

MERCHANT SHIPPING ACT, 2013

THE MERCHANT SHIPPING (LOAD LINE) REGULATIONS 2014

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THE MERCHANT SHIPPING (LOAD LINE) REGULATIONS, 2014

IN EXERCISE of the powers conferred on the Minister under section 35 of the Merchant Shipping Act 2013, these Regulations are made.

PART I – PRELIMINARY

1. Citation

These Regulations may be cited as the Merchant Shipping (Load Line) Regulations, 2014.

2. Interpretation

In these Regulations, unless the context otherwise requires-

"Act" means Merchant Shipping Act 2013;

"Administration" means the Gambia Maritime Administration;

"alteration" includes deterioration;

"amidships" in relation to a ship means the middle of the ship's length;

"anniversary date" in relation to a certificate means the day and the month of each year which corresponds to the date of the expiry of the certificate;

"appropriate load line" means the load line directed to be marked on a ship pursuant to regulation 5(2)(b), or in a case of a ship not surveyed under these Regulations, pursuant to an International Load Line Certificate or an International Load Line Certificate (1966) which is in force, indicating the maximum depth to which the ship may be loaded in salt water in a particular zone or area and seasonal period;

"appropriate certificate" means -

(a) in the case of a Convention-size ship, an International Load Line Certificate or an International Load Line Certificate (1966); and

(b) in the case of any other ship, a Gambian Load Line Certificate;

"appropriate marks" means the appropriate load lines, the deck-line and load line mark;

"clearance" includes transits;

"conditions of assignment" means the conditions relating to construction, arrangement and stability with which a ship must comply in order to be assigned freeboards;

"Convention Country" has the meaning given to it by section 313 of the Act;

"Convention-size" in relation to a ship, means in the case of an existing ship, of not less than 150 gross tons, ascertained in accordance with the law in force on 21st July 1968, and in the case of a new ship, of not less than 24 metres in length;

"existing ship" means a ship which is not a new ship;

"Gambia Load Line Certificate" means a certificate issued under section 312 of the Act other than an International Load Line Certificate;

"Gambia Load Line Exemption Certificate" means a certificate issued under regulation 29(1);

"exclusive surveyor" means a surveyor appointed by and working exclusively for the Administration;

"Exemption Certificate" means an International Load Line Exemption Certificate or a Gambian Load Line Exemption Certificate;

"freeboard" means the distance measured vertically downwards at amidships from the upper edge of the deck-line described in regulation 12 to the position at which the upper edge of the load line appropriate to the freeboard is to be marked;

"International Load Line Certificate" means an International Load Line Certificate issued under the 1966 Convention as amended by the 1988 Protocol;

"International Load Line Certificate (1966)" means an International Load Line Certificate issued under the 1966 Convention before the relevant entry into force date, if any;

"International Load Line Exemption Certificate" means an International Load Line Exemption Certificate issued under the 1966 Convention as amended by the 1988 Protocol;

"International Load Line Exemption Certificate (1966)" means an International Load Line Exemption Certificate issued under the 1966 Convention before the relevant entry into force date, if any;

"length" or "L" in relation to a ship means the greater of the following distances-

- (a) 96% of the total length on a waterline at 85% of the least moulded depth measured from the top of the keel, or
- (b) the length from the fore-side of the stem to the axis of the rudder stock on that water line,

where the stem contour is concave above the waterline at 85% of the least moulded depth, both the forward terminal of the total length and the fore-side of the stem respectively shall be taken at the vertical projection to that waterline of the aftermost point of the stem contour, above that waterline. In ships designed with a rake of keel the waterline on which this length is measured shall be parallel to the designed waterline;

"load line" means a mark on the ship indicating the maximum depth to which a ship may be loaded;

"material date" for the purposes of the definitions of a new and existing ship is-

- (a) in relation to a ship whose parent country is a Convention country other than The Gambia, the date on which the 1966 Convention entered into force for that country, and
- (b) in relation to any other ship, 21 July 1968;

"moulded depth" in relation to a ship means the vertical distance measured from the top of the keel to the top of the freeboard deck beam at side, except that-

- (a) in the case of a wood or composite ship, it shall be measured from the lower edge of the keel rabbet,
- (b) where the form at the lower part of the midship section of the ship is of a hollow character or where thick garboards are fitted, it shall be measured from the point where the line of the flat of the bottom continued inwards cuts the side of the keel,
- (c) in the case of a ship having rounded gunwales, it shall be measured to the point of intersection of the moulded lines of the deck and side shell plating, the lines extending as though the gunwale were of angular design, and

- (d) where the freeboard deck is stepped and the raised part of the deck extends over the point at which the moulded depth is to be determined, it shall be measured to a line of reference extending from the lower part of the deck along a line parallel to the raised part of the deck;

"Near Coastal Voyage" means voyages in the vicinity of Gambia as defined by **Schedule???**;

"new ship" means a ship whose keel is laid, or which is at a similar stage of construction, on or after the material date;

"non Gambian ship" means any ship other than a Gambian ship within the meaning of section 3 of the Act;

"parent country" in relation to a ship, means the country or territory in which the ship is registered or where the ship is not registered anywhere, it means the country or territory whose flag the ship flies;

"pleasure vessel" has the same meaning given to it by section 3 of the Act;

"rake of keel" means the inclination of the keel to a horizontal baseline;

"relevant entry into force date" means the date when the 1988 Protocol enters into force in respect of the Government of the parent country of the ship in question;

"sailing ship" means a ship designed to carry sail, whether as the sole means of propulsion, or as a supplementary means;

"surveyor" means a surveyor appointed by the Administration;

"watertight" in relation to any part of the ship, means capable of preventing the passage of water in any direction.

3. Application

These Regulations apply to Gambian ships, wherever they may be and to other ships while they are in Gambian waters, except-

- (a) ships of war;
- (b) ships solely engaged in fishing; and

- (c) pleasure vessels.

PART II - SURVEYS AND CERTIFICATES

4. Survey and Inspection of ships

- (1) A Gambian ship shall be subject to the surveys specified below-
 - (a) an initial survey before the ship is put into service, which shall include a complete inspection of its structure and equipment as required by these Regulations, and shall be such as to ensure that the arrangements, materials and scantlings comply fully with the requirements of these Regulations.
 - (b) a renewal survey at intervals not exceeding five years, except where sub regulations (2)(a), (5), (6) or (7) of regulation 26 are applicable, which shall be such as to ensure that the structure, equipment, arrangements, materials and scantlings comply fully with the requirements of these Regulations.
 - (c) an annual survey within the period of three months before or after each anniversary date of the appropriate certificate to ensure that-
 - (i) alterations have not been made to the hull or superstructures which would affect the calculations determining the position of the load line,
 - (ii) the fittings and appliances for the protection of openings, guard rails, freeing ports and means of access to crew's quarters are maintained in an effective condition,
 - (iii) the appropriate marks are correctly and permanently indicated, or
 - (iv) information is provided in accordance with regulations 24 and 25.
- (2) The owner and master shall ensure that after any of the surveys referred to in sub-regulation (1) has been completed, no material alteration is made to the ship, its structure and equipment, without the approval of the Assigning Administration.

(3) After a satisfactory annual survey referred to in sub-regulation (1)(c), the surveyor shall endorse the International Load Line Certificate, the International Load Line Certificate (1966) or, as the case may be, the Gambian Load Line Certificate accordingly.

PART III - FREEBOARDS

5. Assignment of freeboards

(1) The Administration shall assign freeboards to a Gambian ship in accordance with the requirements of these Regulations.

(2) The Administration shall-

- (a) determine the particulars of the freeboard to be assigned;
- (b) determine which of the load lines described in Part IV are to be marked on the sides of the ship in accordance with the requirements of that Part;
- (d) determine the position where the load lines, the deck-line and the load line mark are to be so marked; and
- (d) complete a copy of the record of particulars relating to the conditions of assignment.

(3) Where a passenger ship is marked with subdivision load lines, and the lowest of those lines is lower than the line which is the appropriate load line then that subdivision load line shall have effect as if it is the appropriate load line for the purposes of these Regulations.

6. Types of freeboard

(1) The freeboards that can be assigned to a ship under these Regulations are -

- (a) Summer freeboard;
- (b) Tropical freeboard;

- (c) Winter freeboard;
- (e) Winter North Atlantic freeboard; and
- (e) Fresh Water freeboard and Tropical Fresh Water freeboard;

(2) In the case of ships carrying timber, the freeboards that can be assigned to them under these Regulations are-

- (a) Summer Timber freeboard;
- (b) Winter Timber freeboard;
- (c) Winter North Atlantic Timber freeboard;
- (d) Tropical Timber freeboard;
- (e) Fresh Water Timber freeboard; and
- (f) Tropical Fresh Water Timber freeboard.

7. Determination of freeboards

The freeboards assigned to a new ship shall be determined in accordance with the provisions of the First Schedule.

8. Greater than minimum freeboards

(1) A freeboard determined in accordance with regulation 8 is the minimum freeboard that may be assigned to the ship.

(2) Subject to sub-regulation (3), the Administration may where it is satisfied that the ship complies with the requirements of these Regulations, assign freeboards, other than Timber freeboards, which exceed the minimum freeboards by such an amount as it may determine.

(3) Timber freeboards shall not be assigned to a ship to which greater than minimum freeboards have been assigned.

(4) Where a freeboard greater than the minimum is assigned to a ship and the load line appropriate to that freeboard corresponds to, or is lower than the position at which the lowest of the load lines appropriate to minimum freeboards would be marked -

- (a) load lines only appropriate to the greater than minimum Summer freeboard and Fresh Water freeboard shall be marked on the sides of the ship;
- (b) the load line appropriate to the greater than minimum Summer freeboard shall be known as the "All Seasons load line" and shall consist of the horizontal line intersecting the load line mark;
- (c) the vertical line described in regulation 14 shall be omitted; and
- (d) subject to the provisions of sub regulation (c), the Fresh Water load line shall be as described in regulation 14 (1) and be marked accordingly.

9. Special position of deck-line: correction of freeboards

Where in any ship the deck line is marked in accordance with regulation 12(3) –

- (a) the freeboards assigned to the ship shall be corrected to allow for the vertical distance by which the position of the deck-line is altered by virtue of that sub-regulation;
- (b) the reference point to which the deck-line has been so marked, and the identity of the deck which has been taken as the freeboard deck, shall be specified in the appropriate certificate issued in respect of the ship.

10. Determination of freeboard deck

The freeboard deck shall be the deck from which the freeboards assigned to the ship are calculated, being-

- (a) the uppermost complete deck exposed to weather and sea, which has permanent means of closing all openings open to the weather, and below which all openings in the sides of the ship are fitted with permanent means of watertight closing;
- (b) at the request of the owner and subject to the approval of the Administration, a deck lower than that described in sub regulation (a) above, it being a complete and permanent deck which is continuous both in fore and aft direction at least between the machinery space and the peak bulkheads of the ship, and athwartships; and

- (c) a deck which is stepped, being taken to consist for this purpose of the lowest line of the deck and the continuation of that line parallel to the upper part of the deck.

PART IV - LOAD LINES AND MARKS

11. Marking

(1) The load line directed to be marked on the ship pursuant to regulation 5(2)(b), the deckline and the load line mark shall be marked by the owner on each side of the ship in accordance with the directions of the Administration and the requirements of this Part.

(2) Where an Exemption Certificate is issued in association with the assignment of special freeboards which are less than those required by regulation 7, the ship shall be marked by the owner in accordance with regulation 18(4).

12. Deck-line

(1) The deck-line shall consist of a horizontal line 300 millimetres in length and 25 millimetres in width and shall be marked amidships on each side of the ship so as to indicate the position of the freeboard deck.

(2) Subject to sub-regulation (3), the deck-line shall be marked in such a position on the side of the ship that its upper edge passes through the point amidships where the continuation outwards of the upper surface of the freeboard deck, or of any sheathing of that deck, intersects the outer surface of the shell of the ship as shown in Figure 1.

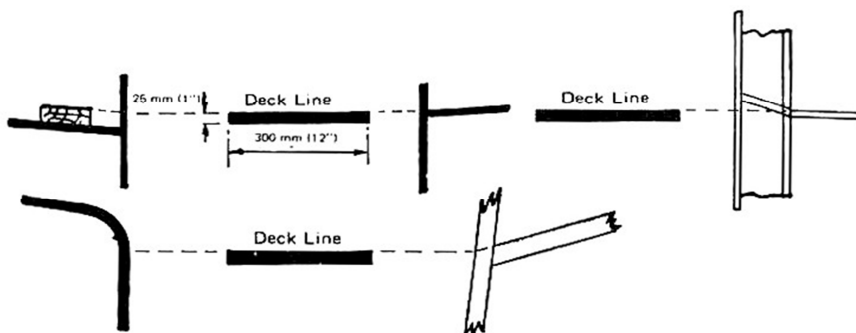


Fig. 1. Deck Line

(3) Where the design of the ship or other circumstances renders it impracticable to mark the deck-line in accordance with sub-regulation (2), the Administration may direct that it be marked by reference to another

fixed point as near as practicable to the position described in sub regulation (2).

13. Load line mark

(1) The load line mark as shown in Figure 2 shall consist of a ring 300 millimetres in outside diameter and 25 millimetres wide, intersected by a horizontal line 450 millimetres long and 25 millimetres wide the upper edge of which passes through the centre of the ring.

(2) The centre of the ring shall be marked amidships vertically below the deck-line so that, except as otherwise provided in regulation 9, the distance from the centre of the ring to the upper edge of the deck-line is equal to the Summer freeboard assigned to the ship.

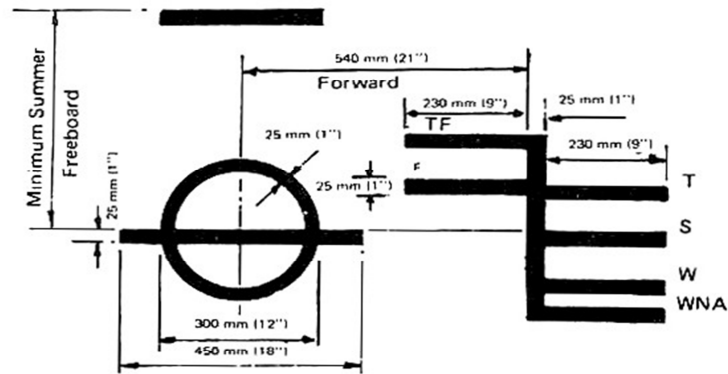


Fig. 2. Load Line Mark and lines to be used with this mark

14. Load lines

(1) Except as otherwise provided for in sub-regulation (3), the load lines shown in Figure 2 shall consist of horizontal lines of 230 millimetres in length and 25 millimetres in width, extending forward or abaft of a vertical line 25 millimetres in width marked 540 millimetres forward of the centre of the ring of the load line mark and at right angles to that line.

(2) The individual load lines shall be as follows-

- (a) the Summer load line, which shall extend forward of the said vertical line, and shall correspond horizontally with the line passing through the centre of the ring of the load line mark, and shall be marked S;
- (b) the Winter load line, which shall extend forward of the vertical line, and be marked W;
- (c) the Winter North Atlantic load line, which shall extend forward of the vertical line, and be marked WNA;

- (d) the Tropical load line, which shall extend forward of the vertical line, and be marked T;
- (e) the Fresh Water load line, which shall extend abaft the vertical line, and be marked F, and
- (f) the Tropical Fresh Water load line, which shall extend abaft the vertical line and be marked TF.

(3) The maximum depth to which a ship may be loaded in relation to a load line referred to in sub-regulation (1) shall be the depth indicated by the upper edge of the appropriate load line.

(4) In the case of a sailing ship-

- (a) the Summer load line shall consist of the line passing through the centre of the ring of the load line mark; and
- (b) the Winter North Atlantic load line and Fresh Water load line only shall be marked on the ship as shown in Figure 3.

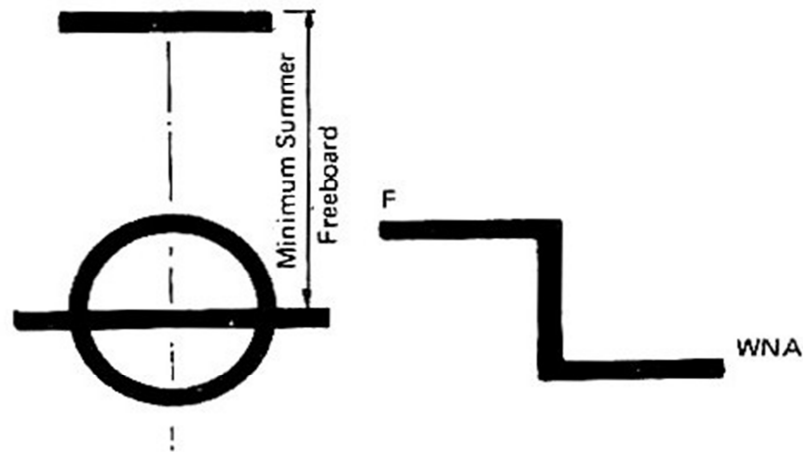


Fig.3 Load Line Mark on Sailing Ships and lines to be used with this mark

15. Timber load lines

(1) Timber load lines shall consist of horizontal lines of the dimensions specified in respect of such lines in regulation 14(1), extending abaft or forward of a vertical line 25 millimetres in width and marked 540 millimetres abaft the centre of the ring of the load line mark and at right angles to that line as shown in Figure 4.

(2) Individual Timber load lines shall be as follows-

- (a) the Summer Timber load line, which shall extend abaft the said vertical line and be marked LS;
- (b) the Winter Timber load line, which shall extend abaft the vertical line and be marked LW;
- (c) the Winter North Atlantic Timber load line, which shall extend abaft the vertical line and be marked LWNA;
- (d) the Tropical Timber load line which shall extend abaft of the vertical line and be marked LT;
- (e) the Fresh Water Timber load line, which shall extend forward of the vertical line and be marked LF; and
- (f) the Tropical Fresh Water Timber load line, which shall extend forward of the vertical line and be marked LTF;

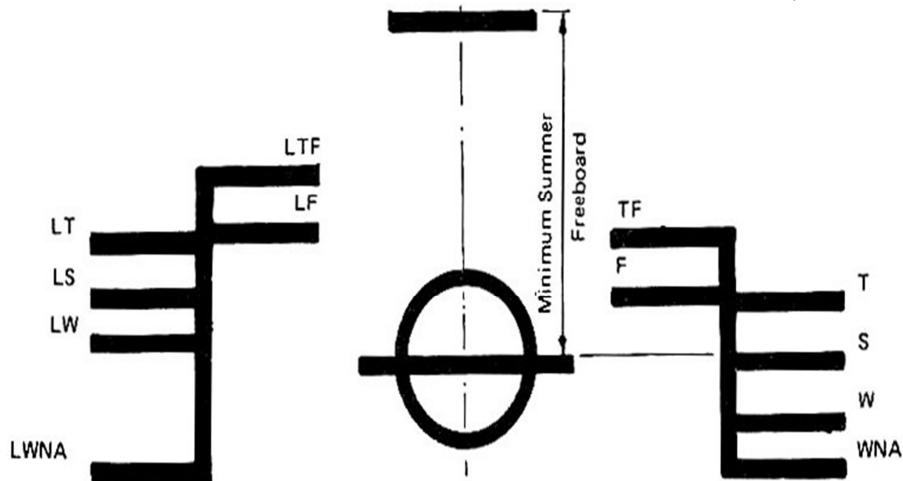


Fig.4 Timber Load Line Mark and lines to be used with this mark

(3) The maximum depth to which a ship may be loaded in relation to a Timber load line referred to in sub regulation (1) shall be the depth indicated by the upper edge of the appropriate Timber load line.

16. Appropriate load line

The appropriate load line in respect of a ship at any particular zone or area and seasonal period shall be ascertained in accordance with the provisions of the Second Schedule.

17. Position of load lines

Each load line shall be marked in such a position on each side of the ship that the distance measured vertically downwards from the upper edge of the deck-line to the upper edge of the load line is equal to the freeboard assigned to the ship which is appropriate to that load line.

18. Method of marking

(1) The appropriate marks shall be marked in such a manner as to be plainly visible.

(2) Where the sides of the ship are of metal the appropriate marks shall be cut in, centre punched or welded.

(3) Where the sides of the ship are of wood, the marks shall be cut into the planking to a depth of not less than 3 millimetres.

(4) Where the sides are of other materials to which the methods of marking described in (a) and (b) cannot effectively be applied the marks shall be permanently affixed by bonding or some other effective method.

(5) The appropriate marks shall be painted in white or yellow where the background is dark, and in black where the background is light.

(6) Where an Exemption Certificate is issued in association with the assignment of special freeboards which are less than those required by regulation 7, the load lines and the load line mark shall be marked on the ship by being painted in red on a contrasting background and shall comply with sub regulation (2).

19. Authorisation of removal, etc., of appropriate marks

After the appropriate marks have been made on a ship-

- (a) the owner and master shall keep the ship so marked; and
- (b) the marks shall not be concealed, removed, altered, defaced or obliterated except with the authority of the Administration

20. Mark of Administration

(1) The identity of the Administration may be marked alongside the load line ring either above the horizontal line which passes through the centre of the ring, or above and below it.

(2) Such a mark shall consist of not more than four initials each measuring approximately 115 millimetres in height and 75 millimetres in width.

PART V - CONDITIONS OF ASSIGNMENT

21. Requirements relevant to the assignment of freeboards

(1) Every ship to which freeboards are assigned under these Regulations shall comply with the conditions of assignment applicable to that ship and set out in the Third Schedule.

(2) Any ship which cannot comply with the conditions specified in sub regulation (1) may be required to meet such alternative conditions as may be specified by the Administration.

22. Record of particulars

(1) The record of particulars shall be provided on the ship in a form given in the Fourth Schedule.

(2) The record shall be furnished by the Administration and be retained on board at all times.

23. Compliance with conditions of assignment

(1) Except as otherwise provided for in sub-regulation (2), a ship will cease to comply with the conditions of assignment-

(a) where at any time after the assignment of freeboards, there has been any alteration of the hull, superstructures, fittings or appliances of the ship such that-

(i) a requirement applicable to the ship under regulation 21 is not complied with; or

(ii) it differs in a material respect from the record of particulars provided in accordance with regulation 22;

or

(b) where the record of particulars is not on board in accordance with regulation 22(2).

(2) A ship shall be taken to comply with the conditions of assignment notwithstanding an alteration referred to in sub-regulation (1)(a) where-

(a) amended freeboards appropriate to the condition of the ship have been assigned, the ship has been marked with these load lines and a new certificate issued to the owner of the ship accordingly; or

(b) the alteration has been inspected by a surveyor on behalf of the Administration and that the Administration is satisfied that the alteration is not such as to require any change in the freeboards assigned to the ship, and full particulars of the alteration together with the date and place of his inspection have been endorsed by the surveyor on the record referred to in regulation 22(1).

PART VI - INFORMATION FOR THE MASTER

24. Information as to the stability of ships

(1) The owner of every ship to which these Regulations apply shall provide for the guidance of the master, information relating to the stability of the ship in accordance with this regulation in the form of a book, which shall be kept on the ship at all times in the custody of the master.

(2) In the case of a Gambian ship, this information shall –

(a) include all matters specified in the Fifth Schedule;

(b) be in the form required by that Schedule; and

(c) be in accordance with the requirements of sub regulations (3), (4) and (5).

(3) Subject to sub-regulation (4), this information shall be based on the determination of stability taken from an inclining test carried out in the

presence of a surveyor appointed by the Administration or, in the case of a ship listed in Part II of Fifth Schedule, by the Administration. This information shall be amended whenever any alterations are made to the ship or changes occur to it which will materially affect this information and, where necessary, the ship shall be re-inclined.

(4) The inclining test may be dispensed with where-

(a) in the case of any ship basic stability data is available from the inclining test of a sister ship or, in the case of a ship listed in Part II of the Fifth Schedule, the Administration is satisfied that reliable stability information can be obtained from such data; and

(b) in the case of-

(i) a ship specially designed for the carriage of liquids or ore in bulk, or

(ii) of any class of such ships,

the information available in respect of similar ships shows that the ship's proportions and arrangements will ensure more than sufficient stability in all probable loading conditions.

(5) Before this information is issued to the master-

(a) where it relates to a ship which is listed in Part II of the Fifth Schedule, it shall be approved by the Administration which assigned freeboards to the ship; and

(b) where it relates to any other ship, it shall be approved by the Administration.

25. Information as to loading and ballasting of ships

(1) The owner of any ship of more than 150 metres in length specially designed for the carriage of liquids or ore in bulk shall provide, for the guidance of the master, information relating to the loading and ballasting of the ship.

(2) This information shall indicate the maximum stresses permissible for the ship and specify the manner in which the ship is to be loaded and

ballasted to avoid the creation of unacceptable stresses in its structure.

(3) In the case of a Gambian ship the provisions of regulation 24(5) shall have effect in respect of information required under this regulation, and the information so approved shall be included in the book referred to in regulation 24(1).

PART VII – CERTIFICATES

26. Duration and extension of certificates

(1) Subject to sub-regulations (2), (4), (5) and (8), the duration of any certificate issued under these Regulations shall not exceed a period of five years beginning with the date of completion of the initial or renewal survey referred to in regulation 4(1)(a) or (b) respectively.

(2) When the renewal survey referred to in regulation 4(1)(b) is completed-

(a) within three months before the expiry of the existing certificate, the new certificate shall be valid for a period beginning with the date of completion of the renewal survey and ending on a date which does not exceed five years from the expiry of the existing certificate;

(b) after the expiry of the existing certificate, the new certificate shall be valid for a period beginning with the date of completion of the renewal survey and ending on a date which does not exceed five years from the expiry of the existing certificate.

(c) is completed more than three months before the expiry of the existing certificate, the new certificate shall be valid for a period beginning with the date of completion of the renewal survey and ending on a date which does not exceed five years from the date of the completion of the renewal survey.

(3) Where a certificate is issued for a period of less than five years, the Administration may extend the validity of the certificate beyond the expiry date to the maximum period specified in sub-regulation (1), provided that the annual surveys applicable when a certificate is issued for a period of five years are carried out as appropriate.

(4) Where after the renewal survey, a new certificate cannot be issued to the ship before the expiry of the existing certificate, the Administration may extend the validity of the existing certificate for a period which shall not

exceed five months and the extension shall be endorsed on the certificate, and shall be granted only where there have been no alterations in the structure, equipment, arrangements, materials or scantlings which affect the ship's freeboard.

(5) Where, at the time when a certificate expires, a ship is not in a port in which it is to be surveyed, the Administration may extend the validity of the certificate but this extension shall be granted only where it appears proper and reasonable to the Administration to do so for the purpose of allowing the ship to complete its voyage to the port in which it is to be surveyed.

(6) No certificate shall be extended for a period longer than three months beginning with the date of expiry, and a ship to which an extension is granted shall not, on its arrival in the port in which it is to be surveyed, be entitled by virtue of such extension to leave that port without having a new certificate.

(7) When the renewal survey is completed, the new certificate shall be valid for a period ending on a date which does not exceed five years from the expiry of the previous certificate before the extension was granted.

(8) A certificate issued to a ship engaged on short voyages which has not been extended under sub-regulations (3), (4) or (5) may be extended by the Administration for a period of not more than one month beginning with the date of its expiry.

(9) When the renewal survey is completed the new certificate shall be valid for a period beginning on a date which does exceed five years from the expiry of the previous certificate before the extension was granted.

(10) In special circumstances as determined by the Administration, a new certificate need not be dated from the expiry of the previous certificate before the extension was granted, as required by sub regulations (2), (5) and (8).

(11) In these special circumstances, the new certificate shall be valid for a period ending on a date which is not more than five years from the date of completion of the renewal survey.

(12) When an annual survey is completed before the period specified in regulation 4(1)(c) then-

(a) a new anniversary date shall be endorsed on the certificate which shall not be more than three months later than the date on which the annual survey was completed;

(b) the subsequent annual survey required by regulation 4(1)(c)

- shall be completed at the intervals prescribed by that regulation using the new anniversary date; and
- (c) the expiry date of the certificate may remain unchanged provided one or more annual surveys are carried out so that the maximum intervals between the surveys prescribed by regulation 4(1)(c) are not exceeded.

27. Certificates ceasing to be valid, and surrender and cancellation of certificates

(1) An appropriate certificate issued in respect of a Gambian ship shall cease to be valid where-

- (a) material alterations have taken place in the hull or superstructures of the ship such as would necessitate the assignment of an increased freeboard;
- (b) the fittings and appliances mentioned in regulation 4(1)(c)(ii) are not maintained in an effective condition;
- (c) the certificate is not endorsed in accordance with regulation 4(3) to show that the ship has been surveyed in accordance with regulation 4(1)(c);
- (d) the structural strength of the ship is lowered to such an extent that the ship is unsafe;
- (e) a new certificate is issued in respect of the ship; or
- (f) the ship ceases to be a Gambian ship.

(2) The Administration may cancel an appropriate certificate issued in respect of a Gambian ship where it is satisfied that-

- (a) the certificate was issued based on false or erroneous information;
- (b) information on the basis of which freeboards were assigned to the ship was incorrect in a material particular; or
- (c) the ship ceases to comply with the conditions of assignment relating to it.

(3) Where the Administration proposes to cancel a certificate, it shall first

notify the owner in writing, specifying the grounds for the proposed cancellation.

(4) Subject to sub-regulation (5), the Administration shall not cancel the certificate until the owner has been given a reasonable opportunity to make representations, and the Administration has considered any such representations made.

(5) Sub-regulation (4) shall not apply where the Administration considers that urgent safety considerations so require.

(6) The Administration may direct any certificate issued under these Regulations which has expired, ceased to be valid, or been cancelled, to be surrendered.

(7) The requirement that the notification referred to in sub-regulation (3) should be in writing is satisfied where the text of the notification-

- (a) is transmitted by electronic means;
- (b) is received in legible form; and
- (c) is capable of being used for subsequent reference.

28. Notification

(1) Where an appropriate certificate or an Exemption Certificate is issued in respect of a Gambian ship, the owner and master of the ship shall ensure that it is kept legible and posted up in some conspicuous place on board the ship.

(2) Before any Gambian ship leaves any dock, wharf, harbour or other place for the purpose of proceeding to sea, the master of the ship shall ensure that a notice is posted up in some conspicuous place on board the ship, in a form and containing such particulars relating to the depth to which the ship is loaded as is specified in the Sixth Schedule.

(3) Sub-regulation (2) does not apply to ships employed on a Near Coastal Voyage.

29. Form and issue of exemption certificate

(1) A certificate issued by the Administration under section 317(1) of the Act shall be in the form prescribed in the Seventh Schedule.

(2) Except in so far as the nature or terms of any such exemption require the contrary, the ship-

- (a) shall be assigned freeboards in accordance with regulation 5;
- (b) shall be subject to surveys in accordance with regulation 4; and
- (c) regulations 4, 26 and 27 and sections 317 and 325 of the Act shall apply in relation to the Exemption Certificate as they apply in relation to an appropriate certificate.

30. Duration and termination of exemption certificates

Regulations 26 and 27 shall apply in relation to a certificate issued by the Administration under section 317 of the Act as they apply in relation to an appropriate certificate.

31. Certificates issued by Governments other than the Administration

Section 326 of the Act does not apply to a non- Gambian ship in respect of which a valid International Load Line Certificate or a valid International Load Line Exemption Certificate is produced.

32. Issue of certificate in respect of ship transferred from registry of another country to the Gambian registry

In the case of a ship that has transferred from the registry of the Government of another country to the Gambian registry, the Administration may, subject to such survey requirements as it considers necessary, issue an International Load Line Certificate for a period to be determined by the Administration, but for no longer than the period of validity of the certificate issued by or on behalf of the Government of that other country where satisfied that-

- (a) the ship has already been subjected to satisfactory initial, renewal and annual surveys as appropriate;
- (b) the condition of the ship, including its structure and equipment, have been maintained so as to comply with the requirements of the 1966 Convention applicable to the ship; and

- (c) after any of the surveys referred to in sub regulation 32(a) above have been completed, no material change has been made to the ship, including its structure and equipment, subject to such surveys, without the approval of the administration of that State.

33. Determination of freeboard deck and freeboard where valid certificate cannot be produced

For the purposes of section 317 of the Act, where a valid Convention certificate cannot be produced, the freeboard deck and the freeboard shall be determined in accordance with these Regulations and the appropriate load line shall be the maximum depth to which the ship may be loaded in salt water.

PART VIII - EQUIVALENTS, PENALTIES AND DETENTION

34. Equivalents

The Administration may -

- (a) allow any fitting, material, appliance or apparatus to be fitted in a ship, or allow other provisions to be made in a ship, in the place of any fitting, material, appliance, apparatus or provision respectively which is required under any of the provisions of these Regulations, where satisfied by trial or otherwise that it is at least as effective as that so required; or
- (b) allow in an exceptional case, departure from the requirements of any of the said provisions on condition that the freeboards to be assigned to the ship are increased to such an extent as to satisfy the Administration that the safety of the ship and protection afforded to the crew will be no less effective than would be the case where the ship fully complied with those requirements and there were no such increase of freeboards.

35. Offences and penalties in relation to certificates and surveys

(1) A person shall not-

- (a) intentionally alter a certificate referred to in these Regulations;
- (b) falsely make a certificate referred to in these Regulations;

- (c) in connection with any survey required by these Regulations, knowingly or recklessly furnish false information;
- (d) with intent to deceive, use, lend, or allow to be used by another, a certificate referred to in these Regulations; or
- (e) fail to surrender as directed a certificate required to be surrendered under regulation 27(6).

(2) A person who contravenes sub-regulation (1) commits an offence and is liable on conviction to a fine not exceeding one hundred and fifty thousand dalasis.

36. Detention

In any case where a ship is liable to be detained under section 499 of the Act, which relates to the detention of a ship, shall have effect in relation to the ship, subject to the modification that as if for the words "this Act" wherever they appear, there were substituted the words "the Merchant Shipping (Load Line) Regulations 2010".

SCHEDULES
FIRST SCHEDULE
 (regulation 7)
FREEBOARDS

1. Interpretation

1. Expressions in this Schedule have the same meanings as those assigned to them in the Third Schedule, and –

“block coefficient (C b)” means the product of –

$$\frac{\nabla}{LBd1}$$

where –

∇ is the volume of the moulded displacement of the ship, excluding bossing, where the ship has a metal shell, and of displacement to the outer surface of the hull where the ship has a shell of any other material, displacement being taken in each case at a moulded draught of d_1 ; and

d_1 is 85 per cent of the least moulded depth, provided that in no case shall the block coefficient (C_b) be taken to be less than 0.68;

“depth for freeboard (D)” means –

(a) except as otherwise stated in subparagraph (b) below, the moulded depth of the ship amidships plus the thickness of the freeboard deck stringer plate where fitted, plus, where the exposed freeboard deck is sheathed, the product of-

$$\frac{T((L) - (S))}{(L)}$$

where –

T is the mean thickness of the exposed sheathing clear of deck openings;

(b) in a ship having a rounded gunwale with a radius greater than 4 per cent of the breadth of the ship or having topsides of unusual form, the depth calculated in accordance with subparagraph (a) above, would be the depth for freeboard purposes of a ship having a midship section with vertical topsides and with the same round of beam and the same area of topside section as that of the midship section of the actual ship;

“effective length or (E)” in relation to a superstructure, means the effective length of the superstructure determined in accordance with the provisions of paragraph 9(3);

“flush deck ship” means a ship which has no superstructure on the freeboard deck;

“length (S)” in relation to a superstructure means the length of the superstructure determined in accordance with the provisions of paragraph 9(2);

“salt water” means water having a relative density of 1.025;

“Summer draught” means the draught measured from –

- (a) in the case of a wood or composite ship, the lower edge of the keel rabbet,
- (b) where the form at the lower part of the midship section is of a hollow character, or where thick garboards are fitted, the point where the line of the flat of the bottom continued inwards cuts the side of the keel, and
- (c) in any other case, the top of the keel;

to the point which, when load lines and marks have been marked on the ship’s side, will correspond to the centre of the ring of the load line mark;

“Summer Timber draught” means the draught measured from point (a),(b) or (c) described in the definition of the Summer draught to the point which when Timber load lines have been marked on the ship’s side will correspond to the upper edge of the Summer Timber load line;

“tabular freeboard” means in the case of a Type “A” ship the freeboard appropriate to the ship’s length under Freeboard Table A and, in the case of a Type “B” ship, the freeboard appropriate to the ship’s length under Freeboard Table B.

Freeboards: general

2.1 Except as otherwise provided in subparagraph 2.2, the freeboards, other than Timber freeboards, to be assigned to a ship shall be determined in accordance with the provisions of Part I, and Timber freeboards to be assigned to a ship shall be determined in accordance with Part II.

2.2 The freeboards to be assigned to –

- (a) sailing ships;
- (b) tugs;
- (c) ships of wood or of composite construction or of other materials;
- (d) ships with constructional features such as to render

freeboards determined in accordance with paragraph (a) unreasonable or impracticable; and

(e) unmanned barges having on the freeboard deck only small access openings closed by watertight gasketed covers of steel;

shall be determined in accordance with the provisions of Part III of this Schedule.

PART I – FREEBOARDS OTHER THAN TIMBER FREEBOARDS

Determination of freeboards

3.1 Subject to subparagraph 3.3, the Summer freeboard shall be determined in accordance with the provisions of paragraphs 4 to 16.

3.2 Subject to subparagraph 3.3, the Tropical freeboard shall be obtained by deducting from the Summer freeboard one forty-eighth (1/48th) of the Summer draught of the ship.

3.3 The freeboard so obtained in subparagraphs 3.1 and 3.2, but omitting any correction made in paragraph 8 for deck-line, shall be not less than 50 millimetres except in the case of a ship with hatchways in Position 1 to which paragraph 5 of the Third Schedule applies but which do not have pontoon covers, in which case it shall be not less than 150 millimetres.

3.4 The Winter freeboard shall be obtained by adding to the Summer freeboard one forty-eighth (1/48th) of the Summer draught of the ship.

3.5 The Winter North Atlantic freeboard shall be obtained by adding to the Winter freeboard a distance of 50 millimetres.

3.6.1 Subject to subparagraph 3.6.2 below, the fresh water freeboard shall be obtained by deducting from the Summer freeboard the quantity –

$$\frac{\Delta}{4T}$$

where –

Δ is the displacement in salt water in metric tons at the Summer

load waterline, and T represents metric tons per centimetre immersion in salt water at that waterline.

3.6.2 In any case in which the displacement at that waterline cannot be ascertained the deduction shall be one forty-eighth (1/48th) of the Summer draught of the ship.

Summer freeboard: Type "A" ships

4. The Summer freeboard assigned to a Type "A" ship shall be determined as follows-

- (a) There shall first be ascertained the ship's tabular freeboard from Table A;
- (b) Where the block coefficient (C_b) of the ship exceeds 0.68 the tabular freeboard shall be multiplied by the factor-
$$\frac{(C_b) + 0.68}{1.36}$$
- (c) Corrections in accordance with paragraphs 6 to 16 shall be applied to the freeboard obtained in accordance with paragraphs (a) and (b);
- (d) Subject to paragraph 3.3, the freeboard so corrected shall be the Summer freeboard assigned to the ship.

Summer freeboard: Type "B" ships

5. The Summer freeboard to be assigned to a Type "B" ship shall be determined as follows-

- 5.1 There shall first be ascertained, the ship's tabular freeboard from Table B.
- 5.2.1 Where the ship has hatchways in Position 1 the covers of which are either pontoon covers complying with the requirements of paragraph 5.4 of the Third Schedule or covers which comply with paragraph 6.2 of that Schedule, the tabular freeboard may be corrected in accordance with such of the provisions of subparagraphs 5.3 to 5.8 as are applicable to the ship.
- 5.2.2. Where the ship has hatchways in Position 1 the covers of which comply with the requirements of paragraph 5 of the Third Schedule except those of subparagraph 5.4 of that paragraph, the tabular freeboard shall be corrected in

accordance with the provisions of subparagraph 5.9.

5.3. The tabular freeboard of a ship to which subparagraph 5.2.1 applies and which exceeds 100 metres in length may be reduced by an amount not exceeding the maximum applicable under subparagraphs 5.4 and 5.5 where the Administration is satisfied that—

(a) the measures for the protection of the crew comply with the requirements of paragraph 15 of the Third Schedule;

(b) the freeing arrangements comply with the requirements of paragraph 14 of the Third Schedule;

(c) all covers of hatchways in Positions 1 and 2 comply with the requirements of paragraph 6 of the Third Schedule;

(d) in the case of a ship constructed before 8th June 2000, when the ship is loaded to the Summer load waterline it will remain afloat, after the flooding of any single damaged compartment other than the machinery space at an assumed permeability of 0.95, in the condition of equilibrium described in subparagraph 5.6 and where the length of the ship exceeds 225 metres the machinery space shall rank as a floodable compartment for the purposes of this requirement having for the purpose an assumed permeability of 0.85.

(e) in the case of a ship constructed on or after 8th June 2000 which is loaded in accordance with the initial condition of loading before flooding, the ship shall –

(i) be able to withstand the flooding of any compartment or compartments, with an assumed permeability of 0.95, consequent upon the damage assumptions specified in paragraph 5.8, and,

(ii) remain afloat in a satisfactory condition of equilibrium, as referred to in subparagraph 1.1.3.2 of the definition of a Type “A” ship in paragraph 1.1 of the Third Schedule; and where the ship is over 150 metres in length, the machinery space shall be treated for these purposes as a floodable compartment, but with a permeability of 0.85.

5.4 Subject to subparagraph 5.5 no reduction of freeboard pursuant to subparagraph 5.3 shall exceed 60 per cent of the difference between the tabular freeboards under Freeboard Table A and Freeboard Table B.

5.5 The reduction of 60 per cent referred to in subparagraph 5.4 may be increased to 100 per cent where the Administration is satisfied that –

- (a) the ship complies with the requirements of paragraphs 17 and 20 of the Third Schedule as if it were a Type “A” ship and with those of paragraph 22 of that Schedule;
- (b) the ship complies with the requirements of subparagraphs 5.3(a) to 5.3(c);
- (c) in the case of a ship constructed before 8th June 2000, when loaded to the Summer waterline the ship will remain afloat in the condition of equilibrium described in subparagraph 5.6 after the flooding –
 - (i) of any two compartments adjacent fore and aft, neither of which is the machinery space, at an assumed permeability of 0.95; and
 - (ii) in the case of a ship exceeding 225 metres in length, of the machinery space alone, at an assumed permeability of 0.85; and
- (d) in the case of a ship constructed on or after 8th June 2000, the ship complies with the requirements of subparagraph 5.3(e); but in relation to the damage assumptions specified in paragraph 5.8, throughout the length of the ship any one transverse bulkhead will be assumed to be damaged, such that two adjacent fore and aft compartments shall be flooded simultaneously, except that such damage will not apply to the boundary bulkheads of a machinery space.

5.6 In the case of a ship constructed before 8th June 2000, the condition of equilibrium referred to in subparagraphs 5.3 and 5.5 above is as follows –

- (a) the final waterline after flooding is below the top of any ventilator coaming, the lower edge of any air pipe opening, the upper edge of the sill of any access opening fitted with a

weathertight door, and the lower edge of any other opening through which progressive flooding may take place;

- (b) the angle of heel due to unsymmetrical flooding does not exceed 1° , or where no part of the deck is immersed the angle of heel does not exceed 1° ; and
- (c) the metacentric height calculated using the constant displacement method has a positive value of at least 50 millimetres in the upright condition after flooding;
- (d) the ship has adequate residual stability; and
- (e) the ship has sufficient stability during intermediate stages of flooding to the satisfaction of the Administration.

5.7 In the case of a ship constructed before 8th June 2000, the following assumptions shall be made for the purposes of calculations pursuant to subparagraphs 5.3(e) and 5.5(c) –

- (a) the vertical extent of damage is equal to the depth of the ship at the point of damage, measured from and including the freeboard deck at side to the underside of the keel;
- (b) the transverse penetration of damage is not more than one fifth of the breadth of the ship (B), this distance being measured inboard from the ship's side at right angles to the centre line of the ship at the level of the Summer load waterline. The depth of transverse penetration damage assumed shall be that which results in the most severe conditions;
- (c) except in the case of compartments referred to in subparagraph 5.5(c)(i), no transverse bulkhead is damaged;
- (d) the height of the centre of gravity above the base-line is assessed allowing for homogeneous loading of cargo holds and for 50 per cent of the designed capacity of consumable fluids and stores.

5.8 In the case of a ship constructed on or after 8th June 2000, the following assumptions shall be made for the purposes of the calculations pursuant to subparagraphs 5.3(e) and 5.5(d) –

- (a) the vertical extent of damage in all cases is assumed to be

from the base line upwards without limit;

- (b) the transverse extent of damage is equal to one fifth of the breadth of the ship (B) or 11.5m, whichever is the lesser, measured inboard from the side of the ship perpendicularly to the centreline at the level of the summer load waterline;
- (c) where damage of a lesser extent than that specified in subparagraphs 5.8(a) and 5.8(b) above results in a more severe condition, such lesser extent shall be assumed;
- (d) except where otherwise required by subparagraph 5.5, the flooding shall be confined to a single compartment between adjacent transverse bulkheads provided the inner longitudinal boundary of the compartment is not in a position within the transverse extent of assumed damage. Transverse boundary bulkheads of wing tanks which do not extend over the full breadth of the ship shall be assumed not to be damaged, provided they extend beyond the transverse extent of assumed damage prescribed in subparagraph 5.8(b) above.

Where in a transverse bulkhead there are steps or recesses of not more than 3m in length located within the transverse extent of assumed damage as defined in subparagraph 5.8.2, such transverse bulkhead may be assumed intact and the adjacent compartment may be flooded singly. Where, however, within the transverse extent of assumed damage there is a step or recess of more than 3m in length in a transverse bulkhead, the two compartments adjacent to this bulkhead shall be considered as flooded. The step formed by the afterpeak bulkhead and the afterpeak tank top shall not be regarded as a step for the purpose of this regulation;

- (e) where a main transverse bulkhead is located within the transverse extent of assumed damage and is stepped in way of a double bottom or side tank by more than 3m, the double bottom or side tanks adjacent to the stepped portion of the main transverse bulkhead shall be considered as flooded simultaneously. Where this side tank has openings, into one or several holds, such as grain feeding holes, such hold or holds shall be considered as flooded simultaneously. Similarly in a ship designed for the carriage of liquid cargoes, where a side tank has openings into adjacent compartments, such adjacent compartments shall be considered as empty and as being flooded simultaneously. This provision is applicable even where

such openings are fitted with closing appliances, except in the case of sluice valves fitted in bulkheads between tanks and where the valves are controlled from the deck. Manhole covers with closely spaced bolts are considered equivalent to the unpierced bulkhead except in the case of openings in topside tanks common to the holds;

- (f) where the flooding of any two adjacent fore and aft compartments is envisaged, main transverse watertight bulkheads shall be spaced at least $\frac{1}{3} L$ $\frac{2}{3}$ or 14.5m, whichever is the lesser, in order to be considered effective. Where transverse bulkheads are spaced at a lesser distance, one or more of these bulkheads shall be assumed as non-existent in order to achieve the minimum spacing between bulkheads.

5.9 The tabular freeboard of a ship to which subparagraph 5.2(b) applies shall be increased by the amount shown in Table 1 appropriate to the ship's length –

5.10 Freeboards, at intermediate lengths of ship shall be obtained by linear interpolation. The increase in the case of ships of more than 200 metres in length shall be by an amount which the Administration determines in each particular case.

- (a) This subparagraph applies to every Type "B" ship of not more than 100 metres in length having enclosed superstructures the total effective length (e) of which does not exceed 35 per cent of the ship's length (L).

- (b) The freeboard calculated in respect of such a ship in accordance with subparagraphs 5.1, 5.2 and 5.9 shall be increased by the following amount –

$$7.5(100 - (L)) \left[0.35 - \frac{(E)}{(L)} \right]$$

5.11 In the case of a ship with a block coefficient (C_b) exceeding 0.68, the freeboard calculated in accordance with subparagraphs (1) to (10) shall be multiplied by the factor –

$$\frac{(C_b) + 0.68}{1.36}$$

5.12 Corrections in accordance with paragraphs 6 to 16 shall be applied to the freeboard calculated in accordance with subparagraphs (1) to (11) and, subject to paragraph 3(3), the freeboard so corrected shall be the Summer freeboard to be assigned to the ship.

Length of ship (metres)	Freeboard increase (millimetres)	Length of ship (metres)	Freeboard increase (millimetres)	Length of ship (metres)	Freeboard increase (millimetres)
108 and below	50	139	175	170	290
109	52	140	181	171	292
110	55	141	186	172	294
111	57	142	191	173	297
112	59	143	196	174	299
113	62	144	201	175	301
114	64	145	206	176	304
115	68	146	210	177	306
116	70	147	215	178	308
117	73	148	219	179	311
118	76	149	224	180	313
119	80	150	228	181	315
120	84	151	232	182	318
121	87	152	236	183	320
122	91	153	240	184	322
123	95	154	244	185	325
124	99	155	247	186	327
125	103	156	251	187	329
126	108	157	254	188	332
127	112	158	258	189	334
128	116	159	261	190	336
129	121	160	264	191	339
130	126	161	267	192	341
131	131	162	270	193	343
132	136	163	273	194	346
133	142	164	275	195	348
134	147	165	278	196	350
135	153	166	280	197	353
136	159	167	283	198	355
137	164	168	285	199	357
138	170	169	287	200	358

Basic freeboard

6. In the following paragraphs “basic freeboard” means the accordance with paragraph 4 or 5, whichever is applicable, but ship, the corrections referred to in paragraph 4.3, or in the case of a referred to in paragraph 5.12.

Correction for Depth

7.1 Where the depth for freeboard (D) exceeds $\frac{(L)}{15}$, the basic freeboard of the ship shall be-

$$\text{increased by } - \left((D) - \frac{(L)}{15} \right) R \text{ millimetres}$$

where R is –

$$\frac{(L)}{0.48}, \text{ in the case of a ship less than 120 metres in length; and}$$

250 in the case of a ship of 120 metres or more in length.

7.2 Where (D) is less than $\frac{(L)}{15}$, the basic freeboard of the ship shall be

reduced by –

$$\left((D) - \frac{(L)}{15} \right) R \text{ millimetres}$$

where, but only where, the ship has, subject to subparagraph 7.3, either –

- (a) an enclosed superstructure covering at least 0.6 (L) amidships;
- (b) an efficient trunk extending for the ship's length; or
- (c) a combination of enclosed superstructures connected by efficient trunks, being a combination extending for the ship's length.

7.3 Where the height of any such superstructure or trunk in subparagraph 7.2 is less than standard height the amount of reduction shall be reduced in the ratio of the actual to the standard height of the superstructure or trunk.

Correction for position of deck-line

8.1 Subject to the provisions of subparagraph 8.2, where the actual depth to the upper edge of the deck-line is greater or less than the depth for freeboard, the difference where greater shall be added to, or where less shall be deducted from, the basic freeboard of the ship.

8.2 Where the position of the deck-line has been fixed in accordance with the provisions of regulation 16(3), the actual depth of the ship shall be taken to the point amidships where the continuation outwards of the upper surface of the freeboard deck or of any sheathing on that deck intersects the outer surface of the shell of the ship.

Standard height, length and effective length of superstructures

9.1 The standard height of a superstructure shall be determined in accordance with Table 2 –

TABLE 2

Length of ship (L)(metres)	Standard Height (metres)	
	of a raised quarter deck	of a superstructure other than a raised quarter deck
30 or less	0.90	1.80
75 or more	1.20	1.80
125 or more	1.80	2.30

Standard heights for intermediate lengths of the ship shall be obtained by linear interpolation.

9.2.1 Subject to subparagraph 9.2.2 below, the length of a superstructure (S) shall be the mean length of the parts of the superstructure which lie within the length of the ship.

9.2.2 In the case of an enclosed superstructure having an end bulkhead which extends in a fair convex curve beyond its intersection with the superstructure sides, the length of the superstructure (S) may be taken as its length determined in accordance with subparagraph 9.2.1, but increased by two-thirds of the fore and aft extent of the curvature to a maximum of one half the breadth of the superstructure at the point of intersection of the curved end of the superstructure with its side.

9.3.1 In the case of an enclosed superstructure of standard height, the effective length of a superstructure (E) shall be, subject to subparagraph 9.3.3 below, either –

- (a) its length; or

(b) where the superstructure is set in from the sides of the ship, its length modified in the ratio b/B_s , where –

(i) “b” is the breadth of the superstructure at the middle of its length; and

(ii) “ B_s ” is the breadth of the ship at the middle of the length of the superstructure:

where the superstructure is only set in for part of its length, this modification shall be applied only to that part.

9.3.2 In the case of an enclosed superstructure of less than standard height the effective length of a superstructure, subject to subparagraphs 9.3.1 above and 9.3.3 below, shall be its length reduced in the ratio of the actual height of the superstructure to its standard height.

9.3.3 In the case of an enclosed superstructure consisting of a raised quarter deck the effective length of a superstructure shall, where the deck is fitted with an intact front bulkhead, be its length subject to a maximum of 0.6 of the ship’s length and, where not so fitted, be determined by treating the raised quarter deck as a poop of less than standard height.

9.3.4 A superstructure which is not an enclosed superstructure as defined in paragraph 1 of the Third Schedule shall have no effective length.

Standard height and effective length of trunks

10.1 The standard height of a trunk shall be that applicable to a superstructure other than a raised quarter deck in paragraph 9.1.

10.2 The effective length of a trunk shall be determined as follows –

(a) a trunk which is not an efficient trunk as described in subparagraph 10.2.2 below shall have no effective length;

(b) a trunk shall be treated as an efficient trunk provided –

(i) it is at least as strong as a superstructure;

(ii) the hatchways in way of the trunk are in the trunk deck, and the hatchway coamings and covers comply with the requirements of paragraphs 4 to 6 of the Third Schedule, except that small access openings with watertight covers may be permitted in

the freeboard deck;

(iii) the width of the trunk deck stringer provides a satisfactory gangway and sufficient lateral stiffness;

(iv) a permanent working platform fore and aft fitted with guard rails or guard wires complying with applicable requirements in paragraph 18.2.1 of the Third Schedule is provided by the trunk deck, or by detached trunks connected to superstructures by efficient permanent gangways;

(v) ventilators are protected by the trunk, by watertight covers or by equivalent means;

(vi) open rails or wires are fitted on the weather parts of the freeboard deck in way of the trunk for at least half their length;

(vii) the machinery casings are protected by the trunk, or by an enclosed superstructure of at least standard height, or by a deckhouse of the same height, strength and weathertightness equivalent to such an enclosed superstructure;

(viii) the breadth of the trunk is at least 60 per cent of the breadth of the ship;

(ix) where there is no superstructure the length of the trunk is at least $0.6(L)$.

10.2.3 Except as otherwise provided in subparagraph 10.2.4 below, the effective length of an efficient trunk shall be its full length reduced in the ratio of its mean breadth to the breadth of the ship.

10.2.4 Where the actual height of an efficient trunk is less than the standard height, its effective length shall be the length calculated in accordance with subparagraph 10.2.3 above reduced in the ratio of the actual to the standard height of the trunk. In addition, where the ship is a Type "B" ship and the height of hatchway coamings on the trunk deck is less than that required by paragraph 5.1 or 6.1 of the Third Schedule a reduction from the actual height of the trunk shall be made of an amount corresponding to the difference between the actual height and the required height of the hatchway coamings.

Deduction for effective length of superstructures and trunks

11.1 Where the sum of the effective lengths of superstructures and trunks of a ship is $1.0(L)$, the basic freeboard of the ship shall be reduced by

–

350 millimetres where the ship is 24 metres in length (L);
 860 millimetres where the ship is 85 metres in length (L);
 1070 millimetres where the ship is 122 metres in length or more;
 and by amounts obtained by linear interpolation in the case of ships of intermediate length.

11.2 Where the sum of the effective lengths of superstructures and trunk is less than 1.0 (L), the basic freeboard of a ship shall be reduced by a percentage of the figures in subparagraph 11.1 according to the total effective length of its superstructures and trunks as follows.

11.2.1 In the case of a Type “A” ship, by a percentage given in Table 3. The percentage in the case of a ship having superstructures and trunks of an effective length intermediate to those specified in Table 3 is to be obtained by linear interpolation,

11.2.2.1 Subject to subparagraphs 11.2.2.2, 11.2.2.3 and 11.2.2.4 below, in the case of a Type “B” ship, by a percentage given in Table 4. The percentage in the case of a ship having superstructures and trunks of an effective length intermediate to those specified in Table 4 is to be obtained by linear interpolation,

11.2.2.2 Where the effective length of a bridge covers less than 0.1(L) before and 0.1(L) abaft amidships the percentages shall be obtained by linear interpolation between the lines I and II,

11.2.2.3 Where the effective length of a forecastle is more than 0.4 (L), the percentages shall be obtained from line II,

11.2.2.4 Where the effective length of a forecastle is less than 0.07 (L), the above percentages shall be reduced by –

$$5 \frac{(0.07(L) - f)}{0.07(L)}$$

where “f” is the effective length of the forecastle.

TABLE 3

PERCENTAGE OF DEDUCTION FOR TYPE “A” SHIPS

Percentage of deduction for all types of superstructure and trunks	Total effective length of superstructure and trunks										
	0	0.1(L)	0.2(L)	0.3(L)	0.4(L)	0.5(L)	0.6(L)	0.7(L)	0.8(L)	0.9(L)	1.0(L)
	0	7	14	21	31	41	52	63	75.3	87.7	100

TABLE 4

PERCENTAGE OF DEDUCTION FOR TYPE “B” SHIPS

Ships with forecastle and without detached bridge	Total effective length of superstructure and trunks											
	Line	0	0.1 (L)	0.2 (L)	0.3 (L)	0.4 (L)	0.5 (L)	0.6 (L)	0.7 (L)	0.8 (L)	0.9 (L)	1.0
	I	0	5	10	15	23.5	32	46	63	75.3	87.7	100
Ships with forecastle and detached bridge	II	0	6.3	12.7	19	27.5	36	46	63	75.3	87.7	100

Measurement of Sheer

12.1 The sheer shall be measured from the deck at side to a line of reference drawn parallel to the keel through the sheer line at amidships.

12.2 In ships designed with a rake of keel, the sheer shall be measured in relation to a line of reference drawn parallel to the Summer load waterline.

12.3 In flush deck ships and in ships with detached superstructures the sheer shall be measured at the freeboard deck.

12.4 In ships with topsides of unusual form in which there is a step or break in the topsides, the sheer shall be considered in relation to the equivalent depth amidships.

12.5 In ships with a superstructure of standard height which extends over the whole length of the freeboard deck, the sheer shall be measured at the superstructure deck. Where the height of the superstructure exceeds the standard height the least difference (Z) between the actual and standard heights shall be added to each end ordinate. Similarly, the intermediate ordinates at distances of 1/6(L) and 1/3(L) from each perpendicular shall be increased by 0.444 (Z) and 0.111 (Z) respectively.

12.6 Where the deck of an enclosed superstructure has at least the same sheer as the exposed freeboard deck, the sheer of the enclosed portion of the freeboard deck shall not be taken into account.

12.7 Where an enclosed poop or forecastle is either –

- (a) of standard height with greater sheer than that of the freeboard deck; or

(b) is of more than standard height;

an addition to the sheer of the freeboard deck shall be made calculated in accordance with paragraph 14.4.

Standard sheer profile

13. The ordinates of the standard sheer profile are given in Table 5 –

TABLE 5

	Station	Ordinate (in millimetres)	Factor
After half	After perpendicular (A.P.)	$25.0((L) / 3 + 10)$	1
	1/6(L) from A.P.	$11.1((L) / 3 + 10)$	3
	1/3(L) from A.P.	$2.8((L) / 3 + 10)$	3
	Amidships	0	1
Forward half	Amidships	0	1
	1/3(L) from F.P.	$5.6((L) / 3 + 10)$	3
	1/6(L) from F.P.	$22.2((L) / 3 + 10)$	3
	Forward perpendicular (F.P.)	$50.0((L) / 3 + 10)$	1

Measurement of variation front standard sheer profile

14.1 Where the sheer profile differs from the standard sheer profile, the four ordinates of each profile in the forward or after halves of the ship shall be multiplied by the appropriate factors given in paragraph 13. The difference between the sums of the respective products and those of the standard divided by 8 shall be the deficiency or excess of sheer in the forward or after half. The arithmetical mean of the excess or deficiency in the forward and after halves shall be the excess or deficiency of sheer.

14.2 Where the after half of the sheer profile is greater than the standard sheer profile and the forward half is less than the standard sheer profile, no credit shall be allowed for the part in excess, and deficiency only shall be measured.

14.3 Where the forward half of the sheer profile exceeds the standard sheer profile, and the after half of the sheer profile is not less than 75 per cent of the standard sheer profile, credit shall be allowed for the part in excess. Where the after half of the sheer profile is less

than 50 per cent of the standard sheer profile, no credit shall be given for the excess of sheer forward. Where the sheer in the after half is between 50 per cent and 75 per cent of the standard sheer profile, intermediate allowances may be granted for excess sheer forward.

14.4 Where sheer credit is given for a poop or forecastle the following formula shall be used –

$$s = \frac{y}{3} \cdot \frac{L'}{L}$$

where –

s = sheer credit, to be deducted from the deficiency or added to the excess of sheer;

y = difference between actual and standard height of superstructure at the after or forward perpendicular; and

L' = mean enclosed length of poop or forecastle up to a maximum length of 0.5 (L).

This formula provides a curve in the form of a parabola tangential to the actual sheer curve at the freeboard deck and intersecting the end ordinate at a point below the superstructure deck at a distance equal to the standard height of the poop or forecastle. The superstructure deck shall not be less than standard height above this curve at any point. This curve shall be used in determining the sheer profile for the forward and the after halves of the ship.

Correction for Variations from standard sheer profile

15.1 The correction for sheer shall be the deficiency or excess of sheer determined in accordance with paragraph 14 multiplied by –

$$0.75 - \frac{S}{2(L)}$$

15.2 In the case of a ship with sheer less than the standard sheer profile, the correction for deficiency of sheer determined in accordance with subparagraph 15.1 shall be added to the basic freeboard of the ship.

15.3 Subject to subparagraph 15.4, in the case of a ship having an excess of sheer –

- (a) where an enclosed superstructure covers 0.1(L) before and 0.1(L) abaft amidships, the correction for excess of sheer determined in accordance with subparagraph 15.1 shall be deducted from the basic freeboard of the ship;
- (b) where no enclosed superstructure covers amidships, no deductions shall be made from the basic freeboard of the ship;
- (c) where an enclosed superstructure covers less than 0.1(L) before and 0.1(L) abaft amidships, the correction for excess of sheer determined in accordance with subparagraph 15.1 shall be modified in the ratio of the amount of 0.2(L) amidship which is covered by the superstructure, to 0.2(L).

15.4 The maximum deduction for excess sheer shall be at the rate of 125 millimetres per 100 metres of length (L).

Correction for minimum bow height

16.1 Except as otherwise provided in subparagraphs 16.2 and 16.3, where the bow height determined in accordance with subparagraph 16.4 is less than the minimum bow height determined in accordance with subparagraph 16.5, the freeboard determined for the ship shall be increased by an amount equal to the difference between the bow height and the minimum bow height.

16.2 Where an existing ship to which subparagraph 16.1 applies has been so constructed or modified as to comply with all the requirements of the Third Schedule applicable to a new ship of her type and is to be assigned freeboards determined in accordance with this Schedule, and/or –

- (a) the forecastle is less than 0.07(L);
- (b) the sheer extends for less than 15 per cent of the ship's length (L) measured from the forward perpendicular;

The freeboard shall be increased by such amount as the Administration may determine in each particular case.

16.3 In the case of a ship to which subparagraph 16.1 applies, being a ship which is constructed to meet exceptional operational requirements, the correction to be made in accordance with

subparagraphs 16.1 and 16.2 may be reduced or waived where the Administration is satisfied that the safety of the ship will not be impaired in consequence of the worst sea and weather conditions likely to be encountered by the ship in service.

16.4 The bow height of a ship is the vertical distance at the forward perpendicular between the Summer load waterline at the designed trim and the top of the exposed deck at side.

16.4.1 Where the bow height is obtained by including sheer, the sheer shall extend for no less than 15 per cent of length (L) measured from the forward perpendicular.

16.4.2 Where the bow height is obtained by including the height of a superstructure, such superstructure shall –

(a) extend from the stem to a point not less than 0.07 of the ship's length (L) measured from the forward perpendicular;

(b) where length (L) is 100 metres or less, be an enclosed superstructure; and

(c) where length (L) exceeds 100 metres in length, be fitted with satisfactory closing appliances.

16.5 The minimum bow height in millimetres shall be –

$$56(L) \left(1 - \frac{(L)}{500} \right) \left(\frac{1.36}{C_b - 0.68} \right)$$

where (L) is less than 250 metres; and

$$7000 \left(\frac{13.6}{C_b + 0.68} \right)$$

where (L) is 250 metres or more;

C_b shall not be taken as less than 0.68.

PART II – TIMBER FREEBOARDS

Summer Timber freeboard

17 The Summer Timber freeboard is the freeboard determined in accordance with the provisions of paragraphs 5.1,5.2.1, 5.10 and 5.11 and corrected in accordance with the provisions of paragraph 6 to 15, except that the percentages in Table 6 shall be substituted for those given in Table 4 of paragraph 11.2.

TABLE 6

PERCENTAGE OF DEDUCTION FOR TYPE “B” SHIPS

Percentage of deduction for all types of superstructure	Total effective length of superstructure										
	0	0.1 (L)	0.2 (L)	0.3 (L)	0.4 (L)	0.5 (L)	0.6 (L)	0.7 (L)	0.8 (L)	0.9 (L)	1.0 (L)
	20	31	42	53	64	70	76	82	88	94	100

Percentages at intermediate lengths superstructures shall be obtained by linear interpolation.

Other Timber freeboards

18.1 The Winter Timber freeboard shall be obtained by adding to the Summer Timber freeboard one thirty-sixth (1/36th) of the Summer Timber draught.

18.2 The Winter North Atlantic Timber freeboard shall be the same as the Winter North Atlantic freeboard assigned.

18.3 The Tropical Timber freeboard shall be obtained by deducting from the Summer Timber freeboard one forty-eighth (1/48th) of the Summer Timber draught.

18.4.1 The Fresh Water Timber freeboard shall, subject to subparagraph 18.4.2, obtained by deducting from the Summer Timber freeboard the quantity –

$$\frac{\Delta}{4T} \text{ millimetres}$$

where –

Δ is the displacement in salt water in tonnes at the waterline which will when load lines have been marked on the ship's side correspond to the Summer Timber load line; and

T represents tonnes per centimetre immersion in salt water at that waterline.

18.4.2 Where the displacement at that waterline cannot be ascertained, the deduction shall be one forty-eighth (1/48th) of the Summer Timber draught of the ship.

PART III – SAILING SHIPS AND OTHER SHIPS

Sailing ships and tugs

19. The freeboards to be assigned to sailing ships and tugs shall be freeboards determined in accordance with the provisions of Part I of this Schedule increased by such amounts as the Administration may direct in each particular case.

Ships of wood and other ships

20. The freeboards to be assigned to ships of wood or of composite construction or of other materials, or to ships with constructional features such as to render freeboards calculated in accordance with Part I of this Schedule unreasonable or impracticable shall be determined by the Administration in each particular case.

Unmanned barges

21. The freeboards to be assigned to unmanned barges having on the freeboard deck only small access openings closed by watertight gasketed covers of steel shall be freeboards determined in accordance with the provisions of Part I of this Schedule omitting paragraphs 5 and 16. Such freeboards may be reduced by such amounts not exceeding 25 per cent as the Administration may direct in each particular case.

FREEBOARD TABLES

22. The following is the Freeboard Table referred to in paragraph 4 of this schedule:—

TABLE A

FREEBOARD TABLE TYPE “A” SHIPS

Length of Ship (metres)	Freeboard (millimetres)	Length of ship (metres)	Freeboard (millimetres)	Length of ship (metres)	Freeboard (millimetres)
24	200	64	626	104	1196
25	208	65	639	105	1212
26	217	66	653	106	1228
27	225	67	666	107	1244
28	233	68	680	108	1260
29	242	69	693	109	1276
30	250	70	706	110	1293
31	258	71	720	111	1309
32	267	72	733	112	1326
33	275	73	746	113	1342
34	283	74	760	114	1359
35	292	75	773	115	1376
36	300	76	786	116	1392
37	308	77	800	117	1409
38	316	78	814	118	1426
39	325	79	828	119	1442
40	334	80	841	120	1459
41	344	81	855	121	1476
42	354	82	869	122	1494
43	364	83	883	123	1511
44	374	84	897	124	1528
45	385	85	911	125	1546
46	396	86	926	126	1563
47	408	87	940	127	1580
48	420	88	955	128	1598
49	432	89	969	129	1615
50	443	90	984	130	1632
51	455	91	999	131	1650
52	467	92	1014	132	1667
53	478	93	1029	133	1684
54	490	94	1044	134	1702
55	503	95	1059	135	1719
56	516	96	1074	136	1736
57	530	97	1089	137	1753
58	544	98	1105	138	1770
59	559	99	1120	139	1787
60	573	100	1135	140	1803
61	587	101	1151	141	1820
62	600	102	1166	142	1837
63	613	103	1181	143	1853

FREEBOARD TABLE TYPE “A” SHIPS

Length of Ship (metres)	Freeboard (millimetres)	Length of ship (metres)	Freeboard (millimetres)	Length of ship (metres)	Freeboard (millimetres)
144	1870	197	2582	250	3012
145	1886	198	2592	251	3018
146	1903	199	2602	252	3024
147	1919	200	2612	253	3030
148	1935	201	2622	254	3036
149	1952	202	2632	255	3042
150	1968	203	2641	256	3048
151	1984	204	2650	257	3054
152	2000	205	2659	258	3060
153	2016	206	2669	259	3066
154	2032	207	2678	260	3072
155	2048	208	2687	261	3078
156	2064	209	2696	262	3084
157	2080	210	2705	263	3089
158	2096	211	2714	264	3095
159	2111	212	2723	265	3101
160	2126	213	2732	266	3106
161	2141	214	2741	267	3112
162	2155	215	2749	268	3117
163	2169	216	2758	269	3123
164	2184	217	2767	270	3128
165	2198	218	2775	271	3133
166	2212	219	2784	272	3138
167	2226	220	2792	273	3143
168	2240	221	2801	274	3148
169	2254	222	2809	275	3153
170	2268	223	2817	276	3158
171	2281	224	2825	277	3163
172	2294	225	2833	278	3167
173	2307	226	2841	279	3172
174	2320	227	2849	280	3176
175	2332	228	2857	281	3181
176	2345	229	2865	282	3185
177	2357	230	2872	283	3189
178	2369	231	2880	284	3194
179	2381	232	2888	285	3198
180	2393	233	2895	286	3202
181	2405	234	2903	287	3207
182	2416	235	2910	288	3211
183	2428	236	2918	289	3215
184	2440	237	2925	290	3220
185	2451	238	2932	291	3224
186	2463	239	2939	292	3228
187	2474	240	2946	293	3233
188	2486	241	2953	294	3237
189	2497	242	2959	295	3241
190	2508	243	2966	296	3246

191	2519	244	2973	297	3250
192	2530	245	2979	298	3254
193	2541	246	2986	299	3258
194	2552	247	2993	300	3262
195	2562	248	3000	301	3266
196	2572	249	3006	302	3270

TABLE A (continued)

Length of Ship (metres)	Freeboard (millimetres)	Length of ship (metres)	Freeboard (millimetres)	Length of ship (metres)	Freeboard (millimetres)
303	3274	324	3342	345	3394
304	3278	325	3345	346	3396
305	3281	326	3347	347	3399
306	3285	327	3350	348	3401
307	3288	328	3353	349	3403
308	3292	329	3355	350	3406
309	3295	330	3358	351	3408
310	3298	331	3361	352	3410
311	3302	332	3363	353	3412
312	3305	333	3366	354	3414
313	3308	334	3368	355	3416
314	3312	335	3371	356	3418
315	3315	336	3373	357	3420
316	3318	337	3375	358	3422
317	3322	338	3378	359	3423
318	3325	339	3380	360	3425
319	3328	340	3382	361	3427
320	3331	341	3385	362	3428
321	3334	342	3387	363	3430
322	3337	343	3389	364	3432
323	3339	344	3392	365	3433

Freeboards at intermediate lengths of ship shall be obtained by linear interpolation.

Freeboards, in mm, at length of ship less than 24 metres shall be –

$$50 + \left[\frac{150(L)}{24} \right]$$

See also paragraph 3 of this Schedule..

23. The following is Freeboard Table B referred to in paragraph 5 of this Schedule:–

TABLE B

FREEBOARD TABLE FOR TYPE “B” SHIPS

Length of Ship (metres)	Freeboard (millimetres)	Length of ship (metres)	Freeboard (millimetres)	Length of ship (metres)	Freeboard (millimetres)
24	200	72	754	120	1690
25	208	73	769	121	1709
26	217	74	784	122	1729
27	225	75	800	123	1750
28	233	76	816	124	1771
29	242	77	833	125	1793
30	250	78	850	126	1815
31	258	79	868	127	1837
32	267	80	887	128	1859
33	275	81	905	129	1880
34	283	82	923	130	1901
35	292	83	942	131	1921
36	300	84	960	132	1940
37	308	85	978	133	1959
38	316	86	996	134	1979
39	325	87	1015	135	2000
40	334	88	1034	136	2021
41	344	89	1054	137	2043
42	354	90	1075	138	2065
43	364	91	1096	139	2087
44	374	92	1116	140	2109
45	385	93	1135	141	2130
46	396	94	1154	142	2131
47	408	95	1172	143	2171
48	420	96	1190	144	2190
49	432	97	1209	145	2209
50	443	98	1229	146	2229
51	455	99	1250	147	2250
52	467	100	1271	148	2271
53	478	101	1293	149	2293
54	490	102	1315	150	2315
55	503	103	1337	151	2334
56	516	104	1359	152	2354
57	530	105	1380	153	2375
58	544	106	1401	154	2396
59	559	107	1421	155	2418
60	573	108	1440	156	2440
61	587	109	1459	157	2460

62	601	110	1479	158	2480
63	615	111	1500	159	2500
64	629	112	1521	160	2520
65	644	113	1543	161	2540
66	659	114	1565	162	2560
67	674	115	1587	163	2580
68	689	116	1609	164	2600
69	705	117	1630	165	2620
70	721	118	1651	166	2640
71	738	119	1671	167	2660

TABLE B (continued)

Length of Ship (metres)	Freeboard (millimetres)	Length of ship (metres)	Freeboard (millimetres)	Length of ship (metres)	Freeboard (millimetres)
168	2680	221	3601	274	4327
169	2698	222	3615	275	4339
170	2716	223	3630	276	4350
171	2735	224	3645	277	4362
172	2754	225	3660	278	4373
173	2774	226	3675	279	4385
174	2795	227	3690	280	4397
175	2815	228	3705	281	4408
176	2835	229	3720	282	4420
177	2855	230	3735	283	4432
178	2875	231	3750	284	4443
179	2895	232	3765	285	4455
180	2915	233	3780	286	4467
181	2933	234	3795	287	4478
182	2952	235	3808	288	4490
183	2970	236	3821	289	4502
184	2988	237	3835	290	4513
185	3007	238	3849	291	4525
186	3025	239	3864	292	4537
187	3044	240	3880	293	4548
188	3062	241	3893	294	4560
189	3080	242	3906	295	4572
190	3098	243	3920	296	4583
191	3116	244	3934	297	4595
192	3134	245	3949	298	4607
193	3151	246	3965	299	4618
194	3167	247	3978	300	4630
195	3185	248	3992	301	4642
196	3202	249	4005	302	4654
197	3219	250	4018	303	4665
198	3235	251	4032	304	4676
199	3249	252	4045	305	4686
200	3264	253	4058	306	4695
201	3280	254	4072	307	4704
202	3296	255	4085	308	4714

203	3313	256	4098	309	4725
204	3330	257	4112	310	4736
205	3347	258	4125	311	4748
206	3363	259	4139	312	4757
207	3380	260	4152	313	4768
208	3397	261	4165	314	4779
209	3413	262	4177	315	4790
210	3430	263	4189	316	4801
211	3445	264	4201	317	4812
212	3460	265	4214	318	4823
213	3475	266	4227	319	4834
214	3490	267	4240	320	4844
215	3505	268	4252	321	4855
216	3520	269	4264	322	4866
217	3537	270	4276	323	4878
218	3554	271	4289	324	4890
219	3570	272	4302	325	4899
220	3586	273	4315	326	4909

TABLE B (continued)

Length of Ship (metres)	Freeboard (millimetres)	Length of ship (metres)	Freeboard (millimetres)	Length of ship (metres)	Freeboard (millimetres)
327	4920	340	5055	353	5190
328	4931	341	5065	354	5200
329	4943	342	5075	355	5210
330	4955	343	5086	356	5220
331	4965	344	5087	357	5230
332	4975	345	5108	358	5240
333	4985	346	5119	359	5250
334	4995	347	5130	360	5260
335	5005	348	5140	361	5268
336	5015	349	5150	362	5276
337	5025	350	5160	363	5285
338	5035	351	5170	364	5294
339	5045	352	5180	365	5303

Freeboards at intermediate lengths of ship shall be obtained by linear interpolation.

Freeboards, in mm, at length of ship less than 24 metres shall be –

$$50 + \left[\frac{150(L)}{24} \right]$$

See also paragraphs 3 and 17 of this Schedule.

SECOND SCHEDULE

(regulation 16)

APPROPRIATE LOAD LINES AND SEASONAL ZONES, AREAS AND PERIODS

Appropriate Load Lines

1. The seasonal zones, areas and periods which determine the appropriate load line in a particular sea area at a given time are set out in this Schedule and shown by way of illustration on Chart No D.6083 "Load Line Regulations: Zones, Areas & Seasonal Periods, Edition No 2"; available from the United Kingdom Hydrographic Office.

2. Subject to subparagraphs (d) to (g) below, the load line appropriate to a ship shall be —

- (a) the Summer load line, when the ship is in a Summer Zone, excluding any part of such a zone which is a seasonal area in relation to the ship;
- (b) the Tropical load line, when the ship is in a Tropical Zone;
- (c) the Summer load line, the Winter load line or the Tropical load line, according to the season when the ship is in a seasonal zone or area, including any part of a Summer Zone which is a seasonal area in relation to the ship;
- (d) the Winter North Atlantic load line, in the case of a ship of 100 metres or less in length, when it is in these zones during the Winter seasonal periods applicable to them —
 - (i) North Atlantic Winter Seasonal Zone I, as set out in paragraph 4.1;
 - (ii) North Atlantic Winter Seasonal Zone II, as set out in paragraph 4.2 as lies between the meridians of longitude 15⁰W and 50⁰W; during the winter seasonal periods applicable in those

zones;

- (e) the Summer load line, in the case of a sailing ship, except in circumstances in which subparagraph 2.4 above applies;
- (f) an All Seasons load line, in the case of a ship marked in accordance with regulation 8;
- (g) the Timber load line, corresponding to the seasons and zones, in the case of a ship marked with Timber load lines and carrying timber deck cargo in accordance with Part IV of the Third Schedule.

Ports on Boundary Lines

3. For the purposes of applying the provisions of this Schedule to a ship at a port which stands on the boundary line between two zones or areas or between a zone and an area, or which is required by this Schedule to be considered as being on such a boundary line, the port shall be deemed to be within the zone or area into which the ship is about to proceed or from which she has arrived as the case may be.

Zones, Areas and Seasonal Periods

NORTHERN WINTER SEASONAL ZONES AND AREA

North Atlantic Winter Seasonal Zones I and II

4.1 The North Atlantic Winter Seasonal Zone I lies within the meridian of longitude 50°W from the coast of Greenland to latitude 45°N , thence the parallel of latitude 45°N to longitude 15°W , thence the meridian of longitude 15°W to latitude 60°N , thence the parallel of latitude 60°N to the Greenwich Meridian, thence this meridian northwards.

Seasonal periods:

WINTER: 16th October to 15th April.

SUMMER: 16th April to 15th October.

4.2 The North Atlantic Winter Seasonal Zone II lies within the meridian of longitude $68^{\circ}30'\text{W}$ from the coast of the United States to latitude 40°N , thence the rhumb line to the point latitude 36°N longitude 73°W , thence the parallel of latitude 36°N to longitude 25°W and thence the

rhumb line to Cape Torinana.

Excluded from this zone are the North Atlantic Winter Seasonal Zone I, the North Atlantic Winter Seasonal Area and the Baltic Sea bounded by the parallel of latitude of The Skaw in the Skagerrak.

The Shetland Islands are to be considered as being on the boundary line between the North Atlantic Winter Seasonal Zones I and II.

Seasonal periods:

WINTER: 1st November to 31st March.

SUMMER: 1st April to 31st October.

North Atlantic Winter Seasonal Area

5. The boundary of the North Atlantic Winter Seasonal Area is the meridian of longitude 68⁰30'W from the coast of the United States to latitude 40⁰N, thence the rhumb line to the southernmost intersection of the meridian of longitude 61⁰W with the coast of Canada and thence the east coasts of Canada and the United States.

Seasonal periods:

For ships over 100 metres in length:

WINTER: 16th December to 15th February.

SUMMER: 16th February to 15th December.

For ships of 100 metres or less in length:

WINTER: 1st November to 31st March.

SUMMER: 1st April to 31st October.

North Pacific Winter Seasonal Zone

6. The southern boundary of the North Pacific Winter Seasonal Zone is-

the parallel of latitude 50°N from the east coast of the Russian Federation to the west coast of Sakhalin, thence the west coast of Sakhalin to the southern extremity of Cape Krilon, thence the rhumb line to Wakkanai, Hokkaido, Japan, thence the east and south coasts of Hokkaido to longitude 145°E , thence the meridian of longitude 145°E to latitude 35°N , thence the parallel of latitude 35°N to longitude 150°W and thence the rhumb line to the southern extremity of Dall Island, Alaska.

Seasonal periods:

WINTER: 16th October to 15th April.

SUMMER: 16th April to 15th October.

SOUTHERN WINTER SEASONAL ZONE

Southern Winter Seasonal Zone

The northern boundary of the Southern Winter Seasonal Zone is —

the rhumb line from the east coast of the American continent at Cape Tres Ventanas to the point latitude 34°S longitude 50°W , thence the parallel of latitude 34°S to longitude 17°E , thence the rhumb line to the point latitude $5^{\circ}10'\text{S}$, longitude 20°E , thence the rhumb line to the point latitude 34°S , longitude 28°E , thence the rhumb line to the point latitude $35^{\circ}30'\text{S}$, longitude 18°E , and thence the rhumb line to Cape Grim on the northwest coast of Tasmania; thence along the north and east coasts of Tasmania to the southernmost point of Bruny Island, thence the rhumb line to Black Rock Point on Stewart Island, thence the rhumb line to the point latitude 47°S , longitude 170°E , thence the rhumb line to the point latitude 33°S , longitude 70°W , and thence the parallel of latitude 33°S to the point latitude 33°S , longitude 79°W , thence the rhumb line to the point latitude 41°S , longitude 5°W , thence the rhumb line to Punta Corona lighthouse on Chiloe Island, latitude $41^{\circ}47'\text{S}$ longitude $75^{\circ}53'\text{W}$, thence along the north, east and south coasts of Chiloe Island to the point latitude $43^{\circ}20'\text{S}$, longitude $74^{\circ}20'\text{W}$, and thence the meridian of longitude $74^{\circ}20'\text{W}$, to the parallel of latitude $45^{\circ}45'\text{S}$, including the inner zone of Chiloe channels from the meridian $74^{\circ}20'\text{W}$ to the east.

Seasonal Periods:

WINTER: 16th April to 15th October.

SUMMER: 16th October to 15th April.

TROPICAL ZONE

Northern Boundary of the Tropical Zone

8. The northern boundary of the Tropical Zone is-

the parallel of latitude 13°N from the east coast of the American continent to longitude 60°W , thence the rhumb line to the point latitude 10°N , longitude 58°W , thence the parallel of latitude 10°N to longitude 20°W , thence the meridian of longitude 20°W to latitude 30°N and thence the parallel of latitude 30°N to the west coast of Africa; from the east coast of Africa the parallel of latitude 8°N to longitude 70°E , thence the meridian of longitude 70°E to latitude 13°N , thence the parallel of latitude 13°N to the west coast of India; thence the south coast of India to latitude $10^{\circ}30'\text{N}$ on the east coast of India, thence the rhumb line to the point latitude 9°N , longitude 82°E , thence the meridian of longitude 82°E to latitude 8°N , thence the parallel of latitude 8°N to the west coast of Malaysia, thence the coast of South-East Asia to the east coast of Vietnam at latitude 10°N , thence the parallel of latitude 10°N to longitude 145°E , thence the meridian of longitude 145°E to latitude 13°N and thence the parallel of latitude 13°N to the west coast of the American continent.

Saigon is to be considered as being on the boundary line of the Tropical Zone and the Seasonal Tropical Area.

Southern Boundary of the Tropical Zone

9. The southern boundary of the Tropical Zone is-

the rhumb line from the Port of Santos, Brazil, to the point where the meridian of longitude 40°W intersects the Tropic of Capricorn; thence the Tropic of Capricorn to the west coast of Africa; from the east coast of Africa the parallel of latitude 20°S to the west coast of Madagascar, thence the west and north coasts of Madagascar to longitude 50°E , thence the meridian of longitude 50°E to latitude 10°S , thence the parallel of latitude 10°S to longitude 98°E , thence the rhumb line to Port Darwin, Australia, thence the coasts of Australia and Wessel Island eastwards to Cape Wessel, thence the parallel of latitude 11°S to the west side of Cape York; from the east side of Cape York the parallel of latitude 11°S to longitude 150°W , thence the rhumb line to the point latitude 26°S , longitude 75°W , thence the rhumb line to the point latitude $32^{\circ}47'\text{S}$, longitude 72°W , and thence to the parallel of latitude

32°47'S to the west coast of South America.

Valparaiso and Santos are to be considered as being on the boundary line of the Tropical and Summer Zones.

Areas to be included in the Tropical Zone

10. The following areas are to be as included in the Tropical Zone —

- (a) the Suez Canal, the Red Sea and the Gulf of Aden, from Port Said to the meridian of longitude 45°E;
- (b) Aden and Berbera are to be considered as being on the boundary line of the Tropical Zone and the Seasonal Tropical Area;
- (c) the Persian Gulf to the meridian of longitude 59°E; and
- (d) the area bounded by the parallel of latitude 22°S from the east coast of Australia to the Great Barrier Reef, thence the Great Barrier Reef to latitude 11°S. The northern boundary of the area is the southern boundary of the Tropical Zone.

SEASONAL TROPICAL AREAS

11. The following are Seasonal Tropical Areas.

11.1 In the North Atlantic

An area bounded on the north by the rhumb line from Cape Catoche, Yucatan, to Cape San Antonio, Cuba, the north Coast of Cuba to latitude 20°N and thence the parallel of latitude 20°N to longitude 20°W; on the west by the coast of the American continent; on the south and east by the northern boundary of the Tropical Zone.

Seasonal periods:

TROPICAL: 1st November to 15th July.

SUMMER: 16th July to 31st October.

11.2 In the Arabian Sea

An area bounded

on the west by the coast of Africa, the meridian of longitude 45°E in the Gulf of Aden, the coast of South Arabia and the meridian of longitude 59°E in the Gulf of Oman; on the north and east by the coasts of Pakistan and India; on the south by the northern boundary of the Tropical Zone.

Seasonal periods:

TROPICAL: 1st September to 31st May.

SUMMER: 1st June to 31st August.

11.3 In the Bay of Bengal

The Bay of Bengal north of the northern boundary of the Tropical Zone.

Seasonal periods:

TROPICAL: 1st December to 30th April.

SUMMER: 1st May to 30th November.

11.4 In the South Indian Ocean

11.4.1 An area bounded

on the north and west by the southern boundary of the Tropical Zone and the east coast of Madagascar; on the south by the parallel of latitude 20°S ;
on the east by the rhumb line from the point latitude 20°S , longitude 50°E , to the point latitude 15°S , longitude $51^{\circ}30'\text{E}$, and thence by the meridian of longitude $51^{\circ}30'\text{E}$ to latitude 10°S .

Seasonal periods:

TROPICAL: 1st April to 30th November.

SUMMER: 1st December to 31st March.

11.4.2 An area bounded

on the north by the southern boundary of the Tropical Zone;
on the east by the coast of Australia;
on the south by the parallel of latitude 15°S from longitude $51^{\circ}30'\text{E}$, to longitude 114°E and thence the meridian of longitude 114°E to the coast of Australia;
on the west by the meridian of longitude $51^{\circ}30'\text{E}$.

Seasonal periods:

TROPICAL: 1st May to 30th November.

SUMMER: 1st December to 30th April.

11.5 In the China Sea

An area bounded

on the west and north by the coasts of Vietnam and China from latitude 10⁰N to Hong Kong; on the east by the rhumb line from Hong Kong to the Port of Sual (Luzon Island) and the west coasts of the Islands of Luzon, Samar and Leyte to latitude 10⁰N; on the south by the parallel of latitude 10⁰N.

Hong Kong and Sual are to be considered as being on the boundary of the Seasonal Tropical Area and Summer Zone.

Seasonal periods:

TROPICAL: 21st January to 30th April.

SUMMER: 1st May to 20th January.

11.6 In the North Pacific

11.6.1 An area bounded

on the north by the parallel of latitude 25⁰N; on the west by the meridian of longitude 160⁰E; on the south by the parallel of latitude 13⁰N; on the east by the meridian of longitude 130⁰W.

Seasonal periods:

TROPICAL: 1st April to 31st October.

SUMMER: 1st November to 31st March.

11.6.2 An area bounded

on the north and east by the west coast of the American continent; on the west by the meridian of longitude 123⁰W from the coast of the American continent to latitude 33⁰N and by the rhumb line from the point latitude 33⁰N, longitude 123⁰W to the point latitude 13⁰N, longitude 105⁰W; on the south by the parallel of latitude 13⁰N.

Seasonal periods:

TROPICAL: 1st March to 30th June and 1st November to 30th November.

SUMMER: 1st July to 31st October and 1st December to 28th/29th February.

11.7 In the South Pacific

11.7.1 The Gulf of Carpentaria south of latitude 11°S

Seasonal periods:

TROPICAL: 1st April to 30th November.

SUMMER: 1st December to 31st March.

11.7.2 An area bounded

on the north and east by the southern boundary of the Tropical Zone; on the south by the parallel of latitude of 24°S to longitude 154°E, thence by the meridian of longitude 154°E to the Tropic of Capricorn and thence by the Tropic of Capricorn to longitude 150°W, thence by the meridian of longitude 150°W to latitude 20°S and thence by the parallel of latitude 20°S to the point where it intersects the southern boundary of the Tropical Zone; on the west by the boundaries of the area within the Great Barrier Reef included in the Tropical Zone and by the east coast of Australia.

Seasonal periods:

TROPICAL: 1st April to 30th November.

SUMMER: 1st December to 31st March.

SUMMER ZONES

12. The remaining sea areas constitute the Summer Zones.

However, for ships of 100 metres or less in length, the area bounded on the north and west by the east coast of the United States; on the east by the meridian of longitude 68°30'S from the coast of the United States to latitude 40°N and thence by the rhumb line to the point latitude 36°N longitude 73°W; on the south by the parallel of latitude 36°N; is a Winter Seasonal Area.

Seasonal periods:

WINTER: 1st November to 31st March.

SUMMER: 1st April to 31st October.

ENCLOSED SEAS

13. Baltic Sea

This sea bounded by the parallel of latitude of The Skaw in the Skagerrak is included in the Summer Zones.

However, for ships of 100 metres or less in length, it is a Winter Seasonal Area.

Seasonal periods:

WINTER: 1st November to 31st March.

SUMMER: 1st April to 31st October.

14. Black Sea

This sea is included in the Summer Zones.

However, for ships of 100 metres or less in length, the area north of latitude 44°N is a Winter Seasonal Area.

Seasonal periods:

WINTER: 1st December to 28th/29th February.

SUMMER: 1st March to 30th November.

15. Mediterranean

This sea is included in the Summer Zones.

However, for ships of 100 metres or less in length, the area bounded on the north and west by the coasts of France and Spain and the meridian of longitude 3°E from the coast of Spain to latitude 40°N; on the south by the parallel of latitude 40°N from longitude 3°E to the west coast of Sardinia; on the east by the west and north coasts of Sardinia from latitude 40°N to latitude 9°E to the south coast of Corsica, hence by the west and north coasts of Corsica to longitude 9°E and thence by the

rhumb line to Cape Sicié.
is a Winter Seasonal Area

Seasonal periods:

WINTER: 16th December to 15th March.

SUMMER: 16th March to 15th December.

16. Sea of Japan

This sea south of latitude 50⁰N is included in the Summer Zones.

However, for ships of 100 metres or less in length, the area between the parallel of latitude 50⁰N and the rhumb line from the east coast of Korea at latitude 38⁰N to the west coast of Hokkaido, Japan, at latitude 43⁰12'N is a Winter Seasonal Area.

Seasonal periods:

WINTER: 1st December to 28th/29th February.

SUMMER: 1st March to 30th November.

THIRD SCHEDULE

(regulation 21(1))

CONDITIONS OF ASSIGNMENT

1.1 In this Schedule, except where the context otherwise requires-

“breadth (B)” means the maximum breadth of the ship measured amidships to the moulded line of the frame in the case of a ship having a metal shell, or to the outer surface of the hull in the case of a ship having a shell of any other material;

“enclosed superstructure” means a superstructure —

(a) which has enclosing bulkheads of efficient construction in which all access openings are fitted with sills and weathertight doors; and

(b) in which all other openings in sides or ends are fitted with efficient weathertight means of closing;

but shall not include a bridge or poop fulfilling these requirements unless access to machinery and other working spaces within the bridge or poop is provided by alternative means which are available at all times when access openings in the bulkheads of the bridge or poop are closed;

"exposed position" means a position which is either —

- (a) exposed to weather and sea; or
- (b) within a structure so exposed other than enclosed superstructure;

"forward perpendicular" means the perpendicular taken at the forward end of the ship's length (L), coinciding with the foreside of the stem on the waterline on which such length is measured; and "after perpendicular" means the perpendicular taken at the after end of such length;

"freeing port area (A)" means the sum of the areas of the openings of freeing ports on each side of the ship for each well;

"height" in relation to a superstructure means the least vertical height measured at side from the top of the superstructure deck beams to the top of the freeboard deck beams; and the "standard height" of a superstructure means the height ascertained in accordance with the provisions of paragraph 9 of the First Schedule;

"Position 1" or "Position 2" means those positions in which structure, openings or fittings are situated —

- (a) in the case of Position 1, upon exposed freeboard and raised quarter decks, and upon exposed superstructure decks situated forward of a point located a quarter of the ship's length from the forward perpendicular; and
- (b) in the case of Position 2, upon exposed superstructure decks situated abaft a quarter of the ship's length from the forward perpendicular;

"Summer load waterline" means the waterline which corresponds to the Summer load line of the ship;

"superstructure" means a decked structure, including a raised quarter deck, situated on the freeboard deck which either extends from side to side of the ship or is such that its side plating is not inboard of the shell plating by more than 4 per

cent of the breadth of the ship; and where the freeboard deck consists of a lower deck as described in subparagraph (b) of the definition of “freeboard deck”, includes that part of the hull which extends above the freeboard deck;

"superstructure deck" means a deck forming the top of a superstructure;

“Type “A” ship” means a ship which is designed to carry only liquid cargoes in bulk and has the characteristics set out below —

(a) the cargo tanks of the ship have only small access openings closed by watertight gasketed covers of steel or equivalent material;

(b) the ship has high integrity of the exposed deck and has a low permeability of loaded cargo compartments;

(c) in the case of a ship constructed before 8th June 2000, where over 150 metres in length and designed to have empty compartments when loaded to the Summer load waterline, the ship shall be capable of remaining afloat after the flooding of any one of these empty compartments, at an assumed permeability of 0.95 in a condition of equilibrium; where over 225 metres in length its machinery space shall be treated as a floodable compartment, but with an assumed permeability of 0.85;

(d) in the case of a ship constructed on or after 8th June 2000, where over 150m in length and a freeboard of less than required for a type “B” ship has been assigned, when loaded in accordance with the initial condition of loading before flooding, the ship is capable of remaining afloat in a satisfactory condition of equilibrium after the flooding of any compartment or compartments with an assumed permeability of 0.95, consequent upon the damage assumptions specified in paragraph 5(8) of Part 1 of the First Schedule; in such a ship the machinery space shall be treated as a floodable compartment, but with a permeability of 0.85.

(e) the condition of equilibrium referred to in subparagraph (c)(i) is as follows-

(i) the final water line after the flooding is below the top of any ventilator coaming, the lower edge of any air pipe opening, the upper edge of the sill of any access opening fitted with a weathertight door, and the

lower edge of any other opening through which progressive flooding may take place;

(ii) the angle of heel due to unsymmetrical flooding does not exceed 15 degrees or, where no part of the deck is immersed, an angle of heel of up to 17 degrees may be accepted;

(iii) the metacentric height calculated using the constant displacement method has a positive value in the upright condition after the flooding;

(iv) the ship has adequate residual stability; and

(v) the ship has sufficient stability during intermediate stages of flooding to the satisfaction of the Administration;

(f) The condition of equilibrium referred to in subparagraph (c)(ii) shall be regarded as satisfactory provided the following conditions are fulfilled.

(i) The final waterline after flooding, taking into account sinkage, heel and trim, is below the lower edge of any opening through which progressive downflooding may take place. Such openings shall include air pipes, ventilators and openings which are closed by means of weathertight doors or hatch covers, and may exclude those openings closed by means of manhole covers and flush scuttles, cargo hatch covers of the type described in subparagraph (a), remotely operated sliding watertight doors, and sidescuttles of non-opening type. However, in the case of doors separating a main machinery space from a steering gear compartment, watertight doors may be of a hinged, quick-acting type kept closed at sea, whilst not in use, provided also that the lower sill of such doors is above the summer load waterline.

(ii) Where pipes, ducts or tunnels are situated within the assumed extent of damage penetration as defined in paragraph 5(8)(b) of Part 1 of the First Schedule, arrangements shall be made so that progressive flooding cannot thereby extend to compartments other than those assumed to be floodable in the calculation for each case of damage.

(iii) Where no part of the deck is immersed, the

angle of heel due to unsymmetrical flooding does not exceed 17°. Where any part of the deck is immersed, the angle of heel due to unsymmetrical flooding does not exceed 15g.

(iv) The metacentric height in the flooded condition is positive.

(v) When any part of the deck outside the compartment assumed flooded in a particular case of damage is immersed, or in any case where the margin of stability in the flooded condition may be considered doubtful, the residual stability is to be investigated by the Administration. It may be regarded as sufficient where the righting lever curve has a minimum range of 200 beyond the position of equilibrium with a maximum righting lever of at least 0.1m within this range. The area under the righting lever curve within this range shall not be less than 0.0175m.rad. The Administration shall give consideration to the potential hazard presented by protected or unprotected openings which may become temporarily immersed within the range of residual stability.

(vi) The Administration is satisfied that the stability is sufficient during the intermediate stages of flooding.

“Type “B” ship” means a ship other than a Type “A” ship;

“unattended machinery space” means a machinery space which during the normal operation of the ship at sea is unattended for any period, and “attended machinery space” means a machinery space other than an unattended machinery space;

“weathertight” in relation to any part of a ship other than a door in a bulkhead means that water will not penetrate it and so enter the hull of the ship in the worst sea and weather conditions likely to be encountered by the ship in service; and in relation to a door in a bulkhead it means a door which —

(a) is constructed of steel or other equivalent material, is permanently and strongly attached to the bulkhead, and is framed, stiffened and fitted so that the whole structure in which it is set is of equivalent strength to the unpierced bulkhead;

(b) is closed by means of gaskets, clamping devices or other equivalent means permanently attached to the

bulkhead or to the door itself;

(c) when closed, is weathertight as above defined; and

(d) it can be operated from either side of the bulkhead.

1.2 In the definition of a "Type "A" ship", the initial condition of loading before flooding referred to in paragraph (c)(ii) shall be determined as follows-

(a) the ship is loaded to its summer load waterline on an imaginary even keel;

(b) when calculating the vertical centre of gravity, the following principles apply-

(i) homogenous cargo is carried,

(ii) all cargo compartments, except those referred to under subparagraph 1.2.2.3, but including compartments intended to be partially filled, shall be considered fully loaded except that in the case of fluid cargoes each compartment shall be treated as 98% full,

(iii) where the ship is intended to operate at its summer load waterline with empty compartments, such compartments shall be considered empty provided the height of the centre of gravity so calculated is not less than as calculated under subparagraph 1.2.2.2,

(iv) 50 % of the individual total capacity of all tanks and spaces fitted to contain consumable liquids and stores is allowed for. It shall be assumed that for each type of liquid, at least one transverse pair or a single centreline tank has maximum free surface, and the tank or combination of tanks to be taken into account shall be those where the effect of free surfaces is the greatest; in each tank the centre of gravity of the contents shall be taken at the centre of volume of the tank. The remaining tanks shall be assumed either completely empty or completely filled, and the distribution of consumable liquids between these tanks shall be effected so as to obtain the greatest possible height above the keel for the centre of gravity,

(v) at an angle of heel of not more than 5° in each compartment containing liquids, as prescribed in subparagraph.

(c) except that in the case of compartments containing consumable fluids, as prescribed in subparagraph 1.2.2.4, the maximum free surface effect shall be taken into account. Alternatively, the actual free surface effects may be used, provided the methods of calculation are acceptable to the Administration;

(d) weights shall be calculated on the basis of the following values for specific gravities-

- (i) salt water-1.025,
- (ii) fresh water-1.000,
- (iii) oil fuel -0.950,
- (iv) diesel oil-0.900,
- (v) lubricating oil-0.900.

PART I - SHIPS IN GENERAL

Structural strength and stability

2.1 The construction of the ship shall be such that its general structural strength is sufficient for the freeboards assigned.

2.2 The design and construction of the ship shall be such as to ensure that its stability in all probable loading conditions shall be sufficient for the freeboards assigned, and for this purpose due consideration shall be given to the intended service of the ship and to the following criteria-

(a) The area under the curve of righting levers (GZ curve) shall not be less than —

(i) 0.055 metre-radians up to an angle of 30 degrees;

(ii) 0.09 metre-radians up to an angle of 40 degrees or the angle at which the lower edge of any openings in the hull, superstructures or deckhouses which cannot be closed weathertight, are immersed where that angle is less; and

(iii) 0.03 metre-radians between the angles of heel of 30 degrees and 40 degrees or such lesser angle as is referred to in subparagraph 2.2.1.2 above.

(b) The righting lever (GZ) shall be at least 0.20 metres at an angle of heel equal to or greater than 30 degrees.

(c) The maximum righting lever shall occur at an angle of heel not less than 30 degrees.

(d) The initial transverse metacentric height shall not be less than 0.15 metres. In the case of a ship carrying a timber deck cargo which complies with subparagraph 2.2.1 above by taking into account the volume of timber deck cargo, the initial transverse metacentric height shall not be less than 0.05 metres.

2.3 To determine whether the ship complies with the requirements of subparagraph 2.2 the ship shall, unless otherwise permitted, be subject to an inclining test which shall be carried out in the presence of a surveyor appointed by the Administration or, for the ships listed in regulation 32(5), a surveyor appointed by the Administration.

Superstructure end bulkheads

3. Bulkheads at exposed ends of enclosed superstructures shall be of efficient construction. The height of any sill in an access opening in such a bulkhead shall, except where otherwise stated, be at least 380 millimetres above the deck.

Hatchways: general

4.1 The provisions of this paragraph and of paragraphs 5 and 6 apply to all hatchways in Position 1 or in Position 2 except where otherwise stated.

4.2 Subject to subparagraph 4.3, the construction and the means for securing the weathertightness of a hatchway shall-

(a) in the case of a hatchway closed by a portable cover and secured weathertight by tarpaulins and battening devices, comply with the requirements of paragraph 5; and

(b) in the case of a hatchway closed by a weathertight cover of steel or other equivalent material fitted with gaskets and clamping devices, comply with the requirements of paragraph 6.

4.3 Every hatchway located in an exposed position on a deck above a superstructure deck and leading to a space below shall be of such a construction and be fitted with such means as will secure the weathertightness of the hatchway, having regard to its position.

Hatchways closed by portable covers and secured weathertight by tarpaulins and battening devices.

Coamings

5.1 Every hatchway shall have a coaming of substantial construction. The coaming shall be constructed of mild steel but may be constructed of other material provided that the strength and stiffness of the coaming are equivalent to those of a coaming of mild steel. The height of the coaming above the deck shall be at least-

- (a) 600 millimetres, where the hatchway is in Position 1;
- (b) 450 millimetres, where the hatchway is in Position 2.

Covers

5.2.1 The width of every bearing surface for a hatchway cover shall be at least 65 millimetres.

5.2.2 In the case of a cover made of wood —

- (a) the finished thickness of the cover shall be at least 60 millimetres in association with a span of not more than 1.5 metres, and the thickness of covers for larger spans shall be increased by 4 millimetres for each 100 millimetres above the span of 1.5 metres;
- (b) the ends of the cover shall be protected by galvanised steel bands efficiently secured.

5.2.3 In the case of a cover made of mild steel-

- (a) the strength of the cover shall withstand the assumed load given in Table 1, and the product of the maximum stress thus calculated and the factor 4.25 shall not exceed the minimum ultimate strength of the material;

TABLE 1

Ship's Length (L)	Assumed Load, per square metre	
	Hatchway in Position 1	Hatchway in Position 2
24 metres	1 metric ton	0.75 metric ton

100 metres or over	1.75 metric tons	1.30 metric tons
Over 24 metres but less than 100 metres	to be ascertained by linear interpolation	

(b) the cover shall be so designed as to limit the deflection to not more than 0.0028 times the span under the assumed load in Table 1 appropriate to the hatchway cover.

5.2.4 In the case of a cover made neither of mild steel nor wood the strength and stiffness of the cover shall be equivalent to those of a cover of mild steel.

Portable beams

5.3.1 Where portable beams for supporting hatchway covers are made of mild steel, their strength shall be such as to withstand the assumed load given in Table 1, and the product of the maximum stress thus calculated and the factor 5 shall not exceed the minimum ultimate strength of the material.

5.3.2 Such beams shall be so designed as to limit the deflection to not more than 0.0022 times the span under the assumed load in Table 1 appropriate to the beam.

5.3.3 In the case of portable beams not made of mild steel, the strength and stiffness of the beams shall be equivalent to those of beams of mild steel.

Pontoon covers

5.4.1 Where pontoon covers of mild steel are used in place of portable beams and covers, their strength shall be such as to withstand the assumed load given in Table 1, and the product of the maximum stress thus calculated and the factor 5 shall not exceed the minimum ultimate strength of the material.

5.4.2 Such pontoon covers shall be so designed as to limit the deflection to not more than 0.0022 times the span under the assumed load in Table 1 appropriate to the pontoon cover.

5.4.3 Mild steel plating forming the tops of such covers shall not be less in thickness than 1 per cent of the spacing of the stiffeners or 6 millimetres, whichever is the greater.

5.4.4 In the case of pontoon covers not made of mild steel, the strength and stiffness of the cover shall be equivalent to those of a cover of mild steel.

Carriers or sockets

5.5 Carriers or sockets for portable beams shall be of substantial construction and provide efficient means for the 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.

Cleats

5.6 Cleats shall be set to fit the taper of the wedges. They shall be at least 65 millimetres wide and spaced not more than 600 millimetres, centre to centre. The end cleats along each side or end of the hatchway shall not be more than 150 millimetres from the hatch corners.

Battens and wedges

5.7 Battens and wedges shall be efficient for their purpose and in good condition. Wedges shall be of tough wood or equivalent material cut to a taper of not more than 1 in 6 and shall not be less than 13 millimetres thick at the toes.

Tarpaulins

5.8 At least two layers of tarpaulins shall be provided for every hatchway. They shall be waterproof, in good condition, and have satisfactory strength and quality.

Security of hatchway covers

5.9.1 Except as otherwise provided in subparagraph 5.9.2, steel bars shall be provided for every hatchway to ensure that each section of hatchway covers can be efficiently and independently secured after the tarpaulins have been battened down and that hatchway covers of more than 1.5 metres in length are secured by at least two such bars.

5.9.2 Bars of material other than steel, or means of securing hatchway covers otherwise than by bars, may be used provided —

- (a) in the case of the former the strength and stiffness of the bars used are equivalent to those of steel bars;
- (b) in either case the degree of security so achieved is not less than that which would be achieved by the use of steel bars.

Hatchways closed by weathertight covers of steel or equivalent material fitted with gaskets and clamping devices

Coamings

6.1.1 Except as otherwise provided in subparagraph 6.1.2, every hatchway shall have a coaming of substantial construction the height of which above the deck shall be at least-

- (a) 600 millimetres, where the hatchway is in Position 1;
- (b) 450 millimetres, where the hatchway is in Position 2.

6.1.2 A hatchway may have a coaming of less than the height applicable under the provisions of subparagraph 6.1.1, or in exceptional circumstances a coaming may be dispensed with altogether, provided that-

- (a) the safety of the ship will not be impaired in the worst sea or weather conditions likely to be encountered by the ship in service;
- (b) when any coaming is fitted it shall be of substantial construction.

Weathertight covers

6.2.1 The strength of every cover of mild steel shall be such as to withstand the assumed load given in Table 1, and the product of the maximum stress thus calculated and the factor 4.25 shall not exceed the minimum ultimate strength of the material. Every such cover shall be so designed as to limit the deflection under such a load to not more than 0.0028 times the span.

6.2.2 Every such cover made of materials other than mild steel shall have a strength and stiffness equivalent to that required for a cover of mild steel.

6.2.3 Every cover shall be fitted with efficient means by which it can be secured and made weathertight.

6.2.4 Mild steel plating forming the top of any cover shall be not less in thickness than one per cent of the spacing of the stiffeners or 6 millimetres whichever is the greater.

Machinery space openings

7.1 Every machinery space opening situated in Position 1 or Position 2 shall be efficiently framed and enclosed by a steel casing of substantial strength, account being taken of the extent, if any, to which the casing is protected by other structures.

7.2 Every doorway in a casing referred to in the subparagraph 7.1 shall be fitted with a steel watertight door having a sill the height of which shall be at least —

- (a) 600 millimetres above the deck, where the opening is in Position 1;
- (b) 380 millimetres above the deck, where the opening is in Position 2.

7.3 Every opening in such a casing other than a doorway shall be provided with a permanently attached cover of steel fitted with efficient means by which it can be secured and maintained weathertight and, except in the case of a cover consisting of a plate secured by bolts, is capable of being operated from either side of the opening.

7.4 Every fiddley, funnel or machinery space ventilator situated in an exposed position on the freeboard deck or on a superstructure deck shall have a coaming of such a height above the deck as will provide adequate protection having regard to its position.

Miscellaneous openings in freeboard and superstructure decks

8.1 Every manhole and flush scuttle in Position 1 or Position 2 shall be provided with a substantial cover fitted with efficient means to secure and maintain it watertight. Unless secured by closely spaced bolts, every such cover shall be permanently attached by a chain or equivalent means so as to be available for immediate use at all times.

8.2 Every opening in a deck other than a hatchway, machinery space opening, manhole or flush scuttle shall-

- (a) where situated in the freeboard deck, be protected either by an enclosed superstructure or by a deckhouse or companionway equivalent in strength and weathertightness to an enclosed superstructure;
- (b) where situated in an exposed position —
 - (i) in a deck over an enclosed superstructure and giving access to space within that superstructure; or
 - (ii) on top of a deckhouse on the freeboard deck and giving access to space below that deck;

be protected by an efficient deckhouse or companionway fitted with weathertight doors;

8.2.3 where situated in an exposed position in a deck above the deck over an enclosed superstructure and giving access to space within that superstructure, be protected either in accordance with the requirements of subparagraph 8.2.2 or to such lesser extent as may be adequate having regard to its position.

8.3 Every door in a companionway, deckhouse or enclosed superstructure referred to in subparagraph 8.2.1 or 8.2.2 shall have a sill the height of which shall be at least-

- (a) 600 millimetres, where the structure is in Position 1;
- (b) 380 millimetres, where the structure is in Position 2.

Ventilators

9.1.1 Except as otherwise provided in subparagraph 9.1.2 below, every ventilator in Position 1 or Position 2 leading to spaces below the freeboard deck or below the deck of an enclosed superstructure shall have a coaming of steel or equivalent material, substantially constructed and efficiently connected to the deck. The height of such coamings shall be at least-

- (a) 900 millimetres above the deck, where the ventilator is in Position 1;
- (b) 760 millimetres above the deck, where the ventilator is in Position 2.

9.1.2 Where the coaming for any ventilator referred to in subparagraph 9.1.1 above is situated in a position in which it will be especially exposed to weather and sea the height of the coaming shall be increased by such an amount as is necessary to provide adequate protection having regard to its

position.

9.2 Where the coaming of any ventilator referred to in the subparagraph 9.1 exceeds 900 millimetres in height above the deck it shall be efficiently supported by stays, brackets or other means.

9.3 Every ventilator in Position 1 or Position 2 which passes through a superstructure, other than an enclosed superstructure, shall have a coaming of steel or equivalent material at the freeboard deck substantially constructed and efficiently connected to that deck and at least 900 millimetres in height above that deck.

9.4 Subject to subparagraph 9.5, every ventilator opening in Position 1 or Position 2 shall be provided with an efficient appliance by which it can be closed and secured weathertight. Every such closing appliance provided on board a ship of not more than 100 metres in length shall be permanently attached and, in the case of any other ship, shall either be so attached or be conveniently stowed near to the ventilator for which it is provided.

9.5.1 A ventilator in Position 1 the coaming of which exceeds 4.5 metres in height above the deck and a ventilator in Position 2 the coaming of which exceeds 2.3 metres in height above the deck, need not be fitted with a closing appliance unless the fitting of such an appliance is considered necessary by the Administration in order to provide adequate protection.

9.5.2 A ventilator leading to a battery room shall not be fitted with a closing appliance.

Air pipes

10.1 The exposed parts of any air pipe leading to a ballast or other tank and extending above the freeboard deck or a superstructure deck shall be of substantial construction.

10.2 The exposed opening of any such air pipe shall be fitted with efficient means of closing the opening weathertight, which shall be permanently attached so as to be ready for immediate use.

10.3 Subject to subparagraph 10.4, the height above the deck of the exposed opening of any such airpipe shall be —

- (a) at least 760 millimetres, where that deck is the freeboard deck;

(b) at least 450 millimetres, where that deck is a superstructure deck or, where the superstructure is of less than standard height, such height as is necessary to adequately compensate for the lower height of the superstructure.

10.4 The heights given in subparagraph 10.3 may be reduced where—

(a) the working of the ship would be unreasonably impaired where those heights were adhered to; and

(b) the closing arrangements will ensure that the lower height is adequately compensated for.

Cargo ports and similar openings

11.1 Cargo ports and similar openings in the ship's side below the freeboard deck or in the sides or ends of superstructures which form part of the shell of the ship shall be compatible with the design of the ship and shall not exceed in number those necessary for the proper working of the ship.

11.2 Every such cargo port and opening shall be provided with a door or doors so fitted and designed as to ensure watertightness and structural integrity commensurate with the surrounding shell plating.

11.3 Unless the Administration permits, the lower edge of any such cargo port or opening shall not be so situated that it is below a line drawn parallel to the freeboard deck at side having as its lowest point the upper edge of the uppermost load line.

Scuppers, inlets and discharges

12.1 Subject to subparagraphs 12.4 and 12.9, every discharge led through the shell of a ship either-

(a) from spaces below the freeboard deck; or

(b) from within any enclosed superstructure, or from within any deckhouse on the freeboard deck which is fitted with weathertight doors;

shall be fitted in accordance with subparagraphs 12.2 and 12.3 with the means for preventing water from passing inboard.

12.2 Subject to subparagraph 12.3, this shall consist of a single automatic non-return valve fitted at the shell of the ship and having positive means of closure from a position or positions above the freeboard deck. Such positions shall be readily accessible at all times under service conditions and shall be provided with an indicator showing whether the valve is open or closed.

12.3.1 Where the vertical distance from the Summer load waterline to the inboard end of a discharge pipe exceeds 0.01(L) two automatic non-return valves having no positive means of closure may be fitted. One valve shall be situated as close to the ship's shell as practicable and be substantially connected to it and the inboard valve shall be so situated that at all times under service conditions it will be readily accessible for examination.

12.3.2 Where the vertical distance referred to in subparagraph 12.3.1 above exceeds 0.02(L) the Administration may permit a single automatic non-return valve having no positive means of closure, to be fitted. This valve shall be situated as close to the ship's shell as practicable and substantially connected to it.

12.4.1 The controls of any valve in an attended machinery space and serving a main or auxiliary sea inlet or discharge or bilge injection system shall be so sited as to be readily accessible for examination at all times under service conditions.

12.4.2 The controls of any valve in an unattended machinery space and serving a sea inlet or discharge or bilge injection system shall be so sited as to be readily accessible at all times under service conditions, particular attention being paid in this regard to possible delay in reaching or operating the controls. In addition, the machinery space in which the valve is situated shall be equipped with an efficient warning device to give warning at suitable control positions of any entry of water into the machinery space other than water resulting from the normal operation of machinery.

12.4.3 Valves referred to in subparagraph 12.4.1 and 12.4.2 above shall be equipped with an indicator showing whether the valve is open or closed.

12.5 Subject to subparagraph 12.6 every scupper and discharge pipe originating at any level and penetrating the shell of the ship either-

- (a) more than 450 millimetres below the freeboard deck; or

(b) less than 600 millimetres above the Summer load waterline;

shall be equipped with an automatic non-return valve situated as close to the ship's shell as practicable and substantially connected thereto.

12.6 Subparagraph 12.5 shall not apply —

(a) where the scupper or discharge pipe is fitted with the means for preventing water from passing inboard in accordance with the provisions of subparagraphs 12.1 to 12.3; or

(b) where the piping of the scupper or discharge pipe is of substantial thickness;

12.7 Every scupper leading from a superstructure other than an enclosed superstructure or from a deckhouse not fitted with weathertight doors, shall be led overboard.

12.8 All shell fittings and the valves required by this paragraph shall be of steel, bronze or other suitable ductile material, and all pipes referred to in this paragraph shall be of steel or equivalent material.

12.9 In ships constructed on or after 8th June 2000 scuppers led through the shell from enclosed superstructures used for the carriage of cargo shall be permitted only where the edge of the freeboard deck is not immersed when the ship heels 50 either way. In other cases the drainage shall be led inboard to a suitable space, or spaces, of adequate capacity having a high water level alarm and provided with suitable arrangements for discharge overboard.

Side scuttles

13.1 Every side scuttle to a space below the freeboard deck or to a space within an enclosed superstructure shall be fitted with a hinged inside deadlight so that it can be effectively closed and secured watertight.

13.2 No side scuttle shall be fitted in a position such that its sill will be below a line drawn parallel to the freeboard deck at side and having its lowest point-

(a) 2.5 per cent of the breadth of the ship above the Summer load waterline, or Summer Timber load waterline, where assigned; or

- (b) 500 millimetres above the Summer load waterline, or Summer Timber load waterline, where assigned;

whichever is the greater distance.

13.3 Every side scuttle, glass and deadlight, where fitted, shall be of substantial construction and be efficiently fitted.

Freeing ports and arrangements

14.1 Where bulwarks on the weather portions of the freeboard deck, a raised quarter deck or a superstructure deck form wells, efficient provision shall be made for rapidly freeing the decks of water in bulk and for draining them, and in particular the requirements set out in subparagraphs 14.2 to 14.9 shall be complied with.

14.2 Except as otherwise provided in subparagraphs 14.4 and 14.5, the freeing port area (A) for each well shall-

- (a) where the well is on the freeboard deck or on a raised quarter deck, be not less than the area ascertained in accordance with subparagraph 14.3; and
- (b) where the well is on a superstructure deck, other than a raised quarter-deck be not less than one half of the area given by subparagraph 14.3.

14.3.1 Subject to subparagraph 14.3.3 below, where the length (1) of a bulwark in the well is 20 metres or less-

$$(A) = 0.7 + 0.035 (1) \text{ (square metres); and}$$

14.3.2 Subject to subparagraph 14.3.3 below, where (1) exceeds 20 metres,

$$(A) = 0.07 (1) \text{ (square metres).}$$

The length (1) need in no case be greater than $0.7(L)$.

14.3.3 Where the bulwark is more than 1.2 metres in average height the required area shall be increased by 0.004 square metres per metre of length of well for each 0.1 metre difference in height. Where the bulwark is less than 0.9 metre in average height, the required area may be decreased

by 0.004 square metre per metre of length of well for each 0.1 metre difference in height.

14.4.1 Where the deck on which the well is situated has no sheer, the freeing port area shall be the area ascertained in accordance with subparagraph 14.3 increased by 50 per cent.

14.4.2 Where the deck on which the well is situated has sheer less than standard sheer, the freeing port area shall be the area ascertained in accordance with subparagraph 14.3 increased by a percentage to be obtained by linear interpolation.

14.4.3 Where the deck on which the well is situated has sheer, two thirds of the freeing port area shall be situated in the half of the well which is nearest to the lowest point of the sheer.

14.5 The lower edge of every freeing port shall be as near to the deck as practicable.

14.6 Every freeing port more than 230 millimetres in depth shall be protected by rails or bars so fixed that the distance between the lowest rail or bar and the lower edge of the freeing port does not exceed 230 millimetres.

14.7 Every freeing port fitted with a shutter shall have sufficient clearance to prevent jamming of the shutter, and the shutter hinges shall have pins or bearings of efficient non-corrodible material.

14.8 Efficient provision shall be made for freeing water from any superstructure other than an enclosed superstructure.

14.9 Where a ship fitted with a trunk does not comply with the requirements of paragraph 10.2.2.6 of the First Schedule, "Freeboards", or where continuous or substantially continuous hatchway side coamings are fitted between detached superstructures the minimum area of the freeing port openings shall be calculated from the following table:

BREADTH OF HATCHWAY OR TRUNK IN RELATION TO THE BREADTH OF SHIP	AREA OF FREEING PORTS IN RELATION TO THE TOTAL AREA OF THE BULWARKS
40% or less	20%
75% or more	10%

The area of freeing ports at intermediate breadths shall be obtained by

linear interpolation.

Protection of the crew

15.1 Every deckhouse used for the accommodation of members of the crew shall be of efficient construction.

15.2 Except as otherwise provided in subparagraph 15.3, all exposed parts of the freeboard deck and of every superstructure deck shall be fitted at their perimeter with efficient guard rails or guard wires and stanchions complying with the requirements of subparagraph 15.4, or with bulwarks. In either case this protection shall be at least 1 metre in height from the deck.

15.3 The height specified in subparagraph 15.2 may be reduced at a particular point where-

- (a) the normal working of the ship would be unreasonably impeded;
and
- (b) adequate protection is provided at that point.

15.4 Guard rails or guard wires fitted in accordance with subparagraph 15.2 shall consist of courses of rails or wires supported by stanchions efficiently secured to the deck. The opening between the lowest course of the rails or wires and the deck shall not exceed 230 millimetres in height and no opening above that course of rails or wires shall exceed 380 millimetres in height. Where the ship has rounded gunwales the stanchions shall be secured at the perimeter of the flat of the deck.

15.5 Gangways, underdeck passages and all other means of access used by members of the crew to pass between their quarters, the machinery space and any other space in the ship in the course of their necessary work shall be so designed and constructed, and be fitted, where necessary, with life lines, access ladders, guard rails, guard wires, hand rails or other safety fittings, as to afford effective protection for the crew.

15.6 Deck cargo carried on any ship shall be so stowed that any opening which is in way of the cargo and which gives access to and from the crew's quarters, the machinery space and all other parts used in the necessary work of the ship, can be properly closed and secured against the admission of water. Effective protection for the crew in the form of guard rails or life lines shall be provided above the deck cargo where there is no convenient passage on or below the deck of the ship.

15.7 The requirements of this paragraph shall not apply in the case of unmanned barges.

PART II- SPECIAL REQUIREMENTS APPLICABLE TO TYPE “A” SHIPS

Application

16. The requirements of paragraphs 17 to 20 apply only to Type “A” ships.

Machinery casings

17.1 Subject to subparagraph 17.2. every casing enclosing a machinery space opening in Position 1 or Position 2 shall be protected by either-

- (a) an enclosed poop or bridge of at least standard height; or
- (b) a deckhouse of equal height and equivalent strength and weathertightness.

17.2 Subparagraph 17.1 shall not apply and the casing need not be protected where-

- (a) there is no opening in the casing which gives direct access from the freeboard deck to the machinery space; or
- (b) the only opening in the casing has a steel weathertight door and leads to a space or passage way which is as strongly constructed as the casing and is separated from the stairway to the machinery space by a second steel weathertight door.

Gangway and access

18.1 References in this paragraph to a poop or detached bridge apply also to a deckhouse fitted in lieu of and serving the purpose of a poop or detached bridge.

18.2 Access between the poop and the detached bridge shall be by means of either-

- (a) a permanent and efficiently constructed gangway of substantial strength. The gangway shall be at the level of the superstructure deck and have a platform at least 1 metre in width and of non-slip

material. Efficient means of access from gangway level to the deck shall be provided at each terminal point. The platform shall be fitted on each side throughout its length with guard rails or guard wires supported by stanchions. Such rails or wires shall consist of not less than 3 courses, the lowest being not more than 230 millimetres, and the uppermost being at least 1 metre above the platform, and no intermediate opening being more than 380 millimetres in height. Stanchions shall be at intervals of not more than 1.5 metres; or

- (b) an underdeck passage connecting and providing unobstructed access between those structures and complying with the following requirements —
 - (a) the passage and all its fittings shall be oil and gas tight;
 - (b) the passage shall be well lighted, and be fitted with efficient gas detection and ventilation systems;
 - (c) it shall be situated immediately below the freeboard deck;
 - (d) its distance from the shell plating shall at no point throughout its length be less than one fifth of the breadth of the ship. Alternatively two underdeck passages may be provided one to port and one to starboard each of which shall comply with the requirements of subparagraphs 18.2(a), 18.2(b) and 18.2(c) above;
 - (e) means of exit from the passage to the freeboard deck shall be-
 - (i) so arranged as to be as near as practicable to the working areas to be used by the crew;
 - (ii) in no case be more than 90 metres apart; and
 - (iii) fitted with efficient means of closing which are capable of quick release and operable from either side;
 - (f) openings in the freeboard deck corresponding to the means of exit referred to in subparagraph 18.2(e) above shall be protected in accordance with the requirements of paragraph 8.2.1.
 - (g) equivalent means of access.

18.3 In adverse weather conditions, where the crew in the course of their duties may be required to go to working areas forward of the detached

bridge, or forward of the poop in cases where there is no detached bridge, access shall be by means of-

- (a) a gangway complying with the requirements of subparagraph 18.2(a);
- (b) an underdeck passage complying with the requirements of subparagraph 18.2(b); or
- (c) a walkway complying with the following requirements-
 - (i) be not less than 1 metre in width and be situated on or as near as practicable to the centre line of the ship;
 - (ii) where obstructed by pipes or other fittings of a permanent nature, be provided with efficient means of passage over such obstruction.
 - (iii) be fitted on each side and throughout its length with guard rails or guard wires complying with the requirements in subparagraph 18.2(a);
 - (iv) have openings in these guard rails or guard wires which give access to and from the freeboard deck to the working areas used by the crew. These openings shall be on alternate sides of the walkway and be situated not more than 90 metres apart on either side;
 - (v) where the length of exposed deck to be traversed by the crew exceeds 70 metres, shelters of substantial construction shall be set in way of the walkway at intervals not exceeding 45 metres, every such shelter being capable of accommodating at least one person and be so constructed as to afford weather protection on the forward, port and starboard sides.

18.4 The requirements of this paragraph shall not apply in the case of unmanned barges.

Hatchway covers

19. The covers of hatchways in exposed positions on the freeboard deck, on a forecastle deck or on the top of an expansion trunk shall be of steel, of efficient construction, and watertight when secured.

Freeing arrangements

20.1 All exposed parts of the freeboard deck and superstructure decks shall be fitted at their perimeter for at least half their length with guard rails or guard wires in lieu of bulwarks or with other equally effective freeing arrangements. Such guard rails or guard wires shall comply with the requirements set out in relation to such rails or wires in paragraph 18.2(a).

20.2 The upper edge of the sheer strake shall be as low as practicable.

20.3 Where superstructures of the ship are connected by a trunk, the exposed parts of the freeboard deck in way of the trunk shall be fitted at their perimeter throughout their length with guard rails or guard wires complying with the requirements set out in paragraph 18.2(a).

20.4 Where the ship is so constructed that notwithstanding the provision of freeing ports and arrangements it will be particularly subjected under service conditions to the building up of quantities of water on the freeboard deck efficient breakwaters shall be fitted in suitable positions on that deck.

PART III - SPECIAL REQUIREMENTS APPLICABLE TO CERTAIN TYPE "B" SHIPS

Application

21. The requirements of paragraphs 22 to 25 apply only to Type "B" ships assigned a reduced freeboard under the provisions of paragraph 5(3) of the First Schedule.

Gangway and access

22. The ship shall comply with the requirements of either-

(a) paragraph 18 as if it were a Type "A" ship; or

(b) paragraphs 23 and 24.

23.1 References in this paragraph to a poop or detached bridge apply also to a deckhouse fitted in lieu of and serving the purpose of a poop or detached bridge.

23.2 Access between the poop and the detached bridge shall be by means of an efficiently constructed gangway of substantial strength fitted on or near the centre line of the ship. The gangway shall be at least 1 metre in width and shall be fitted on each side and throughout its length with guard rails or guard wires complying with the requirements as set out in paragraph 18.2.1. Where the length of the gangway exceeds 70 metres, shelters complying with the requirements set out in paragraph 18.3(c)(v) shall be provided in way of the gangway.

24.1 In adverse weather conditions, where the crew in the course of their duties may be required to go to working areas forward of the detached bridge, or forward of the poop in cases where there is no detached bridge, access shall be by-

- (a) the means described in paragraph 18.3;
- (b) the means described in paragraph 23.2; or
- (c) equivalent means of access.

24.2 Where hatchway coamings are 600 millimetres or more in height, two walkways complying with the following requirements may be provided in lieu of subparagraph 24.1-

- (a) the walkways shall be efficiently constructed and of satisfactory strength;
- (b) the walkways shall each be at least 1 metre in width and be fitted on the freeboard deck alongside the outboard structure of the hatchway coamings, one to port and the other to starboard of the hatchways;
- (c) on the side outboard of the hatchways each walkway shall be fitted with guard rails or guard wire complying with the requirements set out in paragraph 18.2(a).

Freeing arrangements

25. The ship shall comply with the requirements of paragraph 20.4.

PART IV - SPECIAL REQUIREMENTS APPLICABLE TO SHIPS ASSIGNED TIMBER FREEBOARDS

Application and interpretation

26.1 The requirements of paragraphs 27 to 29 apply only to ships assigned Timber freeboards. The requirements of paragraph 30 shall apply in respect of timber deck cargo carried by a ship which is marked with timber load lines and is loaded to a depth greater than that indicated by the load line which, if timber load lines were not marked, would be appropriate in the circumstances.

26.2 In this Part except where the context otherwise requires-

“deck cargo” means cargo carried in any uncovered space on the deck of a ship;

“timber deck cargo” means deck cargo consisting of timber;

“weather deck” means the uppermost complete deck exposed to weather and sea, a deck which is stepped being taken to consist for this purpose of the lowest line of the deck and the continuation of that line parallel to the upper part of the deck.

Superstructures

27.1 The ship shall have a forecastle of not less than the standard height of an enclosed superstructure and not less in length than $0.07(L)$.

27.2 Where the ship is less than 100 metres in length it shall be fitted aft with either-

(a) a poop of not less than standard height; or

(b) a raised quarter deck having either a deck house or a strong steel hood, so that the total height is not less than the standard height of an enclosed superstructure.

Double bottom tanks

28. Double bottom tanks fitted within the midship half length of the ship shall have satisfactory watertight longitudinal subdivision.

Bulwarks, guard rails and stanchions

29. The ship shall be fitted with-
- (a) permanent bulwarks at least 1 metre in height which are specially stiffened on the upper edge and supported by strong bulwark stays attached to the deck, and provided with freeing ports complying with the requirements of paragraph 14.1 to 14.7; or
 - (b) efficient guard rails and stanchions at least 1 metre in height, of specially strong construction, and complying with the requirements of paragraph 15(4).

Stowage

Siting, distribution and stowage of timber deck cargo

- 30.1 The cargo shall be distributed and stowed so-
- (a) as to avoid excessive loading having regard to the strength of the deck and the supporting structure of the ship;
 - (b) as to ensure that the ship will retain adequate stability at all stages of the voyage having regard in particular to-
 - (i) the vertical distribution of the deck cargo,
 - (ii) the wind moments which can be expected on the voyage,
 - (iii) the losses of weight in the ship, including those due to the consumption of fuel and stores, and
 - (iv) possible increases of weight of the ship or deck cargo, including those due to the absorption of water and to icing;
 - (c) as not to impair the weathertight or watertight integrity of any part of the ship or its fittings or appliances, and to ensure the proper protection of ventilators and air pipes;
 - (d) that its height above the deck, or any other part of the ship on which it stands will not interfere with the navigation or working of the ship;
 - (e) that it will not interfere with, or obstruct access to, the ship's

steering arrangements, including emergency steering arrangements;

(f) that it is in accordance with paragraph 15.6.

Securing of deck cargo

30.2 Deck cargo shall be so secured as to ensure, as far as practicable, that there will be no movements of that cargo relative to the ship in the worst sea and weather conditions which may normally be expected on the voyage; and lashings and all fittings used for their attachment shall be of adequate strength for that purpose.

Maximum height of timber deck cargo

30.3 Timber deck cargo carried by a ship within a Winter seasonal area during the period specified as the Winter period shall be so stowed that at no point throughout its length does the height of the deck cargo above the level of the weather deck at side exceed one third of the extreme breadth of the ship.

Access

30.4.1 Where timber deck cargo occupies the whole or substantially the whole of the uncovered space on the deck of a ship, means of access shall be provided for the crew between their quarters and the machinery spaces and other parts of the ship used in the working of the ship, as follows.

30.4.2 The means of access shall be provided in the form of a walkway fitted over the timber deck cargo, and the walkway shall be-

- (a) as near as practicable on the centreline of the ship;
- (b) not less than 600mm in width, and
- (c) provided with a lifeline which, where practicable, shall be a wire rope set taut with a stretching screw.

30.4.3 In addition guard rails or lifelines spaced not more than 350 mm apart vertically shall be provided on each side of the deck cargo to a height of at least 1 metre above the cargo.

30.4.4 The stanchion supports to all guard rails and lifelines shall be so spaced as to prevent undue sagging.

Uprights

30.5 Where the nature of the timber is such that uprights are necessary in order to comply with subparagraphs 30.6 and 30.7, uprights shall be fitted which are of sufficient strength for the purpose. They shall be secured in

position by angles or metal sockets of sufficient strength for the purpose or by equivalent means and shall be so spaced as to provide efficient support taking into account the nature and length of the timber, so however that the space between any two uprights fore and aft shall not exceed 3 metres.

Stowage of timber deck cargo in relation to superstructures

30.6.1 Timber deck cargo stowed in any well between superstructures shall be stowed as solidly as possible so as to extend over the entire available length of the well to a height not less than the standard height of a superstructure other than a raised quarter deck.

30.6.2 Timber deck cargo stowed in a position having a limiting superstructure at the forward end but no such superstructure at the after end shall be stowed so as to extend over the entire available length between the superstructure and the after end of the aftermost hatchway, to the height and in the manner specified in subparagraph 30.6.1 above.

Securing of Timber deck cargo

30.7.1 Timber deck cargo shall be efficiently secured throughout its length by independent overall lashings spaced not more than 3 metres apart. Eye plates for these lashings shall be efficiently attached to the sheer strake or to the deck stringer plate at intervals of not more than 3 metres. The distance from an end bulk head of a superstructure to the first eye plate shall be not more than 2 metres. Where there is no bulkhead, eye plates and lashings shall be provided at distances of 0.6 metres and 15 metres from the ends of the timber deck cargo.

30.7.2 Lashings shall be of not less than 19 millimetres close link chain or of flexible wire rope of equivalent strength, fitted with sliphooks and turnbuckles so positioned as to be accessible at all times. Wire rope lashings shall have a length of long link chain sufficient to permit the length of lashings to be regulated.

30.7.3 When timber is in lengths less than 3.6 metres the spacing of the lashings shall be reduced or suitable provision made to suit the length of timber.

PART V - GENERAL

Equivalence

31. The Administration may -

- (a) allow any fitting, material, appliance or apparatus to be fitted in a ship, or allow other provisions to be made in a ship, in the place of

any fitting, material, appliance, apparatus or provision respectively which is required under any of the provisions of the Regulations, where satisfied by trial or otherwise that it is at least as effective as that so required; or

- (b) allow in any exceptional case departure from the requirements of any of the said provisions on condition that the freeboards to be assigned to the ship are increased to such an extent as to satisfy the Administration that the safety of the ship and protection afforded to the crew will be no less effective than would be the case where the ship fully complied with those requirements and there were no such increase of freeboards.

FOURTH SCHEDULE

(regulation 22(1))

RECORD OF PARTICULARS MERCHANT SHIPPING (LOAD LINE) REGULATIONS 2014

RECORD OF PARTICULARS RELATING TO CONDITIONS OF ASSIGNMENT

In this record, references to regulations are references to the regulations set out in Annex I to the Convention of 1966, and reference to paragraphs are references to paragraphs of the Third Schedule (Conditions of Assignment).

Name of ship

Port of registry

Nationality

Distinctive number or letters

Shipbuilders

Yard number

Date of Build/conversion

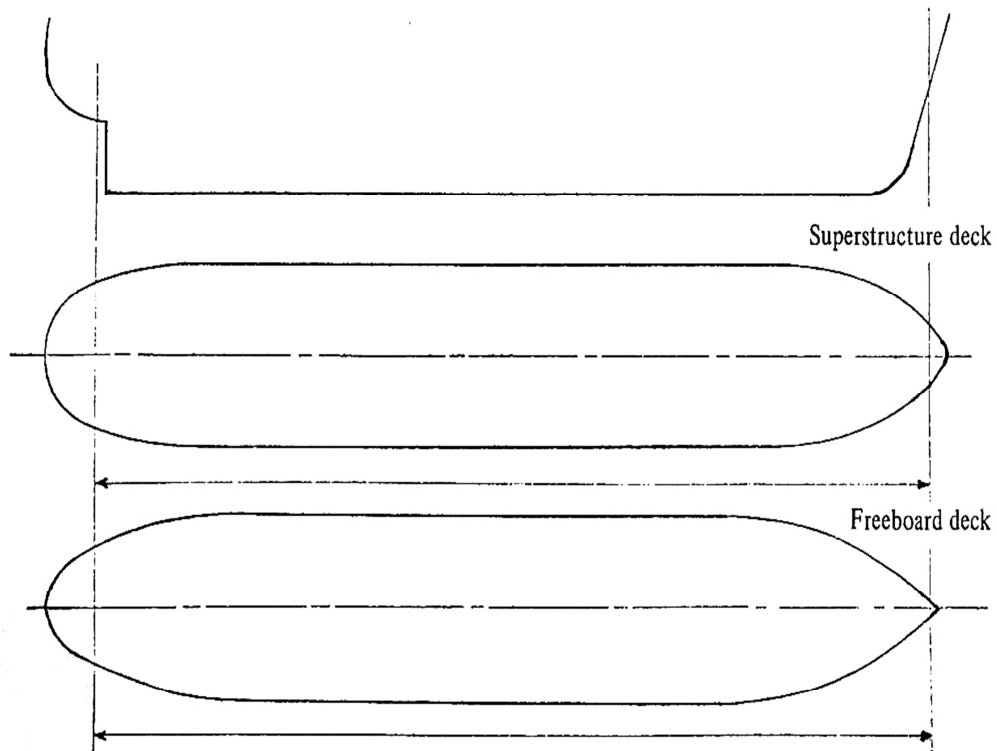
Freeboards assigned as a ship of Type

Classification

Date and place of initial survey

A plan of suitable size may be attached to this report in preference to the sketches on this page

Disposition and dimensions of superstructures, trunks, deckhouses, machinery casings; extent of bulwarks, guard rails and wood sheathing on exposed deck, to be inserted in the diagrams and tables following; together with positions of hatchways, gangways, and other means for the protection of the crew; cargo ports, bow and stern doors, side scuttles, scuppers, ventilators, air pipes, companionways, and other items that would affect the seaworthiness of the ship.



(See the Third Schedule to the Merchant Shipping (Load Line) Regulations 2014, paragraphs 7 & 8)

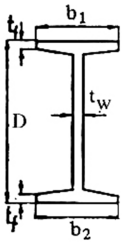
**DOORWAYS IN SUPERSTRUCTURES, EXPOSED MACHINERY CASINGS AND DECKHOUSES PROTECTING OPENINGS IN FREEBOARD AND SUPERSTRUCTURE DECKS
(regulations 12, 17, and 18)**

LOCATION	REF NO. ON SKETCH OR PLAN	NUMBER AND SIZE OF OPENINGS	HEIGHT OF SILLS	CLOSING APPLIANCES	
				TYPE AND MATERIAL	NUMBER OF CLIPS
In forecastle bulkhead					
In bridge forward bulkhead					
In bridge after bulkhead					
In raised quarter deck bulkhead					
In poop bulkhead					
In exposed machinery casings on freeboard or raised quarter decks					
In exposed machinery casings on superstructure decks					
In machinery casings within superstructures or deckhouses on freeboard deck					

In deckhouses in Position 1 enclosing openings leading below freeboard deck					
In deckhouses in Position 2 enclosing openings leading within enclosed superstructures or below freeboard deck					
In exposed pump room casings					

(See the Third Schedule to the Merchant Shipping (Load Line) Regulations 2014, paragraph 5)

HATCHWAYS AT POSITIONS 1 AND 2 CLOSED BY PORTABLE COVERS AND SECURED WEATHERTIGHT BY TARPAULINS AND BATTENING DEVICES (regulation 15)

<i>Position and Reference No. on Sketch or Plan</i>							
<i>Dimensions of clear openings at top of coaming</i>							
<i>Height of coamings above deck</i>							
PORTABLE BEAMS	Number						
	Spacing						
	$B_1 \times t_f$						
	$D \times t_w$						
	$b_2 \times t_f$						
	Bearing surface						
Means of securing each beam							
PORTABLE COVERS	Material						
	Thickness						
	Direction fitted						
	Bearing surface						
Spacing of cleats							
TARPAULINS	No. of layers						
	Material						

Means of securing each section of covers

Are wood covers fitted with galvanized end bands

(See the Third Schedule to the Merchant Shipping (Load Line) Regulations 2014, paragraphs 7 and 8)

HATCHWAYS AT POSITIONS 1 AND 2 CLOSED BY WEATHERTIGHT COVERS OF STEEL (OR OTHER EQUIVALENT MATERIAL) FITTED WITH GASKETS AND CLAMPING DEVICES (Regulation 16)

Position and reference No. on Sketch or Plan						
Dimensions of clear opening at top of coaming						
Height of coaming above deck						
Type of cover or Patent Name						
Material						

Position and reference No. on Sketch or Plan						
Dimensions of clear opening at top of coaming						
Height of coaming above deck						
Type of cover or Patent Name						
Material						

(See the Third Schedule to the Merchant Shipping (Load Line) Regulations 2014, paragraphs 7 and 8)

MACHINERY SPACE OPENINGS AND MISCELLANEOUS OPENINGS IN FREEBOARD AND SUPERSTRUCTURE DECKS (regulations 17 and 18)

Positions and Reference No. on Sketch or Plan						
---	--	--	--	--	--	--

Dimensions							
Height of coaming							
COVER	Material						
	How attached						
Number and spacing of Toggles							
Positions and Reference No. on Sketch or Plan							
Dimensions							
Height of coaming							
COVER	Material						
	How attached						
Number and spacing of Toggles							

Particulars of spurling pipe closing arrangements (See the Third Schedule to the Merchant Shipping (Load Line) Regulations 2014, paragraph 9)

**VENTILATORS ON FREEBOARD AND SUPERSTRUCTURE DECKS
(POSITIONS 1 AND 2)**

(regulation 19)

DECK ON WHICH FITTED	NUMBER FITTED	COAMING		TYPE (STATE PATENT NAME IF ANY)	CLOSING APPLIANCES
		DIMENSIONS	HEIGHT		

(See the Third Schedule to the Merchant Shipping (Load Line) Regulations 2014, paragraph 10)

**AIR PIPES ON FREEBOARD AND SUPERSTRUCTURE DECKS
(regulation 20)**

DECK ON WHICH FITTED	NUMBER FITTED	COAMING		TYPE (STATE PATENT NAME IF ANY)	CLOSING APPLIANCES
		DIMENSIONS	HEIGHT		

(See the Third Schedule to the Merchant Shipping (Load Line) Regulations 2014, paragraph 11)

CARGO PORTS AND OTHER SIMILAR OPENINGS
(regulation 21)

POSITION OF PORT	DIMENSIONS OF OPENING	DISTANCE OF LOWER EDGE FROM FREEBOARD DECK	SECURING DEVICES	REMARKS

(See the Third Schedule to the Merchant Shipping (Load Line) Regulations 2014, paragraph 12)

SCUPPERS, INLETS AND DISCHARGES
(regulation 22)

STATE IF DISCHARGE OR SCUPPER	NUMBER	PIPE			FROM	VERTICAL DISTANCE ABOVE TOP OF KEEL			NUMBER, TYPE AND MATERIAL OF DISCHARGE VALVES	POSITION OF CONTROLS
		DIAMETER	THICKNESS	MATERIAL		DISCHARGE		UPPERMOST VALVE		
						OUTLET IN HULL	INBOARD VALVE			

[NB. Extreme right hand column headed "Position of Controls"

NOTE: In Ro- ro ships, indicate how ready accessibility to scupper valves is ensured when vehicle space is filled

- S – Scupper MS – Mild Steel SD – Screw down
- D – Discharge CS – Cast Steel ANR – Automatic non- return
- GM – Gun Metal SD ANR – Screw down automatic non- return

Any other approved material to be designated.

(See the Third Schedule to the Merchant Shipping (Load Line) Regulations 2014, paragraph 13)

SIDE SCUTTLES

(regulation 23)

POSITION	NUMBER FITTED	CLEAR GLASS SIZE	FIXED OR OPENING	MATERIAL		TYPE & THICKNESS OF GLASS	STANDARDS USED & TYPE No.
				FRAME	DEADLIGHT		

Indicate the vertical distance between the freeboard deck and the lower sill of the side scuttle positioned at the greatest vertical distance below the freeboard deck

(See the Third Schedule to the Merchant Shipping (Load Line) Regulations 2014, paragraphs 14 and 20)

FREEING PORTS

(regulation 24)

	LENGTH OF BULWARK	HEIGHT OF BULWARK	NUMBER AND SIZE OF FREEING PORTS EACH SIDE	TOTAL AREA EACH SIDE	REQUIRED AREA EACH SIDE
SUPERSTRUCTURE DECK					
FORWARD WELL					
FREEBOARD DECK AFTER WELL					

State fore and aft position of each freeing port in relation to superstructure end bulkheads

After Well

Forward Well

Particulars of shutters, bars or rails fitted to freeing ports.

Height of lower edge of freeing port above deck.

(See the Third Schedule to the Merchant Shipping (Load Line) Regulations 2014, paragraphs 15, 18, 22, 23 and 24)

PROTECTION OF THE CREW

(regulations 25 and 26)

State particulars of bulwarks or guardrails on freeboard and superstructure decks:

State details of lifelines, walkways, gangways or underdeck passageways where required to be fitted:

(See the Third Schedule to the Model Shipping (Load Line) Regulations 2014 , paragraph 29)

TIMBER DECK CARGO FITTINGS
(regulation 44)

State particulars of uprights, sockets,
lashings, guardrails and lifelines;

OTHER SPECIAL FEATURES

INITIAL SURVEY

The conditions of assignment shown on this form are a record of the arrangements and fittings provided on the ship and are in accordance with the requirements of the relevant regulations set out in Annex I to the Convention of 1966 and of the Merchant Shipping (Load Line) Regulations 2014.

.....
(Surveyor's Signature)

.....
(Date)

SUBSEQUENT PERIODICAL SURVEYS

I have completed the periodical survey and am satisfied that the fittings and appliances are in accordance with the particulars shown in this record and are in good condition and that approved stability information and, where applicable, information relating to loading and ballasting of the ship is on board.

Signature	Date of Survey	Port of Survey
.....	
.....		
.....	
.....		
.....
.....		

FIFTH SCHEDULE

regulations 24(2), 24(3), 24(4)(a) and 24(5)(a)

STABILITY

PART I – INFORMATION AS TO STABILITY

The information relating to the stability of a ship to be provided for the master shall include the particulars specified below.

1. The ship's name, official number, port of registry, gross and register tonnages, principal dimensions, displacement, deadweight and draught to the Summer load line.
2. A profile view and, where necessary, plan views of the ship drawn to scale showing all compartments, tanks, storerooms and crew and passenger accommodation spaces, with their position relative to mid-ship.
 - 3.1 The capacity and the longitudinal and vertical centre of gravity of every compartment available for the carriage of cargo, fuel, stores, feedwater, domestic or water ballast.
 - 3.2 In the case of a vehicle ferry, the vertical centre of gravity of compartments designated for the carriage of vehicles shall be based on the estimated centres of gravity of the vehicles and not on the volumetric centres of the compartments.
- 4.1 The estimated total weight and the longitudinal and vertical centre of gravity of each such total weight of –
 - (a) the passengers and their effects; and
 - (b) the crew and their effects.
- 4.2 In estimating such centres of gravity, passengers and crew shall be assumed to be distributed about the ship in the spaces they will normally occupy, including the highest decks to which either or both have access.
- 5.1 The estimated weight and the disposition and centre of gravity of the maximum amount of deck cargo which the ship may reasonably be expected to carry on an exposed deck.

5.2 In the case of deck cargo, the arrival condition shall include the weight of water likely to be absorbed by the cargo. (For timber deck cargo the weight of water absorbed shall be taken as 15 per cent of the weight when loaded.)

6. A diagram or scale showing –

- (a) the load line mark and load lines with particulars of the corresponding freeboards; and
- (b) the displacement, tonnes per centimetre immersion, and deadweight corresponding to a range of mean draughts extending between the waterline representing the deepest load line and the waterline of the ship in light condition.

7.1 A diagram or tabular statement showing the hydrostatic particulars of the ship, including the heights of the transverse metacentre and the values of the moment to change trim one centimetre. These particulars shall be provided for a range of mean draughts extending at least between the waterline representing the deepest load line and the waterline of the ship in light condition.

7.2 Where a tabular statement is used to comply with subparagraph 7.1, the intervals between such draughts shall be sufficiently close to permit accurate interpolation.

7.3 In the case of ships having raked keels, the same datum for the heights of centres of buoyancy and metacentres shall be used as for the centres of gravity referred to in paragraphs 3, 4 and 5.

8. The effect on stability of free surface in each tank in the ship in which liquids may be carried, including an example to show how the metacentric height is to be corrected.

9.1 A diagram or table showing cross curves of stability, covering the range of draughts referred to in paragraph 7.1.

9.2 The information shall indicate the height of the assumed axis from which the righting levers are measured and the trim which has been assumed.

9.3 In the case of ships having raked keels and where a datum other than the top of keel has been used, the position of the assumed axis shall be clearly defined.

9.4 Subject to subparagraph 9.5, only enclosed superstructures and efficient trunks as defined in paragraph 10 of the First Schedule shall be taken into account in deriving such curves.

9.5 The following structures may be taken into account in deriving such curves where the Administration is satisfied that their location, integrity and means of closure will contribute to the ship's stability –

- (a) superstructures located above the superstructure deck;
- (b) deckhouses on or above the freeboard deck whether wholly or in part only;
- (c) hatchway structures on or above the freeboard deck.

9.6 Subject to the approval of the Administration in the case of a ship carrying timber deck cargo, the volume of the timber deck cargo, or a part thereof, may be taken into account in deriving a supplementary curve of stability appropriate to the ship when carrying such cargo.

9.7 An example shall be included to show how a curve of righting levers (GZ) may be obtained from the cross curves of stability.

9.8 In the case of a vehicle ferry or a similar ship having bow doors, ship-side doors or stern doors where the buoyancy of a superstructure is taken into account in the calculation of stability information, and the cross curves of stability are based upon the assumption that such doors are secured weathertight, there shall be a specific warning that such doors must be secured weathertight before the ship proceeds to sea.

10.1 The diagram and statements referred to in subparagraph 10.2 shall be provided separately for each of the following conditions of the ship –

- (a) *light condition*. Where the ship has permanent ballast, such diagram and statements shall be provided for the ship in light condition both with and without such ballast;
- (b) *ballast condition both on departure and on arrival*. It is to be assumed that on arrival oil fuel, fresh water, consumable stores and the like are reduced to 10 per cent of their capacity;
- (c) *condition on departure and on arrival when loaded to the Summer load line with cargo filling all spaces available for cargo*. Cargo shall be taken to be

homogeneous except where this is clearly inappropriate, for example, in cargo spaces which are intended to be used exclusively for the carriage of vehicles or of containers;

(d) *service loaded conditions both on departure and on arrival.*

10.2.1 A profile diagram of the ship drawn to a suitable small scale showing the disposition of all components of the deadweight.

10.2.2 A statement showing the lightweight, the disposition and the total weights of all components of the deadweight, the displacement, the corresponding positions of the centre of gravity, the metacentre and also the metacentric height (GM).

10.2.3 A diagram showing the curve of righting levers (GZ). Where credit is given for the buoyancy of a timber deck cargo the curve of righting levers (GZ) must be drawn both with and without this credit.

10.2.4 A statement showing the elements of stability in the condition compared to the criteria laid down in the Second Schedule paragraph 2.2.

10.3 The metacentric height (GM) and the curve of righting levers (GZ) shall be corrected for liquid free surface.

10.4 Where there is a significant amount of trim in any of the conditions referred to in subparagraph 10.1 the metacentric height and the curve of righting levers (GZ) may be required to be determined from the trimmed waterline.

10.5 Where in the view of the Administration the stability characteristics in either or both of the conditions referred to in subparagraph 10.1(c) are not satisfactory, such conditions shall be marked accordingly and an appropriate warning to the master shall be inserted.

11. A statement of instructions on appropriate procedures to maintain adequate stability in each case where special procedures are applied such as partial or complete filling of spaces designated for cargo, fuel, fresh water or other purposes.

12. The report on the inclining test and of the calculation derived from it to obtain information of the light condition of the ship.

**PART II – SHIPS IN RELATION TO WHICH ADMINISTRATION’S APPROVAL OF
THE STABILITY INFORMATION IS REQUIRED**

13. The ships referred to in regulation 32(3), (4)(a) and (5)(a) of the Regulations are as follows:

- (a) an oil tanker over 100 metres in length;
- (b) a bulk carrier, or an ore carrier, over 150 metres in length;
- (c) a single deck bulk carrier over 100 metres in length but not exceeding 150 metres in length;
- (d) a single deck dry cargo ship over 100 metres in length;
- (e) a purpose built container ship over 125 metres in length;
- (f) a column stabilised mobile offshore drilling unit; or
- (g) a column stabilised mobile offshore support unit.

14. In paragraph 13 –

“mobile offshore drilling unit” means a ship capable of engaging in drilling operations for the exploration or exploitation of resources beneath the sea bed such as liquid or gaseous hydrocarbons, sulphur or salt;

“mobile offshore support unit” means a ship used in connection with the offshore petroleum industry to provide ancillary services such as accommodation, cranes or repair facilities; and

“column stabilised” means constructed with the main deck of the unit connected to its underwater hull or footings by columns or caissons.

SIXTH SCHEDULE

regulation 28(2)

NOTICE OF LOAD LINES TO BE POSTED UP BEFORE SAILING

1. In this Schedule

“freeboard” means the distance measured vertically downwards amidships from the upper edge of the deck-line marked on the side of the ship to the surface of the water.

Availability of Standard Form

2. Copies of the “Draught of Water and Freeboard” Notice, an example of which is attached, are available from *the offices of the Administration*.

DRAUGHT OF WATER AND FREEBOARD

NOTICE

SHIP PORT OF REGISTRY GROSS
TONNAGE.....

- (1) Summer freeboard.....millimetres corresponding to a mean draught of.....millimetres
- (2) Winter freeboard.....millimetres corresponding to a mean draught of..... millimetres
- (3) Tropical freeboard.....millimetres corresponding to a mean draught of..... millimetres
- (4) Winter North Atlantic freeboard.....millimetres corresponding to a mean draught of.....millimetres
- (5) Allowance for fresh water for all freeboards other than Timber freeboards..... millimetres
- (6) Timber Summer freeboard..... millimetres corresponding to a mean draught of..... millimetres
- (7) Timber Winter freeboard..... millimetres corresponding to a mean draught of..... millimetres

(8) Timber Tropical freeboard.....millimetres corresponding to a mean draught of..... millimetres

(9) Timber Winter North Atlantic freeboard.....millimetres corresponding to a mean draught of..... millimetres

(10) Allowance for fresh water for Timber freeboards..... millimetres

Notes

1. The particulars to be given above of freeboards and allowances for fresh water to be taken from the load line certificate currently in force in respect of the ship.
2. All freeboards given on the load line certificate must be stated.
3. The mean draught to be given above is the mean of the draughts which would be shown on the scales of measurement on the stem and on the stern post of the ship if it were so loaded that the upper edge of the load line on each side of the ship appropriate to the particular freeboard were on the surface of the water.
4. Where the draught is shown on the scales of measurement on the stem and on the stern post of the ship in feet the mean draught must be given in millimetres.

PARTICULARS OF LOADING

1	2	3	4	5	6	7	8	9
DATE	PLACE	ACTUAL DRAFT			MEAN FREEBOARD		SIGNATURE OF MASTER AND AN OFFICER	
		FORWARD	AFT	MEAN	ACTUAL (See notes 1&2)	CORRECTED (See note 3)	MASTER	OFFICER

Notes

1. The actual mean freeboard (Column 6) is the mean of the freeboards on each side of the ship at the time when the ship is loaded and ready to leave.

2. Where the actual mean freeboard is less than the appropriate minimum saltwater freeboard as shown on the load line certificate there must be entered in Column 7 the corrected freeboard arrived at after making any allowances for density of water, rubbish to be discharged overboard and fuel, water and stores to be consumed on any stretch of river or inland water, being allowances duly entered in the ship's official log-book.
3. Where the actual mean freeboard is greater than the appropriate salt water freeboard, Column 7 need not be filled in.

SEVENTH SCHEDULE

regulation 29(1)

**THE GAMBIA
LOAD LINE CERTIFICATE**

Issued under the provisions of the Model Shipping (Load Line) Regulations 2014 under the authority of the Government of The Gambia by [official designation of the assigning Administration]

PARTICULARS OF SHIP

Name of Ship.....

Distinctive Number or Letters.....

Port of Registry.....

Length (L) as defined by regulation 2 of the Merchant Shipping (Load Line) Regulations 2010.....

Gross Tonnage.....

Freeboard assigned as : Type of ship.....

Freeboard from deck line

Load line

Tropical.....mm. (T)mm. above (S)

Summer.....mm. (S) Upper edge of line through centre of ring

Winte.....mm (W)mm. below (S)

Winter North Atlantic mm.....(WNA) mm. below (S)

Note: Freeboards and Load Lines which are not applicable need not be entered on the certificate.

Allowance for Fresh Water for all freeboards :.....mm.

The upper edge of the deck line from which these freeboards are measured is

Date of initial or renewal survey.....

THIS IS TO CERTIFY

that this ship has been surveyed and the freeboards and load lines shown above have been assigned in accordance with the Merchant Shipping (Load Line) Regulations 2014.

This certificate is valid untilsubject to annual surveys in accordance with these Regulations

Issued at.....on.....20.....

certificate

Signed

An authorised official issuing the

Name

Name of Ship _____

CONDITIONS:

--

ENDORSEMENT OF ANNUAL SURVEYS

This is to certify

That at an annual survey required by Regulation 4(1)(c) of the Merchant Shipping (Load Line) Regulations 2014 this ship was found to comply with the relevant requirements of those Regulations.

Place _____ Date _____

.....Name _____

Signature of an authorised official

Place _____ Date _____

.....Name _____

Signature of an authorised official

Place _____ Date _____

.....Name _____

Signature of an authorised official

Place _____ Date _____

.....Name _____

Signature of an authorised official

Notes

1. When a ship departs from a port situated on a river or inland water, deeper loading shall be permitted corresponding to the weight of fuel and all other materials required for consumption between the point of departure and the sea.
2. When a ship is in fresh water of unit density, the appropriate load line may be submerged by the amount of the freshwater allowance showed above. Where the density is other than unity, an allowance shall be made proportional to the difference between 1.025 and the actual density.
3. This certificate must be kept framed and posted up in some conspicuous place on board the ship, so long as it remains in force and the ship is in use.

Name of Ship

Annual survey in accordance with regulation 26(8)(c)

THIS IS TO CERTIFY

that at an annual survey in accordance with regulation 26(8)(c) of the Merchant Shipping (Load Line) Regulations 2014, the ship was found to comply with the relevant requirements of those Regulations

Place _____ *Date* _____

.....*Name* _____
Signature of an authorised official

Endorsement to extend certificate where valid for less than 5 years where regulation 26(3) applies

The Ship complies with the relevant requirements of the Merchant Shipping (Load Line) Regulations 2014, and this certificate shall, in accordance with regulation 26(3) of those Regulations, be accepted as valid until.....

Place _____ *Date* _____

.....*Name* _____
Signature of an authorised official

Endorsement where the renewal survey has been completed and Regulation 26(4) applies

The Ship complies with the relevant requirements of the Model Shipping (Load Line) Regulations 2014, and this certificate shall, in accordance with regulation 26(4) of those Regulations, be accepted as valid until.....

Place _____ *Date* _____

.....*Name* _____
Signature of an authorised official

Name of Ship

Endorsement to extend the validity of the certificate until reaching the port of survey or for a period of grace where regulation 26(5) or 26(6) applies

This certificate shall, in accordance with regulations 26(5)/26(6) of the Merchant Shipping (Load Line) Regulations 2014, be accepted as valid until.....*

Place _____ Date _____

.....Name _____
Signature of an authorised official

Endorsement for advancement of anniversary date where regulation 26(8)(a) applies

In accordance with regulation 26(8)(a) of the Merchant Shipping (Load Line) Regulations 2014, the new anniversary date is.....

Place _____ Date _____

.....Name _____
Signature of an authorised official

In accordance with regulation 26(8)(a) of the Model Shipping (Load Line) Regulations 2014, the new anniversary date is.....

Place _____ Date _____

.....Name _____
Signature of an authorised official

** Delete as appropriate*

THE GAMBIA LOAD LINE EXEMPTION CERTIFICATE

*Issued under the provisions of the Merchant Shipping (Load Line) Regulations 2014
under the authority of the Government of The Gambia by the Gambia Maritime
Administration*

PARTICULARS OF SHIP

Name of Ship _____

Distinctive Number or Letters _____

Port of Registry _____

<i>Length (L) in metres as defined by regulation 2 of the Merchant Shipping (Load Line) Regulations 2014</i>		<i>Gross Tonnage</i>	
--	--	----------------------	--

THIS IS TO CERTIFY

That the above-mentioned ship is exempt from the following provisions of the Merchant Shipping (Load Line) Regulations 2014-

--

SUBJECT TO THE FOLLOWING CONDITIONS

--

Date of initial or renewal survey _____

This certificate is valid until _____ *subject, where appropriate,*

To annual surveys in accordance with the Merchant Shipping (Load Line) Regulations 2014.

Issued at _____ *on* _____

.....*Name* _____

An authorised official of the Administration

Name of Ship

CONDITIONS (Continued):

ENDORSEMENT FOR ANNUAL SURVEYS

This is to certify

That at an annual survey required under regulation 4(1)(c) of the Merchant Shipping (Load Line) Regulations 2014, this ship continues to comply with the conditions under which the exemption was granted.

Place _____ *Date* _____

Signed.....*Name*_____

An authorised official of the Administration

Place _____ *Date* _____

Signed.....*Name*_____

An authorised official of the Department of Maritime Affairs

Place _____ *Date* _____

Signed.....*Name*_____

An authorised official of the Administration

Place _____ *Date* _____

Signed.....*Name*_____

An authorised official of the Administration

Name of ship

Annual survey in accordance with regulation 26(8)(c)

This is to certify

that at an annual survey in accordance with regulation 26(8)(c) of the Merchant Shipping (Load Line) Regulations 2014, the ship was found to comply with the relevant requirements of those Regulations

Place _____ Date _____

.....Name _____

An authorised official of the Administration

Endorsement to extend the certificate where valid for less than 5 years where regulation 26(3) applies

The Ship complies with the relevant requirements of the Merchant Shipping (Load Line) Regulations 2014, and this certificate shall, in accordance with regulation 26(3) of those Regulations, be accepted as valid until.....

Place _____ Date _____

.....Name _____

An authorised official of the Administration

Endorsement where the renewal survey has been completed and regulation 26(4) applies

The Ship complies with the relevant requirements of the Merchant Shipping (Load Line) Regulations 2014, and this certificate shall, in accordance with regulation 26(4) of those Regulations, be accepted as valid until.....

Place _____ Date _____

.....Name _____

An authorised official of the Administration

Name of Ship _____

Endorsement to extend the validity of the certificate until reaching the port of survey or for a period of grace where regulation 26(5) or 26(6) applies

This certificate shall, in accordance with regulations 26(5)/26(6) of the Merchant Shipping (Load Line) Regulations 2014, be accepted as valid until.....*

Place _____ Date _____

.....Name _____
Signature of an authorised official of the Administration

Endorsement for advancement of anniversary date where regulation 26(8)(a) applies

In accordance with regulation 26(8)(a) of the Merchant Shipping (Load Line) Regulations 2014, the new anniversary date is.....

Place _____ Date _____

.....Name _____
Signature of an authorised official of the Department of Maritime Affairs

In accordance with regulation 26(8)(a) of the Merchant Shipping (Load Line) Regulations 2014, the new anniversary date is.....

Place _____ Date _____

.....Name _____
Signature of an authorised official of the Administration

** Delete as appropriate*