

Section 18

Equipment

A. General

1. The equipment of anchors, chain cables, wires and ropes is to be determined from Table 18.2 in accordance with the equipment numeral Z_1 or Z_2 , respectively.

Note

The anchoring equipment required by this Section is intended of temporary mooring of a vessel within a harbour or sheltered area when the vessel is awaiting berth, tide, etc.

The equipment is, therefore, not designed to hold a ship off fully exposed coasts in rough weather or to stop a ship which is moving or drifting. In this condition the loads on the anchoring equipment increase to such a degree that its components may be damaged or lost owing to the high energy forces generated, particularly in large ships.

The anchoring equipment required by this Section is designed to hold a ship in good holding ground in conditions such as to avoid dragging of the anchor. In poor holding ground the holding power of the anchors will be significantly reduced.

The equipment numeral formula for anchoring equipment required under this Section is based on an assumed current speed of 2,5 m/sec, wind speed of 25 m/sec and a scope of chain cable between 6 and 10, the scope being the ratio between length of chain paid out and water depth.

It is assumed that under normal circumstances a ship will use only one bow anchor and chain cable at a time.

2. Every ship is to be equipped with at least one anchor windlass.

Windlass and chain stopper, if fitted, are to comply with Rules for Machinery Installations, Volume III, Section 14,D.

For the substructures of windlasses and chain stoppers, see Section 10, B.5.

For the location of windlasses on tankers, see Section 24, A.9.

3. For ships having the navigation Notation "L" (Coasting Service) affixed to their Character of Classification, the equipment may be determined as for one numeral range lower than required in accordance with the equipment numeral Z_1 or Z_2 , respectively.

4. When determining the equipment for ships having the navigation notation "T" (Sheltered Shallow Water Service) affixed to their Character of Classification, the provisions of Section 30, E. are to be observed.

5. When determining the equipment for tugs, Section 27, E. is to be observed.

When determining the equipment of barges and pontoons, Section 31, G. is to be observed.

6. Ships built under survey of BKI and which are to have the mark • stated in their Certificate and in the Register Book must be equipped with anchors and chain cables complying with the Rules for Materials, Volume V, and having been tested on approved machines in the presence of Surveyor.

7. For ships having three or more propellers, a reduction of the weight of the bower anchors and the chain cables may be considered.

B. Equipment Numeral

1. The equipment numeral Z_1 for anchors and chain cables is to be calculated as follows:

$$Z_1 = D^{2/3} + 2 h B + \frac{A}{10}$$

D = moulded displacement [ton] (in sea water having a density of 1,025 t/m³) to the summer load waterline

h = effective height from the summer load waterline to the top of the uppermost house

$$= a + \bullet h_i$$

a = distance [m], from the summer load water-line, amidships, to the upper deck at side

A = area [m²], in profile view of the hull, superstructures and houses, having a breadth greater than B/4, above the summer load waterline within the length L and up to the height h

• h_i = sum of height [m] of superstructures and deckhouses, measured on the centreline of each tier having a breadth greater than B/4. Deck sheer, if any, is to be ignored. For the lowest tier, "h" is to be measured at centreline from the upper deck or from a notional deck line where there is local discontinuity in the upper deck.

Where a deckhouse having a breadth greater than B/4 is located above a deckhouse having a breadth of B/4 or less, the wide house is to be included and the narrow house ignored.