

**§ 171.012 Incorporation by reference.**

(a) Certain material is incorporated by reference into this part with the approval of the Director of the Federal Register under 5 U.S.C. 552(a) and 1 CFR part 51. To enforce any edition other than that specified in this section, the Coast Guard must publish a notice of change in the FEDERAL REGISTER and the material must be available to the public. All approved material is available for inspection at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call 202-741-6030 or go to [http://www.archives.gov/federal\\_register/code\\_of\\_federal\\_regulations/ibr\\_locations.html](http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html). It is also available for inspection at the Coast Guard Headquarters. Contact Commandant (CG-ENG-2), Attn: Naval Architecture Division, U.S. Coast Guard Stop 7509, 2703 Martin Luther King Jr. Avenue SE., Washington, DC 20593-7509. The material is also available from the source listed in paragraph (b) of this section.

(b) International Maritime Organization (IMO), Publications Section, 4 Albert Embankment, London SE1 7SR, United Kingdom, +44 (0)20 7735 7611, <http://www.imo.org/>.

(1) Resolution MSC.216(82), Amendments to the International Convention

for the Safety of Life At Sea, 1974, As Amended (IMO Res. MSC.216(82), Adopted on 8 December 2006, incorporation by reference (IBR) approved for §§171.001 and 171.080.

(2) Resolution MSC 267(85), Adoption of the International Code on Intact Stability, 2008 (2008 IS Code), Adopted on 4 December 2008, IBR approved for §171.050.

[USCG-2007-0030, 75 FR 78085, Dec. 14, 2010, as amended by USCG-0832, 77 FR 59788, Oct. 1, 2012; USCG-2013-0671, 78 FR 60163, Sept. 30, 2013]

**§ 171.015 Location of margin line.**

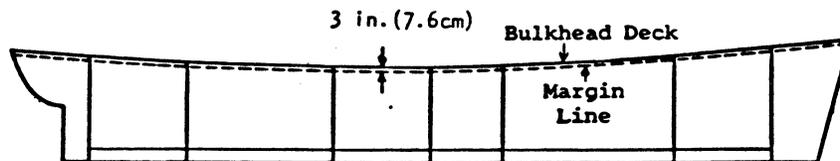
(a) A vessel with a continuous bulkhead deck and sufficient sheer. If the average value of the sheer at the forward perpendicular (FP) and the after perpendicular (AP) is at least 12 inches (30.5 cm), the margin line must be located no less than 3 inches (7.6 cm) below the upper surface of the bulkhead deck at side as illustrated in Figure 171.015(a).

TABLE 171.015

Average value of sheer at FP and AP in inches (cm)	Required position of margin line below top of deck amidships in inches (cm)
12 (30.5) .....	3 (7.6)
6 (15.2) .....	6 (15.2)
0 .....	9 (22.8)

**Figure 171.015(a)**

**Margin Line for a Vessel With a Continuous Bulkhead Deck and With an Average Value of Sheer at the FP and AP of at Least 12 Inches (30.5 cm)**



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(b) A vessel with a continuous bulkhead deck and insufficient sheer. If the average value of the sheer at the forward perpendicular (FP) and the after perpendicular (AP) is less than 12 inches (30.5 cm), the margin line must be a parabolic curve with the following characteristics:

(1) The parabolic curve must be at least 3 inches (7.6 cm) below the upper

surface of the bulkhead deck at the FP and AP.

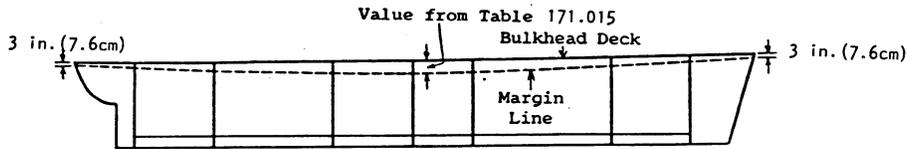
(2) The parabolic curve must be at least the distance given in Table 171.015 below the surface of the bulkhead deck amidships.

(3) Intermediate values not shown in Table 171.015 must be interpolated.

(4) Figure 171.015(b) illustrates a margin line drawn in this manner.

Figure 171.015(b)

Margin Line for a Vessel With a Continuous Bulkhead Deck and With an Average Value of Sheer at the FP and AP Less Than 12 Inches (30.5 cm)

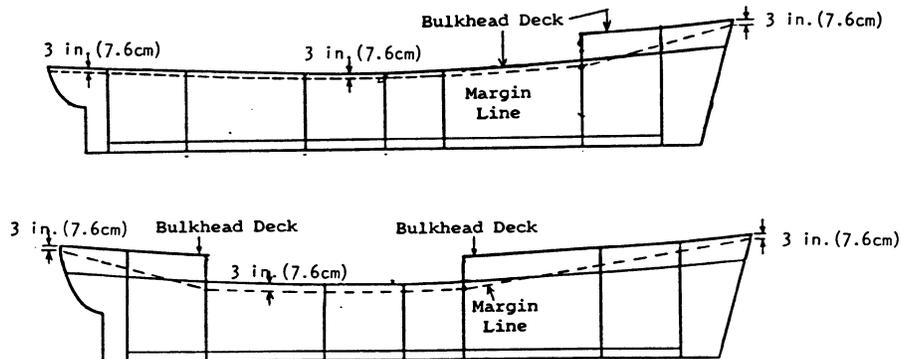


(c) A vessel with a discontinuous bulkhead deck. A continuous margin line must be drawn that is no more than 3

inches (7.6 cm) below the upper surface of the bulkhead deck at side as illustrated in Figure 171.015(c).

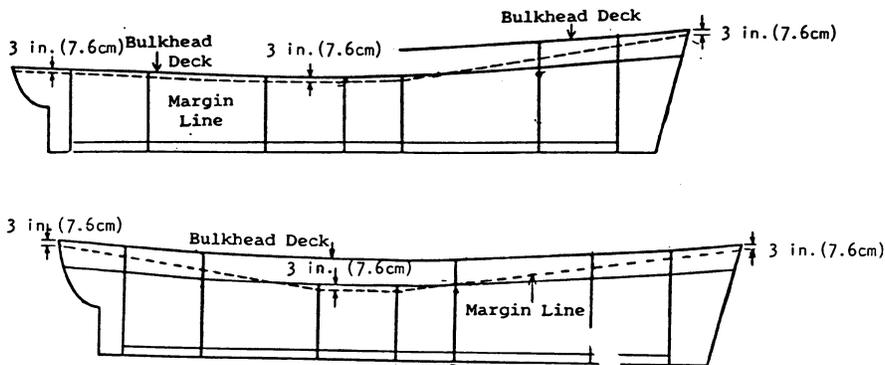
Figure 171.015(c)

Margin Line for a Vessel With a Discontinuous Bulkhead Deck



(d) A vessel with a discontinuous bulkhead deck where the side shell is carried watertight to a higher deck. A continuous margin line must be drawn as illustrated in Figure 171.015(d).

**Figure 171.015(d)**  
**Margin Line for a Vessel With a Discontinuous Bulkhead Deck and With Side Shell Watertight to a Higher Deck**



**§171.017 One and two compartment standards of flooding.**

(a) *One compartment standard of flooding.* A vessel is designed to a one compartment standard of flooding if the margin line is not submerged when the total buoyancy between each set of two adjacent main transverse watertight bulkheads is lost.

(b) *Two compartment standard of flooding.* A vessel is designed to a two compartment standard of flooding if the margin line is not submerged when the total buoyancy between each set of three adjacent main transverse watertight bulkheads is lost.

**Subpart B—Intact Stability**

**§171.045 Weight of passengers and crew.**

(a) This section applies to each vessel, regardless of when constructed.

(b) Compliance with the intact stability requirements applicable to each vessel, using a total weight of passengers and crew carried, is based upon an Assumed Average Weight per Per-

son, which is determined in accordance with §170.090 of this chapter.

[USCG-2007-0030, 75 FR 78085, Dec. 14, 2010]

**§ 171.050 Passenger heel requirements for a mechanically propelled or a non-self propelled vessel.**

(a) Each mechanically propelled or non-self propelled vessel other than a pontoon vessel must be shown by design calculations, in each condition of loading and operation, to have a metacentric height (GM) in feet (meters) of not less than the value given by the following equation:

$$GM = [(W/\Delta)(\frac{2}{3})(b)]/(\tan(T))$$

Where—

$\Delta$  = displacement of the vessel in long (metric) tons.

W = total weight in long (metric) tons of persons other than required crew, including personal effects of those persons expected to be carried on the vessel.

T = 14 degrees or the angle of heel at which the deck edge is first submerged, whichever is less; and

b = distance in feet (meters) from the centerline of the vessel to the geometric center of the passenger deck on one side of the centerline.