
STATUTORY INSTRUMENTS

1997 No. 1509

**The Merchant Shipping (Cargo Ship
Construction) Regulations 1997**

PART III

STABILITY OF SHIPS OF 100 METRES OR OVER

Interpretation

13. In this Part—

“attained subdivision index” means the attained subdivision index of the ship calculated in accordance with regulation 15;

“subdivision length” means the greatest projected moulded length of that part of the ship at or below deck or decks limiting the vertical extent of flooding with the ship at the deepest subdivision load line;

“subdivision load line” means a waterline used in determining the subdivision of the ship;

and

“deepest subdivision load line” means the subdivision load line which corresponds to the draught corresponding to the summer load line assigned to the ship under the Merchant Shipping (Load Lines) Rules 1968.

Application

14. This Part applies to every ship of 100 metres or over in sub-division length constructed on or after 1st February 1992, except any ship which complies with—

- (a) regulation 25 of Annex 1 of MARPOL;
- (b) the International Code for the Construction and Equipment of Ships Carrying Dangerous Chemicals in Bulk;
- (c) the International Code for the Construction and Equipment of Ships Carrying Liquefied Gases in Bulk;
- (d) the Code for the Construction and Equipment of Ships Carrying Dangerous Chemicals in Bulk;
- (e) the Code for the Construction and Equipment of Ships Carrying Liquefied Gases in Bulk;
- (f) the Guidelines for the Design and Construction of Offshore Supply Vessels;
- (g) the Code for the Safety of Special Purpose Ships;
- (h) both with the damage stability requirements of regulation 27 of the International Load Line Convention 1966 as modified by IMO Resolutions A.320(IX) and 514(13) and, in the case of ships to which paragraph (9) of that regulation applies, with paragraph (12)(f) of Resolution A.320(IX); or

- (i) with enactments contained in the Merchant Shipping Act 1995 or Statutory Instruments insofar as they implement the International Convention for the Prevention of Pollution from Ships 1973/78 or the Codes listed above.

Subdivision indices

15.—(1) The attained subdivision index of every ship shall not be less than the required subdivision index of that ship.

(2) The attained subdivision index of a ship is the value “A” calculated in respect of that ship in accordance with the formula specified in paragraph 3 of Annex I in Merchant Shipping Notice No. M.1476 and the required subdivision index for a ship is the value “R” calculated in respect of that ship in accordance with the formula specified in paragraph 2 of Annex I to that Notice.

(3) In calculating “A” and “R” account shall be taken of the explanatory notes set out in Annex II to that Merchant Shipping Notice.

Stability information

16.—(1) The master of every ship shall be supplied with such reliable information as is necessary to enable him by rapid and simple means to determine the stability of the ship under varying conditions of service.

(2) That information shall include—

(a) one of the following—

(i) a curve of minimum operational metacentric height (GM) versus draught which assures compliance with the applicable intact stability requirements of Schedule 4 Part I to the Merchant Shipping (Load Lines) Rules 1968⁽¹⁾ or with the attained subdivision index of the ship, whichever is the more onerous condition or, where curves representing the requirements cross, the part of each curve which represents the more onerous requirement; or

(ii) a (corresponding) curve of the maximum allowable vertical centre of gravity (KG) versus draught; or

(iii) a tabular or equivalent presentation of either of these curves; and

(b) instructions concerning the operation of cross-flooding arrangements; and

(c) all other data and means of presentation necessary to assist the crew to maintain stability after damage.

(3) Where the curve provided or presented in compliance with paragraph (2)(a) is based wholly or in part on the attained subdivision index of the ship the operational GM(KG) values shall be applied in the manner and to the extent specified in paragraph 7 of Annex I in Merchant Shipping Notice No. M.1476.

(a) (4) (a) The information required to be supplied by this regulation shall, before it is supplied to the master, be submitted for approval to that Assigning Authority to which the information supplied in respect of the ship pursuant to rule 30 of the Merchant Shipping (Load Line) Rules 1968 is required to be submitted in accordance with paragraph (5) of that rule.

(b) In this paragraph, “Assigning Authority” has the same meaning as in the Merchant Shipping (Load Line) Rules 1968.

(5) There shall be permanently exhibited or readily available on the navigating bridge for the guidance of the officer in charge of the ship, plans showing clearly for each deck and hold the

(1) Rule 30(5) was substituted by S.I.1990/2128.

boundaries of the watertight compartments, the openings therein, the means of closure and position of any controls thereof, and the arrangements for the correction of any list due to flooding. In addition, booklets containing this information shall be made available by the owners for the use of the officers of the ship.

Openings in watertight bulkheads and internal decks

17.—(1) The number of openings in the boundaries of watertight compartments shall be the minimum compatible with the design and proper working of the ship. Where penetration of watertight bulkheads and internal decks is necessary for access, piping, ventilation, electrical cables, or for any other purpose, arrangements shall be made to maintain watertight integrity at each such point of penetration. The Certifying Authority may permit openings in compartment boundaries above the freeboard deck to be weathertight rather than watertight where it is demonstrated that any progressive flooding resulting therefrom can be easily controlled and the safety of the ship would not be impaired.

(2) Doors provided to ensure the watertight integrity of internal openings which are used while the ship is at sea shall be of the sliding watertight type and capable of being remotely closed from the bridge and capable also of being operated locally from each side of the door without the door closing automatically. Indicators shall be provided at the bridge position showing whether the doors are open or closed, and an audible alarm shall be provided when the door closes. The power for operating and controlling the doors, indicators and alarms shall be supplied from the emergency switchboard required by regulation 49. The control system shall be so designed that if the system fails, closure by hand will not be prevented or impeded. Each power-operated sliding watertight door shall be provided with an individual hand-operated opening and closing mechanism. Means shall be provided at the door itself to open and close the door safely by hand from both sides and from an accessible position above the bulkhead deck.

(3) Access doors and access hatch covers normally closed at sea and intended to ensure the watertight integrity of internal openings, shall be provided locally and on the bridge, with indicators to show whether these doors or hatch covers are open or closed. A notice shall be affixed to each such door or hatch cover stating that it is not to be left open at sea. Such doors and hatch covers shall not be used except where access is necessary and is authorised by the officer of the watch.

(4) Watertight doors or ramps of satisfactory construction may be fitted to subdivide large cargo spaces internally where the Certifying Authority is satisfied that such doors or ramps are essential. These watertight doors or ramps may be of the hinged, rolling or sliding type, but shall not be remotely controlled. They shall be closed before the voyage commences and shall be kept closed throughout the voyage. The time of opening such doors or ramps when the voyage has ended and of closing them before the voyage commences shall be entered in the log book. Any doors or ramps which may be accessible during the voyage shall be fitted with a device which prevents unauthorised opening.

(5) Every closing appliance which is required to be kept permanently closed at sea to ensure the watertight integrity of a compartment shall be provided with a notice affixed to it stating that it is to be kept closed, except that manholes secured by closely bolted covers need not be so marked.

External openings

18.—(1) All external openings which lead to compartments assumed intact for the purposes of calculating the subdivision index “A”, and which are below the final waterlines, shall be watertight.

(2) External openings required to be watertight in accordance with paragraph (1) shall be of sufficient strength and, except in the case of cargo hatch covers, shall be fitted with indicators on the bridge.

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(3) Openings in the shell plating below the deck limiting the vertical extent of damage shall be kept permanently closed while at sea. Any of these openings which may be accessible during the voyage, shall be fitted with a device which prevents unauthorised opening.

(4) Notwithstanding the requirements of paragraph (3), the Certifying Authority may authorise the opening of specific doors, at the discretion of the master, if it is satisfied that such opening is necessary for the operation of the ship and provided that the safety of the ship would not be thereby impaired.

(5) Every watertight closing appliance which is required to be permanently closed at sea to ensure the integrity of an external opening shall be provided with a notice affixed to it stating that it is to be kept closed at sea; provided that manholes secured by closely bolted covers need not be so marked.