

(5) When shifting-boards have a greater unsupported span than the above they must be supported by wood uprights or other approved means spaced with their centres at distances not greater than provided for by these figures.

(6) Wood uprights must not be less than 10 in. in width and 2 in. in thickness.

(7) Shifting-boards must be securely housed at bulkheads, and where permanent angle-bar stiffeners are not available for this purpose wood uprights must be fitted not less than 6 in. in width and 3 in. in thickness shored to requirements.

(8) Where 2½ in. or 3 in. shifting-boards are used longitudinal joints may be butt joints between uprights, care being taken to have at least 4 in. of plank supported. Where 2 in. shifting-boards are used joints must overlap by at least 9 in. between uprights.

(9) Wood uprights must be supported by steel-wire-rope stays set up at the ship's side, or else by wood shores securely heeled against the permanent structure of the ship, such as frames or stringers at the ship's side, hatch coamings, girders, pillars, &c., but not against the plating.

(10) In all ships over 50 ft. in breadth it is strongly recommended that, instead of wood shores, steel-wire-rope stays be fitted for supporting the shifting-boards.

All wood shores must be of good sound timber in a single piece.

(11) The size of the shores required is based on the area of the boards to be supported, thus :—

The length of shores may in ordinary cases be taken as equal to half the registered breadth of the vessel less one foot.

S = spacing of shores fore and aft.

D = registered depth (reduced aft by the height of tunnel above floors).

N = number of shores in depth.

$$\text{Area per shore} = \frac{S \times D}{N + 1}$$

(12) Convenient standard sizes of rectangular shores, as follows, may be taken as the minimum permissible sizes :—

Length of Shores.	Minimum Size.
Up to and not exceeding 16 ft. ..	6 × 4
Over 16 ft. and not exceeding 20 ft. ..	6 × 6
Over 20 ft. ..	8 × 6

Shores 24 ft. and over must be bridged, and no shores to be spliced.

(13) Where difficulties and delays might be experienced in procuring scantlings as above, shores of lesser scantling may be sanctioned, provided the area supported is reduced in proportion as may be prescribed by the Surveyor. Where vessels are already fitted with shores of lesser scantlings than prescribed by the above, the Surveyor may sanction the continued use of these, provided the timber is in good condition and the area supported is reduced as may be prescribed by the Surveyor and approved by the Marine Department.

(14) Vertical spacing of shores. The uppermost shore is to be within 18 in. of the top of uprights approximately in a line with the lower edge of hatch-coamings and heeled against hatch-coamings or girder; every succeeding shore is to be spaced 7 ft. apart vertically measured from the uppermost shore down, except that 8 ft. may be accepted between the lowest shore and heel support. Shores may be heeled on the permanent floors or ceilings provided that cleats or cants are used of sufficient dimensions to distribute the load over several planks.

(15) The angle between any shore and the surface to be supported must not exceed 45° from the horizontal.

(16) When shore is set at an angle exceeding 10° from the horizontal the next larger size of shore to that required by its length must be used.

(17) Uprights should be cleated to the floor or ceiling where fitted, and when the upright is not securely housed at the top the upper supporting shore should not be more than 18 in. down from the deck or top of the upright.

(18) When either the hold or 'tween decks are fitted with tiers of closely spaced pillars these may be utilized for supporting the shifting-boards, provided that they are of the approved size of deck-beam pillars.

(19) When the pillars are not reeled or staggered to support both sides of the shifting-boards, additional support must be given by hook or U clamps spaced 6 ft. apart.