Ministero dei Trasporti e della Navigazione

COMANDO GENERALE DEL CORPO DELLE CAPITANERIE DI PORTO

International Convention On Load Lines, 1966

including

Protocol of 1988 relating to the Load Lines Convention, 1966

INTERNATIONAL CONFERENCE ON LOAD LINES, 1966 including PROTOCOL OF 1988

The Contracting Governments, Desiring to establish uniform principles and rules with respect to the limits to which ships on international voyages may be loaded having regard to the need for safeguarding life and property at sea; CONSIDERING that this end may best be achieved by conclusion of a Convention; HAVE AGREED as follows:

Article 1
General Obligation under the Convention

(1) The Contracting Governments undertake to give effect to the provisions of the present Convention and the Annexes hereto, which shall constitute an integral part of the present Convention. Every reference to the present Convention constitutes at the same time a reference to the Annexes.

(2) The Contracting Governments shall undertake all measures which may be necessary to give effect to the present Convention.

Article 2
Definitions

For the purpose of the present Convention, unless expressly provided otherwise:

(1) "Regulations" means the Regulations annexed to the present Convention.

(2) "Administration" means the Government of the State whose flag the ship is flying.

(3) "Approved" means approved by the Administration.

(4) "International voyage" means a sea voyage from a country to which the present Convention applies to a port outside such country, or conversely. For this purpose, every territory for the international relations of which a Contracting Government is responsible or for which the United Nations are the administering authority is regarded as a separate country.

(5) A "fishing vessel" is a ship used for catching fish, whales, seals, walrus or other living resources of the sea.

(6) "New ship" means a ship the keel of which is laid, or which is at a similar stage of construction, on or after the date of coming into force of the present Convention for each Contracting Government.

(7) "Existing ship" means a ship which is not a new ship.

(8) “Length' means 96% of the total length on a waterline at 85% of the least moulded depth measured from the top of the keel, or the length from the fore-side of the stem to the axis of the

rudder stock on that waterline, if that be greater. 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."

(9) `Anniversary date' means the day and the month of each year which will correspond to the date of expiry of the relevant certificate.

Article 3
General Provisions

(1) No ship to which the present Convention applies shall proceed to sea on an international voyage after the date on which the present Convention comes into force unless it has been surveyed, marked and provided with an International Load Line Certificate or, where appropriate, an International Load Line Exemption Certificate in accordance with the provisions of the present Convention.

(2) Nothing in this Convention shall prevent an Administration from assigning a greater freeboard than the minimum freeboard determined in accordance with Annex 1.

Article 4
Application

(1) The present Convention shall apply to:

(a) ships registered in countries the Governments of which are Contracting Governments;
(b) ships registered in territories to which the present Convention is extended under Article 32; and
(c) unregistered ships flying the flag of a State, the Government of which is a Contracting Government.

(2) The present Convention shall apply to ships engaged on international voyages.

(3) The regulations contained in Annex I, unless expressly provided otherwise, are applicable to new ships.

(4) Existing ships which do not fully comply with the requirements of the Regulations contained in Annex I or any part thereof shall meet at least such lesser related requirements as the Administration applied to ships on international voyages prior to the coming into force of the present Convention; in no case shall such ships be required to increase their freeboards. In order to take advantage of any reduction in freeboard from that previously assigned, existing ships shall comply with all the requirements of the present Convention.

(5) The Regulations contained in Annex II are applicable to new and existing ships to which the present Convention applies.

Article 5
Exceptions

(1) The present Convention shall not apply to:

(a) ships of war;
(b) new ships of less than 24 metres (79 feet) in length;
(c) existing ships of less than 150 tons gross;
(d) pleasure yachts not engaged in trade;
(e) fishing vessels.

(2) Nothing herein shall apply to ships solely navigating:

(a) the Great Lakes of North America and the River St. Lawrence as far east as a rhumb line drawn from Cap des Rosiers to West Point, Anticosti Island, and, on the north side of Anticosti Island, the meridian of longitude 63°W;
(b) the Caspian Sea;
(c) the Plate, Parana and Uruguay Rivers as far east as a rhumb line drawn between Punta Rasa (Cabo San Antonio), Argentina, and Punta del Este, Uruguay.

Article 6
Exemptions

(1) Ships when engaged on international voyages between the near neighbouring ports of two or more States may be exempted by the Administration from the provisions of the present Convention, so long as they shall remain engaged on such voyages, if the Governments of the States in which such ports are situated shall be satisfied that the sheltered nature or conditions of such voyages between such ports make it unreasonable or impracticable to apply the provisions of the present Convention to ships engaged on such voyages.

(2) The Administration may exempt any ship which embodies features of a novel kind from any of the provisions of this Convention the application of which might seriously impede research into the development of such features and their incorporation in ships engaged on international voyages. Any such ship shall, however, comply with safety requirements, which, in the opinion of that Administration, are adequate for the service for which it is intended and are such as to ensure the overall safety of the ship and which are acceptable to the Governments of the States to be visited by the ship.

(3) The Administration which allows any exemption under paragraphs (1) and (2) of this Article shall communicate to the Inter-Governmental Maritime Consultative Organization (hereinafter called the Organization) particulars of the same and reasons therefore which the Organization shall circulate to the Contracting Governments for their information.

(4) A ship which is not normally engaged on international voyages but which, in exceptional circumstances, is required to undertake a single international voyage may be exempted by the Administration from any of the requirements of the present Convention, provided that it complies with safety requirements which, in the opinion of that Administration, are adequate for the voyage which is to be undertaken by the ship.

Article 7
Force Majeure

(1) A ship which is not subject to the provisions of the present Convention at the time of its departure on any voyage shall not become subject to such provisions on account of any deviation from its intended voyage due to stress of weather or any other cause of *force majeur*e.
(2) In applying the provisions of the present Convention, the Contracting Governments shall give due consideration to any deviation or delay caused to any ship owing to stress of weather or any other cause of *force majeur*e.

Article 8
Equivalents

(1) The Administration may allow any fitting, material, appliance or apparatus to be fitted, or any other provision to be made in a ship, other than that required by the present Convention, if it is satisfied by trial thereof or otherwise that such fitting, material, appliance or apparatus, or provision, is at least as effective as that required by the Convention.

(2) The Administration which allows a fitting, material, appliance or apparatus, or provision, other than that required by the present Convention, shall communicate to the Organization for circulation to the Contracting Governments particulars thereof, together with a report on any trials made.

Article 9
Approvals for Experimental Purposes

(1) Nothing in the present Convention shall prevent an Administration from making specific approvals for experimental purposes in respect of a ship to which the Convention applies.

(2) An Administration which makes any such approval shall communicate to the Organization for circulation to the Contracting Governments particulars thereof.

Article 10
Repairs, Alterations and Modifications

(1) A ship which undergoes repairs, alterations, modifications and outfitting related thereto shall continue to comply with at least the requirements previously applicable to the ship. An existing ship in such a case shall not, as a rule, comply to a lesser extent with the requirements for a new ship than it did before.

(2) Repairs, alterations and modifications of a major character and outfitting related thereto should meet the requirements for a new ship in so far as the Administration deems reasonable and practicable.

Article 11
Zones and Areas

(1) A ship to which the present Convention applies shall comply with the requirements applicable to that ship in the zones and areas described in Annex II.

(2) A port standing on the boundary line between two zones or areas shall be regarded as within the zone or area from or into which the ship arrives or departs.

Article 12
Submersion

(1) Except as provided in paragraphs (2) and (3) of this Article, the appropriate load lines on the sides of the ship corresponding to the season of the year and the zone or area in which the ship may be shall not be submerged at any time when the ship puts to sea, during the voyage or on arrival.

(2) When a ship is in fresh water of unit density the appropriate load line may be submerged by the amount of the fresh water allowance shown on the International Load Line Certificate. Where the density is other than unity, an allowance shall be made proportional to the difference between 1.025 and the actual density.

(3) When a ship departs from a port situated on a river or inland waters, deeper loading shall be permitted corresponding to the weight of fuel and all other materials required for consumption between the point of departure and the sea.

Article 13
Survey and Marking

The survey and marking of ships, as regards the enforcement of the provisions of the present Convention and the granting of exemptions therefrom, shall be carried out by officers of the Administration. The Administration may, however, entrust the survey and marking either to surveyors nominated for the purpose or to organizations recognized by it. In every case the Administration concerned fully guarantees the completeness and efficiency of the survey and marking.

Article 14
Initial, renewal and inspections

(1) A ship shall be subjected to the surveys specified below:

(a) An initial survey before the ship is put in service, which shall include a complete inspection of its structure and equipment in so far as the ship is covered by the present Convention. The survey shall be such as to ensure that the arrangements, materials and scantlings fully comply with the requirements of the present Convention.
(b) A renewal survey at intervals specified by the Administration but not exceeding five years, except where paragraphs (2), (5), (6) and (7) of article 19 are applicable, which shall be such as to ensure that the structure, equipment, arrangements, materials and scantlings fully comply with the requirements of the present Convention.
(c) An annual survey within 3 months before or after each anniversary date of the 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 freeboard marks are correctly and permanently indicated;

(iv) the information required by regulation 10 is provided.

(2) The annual surveys referred to in paragraph (1)(c) of this article shall be endorsed on the International Load Line Certificate or the International Load Line Exemption Certificate issued to a ship exempted under paragraph (2) of article 6 of the present Convention."

Article 15

Maintenance of Conditions after Survey

After any survey of the ship under Article 14 has been completed, no change shall be made in the structure, equipment, arrangements, material or scantlings covered by the survey, without the sanction of the Administration.

Article 16

Issue of Certificates

(1) An International Load Line Certificate shall be issued to every ship which has been surveyed and marked in accordance with the present Convention.

(2) An International Load Line Exemption Certificate shall be issued to any ship to which an exemption has been granted under and in accordance with paragraph (2) or (4) of Article 6.

(3) Such certificates shall be issued by the Administration or by any person or organization duly authorized by it. In every case, the Administration assumes full responsibility for the certificate.

(4) *Deleted*

Article 17

Issue or endorsement of Certificate by another Government

(1) A Contracting Government may at the request of another Contracting Government cause a ship to be surveyed and, if satisfied that the provisions of the present Convention are complied with, shall issue or authorize the issue of the International Load Line Certificate to the ship and, where appropriate, endorse or authorize the endorsement of the certificate on the ship in accordance with the present Convention.

(2) A copy of the certificate, a copy of the survey report used for computing the freeboard, and a copy of the computations shall be transmitted as early as possible to the requesting Government.

(3) A certificate so issued must contain a statement to the effect that it has been issued at the request of the Government of the State whose flag the ship is or will be flying and it shall have the same force and receive the same recognition as a certificate issued under Article 16.

(4) No International Load Line Certificate shall be issued to a ship which is flying the flag of a State the Government of which is not a Contracting Government.

Article 18

Form of Certificates

The certificates shall be drawn up in the form corresponding to the models given in Annex III to the present Convention. If the language used is neither English nor French, the text shall include a translation into one of these languages.

Article 19

Duration and validity of Certificates

(1) An International Load Line Certificate shall be issued for a period specified by the Administration, which shall not exceed 5 years.

(2)

(a) Notwithstanding the requirements of paragraph (1), when the renewal survey is completed within 3 months before the expiry date of the existing certificate, the new certificate shall be valid from the date of completion of the renewal survey to a date not exceeding 5 years from the date of expiry of the existing certificate.

(b) When the renewal survey is completed after the expiry date of the existing certificate, the new certificate shall be valid from the date of completion of the renewal survey to a date not exceeding 5 years from the date of expiry of the existing certificate.

(c) When the renewal survey is completed more than 3 months before the expiry date of the existing certificate, the new certificate shall be valid from the date of completion of the renewal survey to a date not exceeding 5 years from the date of completion of the renewal survey.

(3) If a certificate is issued for a period of less than 5 years, the Administration may extend the validity of a certificate beyond the expiry date to the maximum period specified in paragraph (1), provided that the annual surveys referred to in article 14 applicable when a certificate is issued for a period of 5 years are carried out as appropriate.

(4) If, after the renewal survey referred to in paragraph (1)(b) of article 14, a new certificate cannot be issued to the ship before the expiry date of the existing certificate, the person or organization carrying out the survey may extend the validity of the existing certificate for a period which shall not exceed 5 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) If a ship at the time when a certificate expires is not in a port in which it is to be surveyed, the Administration may extend the period of validity of the certificate but this extension shall be granted only for the purpose of allowing the ship to complete its voyage to the port in which it is to be surveyed, and then only in cases where it appears proper and reasonable to do so. No certificate shall be extended for a period longer than 3 months, 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 to a date not exceeding 5 years from the date of expiry of the existing certificate before the extension was granted.

(6) A certificate issued to a ship engaged on short voyages which has not been extended under the foregoing provisions of this article may be extended by the Administration for a period of grace of up to one month from the date of expiry stated on it. When the renewal survey is completed the new certificate shall be valid to a date not exceeding 5 years from the date of expiry of the existing certificate before the extension was granted.

(7) In special circumstances, as determined by the Administration, a new certificate need not be dated from the date of expiry of the existing certificate as required by paragraphs (2), (5) and (6). In these special circumstances, the new certificate shall be valid to a date not exceeding 5 years from the date of completion of the renewal survey.

(8) If an annual survey is completed before the period specified in article 14 then:

(a) the anniversary date shown on the certificate shall be amended by endorsement to a date which shall not be more than 3 months later than the date on which the survey was completed;
(b) the subsequent annual survey required by article 14 shall be completed at the intervals prescribed by that article using the new anniversary date;
(c) the expiry date may remain unchanged provided one or more annual surveys are carried out so that the maximum intervals between the surveys prescribed by article 4 are not exceeded.

(9) An International Load Line Certificate shall cease to be valid if any of the following circumstances exist:

(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 paragraph (1)(c) of article 14 are not maintained in an effective condition;
(c) the certificate is not endorsed to show that the ship has been surveyed as provided in paragraph (1)(c) of article 14;
(d) the structural strength of the ship is lowered to such an extent that the ship is unsafe.

(10)

(a) The duration of an International Load Line Exemption Certificate issued by an Administration to a ship exempted under paragraph (2) of article 6 shall not exceed 5 years. Such certificate shall be subject to a renewal, endorsement, extension and cancellation procedure similar to that provided for an International Load Line Certificate under this article.

(b) The duration of an International Load Line Exemption Certificate issued to a ship exempted under paragraph (4) of article 6 shall be limited to the single voyage for which it is issued.

(11) A certificate issued to a ship by an Administration shall cease to be valid upon the transfer of such a ship to the flag of another State.

Article 20
Acceptance of Certificates

The certificates issued under the authority of a Contracting Government in accordance with the present Convention shall be accepted by the other Contracting Governments and regarded for all purposes covered by the present Convention as having the same force as certificates issued by them.

Article 21
Control

(1) Ships holding a certificate issued under Article 16 or Article 17 are subject, when in the ports of other Contracting Governments, to control by officers duly authorized by such Governments. Contracting Governments shall ensure that such control is exercised as far as is reasonable and practicable with a view to verifying that there is on board a valid certificate under the present Convention. If there is a valid International Load Line Certificate on board the ship, such control shall be limited to the purpose of determining that:

(a) the ship is not loaded beyond the limits allowed by the certificate;
(b) the position of the load line of the ship corresponds with the certificate; and
(c) the ship has not been so materially altered in respect of the matters set out in sub-paragraphs (a) and (b) paragraph (9) of Article 19 that the ship is manifestl unfit to proceed to sea without danger to human life.

If there is a valid International Load Line Exemption Certificate on board, such control shall be limited to the purpose of determining that any conditions stipulated in that certificate are complied with.

(2) If such control is exercised under sub-paragraph (c) of paragraph (1) of this Article, it shall only be exercised in so far as may be necessary to ensure that the ship shall not sail until it can proceed to sea without danger to the passengers or the crew.

(3) In the event of the control provided for in this Article giving rise to intervention of any kind, the officer carrying out the control shall immediately inform in writing the Consul or the diplomatic representative of the State whose flag the ship is flying of this decision and of all the circumstances in which intervention was deemed to be necessary.

Article 22
Privileges

The privileges of the present Convention may not be claimed in favour of any ship unless it holds a valid certificate under the Convention.

Article 23
Casualties

(1) Each Administration undertakes to conduct an investigation of any casualty occurring to ships for which it is responsible and which are subject to the provisions of the present Convention when it judges that such an investigation may assist in determining what changes in the Convention might be desirable.

(2) Each Contracting Government undertakes to supply the Organization with the pertinent information concerning the findings of such investigations. No reports or recommendations of the Organization based upon such information shall disclose the identity or nationality of the ships concerned or in any manner fix or imply responsibility upon any ship or person.

Article 24
Prior Treaties and Conventions

(1) All other treaties, conventions and arrangements relating to load line matters at present in force between Governments Parties to the present Convention shall continue to have full and complete effect during the terms thereof as regards:

(a) ships to which the present Convention does not apply; and
(b) ships to which the present Convention applies, in respect of matters for which it has not expressly provided.

(2) To the extent, however, that such treaties, conventions or arrangements conflict with the provisions of the present Convention, the provisions of the present Convention shall prevail.

Article 25
Special Rules drawn up by Agreement

When in accordance with the present Convention special rules are drawn up by agreement among all or some of the Contracting Governments, such rules shall be communicated to the Organization for circulation to all Contracting Governments.

Article 26
Communication of Information

(1) The Contracting Governments undertake to communicate to and deposit with the Organization:

(a) a sufficient number of specimens of their certificates issued under the provisions of the present Convention for circulation to the Contracting Governments;
(b) the text of the laws, decrees, orders, regulations and other instruments which shall have been promulgated on the various matters within the scope of the present Convention; and
(c) a list of non-governmental agencies which are authorized to act in their behalf in the administration of load line matters for circulation to the Contracting Governments.

(2) Each Contracting Government agrees to make its strength standards available to any other Contracting Government, upon request.

Article 27
Signature, Acceptance and Accession

(1) The present Convention shall remain open for signature for three months from 5 April 1966 and shall thereafter remain open for accession. Governments of States Members of the United Nations, or of any of the Specialized Agencies, or of the International Atomic Energy Agency, or parties to the Statute of the International Court of Justice may become parties to the Convention by:

(a) signature without reservation as to acceptance;
(b) signature subject to acceptance followed by acceptance; or
(c) accession.

(2) Acceptance or accession shall be effected by the deposit of an instrument of acceptance or accession with the Organization which shall inform all Governments that have signed the Convention or acceded to it of each new acceptance or accession and of the date of its deposit.

Article 28
Coming into force

(1) The present Convention shall come into force twelve months after the date on which not less than fifteen Governments of States, including seven each with not less than one million gross tons of shipping, have signed without reservation as to acceptance or deposited instruments of acceptance or accession in accordance with Article 27. The Organization shall inform all Governments which have signed or acceded to the present Convention of the date on which it comes into force.

(2) For Governments which have deposited an instrument of acceptance of or accession to the present Convention during the twelve months mentioned in paragraph (1) of this Article, the acceptance or accession shall take effect on the coming into force of the present Convention or three months after the date of deposit of the instrument of acceptance or accession, whichever is the later date.

(3) For Governments which have deposited an instrument of acceptance of or accession to the present Convention after the date on which it comes into force, the Convention shall come into force three months after the date of the deposit of such instrument.

(4) After the date on which all the measures required to bring an amendment to the present Convention into force have been completed, or all necessary acceptances are deemed to have been given under sub-paragraph (b) of paragraph (2) of Article 29 in case of amendment by unanimous acceptance, any instrument of acceptance or accession deposited shall be deemed to apply to the Convention as amended.

Article 29
Amendments

(1) The present Convention may be amended by either of the procedures specified in the following paragraphs.

(2) Amendments after consideration within the Organization:

(a) Any amendment proposed by a Contracting Government shall be submitted to the Secretary-General of the Organization, who shall then circulate it to all Members of the Organization and all Contracting Governments at least six months prior to its consideration.

(b) Any amendment proposed and circulated as above shall be referred to the Maritime Safety Committee of the Organization for consideration.

(c) Contracting Governments of States, whether or not Members of the Organization, shall be entitled to participate in the proceedings of the Maritime Safety Committee for the consideration and adoption of amendments.

(d) Amendments shall be adopted by a two-thirds majority of the Contracting Governments present and voting in the Maritime Safety Committee expanded as provided for in sub-paragraph (c) of this paragraph (herein- after referred to as "the expanded Maritime Safety Committee") on condition that at least one-third of the Contracting Governments shall be present at the time of voting.

(e) Amendments adopted in accordance with sub-paragraph (d) of this paragraph shall be communicated by the Secretary-General of the Organization to all Contracting Governments for acceptance.

(f)

(i) An amendment to an Article of the Convention shall be deemed to have been accepted on the date on which it is accepted by two-thirds of the Contracting Governments.

(ii) An amendment to an Annex shall be deemed to have been accepted: at the end of two years from the date on which it is communicated toContracting Governments for acceptance; or at the end of a different period, which shall not be less than one year, if so determined at the time of its adoption by a two- thirds majority of the Contracting Governments present and voting in the expanded Maritime Safety Committee.

However, if within the specified period either more than one-third of Contracting Governments, or Contracting Governments the combined merchant fleets of which constitute not less than fifty per cent of the gross tonnage of all the merchant fleets of all Contracting Governments, notify the Secretary-General of the Organization that they object to the amendment, it shall be deemed not to have been accepted.

(g)

(i) An amendment to an Article of the Convention shall enter into force with respect to those Contracting Governments which have accented it, six months after the date on which it is deemed to have been accepted, and with respect to each Contracting Government which accepts it after that date, six months after the date of that Contracting Government's acceptance.

(ii) An amendment to an Annex shall enter into force with respect to all Contracting Governments, except those which have objected to the amendment under sub-paragraph (f)(ii) of this paragraph and which have not withdrawn such objections, six months after the date on which it is deemed to have been accepted. However, before the date set for entry into force, any Contracting Government may give notice to the Secretary-General of the Organization that it exempts itself from giving effect to that amendment for a period not longer than one year from the date of its entry into force, or for such longer period as may be determined by a two-thirds majority of the

Contracting Governments present and voting in the expanded Maritime Safety Committee at the time of the adoption of the amendment.

(3) Amendment by a Conference:

(a) Upon the request of a Contracting Government concurred in by at least one-third of the Contracting Governments, the Organization shall convene a Conference of Contracting Governments to consider amendments to the present Convention.
(b) Every amendment adopted by such a Conference by a two-thirds majority of the Contracting Governments present and voting shall be communicated by the Secretary-General of the Organization to all Contracting Governments for acceptance.
(c) Unless the Conference decides otherwise, the amendment shall be deemed to have been accepted and shall enter into force in accordance with the procedures specified in sub-paragraphs (2)(f) and (23(g) respectively of this Article, provided that references in these paragraphs to the expanded Maritime Safety Committee shall be taken to mean references to the Conference.

(4)

(a) A Contracting Government which has accepted an amendment to an Annex which has entered into force shall not be obliged to extend the benefit of the present Convention in respect of the certificates issued to a ship entitled to fly the flag of a State the Government of which, pursuant to the provisions of sub-paragraph 12)(f)(ii) of this Article, has objected to the amendment and has not withdrawn such an objection, but only to the extent that such certificate relate to matters covered by the amendment in question.
(b) A Contracting Government which has accepted an amendment to an Annex which has entered into force shall extend the benefit of the present Convention in respect of the certificates issued to a ship entitled to fly the flag of a State the Government of which, pursuant to the provisions of sub-paragraph (2)(g)(ii) of this Article, has notified the Secretary-General of the Organization that it exempts itself from giving effect to the amendment.

(5) Unless expressly provided otherwise, any amendment to the present Convention made under this Article, which relates to the structure of a ship, shall apply only to ships the keels of which are laid or which are at a similar stage of construction, on or after the date on which the amendment enters into force.

(6) Any declaration of acceptance of, or objection to, an amendment or any notice given under sub-paragraph (2)(g)(ii) of this Article shall be submitted in writing to the Secretary-General of the Organization, who shall inform all Contracting Governments of any such submission and the date of its receipt.

(7) The Secretary-General of the Organization shall inform all Contracting Governments of any amendments which enter into force under this Article, together with the date on which each such amendment enters into force."

Article 30
Denunciation

(1) The present Convention may be denounced by any Contracting Government at any time after the expiry of five years from the date on which the Convention comes into force for that Government.

(2) Denunciation shall be effected by a notification in writing addressed to the Organization which shall inform all the other Contracting Governments of any such notification received and of the date of its receipt.

(3) A denunciation shall take effect one year, or such longer period as may be specified in the notification, after its receipt by the Organization.

Article 31
Suspension

(1) In case of hostilities or other extraordinary circumstances which affect the vital interests of a State the Government of which is a Contracting Government, that Government may suspend the operation of the whole or any part of the present Convention. The suspending Government shall immediately give notice of any such suspension to the Organization.

(2) Such suspension shall not deprive other Contracting Governments of any right of control under the present Convention over the ships of the suspending Government when such ships are within their ports.

(3) The suspending Government may at any time terminate such suspension and shall immediately give notice of such termination to the Organization.

(4) The Organization shall notify all Contracting Governments of any suspension or termination of suspension under this Article.

Article 32
Territories

(1)
(a) The United Nations, in cases where they are the administering authority for a territory, or any Contracting Government responsible for the international relations of a territory, shall as soon as possible consult with such territory in an endeavour to extend the present Convention to that territory and may at any time by notification in writing to the Organization declare that the present Convention shall extend to such territory.
(b) The present Convention shall, from the date of the receipt of the notification or from such other date as may be specified in the notification, extend to the territory named therein.

(2)
(a) The United Nations, or any Contracting Government which has made a declaration under sub-paragraph (a) of paragraph (1) of this Article, at any time after the expiry of a period of five years from the date on which the Convention has been so extended to any

territory, may by notification in writing to the Organization declare that the present Convention shall cease to extend to any such territory named in the notification.

(b) The present Convention shall cease to extend to any territory mentioned in such notification one year, or such longer period as may be specified therein, after the date of receipt of the notification by the Organization.

(3) The Organization shall inform all the Contracting Governments of the extension of the present Convention to any territories under paragraph (1) of this Article, and of the termination of any such extension under the provisions of paragraph (2), stating in each case the date from which the present Convention has been or will cease to be so extended.

Article 33
Registration

(1) The present Convention shall be deposited with the Organization and the Secretary-General of the Organization shall transmit certified true copies thereof to all Signatory Governments and to all Governments which accede to the present Convention.

(3) As soon as the present Convention comes into force it shall be registered by the Organization in accordance with Article 102 of the Charter of the United Nations.

Article 34
Languages

The present Convention is established in a single copy in the English and French languages, both texts being equally authentic. Official translations in the Russian and Spanish languages shall be prepared and deposited with the signed original.

INTERNATIONAL CONFERENCE ON LOAD LINES, 1966
including PROTOCOL of 1988

ANNEX I REGULATIONS FOR DETERMINING LOAD LINES
CHAPTER I GENERAL

The Regulations assume that the nature and stowage of the cargo, ballast, etc., are such as to secure sufficient stability of the ship and the avoidance of excessive structural stress.
The Regulations also assume that where there are international requirements relating to stability or subdivision, these requirements have been complied with.

Regulation 1
Strength of Ship

The Administration shall satisfy itself that the general structural strength of the ship is sufficient for the draught corresponding to the freeboard assigned. Ships built and maintained in conformity with the requirements of a classification society recognized by the Administration may be considered to possess adequate strength.

Regulation 2
Application

(1) Ships with mechanical means of propulsion or lighters, barges or other ships without independent means of propulsion, shall be assigned freeboards in accordance with the provisions of Regulations 1-40 inclusive of this Annex.

(2) Ships carrying timber deck cargoes may be assigned, in addition to the freeboards prescribed in paragraph (1) of this Regulation, timber freeboards in accordance with the provisions of Regulations 41-45 inclusive of this Annex.

(3) Ships designed to carry sail, whether as the sole means of propulsion or as a supplementary means, and tugs, shall be assigned freeboards in accordance with the provisions of Regulations 1-40 inclusive of this Annex. Such additional freeboard shall be required as determined by the Administration.

(4) Ships of wood or of composite construction, or of other materials the use of which the Administration has approved, or ships whose constructional features are such as to render the application of the provisions of this Annex unreasonable or impracticable, shall be assigned freeboards as determined by the Administration.

(5) Regulations 10-26 inclusive of this Annex shall apply to every ship to which a minimum freeboard is assigned. Relaxations from these requirements may be granted to a ship to which a greater than minimum freeboard is assigned on condition that the Administration is satisfied with the safety conditions provided.

(6) Regulation 22(2) and regulation 27 shall apply only to ships the keels of which are laid or which are at a similar stage of construction on or after the date on which the Protocol of 1988 Relating to the International Convention on Load Lines, 1966 enters into force.

(7) New ships, other than those specified in paragraph (6), shall comply either with regulation 27 of the present Convention (as amended) or with regulation 27 of the International Convention on Load Lines, 1966 (as adopted on 5 April 1966), as determined by the Administration.

Regulation 3

Definitions of Terms used in the Annexes

(1) Length. The length (L) shall be taken as 96% of the total length on a waterline at 85% of the least moulded depth measured from the top of the keel, or as the length from the fore-side of the stem to the axis of the rudder stock on that waterline, if that be greater. 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.

(2) Perpendiculars. The forward and after perpendiculars shall be taken at the forward and after ends of the length (L). The forward perpendicular shall coincide with the foreside of the stem on the waterline on which the length is measured.

(3) Amidships. Amidships is at the middle of the length (L).

(4) Breadth. Unless expressly provided otherwise, the breadth (B) is the maximum breadth of the ship, measured amidships to the moulded line of the frame in a ship with a metal shell and to the outer surface of the hull in a ship with a shell of any other material.

(5) Moulded Depth

(a) The moulded depth is the vertical distance measured from the top of the keel to the top of the freeboard deck beam at side. In wood an composite ships the distance is measured from the lower edge of the keel rabbet. Where the form at the lower part of the midship section is of a hollow character, or where thick garboards are fitted, the distance is measured from the point where the line of the flat of the bottom continued inwards cuts the side of the keel.

(b) In ships having rounded gunwales, the moulded depth shall be measured to the point of intersection of the moulded lines of deck and sides the lines extending as though the gunwale were of angular design.

(c) Where the freeboard deck is stepped and the raised part of the deck extends over the point at which the moulded depth is to be determined, the moulded depth shall be measured to a line of reference extending from the lower part of the deck along a line parallel with the raised part.

(6) Depth for Freeboard (D)

(a) The depth for freeboard (D) is the moulded depth amidships, plus the thickness of the freeboard deck stringer plate, where fitted, plus (T(L-S)/ L) if the exposed freeboard deck is sheathed, where T is the mean thickness of the exposed sheathing clear of deck openings, and S is the total length of superstructures as defined in sub-paragraph (10) (d) of this Regulation.

(b) The depth for freeboard (D) in a ship having a rounded gunwale with a radius greater than 4 per cent of the breadth (B) or having topsides of unusual form is the depth for freeboard of a ship having a midship section with vertical topsides and with the same round of beam and area of topside section equal to that provided by the actual midship section.

7) Block Coefficient. The block coefficient (Cb) is given by:

Cb=(Ñ / L.B.d1);

where

Ñ is the volume of the moulded displacement of the ship, excluding bossing, in a ship with a metal shell, and is the volume of displacement to the outer surface of the hull in a ship with a shell of any other material, both taken at a moulded draught of d1; and where

d1 is 85 per cent of the least moulded depth.

(8) Freeboard. The freeboard assigned is the distance measured vertically downwards amidships from the upper edge of the deck line to the upper edge of the related load line.

(9) Freeboard Deck. The freeboard deck is normally the uppermost complete deck exposed to weather and sea, which has permanent means of closing all openings in the weather part thereof, and below which all openings in the sides of the ship are fitted with permanent means of watertight closing. In a ship having a discontinuous freeboard deck, the lowest line of the exposed deck and the continuation of that line parallel to the upper part of the deck is taken as the freeboard deck. At the option of the owner and subject to the approval of the administration, a lower deck may be designated as the freeboard deck provided it is a complete and permanent deck continuous in a fore and aft direction at least between the machinery space and peak bulkheads and continuous athwartships. When this lower deck is stepped the lowest line of the deck and the continuation of that line parallel to the upper part of the deck is taken as the freeboard deck. When a lower deck is designated as the freeboard deck, that part of the hull which extends above the freeboard deck is treated as a superstructure so far as concerns the application of the conditions of assignment and the calculation of freeboard. It is from this deck that the freeboard is calculated.

(10) Superstructure

(a) A superstructure is a decked structure on the freeboard deck, extending from side to side of the ship or with the side plating not being inboard of the shell plating more than 4 per cent of the breadth (B). A raised quarter deck is regarded as a superstructure.

(b) An enclosed superstructure is a superstructure with:

(i) enclosing bulkheads of efficient construction;

(ii) access openings, if any, in these bulkheads fitted with doors complying with the requirements of Regulation 12;

(iii) all other openings in sides or ends of the superstructure fitted with efficient weathertight means of closing.

A bridge or poop shall not be regarded as enclosed unless access is provided for the crew to reach machinery and other working spaces inside these superstructures by alternative means which are available at all times when bulkhead openings are closed.

(c) The height of a superstructure is the least vertical height measured at side from the top of the superstructured deck beams to the top of the freeboard deck beams.

(d) The length of a superstructure (S) is the mean length of the part of the superstructure which lies within the length (L).

(11) Flush Deck Ship. A flush deck ship is one which has no superstructure on the freeboard deck.

(12) Weathertight. Weathertight means that in any sea conditions water will not penetrate into the ship.

Regulation 4
Deck Line

The deck line is a horizontal line 300 millimetres (12 inches) in length and 25 millimetres (1 inch) in breadth. It shall be marked amidships on each side of the ship, and its upper edge shall normally pass through the point where the continuation outwards of the upper surface of the freeboard deck intersects the outer surface of the shell (as illustrated in Figure 1 CLICK HERE), provided that the deck line may be placed with reference to another fixed point on the ship on condition that the freeboard is correspondingly corrected. The location of the reference point and the identification of the freeboard deck shall in all cases be indicated on the International Load Line Certificate (1966).

Regulation 5
Load Line Mark

The Load Line Mark shall consist of a ring 300 millimetres (12 inches) in outside diameter and 25 millimetres (1 inch) wide which is intersected by a horizontal line 450 millimetres (18 inches) in length and 25 millimetres (1 inch) in breadth, the upper edge of which passes through the centre of the ring. The centre of the ring shall be placed amidships and at a distance equal to the assigned summer freeboard measured vertically below the upper edge of the deck line.

Regulation 6
Lines to be used with the Load Line Mark

(1) The lines which indicate the load line assigned in accordance with these Regulations shall be horizontal lines 230 millimetres (9 inches) in length and 25 millimetres (1 inch) in breadth which extend forward of, unless expressly provided otherwise, and at right angles to, a vertical line 25 millimetres (1 inch) in breadth marked at a distance 540 millimetres (21 inches) forward of the centre of the ring.

(2) The following load lines shall be used:

(a) The Summer Load Line indicated by the upper edge of the line which passes through the centre of the ring and also by a line marked S.
(b) The Winter Load Line indicated by the upper edge of a line marked W.
(c) The Winter North Atlantic Load Line indicated by the upper edge of a line marked WNA.
(d) The Tropical Load Line indicated by the upper edge of a line marked T.
(e) The Fresh Water Load Line in summer indicated by the upper edge of a line marked F. The Fresh Water Load Line in summer is marked abaft the vertical line. The difference between the Fresh Water Load Line in summer and the Summer Load Line is the allowance to be made for loading in fresh water at the other load lines.
(f) The Tropical Fresh Water Load Line indicated by the upper edge of a line marked TF, and marked abaft the vertical line.

(3) If timber freeboards are assigned in accordance with these Regulations, the timber load lines shall be marked in addition to ordinary load lines. These lines shall be horizontal lines 230 millimetres (9 inches) in length and 25 millimetres (1 inch) in breadth which extend abaft unless expressly provided otherwise, and are at right angles to, a vertical line 25 millimetres (1 inch) in breadth marked at a distance 540 millimetres (21 inches) abaft the centre of the ring (as illustrated in Figure 3 CLICK HERE).

(4) The following timber load lines shall be used:

(a) The Summer Timber Load Line indicated by the upper edge of a line marked LS.
(b) The Winter Timber Load Line indicated by the upper edge of a line marked LW.
(c) The Winter North Atlantic Timber Load Line indicated by the upper edge of a line marked LWNA.
(d) The Tropical Timber Load Line indicated by the upper edge of a line marked LT.
(e) The Fresh Water Timber Load Line in summer indicated by the upper edge of a line marked LF and marked forward of the vertical line.

The difference between the Fresh Water Timber Load Line in summer and the Summer Timber Load Line is the allowance to be made for loading in fresh water at the other timber load lines.

(f) The Tropical Fresh Water Timber Load Line indicated by the upper edge of a line marked LTF and marked forward of the vertical line.

(5) Where the characteristics of a ship or the nature of the ship's service or navigational limits make any of the seasonal lines inapplicable, these lines may be omitted.

(6) Where a ship is assigned a greater than minimum freeboard so that the load line is marked at a position corresponding to, or lower than, the lowest seasonal load line assigned at minimum freeboard in accordance with the present Convention, only the Fresh Water Load Line need be marked.

(7) On sailing ships only the Fresh Water Load Line and the Winter North Atlantic Load Line need be marked (as illustrated in Figure 4 CLICK HERE).

(8) Where a Winter North Atlantic Load Line is identical with the Winter Load Line corresponding to the same vertical line, this load line shall be marked W.

(9) Additional load lines required by other international conventions in force may be marked at right angles to and abaft the vertical line specified in paragraph (1) of this Regulation.

Regulation 7
Mark of Assigning Authority

The mark of the Authority by whom the load lines are assigned may be indicated alongside the load line ring above the horizontal line which passes through the centre of the ring, or above and below it. This mark shall consist of not more than four initials to identify the Authority's name, each measuring approximately 115 millimetres (4J inches) in height and 75 millimetres (3 inches) in width.

Regulation 8
Details of Marking

The ring, lines and letters shall be painted in white or yellow on a dark ground or in black on a light ground. They shall also be permanently marked on the sides of the ships to the satisfaction of the Administration. The marks shall be plainly visible and, if necessary, special arrangements shall be made for this purpose.

Regulation 9
Verification of Marks

The International Load Line Certificate shall not be delivered to the ship until the officer or surveyor acting under the provisions of Article 13 of the present Convention has certified that the marks are correctly and permanently indicated on the ship's sides.

CHAPTER II CONDITIONS OF ASSIGNMENT OF FREEBOARD

Regulation 10
Information to be supplied to the Master

(1) The master of every new ship shall be supplied with sufficient information, in an approved form, to enable him to arrange for the loading and ballasting of his ship in such a way as to avoid the creation of any unacceptable stresses in the ship's structure, provided that this requirement need not apply to any particular length, design or class of ship where the Administration considers it to be unnecessary.

(2) Every ship which is not required under the International Convention for Safety of Life at Sea in force to undergo an inclining test upon its completion shall:

(a) be so inclined and the actual displacement and position of the centre of gravity shall be determined for the light ship condition;
(b) have supplied for the use of its master such reliable information in an approved form as is necessary to enable him by rapid and simple processes to obtain accurate guidance as

to the stability of the ship under all conditions likely to be encountered in normal service;

(c) carry on board at all times its approved stability information together with evidence that the information has been approved by the Administration;

(d) if the Administration so approves, have its inclining test on completion dispensed with, provided basic stability data are available from the inclining test of a sister ship and it is shown to the satisfaction of the Administration that reliable stability information for the ship can be obtained from such basic data..

Regulation 11

Superstructure and bulkheads

Bulkheads at exposed ends of enclosed superstructures shall be off efficient construction be to the satisfaction of the Administration.

Regulation 12

Doors

(1) All access openings in bulkheads at ends of enclosed superstructures shall be fitted with doors of steel or other equivalent material, permanently and strongly attached to the bulkhead, and framed, stiffened and fitted so that the whole structure is of equivalent strength to the unpierced bulkhead and weathertight when closed. The means for securing these doors weathertight shall consist of gaskets and clamping devices or other equivalent means and shall be permanently attached to the bulkhead or to the doors themselves, and the doors shall be so arranged that they can be operated from both sides of the bulkhead.

(2) Except as otherwise provided in these Regulations, the height of the sills of access openings in bulkheads at ends of enclosed superstructures shall be at least 380 millimetres (15 inches) above the deck.

Regulation 13

Position of Hatchways, Doorways and Ventilators

For the purpose of the Regulations, two positions of hatchways, doorways and ventilators are defined as follows:

Position 1 - Upon exposed freeboard and raised quarter decks, and upon exposed superstructure decks situated forward of a point located a quarter of the ship's length from the forward perpendicular.

Position 2 - Upon exposed superstructure decks situated abaft a quarter of the ship's length from the forward perpendicular.

Regulation 14
Cargo and other Hatchways

(1) The construction and the means for securing the weathertightness of cargo and other hatchways in positions 1 and 2 shall be at least equivalent to the requirements of Regulations 15 and 16 of this Annex.

(2) Coamings and hatchway covers to exposed hatchways on decks above the superstructure deck shall comply with the requirements of the Administration.

Regulation 15
Hatchways closed by Portable Covers and secured Weathertight by Tarpaulins and Battening Devices Hatchway Coamings

(1) The coamings of hatchways closed by portable covers secured weathertight by tarpaulins and battening devices shall be of substantial construction, and their height above the deck shall be at least as follows:

- 600 millimetres (23 ½ inches) if in position 1.

- 450 millimetres (17 ½ inches) if in position 2.

Hatchway Covers

(2) The width of each bearing surface for hatchway covers shall be at least 65 millimetres (2 ½ inches).

(3) Where covers are made of wood, the finished thickness shall be at least 60 millimetres (2 3/8 inches) in association with a span of not more than 1.5 metres (4.9 feet).

(4) Where covers are made of mild steel the strength shall be calculated with assumed loads not less than 1.75 metric tons per square metre (358 pounds per square foot) on hatchways in position 1, and not less than 1.30 metric tons per square metre (266 pounds per square foot) on hatchways in position 2, and the product of the maximum stress thus calculated and the factor 4.25 shall not exceed the minimum ultimate strength of the material. They shall be so designed as to limit the deflection to not more than 0.0028 times the span under these loads.

(5) The assumed loads on hatchways in position 1 may be reduced to 1 metric ton per square metre (205 pounds per square foot) for ships of 24 metres (79 feet) in length and shall be not less than 1.75 metric tons per square metre (358 pounds per square foot) for ships of 100 metres (328 feet) in length. The corresponding loads on hatchways in position 2 may be reduced to 0.75 metric tons per square metre (154 pounds per square foot) and 1.30 metric tons per square metre (266 pounds per square foot) respectively. In all cases values at intermediate lengths shall be obtained by linear interpolation.

Portable Beams

(6) Where portable beams for supporting hatchway covers are made of mild steel the strength shall be calculated with assumed loads not less than 1.75 metric tons per square metre (358 pounds per square foot) on hatchways in position 1 and not less than 1.30 metric tons per

square metre (266 pounds per square foot) on hatchways in position 2 and the product of the maximum stress thus calculated and the factor 5 shall not exceed the minimum ultimate strength of the material. They shall be so designed as to limit the deflection to not more than 0.0022 times the span under these loads. For ships of not more than 100 metres (328 feet) in length the requirements of paragraph (5) of this Regulation are applicable.

Pontoon Covers

(7) Where pontoon covers used in place of portable beams and covers are made of mild steel the strength shall be calculated with the assumed loads given in paragraph (4) of this Regulation, and the product of the maximum stress thus calculated and the factor 5 shall not exceed the minimum ultimate strength of the material. They shall be so designed as to limit the deflection to not more than 0.0022 times the span. Mild steel plating forming the tops of covers shall be not less in thickness than one per cent of the spacing of stiffeners or 6 millimetres (0.24 inches) if that be greater. For ships of not more than 100 metres (328 feet) in length the requirements of paragraph (5) of this Regulation are applicable.

(8) The strength and stiffness of covers made of materials other than mild steel shall be equivalent to those of mild steel to the satisfaction of the Administration.

Carriers or Sockets

(9) Carriers or sockets for portable beams shall be of substantial construction, and shall provide means for the efficient 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

(10) Cleats shall be set to fit the taper of the wedges. They shall be at least 65 millimetres (2 ½ inches) wide and spaced not more than 600 millimetres (23 ½ inches) centre to centre; the cleats along each side or end shall be not more than 150 millimetres (6 inches) from the hatch corners.

Battens and Wedges

(11) Battens and wedges shall be efficient and in good condition. Wedges shall be of tough wood or other equivalent material. They shall have a taper of not more than 1 in 6 and shall be not less than 13 millimetres (½ inch) thick at the toes.

Tarpaulins

(12) At least two layers of tarpaulin in good condition shall be provided for each hatchway in position 1 or 2. The tarpaulins shall be waterproof and of ample strength. They shall be of a material of at least an approved standard weight and quality.

Security of Hatchway Covers

(13) For all hatchways in position 1 or 2 steel bars or other equivalent means shall be provided in order efficiently and independently to secure each section of hatchway covers after the

tarpaulins are battened down. Hatchway covers of more than 1.5 metres (4.9 feet) in length shall be secured by at least two such securing appliances.

Regulation 16

Hatchways closed by Weathertight Covers of Steel or other equivalent material fitted with Gaskets and Clamping Devices

Hatchway Coamings

(1) At positions 1 and 2 the height above the deck of hatchway coamings fitted with weathertight hatch covers of steel or other equivalent material fitted with gaskets and clamping devices shall be as specified in Regulation 15 (1). The height of these coamings may be reduced, or the coamings omitted entirely, on condition that the Administration is satisfied that the safety of the ship is not thereby impaired in any sea conditions. Where coamings are provided they shall be of substantial construction.

Weathertight Covers

(2) Where weathertight covers are of mild steel the strength shall be calculated with assumed loads not less than 1.75 metric tons per square metre (358 pounds per square foot) on hatchways in position 1, and not less than 1.30 metric tons per square metre (266 pounds per square foot) on hatchways in position 2, and the product of the maximum stress thus calculated and the factor of 4.25 shall not exceed the minimum ultimate strength of the material. They shall be so designed as to limit the deflection to not more than 0.0028 times the span under these loads. Mild steel plating forming the tops of covers shall be not less in thickness than one per cent of the spacing of stiffeners or 6 millimetres (0.24 inches) if that be greater. The provisions of Regulation 15 (5) are applicable for ships of not more than 100 metres (328 feet) in length.

(3) The strength and stiffness of covers made of materials other than mild steel shall be equivalent to those of mild steel to the satisfaction of the Administration.

Means for Securing Weathertightness

(4) The means for securing and maintaining weathertightness shall be to the satisfaction of the Administration. The arrangements shall ensure that the tightness can be maintained in any sea conditions, and for this purpose tests for tightness shall be required at the initial survey, and may be required at periodical surveys and at annual inspections or at more frequent intervals.

Regulation 17

Machinery Space Openings

(1) Machinery space openings in position 1 or 2 shall be properly framed and efficiently enclosed by steel casings of ample strength, and where the casings are not protected by other structures their strength shall be specially considered. Access openings in such casings shall be fitted with doors complying with the requirements of Regulation 12 (1), the sills of which shall be at least 600 millimetres (23 ½ inches) above the deck if in position 1, and at least 380 millimetres (15 inches) above the deck if in position 2. Other openings in such casings shall be fitted with equivalent covers, permanently attached in their proper positions.

(2) Coamings of any fiddley, funnel or machinery space ventilator in an exposed position on the freeboard or superstructure deck shall be as high above the deck as is reasonable and practicable. Fiddley openings shall be fitted with strong covers of steel or other equivalent material permanently attached in their proper positions and capable of being secured weathertight.

Regulation 18

Miscellaneous Openings in Freeboard and Superstructure Decks

(1) Manholes and flush scuttles in position 1 or 2 or within superstructures other than enclosed superstructures shall be closed by substantial covers capable of being made watertight. Unless secured by closely spaced bolts, the covers shall be permanently attached.

(2) Openings in freeboard decks other than hatchways, machinery space openings, manholes and flush scuttles shall be protected by an enclosed superstructure, or by a deckhouse or companionway of equivalent strength and weathertightness. Any such opening in an exposed superstructure deck or in the top of a deckhouse on the freeboard deck which gives access to a space below the freeboard deck or a space within an enclosed superstructure shall be protected by an efficient deckhouse or companionway. Doorways in such deckhouses or companionways shall be fitted with doors complying with the requirements of Regulation 12 (1).

(3) In position 1 the height above the deck of sills to the doorways in companionways shall be at least 600 millimetres (23 ½ inches). In position 2 it shall be at least 380 millimetres (15 inches).

Regulation 19

Ventilators

(1) Ventilators in position 1 or 2 to spaces below freeboard decks or decks of enclosed superstructures shall have coamings of steel or other equivalent material, substantially constructed and efficiently connected to the deck. Where the coaming of any ventilator exceeds 900 millimetres (35 ½ inches) in height it shall be specially supported.

(2) Ventilators passing through superstructures other than enclosed superstructures shall have substantially constructed coamings of steel or other equivalent material at the freeboard deck.

(3) Ventilators in position 1 the coamings of which extend to more than 4.5 metres (14.8 feet) above the deck, and in position 2 the coamings of which extend to more than 2.3 metres (7.5 feet) above the deck, need not be fitted with closing arrangements unless specifically required by the Administration.

(4) Except as provided in paragraph (3) of this Regulation ventilator openings shall be provided with efficient weathertight closing appliances. In ships of not more than 100 metres (328 feet) in length the closing appliances shall be permanently attached; where not so provided in other ships, they shall be conveniently stowed near the ventilators to which they are to be fitted. Ventilators in position 1 shall have coamings of a height of at least 900 millimetres (35 ½

inches) above the deck; in position 2 the coamings shall be of a height at least 760 millimetres (30 inches) above the deck.

(5) In exposed positions, the height of coamings may be required to be increased to the satisfaction of the Administration.

Regulation 20
Air Pipes

Where air pipes to ballast and other tanks extend above the freeboard or superstructure decks, the exposed parts of the pipes shall be of substantial construction; the height from the deck to the point where water may have access below shall be at least 760 millimetres (30 inches) on the freeboard deck and 450 millimetres (17 ½ inches) on the superstructure deck. Where these heights may interfere with the working of the ship, a lower height may be approved, provided the Administration is satisfied that the closing arrangements and other circumstances justify a lower height. Satisfactory means permanently attached, shall be provided for closing the openings of the air pipes.

Regulation 21
Cargo Ports and other similar Openings

(1) Cargo ports and other similar openings in the sides of ships below the freeboard deck shall be fitted with doors so designed as to ensure watertightness and structural integrity commensurate with the surrounding shell plating. The number of such openings shall be the minimum compatible with the design and proper working of the ship.

(2) Unless permitted by the Administration, the lower edge of such openings shall not be below a line drawn parallel to the freeboard deck at side, which has at its lowest point the upper edge of the uppermost load line.

Regulation 22
Scuppers, Inlets and Discharges

(1) Discharges led through the shell either from spaces below the freeboard deck or from within superstructures and deckhouses on the freeboard deck fitted with doors complying with the requirements of Regulation 12 shall, except as provided in paragraph (2), be fitted with efficient and accessible means for preventing water from passing inboard. Normally each separate discharge shall have one automatic non-return valve with a positive means of closing it from a position above the freeboard deck. Where, however, the vertical distance from the summer load waterline to the inboard end of the discharge pipe exceeds 0.01 L, the discharge may have two automatic non-return valves without positive means of closing, provided that the inboard valve is always accessible for examination under service conditions; where that vertical distance exceeds 0.02 L a single automatic non-return valve without positive means of closing may be accepted subject to the approval of the Administration. The means for operating the positive action valve shall be readily accessible and provided with an indicator showing whether the valve is open or closed.

(2) Scuppers led through the shell from enclosed superstructures used for the carriage of cargo shall be permitted only where the edge of the free board deck is not immersed when the ship heels 5° either way. In other cases the drainage shall be led inboard in accordance with the requirements of the International Convention for the Safety of Life at Sea in force.

(3) In manned machinery spaces main and auxiliary sea inlets and discharges in connexion with the operation of machinery may be controlled locally. The controls shall be readily accessible and shall be provided with indicators showing whether the valves are open or closed.

(4) Scuppers and discharge pipes originating at any level and penetrating the shell either more than 450 millimetres (17 ½ inches) below the freeboard deck or less than 600 millimetres (23 ½ inches) above the summer load waterline shall be provided with a non-return valve at the shell. This valve, unless required by paragraph (2), may be omitted if the piping is of substantial thickness.

(5) Scuppers leading from superstructures or deckhouses not fitted with doors complying with the requirements of Regulation 12 shall be led overboard.

(6) All shell fittings, and the valves required by this Regulation shall be of steel, bronze or other approved ductile material. Valves of ordinary cast iron or similar material are not acceptable. All pipes to which this Regulation refers shall be of steel or other equivalent material to the satisfaction of the Administration.

Regulation 23
Side Scuttles

(1) Side scuttles to spaces below the freeboard deck or to spaces within enclosed superstructures shall be fitted with efficient hinged inside deadlights arranged so that they can be effectively closed and secured watertight.

(2) No side scuttle shall be fitted in a position so that its sill is below a line drawn parallel to the freeboard deck at side and having its lowest point 2.5 per cent of the breadth (B) above the Summer Load Line (or Summer Timber Load Line, if assigned), or 500 millimetres (19 ½ inches), whichever is the greater distance.

(3) The side scuttles, together with their glasses, if fitted, and deadlights, shall be of substantial and approved construction.

Regulation 24
Freeing Ports

(1) Where bulwarks on the weather portions of freeboard or superstructure decks form wells, ample provision shall be made for rapidly freeing the decks of water and for draining them. Except as provided in paragraphs (2) and (3) of this Regulation, the minimum freeing port area (A) on each side of the ship for each well on the freeboard deck shall be that given by the following formulae in cases where the sheer in way of the well is standard or greater than standard. The minimum area for each well on superstructure decks shall be one-half of the area given by the formulae.

Where the length of bulwark (l) in the well is 20 metres or less

$$A=0.7+0.035l \text{ square metres}$$

where l exceeds 20 metres

$$A=0.07l \text{ square metres}$$

l need in no case be taken as greater than 0.7 L.

If 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 metres per metre of length of well for each 0.1 metre difference in height.

Or, where the length of bulwark (l) in the well is 66 feet or less

$$A=7.6+0.115l \text{ square feet}$$

where l exceeds 66 feet

$$A=0.23l \text{ square feet}$$

l need in no case be taken as greater than 0.7 L.

If the bulwark is more than 3.9 feet in average height the required area shall be increased by 0.04 square feet per foot of length of well for each foot difference in height. If the bulwark is less than 3 feet in average height, the required area may be decreased by 0.04 square feet per foot of length for each foot difference in height.

(2) In ships with no sheer the area calculated according to paragraph (1) of this Regulation shall be increased by 50 per cent. Where the sheer is less than the standard the percentage shall be obtained by linear interpolation.

(3) Where a ship fitted with a trunk does not comply with the requirements of Regulation 36 (1) (e) or where continuous or substantially continuous hatchway side coamings are fitted between detached superstructures the minimum area of the freeing port openings shall be calculated from the following table:

breadth of hatchway or trunk in relation to the breadth of ship	area of freeing ports in relation to the total area of the bulwarks
40% or less	20%
75% or more	10%

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

(4) In ships having superstructures which are open at either or both ends, adequate provision for freeing the space within such superstructures shall be provided to the satisfaction of the Administration.

(5) The lower edges of the freeing ports shall be as near the deck as practicable. Two-thirds of the freeing port area required shall be provided in the half of the well nearest the lowest point of the sheer curve.

(6) All such openings in the bulwarks shall be protected by rails or bars spaced approximately 230 millimetres (9 inches) apart. If shutters are fitted to freeing ports, ample clearance shall be provided to prevent jamming. Hinges shall have pins or bearings of non-corrodible material. If shutters are fitted with securing appliances, these appliances shall be of approved construction.

Regulation 25

Protection of the Crew

(1) The strength of the deckhouses used for the accommodation of the crew shall be to the satisfaction of the Administration.

(2) Efficient guard rails or bulwarks shall be fitted on all exposed parts of the freeboard and superstructure decks. The height of the bulwarks or guard rails shall be at least 1 metre (391/2 inches) from the deck, provided that where this height would interfere with the normal operation of the ship, a lesser height may be approved if the Administration is satisfied that adequate protection is provided.

(3) The opening below the lowest course of the guard rails shall not exceed 230 millimetres (9 inches). The other courses shall be not more than 380 millimetres (15 inches) apart. In the case of ships with rounded gunwales the guard rail supports shall be placed on the flat of the deck.

(4) Satisfactory means (in the form of guard rails, life lines, gangways or underdeck passages etc.) shall be provided for the protection of the crew in getting to and from their quarters, the machinery space and all other parts used in the necessary work of the ship.

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

Regulation 26

Special Conditions of Assignment for Type `A' Ships

Machinery Casings

(1) Machinery casings on Type `A' ships as defined in Regulation 27 shall be protected by an enclosed poop or bridge of at least standard height, or by a deckhouse of equal height and equivalent strength, provided that machinery casings may be exposed if there are no openings giving direct access from the freeboard deck to the machinery space. A door complying with the requirements of Regulation 12 may, however, be permitted in the machinery casing, provided that it leads to a space or passageway which is as strongly constructed as the casing and is separated from the stairway to the engine room by a second weathertight door of steel or other equivalent material.

Gangway and Access

(2) An efficiently constructed fore and aft permanent gangway of sufficient strength shall be fitted on Type `A' ships at the level of the superstructure deck between the poop and the midship bridge or deckhouse where fitted, or equivalent means of access shall be provided to carry out the purpose of the gangway, such as passages below deck. Elsewhere, and on Type `A' ships without a midship bridge, arrangements to the satisfaction of the Administration shall be provided to safeguard the crew in reaching all parts used in the necessary work of the ship.

(3) Safe and satisfactory access from the gangway level shall be available between separate crew accommodations and also between crew accommodations and the machinery space.

Hatchways

(4) Exposed hatchways on the freeboard and forecastle decks or on the tops of expansion trunks on Type `A' ships shall be provided with efficient watertight covers of steel or other equivalent material.

Freeing Arrangements

(5) Type `A' ships with bulwarks shall have open rails fitted for at least half the length of the exposed parts of the weather deck or other effective freeing arrangements. The upper edge of the sheer strake shall be kept as low as practicable.

(6) Where superstructures are connected by trunks, open rails shall be fitted for the whole length of the exposed parts of the freeboard deck.

CHAPTER III FREEBOARDS

Regulation 27
Types of Ships

1) For the purposes of freeboard computation, ships shall be divided into type `A' and type `B'.

Type `A' ships

(2) A type `A' ship is one which:

(a) is designed to carry only liquid cargoes in bulk;
(b) has a high integrity of the exposed deck with only small access openings to cargo compartments, closed by watertight gasketed covers of steel or equivalent material; and
(c) has low permeability of loaded cargo compartments.

(3) A type `A' ship if over 150 m in length to which a freeboard less than type `B' has been assigned, when loaded in accordance with the requirements of paragraph (11), shall 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 (12), and shall remain afloat in a satisfactory condition of equilibrium as specified in paragraph (13). In such a ship the machinery space shall be treated as a floodable compartment, but with a permeability of 0.85.

(4) A type `A' ship shall be assigned a freeboard not less than that based on table A of regulation 28.

Type `B' ships

(5) All ships which do not come within the provisions regarding type `A' ships in paragraphs (2) and (3) shall be considered as type `B' ships.

(6) Type `B' ships, which in position 1 have hatchways fitted with hatch covers which comply with the requirements of regulation 15, other than paragraph (7), shall be assigned freeboards based upon the values given in table B of regulation 28, increased by the values given in the following table:
Freeboard increase over tabular freeboard for type `B' ships, for ships with hatch covers not complying with regulation 15(7) or regulation 16

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

Freeboards at intermediate lengths of ship shall be obtained by linear interpolation.
Ships above 200 m in length shall be dealt with by the Administration.

(7) Type `B' ships, which in position 1 have hatchways fitted with hatch covers complying with the requirements of regulation 15(7) or regulation 16, shall, except as provided in paragraphs (8) to (13) inclusive of this regulation, be assigned freeboards based on table B of regulation 28.

(8) Any type `B' ship of over 100 m in length may be assigned freeboards less than those required under paragraph (7), provided that, in relation to the amount of reduction granted, the Administration is satisfied that:

(a) the measures provided for the protection of the crew are adequate;
(b) the freeing arrangements are adequate;
(c) the covers in positions 1 and 2 comply with the provisions of regulation 16 and have adequate strength, special care being given to their sealing and securing arrangements; and
(d) the ship, when loaded in accordance with the requirements of paragraph (11), shall 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 (12), and shall remain afloat in a satisfactory condition of equilibrium, as specified in

paragraph (13). In such a ship, if over 150 m in length, the machinery space shall be treated as a floodable compartment, but with a permeability of 0.85.

(9) In calculating the freeboards for type `B' ships which comply with the requirements of paragraphs (8), (11), (12) and (13), the values from table B of regulation 28 shall not be reduced by more than 60% of the difference between the B and A tabular values for the appropriate ship lengths.

(10)

(a) The reduction in tabular freeboard allowed under paragraph (9) may be increased up to the total difference between the values in table A and those in table B of regulation 28 on condition that the ship complies with the requirements of:

(i) regulation 26, other than paragraph (4), as if it were a type `A' ship;
(ii) paragraphs (8), (11) and (13) of this regulation; and
(iii) paragraph (12) of this regulation, provided that 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.

(b) In such a ship, if over 150 m in length, the machinery space shall be treated as a floodable compartment, but with a permeability of 0.85.

Initial condition of loading

(11) The initial condition of loading before flooding 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) Homogeneous cargo is carried.
(ii) All cargo compartments, except those referred to under (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 (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.

(v) At an angle of keel of not more than 5° in each compartment containing liquids, as prescribed in (ii) except that in the case of compartments containing consumable fluids, as prescribed in (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 Administration.

(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
lubricating oil	0.900

Damage assumptions

(12) The following principles regarding the character of the assumed damage apply:

(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 B/5 or 11.5 m, 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 specified in subparagraphs (a) and (b) results in a more severe condition, such lesser extent shall be assumed.

(d) Except where otherwise required by paragraph (10)(a), the flooding shall be confined to a single compartment between adjacent transverse bulkheads provided the inner longitudinal boundary of the compartment is not in a position within the transverse extent of assumed damage. Transverse boundary bulkheads of wing tanks which do not extend over the full breadth of the ship shall be assumed not to be damaged, provided they extend beyond the transverse extent of assumed damage prescribed in subparagraph (b). If in a transverse bulkhead there are steps or recesses of not more than 3 m in length located within the transverse extent of assumed damage as defined in subparagraph (b), such transverse bulkhead may be considered intact and the adjacent compartment may be floodable singly. If, however, within the transverse extent of assumed damage there is a step or recess of more than 3 m in length in a transverse bulkhead, the two compartments adjacent to this bulkhead shall be considered as flooded. The step formed by the afterpeak bulkhead and the afterpeak tank top shall not be regarded as a step for the purpose of this regulation.

(e) Where a main transverse bulkhead is located within the transverse extent of assumed damage and is stepped in way of a double bottom or side tank by more than 3 m, 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 fluid cargoes, if a side tank has openings into adjacent compartments, such adjacent compartments shall be considered as empty and as being flooded simultaneously. This provision is applicable even where such openings are fitted with closing appliances, except in the case of sluice valves fitted in bulkheads between tanks and where the valves

are controlled from the deck. Manhole covers with closely spaced bolts are considered equivalent to the unpierced bulkhead except in the case of openings in topside tanks making the topside tanks common to the holds.

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

Condition of equilibrium

(13) The condition of equilibrium after flooding shall be regarded as satisfactory provided:

(a) 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 (even if they comply with regulation 12) or hatch covers (even if they comply with regulation 16 or regulation 19(4)), and may exclude those openings closed by means of manhole covers and flush scuttles (which comply with regulation 18), cargo hatch covers of the type described in regulation 27(2), remotely operated sliding watertight doors, and sidescuttles of the non-opening type (which comply with regulation 23). However, in the case of doors separating a main machinery space from a steering gear compartment, watertight doors may be of a hinged, quick-acting type kept closed at sea, whilst not in use, provided also that the lower sill of such doors is above the summer load waterline.

(b) If pipes, ducts or tunnels are situated within the assumed extent of damage penetration as defined in paragraph (12)(b), 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.

(c) The angle of heel due to unsymmetrical flooding does not exceed 15°. If no part of the deck is immersed, an angle of heel of up to 17° may be accepted.

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

(e) 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. It may be regarded as sufficient if the righting lever curve has a minimum range of 20° 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 be not less than 0.0175 m.rad. The Administration shall give consideration to the potential hazard presented by protected or unprotected openings which may become temporarily immersed within the range of residual stability.

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

Ships without means of propulsion

(14) A lighter, barge or other ship without independent means of propulsion shall be assigned a freeboard in accordance with the provisions of these regulations. Barges which meet the requirements of paragraphs (2) and (3) may be assigned type `A' freeboards:

(a) The Administration should especially consider the stability of barges with cargo on the weather deck. Deck cargo can only be carried on barges to which the ordinary type `B' freeboard is assigned.
(b) However, in the case of barges which are unmanned, the requirements of regulations 5, 26(2), 26(3) and 39 shall not apply.
(c) Such unmanned barges which have on the freeboard deck only small access openings closed by watertight gasketed covers of steel or equivalent material may be assigned a freeboard 25% less than those calculated in accordance with these regulations."

Regulation 28
Freeboard Tables

Type `A' Ships

(1) The tabular freeboard for Type `A' ships shall be determined from the following table:
CLICK HERE

Type `B' ships

(2) The tabular freeboard for Type `B' ships shall be determined from the following table:
CLICK HERE

Regulation 29
Correction to the Freeboard for Ships under 100 metres (328 feet) in length

The tabular freeboard for a Type `B' ship of between 24 metres (79 feet) and 100 metres (328 feet) in length having enclosed superstructures with an effective length of up to 35 per cent of the length of the ship shall be increased by:

7.5(100-L)(0.35-(E / L))millim etres
where

L = length of ship in metres,

E = effective length of superstructure in metres as defined in Regulation 35;

or

0.09(328-L)(0.35-(E / L))inches
where

L = length of ship in feet,

E = effective lenght of superstructures in feet as defined in Regulation 35;

Regulation 30
Correction for Block Coefficient

Where the block coefficient (Cb) exceeds 0.68, the tabular freeboard specified in Regulation 28 as modified, if applicable, by Regulations 27 (8), 27 (10) and 29 shall be multiplied by the factor ((Cb+0.68) / 1.36)

Regulation 31
Correction for Depth

(1) Where D exceeds (L / 15) the freeboard shall be increased by
(D-(L / 15))R millimetres, where R is (L / 0.48) at

lengths less than 120 metres and 250 at 120 metres length and above, or

(D-(L / 15))R inches, where R is (L / 131.2) at lengths less than 393.6 feet and 3 at 393.6 feet length and above.

(2) Where D is less than (L / 15) no reduction shall be made except in a ship with an enclosed superstructure covering at least 0.6 L amidships, with a complete trunk, or combination of detached enclosed superstructures and trunks which extend all fore and aft, where the freeboard shall be reduced at the rate prescribed in paragraph (1) of this Regulation.

(3) Where the height of superstructure or trunk is less than the standard height, the reduction shall be in the ratio of the actual to the standard height as defined in Regulation 33.

Regulation 32
Correction for Position of Deck Line

Where the actual depth to the upper edge of the deck line is greater or less than D, the difference between the depths shall be added to or deducted from the freeboard.

Regulation 33
Standard Height of Superstructure

The standard height of a superstructure shall be as given in the following table:

Standard Height (in metres)

L (metres)	**Raised Quarter Deck**	**All other Superstructures**
30 or less	0.90	1.80
75	1.20	1.80
125 or more	1.80	2.30

Standard Height (in feet)

L (feet)	**Raised Quarter Deck**	**All other Superstructures**
98.5 or less	3.0	5.9
246	3.9	5.9
410 or more	5.9	7.5

The standard heights at intermediate lengths of the ship shall be obtained by linear interpolation.

Regulation 34
Length of Superstructure

(1) Except as provided in paragraph (2) of this Regulation, the length of a superstructure (S) shall be the mean length of the parts of the superstructure which lie within the length (L).

(2) Where the end bulkhead of an enclosed superstructure extends in a fair convex curve beyond its intersection with the superstructure sides, the length of the superstructure may be increased on the basis of an equivalent plane bulkhead. This increase shall be two-thirds of the fore and aft extent of the curvature. The maximum curvature which may be taken into account in determining this increase is one-half the breadth of the superstructure at the point of intersection of the curved end of the superstructure with its side.

Regulation 35
Effective Length of Superstructure

(1) Except as provided for in paragraph (2) of this Regulation, the effective length (E) of an enclosed superstructure of standard height shall be its length.

(2) In all cases where an enclosed superstructure of standard height is set in from the sides of the ship as permitted in Regulation 3 (10), the effective length shall be the length modified by the ratio of b/Bs, where b is the breadth of the superstructure at the middle of its length; and Bs is the breadth of the ship at the middle of the length of the superstructure.

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

(3) Where the height of an enclosed superstructure is less than the standard height, the effective length shall be its length reduced in the ratio of the actual height to the standard height. Where the height exceeds the standard, no increase shall be made to the effective length of the superstructure.

(4) The effective length of a raised quarter deck, if fitted with an intact front bulkhead, shall be its length up to a maximum of 0.6 L. Where the bulkhead is not intact, the raised quarter deck shall be treated as a poop of less than standard height.

(5) Superstructures which are not enclosed shall have no effective length.

Regulation 36
Trunks

(1) A trunk or similar structure which does not extend to the sides of the ship shall be regarded as efficient on the following conditions:

(a) the trunk is at least as strong as a superstructure;
(b) the hatchways are in the trunk deck, and the hatchway coamings and covers comply with the requirements of Regulations 13 to 16 inclusive and the width of the trunk deck stringer provides a satisfactory gangway and sufficient lateral stiffness. However, small access openings with watertight covers may be permitted in the freeboard deck;
(c) a permanent working platform fore and aft fitted with guard rails is provided by the trunk deck, or by detached trunks connected to superstructures by efficient permanent gangways;
(d) ventilators are protected by the trunk, by watertight covers or by other equivalent means;
(e) open rails are fitted on the weather parts of the freeboard deck in way of the trunk for at least half their length;
(f) the machinery casings are protected by the trunk, by a superstructure of at least standard height, or by a deckhouse of the same height and of equivalent strength;
(g) the breadth of the trunk is at least 60 per cent of the breadth of the ship; and
(h) where there is no superstructure, the length of the trunk is at least 0.6 L.

(2) The full length of an efficient trunk reduced in the ratio of its mean breadth to B shall be its effective length.

(3) The standard height of a trunk is the standard height of a superstructure other than a raised quarter deck.

(4) Where the height of a trunk is less than the standard height, its effective length shall be reduced in the ratio of the actual to the standard height. Where the height of hatchway coamings on the trunk deck is less than that required under Regulation 15 (1), a reduction from the actual height of trunk shall be made which corresponds to the difference between the actual and the required height of coaming.

Regulation 37
Deduction for Superstructures and Trunks

(1) Where the effective length of superstructures and trunks is 1.0 L, the deduction from the freeboard shall be 350 millimetres at 24 metres length of ship, 860 millimetres at 85 metres length, and 1070 millimetres at 122 metres length and above (14 inches at 79 feet length of ship, 34 inches at 279 feet length, and 42 inches at 400 feet length and above); deductions at intermediate lengths shall be obtained by linear interpolation.

(2) Where the total effective length of superstructures and trunks is less than 1.0 L the deduction shall be a percentage obtained from one of the following tables:

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 and trunks shall be obtained by linear interpolation.

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	0.9 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	100
Ships with forecastle and detached Bridge	**II**	0	6.3	12.7	19	27.5	36	46	63	75.3	87.7	100

(3) For ships of Type `B':

(a) Where the effective length of a bridge is less than 0.2 L, the percentages shall be obtained by linear interpolation between lines I and II.
(b) Where the effective length of a forecastle is more than 0.4 L, the percentages shall be obtained from line II.
(c) Where the effective length of a forecastle is less than 0.07 L, the above percentages shall be reduced by: 5´((0.07L-f) / 0.07L
where f is the effective length of the forecastle.

Regulation 38
Sheer

General

(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 amidships.

(2) In ships designed with a rake of keel, the sheer shall be measured in relation to a reference line drawn parallel to the design 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 exceeds the standard the least difference (Z) between the actual and standard heights shall be added to each end ordinate. Similarly, the intermediate ordinates at distances of M L and K 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 of standard height with greater sheer than that of the freeboard deck, or is of more than standard height, an addition to the sheer of the freeboard deck shall be made as provided in paragraph (12) of this Regulation.

Standard Sheer Profile

(8) The ordinates of the standard sheer profile are given in the following table:

Standard Sheer Profile (Where L is in metres)

	Station	**Ordinate (in millimetres)**	**Factor**
After Half	After Perpendicular	25 (L/3+10)	1
	1/6 L from A.P.	11.1((L/3+10)	3
	1/3 L from A.P.	2.8 (L/3+10)	3
	Amidship	0	1
Forward half	After Perpendicular	0	1
	1/3 L from A.P.	5.6 (L/3+10)	3
	1/6 L from A.P.	22.2 (L/3+10)	3
	Amidship	50 (L/3+10)	1

Standard Sheer Profile (Where L is in feet)

	Station	Ordinate (in inches)	Factor
After Half	After Perpendicular		1
	1/6 L from A.P.		3
	1/3 L from A.P.		3
	Amidship		1
Forward half	After Perpendicular		1
	1/3 L from A.P.		3
	1/6 L from A.P.		3
	Amidship		1

Measurement of Variation from Standard Sheer Profile

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

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

(11) Where the forward half of the sheer profile exceeds the standard, and the after portion of the sheer profile is not less than 75 per cent of the standard, credit shall be allowed for the part in excess; where the after part is less than 50 per cent of the standard no credit shall be given for the excess sheer forward. Where the after sheer is between 50 per cent and 75 per cent of the standard, intermediate allowances may be granted for excess sheer forward.

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

$$s=(y / 3)(L' / L)$$

where

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

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

L'= mean enclosed length of poop or forecastle up to a maximum length of 0.5 L,

L= length of ship as defined in Regulation 3 (1) of this Annex.

The above formula provides a curve in the form of a parabola tangent to the actual sheer curve at the freeboard deck and intersecting the end ordinate at a point below the

superstructure deck a distance equal to the standard height of a superstructure. 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 forward and after halves of the ship.

Correction for Variations from Standard Sheer Profile

(13) The correction for sheer shall be the deficiency or excess of sheer (see paragraphs (9) to (11) inclusive of this Regulation), multiplied by

0.75-(S / 2L)
where

S is the total length of enclosed superstructures.

Addition for Deficiency in Sheer

(14) Where the sheer is less than the standard, the correction for deficiency in sheer (see paragraph (13) of this Regulation) shall be added to the freeboard.

Deduction for Excess Sheer

(15) In ships where an enclosed superstructure covers 0.1 L before and 0.1 L abaft amidships, the correction for excess of sheer as calculated under the provisions of paragraph (13) of this Regulation shall be deducted from the freeboard; in ships where no enclosed superstructure covers amidships, no deduction shall be made from the freeboard; where an enclosed superstructure covers less than 0.1 L before and 0.1 L abaft amidships, the deduction shall be obtained by linear interpolation. The maximum deduction for excess sheer shall be at the rate of 125 millimetres per 100 metres of length (1J inches per 100 feet of length).

Regulation 39
Minimum Bow Height

(1) The bow height defined as the vertical distance at the forward perpendicular between the waterline corresponding to the assigned summer freeboard and the designed trim and the top of the exposed deck at side shall be not less than:

for ships below 250 metres in length, 56L(1-(L/500))(1.36/(Cb+0.68))millimetres;

for ships of 250 metres and above in length, 7000(1.36 / (Cb+0.68))mill imetres;
where
L is the length of the ship in metres,
Cb is the block coefficient which is to be
Taken as not less than 0.68
or, for ships below 820 feet in length,
0.672L(1-(L / 1640))(1.36 / (Cb+ 0.68))inches;

for ships of 820 feet and above in length, 275.6(1.36 / (Cb+ 0.68))inches;

where

L is the length of the ship in feet,

Cb is the block coefficient which is to be taken as not less than 0.68

(2) Where the bow height required in paragraph (1) of this Regulation is obtained by sheer, the sheer shall extend for at least 15 per cent of the length of the ship measured from the forward perpendicular. Where it is obtained by fitting a superstructure, such superstructure shall extend from the stem to a point at least 0.07 L abaft the forward perpendicular, and it shall comply with the following requirements:

(a) for ships not over 100 metres (328 feet) in length it shall be enclosed as defined in Regulation 3 (10),and
(b) for ships over 100 metres (328 feet) in length it need not comply with Regulation 3 (10) but shall be fitted with closing appliances to the satisfaction of the Administration.

(4) Ships which, to suit exceptional operational requirements, cannot meet the requirements of paragraphs (1) and (2) of this Regulation may be given special consideration by the Administration.

Regulation 40
Minimum Freeboards

Summer Freeboard

(1) The minimum freeboard in summer shall be the freeboard derived from the tables in Regulation 28 as modified by the corrections in Regulations 27, as applicable, 29, 30, 31, 32, 37, 38 and, if applicable, 39.

(2) The freeboard in salt water, as calculated in accordance with paragraph (1) of this Regulation, but without the correction for deck line, as provided by Regulation 32, shall not be less than 50 millimetres (2 inches). For ships having in position 1 hatchways with covers which do not comply with the requirements of Regulations 15 (7), 16 or 26, the freeboard shall be not less than 150 millimetres (6 inches).

Tropical Freeboard

(3) The minimum freeboard in the Tropical Zone shall be the freeboard obtained by a deduction from the summer freeboard of one forty-eighth of the summer draught measured from the top of the keel to the centre of the ring of the load line mark.

(4) The freeboard in salt water, as calculated in accordance with the paragraph (3) of this Regulation, but without the correction for deck line, as provided by Regulation 32, shall not be less than 50 millimetres (2 inches). For ships having in position 1 hatchways with covers which do not comply with the requirements of Regulations 15 (7), 16 or 26, the freeboard shall be not less than 150 millimetres (6 inches).

Winter Freeboard

(5) The minimum freeboard in winter shall be the freeboard obtained by an addition to the summer freeboard of one forty-eighth of summer draught, measured from the top of the keel to the centre of the ring of the load line mark.

Winter North Atlantic Freeboard

(6) The minimum freeboard for ships of not more than 100 metres (328 feet) in length, which enter any part of the North Atlantic defined in Regulation 52 (Annex II) during the winter seasonal period, shall be the winter freeboard plus 50 millimetres (2 inches). For other ships, the Winter North Atlantic Freeboard shall be the winter freeboard.

Fresh Water Freeboard

(7) The minimum freeboard in fresh water of unit density shall be obtained by deducting from the minimum freeboard in salt water:

(D / 40 T)centimetres(inches)

where

D= displacement in salt water in tons at the summer load waterline,

T=tons per centimetre (inch) immersion in salt water at the summer load waterline.

(8) Where the displacement at the summer load waterline cannot be certified, the deduction shall be one forty-eighth of summer draught, measured from the top of the keel to the centre of the ring of the load line mark.

CHAPTER IV SPECIAL REQUIREMENTS FOR SHIPS ASSIGNED TIMBER FREEBOARDS

Regulation 41
Application of this Chapter

Regulations 42 to 45 inclusive apply only to ships to which timber load lines are assigned.

Regulation 42
Definitions

(1) Timber Deck Cargo. The term "timber deck cargo" means a cargo of timber carried on an uncovered part of a freeboard or superstructure deck. The term does not include wood pulp or similar cargo.

(2) Timber Load Line. A timber deck cargo may be regarded as giving a ship a certain additional buoyancy and a greater degree of protection against the sea. For that reason, ships carrying a timber deck cargo may be granted a reduction of freeboard calculated according to the provisions of Regulation 45 and marked on the ship's side in accordance with the provisions of Regulation 6 (3) and (4). However, in order that such special freeboard may be granted and used, the timber deck cargo shall comply with certain conditions which are laid down in Regulation 44, and the ship itself shall also comply with certain conditions relating to its construction which are set out in Regulation 43.

Regulation 43
Construction of Ship

Superstructure

(1) Ships shall have a forecastle of at least standard height and a length of at least 0.07 L. In addition, if the ship is less than 100 metres (328 feet) in length, a poop of at least standard height, or a raised quarter deck with either a deckhouse or a strong steel hood of at least the same total height shall be fitted aft.

Double Bottom Tanks

(2) Double bottom tanks where fitted within the midship half length of the ship shall have adequate watertight longitudinal subdivision.

Bulwarks

(3) The ship shall be fitted either with permanent bulwarks at least 1 metre (39J inches) in height, specially stiffened on the upper edge and supported by strong bulwark stays attached to the deck and provided with necessary freeing ports, or with efficient rails of the same height and of specially strong construction.

Regulation 44
Stowage

General

(1) Openings in the weather deck over which cargo is stowed shall be securely closed and battened down. The ventilators shall be efficiently protected.

(2) Timber deck cargo shall extend over at least the entire available length which is the total length of the well or wells between superstructures. Where there is no limiting superstructure at the after end, the timber shall extend at least to the after end of the aftermost hatchway. The timber shall be stowed as solidly as possible to at least the standard height of a superstructure other than a raised quarter deck.

(3) On a ship within a seasonal winter zone in winter, the height of the deck cargo above the weather deck shall not exceed one-third of the extreme breadth of the ship.

(4) The timber deck cargo shall be compactly stowed, lashed and secured. It shall not interfere in any way with the navigation and necessary work of the ship.

Uprights

(5) Uprights, when required by the nature of the timber, shall be of adequate strength considering the breadth of the ship; the spacing shall be suitable for the length and character of timber carried, but shall not exceed 3 metres (9.8 feet). Strong angles or metal sockets or equally efficient means shall be provided for securing the uprights.

Lashings

(6) Timber deck cargo shall be efficiently secured throughout its length by independent over-all lashings spaced not more than 3 metres (9.8 feet) 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 (9.8 feet). The distance from an end bulkhead of a superstructure to the first eye plate shall be not more than 2 metres (6.6 feet). Eye plates and lashings shall be provided 0.6 metres (23J inches) and 1.5 metres (4.9 feet) from the ends of timber deck cargoes where there is no bulkhead.

(7) Lashings shall be not less than 19 millimetres (L inch) close link chain or flexible wire rope of equivalent strength, fitted with sliphooks and turnbuckles, which shall be accessible at all times. Wire rope lashings shall have a short length of long link chain to permit the length of lashings to be regulated.

(8) When timber is in lengths less than 3.6 metres (11.8 feet) the spacing of the lashings shall be reduced or other suitable provisions made to suit the length of timber.

(9) All fittings required for securing the lashings shall be of strength corresponding to the strength of the lashings.

Stability

(10) Provision shall be made for a safe margin of stability at all stages of the voyage, regard being given to additions of weight, such as those due to absorption of water and icing and to losses of weight such as those due to consumption of fuel and stores.

Protection of Crew, Access to Machinery Spaces, etc.

(11) In addition to the requirements of Regulation 25 (5) of this Annex guard rails or life lines spaced not more than 330 millimetres (13 inches) apart vertically shall be provided on each side of the deck cargo to a height of at least 1 metre (39J inches) above the cargo.

Steering Arrangements

(12) Steering arrangements shall be effectively protected from damage by cargo and, as far as practicable, shall be accessible. Efficient provision shall be made for steering in the event of a breakdown in the main steering arrangements.

Regulation 45
Computation for Freeboard

(1) The minimum summer freeboards shall be computed in accordance with Regulations 27 (5), 27 (6), 27 (11), 28, 29, 30, 31, 32, 37 and 38, except Regulation 37 is modified by substituting the following percentages for those given in Regulation 37:

Percentage of Deduction for Type `A' ships

	Total Effective length of Superstructures										
	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 superstructure	20	31	42	53	64	70	76	82	88	94	100

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

(2) The Winter Timber Freeboard shall be obtained by adding to the Summer Timber Freeboard one thirty-sixth of the moulded summer timber draught.

(3) The Winter North Atlantic Timber Freeboard shall be the same as the Winter North Atlantic Freeboard prescribed in Regulation 40 (6).

(4) The Tropical Timber Freeboard shall be obtained by deducting from the Summer Timber Freeboard one forty-eighth of the moulded summer timber draught.

(5) The Fresh Water Timber Freeboard shall be computed in accordance with Regulation 40 (7) based on the summer timber load waterline or with Regulation 40(8) based on the summer timber draught measured from the top of the keel to the summer timber load line.

ANNEX II ZONES, AREAS AND SEASONAL PERIODS

The zones and areas in this Annex are, in general, based on the following criteria:

Summer -not more than 10 per cent winds of force 8 Beaufort (34 knots) or more.

Tropical -not more than 1 per cent winds of force 8 Beaufort (34 knots) or more. Not more than one tropical storm in 10 years in an area of 5° square in any one separate calendar month.

In certain special areas, for practical reasons, some degree of relaxation has been found acceptable. A chart is attached to this Annex to illustrate the zones and areas defined below.

Regulation 46
Northern Winter Seasonal Zones and Area

(1) North Atlantic Winter Seasonal Zones I and II

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

Seasonal periods:

WINTER: 16 October to 15 April

SUMMER: 16 April to 15 October

(b) The North Atlantic Winter Seasonal Zone II lies within the meridian of longitude 68°30'W from the coast of the United States to latitude 40°N, thence the rhumb line to the point latitude 36°N, longitude 73°W, thence the parallel of latitude 36°N to longitude 25°W and thence the rhumb line to Cape 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 of the North Atlantic Winter Seasonal Zones I and II.

Seasonal periods:

WINTER: 1 November to 31 March

SUMMER: 1 April to 31 October

(2) North Atlantic Winter Seasonal Area

The boundary of the North Atlantic Winter Seasonal Area is-the meridian of longitude 68°30'W from the coast of the United States to latitude 40°N, thence the rhumb line to the southernmost intersection of the meridian of longitude 61°W with the coast of Canada and thence the east coasts of Canada and the United States.

Seasonal periods:

For ships over 100 metres (328 feet) in length:

WINTER: 16 December to 15 February

SUMMER: 16 February to 15 December

For ships of 100 metres (328 feet) and under in length:

WINTER: 1 November to 31 March

SUMMER: 1 April to 31 October

(3) North Pacific Winter Seasonal Zone

The southern boundary of the North Pacific Winter Seasonal Zone is-the parallel of latitude 50°N from the east coast of the USSR to the west coast of Sakhalin, thence the west coast of Sakhalin to the southern extremity of Cape Kril'on, thence the rhumb line to Wakkanai, Hokkaido, Japan, thence the east and south coasts of Hokkaido to longitude 145°E, thence the meridian of longitude 145°E to latitude 35°N, thence the parallel of latitude 35°N to longitude 150°W and thence the rhumb line to the southern extremity of Dall Island, Alaska.

Seasonal periods:

WINTER: 16 October to 15 April

SUMMER: 16 April to 15 October

Regulation 47
Southern Winter Seasonal Zone

The northern boundary of the Southern Winter Seasonal Zone is- the rhumb line from the east coast of the American continent at Cape Tres Puntas to the point latitude 34°S, longitude 50°W, thence the parallel of latitude 34°S to longitude 17°E, thence the rhumb line to the point latitude 35°10'S, longitude 20°E, thence the rhumb line to the point latitude 34°S, longitude 28°E, thence along the rhumb line to the point latitude 35°30'S; longitude 118°E, and thence the rhumb line to Cape Grim on the northwest coast of Tasmania; thence along the north and east coasts of Tasmania to the southernmost point of Bruny Island, thence the rhumb line to Black Rock Point on Stewart Island, thence the rhumb line to the point latitude 47°S, longitude 170°E, thence along the rhumb line to the point latitude 33°S, longitude 170°W, and thence the parallel of latitude 33°S to the point latitude 33°S, longitude 79°W, thence the rhumb line to the point latitude 41°S, longitude 75°W, thence the rhumb line to Punta Corona lighthouse on Chiloe Island, latitude 41°47'S, longitude 73°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. Valparaiso is to be considered as being on the boundary line of the Summer and Winter Seasonal Zones.

Seasonal periods:

WINTER: 16 April to 15 October

SUMMER: 16 October to 15 April

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

(7) In the South Pacific

(a) The Gulf of Carpentaria south of latitude 11°S.

Seasonal periods:

TROPICAL: 1 April to 30 November

SUMMER: 1 December to 31 March

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

Seasonal periods:

TROPICAL: 1 April to 30 November

SUMMER: 1 December to 31 March

Regulation 50
Summer Zones

The remaining areas constitute the Summer Zones.
However, for ships of 100 metres (328 feet) and under in length, the area bounded-on the north and west by the east coast of the United States; on the east by the meridian of longitude 68°30'W from the coast of the United States to latitude 40°N and thence by the rhumb line to the point latitude 36°N, longitude 73°W; on the south by the parallel of latitude 36°N; is a Winter Seasonal Area.

Seasonal periods:

WINTER: 1 November to 31 March

SUMMER: 1 April to 31 October

Regulation 51
Enclosed Seas

(1) 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 (328 feet) and under in length, it is a Winter Seasonal Area.

Seasonal periods:

WINTER: 1 November to 31 March

SUMMER: 1 April to 31 October

(2) Black Sea

This sea is included in the Summer Zones.
However, for ships of 100 metres (328 feet) and under in length, the area north of latitude 44°N is a Winter Seasonal Area.

Seasonal periods:

WINTER: 1 December to 28/29 February

SUMMER: 1 March to 30 November

(3) Mediterranean

This sea is included in the Summer Zones.
However, for ships of 100 metres (328 feet) and under in length, the area bounded-on the north and west by the coasts of France and Spain and the meridian of longitude 3°E from the coast of Spain to latitude 40°N;on the south by the parallel of latitude 40°N from longitude 3°E to the west coast of Sardinia;on the east by the west and north coasts of Sardinia from latitude 40°N to longitude 9°E, thence by the meridian of longitude 9°E to the south coast of Corsica, thence by the west and north coasts of Corsica to longitude 9°E and thence by the rhumb line to Cape Sicié;is a Winter Seasonal Area.

Seasonal periods:

WINTER: 16 December to 15 March

SUMMER: 16 March to 15 December

(4) Sea of Japan

This sea south of latitude 50°N is included in the Summer Zones.

However, for ships of 100 metres (328 feet) and under in length, the area between the parallel of latitude 50°N and the rhumb line from the east coast of Korea at latitude 38°N to the west coast of Hokkaido, Japan, at latitude 43°12'N is a Winter Seasonal Area.

Seasonal periods:

WINTER: 1 December to 28/29 February

SUMMER: 1 March to 30 November

Regulation 52
The Winter North Atlantic Load Line

The part of the North Atlantic referred to in Regulation 40 (6) (Annex I) comprises:

(a) that part of the North Atlantic Winter Seasonal Zone II which lies between the meridians of 15°W and 50°W;

(b) the whole of the North Atlantic Winter Seasonal Zone I, the Shetland Islands to be considered as being on the boundary.

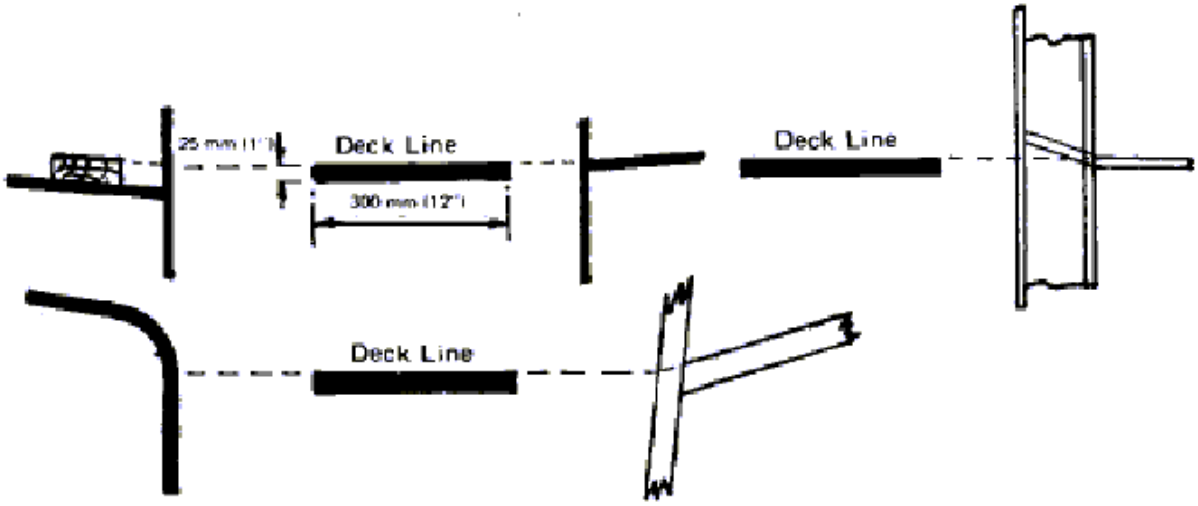

Fig. 1. Deck Line

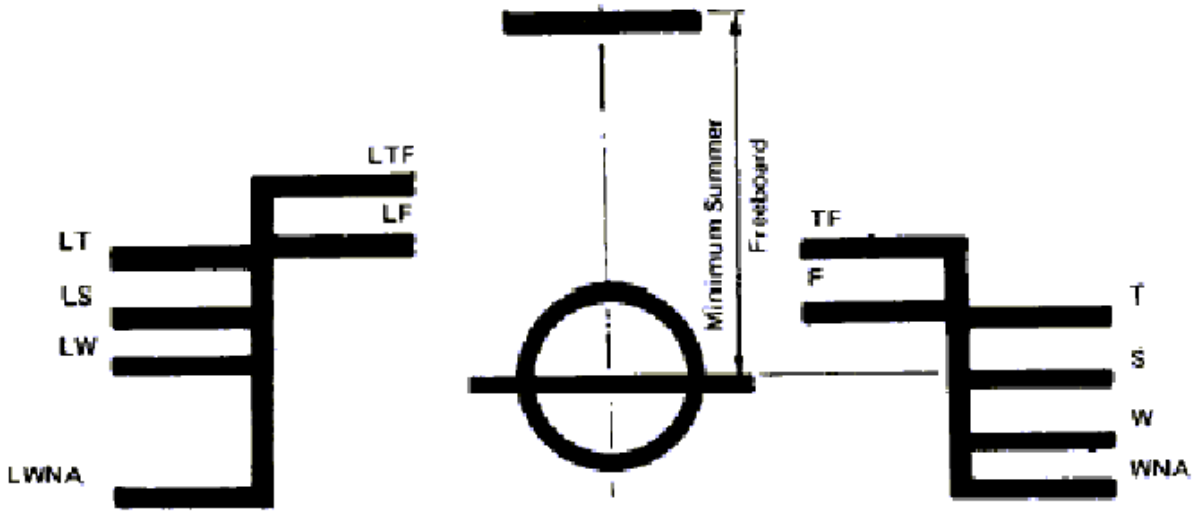

Fig. 3. Timber Load Line Mark and lines to be used with this mark

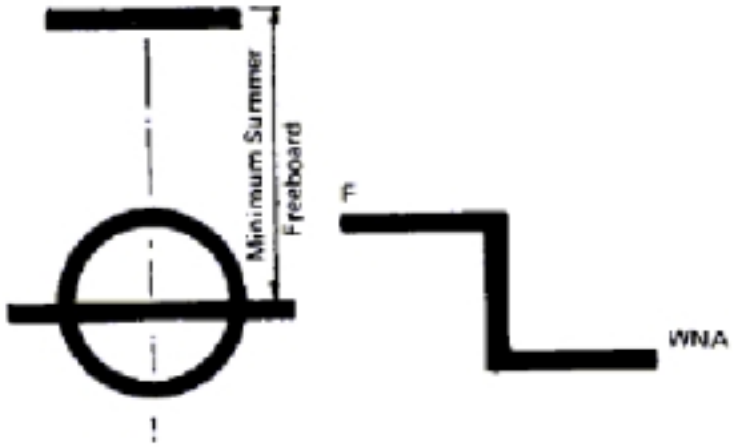

Fig. 4. Load Line Mark on sailing ships and lines to be used with this mark

TABLE A

Freeboard Table for Type 'A' Ships

Length of ship (metres)	Freeboard (milli-metres)	Length of ship (metres)	Freeboard (milli-metres)	Length of ship (metres)	Freeboard (milli-metres)
24	200	30	250	36	300
25	208	31	258	37	308
26	217	32	267	38	316
27	225	33	275	39	325
28	233	34	283	40	334
29	242	35	292	41	344

TABLE A (*continued*)

Length of ship (metres)	Freeboard (milli-metres)	Length of ship (metres)	Freeboard (milli-metres)	Length of ship (metres)	Freeboard (milli-metres)
42	354	92	1014	142	1837
43	364	93	1029	143	1853
44	374	94	1044	144	1870
45	385	95	1059	145	1886
46	396	96	1074	146	1903
47	408	97	1089	147	1919
48	420	98	1105	148	1935
49	432	99	1120	149	1952
50	443	100	1135	150	1968
51	455	101	1151	151	1984
52	467	102	1166	152	2000
53	478	103	1181	153	2016
54	490	104	1196	154	2032
55	503	105	1212	155	2048
56	516	106	1228	156	2064
57	530	107	1244	157	2080
58	544	108	1260	158	2096
59	559	109	1276	159	2111
60	573	110	1293	160	2126
61	587	111	1309	161	2141
62	600	112	1326	162	2155
63	613	113	1342	163	2169
64	626	114	1359	164	2184
65	639	115	1376	165	2198
66	653	116	1392	166	2212
67	666	117	1409	167	2226
68	680	118	1426	168	2240
69	693	119	1442	169	2254
70	706	120	1459	170	2268
71	720	121	1476	171	2281
72	733	122	1494	172	2294
73	746	123	1511	173	2307
74	760	124	1528	174	2320
75	773	125	1546	175	2332
76	786	126	1563	176	2345
77	800	127	1580	177	2357
78	814	128	1598	178	2369
79	828	129	1615	179	2381
80	841	130	1632	180	2393
81	855	131	1650	181	2405
82	869	132	1667	182	2416
83	883	133	1684	183	2428
84	897	134	1702	184	2440
85	911	135	1719	185	2451
86	926	136	1736	186	2463
87	940	137	1753	187	2474
88	955	138	1770	188	2486
89	969	139	1787	189	2497
90	984	140	1803	190	2508
91	999	141	1820	191	2519

TABLE A (*continued*)

Length of ship (metres)	Freeboard (milli-metres)	Length of ship (metres)	Freeboard (milli-metres)	Length of ship (metres)	Freeboard (milli-metres)
192	2530	242	2959	292	3228
193	2541	243	2966	293	3233
194	2552	244	2973	294	3237
195	2562	245	2979	295	3241
196	2572	246	2986	296	3246
197	2582	247	2993	297	3250
198	2592	248	3000	298	3254
199	2602	249	3006	299	3258
200	2612	250	3012	300	3262
201	2622	251	3018	301	3266
202	2632	252	3024	302	3270
203	2641	253	3030	303	3274
204	2650	254	3036	304	3278
205	2659	255	3042	305	3281
206	2669	256	3048	306	3285
207	2678	257	3054	307	3288
208	2687	258	3060	308	3292
209	2696	259	3066	309	3295
210	2705	260	3072	310	3298
211	2714	261	3078	311	3302
212	2723	262	3084	312	3305
213	2732	263	3089	313	3308
214	2741	264	3095	314	3312
215	2749	265	3101	315	3315
216	2758	266	3106	316	3318
217	2767	267	3112	317	3322
218	2775	268	3117	318	3325
219	2784	269	3123	319	3328
220	2792	270	3128	320	3331
221	2801	271	3133	321	3334
222	2809	272	3138	322	3337
223	2817	273	3143	323	3339
224	2825	274	3148	324	3342
225	2833	275	3153	325	3345
226	2841	276	3158	326	3347
227	2849	277	3163	327	3350
228	2857	278	3167	328	3353
229	2865	279	3172	329	3355
230	2872	280	3176	330	3358
231	2880	281	3181	331	3361
232	2888	282	3185	332	3363
233	2895	283	3189	333	3366
234	2903	284	3194	334	3368
235	2910	285	3198	335	3371
236	2918	286	3202	336	3373
237	2925	287	3207	337	3375
238	2932	288	3211	338	3378
239	2939	289	3215	339	3380
240	2946	290	3220	340	3382
241	2953	291	3224	341	3385

TABLE A

Freeboard Table for Type 'A' Ships

Length of ship (feet)	Freeboard (inches)	Length of ship (feet)	Freeboard (inches)	Length of ship (feet)	Freeboard (inches)
80	8·0	380	54·7	680	105·5
90	8·9	390	56·8	690	106·6
100	9·8	400	58·8	700	107·7
110	10·8	410	60·9	710	108·7
120	11·9	420	62·9	720	109·7
130	13·0	430	65·0	730	110·7
140	14·2	440	67·0	740	111·7
150	15·5	450	69·1	750	112·6
160	16·9	460	71·1	760	113·5
170	18·3	470	73·1	770	114·4
180	19·8	480	75·1	780	115·3
190	21·3	490	77·1	790	116·1
200	22·9	500	79·0	800	117·0
210	24·5	510	80·9	810	117·8
220	26·2	520	82·7	820	118·6
230	27·8	530	84·5	830	119·3
240	29·5	540	86·3	840	120·1
250	31·1	550	88·0	850	120·7
260	32·8	560	89·6	860	121·4
270	34·6	570	91·1	870	122·1
280	36·3	580	92·6	880	122·7
290	38·0	590	94·1	890	123·4
300	39·7	600	95·5	900	124·0
310	41·4	610	96·9	910	124·6
320	43·2	620	98·3	920	125·2
330	45·0	630	99·6	930	125·7
340	46·9	640	100·9	940	126·2
350	48·8	650	102·1	950	126·7
360	50·7	660	103·3	960	127·2
370	52·7	670	104·4	970	127·7

TABLE A (*continued*)

Length of ship (feet)	Freeboard (inches)	Length of ship (feet)	Freeboard (inches)	Length of ship (feet)	Freeboard (inches)
980	128·1	1060	131·4	1140	133·8
990	128·6	1070	131·7	1150	134·0
1000	129·0	1080	132·0	1160	134·3
1010	129·4	1090	132·3	1170	134·5
1020	129·9	1100	132·6	1180	134·7
1030	130·3	1110	132·9	1190	135·0
1040	130·7	1120	133·2	1200	135·2
1050	131·0	1130	133·5		

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

Ships above 1200 feet in length shall be dealt with by the Administration.

TABLE B

Freeboard Table for Type 'B' Ships

Length of ship (metres)	Freeboard (milli-metres)	Length of ship (metres)	Freeboard (milli-metres)	Length of ship (metres)	Freeboard (milli-metres)
24	200	51	455	78	850
25	208	52	467	79	868
26	217	53	478	80	887
27	225	54	490	81	905
28	233	55	503	82	923
29	242	56	516	83	942
30	250	57	530	84	960
31	258	58	544	85	978
32	267	59	559	86	996
33	275	60	573	87	1015
34	283	61	587	88	1034
35	292	62	601	89	1054
36	300	63	615	90	1075
37	308	64	629	91	1096
38	316	65	644	92	1116
39	325	66	659	93	1135
40	334	67	674	94	1154
41	344	68	689	95	1172
42	354	69	705	96	1190
43	364	70	721	97	1209
44	374	71	738	98	1229
45	385	72	754	99	1250
46	396	73	769	100	1271
47	408	74	784	101	1293
48	420	75	800	102	1315
49	432	76	816	103	1337
50	443	77	833	104	1359

TABLE B (*continued*)

Length of ship (metres)	Freeboard (milli-metres)	Length of ship (metres)	Freeboard (milli-metres)	Length of ship (metres)	Freeboard (milli-metres)
105	1380	155	2418	205	3347
106	1401	156	2440	206	3363
107	1421	157	2460	207	3380
108	1440	158	2480	208	3397
109	1459	159	2500	209	3413
110	1479	160	2520	210	3430
111	1500	161	2540	211	3445
112	1521	162	2560	212	3460
113	1543	163	2580	213	3475
114	1565	164	2600	214	3490
115	1587	165	2620	215	3505
116	1609	166	2640	216	3520
117	1630	167	2660	217	3537
118	1651	168	2680	218	3554
119	1671	169	2698	219	3570
120	1690	170	2716	220	3586
121	1709	171	2735	221	3601
122	1729	172	2754	222	3615
123	1750	173	2774	223	3630
124	1771	174	2795	224	3645
125	1793	175	2815	225	3660
126	1815	176	2835	226	3675
127	1837	177	2855	227	3690
128	1859	178	2875	228	3705
129	1880	179	2895	229	3720
130	1901	180	2915	230	3735
131	1921	181	2933	231	3750
132	1940	182	2952	232	3765
133	1959	183	2970	233	3780
134	1979	184	2988	234	3795
135	2000	185	3007	235	3808
136	2021	186	3025	236	3821
137	2043	187	3044	237	3835
138	2065	188	3062	238	3849
139	2087	189	3080	239	3864
140	2109	190	3098	240	3880
141	2130	191	3116	241	3893
142	2151	192	3134	242	3906
143	2171	193	3151	243	3920
144	2190	194	3167	244	3934
145	2209	195	3185	245	3949
146	2229	196	3202	246	3965
147	2250	197	3219	247	3978
148	2271	198	3235	248	3992
149	2293	199	3249	249	4005
150	2315	200	3264	250	4018
151	2334	201	3280	251	4032
152	2354	202	3296	252	4045
153	2375	203	3313	253	4058
154	2396	204	3330	254	4072

TABLE B (*continued*)

Length of ship (metres)	Freeboard (milli-metres)	Length of ship (metres)	Freeboard (milli-metres)	Length of ship (metres)	Freeboard (milli-metres)
255	4085	292	4537	329	4943
256	4098	293	4548	330	4955
257	4112	294	4560	331	4965
258	4125	295	4572	332	4975
259	4139	296	4583	333	4985
260	4152	297	4595	334	4995
261	4165	298	4607	335	5005
262	4177	299	4618	336	5015
263	4189	300	4630	337	5025
264	4201	301	4642	338	5035
265	4214	302	4654	339	5045
266	4227	303	4665	340	5055
267	4240	304	4676	341	5065
268	4252	305	4686	342	5075
269	4264	306	4695	343	5086
270	4276	307	4704	344	5097
271	4289	308	4714	345	5108
272	4302	309	4725	346	5119
273	4315	310	4736	347	5130
274	4327	311	4748	348	5140
[redacted]					
281	4408	318	4823	355	5210
282	4420	319	4834	356	5220
283	4432	320	4844	357	5230
284	4443	321	4855	358	5240
285	4455	322	4866	359	5250
286	4467	323	4878	360	5260
287	4478	324	4890	361	5268
288	4490	325	4899	362	5276
289	4502	326	4909	363	5285
290	4513	327	4920	364	5294
291	4525	328	4931	365	5303

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

Ships above 365 metres in length shall be dealt with by the Administration.

TABLE B

Freeboard Table for Type 'B' Ships

Length of ship (feet)	Freeboard (inches)	Length of ship (feet)	Freeboard (inches)	Length of ship (feet)	Freeboard (inches)
80	8·0	110	10·8	140	14·2
90	8·9	120	11·9	150	15·5
100	9·8	130	13·0	160	16·9