

§ 45.33

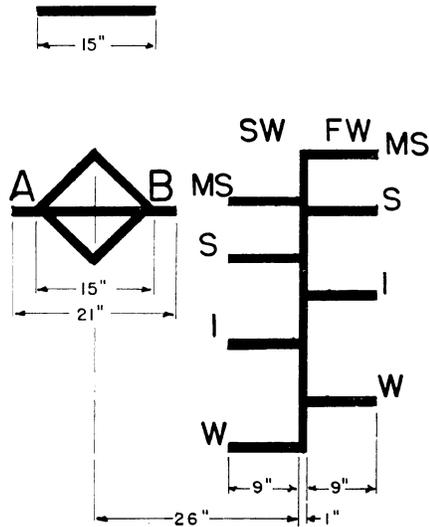
§ 45.33 Diamond.

(a) Each vessel must be marked with the diamond mark described in figure 2 of § 45.35 amidships below the upper edge of the deck line on each side with the center of the loadline mark at a distance below the deck line equal to the summer freeboard assigned under this part.

(b) The width of each line in the loadline mark must be 1 inch.

§ 45.35 Seasonal load lines.

Each vessel must have the summer (S), midsummer (MS), intermediate (I), and winter (W) loadlines for fresh water freeboards calculated under §§ 45.71 through 45.75 marked in accordance with § 45.39.



§ 45.37 Salt water load lines.

Each vessel that operates in the salt water of the St. Lawrence River must—

(a) Be marked with the summer (S), midsummer (MS), intermediate (I) and winter (W) load line marks under § 45.77 for salt water; and

(b) Be marked with the letters “FW” above the fresh water marks and the letters “SW” above the salt water marks as described in figure 2.

§ 45.39 Marking.

(a) The diamond, lines, and letters must be painted in white or yellow on

a dark ground or in black on a light ground and permanently marked on the sides of the vessel.

(b) The upper edge of the line that passes through the center of the diamond must indicate summer freeboard assigned under § 45.53.

(c) Unless otherwise authorized the seasonal load lines must be horizontal lines extending forward of, and at right angles to, a vertical line marked at a distance 26 inches forward of the vertical centerline of the diamond as described in figure 2.

(d) The salt water load lines must be horizontal lines extending abaft the vertical line required by paragraph (b) of this section as described in figure 2.

(e) The upper edge of each seasonal and salt water load line mark must indicate the minimum freeboard for that mark.

(f) When two freeboards assigned under this part differ by 2 inches or less, the line for the lesser freeboard must be omitted and the line for the greater freeboard must be identified with the seasonal letters for both freeboards.

(g) Seasonal freeboards that are limited by a summer freeboard assigned under § 45.53(c) must not be marked but the identifying letter must be marked adjacent to the summer mark.

(h) The identity of the authority that assigns the freeboard must be indicated alongside the load line diamond above the horizontal line that passes through the center of the diamond with two initials approximately 4½ inches high and 3 inches wide.

Subpart C—Freeboards

§ 45.51 Types of ships.

(a) For the purpose of this subpart, a type A vessel has—

- (1) No cargo ports or similar sideshell openings below the freeboard deck;
- (2) Only small freeboard deck openings fitted with watertight gasketed hatch covers of steel;
- (3) No dimension of a freeboard deck cargo opening greater than 6 feet and the total area not exceeding 18 ft²; and
- (4) No more than two freeboard deck cargo openings to a single cargo space.

(b) For the purposes of this subpart a type B vessel is a vessel that does not

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meet the requirements in paragraph (a) of this section.

§ 45.53 Summer freeboard.

(a) Except as required in paragraph (c) of this section, the minimum freeboard in summer for a type A vessel is F in the following formula modified by the corrections in this subpart:

$$F \text{ (inches)} = 10.2 \times P_1 \times D$$

where P_1 is defined in § 45.55 and D is the depth for freeboard in feet.

(b) Except as required in paragraph (c) of this section, the minimum freeboard in summer for a type B vessel is F in the formula modified by the corrections in this subpart:

$$F \text{ (inches)} = 12 \times P_1 \times D$$

where P_1 is defined by § 45.55 and D is the depth for freeboard in feet.

(c) Seasonal freeboards assigned under §§ 45.71 through 45.75 must be calculated on the basis of the summer freeboard calculated under paragraph (a) or (b) of this section.

(d) If a minimum freeboard is required for a vessel under this part which is greater than that required by paragraph (a) or (b) of this section because of scantling or subdivision requirements, the summer freeboard and the seasonal freeboards assigned under this subpart must be no less than that minimum freeboard, except the midsummer seasonal freeboard may be calculated on the basis of the summer freeboard assigned under this paragraph.

(e) If a greater than the calculated minimum freeboard is requested by the applicant for the load line certificate, that greater freeboard may be assigned as the summer freeboard and—

(1) The intermediate and winter seasonal freeboards assigned must be calculated under paragraph (a) or (b) of this section; and

(2) The midsummer seasonal freeboard must be calculated on the basis of the summer freeboard assigned under this paragraph.

§ 45.55 Freeboard coefficient.

(a) For ships less than 350 feet in length (L), the freeboard coefficient is P_1 in the formula:

$$P_1 = P + A[(L/D) - (L/D_s)]$$

where P is a factor, which is a function of the length from table 1 and “ A ” is a coefficient, which is a function of length (L), from table 2; L/D is the ratio of the length (L) to the depth for freeboard (D); L/D_s is the ratio of the length (L) to a standard depth (D_s) from table 3.

D is not to be used as less than that which will give a ratio of L to D that is:

(a) More than 15 when $L=400$ feet or less, or

(b) More than 21 when $L=700$ feet or more, with the ratio for intermediate lengths being calculated proportionately.

(b) For ships 350 feet or more in length (L), the coefficient “ A ” is zero and the formula is:

$$P_1 = P$$

where P is a factor, which is a function of length from table (1).

§ 45.57 Correction: Position of deckline.

(a) Where the depth to the upper edge of the deckline is greater or less than D , the difference between the depths must be added to or deducted from the freeboard.

(b) When the Commandant or the approved assigning authority approves a location for the deckline that is above or below the freeboard deck, the minimum summer freeboard must be corrected by—

(1) Adding the difference between the depth and D if the depth is greater than D ; and

(2) Subtracting the difference between the depth and D , if the depth is less than D .

(c) Except for the adjustment allowed in paragraph (b) of this section, no freeboard of less than 2 in. may be assigned.

§ 45.58 Correction: Short superstructure.

The minimum freeboard in summer for a type B vessel that is 79 ft. or more but less than 500 ft. in length and has enclosed superstructures with an effective length of 25 percent or less of the length of the vessel must be increased by—

$$0.03 (500 - L) (0.25 - E/L) \text{ inches}$$

where:

(L)=length of vessel in feet;