

§ 42.15-75

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provided in paragraphs (b) and (c) of this section, the minimum freeing port area (*A*) on each side of the vessel for each well on the freeboard deck shall be that given by the following formulae in cases where the sheer in way of the well is standard or greater than standard. The minimum area for each well on superstructure decks shall be one-half of the area given by the formulae.

(1) Where the length of bulwark (*l*) in the well is 66 feet or less  $A=7.6+0.115l$  (square feet)

(2) Where *l* exceeds 66 feet  $A=0.23l$  (square feet)

(3) *l* need in no case be taken as greater than  $0.7L$ .

(4) If the bulwark is more than 3.9 feet in average height the required area shall be increased by 0.04 square feet per foot of length of well for each foot difference in height. If the bulwark is less than 3 feet in average height, the required area may be decreased by 0.04 square feet per foot of length for each foot difference in height.

(b) In vessels with no sheer the area calculated according to paragraph (a) of this section shall be increased by 50 percent. Where the sheer is less than the standard the percentage shall be obtained by linear interpolation.

(c) Where a vessel is fitted with a trunk which does not comply with the requirements of § 42.20-55(a)(5) or where continuous or substantially continuous hatchway side coamings are fitted between detached superstructures the minimum area of the freeing port openings shall be calculated from Table 42.15-70(c):

TABLE 42.15-70(c)

Breadth of hatchway or trunk in relation to the breadth of vessel	Area of freeing ports in relation to the total area of the bulwarks
40 percent or less .....	20 percent.
75 percent or more .....	10 percent.

NOTE: The area of freeing ports at intermediate breadths shall be obtained by linear interpolation.

(d) In vessels having superstructures which are open at either or both ends, adequate provision for freeing the space within such superstructures shall be provided to the satisfaction of the assigning authority.

(e) The lower edges of the freeing ports shall be as near the deck as practicable. Two-thirds of the freeing port area required shall be provided in the half of the well nearest the lowest point of the sheer curve.

(f) All such openings in the bulwarks shall be protected by rails or bars spaced approximately 9 inches apart. If shutters are fitted to freeing ports, ample clearance shall be provided to prevent jamming. Hinges shall have pins or bearings of noncorrodible material. If shutters are fitted with securing appliances, these appliances shall be of approved construction.

[CGFR 68-60, 33 FR 10062, July 12, 1968, as amended by CGFR 68-126, 34 FR 9014, June 5, 1969]

§ 42.15-75 Protection of the crew.

(a) The strength of the deckhouses used for the accommodation of the crew shall be to the satisfaction of the assigning authority.

(b) Efficient guard rails or bulwarks must be fitted on all exposed parts of the freeboard and superstructure decks as follows:

(1) The height of the bulwarks or guard rails must be at least 39½ inches from the deck, provided that where this height would interfere with the normal operation of the vessel, a lesser height may be approved if the Commandant and the assigning authority are satisfied that adequate protection is provided.

(2) On each vessel that is initially surveyed for load line assignment after January 1, 1976, and that is exclusively engaged in towing operations, the minimum bulwark or rail height on the freeboard deck may be reduced to 30 inches provided the assigning authority is satisfied that adequate grabrails are provided around the periphery of the deckhouse.

(3) Portable rails may be used when operating conditions warrant their use.

(c) The opening below the lowest course of the guard rails shall not exceed 9 inches. The other courses shall be not more than 15 inches apart. In the case of vessels with rounded gunwales the guard rail supports shall be placed on the flat of the deck.

(d) Satisfactory means (in the form of guard rails, life lines, gangways or

underdeck passages, etc.) shall be provided for the protection of the crew in getting to and from their quarters, the machinery space and all other parts used in the necessary work of the vessel.

(e) Deck cargo carried on any vessel shall be so stowed that any opening which is in way of the cargo and which gives access to and from the crew's quarters, the machinery space and all other parts used in the necessary work of the vessel, can be properly closed and secured against the admission of water. Effective protection for the crew in the form of guard rails or life lines shall be provided above the deck cargo if there is no convenient passage on or below the deck of the vessel.

[CGFR 68-60, 33 FR 10062, July 12, 1968, as amended by CGFR 68-126, 34 FR 9014, June 5, 1969; CGD 74-164, 41 FR 1470, Jan. 8, 1976]

**§ 42.15-80 Special conditions of assignment for Type "A" vessels.**

(a) *Machinery casings.* Machinery casings on Type "A" vessels as defined in § 42.09-5(b) must be protected by an enclosed poop or bridge of at least standard height, or by a deckhouse of equal height and equivalent strength, except that machinery casings may be exposed if there are no openings giving direct access from the freeboard deck to the machinery space. A door complying with the requirements of § 42.15-10 is permitted in the machinery casing if it leads to a space or passageway which is as strongly constructed as the casing and is separated from the stairway to the engine room by a second weather-tight door of steel or equivalent material.

(b) *Gangway and access.* (1) An efficiently constructed fore and aft permanent gangway of sufficient strength shall be fitted on Type "A" vessels at the level of the superstructure deck between the poop and the midship bridge or deckhouse where fitted, or equivalent means of access shall be provided to carry out the purpose of the gangway, such as passages below deck. Elsewhere, and on Type "A" vessels without a midship bridge, arrangements to the satisfaction of the assigning authority shall be provided to safeguard the crew in reaching all parts used in the necessary work of the ship.

(2) Safe and satisfactory access from the gangway level shall be available between separates crew accommodations and also between crew accommodations and the machinery space.

(c) *Hatchways.* Exposed hatchways on the freeboard and forecastle decks or on the tops of expansion trunks on Type "A" vessels shall be provided with efficient watertight covers of steel or other equivalent material.

(d) *Freeing arrangements.* (1) Type "A" vessels with bulwarks shall have open rails fitted for at least half the length of the exposed parts of the weather deck or other effective freeing arrangements. The upper edge of the sheer strake shall be kept as low as practicable.

(2) Where superstructures are connected by trunks, open rails shall be fitted for the whole length of the exposed parts of the freeboard deck.

[CGFR 68-60, 33 FR 10063, July 12, 1968, as amended by CGFR 68-126, 34 FR 9014, June 5, 1969; CGD 79-153, 48 FR 38647, Aug. 25, 1983]

**Subpart 42.20—Freeboards**

**§ 42.20-3 Freeboard assignment: Type "A" vessels.**

(a) A Type "A" vessel is assigned a freeboard not less than that based on Table 42.20-15(a)(1) provided that the vessel meets the flooding standard in § 42.20-6.

(b) A vessel that meets the requirements of Subpart D, F, or G of Part 172 of this chapter is considered by the Coast Guard as meeting the flooding standard referenced in paragraph (a) of this section.

[CGD 79-153, 48 FR 38647, Aug. 25, 1983 as amended by CGD 79-023, 49 FR 26593, June 28, 1984]

**§ 42.20-5 Freeboard assignment: Type "B" vessels.**

(a) Each Type "B" vessel is assigned a freeboard from Table 42.20-15(b)(1) that is increased or decreased by the provisions of this section.

(b) Each Type "B" vessel that has a hatchway in position 1, must have the freeboard assigned in accordance with paragraph (a) of this section increased by the amount given in Table 42.20-5(b) unless the hatch cover complies with:

(1) Section 42.15-25(d); or