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

(b) Steel hull vessels:

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

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

(c) Fiber reinforced plastic vessels:

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

(2) Rules for Building and Classing Reinforced Plastic Vessels, ABS; or

(3) ABS Guide for High Speed Craft;

(d) 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;

(e) 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 961, Jan. 10, 1996, as amended at 62 FR 51356, Sept. 30, 1997]

§ 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 detailed 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.