulations for the Classification of Yachts and Small Craft, Lloyd's; or

(i) For a vessel of more than 30.5 meters (100 feet) in length—Rules for Building and Classing Aluminum Vessels, ABS; or

(ii) For a vessel of not more than 30.5 meters (100 feet) in length—Rules for Building and Classing Steel Vessels Under 61 Meters (200 Feet) in Length, ABS, with the appropriate conversions from the ABS Rules for Building and Classing Aluminum Vessels; or

(2) ABS Guide for High Speed Craft.

(c) Steel hull vessels operating in protected waters—Rules for Building and Classing Steel Vessels for Service on Rivers and Intracoastal Waterways, ABS.

[CGD 85–080, 61 FR 900, Jan. 10, 1996, as amended at 62 FR 51348, Sept. 30, 1997]

§ 116.330 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 detailed calculations on the strength of the mast, post, yards, booms, bowsprits, and standing rigging.

[CGD 85–080, 61 FR 900, Jan. 10, 1996; 61 FR 20556, May 7, 1996]

§ 116.340 Alternate design considerations.

The Commanding Officer, Marine Safety Center, may approve the structure of a vessel of novel design, unusual form, or special materials, which does not meet the requirements of §116.300, if it is shown by systematic analysis based on engineering principles that the vessel structure provides adequate safety and strength. An owner seeking approval of an alternate design 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 a vessel, to the Marine Safety Center.

Subpart D—Fire Protection

§ 116.400 Application.

(a) This subpart applies to:

(1) Vessels carrying more than 150 passengers; or

(2) Vessels with overnight accommodations for more than 49 passengers but not more than 150 passengers.

(b) A vessel with overnight accommodations for more than 150 passengers must comply with §72.05 in subchapter H of this chapter.

§ 116.405 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) *Combustible materials to be limited.* Limited amounts of combustible materials such as wiring insulation, pipe hanger linings, nonmetallic (plastic) pipe, and cable ties are permitted in concealed spaces except as otherwise prohibited by this subpart.

(c) *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.