

**§ 42.20-25**

up to 35 percent of the length of the vessel shall be increased by:

$$0.09 (328 - L) [0.35 - (E/L)] \text{ inches}$$

where:

$L$ =length of vessel in feet.

$E$ =effective length of superstructure in feet as defined in § 42.20-50.

[CGFR 68-60, 33 FR 10064, July 12, 1968]

**§ 42.20-25 Correction for block coefficient.**

If the block coefficient ( $C_b$ ) exceeds 0.68, the tabular freeboard specified in § 42.20-15 as modified, if applicable, by §§ 42.20-5 (b) and (d), and 42.20-20(a) must be multiplied by the factor  $(C_b+0.68)/1.36$ .

[CGD 79-153, 48 FR 38650, Aug. 25, 1983]

**§ 42.20-30 Correction for depth.**

(a) Where  $D$  exceeds  $L/15$  the freeboard shall be increased by  $[D - (L/15)] R$  inches, where  $R$  is  $L/131.2$  at lengths less than 393.6 feet and 3 at 393.6 feet length and above.

(b) Where  $D$  is less than  $L/15$  no reduction shall be made except in a vessel with an enclosed superstructure covering at least  $0.6L$  amidships, with a complete trunk, or combination of detached enclosed superstructures and trunks which extend all fore and aft, where the freeboard shall be reduced at the rate prescribed in paragraph (a) of this section.

(c) Where the height of superstructure or trunk is less than the standard height, the reduction shall be in the ratio of the actual to the standard height as defined in § 42.20-40.

[CGFR 68-60, 33 FR 10064, July 12, 1968]

**§ 42.20-35 Correction for position of deck line.**

(a) Where the actual depth to the upper edge of the deck line is greater or less than  $D$ , the difference between the depths shall be added to or deducted from the freeboard.

[CGFR 68-60, 33 FR 10065, July 12, 1968]

**§ 42.20-40 Standard height of superstructure.**

(a) The standard height of a superstructure shall be as given in Table 42.20-40(a):

TABLE 42.20-40(A) STANDARD HEIGHTS (IN FEET)<sup>1</sup>

Length (L) (in feet)	Raised quarter deck	All other superstructures
98.5 or less .....	3.0	5.9
246 .....	3.9	5.9
410 or more .....	5.9	7.5

<sup>1</sup>The standard heights at intermediate lengths of the vessel shall be obtained by linear interpolation.

[CGFR 68-60, 33 FR 10065, July 12, 1968, as amended by CGFR 68-126, 34 FR 9015, June 5, 1969]

**§ 42.20-45 Length of superstructure.**

(a) Except as provided in paragraph (b) of this section, the length of a superstructure ( $S$ ) shall be the mean length of the parts of the superstructure which lie within the length ( $L$ ).

(b) Where the end bulkhead of an enclosed superstructure extends in a fair convex curve beyond its intersection with the superstructure sides, the length of the superstructure may be increased on the basis of an equivalent plane bulkhead. This increase shall be two-thirds of the fore and aft extent of curvature. The maximum curvature which may be taken into account in determining this increase is one-half the breadth of the superstructure at the point of intersection of the curved end of the superstructure with its side.

[CGFR 68-60, 33 FR 10065, July 12, 1968, as amended by CGFR 68-126, 34 FR 9015, June 5, 1969]

**§ 42.20-50 Effective length of superstructure.**

(a) Except as provided for in paragraph (b) of this section the effective length ( $E$ ) of an enclosed superstructure of standard height shall be its length.

(b) In all cases where an enclosed superstructure of standard height is set in from the sides of the vessel as permitted in § 42.13-15(j), the effective length shall be the length modified by the ratio of  $b/B_s$ ,

where:

- “ $b$ ” is the breadth of the superstructure at the middle of its length;
- “ $B_s$ ” is the breadth of the vessel at the middle of the length of the superstructure.

(1) Where a superstructure is set in for a part of its length, this modification shall be applied only to the set in part.

(c) Where the height of an enclosed superstructure is less than the standard height, the effective length shall be its length reduced in the ratio of the actual height to the standard height. Where the height exceeds the standard, no increase shall be made to the effective length of the superstructure.

(d) The effective length of a raised quarter deck if fitted with an intact front bulkhead, shall be its length up to a maximum of  $0.6L$ . Where the bulkhead is not intact, the raised quarter deck shall be treated as a poop of less than standard height.

(e) Superstructures which are not enclosed shall have no effective length.

[CGFR 68-60, 33 FR 10065, July 12, 1968]

**§ 42.20-55 Trunks.**

(a) A trunk or similar structure which does not extend to the sides of the vessel shall be regarded as efficient on the following conditions:

(1) The trunk is at least as strong as a superstructure;

(2) The hatchways are in the trunk deck, and the hatchway coamings and covers comply with the requirements of §§ 42.15-15 to 42.15-30, inclusive, and the width of the trunk deck stringer provides a satisfactory gangway and sufficient lateral stiffness; however, small access openings with watertight covers may be permitted in the freeboard deck;

(3) A permanent working platform fore and aft fitted with guard rails is provided by the trunk deck, or by detached trunks connected to superstructures by efficient permanent gangways;

(4) Ventilators are protected by the trunk by watertight covers or by other equivalent means;

(5) Open rails are fitted on the weather parts of the freeboard deck in way of the trunk for at least half their length;

(6) The machinery casings are protected by the trunk, by a superstructure of at least standard height, or by a deckhouse of the same height and of equivalent strength;

(7) The breadth of the trunk is at least 60 percent of the breadth of the vessel; and,

(8) Where there is no superstructure, the length of the trunk is at least  $0.6L$ .

(b) The full length of an efficient trunk reduced in the ratio of its mean breadth to  $B$  shall be its effective length.

(c) The standard height of a trunk is the standard height of a superstructure other than a raised quarter deck.

(d) Where the height of a trunk is less than the standard height, its effective length shall be reduced in the ratio of the actual to the standard height. Where the height of hatchway coamings on the trunk deck is less than that required under § 42.15-25(a), a reduction from the actual height of trunk shall be made which corresponds to the difference between the actual and required height of coaming.

[CGFR 68-60, 33 FR 10065, July 12, 1968, as amended by CGFR 68-126, 34 FR 9015, June 5, 1969]

**§ 42.20-60 Deduction for superstructures and trunks.**

(a) Where the effective length of superstructures and trunks is  $1.0L$ , the deduction from the freeboard shall be 14 inches at 79 feet length of vessel, 34 inches at 279 feet length, and 42 inches at 400 feet length and above; deductions at intermediate lengths shall be obtained by linear interpolation.

(b) Where the total effective length of superstructures and trunks is less than  $1.0L$  the deduction shall be a percentage obtained from Table 42.20-60(b)(1) or Table 42.20-60(b)(2):

TABLE 42.20-60(B)(1)—PERCENTAGE OF DEDUCTION FOR TYPE "A" VESSELS

	Total effective length of superstructures and trunks										
	0	0.1L	0.2L	0.3L	0.4L	0.5L	0.6L	0.7L	0.8L	0.9L	1.0L
Percentage of deduction for all types of superstructures <sup>1</sup> .....	0	7	14	21	31	41	52	63	75.3	87.7	100

<sup>1</sup> Percentages at intermediate lengths of superstructures and trunks shall be obtained by linear interpolation.