CAYMAN ISLANDS

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THE MERCHANT SHIPPING LAW (2001 REVISION)

THE MERCHANT SHIPPING (LOAD LINE) REGULATIONS, 2002

ARRANGEMENT OF REGULATIONS

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PART I - General

The Governor in exercise of the powers conferred on him by sections 224 and 459(1)(d) of the Merchant Shipping Law (2001 Revision) makes the following Regulations:

Citation

1. These Regulations may be cited as the Merchant Shipping (Load Line) Regulations, 2002.

Definitions

2. (1) In these Regulations, except where the context otherwise requires -

"amidships" means the middle of the ship's length (L);

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

"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 "Cayman Islands Load Line Certificate";

"appropriate load lines" means the load lines directed to be marked on a ship pursuant to regulation 6(2)(b), or in the 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 marks" means the appropriate load lines, the deck-line and load line mark; "Assigning Authority" means the Director or any person authorised by the Director and includes in particular, if so authorised, Lloyd's Register of Shipping, Bureau Veritas, American Bureau of Shipping, Det Norske Veritas, Germanischer Lloyd, Registro Italiano Navale and any other Classification Society which may be authorised by the Director from time to time;

"Caymans Islands Load Line Certificate" means a certificate issued under regulation 6 other than an International Load Line Certificate;

"Cayman Islands Load Line Exemption Certificate" means a certificate issued under section 242(1)(b) of the Law;

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

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

"exclusive surveyor" means a surveyor appointed by and working exclusively for an Assigning Authority;

"exemption certificate" means an International Load Line Exemption Certificate or a Cayman Islands Load Line Exemption Certificate;

"freeboard" means the distance measured vertically downwards at amidships from the upper edge of the deck-line described in regulation 16 to the position at which the upper edge of the load line appropriate to the freeboard assigned to the ship is to be marked;

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“freeboard deck” means 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; or
(b) subject to the approval of the Assigning Authority, a deck lower than that described in paragraph (a), it being a complete and permanent deck which is continuous both in a fore and aft direction at least between the machinery space and peak bulkheads of the ship, and athwartships; and
(c) where a deck is stepped –
(i) in the case of the uppermost deck being taken as the freeboard deck in accordance with paragraph (a), the lowest line of the exposed deck and the continuation of that line parallel to the upper part of the deck is to be taken as the freeboard deck; and
(ii) when a lower deck is designated as the freeboard deck, the lowest line of the deck and the continuation of that line parallel to the upper part of the deck is to be taken as the freeboard deck; and
(d) when a lower deck is designated as the freeboard deck, in accordance with paragraph (b), any part of the hull which extends above the freeboard deck is to be treated as a superstructure for the purposes of the application of the requirements of these Regulations;

"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);

“international voyage” means a voyage between -

(a) a port in the Cayman Islands and a port outside the Cayman Islands; or
(b) a port in a Convention country (other than the Cayman Islands) and a port in any other country or territory (whether a Convention country or not) which is outside the Cayman Islands;

“Law” means the Merchant Shipping Law (2001 Revision);

"length" and "(*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 waterline, and 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 in the position of a load line specified in the appropriate load line certificate;

“load line certificate” means a load line certificate issued in accordance with these Regulations;

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“material date” for the purposes of the definitions of a new and an existing ship means -

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

“mean draught” means the mean of the draughts shown on the scales of measurement on the stem and on the stern post of the ship;

“mean freeboard” means the arithmetic mean of the freeboards measured on each side of the ship;

“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;

“moulded depth” 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) if the form at the lower part of the midship section of the ship is of a hollow character or if 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) if 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;

"new ship" means a ship whose keel is laid, or which is at a similar stage of construction, on or after the material date, and "existing ship" means a ship which is not a new ship;

“rake of keel” means the inclination of the keel to a horizontal baseline;

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

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

“superstructure” means a decked structure (including a raised quarterdeck) 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 percent of the breadth of the ship; and where the freeboard deck consists of a lower deck as described in paragraph (b) of the definition of “freeboard deck”, includes that part of the hull which extends above the freeboard deck;

“surveyor” means a surveyor appointed under section 414 of the Law, and for the purposes of these Regulations, includes an exclusive surveyor;

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"valid Convention certificate" means -

(a) an International Load Line Certificate (1966) or an International Load Line Exemption Certificate (1966), which is in force; or
(b) an International Load Line Certificate or an International Load Line Exemption Certificate, which is in force;

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

(2) In determining what is an international voyage no account shall be taken of a ship by reason of her being within the Cayman Islands or the territorial waters thereof if she would not have been there but for stress of weather or any other circumstances which neither the master nor the owner nor the charterer (if any) of the ship could have prevented or forestalled.

(3) A reference in these Regulations to the gross tonnage of a ship shall be construed as a reference to the tonnage of the ship as ascertained in accordance with the tonnage regulations.

(4) A reference in these Regulations to any provision of the 1966 Convention shall, in relation to any time after that provision has been amended in pursuance of Article 29 of that Convention, be construed as a reference to that provision as so amended.

Application

3. (1) These Regulations apply to Cayman Islands ships wherever they may be and to other ships whilst they are in Cayman Islands waters, but not to -

(a) ships of war;
(b) ships solely engaged in fishing;
(c) pleasure vessels not engaged in trade; or
(d) ships which do not proceed to sea.

(2) These Regulations shall also apply to ships which are not registered, whether in the Cayman Islands or elsewhere and wholly owned by persons each of whom either is resident in the Cayman Islands or by a body corporate which has its principal place of business in the Cayman Islands.

Application of codes, etc

4. (1) In respect of a ship of less than 24 metres in length which is not engaged on international voyages, where section 240(2) of the Law is not applicable, then with regard to the requirements for freeboard and load lines -

(a) if no cargo is carried and if not more than 12 passengers are carried, regulation 4 of the Merchant Shipping (Vessels in Commercial Use for Sport or Pleasure) Regulations, 2002 shall apply; or
(b) if it is a cargo ship, the CCSS Code shall apply.

(2) In respect of a ship of less than 24 metres in length which is engaged on international voyages, where section 240(1) of the Law is not applicable, then with regard to the requirements for freeboard and load lines -

(a) if no cargo is carried, and if not more than 12 passengers are carried, regulation 4 of the Merchant Shipping (Vessels in Commercial Use for Sport or Pleasure) Regulations, 2002 shall apply; or
(b) if it is a cargo ship, the CCSS Code shall apply.

(3) In respect of a vessel in commercial use which is 24 metres or more in length and does not carry cargo and more than 12 passengers then with regard to the requirements for freeboard and load lines -

(a) if it is engaged in coastal voyages, the relevant provisions of regulation 4 of the Merchant Shipping (Vessels in Commercial Use for Sport or Pleasure) Regulations, 2002 shall apply; or
(b) if it is engaged in international voyages, regulation 5 of the Merchant Shipping (Vessels in Commercial Use for Sport or Pleasure) Regulations, 2002 shall apply.

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(4) For the purposes of this regulation –

"CCSS Code" means the Code of Safety for Caribbean Cargo Ships adopted by the Committee of the Memorandum of Understanding on Port State Control in the Caribbean region.

Exemptions

5. The Director may grant exemptions from all or any of the provisions of these Regulations (as may be specified in the exemption certificate) on such terms (if any) as he may so specify and, subject to giving reasonable notice, may alter or cancel any such exemption.

PART II - Surveys and Certificates

Assignment of freeboards

6. (1) The Assigning Authority shall assign freeboards to a Cayman Islands ship in accordance with the requirements of these Regulations.

(2) The Assigning Authority shall -

Third Schedule
Fourth Schedule

(a) determine the particulars of the freeboards to be assigned in accordance with the provisions of the Third and Fourth Schedules;
(b) determine which of the load lines described in Part III are to be marked on the sides of the ship in accordance with the requirements of that Part;
(c) determine the position in which those load lines, the deck-line and the load line mark are to be so marked; and

Seventh Schedule

(d) complete a copy of the record of particulars, in the form set out in the Seventh Schedule, 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.

Initial, renewal and annual surveys

7. (1) A 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; this survey 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 paragraph (2)(b), (5), (6) or (7) of regulation 10 is applicable, which shall be such as to ensure that the structure, equipment, arrangements, materials and scantlings comply fully with the requirements of these Regulations; and
(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; and
(iv) information is provided in accordance with regulations 32 and 33.

(2) The owner and master shall ensure that after any of the surveys referred to in paragraph (1)(a) to (c) have been completed, no material alteration is made to the ship, its structure and equipment, without the approval of the Assigning Authority.

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

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(4) A reference in Part IX of the Law to periodical inspections shall, for the purposes of that Part of the Law and these Regulations, be construed as annual surveys within the meaning of paragraph (1)(c) of this Regulation.

Issue of appropriate certificates

8. (1) Subject to regulation 9, the Assigning Authority shall issue an International Load Line Certificate in the case of a Convention-size ship, or a Cayman Islands Load Line Certificate in the case of any other Cayman Islands ship which has been surveyed and marked in accordance with these Regulations.

(2) Where the certificate is-

(a) an International Load Line Certificate it shall be in the form prescribed by Annex III to the 1988 Protocol; and
(b) a Cayman Islands Load Line Certificate it shall indicate compliance with these Regulations and state -
(i) the particulars of the freeboards assigned;
(ii) the dates and places of periodical inspections; and
(iii) any conditions with which the ship has to comply.

(3) In the case of a ship that has transferred from the registry of the Government of another country to the Cayman Islands registry, the Assigning Authority, subject to such survey requirements it considers to be necessary, may issue an International Load Line Certificate for a period to be determined by the Assigning Authority, but for not longer than the period of validity of the certificate issued by or on behalf of the Government of that other country if it is satisfied that -

(a) the ship has already been subjected to satisfactory initial, periodical, intermediate, annual and additional surveys, as appropriate;
(b) the condition of the ship, including its structure and equipment, have been maintained so as to comply with the relevant regulations applicable to the ship; and
(c) after any of the surveys referred to in subparagraph (a) 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 other country, except by direct replacement.

Issue and form of exemption certificates

9. (1) Where a ship is exempted under these Regulations, the appropriate exemption certificate under section 242 of the Law shall be issued to the ship in the form prescribed by the 1966 Convention as amended by Annex III to the 1988 Protocol, and shall state the conditions with which the ship is to comply.

(2) Regulations 7, 8, 10, 11 and 12 shall apply in relation to an exemption certificate as they apply in relation to an appropriate certificate.

Duration and extension of certificates

10. (1) Subject to paragraphs (2), (4), (5) and (6), 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 7(1)(a) or (b), respectively.

(2) When the renewal survey referred to in regulation 7(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 previous certificate; and
(c) 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 completion of the renewal survey.

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(3) Where a certificate is issued for a period of less than five years, the Assigning Authority may extend the validity of the certificate beyond the expiry date to the maximum period specified in paragraph (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 Assigning Authority may extend the validity of the existing certificate for a period which shall not exceed five months. This 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 Assigning Authority may extend the validity of the certificate but this extension shall be granted only where it appears proper and reasonable to the Assigning Authority to do so for the purpose of allowing the ship to complete its voyage to the port in which it is to be surveyed. 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. 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.

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

(7) In special circumstances, as determined by the Assigning Authority, a new certificate need not be dated from the expiry of the previous certificate before the extension was granted, as required by paragraphs (2), (5) and (6). 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.

(8) If an annual survey is completed before the period specified in regulation 7(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 7(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 7(1)(c) are not exceeded.

Certificates ceasing to be valid and cancellation of certificates

11. (1) An appropriate certificate issued in respect of a Cayman Islands 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 7(1)(c)(ii) are not maintained in an effective condition;
(c) the certificate is not endorsed in accordance with regulation 7(3) to show the ship has been surveyed in accordance with regulation
7(1)(c);
(d) the structural strength of the ship is lowered to such an extent that the ship is unsafe;

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(e) a new certificate is issued in respect of the ship; or
(f) the ship ceases to be a Cayman Islands ship.

(2) The Director may cancel an appropriate certificate issued in respect of a Cayman Islands ship if he is satisfied that -

(a) the certificate was issued on false or erroneous information;
(b) information on the basis on 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 Director proposes to cancel a certificate, he shall first notify the owner in writing, specifying the grounds for the proposed cancellation.

(4) Subject to paragraph (5), the Director shall not cancel the certificate until the owner has been given a reasonable opportunity to make representations, and the Director has considered such representations.

(5) Paragraph (4) shall not apply where the Director considers that urgent safety considerations so require.

(6) The requirement that the notification referred to in paragraph (3) is to 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.

Surrender of cancelled certificates

12. The Director may require any certificate issued under these Regulations which has expired, ceased to be valid or been cancelled, to be surrendered as he directs.

Ships not registered in the Cayman Islands

13. (1) The Director may, at the request of the Government of a Convention country, survey a ship registered in that country and if satisfied that the requirements of the 1966 Convention or the 1966 Convention as amended by the Protocol of 1988 are complied with and that a survey has been satisfactorily completed in accordance with these Regulations, issue to the ship an International Load Line Certificate or an International Load Line Certificate 1966, as the case may be, and, where appropriate, endorse such certificate in accordance with the requirements of the 1966 Convention or the 1966 Convention as amended by the Protocol of 1988. A certificate issued in accordance with such a request shall contain a statement that it has been so issued and shall have the same effect as if it was issued by that Government and not by the Director.

(2) A Cayman Islands Load Line Certificate may be issued to a non- Cayman Islands ship which has been surveyed and marked in accordance with these Regulations.

(3) Subject to paragraph (4), a certificate issued under paragraph (2) shall be subject to the same conditions and have the same effect as a similar certificate issued to a Cayman Islands ship.

(4) Any certificate issued under paragraph (2) in respect of a ship registered in a country to which the 1966 Convention applies shall be valid only so long as the ship is not plying on international voyages, and shall be cancelled by the Director if he has reason to believe that the ship is plying on international voyages.

Provisions as to inspections

14. (1) A surveyor may inspect a ship for the purpose of ensuring that these Regulations have been complied with in respect of the ship.

(2) Notwithstanding paragraph (1), a surveyor authorised by the Director for the purpose may go on board any non-Cayman Islands ship to which the 1966 Convention applies for the purpose of verifying that there is in force a certificate or certificates required by these Regulations and if a valid Convention Certificate is produced, this inspection shall be limited to seeing that -

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(a) the ship is not loaded beyond the limits allowed by the certificate;
(b) lines are marked on the ship in the positions of the load lines specified in the certificate;
(c) no material alterations have taken place in the hull or superstructures of the ship which affect the basis on which any of those lines have been marked; and
(d) the fittings and appliances for the protection of openings, the guard rails, the freeing ports and the means of access to the crew's quarters have been maintained on the ship in as effective a condition as they were when the certificate was issued.

(3) Where on inspection the ship is found to have been so materially altered in respect of the matters referred to in paragraph (2)(c) or (d) that the ship is manifestly unfit to proceed to sea without danger to human life, it shall be deemed to be unsafe for the purposes of Part XI of the Law.

PART III - Load Lines and Marks

Marking

15. (1) The appropriate marks shall be marked by the owner on each side of the ship in accordance with the directions of the Assigning Authority 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 29, the ship shall be marked by the owner in accordance with regulation 22(4).

Deck Line

16. (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 so as to indicate the position of the freeboard deck.

(2) Subject to paragraph (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.

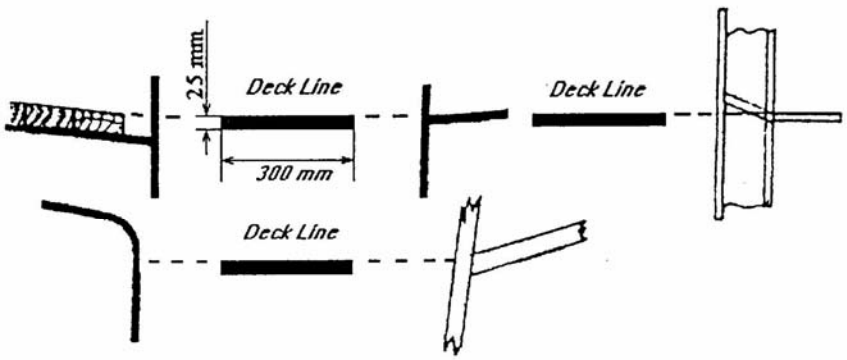

Figure 1: Deck-line

(3) Where the design of the ship, or other circumstances, render it impracticable to mark the deck-line in accordance with paragraph (2) the Assigning Authority may direct that it be marked by reference to another fixed point as near as practicable to the position described in paragraph (2), as also shown in Figure 1.

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Load line mark

17. 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. The centre of the ring shall be marked amidships vertically below the deck-line so that, except as otherwise provided in regulation 30, 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.

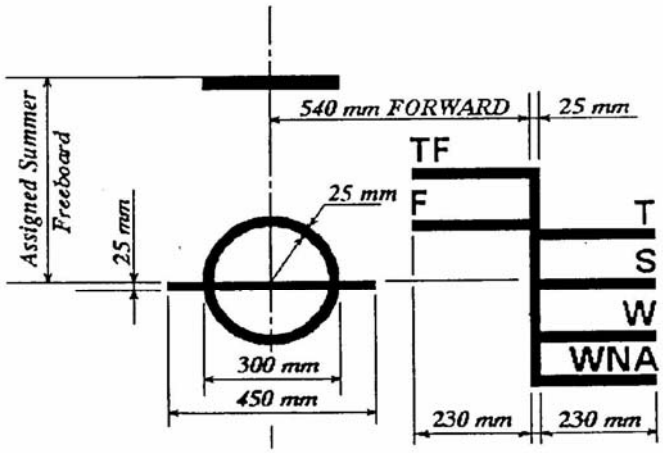

Figure 2: Load Line Mark and Lines to be used with this mark

Load lines

18 (1) Load lines indicate the maximum depth to which a ship may be loaded in the circumstances described in the First Schedule.

(2) Except as otherwise provided for in paragraph (4), regulation 19 and 30, 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. The individual load lines shall be as follows:

(a) the Summer load line, which shall extend forward of the vertical line corresponding horizontally with the line passing through the centre of the ring of the load line mark, and 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 said vertical line, and be marked TF.

(3) The maximum depth of loading referred to in paragraph (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.

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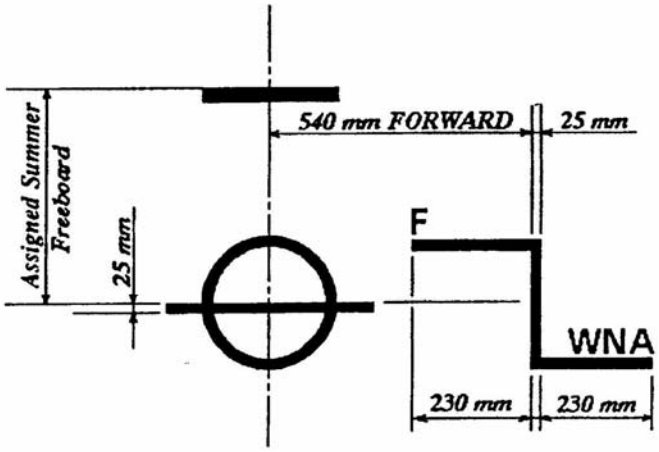

Figure 3: Load Line Mark and Lines for Sailing Ships

Timber load lines

19. (1) Timber load lines shown in Figure 4 shall consist of horizontal lines of the dimensions specified in respect of such lines in regulation 18(2), 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; and 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 said 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 the vertical line and be marked LF;
(e) the Freshwater 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.

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

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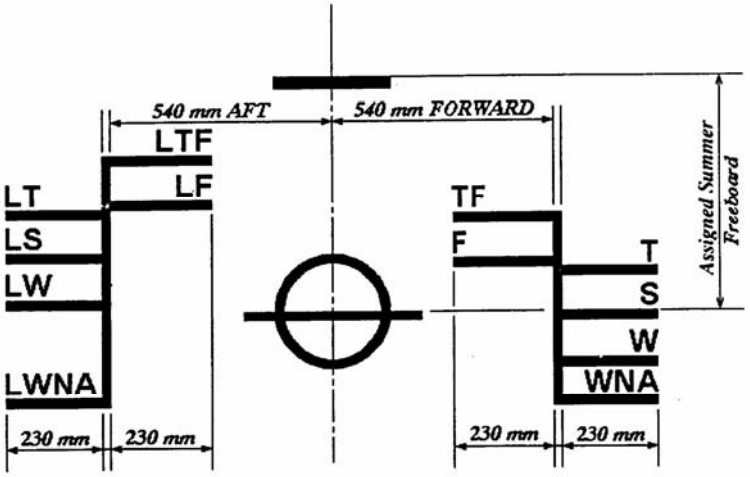

Figure 4: Timber Load Line Mark and Lines to be used with this mark

Appropriate load line First Schedule

20. The appropriate load line in respect of a ship varies at any particular place and time in accordance with the First Schedule.

Position of load lines

21. 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.

Method of marking

22. (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; 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; where the sides are of other materials to which the foregoing methods of marking cannot effectively be applied the marks shall be permanently affixed by bonding or some other effective method.

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

(4) Where an exemption certificate is issued in association with the assignment of special freeboards which are less than those required by regulation 29, 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 paragraph (2).

Authorisation of removal, etc., of appropriate marks

23. After the appropriate marks have been made on a ship, they shall not be concealed, removed, altered, defaced or obliterated except with the authority of the Assigning Authority.

Marking of Assigning Authority

24. (1) The identity of the Assigning Authority 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) This mark shall consist of not more than four initials each measuring approximately 115 millimetres in height and 75 millimetres in width.

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PART IV - Conditions of Assignment

Requirements relevant to the assignment of freeboards Second Schedule

25. (1) Subject to paragraph (3) freeboards assigned under these Regulations shall comply with the requirements applicable to the ship in Part I of the Second Schedule.

(2) In addition to complying with paragraph (1), ships assigned Timber freeboards shall comply with Parts II, III and IV of the Second Schedule as appropriate.

(3) An existing ship may, instead of complying with the conditions of assignment referred to in paragraph (1), comply with such of the requirements relevant to the assignment of freeboards to ships as were applicable to it under the law in force immediately before 21st July, 1968.

Compliance with conditions of assignment

26. (1) Except as otherwise provided for in paragraph (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 25 is not complied with; or
(ii) it differs in a material respect from the record of particulars provided in accordance with regulation 27; and
(b) where the record of particulars is not on board in accordance with regulation 27(2).

(2) A ship shall be taken to comply with the conditions of assignment notwithstanding an alteration referred to in paragraph (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 Assigning Authority and that Authority 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 27(1).

Record of particulars

Seventh Schedule

27. (1) A record of particulars listing in respect of the hull, superstructures, fittings and appliances of the ship the basis on which freeboards were assigned shall be provided on the ship in a form that is recommended by the International Maritime Organization and as appearing in the Seventh Schedule.

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

PART V - Freeboards

Types of freeboard

28. The freeboards that can be assigned to a ship under these Regulations are the Summer freeboard; Tropical freeboard; Winter freeboard; Winter North Atlantic freeboard; Fresh Water freeboard and Tropical Fresh Water freeboard. In the case of ships carrying Timber the freeboards that may be assigned are Summer Timber freeboard; Winter Timber freeboard; Winter North Atlantic Timber freeboard; Tropical Timber freeboard; Fresh Water Timber freeboard and Tropical Fresh Water Timber freeboard.

Determination of Freeboards. Third Schedule

29. Except as otherwise provided for in regulation 30 the freeboards assigned to a ship shall be determined in accordance with the provisions of the Third Schedule.

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Greater than minimum freeboards

30. (1) A freeboard determined in accordance with regulation 29 is the minimum freeboard that may be assigned to the ship.

(2) Notwithstanding paragraph (1), the Assigning Authority may however, 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 then -

(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 18 shall be omitted; and
(d) subject to subparagraph (c), the Fresh Water load line shall be as described in regulation 18(2) and be marked accordingly.

Special position of deckline correction of freeboards

31. In any ship where the deck line is marked in accordance with regulation 16(3), 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 paragraph and 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.

PART VI – Stability and Particulars of Loading

Information as to stability of ships

32. (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 and such information shall be in the form of a book which shall be kept on the ship at all times in the custody of the master.

Fifth Schedule

(2) In the case of a Cayman Islands ship this information shall include all matters specified in the Fifth Schedule, shall be in the form required by that Schedule and shall also be in accordance with the requirements of paragraphs(3), (4) and (5).

(3) Subject to paragraph (4), this information shall be based on the determination of stability taken from an inclining test carried out in the presence of a surveyor authorised by the Director for the purpose or, for ships listed in paragraph (5)(a), by the Assigning Authority, and the information shall be amended whenever any alterations are made to the ship or changes occur to it which will materially affect this information and, if necessary, the ship shall be re-inclined.

(4) The Assigning Authority may allow the inclining test to be dispensed with where -

(a) in the case of any ship, basic stability data is available from the inclining test of a sister ship and the Director or Assigning Authority is satisfied that reliable stability information can be obtained from such data; and
(b) in the case of a ship specially designed for the carriage of liquids or ore in bulk, or of any class of such ships, the information available in respect of similar ships that the ship's proportions and arrangements will ensure more than sufficient stability in all probable loading conditions.

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

(a) where it relates to a ship which is -
(i) an oil tanker over 100 metres in length;
(ii) a bulk carrier or an ore carrier over 150 metres in length;
(iii) a single deck bulk carrier over 100 metres in length but not exceeding 150 metres in length;
(iv) a single deck dry cargo ship over 100 metres in length;
(v) a purpose built container ship over 125 metres in length;
(vi) a column stabilised mobile offshore drilling unit; or
(vii) a column stabilised mobile offshore support unit, it shall be approved either by the Director or the Assigning Authority which assigned freeboards to the ship; or
(b) where it relates to any other ship, it shall be approved by the Director.

Information as to loading and ballasting of ships

33. (1) The owner of a 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 Cayman Islands ship regulation 32(5) shall have effect in respect of information required under this regulation, and the information so approved shall be included in the book referred in regulation 32(1).

Posting up of particulars of loading
Sixth Schedule

34. The master of every Cayman Islands ship which has been assigned freeboards in accordance with the requirements of these Regulations shall, before the ship leaves any dock, wharf, harbour or other place for the purpose of proceeding to sea, cause a Notice, duly signed by the master and an officer of the ship, to be posted up in some conspicuous place on board the ship, in accordance with the provisions of the Sixth Schedule.

PART VII - Equivalence, Offences and Detention

Equivalence

35. The Assigning Authority may, with the approval of the Director -

(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 these Regulations, if 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 Regulations on condition that the freeboards to be assigned to the ship are increased to such an extent as to satisfy the Director that the safety of the ship and protection afforded to the crew will be no less effective than would be the case if the ship fully complied with those requirements and there were no such increase of freeboards.

Offences and detention

36. (1) Where any ship, or owner or master thereof, fails to comply with these Regulations, the owner and master of the ship is each guilty of an offence and liable on summary conviction to a fine of ten thousand dollars.

(2) It shall be a defence for a person charged under paragraph (1) to show that he took all reasonable precautions and exercised all due diligence to avoid the commission of the offence.

(3) In any case where a ship is liable to be detained, section 439 of the Law shall have effect in relation to the ship, subject to the modification that as if for the words "this Law" wherever they appear, there were substituted the words "the Merchant Shipping (Load Lines) Regulations 2002".

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PART VIII-Final Provisions

Repeals

37. The following rules and regulations are repealed –

(a) The Merchant Shipping (Load Line) (Cayman Islands) Rules, 1988;
(b) The Merchant Shipping (Load Lines) (Deck Cargo) (Cayman Islands) Regulations, 1988;
(c) The Merchant Shipping (Load Lines) (Particulars of Depth of Loading) (Cayman Islands) Regulations, 1988; and
(c) The Merchant Shipping (Load Lines) (Commencement and Notice of Arrangements for Surveys) (Cayman Islands) Regulations 1988.

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Regulations 18 and 20

FIRST SCHEDULE

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 only* on the chart annexed to these Regulations.

2. Subject to subsubparagraphs (d) to (g) 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(a); and
(ii) North Atlantic Winter Seasonal Zone II, as set out in paragraph 4(b) as lies between the meridians of longitude 15ºW and 50ºW, 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 (d) applies;
(f) an All Seasons load line, in the case of a ship marked in accordance with regulation 30; and
(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 Parts IV to VI of the Second Schedule.

Ports on Boundary Lines

3. For the purposes of applying 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 in to 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. (a) The North Atlantic Winter Seasonal Zone I lies within the meridian of longitude 50ºW from the coast of Greenland to latitude 45ºN, thence the parallel of latitude 45ºN to longitude 15ºW, thence the meridian of longitude 15ºW to latitude 60ºN, thence the parallel of latitude 60ºN to the Greenwich Meridian, thence this meridian northwards.
Seasonal periods:
WINTER:16th October to 15th April;
SUMMER:16th April to 15th October.

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(b) The North Atlantic Winter Seasonal Zone II lies within the meridian of longitude 68º 30´ W from the coast of the United States to latitude 40ºN, thence the rhumb line to the point latitude 36ºN longitude 73ºW, thence the parallel of latitude 36ºN to longitude 25ºW and thence the rhumb line to Cape Toriñana.
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 68º30´ W from the coast of the United States to latitude 40ºN, thence the rhumb line to the southernmost intersection of the meridian of longitude 61ºW 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 50ºN 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 145ºE, thence the meridian of longitude 145ºE to latitude 35ºN, thence the parallel of latitude 35ºN to longitude 150ºW 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

7. The northern boundary of the Southern Winter Seasonal Zone is -
the rhumb line from the east coast of the American continent at Cape Tres Puntas to the point latitude 34ºS, longitude 50ºW, thence the parallel of latitude 34ºS to longitude 17°E, thence the rhumb line to the point latitude 35° 10´ S, longitude 20°E, thence the rhumb line to the point latitude 34° S, longitude 28ºE, thence the rhumb line to the point latitude 35º30’S, longitude 118ºE, and thence the rhumb line to Cape Grim on the north-west 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 47ºS, longitude 170ºE, thence the rhumb line to the point latitude 33ºS, longitude 170ºW, and thence the parallel of latitude 33ºS to the point latitude 33°S, longitude 79°W, thence the rhumb line to the point latitude 41°S, longitude 75°W, thence the rhumb line to Punta Corona lighthouse on Chiloe Island, latitude 41°47'S longitude 75°53'W, thence along the north, east and south coasts of Chiloe Island to the point latitude 43°20'S, longitude 74°20'W, and thence the meridian of longitude 74°20'W, to the parallel of latitude 45°45'S, including the inner zone of Chiloe channels from the meridian 74°20'W to the east.

Seasonal Periods:
WINTER:16th April to 15th October;
SUMMER:16th October to 15th April.

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TROPICAL ZONE

Northern Boundary of the Tropical Zone

8. The northern boundary of the Tropical Zone is -

the parallel of latitude 13ºN from the east coast of the American continent to longitude 60ºW, thence the rhumb line to the point latitude 10ºN, longitude 58ºW, thence the parallel of latitude 10ºN to longitude 20ºW, thence the meridian of longitude 20ºW to latitude 30ºN and thence the parallel of latitude 30ºN to the west coast of Africa; from the east coast of Africa the parallel of latitude 8ºN to longitude 70ºE, thence the meridian of longitude 70ºE to latitude 13ºN, thence the parallel of latitude 13ºN to the west coast of India; thence the south coast of India to latitude 10º30'N on the east coast of India, thence the rhumb line to the point latitude 9ºN, longitude 82ºE, thence the meridian of longitude 82ºE to latitude 8ºN, thence the parallel of latitude 8ºN to the west coast of Malaysia, thence the coast of south-east Asia to the east coast of Vietnam at latitude 10ºN, thence the parallel of latitude 10ºN to longitude 145ºE, thence the meridian of longitude 145ºE to latitude 13ºN and thence the parallel of latitude 13ºN 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 40ºW 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 20ºS to the west coast of Madagascar, thence the west and north coasts of Madagascar to longitude 50ºE, thence the meridian of longitude 50ºE to latitude 10ºS, thence the parallel of latitude 10ºS to longitude 98ºE, thence the rhumb line to Port Darwin, Australia, thence the coasts of Australia and Wessel Island eastwards to Cape Wessel, thence the parallel to latitude 11ºS to the west side of Cape York; from the east side of Cape York the parallel of latitude 11ºS to longitude 150ºW, thence the rhumb line to the point latitude 26ºS, longitude 75ºW, thence the rhumb line to the point latitude 32°47'S, longitude 72°W, and thence to the parallel of 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 45ºE;

Aden and Berbera are to be considered as being on the boundary line of the Tropical Zone and the Seasonal Tropical Area;

(b) The Persian Gulf to the meridian of longitude 59ºE; and

(c) The area bounded by the parallel of latitude 22ºS from the east coast of Australia to the Great Barrier Reef, thence the Great Barrier Reef to latitude 11ºS. The northern boundary of the area is the southern boundary of the Tropical Zone.

Seasonal Tropical Areas

11. The following are Seasonal Tropical Areas -

(a) 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 20ºN and thence the parallel of latitude 20ºN to longitude 20ºW;
- 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.

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(b) In the Arabian Sea -
an area bounded -
- on the west by the coast of Africa, the meridian of longitude 45ºE in the Gulf of Aden, the coast of South Arabia and the meridian of longitude 59ºE 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.

(c) 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.

(d) In the South Indian Ocean -
(i) 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 20ºS;
- on the east by the rhumb line from the point latitude 20ºS, longitude 50ºE, to the point latitude 15ºS, longitude 51º30'E, and thence by the meridian of longitude 51º30'E to latitude 10ºS;

Seasonal periods:
TROPICAL:1st April to 30th November;
SUMMER:1st December to 31st March.

(ii) 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 15ºS from longitude 51º30'E, to longitude 114ºE and thence the meridian of longitude 114ºE to the coast of Australia;
- on the west by the meridian of longitude 51º30'E;

Seasonal periods:
TROPICAL:1st May to 30th November;
SUMMER:1st December to 30th April.

(e) In the China Sea -
an area bounded -
- on the west and north by the coasts of Vietnam and China from latitude 10ºN 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 10ºN;
- on the south by the parallel of latitude 10ºN;

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.

(f) In the North Pacific -
(i) an area bounded -
- on the north by the parallel of latitude 25ºN;
- on the west by the meridian of longitude 160ºE;
- on the south by the parallel of latitude 13ºN;
- on the east by the meridian of longitude 130ºW;

Seasonal Periods:
TROPICAL:1st April to 31st October;
SUMMER:1st November to 31st March.

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(ii) an area bounded -
- on the north and east by the west coast of the American continent;
- on the west by the meridian of longitude 123ºW from the coast of the American continent to latitude 33ºN and by the rhumb line from the point latitude 33ºN, longitude 123ºW to the point latitude 13ºN, longitude 105ºW;
- on the south by the parallel of latitude 13ºN;

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.

(g) In the South Pacific -
(i) the Gulf of Carpentaria south of latitude 11ºS;

Seasonal periods:
TROPICAL:1st April to 30th November;
SUMMER:1st December to 31st March.

(ii) An area bounded -
- on the north and east by the southern boundary of the Tropical Zone;
- on the south by the parallel of latitude 24°S from the east coast of Australia 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 150ºW, thence by the meridian of longitude 150ºW to latitude 20ºS and thence by the parallel of latitude 20ºS 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 68º30'S from the coast of the United States to latitude 40ºN and thence by the rhumb line to the point latitude 36ºN longitude 73ºW;
- on the south by the parallel of latitude 36ºN;

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 44ºN is a Winter Seasonal Area;

Seasonal periods:
WINTER:1st December to 28th/29th February;
SUMMER:1st March to 30th November.

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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 3ºE from the coast of Spain to latitude 40ºN;
- on the south by the parallel of latitude 40ºN from longitude 3ºE to the west coast of Sardinia;
- on the east by the west and north coasts of Sardinia from latitude 40ºN to longitude 9ºE thence by the meridian of longitude 9ºE to the south coast of Corsica, thence by the west and north coasts of Corsica to longitude 9ºE 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 50ºN is included in the Summer Zones.

However, for ships of 100 metres or less in length, the area between the parallel of latitude 50ºN and the rhumb line from the east coast of Korea at latitude 38ºN to the west coast of Hokkaido, Japan, at latitude 43º12’N is a Winter Seasonal Area;

Seasonal periods:

WINTER:1st December to 28th/29th February;
SUMMER:1st March to 30th November.

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Regulation 25

SECOND SCHEDULE

CONDITIONS OF ASSIGNMENT

Interpretation

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;

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

"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 paragraph 9 of the Third 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 Quarterdecks, 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 deck" means a deck forming the top of a structure;

"timber deck cargo" means deck cargo consisting of timber; and

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"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-

(i) before 8th June 2000, if 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; if over 225 metres in length its machinery space shall be treated as a floodable compartment, but with an assumed permeability of 0.85; and

(ii) on or after 8th June 2000, if over 150 metres 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(9) of Part 1 of the Third Schedule, in such a ship the machinery space shall be treated as a floodable compartment, but with a permeability of 0.85;

(d) the condition of equilibrium referred to in subparagraph (c) (i) is as follows:

(i) the final water line after flooding is below the top of any ventilator coaming, the lower edge of any air pipe opening, the upper edge of any 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, if 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 Assigning Authority;

(e) the condition of equilibrium referred to in subsubparagraph (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 subsubparagraph (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 water line;

(ii) if pipes, ducts or tunnels are situated within the assumed extent of damage penetration as defined in paragraph 5(9)(b) of Part 1 of the Third 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) if no part of the deck is immersed, the angle of heel due to unsymmetrical flooding does not exceed 17 degrees. If any part of the deck is immersed, the angle of heel due to unsymmetrical flooding does not exceed 15 degrees;

(iv) the metacentric height in the flooded condition is positive;

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(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 Assigning Authority. It may be regarded as sufficient if the righting lever curve has a minimum range of 20 degrees 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 0.0175 metre-radians; the Assigning Authority shall give consideration to the potential hazard presented by protected or unprotected openings which may become temporarily immersed within the range of residual stability; and

(vi) the Assigning Authority 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) can be operated from either side of the bulkhead.

(2) In the definition of a "Type "A" ship", the initial condition of loading before flooding referred to in subsubparagraph (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 subsubsubparagraph (iii), 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) if 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 subsubsubparagraph (ii);
(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;

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(v) at an angle of heel of not more than 5 degrees in each compartment containing liquids, as prescribed in subsubsubparagraph (ii) except that in the case of compartments containing consumable fluids, as prescribed in subsubsubparagraph (iv), 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 Assigning Authority; and

(vi) weights shall be calculated on the basis of the following values for specific gravities -
salt water 1.025;
fresh water 1.000;
oil fuel 0.950;
diesel oil 0.900; and
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) 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, if 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 subsubsubparagraph (ii);
(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; and
(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 subsubparagraph (a) by taking into account the volume of timber deck cargo, the initial transverse metacentric height shall not be less than 0.05 metres.

(3) To determine whether the ship complies with the requirements of subparagraph (2) the ship shall, unless otherwise permitted, be subject to an inclining test which shall be carried out in the presence of a surveyor.

(4) For ships listed in regulation 32(5), the inclining test shall be carried out by a surveyor authorised for the purpose by the Assigning Authority.

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) This paragraph and paragraphs 5 and 6 apply to all hatchways in Position 1 or in Position 2 except where otherwise stated.

(2) Subject to subparagraph (3), the construction and the means for securing the weathertightness of a hatchway shall –

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(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.

(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, if the hatchway is in Position 1; or
(b) 450 millimetres, if the hatchway is in Position 2.

Portable Covers

(2) Portable covers shall comply with the following requirements:

(a) The width of every bearing surface for a hatchway cover shall be at least 65 millimetres;
(b) where a cover made of wood -
(i) 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; and
(ii) the ends of the cover shall be protected by galvanised steel bands efficiently secured;
(c) where a cover made of mild steel -
(i) 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; and
(ii) 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; and
(d) where a cover is 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

(3) Portable beams for supporting hatchway covers shall comply with the following requirements:

(a) where the beams are made of mild steel-
(i) 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; and
(ii) they 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;
(b) where the beams are not made of mild steel, the strength and stiffness of the beams shall be equivalent to those of the beams of mild steel.

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Pontoon Covers

(4) Where pontoon covers are used in place of portable beams and covers, they shall comply with the following requirements:

(a) where the covers are made of mild steel-
  (i) 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;
  (ii) they 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; and
  (iii) mild steel plating forming the tops of such covers shall not be less in thickness than 1 percent of the spacing of the stiffeners or 6 millimetres, whichever is the greater; and

(b) where the 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.

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

Carriers or Sockets

(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

(6) Cleats shall be set to fit the taper of the wedges and they shall be at least 65 millimetres wide and spaced not more than 600 millimetres, centre to centre, but 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

(7) Battens and wedges shall be efficient for their purpose and in good condition and 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

(8) At least two layers of tarpaulins shall be provided for every hatchway, which tarpaulins shall be waterproof, in good condition, and have satisfactory strength and quality.

Security of Hatchway Covers

(9) Except as otherwise provided in subparagraph (10), steel bars shall be provided for every hatchway to ensure that each section of the hatchway covers can be efficiently 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.

(10) Bars of material other than steel, or means of securing hatchway covers otherwise than by bars, may be used where -

(a) in the case of the former the strength and stiffness of the bars used are equivalent to those of steel bars; and
(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.

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Hatchways Closed by Weathertight Covers of Steel or Equivalent Material Fitted with Gaskets and Clamping Devices

Coamings

6. (1) Except as otherwise provided in subparagraph (2), every hatchway shall have a coaming of substantial construction, the height of which above the deck shall be at least -

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

(2) A hatchway may have a coaming of less than the height applicable under the provisions of subparagraph (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; and
(b) when any coaming is fitted it shall be of substantial construction.

Weathertight Covers

(3) The strength of every cover of mild steel shall be such as to withstand the assumed load given in Table 1 in paragraph 5, 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.

(4) Every such cover of material other than mild steel shall have strength and stiffness equivalent to that required in the case of a cover of mild steel.

(5) Every cover shall be fitted with efficient means by which it can be secured and made Weathertight.

(6) Mild steel plating forming the top of any cover shall be not less in thickness than one percent 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.

(2) Every doorway in a casing referred to in subparagraph (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, if the opening is in Position 1; or
(b) 380 millimetres above the deck, if the opening is in Position 2.

(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.

(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.

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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.

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

(a) if situated in the freeboard deck, be protected either by an enclosed superstructure or by a deckhouse or companionway equivalent in strength and weathertight to an enclosed superstructure;

(b) if 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; or

(c) if 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 subsubparagraph (b) or to such lesser extent as may be adequate having regard to its position.

(3) Every door in a companionway, deckhouse or enclosed superstructure referred to in subparagraph (2)(a) or (b) shall have a sill the height of which shall be at least -

(a) 600 millimetres, if the structure is in Position 1; or

(b) 380 millimetres, if the structure is in Position 2.

Ventilators

9. (1) Except as otherwise provided in subparagraph (2), 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, if the ventilator is in Position 1; or

(b) 760 millimetres above the deck, if the ventilator is in Position 2; and

(2) Where the coaming for a ventilator referred to in subparagraph (1) 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.

(3) Where the coaming of a ventilator referred to in subparagraph (1) exceeds 900 millimetres in height above the deck it shall be efficiently supported by stays, brackets or other means.

(4) 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.

(5) Subject to subparagraph (6), 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.

(6) 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 Assigning Authority in order to provide adequate protection; and a ventilator leading to a battery room shall not be fitted with a closing appliance.

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Air Pipes

10. (1) The exposed parts of an air pipe leading to a ballast or other tank and extending above the freeboard deck or a superstructure deck shall be of substantial construction.

(2) The exposed opening of 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.

(3) Subject to subparagraph (4), the height above the deck of the exposed opening of such air pipe shall be -

(a) at least 760 millimetres, if that deck is the freeboard deck; or

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

(4) The heights given in subparagraph (3) may be reduced if -

(a) the working of the ship would be unreasonably impaired if 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.

(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.

(3) Unless the Assigning Authority permits, the lower edge of 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) 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 (2) and (3) with the means for preventing water from passing inboard.

(2) Subject to subparagraph (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.

(3) Where-

(a) 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 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; and

(b) the vertical distance referred to in subsubparagraph (a) exceeds 0.02(*L*), the Assigning Authority 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.

(4) The controls of a valve in an unattended 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;

(5) The controls of a 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 entry of water into the machinery space other than water resulting from the normal operation of machinery; and

(6) Valves referred to in subparagraphs (4) and (5) shall be equipped with an indicator showing whether the valve is open or closed.

(7) Subject to subparagraph (8), 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.

(8) Subparagraph (7) 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 (1) to (3); or
(b) where the piping of the scupper or discharge pipe is of substantial thickness.

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

(10) 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.

(11) 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 5 degrees 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 within an enclosed superstructure shall be fitted with a hinged inside deadlight so that it can be effectively closed and secured watertight.

(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 percent of the breadth of the ship above the Summer load waterline (or Summer Timber load waterline, if assigned); or
(b) 500 millimetres above the Summer load waterline (or Summer Timber load waterline, if assigned), whichever is the greater distance.

(3) Every side scuttle, glass and deadlight, if 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 quarterdeck or a superstructure deck forms 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 (2) to (9) shall be complied with.

(2) Except as otherwise provided in subparagraphs (4) and (5), the freeing port area (A) for each well shall -

(a) where the well is on the freeboard deck or on a raised quarterdeck, be not less than the area ascertained in accordance with subparagraph (3); and
(b) where the well is on a superstructure deck, other than a raised quarterdeck, be not less than one half of the area given by subparagraph (3).

(3) (a) Subject to subsubparagraph (c) , where the length (*l*) of a bulwark in the well is 20 metres or less -

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

(b) subject to subsubparagraph (c), where (*l*) exceeds 20 metres -

$$(A) = 0.07\ (l) \text{ (square metres);}$$

so however that the length (*l*) need in no case be greater than 0.7(*L*);

(c) 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. If 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.

(4) (a) 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 (3) increased by 50 percent;

(b) 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 (3) increased by a percentage to be obtained by linear interpolation; and
(c) 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 sheer.

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

(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.

(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-corrodable material.

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

(9) Where a ship fitted with a trunk does not comply with the requirements of paragraph 10(2)(b)(vi) of the Third 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 –

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

(2) Except as otherwise provided in subparagraph (3), all exposed parts of the freeboard deck and of every superstructure deck shall be fitted at their perimeter with efficient guard wires and stanchions complying with the requirements of subparagraph (4), or with bulwarks. In either case this protection shall be at least 1 metre in height from the deck.

(3) The height specified in subparagraph (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.

(4) Guard rails or guard wires fitted in accordance with subparagraph (2) shall consist 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.

(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 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.

(6) Deck cargo carried on any ship shall be so stowed that any opening which is in the 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 if there is no convenient passage on or below the deck of the ship.

(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 (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.

(2) Subparagraph (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

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(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 weather tight 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.

(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 be of nonslip 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 -

(i) the passage and all its fittings shall be oil and gas tight;

(ii) the passage shall be well lighted, and be fitted with efficient gas detection and ventilation systems;

(iii) it shall be situated immediately below the freeboard deck;

(iv) 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 subsubsubparagraphs (i), (ii) and (iii);

(v) means of exit from the passage to the freeboard deck shall be -

(aa) so arranged as to be as near as practicable to the working areas to be used by the crew;

(bb) in no case be more than 90 metres apart; and

(cc) fitted with efficient means of closing which are capable of quick release and operable from either side; and

(vi) openings in the freeboard deck corresponding to the means of exit referred to in sub-subsubparagraph (v) shall be protected in accordance with the requirements of paragraph 8(2)(a); or

(c) equivalent means of access.

(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 (2)(a); or

(b) an underdeck passage complying with the requirements of subparagraph (2)(b); or

(c) a walkway complying with the following requirements:

(i) the walkway shall 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) if obstructed by pipes or other fittings of a permanent nature, the walkway shall be provided with efficient means of passage over such obstruction;

(iii) the walkway shall be fitted on each side and throughout its length with guard rails or guard wires complying with the requirements in subparagraph (2)(a);

(iv) the walkway shall 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; and

(v) if the length of exposed deck to be traversed by the crew exceeds 70 metres, shelters of

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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.

(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).

(2) The upper edge of the sheer strake shall be as low as practicable.

(3) If 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).

(4) If 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 to be assigned a reduced freeboard under the provisions of paragraph 5(4) of the Third 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.

(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)(a). If the length of the gangway exceeds 70 metres, shelters complying with the requirements set out in paragraph 18(3)(c)(iv) 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.

(2) Where hatchway coamings are 600 millimetres or more in height, two walkways

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complying with the following requirements may be provided in lieu of the access required under subparagraph (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; and
(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 regarding Timber Freeboards and Deck Cargoes

A – Special Structural 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.

(2) In this Schedule, except where the context otherwise requires -

"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*).

(2) If 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 quarterdeck 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 (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).

B – Distribution, Stowage and Securing of Deck Cargo, including 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; and
(f) that it is in accordance with paragraph 15(6).

(2) Deck cargo shall be so secured as to ensure, as far as practicable, that there will be no movement 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.

C – ADDITIONAL REQUIREMENTS FOR THE DISTRIBUTION, STOWAGE AND SECURING OF TIMBER DECK CARGO

Height of Timber Deck Cargo

31. (1) 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.

(2) For vessels assigned and making use of timber load lines –

(a) the timber deck cargo shall extend over at least the entire available length, which is the total length of the well or wells between superstructures;

(b) the timber deck cargo shall extend athwartships as close as possible to the ship's side, due allowance being made for obstructions such as guard rails, bulwark stays, uprights, pilot access etc., so however that ant gap thus created at the side of the ship shall not exceed a mean of 4 percent of the breadth of the ship; and
(c) subject to subparagraph (1), the timber shall be stowed as solidly as possible to at least the height of the superstructure, other than any raised quarterdeck.

32. (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 from the crew between their quarters and the machinery spaces and other parts of the ship used in the working of the ship 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.

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

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

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Uprights

33. If the nature of the timber is such that uprights are necessary in order to comply with paragraphs 34 and 35, 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

34. (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 deck; and

(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 (1).

Securing of Timber Deck Cargo

35. (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 and end bulkhead 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 1.5 metres from the ends of the timber cargo deck;

(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.

(3) When timber is in length less than 3.6 metres the spacings of the lashings shall be reduced or suitable provision made to suit the length of timber.

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Regulation 6 and 29

THIRD SCHEDULE

FREEBOARDS

Interpretation

1. In this Schedule-

"block coefficient (C_b)" means the product of –

$$\frac{\nabla}{LBd_1}$$

where -

∇ is the volume of the moulded displacement of the ship (excluding bossing) if the ship has a metal shell, and of displacement to the outer surface of the hull if 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 percent 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), the moulded depth of the ship amidships plus the thickness of the freeboard deck stringer plate, where fitted, plus, if 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; and

(S) is the total length of the superstructures; and

(b) in a ship having a rounded gunwale with a radius greater than 4 percent of the breadth of the ship or having topsides of unusual form, the depth calculated in accordance with subsubparagraph (a), 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 (*E*)" in relation to a superstructure means the effective length of the superstructure determined in accordance with 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 9(2);

"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) if the form at the lower part of the midship section is of a hollow character, or if 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; and

"tabular freeboard" means in the case of a Type "A" ship the freeboard appropriate to the ship's length under Freeboard Table A set out in the Fourth Schedule and in the case of a Type "B" ship the freeboard appropriate to the ship's length under Freeboard Table B in that Schedule.

Freeboards -General

2. (1) Except as otherwise provided in subparagraph (2), the freeboards, other than Timber freeboards, to be assigned to a ship shall be determined in accordance with the provisions of Part I of this Schedule, and Timber freeboards to be assigned to a ship shall be determined in accordance with Part II of this Schedule.

(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 subparagraph (1) 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 provisions of Part III of this Schedule.

PART I - Freeboards other than Timber Freeboards

Determination of Freeboards

3. (1) Subject to subparagraph (3), the Summer freeboard shall be determined in accordance with the provisions of paragraphs 4 to 16.

(2) Subject to subparagraphs (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) The freeboard so obtained in subparagraphs (1) and (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 Second Schedule applies but which do not have pontoon covers, in which case it shall be not less than 150 millimetres.

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

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(6) The minimum freeboard in fresh water of unit density shall be obtained-

(a) by deducting from the minimum freeboard in salt water 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 centimeter immersion in salt water at that waterline; and

(b) in any case in which the displacement at the Summer load water line 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. (1) The Summer freeboard assigned to a Type "A" ship shall be determined in accordance with this paragraph.

(2) There shall first be ascertained the ship's tabular freeboard from Table A in the Fourth Schedule.

(3) If the block coefficient (Cb) of the ship exceeds 0.68 the tabular freeboard shall be multiplied by the factor -

(4) Corrections in accordance with paragraphs 6 to 16 shall be applied to the freeboard obtained in accordance with subparagraphs (1) and (2).

(5) Subject to paragraph 3(3), the freeboard so corrected shall be the Summer freeboard assigned to the ship.

Summer Freeboard - Type "B" Ships

5. (1) The Summer freeboard to be assigned to a Type "B" ship shall be determined in accordance with this paragraph.

(2) There shall first be ascertained the ship's tabular freeboard from Table B in the Fourth Schedule.

(3) (a) If 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 Second Schedule or covers which comply with paragraph 6 of that Schedule, the tabular freeboard may be corrected in accordance with such of the provisions of subparagraphs (4) to (9) of this paragraph as are applicable to the ship; and

(b) if the ship has hatchways in Position 1 the covers of which comply with the requirements of paragraph 5 of the Second Schedule except those of subparagraph (4) of that paragraph, the tabular freeboard shall be corrected in accordance with the provisions of subparagraph (10) of this paragraph.

(4) The tabular freeboard of a ship to which subparagraph (3)(a) applies and which exceeds 100 metres in length may be reduced by an amount not exceeding the maximum applicable under subparagraphs (5) and (6) if the Assigning Authority is satisfied that -

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

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

(c) all covers of hatchways in Positions 1 and 2 comply with the requirements of paragraph 6 of the Second 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 (7); if 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; and

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(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 will -

(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 (8); and

(ii) remain afloat in a satisfactory condition of equilibrium, as referred to in subparagraph (c)(ii) of the definition of a Type "A" ship in paragraph 1 (1) of the Second Schedule; and if 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) Subject to subparagraph (6), no reduction of freeboard pursuant to subparagraph (4) shall exceed 60 percent of the difference between the tabular freeboards under Freeboard Table A and Freeboard Table B.

(6) The reduction of 60 percent referred to in subparagraph (5) may be increased to 100 percent if the Assigning Authority is satisfied that -

(a) the ship complies with the requirements of paragraphs 17 and 20 of the Second 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 subparagraph (4)(a) to (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 (7) 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 (4)(e); but in relation to the damage assumptions specified in paragraph 5(9), 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.

(7) In the case of a ship constructed before 8th June 2000, the condition of equilibrium referred to in subparagraphs (4) and (6) 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 15 degrees, or if no part of the deck is immersed the angle of heel does not exceed 17 degrees;

(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 Assigning Authority.

(8) 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 (4)(d) and (6)(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 (6)(c)(i), no transverse bulkhead is damaged; and

(d) the height of the centre of gravity above the base line is assessed allowing for homogeneous loading of cargo holds and for 50 percent of the designed capacity of consumable fluids and stores.

(9) 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 (4)(e) and (6)(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) if damage of a lesser extent than that specified in subsubparagraphs (a) and (b) results in a more severe condition, such lesser extent shall be assumed;

(d) except where otherwise required by subparagraph (6), 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 subsubparagraph (b); (e) 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 subsubparagraph (b), such transverse bulkhead may be assumed intact and the adjacent compartment may be flooded singly; if, 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 subsubparagraph;

(f) 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; if 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, if a side tank has openings into adjacent compartments, such adjacent compartments shall be considered as empty 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; and

(g) where the flooding of any two adjacent fore and aft compartments is envisaged, main transverse watertight bulkheads shall be spaced at least $\frac{1}{3}L^{2/3}$ or 14.5whichever 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.

(10) The tabular freeboard of a ship to which subparagraph (3)(b) applies shall be increased by the amount shown in Table 1 appropriate to the ship's length, with freeboards at intermediate lengths of ship being obtained by linear interpolation, provided that the increase in the case of ships of more than 200 metres in length shall be by an amount which the Director determines in each particular case.

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(11) Where a Type "B" ship of not more than 100 metres in length has enclosed superstructures the total effective length (e) of which does not exceed 35 percent of the ship's length (*L*); the freeboard calculated in respect of such a ship in accordance with subparagraphs (1),(2) and (9), shall be increased by the following amount -

$$7.5(100 - L)\left(0.35 - \frac{E}{(L)}\right) \text{ millimetres}$$

(12) In the case of a ship with a block coefficient (C_b) exceeding 0.68, the freeboard calculated in accordance with subparagraphs (2) to (11) shall be multiplied by the factor -

$$\frac{C_b + 0\ 68}{1.36}$$

(13) Corrections in accordance with paragraphs 6 to 16 shall be applied to the freeboard calculated in accordance with subparagraphs (2) to (12) and, subject to paragraph 3(3), the freeboard so corrected shall be the Summer freeboard to be assigned to the ship.

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TABLE 1

Increase in Tabular Freebord for certain Ships

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 Summer freeboard calculated in accordance with paragraph 4 or 5, whichever is applicable, but omitting in the case of a Type “A” ship the corrections referred to in paragraph 5(12).

Correction for Depth

7. (1) If the depth for freeboard (*D*) exceeds $\frac{(L)}{15}$, the basic freeboard of the ship shall be increased by

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

where R is -

$\frac{(L)}{0.48}$, 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.

(2) If (*D*) is less than $\frac{(L)}{15}$ the basic freeboard of the ship shall be reduced by -

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

if, but only if, the ship has, subject to subparagraph (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.

(3) If the height of any such superstructure or trunk in subparagraph (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 (2), if the actual depth to the upper edge of the deck line is greater or less than the depth for freeboard, the difference, if greater, shall be added to, or if less, shall be deducted from, the basic freeboard of the ship.

(2) If the position of the deck-line has been fixed in accordance with 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 on 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

Standard Height of Raised Quarterdecks and Superstructures

Length of ship (L) (metres)	**Standard Height (Metres):**	
	of a raised quarterdeck	**of a superstructure other than a raised quarterdeck**
30 or less	0.90	1.80
75	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)

(2) (a) Subject to subsubparagraph (b), 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; and

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(b) 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 subsubparagraph (a), 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.

(3) (a) In the case of an enclosed superstructure of standard height, the effective length of a superstructure (*E*) shall be, subject to subsubparagraph (c), either -

(i) its length; or

(ii) if the superstructure is set in from the sides of the ship, its length modified in the ratio b/Bs, where -

(aa) "b" is the breadth of the superstructure at the middle of its length; and

(bb) "Bs" is the breadth of the ship at the middle of the length of the superstructure; and

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

(b) in the case of an enclosed superstructure of less than standard height, the effective length of a superstructure, subject to subsubparagraphs (a) and (c), shall be its length reduced in the ratio of the actual height of the superstructure to its standard height;

(c) in the case of an enclosed superstructure consisting of a raised quarterdeck the effective length of a superstructure shall, if 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, if not so fitted, be determined by treating the raised quarterdeck as a poop of less than standard height; and

(d) a superstructure which is not an enclosed superstructure as defined in paragraph 1 of the Second 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 quarterdeck in paragraph 9(1).

(2) The effective length of a trunk shall be determined as follows:

(a) a trunk which is not an efficient trunk as described in subsubparagraph (b) 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 Second 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)(a) of the Second 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 percent of the breadth of the ship; and

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

(c) except as otherwise provided in subsubparagraph (d), 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; and

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(d) if the actual height of an efficient trunk is less than the standard height, its effective length shall be the length calculated in accordance with subsubparagraph (c) reduced in the ratio of the actual to the standard height of the trunk.; in addition, if 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 Second 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 length of superstructures and trunks of a ship is 1.0(*L*), the basic freeboard of the ship shall be reduced by –

350 millimetres	If the ship is 24 metres in length (*L*)
860 millimetres	If the ship is 85 metres in length (*L*)
1070 millimetres	If the ship is 122 metres in length (*L*) or more

(The amount of reduction in the case of ships of intermediate length shall be obtained by linear interpolation)

(2) Where the sum of the effective lengths of superstructure and trunk is less than 1.0(*L*), the basic freeboards of a ship shall be reduced by a percentage of the figures in subparagraph (1) according to the total effective length of its superstructures and trunks as follows:

(a) 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; and

(b) (i) subject to subsubsubparagraphs (ii), (iii) and (iv) in the case of a Type "B" ship, by a percentage appropriate to its length 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;

(ii) 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;

(iii) where the effective length of a forecastle is more than 0.4(*L*), the percentages shall be obtained from line II; and

(iv) where the effective length of a forecastle is less than 0.07(*L*), the above percentages shall be reduced by -

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

where "*f*" is the effective length of the forecastle.

TABLE 3

Percentage of Deduction for Type "A" Ships

	Total effective length of superstructures 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*)
Percentage of deduction for all types of superstructures	0	7%	14%	21%	31%	41%	52%	63%	75.3%	87.7%	100%

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

TABLE 4

Percentage of Deduction for Type "B" Ships

	Line	Total effective length of superstructures 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*)	0.8(*L*)	0.9(*L*)	1.0(*L*)
Ships with Forecastle and without Detached Bridge	I	0	5%	10%	15%	23.5%	32%	46%	63%	75.3%	87.7%	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%	87.7%	100%

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

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.

(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.

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

(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.

(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.

(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.

(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).

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Standard Sheer Profile

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

TABLE 5

Standard Sheer Profile Ordinates

	Station	Ordinate (in millimetres)	Factor
AFTER HALF	After perpendicular (AP)	$25.0\,(\frac{(L)}{3} + 10)$	1
	1/6(*L*) from AP	$11.1\,(\frac{(L)}{3} + 10)$	3
	1/3(*L*) from AP	$2.8\,(\frac{(L)}{3} + 10)$	3
	Amidships	0	1
FORWARD HALF	Amidships	0	1
	1/3(*L*) from FP	$5.6\,(\frac{(L)}{3} + 10)$	3
	1/6(*L*) from FP	$22.2\,(\frac{(L)}{3} + 10)$	3
	Forward perpendicular (FP)	$50.0\,(\frac{(L)}{3} + 10)$	1

Measurement of Variation from 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 half 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 of after half. The arithmetical mean of the excess or deficiency in the forward and after half shall be the excess or deficiency of sheer.

(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.

(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 percent 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 percent 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 percent and 75 percent of the standard sheer profile, intermediate allowances may be granted for excess sheer forward.

(4) Where sheer credit is given for a poop or forecastle the following formula shall be used -

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

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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 of 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 -

$$0\ 75 - \frac{S}{2(L)}$$

(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 (1) shall be added to the basic freeboard of the ship.

(3) Subject to subparagraph (4), in the case of a ship having an excess of sheer -

(a) if 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 (1) shall be deducted from the basic freeboard of the ship;
(b) if no enclosed superstructure covers amidships, no deductions shall be made from the basic freeboard of the ship; and
(c) if 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 (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*).

(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 (2) and (3), where the bow height is determined in accordance with subparagraph (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.

(2) Where an existing ship to which subparagraph (1) applies has been so constructed or modified as to comply with all the requirements of the Second Schedule applicable to a new ship of her type and is to be assigned freeboards determined in accordance with this Schedule, and -

(a) the forecastle is less than 0.07(*L*); or
(b) the sheer extends for less than 15 percent of the ship's length (*L*) measured from the forward perpendicular, the freeboard shall be increased by such amount as the Assigning Authority may determine in each particular case.

(3) In the case of a ship to which subparagraph (1) applies, being a ship which is constructed to meet exceptional operational requirements, the correction to be made in accordance with subparagraphs (1) and (2) may be reduced or waived if the Director 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.

(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.

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(5) (a) Where the bow height is obtained by including sheer, the sheer shall extend for no less than 15 percent of length (*L*) measured from the forward perpendicular;

(b) where the bow height is obtained by including the height of a superstructure, such superstructure shall -

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

(ii) if length (*L*) is 100 metres or less, be an enclosed superstructure; and

(iii) if length (*L*) exceeds 100 metres in length, be fitted with satisfactory closing appliances.

(6) (a) 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

$$7000\left(\frac{1.36}{C_b + 0.68}\right)$$

where (*L*) is 250 metres or more; and

(b) C_b shall not be taken as less than 0.68

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PART II - Timber Freeboards

Summer Timber Freeboard

17. The Summer Timber freeboard is the freeboard determined in accordance with paragraphs 5(2), (3)(a), (11) and (12) and corrected in accordance with paragraphs 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

	Total effective length of superstructures 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*)
Percentage of deduction for all types of superstructures	0	7%	14%	21%	31%	41%	52%	63%	75.3%	87.7%	100%

(Percentages at intermediate lengths of 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.

(2) The Winter North Atlantic Timber freeboard shall be the same as the Winter North Atlantic freeboard assigned.

(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.

(4) (a) The Fresh Water Timber freeboard shall, subject to subparagraph

(b), be obtained by deducting from the Summer Timber freeboard the quantity –

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

where -

Δ is the displacement in salt water in metric tons 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 metric tonnes per centimetre immersion in salt water at that waterline; and

(b) 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.

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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 Assigning Authority 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 Assigning Authority 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 percent as the Director may direct in each particular case.

Regulation 6

FOURTH SCHEDULE

FREEBOARD TABLES

1. The following is the Freeboard Table "A" referred to in the definition of a "tabular freeboard" in paragraph 4 of the Third 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	1980
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

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Length of ship (metres)	Freeboard (millimetres)	Length of ship (metres)	Freeboard (millimetres)	Length of ship (metres)	Freeboard (millimetres)
144	1870	195	2562	246	2986
145	1886	196	2572	247	2993
146	1903	197	2582	248	3000
147	1919	198	2592	249	3006
148	1935	199	2602	250	3012
149	1952	200	2612	251	3018
150	1968	201	2622	252	3024
151	1984	202	2632	253	3030
152	2000	203	2641	254	3036
153	2016	204	2650	255	3042
154	2032	205	2659	256	3048
155	2048	206	2669	257	3054
156	2064	207	2678	258	3060
157	2080	208	2687	259	3066
158	2096	209	2696	260	3072
159	2111	210	2705	261	3078
160	2126	211	2714	262	3084
161	2141	212	2723	263	3089
162	2155	213	2732	264	3095
163	2169	214	2741	265	3101
164	2184	215	2749	266	3106
165	2198	216	2758	267	3112
166	2212	217	2767	268	3117
167	2226	218	2775	269	3123
168	2240	219	2784	270	3128
169	2254	220	2792	271	3133
170	2268	221	2801	272	3138
171	2281	222	2809	273	3143
172	2294	223	2817	274	3148
173	2307	224	2825	275	3153
174	2320	225	2833	276	3158
175	2332	226	2841	277	3163
176	2345	227	2849	278	3167
177	2357	228	2857	279	3172
178	2369	229	2865	280	3176
179	2381	230	2872	281	3181
180	2393	231	2880	282	3185
181	2405	232	2888	283	3189
182	2416	233	2895	284	3194
183	2428	234	2903	285	3198
184	2440	235	2910	286	3202
185	2451	236	2918	287	3207
186	2463	237	2925	288	3211
187	2474	238	2932	289	3215
188	2486	239	2939	290	3220
189	2497	240	2946	291	3224
190	2508	241	2953	292	3228
191	2519	242	2959	293	3233
192	2530	243	2966	294	3237
193	2541	244	2973	295	3241
194	2552	245	2979	296	3246

Length of ship (metres)	Freeboard (millimetres)	Length of ship (metres)	Freeboard (millimetres)	Length of ship (metres)	Freeboard (millimetres)
297	3250	320	3331	343	3389
298	3254	321	3334	344	3392
299	3258	322	3337	345	3394
300	3262	323	3339	346	3396
301	3266	324	3342	347	3399
302	3270	325	3345	348	3401
303	3274	326	3347	349	3403
304	3278	327	3350	350	3406
305	3281	328	3353	351	3408
306	3285	329	3355	352	3410
307	3288	330	3358	353	3412
308	3292	331	3361	354	3414
309	3295	332	3363	355	3416
310	3298	333	3366	356	3418
311	3302	334	3368	357	3420
312	3305	335	3371	358	3422
313	3308	336	3373	359	3423
314	3312	337	3375	360	3425
315	3315	338	3378	361	3427
316	3318	339	3380	362	3428
317	3322	340	3382	363	3430
318	3325	341	3385	364	3432
319	3328	342	3387	365	3433

2. (1) Freeboards at intermediate length of the ship shall be obtained by linear interpolation.

(2) Freeboards at length of ship less than 24 metres shall be –

$$50 + \left(\frac{150(L)}{24} \right) \text{ millimetres.}$$

(3) See also paragraph 3 of the Third Schedule.

3. The following is Freeboard Table B referred to in the definition of “tabular freeboard” in paragraph 5 of the Third 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	36	300	48	420
25	208	37	308	49	432
26	217	38	316	50	443
27	225	39	325	51	455
28	233	40	334	52	467
29	242	41	344	53	478
30	250	42	354	54	490
31	258	43	364	55	503
32	267	44	374	56	516
33	275	45	385	57	530
34	283	46	396	58	544
35	292	47	408	59	559

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Length of ship (metres)	**Freeboard (millimetres)**	**Length of ship (metres)**	**Freeboard (millimetres)**	**Length of ship (metres)**	**Freeboard (millimetres)**
60	573	111	1500	162	2560
61	587	112	1521	163	2580
62	601	113	1543	164	2600
63	615	114	1565	165	2620
64	629	115	1587	166	2640
65	644	116	1609	167	2660
66	659	117	1630	168	2680
67	674	118	1651	169	2698
68	689	119	1671	170	2716
69	705	120	1690	171	2735
70	721	121	1709	172	2754
71	738	122	1729	173	2774
72	754	123	1750	174	2795
73	769	124	1771	175	2815
74	784	125	1793	176	2835
75	800	126	1815	177	2855
76	816	127	1837	178	2875
77	833	128	1859	179	2895
78	850	129	1880	180	2915
79	868	130	1901	181	2933
80	887	131	1921	182	2952
81	905	132	1940	183	2970
82	923	133	1959	184	2988
83	942	134	1979	185	3007
84	960	135	2000	186	3025
85	978	136	2021	187	3044
86	996	137	2043	188	3052
87	1015	138	2065	189	3080
88	1034	139	2087	190	3098
89	1054	140	2109	191	3116
90	1075	141	2130	192	3134
91	1096	142	2151	193	3151
92	1116	143	2171	194	3167
93	1135	144	2190	195	3185
94	1154	145	2209	196	3202
95	1172	146	2229	197	3219
96	1190	147	2250	198	3235
97	1209	148	2271	199	3249
98	1229	149	2293	200	3264
99	1250	150	2315	201	3280
100	1271	151	2334	202	3296
101	1293	152	2354	203	3313
102	1315	153	2375	204	3330
103	1337	154	2396	205	3347
104	1359	155	2418	206	3363
105	1380	156	2440	207	3380
106	1401	157	2460	208	3397
107	1421	158	2480	209	3413
108	1440	159	2500	210	3430
109	1459	160	2520	211	3445
110	1479	161	2540	212	3460

Length of ship (metres)	Freeboard (millimetres)	Length of ship (metres)	Freeboard (millimetres)	Length of ship (metres)	Freeboard (millimetres)
213	3475	264	4201	315	4790
214	3490	265	4214	316	4801
215	3505	266	4227	317	4812
216	3520	267	4240	318	4823
217	3537	268	4252	319	4834
218	3554	269	4264	320	4844
219	3570	270	4276	321	4855
220	3586	271	4289	322	4866
221	3601	272	4302	323	4878
222	3615	273	4315	324	4890
223	3630	274	4327	325	4899
224	3645	275	4339	326	4909
225	3660	276	4350	327	4920
226	3675	277	4362	328	4931
227	3690	278	4373	329	4943
228	3705	279	4385	330	4955
229	3720	280	4397	331	4965
230	3735	281	4408	332	4975
231	3750	282	1120	333	4985
232	3765	283	4432	334	4995
233	3780	284	4443	335	5005
234	3795	285	4455	336	5015
235	3808	286	4467	337	5025
236	3821	287	4478	338	5035
237	3835	288	4490	339	3045
238	3849	289	4502	340	5055
239	3864	290	4513	341	5065
240	3880	291	4525	342	5075
241	3893	292	4537	343	5086
242	3906	293	4548	344	5097
243	3920	294	4560	345	5108
244	3934	295	4572	346	5119
245	3949	296	4583	347	5130
246	3965	297	4595	348	5140
247	3978	298	4607	349	5150
248	3992	299	4618	350	5160
249	4005	300	4630	351	5170
250	4018	301	4642	352	5180
251	4032	302	4654	353	5190
252	4045	303	4665	354	5200
253	4058	304	4676	355	5210
254	4072	305	4686	356	5220
255	4085	306	4695	357	5230
256	4098	307	4704	358	5240
257	4112	308	4714	359	5250
258	4125	309	4725	360	5260
259	4139	310	4736	361	5268
260	4152	311	4748	362	5276
261	4165	312	4757	363	5285
262	4177	313	4768	364	5294
263	4189	314	4779	365	5303

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4. (1) Freeboard at intermediate lengths of ship shall be obtained by linear interpolation.

(2) Freeboards, in millimetres, at lengths of ship less than 24 metres shall be –

$$50 + \left(\frac{150(L)}{24} \right) \text{ millimetres.}$$

(3) See also paragraphs 3 and 17 of the Third Schedule.

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FIFTH SCHEDULE

INFORMATION AS TO STABILITY

1. The information relating to the stability of a ship to be provided for the master shall include the particulars specified in paragraphs 2 to 13.

2. The ship's name, official number, port of registry, gross and net tonnages, principal dimensions, displacement, deadweight and draught to the Summer load line.

3. A profile view and, if 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.

4. (1) The capacity and the longitudinal and vertical centre of gravity of every compartment available for the carriage of cargo, fuel, stores, feed water, domestic or water ballast.

(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.

5. (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.

(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.

6. (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.

(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 percent of the weight when loaded).

7. A diagram or scale showing -

(a) the load line mark and load lines with particulars of the corresponding freeboards; and
(b) the displacement, metric 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.

8. (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.

(2) Where a tabular statement is used to comply with subparagraph (1), the intervals between such draughts shall be sufficiently close to permit accurate interpolation.

(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.

9. The effect of 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.

10. (1) A diagram or table showing cross curves of stability, covering the range of draughts referred to in paragraph 7(b).

(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.

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(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.

(4) Subject to subparagraph (5), only enclosed superstructures and efficient trunks as defined in paragraph 10 of the Third Schedule shall be taken into account in deriving such curves.

(5) The following structures may be taken into account in deriving such curves if the Director 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; and
(c) hatchway structures on or above the freeboard deck.

(6) Subject to the approval of the Director 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.

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

(8) In the case of a vehicle ferry or a similar ship having bow doors, shipside 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.

11. (1) The diagram and statements referred to in subparagraph (2) shall be provided separately for each of the following conditions of the ship -

(a) **Light condition**: If 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 percent 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; and
(d) **Service loaded conditions,** both on departure and on arrival.

(2) (a) A profile diagram of the ship drawn to a suitable small scale showing the disposition of all components of the deadweight;
(b) 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);
(c) 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; and
(d) a statement showing the elements of stability in the condition compared to the criteria laid down in the Second Schedule paragraph 2(2).

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

(4) Where there is a significant amount of trim in any of the conditions referred to in subparagraph

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(1), the metacentric height and the curve of righting levers (GZ) may be required to be determined from the trimmed waterline.

(5) If in the view of the Assigning Authority the stability characteristics in either or both of the conditions referred to in subparagraph (1)(c) are not satisfactory, such conditions shall be marked accordingly and an appropriate warning to the master shall be inserted.

12. 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.

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

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Regulation 34

SIXTH SCHEDULE

PARTICULARS OF LOADING NOTICE OF DRAUGHT OF WATER AND FREEBOARDS 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.

2. Before a ship leaves any dock, wharf, harbour or other place for the purpose of proceeding to sea, a Notice in the form given in this Schedule is to be posted up in some conspicuous place on board the ship, and the Notice shall contain all the relevant information specified in the Notice.

NOTICE TO BE POSTED UP ON BOARD SHIP DRAUGHT OF WATER AND FREEBOARD

NOTICE

Name of Ship	Official Number or IMO Number	Port of Registry	Gross Tonnage

PARTICULARS OF ASSIGNED FREEBOARDS AND CORRESPONDING DRAUGHTS

Freeboard season/Type	Freeboard in millimetres	Corresponding to a Mean Draught of:
Summer		
Winter		
Tropical		
Winter North Atlantic		
Fresh Water Allowance (FWA) for all Freeboards other than Timber Freeboards		
Timber Summer		
Timber Winter		
Timber Tropical		
Timber Winter North Atlantic		
FWA for Timber Freeboards		

NOTES:

1. The particulars to be given above of freeboards and allowances for fresh water are 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 metric units (either millimetres, decimetres, or metres and decimetres) using an equivalent of 25.4 millimetres to one inch.

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PARTICULARS OF LOADING

1	2	3	4	5	6	7	8	9
Date	**Place**	**Actual Draught**			**Mean Freeboarding**		**Signature of Master and an Officer**	
		Forward	**Aft**	**Mean**	**Actual (see Notes 5 & 6)**	**Corrected (See Note 7)**	**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. If the actual mean freeboard is less than the appropriate minimum salt water 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 and for the consumption of fuel, water and stores on any stretch of river or inland water before reaching the sea, being allowances duly entered in the ship's official log book.
3. If the actual mean freeboard is greater than the appropriate salt water freeboard, Column 7 need not be filled in.

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Regulation 6 and 27

SEVENTH SCHEDULE

RECORD OF PARTICULARS

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,as amended, and references to paragraphs are references to paragraphs in the Second Schedule of the Merchant Shipping (Load Line) Regulations, 2002)

NAME OF SHIP	
PORT OF REGISTRY	
NATIONALITY OF SHIP	
DISTINCTIVE NUMBERS OR LETTERS	
NAME OF BUILDERS	
YARD NUMBER	
DATE OF BUILD OR CONVERSION	
FREEBOARDS ASSIGNED AS SHIP OF TYPE*	
CLASSIFICATION SOCIETY	
DATE AND PLACE OF INITIAL SURVEY	

** Indicate "Type "A", Type "B"" or "B-60" etc.*

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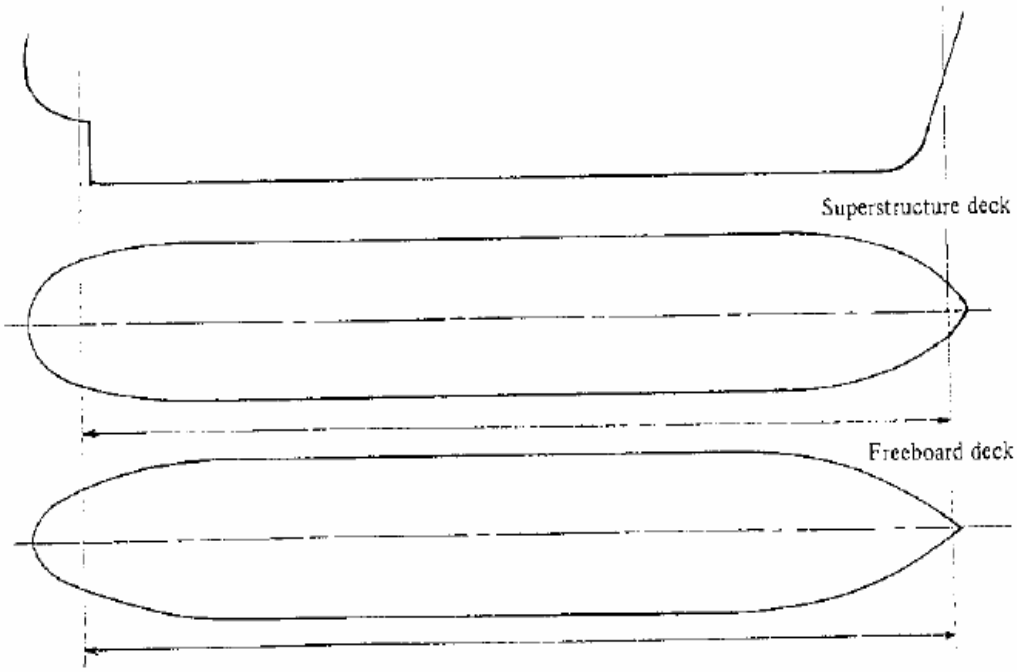
RECORD OF PARTICULARS RELATING TO CONDITIONS OF ASSIGNMENT

(Continued)

The following information is to be inserted in the diagrams and tables following -

- *disposition and dimensions of superstructures, trunks, deckhouse and machinery casings;*
- *extent of bulwarks, guard rails, and wood sheathing on exposed deck;*
- *positions of hatchways, gangways and other means for the protection of the crew;*
- *details of cargo ports, bow and stern doors, side scuttles, scupper, ventilators, air pipes and companionways; and*
- *details of other items that would affect the seaworthiness of the ship.*

(A plan or plans of suitable size may be attached to this Record in preference to the sketches on this page)



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RECORD OF PARTICULARS RELATING TO CONDITIONS OF ASSIGNMENT

(Continued)

1. DOORWAYS IN SUPERSTRUTURES, EXPOSED MACHINERY CASINGS AND DECKHOUSES PROTECTING OPENINGS IN FREEBOARD AND SUPERSTRUCTURE DECKS

(Regulations 12, 17 & 18) (Paragraphs 7 & 8)

LOCATION	REF. NO. ON SKETCH OR PLANS	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 quarterdeck bulkhead					
In poop bulkhead					
In exposed machinery casings on freeboard or raised quarterdecks					
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 pumproom casings					

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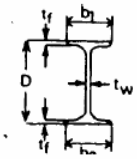
RECORD OF PARTICULARS RELATING TO CONDITIONS OFASSIGNMENT

(Continued)

2. HATCHWAYS AT POSITIONS 1 AND 2 CLOSED BY PORTABLE COVERS AND SECURED WEATHERTIGHT BY TARPAULINS AND BATTENING DEVICES

(Regulation 15) (Paragraph 5)

Position and Reference No. on Sketch or Plan(s)							
Dimensions of clear opening at top of coaming							
Height of coaming above deck							
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** **Materials**						
Means of securing each Section of Covers							
Are wood covers fitted with galvanised end Bands							

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RECORD OF PARTICULARS RELATING TO CONDITIONS OF ASSIGNMENT
(Continued)

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

(Regulation 16) (Paragraphs 6 &19)

POSITION AND REFERENCE ON SKETCH OR PLAN(S)						
DIMENSIONS OF CLEAR OPENING AT TOP OF COAMING						
HEIGHT OF COAMING ABOVE DECK						
TYPE OF COVER OR PATENT NAME						
MATERIALS						
POSITION AND REFERENCE ON SKETCH OR PLAN(S)						
DIMENSIONS OF CLEAR OPENING AT TOP OF COAMING						
HEIGHT OF COAMING ABOVE DECK						
TYPE OF COVER OR PATENT NAME						
MATERIALS						

4. MACHINERY SPACE OPENINGS AND MISCELLANEOUS OPENINGS IN FREEBOARD AND SUPERSTRUCTURE DECKS

(Regulations 17 & 18) (Paragraphs 7 & 8)

POSITION AND REFERENCE ON SKETCH OR PLAN(S)						
DIMENSIONS						
HEIGHT OF COAMING						
COVER: **MATERIAL**						
HOW ATTACHED						
NUMBER & SPACING OF TOGGLES						
POSITION AND REFERENCE ON SKETCH OR PLAN(S)						
DIMENSIONS						
HEIGHT OF COAMING						
COVER:						
MATERIAL						
HOW ATTACHED						
NUMBER & SPACING OF TOGGLES						
PARTICULARS OF SPURLING PIPE CLOSING ARRANGEMENTS						

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RECORD OF PARTICULARS RELATING TO CONDITIONS OF ASSIGNMENT
(Continued)

5. VENTILATORS ON FREEBOARD AND SUPERSTRUCTURE DECKS (POSITIONS 1 AND 2)

(Regulation 19) (Paragraph 9)

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

6. AIR PIPES ON FREEBOARD AND SUPERSTRUCTURE DECKS

(Regulation 20) (Paragraph 10)

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

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RECORD OF PARTICULARS RELATING TO CONDITIONS OF ASSIGNMENT
(Continued)

7. CARGO PORTS AND OTHER SIMILAR OPENINGS

(Regulation 21) (Paragraph 11)

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

8. SCUPPERS, INLETS AND DISCHARGES

(Regulation 22) (Paragraph 12)

STATE IF SCUPPER OR DISCHARGE	NUMBER	PIPE			FROM WHICH COMPARTMENT	WERTICAL DISTANCE ABOVE TOP OF KEEL			NUMBER, TYPE AND MATERIAL OF DISCHARGE VALVES	POSITION OF CONTROLS
						DISCHARGE		UPPERMOST VALVE		
		DIAMETER	THICKNESS	MATERIAL		OUTLET IN HULL	INBOARD END			
In Ro-Ro ships, indicate here how ready accessibility to scupper valves is ensured when vehicle space is filled										

Notes: ***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

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RECORD OF PARTICULARS RELATING TO CONDITIONS OF ASSIGNMENT
(Continued)

9. SIDE SCUTTLES

(Regulation 23) (Paragraph 13)

POSITION	NUMBER FITTED	CLEAR GLASS SIZE	FIXED OR OPENING	MATERIAL		TYPE OF GLASS AND THICKNESS	STANDARDS USED & TYPE NUMBER
				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							

10. FREEING PORTS

(Regulation 24) (Paragraphs 14 & 20)

	LENGTH OF BULWARK	HEIGHT OF BULWARK	NUMBER & SIZE OF FREEING PORTS EACH SIDE	TOTAL AREA EACH SIDE	REQUIRED AREA EACH SIDE
FREEBOARD DECK AFTER WELL					
FORWARD WELL					
SUPERSTRUCTURE DECK					
State fore and aft position of each Freeing Port in relation to superstructure and bulkheads	After Well				
	Forward Well				
Particulars of Shutters, Bars or rails fitted to Freeing Ports:					
Height of lower edges of Freeing Ports above the deck:					

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RECORD OF PARTICULARS RELATING TO CONDITIONS OF ASSIGNMENT
(Continued)

11. PROTECTION OF THE CREW

(Regulations 25 & 26) (Paragraphs 15,18,22,23 & 24)

STATE PARTICULARS OF BULWARKS OR GUARD RAILS ON FREEBOARD AND SUPERSTRUCTURE DECKS:	
STATE DETAILS OF LIFELINES, WALKWAYS, GANGWAYS OR UNDERDECK PASSAGEWAYS WHERE REQUIRED TO BE FITTED	

12. TIMBER DECK CARGO FITTINGS

(Regulation 44) (Paragraph 30)

STATE PARTICULARS OF UPRIGHTS, SOCKETS, LASHINGS, GUARDRAILS AND LIFELINES:	

13. OTHER SPECIAL FEATURES:

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RECORD OF PARTICULARS RELATING TO CONDITIONS OF ASSIGNMENT
(Continued)

14. 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 contained in the Annex to the International Convention on Load Lines, 1966, and of the Second and Seventh Schedules to the Merchant Shipping (Load Lines) Regulations, 2002.

Signed ……. Name of Surveyor: ……..
(Surveyor)

Date: ……..

15. ENDORSEMENT FOR SUBSEQENT SURVEYS

On the date indicated below I have completed the survey of the above vessel and am satisfied that –

1. **The fittings and appliances are in accordance with the Particulars shown in this Record and are in good condition;**
2. **Approved stability information and, where applicable, information relating to the loading and ballasting of the ship, is on board**

DATE OF SURVEY	PLACE OF SURVEY	TYPE OF SURVEY*	NAME OF SURVEYOR	SIGNATURE OF SURVEYOR

**** Indicate if Initial, Annual or Renewal Survey***
(*Delete as appropriate)

Made in Executive Council the 25th day of June , 2002

Carmena H Watler

Clerk of the Cabinet.

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