types of beams are use, 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.

§ 42.15–35 Machinery space openings.

(a) Machinery space openings in position 1 and 2 the height above the deck of hatchway coamings fitted with watertight hatch covers of steel or other equivalent material 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) Watertight covers. (1) Where watertight 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 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. Mild steel plating forming the tops of covers shall not less in thickness than one percent of the spacing of stiffeners 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 watertightness. (1) The means for securing and maintaining watertightness 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.

§ 42.15–30 Hatchways closed by weather-tight 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 weather-tight hatch covers of steel or other equivalent material fitted with gaskets and clamping devices shall be as specified in §42.15–25(a)(1).