

## § 42.15-25

cargo and other hatchways in positions 1 and 2 shall be at least equivalent to the requirements of §§ 42.15-25 and 42.15-30.

(b) Coamings and hatchway covers to exposed hatchways on decks above the superstructure deck shall comply with the requirements of the assigning authority.

[CGFR 68-60, 33 FR 10060, July 12, 1968, as amended by CGFR 68-126, 34 FR 9014, June 5, 1969]

### § 42.15-25 Hatchways closed by portable covers and secured weathertight by tarpaulins and battening devices.

(a) *Hatchway coamings.* (1) The coamings of hatchways closed by portable covers secured weathertight by tarpaulins and battening devices shall be of substantial construction, and their height above the deck shall be at least as follows:

- (i) 23½ inches if in position 1.
- (ii) 17½ inches if in position 2.

(b) *Hatchway covers.* (1) The width of each bearing surface for hatchway covers shall be at least 2½ inches.

(2) Where covers are made of wood, the finished thickness shall be at least 2¾ inches in association with a span of not more than 4.9 feet.

(3) Where covers are made of mild steel, the strength shall be calculated with assumed loads not less than 358 pounds per square foot on hatchways in position 1, and not less than 266 pounds per square foot on hatchways in position 2, and the product of the maximum stress thus calculated and the factor 4.25 shall not exceed the minimum ultimate strength of the material. They shall be so designed as to limit the deflection to not more than 0.0028 times the span under these loads.

(4) The assumed loads on hatchways in position 1 may be reduced to 205 pounds per square foot for vessels of 79 feet in length and shall be not less than 358 pounds per square foot for vessels of 328 feet in length. The corresponding loads on hatchways in position 2 may be reduced to 154 pounds per square foot and 266 pounds per square foot respectively. In all cases values at intermediate lengths shall be obtained by linear interpolation.

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(c) *Portable beams.* (1) Where portable beams for supporting hatchway covers are made of mild steel the strength shall be calculated with assumed loads not less than 358 pounds per square foot on hatchways in position 1 and not less than 266 pounds per square foot on hatchways in position 2 and the product of the maximum stress thus calculated and the factor 5 shall not exceed the minimum ultimate strength of the material. They shall be so designed as to limit the deflection to not more than 0.0022 times the span under these loads. For vessels of not more than 328 feet in length the requirements of paragraph (b)(4) of this section are applicable.

(d) *Pontoon covers.* (1) Where pontoon covers used in place of portable beams and covers are made of mild steel the strength shall be calculated with the assumed loads given in paragraph (b)(3) of this section, and the product of the maximum stress thus calculated and the factor 5 shall not exceed the minimum ultimate strength of the material. They shall be so designed as to limit the deflection to not more than 0.0022 times the span. Mild steel plating forming the tops of covers shall be not less in thickness than 1 percent of the spacing of stiffeners or 0.24 inches if that be greater. For vessels of not more than 328 feet in length the requirements of paragraph (b)(4) of this section are applicable.

(2) The strength and stiffness of covers made of materials other than mild steel shall be equivalent to those of mild steel to the satisfaction of the assigning authority.

(e) *Carriers or sockets.* (1) Carriers or sockets for portable beams shall be of substantial construction, and shall provide means for the efficient fitting and securing of the beams. Where rolling types of beams are used, the arrangements shall ensure that the beams remain properly in position when the hatchway is closed.

(f) *Cleats.* (1) Cleats shall be set to fit the taper of the wedges. They shall be at least 2½ inches wide and spaced not more than 23½ inches center to center; the cleats along each side or end shall be not more than 6 inches from the hatch corners.

(g) *Battens and wedges.* (1) Battens and wedges shall be efficient and in good condition. Wedges shall be of tough wood or other equivalent material. They shall have a taper of not more than 1 in 6 and shall be not less than ½-inch thick at the toes.

(h) *Tarpaulins.* (1) At least two layers of tarpaulin in good condition shall be provided for each hatchway in positions 1 and 2.

(2) The tarpaulins shall be waterproof and of ample strength. They shall be of a material of at least a standard weight and quality as approved by the assigning and issuing authority.

(i) *Security of hatchway covers.* (1) For all hatchways in position 1 or 2, steel bars or other equivalent means shall be provided in order efficiently and independently to secure each section of hatchway covers after the tarpaulins are battened down. Hatchway covers of more than 4.9 feet in length shall be secured by at least two such securing appliances.

[CGFR 68-60, 33 FR 10060, July 12, 1968, as amended by CGFR 68-126, 34 FR 9014, June 5, 1969]

**§ 42.15-30 Hatchways closed by weathertight covers of steel or other equivalent material fitted with gaskets and clamping devices.**

(a) *Hatchway coamings.* At positions 1 and 2 the height above the deck of hatchway coamings fitted with weathertight hatch covers of steel or other equivalent material fitted with gaskets and clamping devices shall be as specified in § 42.15-25(a)(1). The height of these coamings may be reduced, or the coamings omitted entirely, on condition that the assigning authority is satisfied that the safety of the vessel is not thereby impaired in any sea conditions. Where coamings are provided they shall be of substantial construction.

(b) *Weathertight covers.* (1) Where weathertight covers are of mild steel the strength shall be calculated with assumed loads not less than 358 pounds per square foot on hatchways in position 1, and not less than 255 pounds per square foot on hatchways in position 2, and the product of the maximum stress thus calculated and the factor of 4.25 shall not exceed the minimum uti-

mate strength of the material. They shall be so designed as to limit the deflection to not more than 0.0028 times the span under these loads. Mild steel plating forming the tops of covers shall be not less in thickness than one percent of the spacing of stiffeners or 0.24 inches if that be greater. The provisions of § 42.15-25(b)(4) are applicable for vessels of not more than 328 feet in length.

(2) The strength and stiffness of covers made of materials other than mild steel shall be equivalent to those of mild steel to the satisfaction of the assigning authority.

(c) *Means for securing weathertightness.* (1) The means for securing and maintaining weathertightness shall be to the satisfaction of the assigning authority.

(2) The arrangements shall ensure that the tightness can be maintained in any sea conditions. For this purpose tests for tightness shall be required at the initial surveys, and may be required at periodical surveys and at annual surveys or at more frequent intervals.

[CGFR 68-60, 33 FR 10061, July 12, 1968, as amended by CGFR 68-126, 34 FR 9014, June 5, 1969]

**§ 42.15-35 Machinery space openings.**

(a) Machinery space openings in position 1 or 2 shall be properly framed and efficiently enclosed by steel casings of ample strength, and where the casings are not protected by other structures their strength shall be specifically considered. Access openings in such casings shall be fitted with doors complying with the requirements of § 42.15-10(a), the sills of which shall be at least 23½ inches above the deck if in position 1, and at least 15 inches above the deck if in position 2. Other openings in such casings shall be fitted with equivalent covers, permanently attached in their proper positions.

(b) Coamings of any fiddley, funnel, or machinery space ventilators in an exposed position on the freeboard or superstructure deck shall be as high above the deck as is reasonable and practicable. Fiddley openings shall be fitted with strong covers of steel or other equivalent material permanently