

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 mid-summer 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;

( $E$ )=effective length of superstructure in feet as defined in §45.59.

#### § 45.59 Definitions for superstructure corrections.

For the purpose of §§45.58 through 45.61—

(a) The standard height of a superstructure ( $H^s$ ) other than a raised quarter deck and the standard height of a trunk ( $H^t$ ) is determined by the formula: