

§ 32.59-1

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risk of fire. This is not intended to preclude the use of other material for nosing, walking surfaces, etc., over the steel.

(6) Except for washrooms and toilet spaces, deck coverings within accommodation spaces shall be of an approved type. However, overlays for leveling or finishing purposes which do not meet the requirements for an approved deck covering may be used in thicknesses not exceeding $\frac{3}{8}$ of an inch.

(7) Except as provided in paragraph (d)(7-a) of this section, ceilings, linings, and insulation, including pipe and duct laggings, must be made of approved incombustible material.

(7-a) Combustible insulations and vapor barriers that have a maximum extent of burning of 122 millimeters (5 inches) or less when tested in accordance with ASTM D 4986, "Standard Test Method for Horizontal Burning Characteristics of Cellular Polymeric Materials" (incorporated by reference, see § 32.01-1), may be used within refrigerated compartments.

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

(9) Bulkheads, linings and ceilings may have a combustible veneer within a room not to exceed 2 millimeters (.079 inch) in thickness. However, combustible veneers, trim, decorations, etc., shall not be used in corridors or hidden spaces. This is not intended to preclude the use of an approved interior finish or a reasonable number of coats of paint.

(e) Wood hatch covers may be used between cargo spaces or between stores spaces. Hatch covers in other locations shall be of steel or equivalent metal construction. Tonnage openings shall be closed by means of steel plates or equivalent metal construction.

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

[CGFR 65-50, 30 FR 16671, Dec. 30, 1965, as amended by CGFR 66-33, 31 FR 15268, Dec. 6, 1966; CGFR 67-90, 33 FR 1015, Jan. 26, 1968; CGD 74-127, 41 FR 3845, Jan. 26, 1976; CGD 95-028, 62 FR 51198, Sept. 30, 1997; USCG-1998-4442, 63 FR 52190, Sept. 30, 1998; USCG-1999-5151, 64 FR 67177, Dec. 1, 1999]

Subpart 32.59—Minimum Longitudinal Strength and Plating Thickness Requirements for Unclassed Tank Vessels That Carry Certain Oil Cargoes—TB/ALL

§ 32.59-1 Minimum section modulus and plating thickness requirements—TB/ALL.

(a) As used in this section, *Rule* means the current Rules of the American Bureau of Shipping or other recognized classification society, as appropriate for the vessel's present service and regardless of the year the vessel was constructed.

(b) The requirements of this section apply to all in-service, unclassified tank vessels certificated to carry a pollution category I oil cargo listed in 46 CFR Table 30.25-1.

(c) For all vessels except those limited on their Certificate of Inspection to river routes only, the minimum midship section modulus must be—

(1) At least 90 percent of that required by Rule; or

(2) Where there is no specific Rule requirement, at least 100 percent of that which is necessary to meet the bending moment developed under a full load condition in still water, using a permissible bending stress of 12.74 kN/cm² (1.30 t/cm², 8.25 Ltf/in²).

(d) Within the 40-percent midship length, the average flange and web thicknesses of each longitudinal stiffener must be as follows:

(1) For deck and bottom stiffeners: at least 85 percent of Rule thickness, unless a buckling analysis demonstrates that lesser thicknesses can be safely tolerated. However, the average thickness must never be less than 80 percent of Rule thickness; and

(2) For side stiffeners: at least 75 percent of Rule thickness.

(e) Within the 40-percent midship length, the average thickness for longitudinal strength plating must be at least as follows:

(1) Weather deck: 75 percent of Rule thickness;

(2) Hatch: 70 percent of Rule thickness;

(3) Trunk: 75 percent of Rule thickness;

- (4) Sheer strake: 75 percent of Rule thickness;
- (5) Outer sideshell: 75 percent of Rule thickness;
- (6) Inner sideshell: 75 percent of Rule thickness;
- (7) Outer bottom: 75 percent of Rule thickness;
- (8) Inner bottom: 70 percent of Rule thickness;
- (9) Keel: 75 percent of Rule thickness;
- (10) Bulkheads: 75 percent of Rule thickness.

[CGD 91-209, 58 FR 52602, Oct. 8, 1993]

Subpart 32.60—Hull Requirements for Tank Vessels Constructed On or After July 1, 1951

NOTE: Requirements for double hull construction for vessels carrying oil, as defined in 33 CFR 157.03, in bulk as cargo are found in 33 CFR 157.10d.

§ 32.60-1 Scantlings, material, and workmanship—TB/ALL.

(a) All tank vessels, the construction or conversion of which is started on or after July 1, 1951, shall conform to the requirements in this subpart in construction of hulls. The hull and deck-houses shall be of steel or iron construction except that the pilothouse and decks over quarters may be constructed of wood. Scantlings, material, and workmanship, subdivision of cargo spaces, fitting of cofferdams, and testing of tanks shall be at least equivalent to the requirements of the American Bureau of Shipping or other recognized classification society.

(b) See subpart 32.57 for structural fire protection requirements for tank vessels contracted for on or after January 1, 1963.

§ 32.60-5 Subdivision of cargo space—TB/ALL.

The cargo space shall be divided into tight compartments as necessary to avoid excessive stresses and to provide stability.

§ 32.60-10 Segregation of cargo; Grade A, B, C, or D—TB/ALL.

(a) *General.* The galleys, living quarters, navigation spaces, general cargo spaces, boiler rooms, and enclosed spaces where sources of vapor ignition

are normally present, shall be segregated from cargo tanks by cofferdams or pump rooms or tanks, either empty or used to carry liquid having a flashpoint of 150 °F. or above, or deck spaces enclosed or open.

(b) *Cargo tank spaces.* Cargo tank spaces shall extend to the main deck, with hatches and vents located on the weather deck. Liquids having a flashpoint of not less than 150 °F. may be carried in the bulk tanks located beyond the segregating cofferdams and/or pump rooms.

(c) *Enclosed spaces.* (1) Cargo and vent piping passing through enclosed spaces immediately above the bulk cargo tanks shall be continuous except that flanged joints connecting pipe sections will be permitted.

(2) No openings to cargo tank shall be permitted other than stuffing boxes through which valve control rods or permanently installed gage tapes extend and openings for use of tank cleaning machines. Openings for tank cleaning machines, when not in use, shall be kept closed by means of gastight bolted plates and when in use shall be made essentially gas and watertight by covers through which hose or pipe to the tank cleaning machines extend.

(3) The overhead in way of quarters shall be gastight.

(d) *Stowage spaces.* The spaces described in paragraph (c) of this section may be used for stowage purposes and for general cargo provided that adequate ventilation is furnished.

(e) *Openings.* (1) Except as provided in paragraph (c) of this section, there shall be no manholes or other openings from cargo tanks to any other enclosed spaces. An exception may be made to allow direct access from cargo tanks to innerbottoms through gas tight bolted manholes, provided:

(i) The innerbottom tanks are voids or ballast tanks only, and

(ii) The innerbottom tanks are protected from sources of ignition similar to the cargo tanks, and any bilge or ballast pumping system serving the innerbottom tanks are treated like cargo pumping systems.

(2) Any vents, sounding tubes, and similar piping passing through such tanks shall be run in a suitable trunk;