

I CONVENTION FOR THE SAFETY OF LIFE AT SEA, 1948

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Note: The Philippines was an original signatory to this Convention. It was concurred in by the Senate, SJR. No. 94, May 22, 1952. The Philippine instrument of acceptance was signed by the President, August 27, 1952 and was deposited with the Government of the U.K., October 2, 1952. It entered into force, November 19, 1952. It was proclaimed by the President, Proc. No. 366, s. 1953.

Reference: This Convention is also published In 164 UNTS, p. 113. The Presidential proclamation of the Convention is published in 49 O.G., p. 428 (Feb. 1953).

ARTICLE I

(a) The Contracting Governments undertake to give effect to the provisions of the present Convention and of the Regulations annexed thereto, which shall be deemed to constitute an integral part of the present Convention. Every reference to the present Convention implies at the same time a reference to these Regulations.

(b) The Contracting Governments undertake to promulgate all laws, decrees, orders and regulations and to take all other steps which may be necessary to give the present Convention full and complete effect, so as to ensure that, from the point of view of safety of life, a ship is fit for the service for which it is intended.

ARTICLE II

The ships to which the present Convention applies are ships registered in countries the Governments of which are Contracting Governments, and ships registered in territories to which the present Convention is extended under Article XIII.

ARTICLE III

LAWS, REGULATIONS, REPORTS

The Contracting Governments undertake to communicate to the Intergovernmental Maritime Consultative Organization (hereinafter called the Organization)—

- (a) the text of laws, decrees, orders and regulations which shall have been promulgated on the various matters within the scope of the present Convention;
- (b) all available official reports or official summaries of reports in so far as they show the results of the provisions of the present Convention, provided always that such reports or summaries are not of a confidential nature; and
- (c) a sufficient number of specimens of their Certificates issued under the provisions of the present Convention for circulation to the Contracting Governments for the information of their officers.

ARTICLE IV

CASES OF FORCE MAJEURE

(a) No ship, which is not subject to the provisions of the present Convention at the time of its departure on any voyage, shall become subject to the provisions of the present Convention on account of any deviation from its intended voyage due to stress of weather or any other cause of force majeure.

(b) Persons who are on board a ship by reason of force majeure or in consequence of the obligation laid upon the master to carry shipwrecked or other persons shall not be taken into account for the purpose of ascertaining the application to a ship of any provisions of the present Convention.

ARTICLE V

CARRIAGE OF PERSONS IN EMERGENCY

(a) For the purpose of moving persons from any territory in order to avoid a threat to the security of their lives a Contracting Government may permit the carriage of a larger number of persons in its ships than is otherwise permissible under the present Convention.

(b) Such permission shall not deprive other Contracting Governments of any right of control under the present Convention over such ships which come within their ports.

(c) Notice of any such permission, together with a statement of the circumstances, shall be sent to the Organization, by the Contracting Government granting such permission.

ARTICLE VI

SUSPENSION IN CASE OF WAR

(a) In case of war. Contracting Governments which consider that they are affected, whether as belligerents or as neutrals, may suspend the whole or any part of the Regulations annexed hereto. The suspending Government shall immediately give notice of such suspension to the Organization.

(b) 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.

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

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

ARTICLE VII

PRIOR TREATIES AND CONVENTIONS

(a) As between the Contracting Governments the present Convention replaces and abrogates the International Convention for the Safety of Life at Sea which was signed in London on the 31st May, 1929.

(b) All other treaties, conventions and arrangements relating to safety of life at sea, or matters appertaining thereto, 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:—

(i) ships to which the present Convention does not apply;

(ii) ships to which the present Convention applies, in respect of matters for which it has not expressly provided.

(c) 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.

(d) All matters which are not expressly provided for in the present Convention remain subject to the legislation of the Contracting Governments.

ARTICLE VIII

SPECIAL RULES DRAWN UP BY AGREEMENT

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

ARTICLE IX

AMENDMENTS

(a) (i) The present Convention may be amended by unanimous agreement between the Contracting Governments.

(ii) Upon the request of any Contracting Government a proposed amendment shall be communicated by the Organization to all Contracting Governments for consideration and acceptance under this paragraph.

(b) (i) An amendment to the present Convention may be proposed to the Organization at any time by any Contracting Government, and such proposal if adopted by a two-thirds majority of the Assembly of the Organization (hereinafter called the Assembly), upon recommendation adopted by a two-thirds majority of the Maritime Safety Committee of the Organization (hereinafter called the Maritime Safety Committee), shall be communicated by the Organization to all Contracting Governments for their acceptance.

(ii) Any such recommendation by the Maritime Safety Committee shall be communicated by the Organization to all Contracting Governments for their consideration at least six months before it is considered by the Assembly.

(c) (i) A conference of Governments to consider amendments to the present Convention proposed by any Contracting Governments shall at any time be convened by the Organization upon the request of one-third of the Contracting Governments.

(ii) Every amendment adopted by such conference by a two-thirds majority of the Contracting Governments shall be communicated by the Organization to all Contracting Governments for their acceptance.

(d) Any amendment communicated to Contracting Governments for their acceptance under paragraph (b) or (c) of this Article shall come into force for all Contracting Governments, except those which before it comes into force make a declaration that they do not accept the amendment, twelve months after the date on which the amendment is accepted by two-thirds of the Contracting Governments including two-thirds of the Governments represented on the Maritime Safety Committee.

(e) The Assembly, by a two-thirds majority vote, including two-thirds of the Governments represented on the

Maritime Safety Committee, and subject to the concurrence of two-thirds of the Contracting Governments to the present Convention, or a conference convened under paragraph (c) of this Article by a two-thirds majority vote, may determine at the time of its adoption that the amendment is of such an important nature that any Contracting Government which makes a declaration under paragraph (d) of this Article and which does not accept the amendment within a period of twelve months after the amendment comes into force, shall, upon the expiry of this period, cease to be a party to the present Convention.

(f) 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 after the date on which the amendment comes into force.

(g) The Organization shall inform all Contracting Governments of any amendments which come into force under this Article, together with the date on which such amendments shall come into force.

(h) Any acceptance or declaration under this Article shall be made by a notification in writing to the Organization, which shall notify all Contracting Governments of the receipt of the acceptance or declaration.

ARTICLE X

SIGNATURE AND ACCEPTANCE

(a) The present Convention shall remain open for acceptance and Governments of States may become parties to the Convention by:—

- (i) signature without reservation as to acceptance;
- (ii) signature subject to acceptance followed by acceptance; or
- (iii) acceptance.

(b) Acceptance shall be effected by the deposit of an instrument with the Organization, which shall inform all Governments that have already accepted the Convention of each acceptance received and of the date of its receipt.

ARTICLE XI

COMING INTO FORCE

(a) The present Convention shall come into force on the 1st January, 1951, provided that, at least 12 months before that date, not less than 15 acceptances, including 7 by countries each with not less than one million gross tons of shipping, have been deposited in accordance with Articles X and XV.

(b) Should 15 acceptances in accordance with paragraph (a) of this Article not have been deposited 12 months before the 1st January, 1951, the present Convention shall come into force 12 months after the date on which the last of such acceptances is deposited. The Organization shall inform all Governments which have signed or accepted the present Convention of the date on which it comes into force.

(c) Acceptances deposited after the date on which the present Convention comes into force shall take effect three months after the date of their deposit.

ARTICLE XII

DENUNCIATION

- (a) 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.
- (b) Denunciation shall be effected by a notification in writing addressed to the Organization which shall notify all the other Contracting Governments of any denunciation received and of the date of its receipt.
- (c) 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 XIII

TERRITORIES

- (a) (i) 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, may at any time by notification in writing given to the Organization declare that the present Convention shall extend to such territory.
- (ii) 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.
- (b) (i) The United Nations or any Contracting Government which has made a declaration under paragraph (a) 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 a notification in writing given to the Organization declare that the present Convention shall cease to extend to any such territory named in the notification.
- (ii) 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.
- (c) The Organization shall inform all the Contracting Governments of the extension of the present Convention to any territories under paragraph (a) of this Article, and of the termination of any such extension under the provisions of paragraph (b), stating in each case the date from which the present Convention has been or will cease to be so extended.

ARTICLE XIV

REGISTRATION

As soon as the present Convention comes into force it shall be registered by the Organization with the Secretary-General of the United Nations.

ARTICLE XV

INTERIM ARRANGEMENTS

- (a) Unless and until the Organization, in accordance with the Convention on the Inter-Governmental Maritime Consultative Organization signed at Geneva on the 6th March, 1948, takes over the duties assigned to it under the present Convention, the following provisions shall apply:—
- (i) All duties which are assigned to the Organization, other than those set forth in Article IX, shall be carried out by the Government of the United Kingdom of Great Britain and Northern Ireland (hereinafter called the

Government of the United Kingdom).

(ii) Amendments to the present Convention may be proposed at any time by any Contracting Government to the Government of the United Kingdom and such proposals shall be communicated by the latter to the other Contracting Governments for their consideration and acceptance. If any such amendment is unanimously accepted by the Contracting Governments, the present Convention shall be amended accordingly.

(iii) A Conference for the purpose of revising the present Convention shall be convened by the Government of the United Kingdom whenever, after the present Convention has been in force for five years, one-third of the Contracting Governments express a desire to that effect.

(iv) The present Convention shall be deposited in the Archives of the Government of the United Kingdom, which shall transmit certified true copies thereof to all Signatory Governments.

(b) When the Organization takes over the duties assigned to it under the present Convention, the Government of the United Kingdom will transmit to the Organization any documents which Have been deposited with or received by the Governments of the United Kingdom under the present Convention.

In witness whereof the undersigned Plenipotentiaries have signed the present Convention.

Done in London this tenth day of June, 1948, in a single copy, in English and French each equally authoritative.

CHAPTER I.—GENERAL PROVISIONS

PART A.—APPLICATION, DEFINITIONS, &C.

REGULATION I

APPLICATION

(a) Unless expressly provided otherwise, the present Regulations apply only to ships engaged on international voyages.

(b) The classes of ships to which each Chapter applies are more precisely defined, and the extent of the application is shown, in each Chapter.

REGULATION 2

DEFINITIONS

For the purpose of the present Regulations, unless expressly provided otherwise:—

(a) "Regulations" means the Regulations referred to in Article I (a) of the present Convention.

(b) "Administration" means the Government of the country in which the ship is registered.

(c) "Approved" means approved by an Administration.

(d) "International voyage" means a voyage from a country to which the present Convention applies to a port outside such country, or conversely; and 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.

(e) A passenger is every person other than:—

- (i) the master and the members of the crew or other persons employed or engaged in any capacity on board a ship on the business of that ship; and
- (ii) a child under one year of age.
- (f) A passenger ship is a ship which carries more than 12 passengers.
- (g) A cargo ship is any ship which is not a passenger ship.
- (h) A tanker is a cargo ship constructed or adapted for the carriage in bulk of liquid cargoes of an inflammable nature.
- (i) "New ship" means a ship the keel of which is laid on or after the date of coming into force of the present Convention.
- (j) "Existing ship" means a ship which is not a new ship.
- (k) A mile is 6,080 feet or 1,852 meters.

REGULATION 3

EXCEPTIONS

- (a) The present Regulations, unless expressly provided otherwise, do not apply:—
 - (i) Ships of war and troopships.
 - (ii) Cargo ships of less than 500 tons gross tonnage,
 - (iii) Ships not propelled by mechanical means,
 - (iv) Wooden ships of primitive build, such as dhows, junks, &c.
 - (v) Pleasure yachts not engaged in trade,
 - (vi) Fishing vessels.
- (b) Notwithstanding any provisions of the present Regulations, nothing herein shall apply to ships solely navigating the Great Lakes of North America and their connecting and tributary waters as far east as the lower exit of the Lachine Canal at Montreal in the Province of Quebec, Canada.

REGULATION 4

EXEMPTIONS

- (a) 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 Regulations provided that it complies with safety requirements which are adequate in the opinion of the Administration for the voyage which is to be undertaken by the ship.
- (b) Each Administration shall submit to the Organization as soon as possible after the 1st of January each year a report showing the number of voyages of this nature for which exemptions have been granted in the previous calendar year.

REGULATION 5

EQUIVALENTS

(a) Where in the present Regulation it is provided that a particular fitting, appliance or apparatus, or type thereof, shall be fitted or carried in a ship, or that any particular arrangement shall be adopted, an Administration may accept in substitution therefore any other fitting, appliance or apparatus, or type thereof, or any other arrangement, provided that the Administration shall have been satisfied by suitable trials that the fitting, appliance or apparatus, or type thereof, or the arrangement substituted is at least as effective as that specified in the present Regulations.

(b) Any Administration which so accepts, in substitution, a fitting, appliance or apparatus, or type thereof, or other arrangement, shall inform the Organization, and, upon request, shall communicate to the Organization particulars thereof together with a report on the trials made.

PART B.—SURVEYS AND CERTIFICATES

REGULATION 6

INSPECTION AND SURVEY

The inspection and survey of ships, so far as regards the enforcement of the provisions of the present Regulations and the granting of exemptions there from, shall be carried out by officers of the country in which the ship is registered, provided that the Government of each country may entrust the inspection and survey either to surveyors nominated for the purpose or to organizations recognized by it. In every case the Government concerned fully guarantees the completeness and efficiency of the inspection and survey.

REGULATION 7

INITIAL AND SUBSEQUENT SURVEYS OF PASSENGER SHIPS

(a) A passenger ship shall be subjected to the surveys specified below:—

- (i) A survey before the ship is put in service,
- (ii) A periodical survey once every 12 months.
- (iii) Additional surveys, as occasion arises.

(b) The surveys referred to above shall be carried out as follows:

- (i) The survey before the ship is put in service shall include a complete inspection of its structure, machinery and equipments, including the outside of the ship's bottom and the inside and outside of the boilers. This survey shall be such as to ensure that the arrangements, material, and scantlings of the structure, boilers and their appurtenances, main and auxiliary machinery, electrical installation, radio installation, life saving appliances, fire detecting and extinguishing appliances, and other equipments, fully comply with the requirements of the present Convention, and of the laws, decrees, orders and regulations promulgated as a result thereof by the Administration for ships of the service for which it is intended. The survey shall also be such as to ensure that the workmanship of all parts of the ship and its equipments is in all respects satisfactory.
- (ii) The periodical survey shall include an inspection of the structure, boilers, machinery and equipments, including the outside of the ship's bottom. The survey shall be such as to ensure that the ship, as regards the structure, boilers and their appurtenances, main and auxiliary machinery, electrical installation, radio

installation, life saving appliances, fire detecting and extinguishing appliances, and other equipments, is in satisfactory condition and fit for the service for which it is intended, and that it complies with the requirements of the present Convention, and of the laws, decrees, orders and regulations promulgated as a result thereof by the Administration.

(iii) A survey either general or partial, according to the circumstances, shall be made every time an accident occurs or a defect is discovered which affects the safety of the ship or the efficiency or completeness of its life saving appliances or other equipments, or whenever any important repairs or renewals are made. The survey shall be such as to ensure that the necessary repairs or renewals have been effectively made, that the material and workmanship of such repairs or renewals are in all respects satisfactory, and that the ship complies in all respects with the provisions of the present Convention and of the laws, decrees, orders and regulations promulgated as a result thereof by the Administration.

(c) (i) The laws, decrees, orders and regulations referred to in paragraph (b) shall be in all respects such as to ensure that, from the point of view of safety of life, the ship is fit for the service for which it is intended.

(ii) They shall among other things prescribe the requirements to be observed as to the initial and subsequent hydraulic tests to which the main and auxiliary boilers, connections, steam pipes, high pressure receivers, and fuel tanks for internal combustion engines are to be submitted, including the test pressure to be applied and the intervals between two consecutive tests.

(d) The main and auxiliary boilers, connections, tanks and receivers, also steam-piping of more than 3 inches (or 76 millimeters) internal diameter shall be satisfactorily tested by hydraulic pressure when new. Steam pipes of more than 3 inches (or 76 millimeters) internal diameter shall be tested by hydraulic pressure periodically.

REGULATION 8

SURVEYS OF LIFE SAVING APPLIANCES AND OTHER EQUIPMENTS OF CARGO SHIPS

The life saving and fire extinguishing appliances of cargo ships to which Chapters II and III of the present Regulations apply shall be subject to initial and subsequent surveys as provided for passenger ships in paragraph (a) of Regulation 7 with the substitution of 24 months for 12 months in sub-paragraph (a) (ii), and in paragraph (b) of that Regulation so far as it relates to life saving and, fire extinguishing appliances. The lights and means of making sound signals and distress signals carried by the ship shall also be included in the surveys for the purpose of ensuring that they comply fully with the requirements of the present Convention and the International Collision Regulations.

REGULATION 9

SURVEYS OF RADIO INSTALLATIONS OF CARGO SHIPS

The radio installations of cargo ships to which Chapter IV of the present Regulations applies shall be subject to initial and subsequent surveys as provided for passenger ships in paragraph (a) of Regulation 7 and in paragraph (h) of that Regulation so far as it relates to radio installations.

REGULATION 10

MAINTENANCE OF CONDITIONS AFTER SURVEY

After any survey of the ship under Regulation 7, 8 or 9 has been completed, no change shall be made in the structural arrangements, machinery, equipments, &c, covered by the survey, without the sanction of the

Administration.

REGULATION 11

ISSUE OF CERTIFICATES

(a) (i) A certificate called a Safety Certificate shall be issued after inspection and survey to a passenger ship which complies in an efficient manner with the requirements of Chapters II, III, and IV and any other relevant requirements of the present Regulations.

(ii) A certificate called a Safety Equipment Certificate shall be issued after inspection to a cargo ship which complied in an efficient manner with the relevant requirements of Chapters II and III and any other relevant requirements of the present Regulations.

(iii) A certificate called a Safety Radiotelegraphy Certificate shall be issued after inspection to a cargo ship, fitted with a radiotelegraph installation, which complies in an efficient manner with the requirements of Chapter IV and any other relevant requirements of the present Regulations.

(iv) A certificate called a Safety Radiotelephony certificate shall be issued after inspection to a cargo ship, fitted with a radiotelephone installation, which complies in an efficient manner with the requirements of Chapter IV and any other relevant requirements of the present Regulations.

(v) A certificate called an Exemption Certificate shall be issued to every ship to which exemption is granted by a Contracting Government under, and in accordance with, any of the provisions of the present Regulations.

(vi) Safety Certificates, Safety Equipment Certificates, Safety Radio-telegraphy Certificates, Safety Radiotelephony Certificates and Exemption Certificates shall be issued either by the Government of the country in which the ship is registered or by any person or organization duly authorized by that Government. In every case that Government assumes full responsibility for the certificate.

(b) Notwithstanding any other provision of the present Convention, any certificate issued under, and in accordance with, the provisions of the International Convention for the Safety of Life at Sea, 1929, which is current when the present Convention comes into force in respect of the Administration by which the certificate is issued, shall remain valid until it expires under the terms of Article 52 of the Convention of 1929.

REGULATION 12

ISSUE OF CERTIFICATES BY ANOTHER GOVERNMENT

A Contracting Government may, at the request of the Administration, cause a ship to be surveyed, and, if satisfied that the requirements of the present Regulations are complied with, issue certificates to the ship in accordance with the present Regulations. Any certificate so issued must contain a statement to the effect that it has been issued at the request of the Government of the country in which the ship is registered, and it shall have the same force and receive the same recognition as a certificate issued under Regulation II.

REGULATION 13

DURATION OF CERTIFICATES

(a) Certificates shall be issued for a period of not more than 12 months, except Safety Equipment Certificates which shall be issued for a period of not more than 24 months.

(b) If a ship at the time when its certificates expires is not in a port of the country in which it is registered, the certificate may be extended by a duly authorized officer of that country; but such extension shall be granted only for the purpose of allowing the ship to complete its return voyage to the country in which it is registered, and then only cases where it appears proper and reasonable so to do.

(c) No certificate shall be thus extended for a longer period than five months, and a ship to which such extension is granted shall not, on returning to the country in which it is registered, be entitled by virtue of such extension to leave that country again without having obtained a new certificate.

(d) A certificate which has not been extended under the foregoing provisions of this Regulation may be extended by the Administration for a period of grace of up to one month from the date of expiry stated on it.

REGULATION 14

FORM OF CERTIFICATES

(a) All certificates shall be drawn up in the official language or languages of the country by which they are issued.

(b) The form of the certificates shall be that of the models given in the Appendix to the present Regulations. The arrangement of the printed part of the model certificates shall be exactly reproduced in the certificates issued, or in certified copies thereof, and the particulars inserted in the certificates issued, or in certified copies thereof, shall be in Roman characters and Arabic figures.

REGULATION 15

POSTING UP OF CERTIFICATES

All certificates or certified copies thereof issued under the present Regulations, except Exemption Certificates or certified copies thereof, shall be posted up in a prominent and accessible place in the ship.

REGULATION 16

ACCEPTANCE OF CERTIFICATES

Certificates issued under the authority of a Contracting Government shall be accepted by the other Contracting Government for all purposes covered by the present Convention. They shall be regarded by the other Contracting Governments as having the same force as the certificates issued by them to their own ships.

REGULATION 17

QUALIFICATION OF CERTIFICATES

(a) If in the course of a particular voyage a ship has on board a number of persons less than the total number stated in the Safety Certificate and is in consequence, in accordance with the provisions of the present Regulations, free to carry a smaller number of lifeboats and other life saving appliances than that stated in the certificate, a memorandum may be issued by the Government, officer, person, or organization referred to in Regulation 11 and Regulation 13.

(b) This memorandum shall state that in the circumstances there is no infringement of the provisions of the present Regulations. It shall be annexed to the certificate and shall be substituted for it in so far as the lives saving

appliances are concerned. It shall be valid only for the particular voyage for which it is issued.

REGULATION 18

CONTROL

Every ship holding a certificate issued under Regulation 11 or Regulation 12 is subject in the ports of the other Contracting Governments to control by officers duly authorized by such Government in so far as this control is directed towards verifying that there is on board a valid certificate and, if necessary, that the conditions of the ship's seaworthiness correspond substantially with the particulars of that certificate. Such certificate shall be accepted unless, in the opinion of the officer carrying out the control, the conditions of the ship's seaworthiness do not correspond substantially with the particulars of that certificate and the ship cannot proceed to sea without danger to the passengers or the crew, when he shall take such steps as will ensure that the ship shall not sail until it can proceed to sea without danger to the passengers or the crew. In the event of this control giving rise to intervention of any kind, the officer carrying out the control shall inform the Consul of the country in which the ship is registered in writing forthwith of all the circumstances in which intervention was deemed to be necessary, and the facts shall be reported to the Organization.

REGULATION 19

PRIVILEGES

The privileges of the present Convention may not be claimed in favor of any ship unless it holds appropriate valid certificates.

PART C.—CASUALTIES

REGULATION 20

CASUALTIES

(a) Each Administration undertakes to conduct an investigation of any major marine casualty occurring to any of its ships subject to the provisions of the present Convention. Such investigation, in addition to any other purpose, shall have the object of determining whether any changes in the present Regulations are desirable.

(b) Each Contracting Government undertakes to supply the Organization with pertinent information concerning such casualties. 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.

CHAPTER II—CONSTRUCTION

PART A.—GENERAL

REGULATION 1

APPLICATION

(a) (i) Unless expressly provided otherwise, this Chapter apply to new ships.

(ii) In the case of existing passenger ships and cargo ships which do not already comply with the provisions of this Chapter relating to new ships, the arrangements on each ship shall be considered by the Administration, with a view to improvements being made to provide increased safety where practicable and reasonable.

(b) For the purpose of this Chapter:—

(i) A new passenger ship is a passenger ship the keel of which is laid on or after the date of coming into force of the present Convention, or a cargo ship which is converted to a passenger ship on or after that date, all other passenger ships being described as existing passenger ships.

(ii) A new cargo ship is a cargo ship the keel of which is laid on or after the date of coming into force of the present Convention.

(c) Each Administration may, if it considers that the sheltered nature and conditions of the voyage are such as to render the application of any specific requirements of this Chapter unreasonable or unnecessary, exempt from those requirements individual ships or classes of ships belonging to its country which, in the course of their voyage, do not proceed more than 20 miles from the nearest land.

(d) In case of a passenger ship which is permitted under Regulation 22 of Chapter III to carry a number of persons on board in excess of the lifeboat capacity provided, it shall comply with the special standards of subdivision set out in Regulation 5 (e), and the associated special provisions regarding permeability in Regulation 4 (d), unless the Administration is satisfied that, having regard to the nature and conditions of the voyage, compliance with the other provisions of the Regulations of this Chapter is sufficient.

(e) In the case of passenger ships which are employed in the carriage of large numbers of unberthed passengers in special trades, such, for example, as the pilgrim trade, the Administration, if satisfied that it is impracticable to enforce compliance with the requirements of this Chapter, may exempt such ships, when they belong to its country, from those requirements on the following conditions:—

(i) That the fullest provision which the circumstances of the trade will permit shall be made in the matter of construction.

(ii) That steps shall be taken to formulate general rules which shall be applicable to the particular circumstances of these trades. Such rules shall be formulated in concert with such other Contracting Governments, if any, as may be directly interested in the carriage of such passengers in such trades.

Notwithstanding any provisions of the present Convention, the Simla Rules, 1931, shall continue in force as between the parties to those Rules until the rules formulated under sub-paragraph (e) (ii) of this Regulation shall come into force.

REGULATION 2

DEFINITIONS

For the purpose of this Chapter, unless expressly provided otherwise—

(a) (i) The subdivision load line is the waterline used in determining the subdivision of the ship.

(ii) The deepest subdivision load line is the waterline which corresponds to the greatest draught.

- (b) The length of the ship is the length measured between perpendiculars taken at the extremities of the deepest subdivision load line.
- (c) The breadth of the ship is the extreme width from outside of frame to outside of frame at or below the deepest subdivision load line.
- (d) The bulkhead deck is the uppermost deck up to which the transverse watertight bulkheads are carried.
- (e) The margin line is a line drawn at least 3 inches (or 76 millimeters) below the upper surface of the bulkhead deck at side.
- (f) The draught is the vertical distance from the moulded base line amidships to the subdivision load line in question.
- (g) The permeability of a space is the percentage of that space which can be occupied by water. The volume of a space which extends above the margin line shall be measured only to the height of that line.
- (h) The machinery space is to be taken as extending from the moulded base line to the margin line and between the extreme main transverse watertight bulkheads bounding the spaces devoted to the main and auxiliary propelling machinery, boilers when installed and all permanent coal bunkers. In the case of unusual arrangements, the Administration may define the limits of the machinery spaces.
- (i) Passenger spaces are those which are provided for the accommodation and use of passengers, excluding baggage, store, provision and mail rooms. For the purposes of Regulations 4 and 5, spaces provided below the margin line for the accommodation and use of the crew shall be regarded as passenger spaces.
- (j) In all cases volumes shall be calculated to moulded lines:

PART B.—SUBDIVISION AND STABILITY

(PART B APPLIES TO PASSENGER SHIPS ONLY EXCEPT THAT REGULATION IS ALSO APPLIES TO CARGO SHIPS)

REGULATION 3

FLOODABLE LENGTH

- (a) The floodable length at any point of the length of a ship shall be determined by a method of calculation which takes into consideration the form, draught and other characteristics of the ship in question.
- (b) In a ship with a continuous bulkhead deck, the floodable length at a given point is the maximum portion of the length of the ship, having its centre at the point in question, which can be flooded under the definite assumptions hereafter set forth in Regulation 4 without the ship being submerged beyond the margin line.
- (c) (i) In the case of a ship not having a continuous bulkhead deck, the floodable length at any point may be determined to an assumed continuous margin line which at no point is less than 3 inches (or 76 millimeters) below the top of the deck (at side) to which the bulkheads concerned and the shell are carried watertight.
- (ii) Where a portion of an assumed margin line is appreciably below the deck to which bulkheads are carried, the Administration may permit a limited relaxation in the water tightness of those portions of the bulkheads which are above the margin line and immediately under the higher deck.

REGULATION 4

PERMEABILITY

(a) The definite assumptions referred to in Regulation 3 relate to the permeabilities of the spaces below the margin line.

In determining the floodable length, a uniform average permeability shall be used throughout the whole length of each of the following portions of the ship below the margin line:—

- (i) the machinery space as defined in Regulation 2;
- (ii) the portion forward of the machinery space; and
- (iii) the portion abaft the machinery space.

(b) (i) For steamships the uniform average : permeability throughout the machinery space shall be determined from the formula—

$$80 + 12.5$$

(a - c),

where

(v)

a = volume of the passenger spaces, as defined in Regulation 2, which are situated below the margin line within the limits of the machinery space.

c = volume of between deck spaces below the margin line within the limits of the machinery space which are appropriated to cargo, coal or stores.

v = whole volume of the machinery space below the margin line.

(ii) For ships propelled by internal combustion engines, the uniform average permeability shall be taken as 5 greater than that given by the above formula.

(iii) Where it is shown to the satisfaction of the Administration that the average permeability as determined by detailed calculation, is less than that given by the formula, the detailed calculated value may be used. For the purpose of such calculation, the permeabilities of passenger spaces, as defined in Regulation 2, shall be taken as 95, that of all cargo, coal and store spaces as 60, and that of double bottom, oil fuel and other tanks at such values as may be approved in each case by the Administration.

(c) Except as provided in paragraph (d) below, the uniform average permeability throughout the portion of the ship before (or abaft) the machinery space shall be determined from the formula—

$$63 + 35$$

a

v

where:—

a = volume of the passenger spaces, as defined in Regulation 2, which are situated below the margin line, before (or abaft) the machinery space, and

v = whole volume of the portion of the ship below the margin line before (or abaft) the machinery space.

(d) In the case of a ship which is permitted under Regulation 22 of Chapter III to carry a number of persons on board in excess of the lifeboat capacity provided, and is required under paragraph (d) of Regulation 1 in this Chapter to comply with special provisions, the uniform average permeability throughout the portion of the ship before (or abaft) the machinery space shall be determined from the formula—

$95 - 35$

b

v

where:—

b = the volume of the spaces below the margin line and above the tops of floors, inner bottom, or peak tanks, as the case may be, which are appropriated to and used as cargo spaces, coal or oil fuel bunkers, store rooms, baggage and mail rooms, chain lockers and fresh water tanks, before (or abaft) the machinery space; and

v = whole volume of the portion of the ship below the margin line before (or abaft) the machinery space.

In the case of ships engaged on services where the cargo holds are not generally occupied by any substantial quantities of cargo, no part of the cargo spaces is to be included in calculating " b ."

(e) In the case of unusual arrangements the Administration may allow, or require, a detailed calculation of average permeability for the portions before or abaft the machinery spaces. For the purpose of such calculation the permeability of passenger spaces as defined in Regulation 2 shall be taken as 95, that of spaces containing machinery as 80, that of all cargo, coal and store spaces as 60, and that of double bottom, oil fuel and other tanks at such value as may be approved in each case by the Administration.

(f) If a between deck compartment between two watertight transverse bulkheads contains any passenger or crew space, the whole of that compartment, less any space completely enclosed within permanent steel bulkheads and appropriated to other purposes, shall be regarded as passenger space. If, however, the passenger or crew space in question is completely enclosed within permanent steel bulkheads, only the space so enclosed need be considered as passenger space.

REGULATION 5

PERMISSIBLE LENGTH OF COMPARTMENTS

(a) Ships shall be as efficiently subdivided as is possible having regard to the nature of the service for which they are intended. The degree of subdivision shall vary with the length of the ship and with the service, in such manner that the highest degree of subdivision corresponds with the ships of greatest length, primarily engaged in the carriage of passengers.

(b) Factor of Subdivision.—The maximum permissible length of a compartment having its centre at any point in the ship's length is obtained from the floodable length by multiplying the latter by an appropriate factor called the factor of subdivision.

The factor of subdivision shall depend on the length of the ship, and for a given length shall vary according to the nature of the service for which the ship is intended. It shall decrease in a regular and continuous manner—

(i) as the length of the ship increases, and

(ii) from a factor A, applicable to ships primarily engaged in the carriage of cargo, to a factor B, applicable to ships primarily engaged in the carriage of passengers.

The variations of the factors A and B shall be expressed by the following formulae (I) and (II) where L is the length of the ship as defined in Regulation 2:—

A =

L in feet

+ .18

$\frac{L-190}{430}$

(L = 430

L—198

and upwards)

A =

L in meters

+ .18

..... (I)

$\frac{L-58.2}{131}$

(L = 131 and

L—60

upwards)

B =

L in feet

+ .18

$\frac{L-100}{260}$

(L = 260 and

L—138

upwards)

B =

L in meters

+ .18

..... (II)

$\frac{L-30.3}{138}$

(L = 79 and

L—42

upwards)

(c) Criterion of Service.—For a ship of given length the appropriate factor of subdivision shall be determined by the Criterion of Service Numeral (hereinafter called the Criterion Numeral) as given by the following formula; (III) and (IV) where:—

C3 = the Criterion Numeral;

L = length of the ship, as defined in Regulation 2;

M = the volume of the Machinery space, as defined in Regulation 2; with the addition thereto of the volume of any permanent oil fuel bunkers which may be situated above the inner bottom and before or abaft the machinery space;

P = The whole volume of the passenger spaces below the margin line, as defined in Regulation 2;

V = the whole volume of the ship below the margin line;

P1 = KN where:—

N = number of passengers for which the ship is to be certified, and

K has the following values—

Value of K.

Length in feet and volumes in cubic feet..... 6 L.

Length in meters and volumes in cubic meters..... 0.56 L.

Where the value of KN is greater than the sum of P and the whole volume of the actual passenger spaces above the margin line, the figure to be taken as P1 is the sum of $\frac{2}{3}$ KN, whichever is the greater.

When P1 is greater than P—

C3 = 72

M + 2P1

..... (III)

M + P1 - P

and in other cases—

C3 = 72

M + 2P1

..... (IV)

V

For the ships not having a continuous bulkhead deck the volumes are to be taken up to the actual margin lines used in determining the floodable lengths.

(d) Rules for Subdivision of Ships other than those covered by paragraph

(e) of this Regulation, (i) The subdivision abaft the forepeak of ships 430 feet (or 131 meters) in length and upwards having a criterion numeral of 23 or less shall be governed by the factor A given by formula (I); of those having a criterion numeral of 123 or more by the factor B given by formula (II); and of those having a criterion numeral between 23 and 123 by the factor F obtained by linear interpolation between the factors A and B, using the formula:—

$$F = A - \frac{(A - B)(C3 - 23)}{100} \quad \text{..... (IV)}$$

Where the factor F is less than 40 and it is shown to the satisfaction of the Administration to be impracticable to comply with the factor F in a machinery compartment of the ship, the subdivision of such compartment may be governed by an increased factor, which, however, shall not exceed 40.

(ii) The subdivision abaft the forepeak of ships less than 430 feet (or 131 meters) but not less than 260 feet (or 79 meters) in length having a criterion numeral equal to S, where—

$$S = \frac{(L \text{ in feet}) - 260}{34} \quad \text{..... (V)}$$

$$S = \frac{(L \text{ in meters}) - 79}{13} \quad \text{..... (VI)}$$

shall be governed by the factor unity; of those having a criterion numeral of 123 or more by the factor B given by the formula (II); of those having a criterion numeral between S and 123 by the factor F obtained by linear interpolation between unity and the factor B using the formula:—

$$F = 1 - \frac{(1 - B)(C3 - S)}{123 - S} \quad \text{..... (VII)}$$

(iii) The subdivision abaft the forepeak of ships less than 430 feet (or 131 meters) but not less than 260 feet (or 79 meters) in length and having a criterion numeral less than S, and of all ships less than 260 feet (or 79 meters) in length shall be governed by the factor unity, unless, in either case, it is shown to the satisfaction of the

Administration to be impracticable to comply with this factor in any part of the ship, in which case the Administration may allow such relaxation as may appear to be justified, having regard to all the circumstances.

(iv) The provisions of sub-paragraph (d) (iii) shall apply also to ships of whatever length, which are to be certified to carry a number of passengers exceeding 12 but not exceeding—

$L = (\text{in feet})$

$=$

$L = (\text{in meters})$

or 50, whichever is the less

7,000

650

(e) Special Standards of Subdivision for Ships which are permitted under Regulation 22 of Chapter 111 to carry a number of persons on board in excess of (the lifeboat capacity provided and are required under paragraph (d) of Regulation 1 in this Chapter to comply with special provisions.

(i) (a) In this case of ships primarily engaged in the carriage of passengers, the subdivision abaft the forepeak shall be governed by a factor of .50 or by the factor determined according to paragraphs (c) and (d) of this Regulation if less than .50.

(b) In the case of such ships less than 300 feet (or 91.5 meters) in length, if the administration is satisfied that compliance with such factor would be impracticable in a compartment, it may allow the length of that compartment to be governed by a higher factor provided the factor used is the lowest that is practicable and reasonable in the circumstances.

(ii) If, in the case of any ship whether less than 300 feet (or 91.5 meters) or not, the necessity of carrying appreciable quantities of cargo makes it impracticable to require the subdivision abaft the forepeak to be governed by a factor not exceeding .50 the standard of subdivision to be applied shall be determined in accordance with the following sub-paragraphs (a) to (e), subject to the condition that where the Administration is satisfied that insistence on strict compliance in any respect would be unreasonable, it may allow such alternative arrangement of such watertight bulkheads as appears to be justified on merits and will not diminish the general effectiveness of the subdivision.

(a) The provisions of paragraph (c) of this Regulation relating to the criterion numeral shall apply with the exception that in calculating the value of P_i for berthed passengers K is to have the value defined in paragraph (c) of this Regulation or 125 cubic feet (or 3.55 cubic meters), whichever is the greater, and for unberthed passengers K is to have the value 125 cubic feet (or 3.55 cubic meters).

(b) The factor B in paragraph (b) of this Regulation shall be replaced by the factor BB determined by the following formula:-

L in feet

$BB =$

$\frac{57.6}{L}$

$+ .20$

($L = 180$ and upwards)

L—108

L in meters

BB =

__17.6__

+ .20

(L = 55 and upwards)

L—33

(c) The subdivisions abaft the forepeak of ships 430 feet (or 131 meters in length and upwards having a criterion numeral of 23 or less shall be governed by the factor A given by formula (I) in paragraph (b) of this Regulation; of those having a criterion numeral of 123 or more by the factor BB given by the formula in sub-paragraph (ii) (b) of this paragraph; and of those having a criterion numeral between 23 and 123 by the factor F obtained by linear interpolation between the factors A and BB, using the formula:—

$F = A -$

$(A - BB)(C3 - 23)$

100

except that if the factor F so obtained is less than .50 the factor to be used shall be either .50 or the factor calculated according to the provisions of paragraph (d) (i) of this Regulation, whichever is the smaller.

(d) The subdivision abaft the forepeak of ships less than 430 feet (or 131 meters) but not less than 150 feet (or 55 meters) in length having a criterion numeral equal to Si where—

S1 =

1,950 - 4L

(L in feet)

100

S1 =

3,712 - 25L

(L in meters)

19

shall be governed by the factor unity; of those having a criterion numeral of 123 or more by the factor BB given by the formula in sub-paragraph (ii) (b) of this paragraph; of those having a criterion numeral between Si and 123 by the factor F obtained by linear interpolation between unity and the factor BB, using the formula:—

$$F = 1$$

$$(1 - BB)(C3 - S1)$$

$$123 - S1$$

except that in either of the two latter cases if the factor so obtained is less than .50 the subdivision may be governed by a factor not exceeding .50.

(e) The subdivision abaft the forepeak of ships less than 430 feet (of 131 meters) but not less than 180 feet (or 55 meters) in length and having a criterion numeral less than Si, and of all ships less than 180 feet (or 55 meters) in length shall be governed by the factor unity, unless it is shown to the satisfaction of the Administration to be impracticable to comply with this factor in particular compartments, in which event the Administration may allow such relaxations in respect of those compartments as appear to be justified, having regard to all the circumstances, provided that the aftermost compartment and as many as possible of the forward compartments (between the forepeak and the after end of the machinery space) shall be kept within the floodable length.

REGULATION 6

SPECIAL RULES CONCERNING SUBDIVISION

(a) Where in a portion or portions of a ship the watertight bulkheads are carried to a higher deck than in the remainder of the ship, and it is desired to take advantage of this higher extension of the bulkheads in calculating the floodable length, separate margin lines may be used for each such portion of the ship provided that—

(i) the sides of the ship are extended throughout the ship's length to the deck corresponding to the upper margin line and all openings in the shell plating below this deck throughout the length of the ship are treated as being below a margin line, for the purposes of Regulation 13; and

(ii) the two compartments adjacent to the "step" in the bulkhead deck are each within the permissible length corresponding to their respective margin lines and, in addition, their combined length does not exceed twice the permissible length based on the lower margin line.

(b) (i) A compartment may exceed the permissible length determined by the rules of Regulation 5 provided the combined length of each pair of adjacent compartments to which the compartment in question is common does not exceed either the floodable length or twice the permissible length, whichever is the less.

(ii) If one of the two adjacent compartments is situated inside the machinery space, and the second is situated outside the machinery space, and the average permeability of the portion of the ship in which the second is situated differs from that of the machinery space, the combined length of the two compartments shall be adjusted to mean average permeability of the two portions of the ship in which the compartments are situated.

(iii) Where the two adjacent compartments have different factors of sub-division, the combined length of the two compartments shall be determined proportionately.

(c) In ships 430 feet (or 131 meters) in length and upwards, one of the main transverse bulkheads abaft the forepeak shall be fitted at a distance from the forward perpendicular which is not greater than the permissible

length.

(d) A main transverse bulkhead may be recessed provided that all parts of the recess lie inboard of vertical surfaces on both sides of the ship, situated at a distance from the shell plating equal to one-fifth the breadth of the ship, as defined in Regulation 2, and measured at right angles to the centre line at the level of the deepest subdivision load line.

Any part of a recess which lies outside these limits shall be dealt with as a step in accordance with the following paragraph.

(e) A main transverse bulkhead may be stepped provided that it meets one of the following conditions:—

(i) The combined length of the two compartments, separated by the bulkhead in question, does not exceed 90 per cent, of the floodable length or twice the permissible length, except that in ships having a factor of subdivision greater than 9, the combined length of the two compartments in question shall not exceed the permissible length.

(ii) Additional subdivision is provided in way of the step to maintain the same measure of safety as that secured by a plane bulkhead.

(iii) The compartment over which the step extends does not exceed the permissible length corresponding to a margin line taken 3 inches (or 76 millimeters) below the step.

(f) Where a main transverse bulkhead is recessed or stepped, an equivalent plane bulkhead shall be used in determining the subdivision.

(g) If the distance between two adjacent main transverse bulkheads, or their equivalent plane bulkheads, or the distance between the transverse planes passing through the nearest stepped portions of the bulkheads, is less than 10 feet (or 3.05 meters) plus 3 per cent, of the length of the ship, or 35 feet (or 10.67 meters) whichever is the less, only one of these bulkheads shall be regarded as forming part of the subdivision of the ship in accordance with the provisions of Regulation 5.

(h) Where a main transverse watertight compartment contains local subdivision and it can be shown to the satisfaction of the Administration that, after any assumed side damage extending over a length of 10 feet (or 3.05 meters) plus 3 per cent, of the length of the ship, or 35 feet (or 10.67 meters) whichever is the less, the whole volume of the main compartment will not be flooded, a proportionate allowance may be made in the permissible length otherwise required for such compartment. In such a case the volume of effective buoyancy assumed on the undamaged side shall not be greater than that assumed on the damaged side.

REGULATION 7

STABILITY OF SHIPS IN DAMAGED CONDITION

(a) Sufficient intact stability shall be provided in all service conditions so as to enable the ship to withstand the final stage of flooding of any one main compartment which is required to be within the floodable length.

Where two adjacent main compartments are separated by a bulkhead which is stepped under the conditions of subparagraph (e) (i) of Regulation 6, the intact stability shall be adequate to withstand the flooding of those two adjacent main compartments.

Where the required factor of subdivision is 50 or less the intact stability shall be adequate to withstand the flooding of any two adjacent main compartments.

(b) (i) The requirements of paragraph (a) of this Regulation shall be determined by calculations which are in accordance with paragraphs (c), (d) and (f), following, and which take into consideration the proportions and design characteristics of the ship and the arrangement and configuration of the damaged compartments. In making these calculations the ship is to be assumed in the worst anticipated service condition as regards stability.

(ii) Where it is proposed to fit decks, inner skins or longitudinal bulkheads of sufficient tightness to seriously restrict the flow of water, the Administration shall be satisfied that proper consideration is given to such restrictions in the calculations.

(c) For the purpose of making damage stability calculations the volume and surface permeabilities shall be as follows:—

Spaces Permeability

Occupied by Cargo, Coal or Stores 60

Occupied by Accommodations 95

Occupied by Machinery 85

Intended for Liquids 0 or 95*

* Whichever results in the more severe requirements.

(d) Minimum assumed extent of damage shall be as follows:—

(i) Longitudinal extent: 10 ft. (or 3.05 meters) plus 3 per cent, of the length of the ship, or 35 feet (or 10.67 meters) whichever is the less.

(ii) Transverse extent (measured inboard from the ship's side, at right angles to the centre line at the level of the deepest subdivision load line); a distance of one-fifth of the breadth of the ship, as defined in Regulation 2.

(iii) Vertical extent: From top of double bottom up to the margin line.

(iv) If any damage of lesser extent than that indicated in the foregoing sub-paragraphs (i), (ii) and (iii), would result in a more severe condition regarding heel or loss of metacentric height such damage shall be assumed in the calculations.

(e) Unsymmetrical flooding is to be kept to a minimum consistent with efficient arrangements. Where special cross-flooding fittings are provided these, together with the maximum heel before equalization, shall be acceptable to the Administration. Suitable information concerning the use of such fittings shall be supplied to the master of the ship.

(f) The final conditions of the ship after damage and after equalization measures have been taken shall be as follows:—

(i) In the case of symmetrical flooding the residual metacentric height shall be positive, except that, in special cases, the Administration may accept a negative metacentric height (upright) provided the resulting heel is not more than seven degrees.

(ii) In the case of unsymmetrical flooding the total heel shall not exceed seven degrees, except that, in special cases, the Administration may allow additional heel due to the unsymmetrical moment, but in no case shall the final heel exceed fifteen degrees.

(iii) In no case shall the margin line be submerged in the final stage of flooding. If it is considered that the margin line may become submerged during an intermediate stage of flooding, the Administration may require

such investigations and arrangements as it shall consider necessary for the safety of the ship.

(g) The master of the ship shall be supplied with the data necessary to maintain sufficient intact stability under service conditions to enable the ship to withstand the critical damage. In the case of ships requiring cross-flooding the master of the ship shall be informed of the conditions of stability on which the calculations of heel are based and be warned that excessive heeling might result should the ship sustain damage when in a less favorable condition,

(h) (i) No relaxation from the requirements for damage stability may be considered by an Administration unless it is shown that the intact metacentric height in any service condition necessary to meet these requirements is excessive for the service intended.

(ii) Relaxations from the requirements for damage stability shall be permitted only in exceptional cases and subject to the condition that the Administration is to be satisfied that the proportions, arrangements and other characteristics of the ship are the most favorable to stability after damage which can practically and reasonably be adopted in the particular circumstances.

REGULATION 8

PEAK AND MACHINERY SPACE BULKHEADS, SHAFT TUNNELS, UC.

(a) (i) A ship shall have a forepeak or collision bulkhead, which shall be watertight up to the bulkhead deck. This bulkhead shall be fitted not less than 5 per cent, of the length of the ship, and not more than 10 feet (or 3.05 meters) plus 5 per cent, of the length of the ship from the forward perpendicular.

(ii) If the ship has a long forward superstructure, the forepeak bulkhead shall be extended weather tight to the deck next above the bulkhead deck. The extension need not be fitted directly over the bulkhead below, provided it is at least 5 per cent, of the length of the ship from the forward perpendicular, and the part of the bulkhead deck which forms the step is made effectively weather tight.

REGULATION 9

DOUBLE BOTTOMS

(a) A double bottom should be fitted extending from the forepeak bulkhead to the after peak bulkhead as far as this is practicable and compatible with the design and proper working of the ship.

(i) In ships 200 feet (or 61 meters) and under 249 feet (or 76 meters) in length a double bottom shall be fitted at least from the machinery space to the forepeak bulkhead, or as near thereto as practicable.

(ii) In ships 249 feet (or 76 meters) and under 330 feet (or 100 meters) in length a double bottom shall be fitted at least outside the machinery space, and shall extend to the fore and after peak bulkheads, or as near thereto as practicable.

(iii) In ships 330 feet (or 100 meters) in length and upwards a double bottom shall be fitted amidships, and shall extend to the fore and after peak bulkheads, or as near thereto as practicable.

(b) Where a double bottom is required to be fitted the inner bottom shall be continued out to the ship's sides in such a manner as to protect the bottom to the turn of the bilge. Such protection will be deemed satisfactory if the line of intersection of the outer edge of the margin plate with the bilge plating is not lower at any part than a horizontal plane passing through the point or" intersection with the frame line amidships of a transverse diagonal line inclined at 25 degrees to the base line and cutting it at a point one-half the ship's moulded breadth from the

middle line.

(c) Small wells constructed in the double bottom in connection with drainage arrangements of holds, &c, shall not extend downwards more than necessary, nor shall they be less than 18 inches (or 457 millimeters) from the outer bottom or from the inner edge of the margin plate. A well extending to the outer bottom is, however, permitted at the after end of the shaft tunnel of screw ships. Other wells (e.g., for lubricating oil under main engines) may be permitted by the Administration, if satisfied that the arrangements give protection equivalent to that afforded by a double bottom complying with this Regulation.

(d) A double bottom need not be fitted in way of watertight compartments of moderate size exclusively for the carriage of liquids, provided the safety of the ship, in the event of bottom or side damage, is not, in the opinion of the Administration, thereby impaired.

(e) In the case of ships to which the provisions of paragraph (d) of Regulation 1 of this Chapter apply and which are engaged on regular service within the limits of a short international voyage as defined in paragraph (a) of Regulation 2 of Chapter III, the Administration may permit a double bottom to be dispensed with in any part of the ship which is subdivided by a factor not exceeding 50, if satisfied that the fitting of a double bottom in that part would not be compatible with the design and proper working of the ship.

REGULATION 10

ASSIGNING, MARKING AND RECORDING OF SUBDIVISION LOAD LINES

(a) In order that the required degree of subdivision shall be maintained a load line corresponding to the approved subdivision draught shall be assigned and marked on the ship's sides. A ship having spaces which are specially adapted for the accommodation of passengers and the carriage of cargo alternatively may, if the owners desire, have one or more additional load lines assigned and marked to correspond with the subdivision draughts which the Administration may approve for the alternative service conditions.

(b) The subdivision load lines assigned and marked shall be recorded in the Safety Certificate, and shall be distinguished by the notation C.1 for the principal passenger condition, and C.2, C.3, &c, for the alternative conditions.

(c) The freeboard corresponding to each of these load lines shall be measured at the same position and from the same deck line as the freeboards determined in accordance with the International Convention respecting Load Lines, 1930.

(d) The freeboard corresponding to each approved subdivision load line and the conditions of service for which it is approved, shall be clearly indicated on the Safety Certificate.

(e) In no case shall any subdivision load line mark be placed above the deepest load line in salt water as determined by the strength of the ship and/or the International Convention respecting Load Lines, 1930.

(f) Whatever may be the position of the subdivision load line marks, a ship shall in no case be loaded so as to submerge the load line mark appropriate to the season and locality as determined in accordance with the International Convention respecting Load Lines, 1930.

(g) A ship shall in no case be so loaded that when she is in salt water the subdivision load line mark appropriate to the particular voyage and condition of service is submerged.

REGULATION 11

CONSTRUCTION AND INITIAL TESTING OF WATERTIGHT BULKHEADS, &C.

- (a) Watertight subdivision bulkheads, whether transverse or longitudinal, shall be constructed in such a manner that they shall be capable of supporting, with a proper margin of resistance, the pressure due to a head of water up to the margin line in way of each bulkhead. The construction of these bulkheads shall be to the satisfaction of the Administration.
- (b) (i) Steps and recesses in bulkheads shall be watertight and as strong as the bulkhead at the place where each occurs.
- (ii) Where frames or beams pass through a watertight deck or bulkhead, such deck or bulkhead shall be made structurally watertight without the use of wood or cement.
- (c) Testing main compartments by filling them with water is not compulsory. A complete examination of the bulkheads shall be made by a surveyor; and, in addition, a hose test shall be made in all cases.
- (d) The forepeak, double bottoms (including duct keels) and inner skins shall be tested with water to a head up to the margin line.
- (e) Tanks which are intended to hold liquids, and which form part of the subdivision of the ship, shall be tested for tightness with water to a head up to the deepest subdivision load line or to a head corresponding' to two-thirds of the depth from the top of keel to the margin line in way of the tanks, whichever is the greater; provided that in no case shall the test head be less than 3 feet (or 0.92 meters) above the top of the tank.
- (f) The tests referred to in paragraphs (d) and (e) are for the purpose of ensuring that the subdivision structural arrangement are watertight and are not to be regarded as a test of the fitness of any compartment for the storage of oil fuel or for other special purposes for which a test of a superior character may be required depending on the height to which the liquid has access in the tank or its connections.

REGULATION 12

OPENINGS IN WATERTIGHT BULKHEADS

- (a) The number of openings in watertight bulkheads shall be reduced to the minimum compatible with the design and proper working of the ship; satisfactory means shall be provided for closing these openings.
- (b) (i) Where pipes, scuppers, electric cables, &c, are carried through watertight subdivision bulkheads, arrangements shall be made to ensure the integrity of the water tightness of the bulkheads.
- (ii) Valves and cocks not forming part of a piping system shall not be permitted in watertight subdivision bulkheads.
- (c) (i) No doors, manholes, or access openings are permitted—
- (a) in the collision bulkhead below the margin line.
- (b) in watertight transverse bulkheads dividing a cargo space from an adjoining cargo space or from a permanent reserve bunker, except as provided in paragraph (g) of this Regulation.
- (ii) Except as provided in sub-paragraph (c) (iii) below, the collision bulkhead may be pierced below the margin line by not more than one pipe for dealing with fluid in the forepeak tank, provided that the pipe is

fitted with a screw down valve capable of being operated from above the bulkhead deck, the valve chest being secured inside the forepeak to the collision bulkhead.

(iii) If the forepeak is divided to hold two different kinds of liquids, the Administration may allow the collision bulkhead to be pierced below the margin line by two pipes, each of which is fitted as required by the preceding clause, provided the Administration is satisfied that there is no practical alternative to the fitting of such second pipe and that, having regard to the additional subdivision provided in the forepeak, the safety of the ship is maintained.

(d) (i) Watertight doors fitted in bulkheads between permanent and reserve bunkers, shall be always accessible, except as provided in subparagraph (i) (ii) for between deck bunker doors.

(ii) Satisfactory arrangements shall be made by means of screens or otherwise, to prevent the coal from interfering with the closing of watertight bunker doors.

(e) Within the machinery space and apart from bunker and shaft tunnel doors, not more than one door may be fitted in each main transverse bulkhead for intercommunication. These doors shall be of the sliding type and shall be located so as to have the sills as high as practicable. The hand gear for operating these doors from above the bulkhead deck shall be situated outside the machinery space if this is consistent with a satisfactory arrangement of the necessary gearing.

(f) (i) The only types of watertight doors permissible are hinged doors, sliding doors, and doors of other equivalent patterns, excluding plate doors secured only by bolts and doors required to be closed by dropping or by the action of a dropping weight.

(ii) A hinged door shall be fitted with catches workable from each side of the bulkhead.

(iii) A sliding door may have a horizontal or vertical motion. If required to be hand operated only, the gearing shall be operated with an all round crank motion, both at the door and at an accessible position above the bulkhead deck.

(iv) If a door is required to be power operated from a central control, the gearing shall be so arranged that the door can be operated by power also at the door itself. The arrangement shall be such that the door will close automatically if opened by the local control after being closed from the central control and also such that any door can be kept closed by local arrangements which will prevent that door from being opened from the central control. Local control handles in connection with the power gear shall be provided at each side of the bulkhead and shall be so arranged as to enable persons passing through the doorway to hold both handles in the open position. Such power operated doors shall be provided with hand gear, workable both at the door itself and from an accessible position above the bulkhead deck. At the latter position the hand gear shall be operated with an all round crank motion. Provision shall be made to give warning by sound signal when the door is about to be closed; the signal shall precede the movement of the door by a safe interval.

(v) In all classes of doors indicators shall be fitted at all operating stations other than at the door itself, showing whether the door is opened or closed.

(g) (i) Hinged watertight doors in passenger, crew, and working spaces are only permitted above a deck the underside of which, at its lowest point at side, is at least 7 feet (or 2.13 meters) above the deepest subdivision load line, and they are not permitted in those spaces below such deck.

(ii) Hinged watertight doors of satisfactory construction may be fitted in bulkheads dividing cargo between deck spaces, at the highest level consistent with practicability. The outboard vertical edges of such doors shall be situated at a distance from the shell plating which is not less than one-fifth the breadth of the ship, as defined in Regulation 2, such distance being measured at right angles to the centre line of the ship at the level

of the deepest sub-division load line. These doors shall be closed before the voyage commences and shall be kept closed during navigation, and the time of opening such doors in port and of closing them before the ship leaves port shall be entered in such log books as may be prescribed by the Administration. Where it is proposed to fit such doors, the number and arrangements shall receive the special consideration of the Administration, and a statement shall be required from the owners certifying as to the absolute necessity of such doors.

(h) All other watertight doors shall be sliding doors.

(i) (i) When any watertight doors which may be sometimes opened at sea, excluding those at the entrances of tunnels, are fitted in the main transverse watertight bulkheads at such a height that their sills are below the deepest subdivision load line, the following rules shall apply:—

(I) When the number of such doors exceeds 5 all the watertight sliding door shall be power operated and shall be capable of being simultaneously closed from a station situated on the bridge.

(II) When the number of such doors does not exceed 5—

(a) if the criterion numeral does not exceed 30 all the watertight sliding doors may be operated by hand only;

(b) if the criterion numeral exceeds 30 all the watertight sliding doors shall be operated by power;

(c) in any ship, of whatever criterion numeral, if there is only one watertight door apart from the tunnel door, and it is in the machinery space the Administration may allow these two doors to be operated by hand only.

(ii) If watertight doors which have sometimes to be open at sea for the purpose of trimming coal are fitted between bunkers in the between-decks below the bulkhead deck, these doors shall be operated by power. The opening and dosing of these doors shall be recorded in such log book as may be prescribed by the Administration.

(iii) When trunk ways in connection with refrigerated cargo are carried through more than one main transverse watertight bulkhead and the sills of the openings are less than 7 feet (or 2.13 meters) above the deepest subdivision load line, the watertight doors at such openings shall be operated by power.

(j) Portable plates on bulkheads shall not be permitted except in machinery spaces. Such plates shall always be in place before the ship leaves port, and shall not be removed during navigation except in case of urgent necessity. The necessary precautions shall be taken in replacing them to ensure that the joints shall be watertight.

(k) All watertight doors shall be kept closed during navigation except when necessarily opened for the working of the ship, and shall always be ready to be immediately closed.

(l) (i) Where trunk ways or tunnels for access from crew's accommodation to the stokehold, for piping, or for any other purpose are carried through main transverse watertight bulkheads, they shall be watertight and in accordance with the requirements of Regulation 15. The access to at least one end of each such tunnel or trunk way, if used as a passage at sea, shall be through a trunk extending watertight to a height sufficient to permit access above the margin line. The access to the other end of the trunk way or tunnel may be through a watertight door of the type required by its location in the ship. Such trunk ways or tunnels shall not extend through the first subdivision bulkhead abaft the collision bulkhead.

(ii) Where it is proposed to fit tunnels or trunk ways for forced draft, piercing main transverse watertight bulkheads, these shall receive the special consideration of the Administration.

REGULATION 13

OPENINGS IN THE SHELL PLATING BELOW THE MARGIN LINE

- (a) The number of openings in the shell plating shall be reduced to the minimum compatible with the design and proper working of the ship.
- (b) The arrangement and efficiency of the means for closing any opening in the shell plating shall be consistent with its intended purpose and the position in which it is fitted and generally, to the satisfaction of the Administration.
- (c) (i) If in a between decks, the sills of any side scuttles are below a line drawn parallel to the bulkhead deck at side and having its lowest point $2\frac{1}{2}$ per cent, of the breadth of the ship above the deepest subdivision load line, all side scuttles in that between deck shall be of a non-opening type.
- (ii) All side scuttles the sills of which are below the margin line, other than those required to be of a non-opening type by sub-paragraph (c) (i), shall be of such construction as will effectively prevent any person opening them without the consent of the master of the ship.
- (iii) (a) If in a between-decks, the sills of any of the side scuttles referred to in sub-paragraph (c) (ii) are below a line drawn parallel to the bulkhead deck at side and having its lowest point 4 feet (or 1.37 meters) plus $2\frac{1}{2}$ per cent of the breadth of the ship above the water when the ship departs from any port, all the side scuttles in that between decks shall be closed watertight and locked before the ship leaves port, and they shall not be opened before the ship arrives at the next port. In the application of this sub-paragraph the appropriate allowance for fresh water may be made when applicable.
- (b) The time of opening such side scuttles in port and of closing and locking them before the ship leaves port shall be entered in such log book as may be prescribed by the Administration.
- (c) For any ship that has one or more side scuttles so placed that the requirements of the first clause of this sub-paragraph would apply when she was floating at her deepest subdivision load line, the Administration may indicate the limiting mean draught at which these side scuttles will have their sills above the line drawn parallel to the bulkhead deck at side, and having its lowest point 4 feet (or 1.37 meters) plus $2\frac{1}{2}$ per cent, of the breadth of the ship above the waterline corresponding to the limiting mean draught, and at which it will therefore be permissible to depart from port without previously closing and locking them and to open them at sea on the responsibility of the master during the voyage to the next port. In tropical zones as defined in the International Convention respecting Load Lines, 1930, this limiting draught may be increased by 1 foot (or 0.305 meters).
- (d) Efficient hinged inside deadlights arranged so that they can be easily and effectively closed and secured watertight shall be fitted to all side scuttles, except that abaft one-eighth of the ship's length from the forward perpendicular and above a line drawn parallel to the bulkhead deck at side and having its lowest point at a height of 12 feet (or 3.66 meters) plus $2\frac{1}{2}$ per cent, of the breadth of the ship above the deepest subdivision load line, the deadlights may be portable in passenger accommodation other than that for steerage passengers, unless the deadlights are required by the International Convention respecting Load Lines, 1930, to be permanently attached in their proper positions. Such portable deadlights shall be stowed adjacent to the side-scuttles they serve.
- (e) Side scuttles and their deadlights, which will not be accessible during navigation, shall be closed and secured before the ship leaves port.
- (f) (i) No side-scuttles shall be fitted in any spaces which are appropriated exclusively to the carriage of cargo or coal.

(ii) Side scuttles may, however, be fitted in spaces appropriated alternatively to the carriage of cargo or passengers, but they shall be of such construction as will effectively prevent any person opening them or their deadlights without the consent of the master of the ship

(iii) If cargo is carried in such spaces, the side-scuttles and their deadlights shall be closed watertight and locked before the cargo is shipped and such closing and locking shall be recorded in such logbook as may be prescribed by the Administration.

(g) Automatic ventilating side-scuttles shall not be fitted in the shell plating below the margin line without the special sanction of the Administration.

(h) The number of scuppers, sanitary discharges and other similar openings in the shell plating shall be reduced to the minimum either by making each discharge serve for as many as possible of the sanitary and other pipes, or in any other satisfactory manner.

(i) (i) All inlets and discharges in the shell plating shall be fitted with efficient and accessible arrangements for preventing the accidental admission of water into the ship.

(ii) (a) Except as provided in sub-paragraph (i) (iii), each separate discharge led through the shell plating from spaces below the margin line shall be provided either with one automatic non-return valve fitted with a positive means of closing it from above the bulkhead deck, or, alternatively, with two automatic non-return valves without such means, the upper of which is so situated above the deepest subdivision load line as to be always accessible for examination under service conditions, and is of a type which is normally closed.

(b) Where a valve with positive means of closing is fitted, the operating position above the bulkhead deck shall always be readily accessible, and means shall be provided for indicating whether the valve is open or closed.

(iii) Main and auxiliary sea inlets and discharges in connection with machinery shall be fitted with readily accessible cocks or valves between the pipes and shell plating or between the pipes and fabricated boxes attached to the shell plating.

(j) (i) Gangway, cargo and coaling ports fitted below the margin line shall be of sufficient strength. They shall be effectively closed and secured watertight before the ship leaves port, and shall be kept closed during navigation.

(ii) Such ports shall be in no case fitted so as to have their lowest point below the deepest subdivision load-line.

(k) (i) The inboard opening of each ash-shoot, rubbish-shoot, &c, shall be fitted with an efficient cover.

(ii) If the inboard opening is situated below the margin line, the cover shall be watertight, and in addition an automatic non-return valve shall be fitted in the shoot in an easily accessible position above the deepest load-line. When the shoot is not in use both the cover and the valve shall be kept close and secured.

REGULATION 14

CONSTRUCTION AND INITIAL TESTS OF WATERTIGHT DOORS, SIDE SCUTTLES, &C.

(a) (i) The design, materials and construction of all watertight doors, side scuttles, gangway, cargo and coaling ports, valves, pipes, ash-shoots, and rubbish-shoots referred to in these Regulations shall be to the satisfaction of the Administration.

(ii) The frames of vertical watertight doors shall have no groove at the bottom in which dirt might lodge and prevent the door closing properly.

(iii) Watertight doors giving direct access to any space containing bunker coal shall, together with the frames,

be made of cast or wrought steel.

(iv) Cocks or valves of more than 3 inches bore (for 76 millimeters) for main and auxiliary sea inlets and discharges in connection with machinery shall be of steel or bronze as applicable, or other approved ductile material.

(v) Ordinary cast iron shall not be used for the other cocks and valves of any size, which are fitted to the shell plating below the bulkhead deck or which affect the subdivision arrangements of the ship.

(b) Each watertight door shall be tested by water pressure to a head up to the margin line. The test shall be made before the ship is put in service, either before or after the door is fitted.

REGULATION 15

CONSTRUCTION AND INITIAL TESTS OF WATERTIGHT DECKS, TRUNKS, &C.

(a) Watertight decks, trunks, tunnels, duct keels and ventilators shall be of the same strength as watertight bulkheads at corresponding levels. The means used for making them watertight, and the arrangements adopted for closing openings in them, shall be to the satisfaction of the Administration. Watertight ventilators and trunks shall be carried at least up to the bulkhead deck.

(b) After completion, a hose or flooding test shall be applied to watertight decks and a hose test to watertight trunks, tunnels and ventilators.

REGULATION 16

SIDE AND OTHER OPENINGS, &C, ABOVE THE MARGIN LINE

(a) Side scuttles, gangway, cargo and coaling ports, and other means for closing openings in the shell plating above the margin line shall be of efficient design and construction and of sufficient strength having regard to the spaces in which they are fitted and their positions relative to the deepest subdivision load line.

(b) The bulkhead deck or a deck above it shall be weather tight in the sense that in ordinary sea conditions water will not penetrate in a downward direction. All openings in the exposed weather deck shall have coatings of ample height and strength and shall be provided with efficient means for expeditiously closing them weather tight.

(c) Freeing ports and/or scuppers shall be fitted as necessary for rapidly clearing the weather deck of water under all weather conditions.

REGULATION 17

PUMPING ARRANGEMENTS

(a) Ships shall be provided with an efficient pumping plant, capable of pumping from and draining any watertight compartment under all practicable conditions after a casualty whether the ship is upright or listed. For this purpose wing suction will generally be necessary except in narrow compartments at the ends of the ship, where one suction may be sufficient. In compartments of unusual form, additional suction may be required. Arrangements shall be made whereby water in the compartment may find its way to the suction pipes. Efficient means shall be provided for draining water from insulated holds.

(b) (i) Except as provided elsewhere in this Regulation, ships shall have at least three power pumps connected to the bilge main, one of which may be attached to the propelling unit. Where the criterion numeral is 30 or more,

one additional independent power pump shall be provided. In ships less than 300 feet (or 91.5 meters) in length and having a criterion numeral less than 30, two efficient hand-pumps of the crank type, fitted one forward and one aft, may be substituted for one of the independent power pumps.

(ii) The requirements are summarized in the following table:—

Less than 300 feet (or 91.5 meters) 300 feet (or 91.5 meters) and over

Length of ship

Criterion numeral Less than 30 30 and over Less than 30 30 and over

Hand pumps (may be replaced by one independent pump)

2

—

—

—

Main engine pump(may be replaced by one independent pump)

1

1

1

1

Independent pumps

1

3

2

3

(iii) Sanitary, ballast and general service pumps may be accepted as independent power bilge pumps if fitted with the necessary connections to the bilge pumping system.

(c) Where practicable, the power bilge pumps shall be placed in separate watertight compartments so arranged or situated that these compartments will not readily be flooded by the same damage. If the engines and boilers are in two or more watertight compartments, the pumps available for bilge service shall be distributed "through these compartments as far as is possible.

(d) On ships 300 feet (or 91.5 meters) or more in length or having a criterion numeral of 30 or more, the

arrangements shall be such that at least one power pump will be available for use in all ordinary circumstances in which a ship may be flooded at sea. This requirement will be satisfied if—

(i) One of the required pumps is an emergency pump of a reliable submersible type having a source of power situated above the bulkhead deck, or

(ii) The pumps and their sources of power are so disposed throughout the length of the ship that under any condition of flooding which the ship is required to withstand, at least one pump in an undamaged compartment will be available.

(e) With the exception of pumps which may be provided for peak compartments only, each bilge pump, whether operated by hand or by power shall be arranged to draw water from any hold or machinery compartment in the ship.

(f) (i) Each independent power bilge pump shall be capable of giving a speed of water through the main bilge pipe of not less than 400 feet (or 122 meters) per minute. Independent power bilge pumps situated in machinery spaces shall have direct suctions from these spaces, except that not more than two such suctions shall be required in any one space. The Administration may require independent power bilge pumps situated in other spaces to have separate direct suctions. Direct suctions shall be suitably arranged and those in a machinery space shall be of a diameter not less than that of the bilge main.

(ii) In coal-burning ships there shall be provided in the stokehold, in addition to the other suctions required by this Regulation, a flexible suction hose of suitable diameter and sufficient length, capable of being connected to the suction side of an independent power pump.

(g) Main circulating pumps shall have direct suction connections, provided with non-return valves, to the lowest drainage level in the machinery space, and of a diameter at least two-thirds that of the main sea inlet. Where the fuel is, or may be, coal and there is no watertight bulkhead between the engines and the boilers, a direct discharge overboard shall be fitted from at least one circulating pump, or, alternatively, a by-pass may be fitted to the circulating discharge. The spindles of the sea inlet and direct suction valves shall extend well above the engine room platform.

(h) (i) All pipes from the pumps which are required for draining cargo or machinery spaces shall be entirely distinct from pipes which may be used for tilling or emptying spaces where water or oil is carried.

(ii) Lead pipes shall not be used in or under coal bunkers or oil fuel storage tanks, or in boiler or machinery spaces, including motor rooms in which oil settling tanks or oil fuel pumping units are situated.

(i) The Administration shall make rules relating to the diameters of the bilge main and branch pipes. The diameter of the bilge main may be determined approximately from the following formulæ;—

See Formula at Philippine Treaties, Volume I, Page 776.

(j) The arrangement of the bilge and ballast pumping system shall be such as to prevent the possibility of water passing from the sea and from water ballast spaces into the cargo and machinery spaces, or from one compartment to another. Special provision shall be made to prevent any deep tank having bilge and ballast connections being inadvertently run up from the sea when containing cargo, or pumped out through a bilge pipe when containing water ballast.

(k) Provision shall be made to prevent the compartment served by any bilge suction pipe being flooded, in the event of the pipe being severed or otherwise damaged by collision or grounding, in any other compartment. For this purpose, where the pipe is at any part situated nearer the side of the ship than one-fifth the breadth of the ship

(measured at right angles in the centre line at the level of the deepest sub-division load line), or in a duct keel, a non-return valve shall be fitted to the pipe in the compartment containing the open end.

(l) All the distribution boxes, cocks, and valves in connection with the bilge pumping arrangements shall be in positions which are accessible at all times under ordinary circumstances. They shall be so arranged that, in the event of flooding, one of the bilge pumps may be operative on any compartment. If there is only one system of pipes common to all the pumps, the necessary cocks or valves for controlling the bilge suction must be workable from above the bulkhead deck. If, in addition to the main bilge pumping system an emergency bilge pumping system is provided, it shall be independent of the main system and so arranged that a pump is capable of operating on any compartment under flooding conditions.

REGULATION 18

STABILITY TESTS FOR PASSENGER SHIPS AND CARGO SHIPS

(a) Passenger ships and cargo ships shall be inclined upon their completion and the elements of their stability determined. The master shall be supplied with such information on this subject as is necessary to permit efficient handling of the ship, and a copy shall be furnished to the Administration concerned.

(b) The Administration may allow the inclining test of an individual ship to be 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 exempted ship can be obtained from such data.

REGULATION 19

PERIODICAL OPERATION AND INSPECTION OF WATERTIGHT DOORS, &C.

(a) In new and existing ships drills for the operating of watertight doors, side scuttles, valves and closing mechanisms of scuppers, ash-shoots and rubbish-shoots, shall take place weekly. If ships in which the voyage exceeds one week in duration a complete drill shall be held before leaving port, and others thereafter at least once a week during the voyage, provided that all watertight power doors and hinged doors, in main transverse bulkheads, in use at sea, shall be operated daily.

(b) The watertight doors and all mechanisms and indicators connected therewith, all valves the closing of which is necessary to make a compartment watertight and all valves the operation of which is necessary for damage control cross connections shall be periodically inspected at sea, at least once a week.

REGULATION 20

ENTRIES IN LOG

(a) In new and existing ships hinged doors, portable plates, side scuttles, gangway, cargo and coaling ports and other openings, which are required by these Regulations to be kept closed during navigation, shall be closed before the ship leaves port. The time of closing and the time of opening (if permissible under these Regulations), shall be recorded in such log book as may be prescribed by the Administration.

(b) A record of all drills and inspections required by Regulation 19 shall be entered in the log book with an explicit record of any defects which may be disclosed.

PART C-ELECTRICAL INSTALLATIONS

(PART C APPLIES TO PASSENGER SHIPS ONLY)

REGULATION 21

GENERAL

(a) Electrical installations in ships shall be such that:—

- (i) services essential for safety will be maintained under various emergency conditions; and
- (ii) the safety of passengers, crew and ship from electrical hazards will be assured.

(b) Every ship, the electrical power of which constitutes the only means of maintaining the auxiliary services indispensable for the propulsion and the safety of the ship, shall be provided with at least two main generating sets. The power of these sets shall be such that it shall still be possible to ensure the functioning of the said services in the event of any one of these generating sets being stopped.

REGULATION 22

EMERGENCY SOURCE OF POWER

(a) There shall be above the bulkhead deck a self-contained emergency source of electrical power. It shall be situated outside the machinery casings. The power available shall be sufficient to supply all those services that are, in the opinion of the Administration, necessary for the safety of the passengers and the crew in an emergency, due regard being paid to such services as may have to be operated simultaneously. Special consideration shall be given to emergency lighting at every boat station on deck and over sides, in all alleyways, stairways and exits, in the machinery spaces and in the control stations as defined in Regulation 26, and to navigation lights if solely electric. The power shall be adequate for a period of 36 hours, except that, in the case of ships engaged regularly on voyages of short duration, the Administration may accept a lesser supply if satisfied, that the same standard of safety would be attained. The source of emergency power may be either—

- (i) an accumulator (storage) battery capable of carrying the emergency load without recharging or excessive voltage drop; or
- (ii) a generator driven by a suitable type of compression ignition engine with an independent fuel supply and with starting arrangements approved by the Administration. The fuel used shall have a flash point of not less than 110°F. (or 43.3°C).

(b) Arrangements shall be such that the emergency plant will function efficiently when the ship is inclined 22h° and/or when the trim of the ship is 10° from an even keel.

(c) (i) Where the emergency power is derived from an accumulator battery, arrangements shall be made to ensure that emergency lighting will automatically come into operation in the event of failure of the main lighting supply.

- (ii) Where the emergency source of power is a generator, there shall be provided a temporary source of emergency power from an accumulator battery of sufficient capacity—

(a) to supply emergency lighting continuously for half-an-hour; and

(b) to close the watertight doors (if electrically operated) but not necessarily to close them all simultaneously.

The arrangements shall be such that the temporary source of emergency power will come into operation automatically in the event of failure of the main supply.

(iii) Provision shall be made for the periodic testing of automatic arrangements.

(d) Electrically operated steering gears shall be served by two sets of feeder cables from the main switchboard. Each feeder shall have adequate capacity for serving all motors which may operate simultaneously, and these feeders shall be separated throughout their length as widely as is practicable. Short circuit protection only shall be provided for these circuits and motors.

REGULATION 23

NUMBER OF DAVITS AND CAPACITY OF LIFEBOATS AND BUOYANT APPARATUS

(a) (i) A passenger ship shall be provided with sets of davits in accordance with its length as provided in Column A of the Table in Regulation 24 except that a number of sets of davits greater than the number of lifeboats necessary for the accommodation of all the persons on board shall not be required,

(ii) Each set of davits shall have a lifeboat attached. If these lifeboats do not provide sufficient accommodation for all persons on board, additional sets of davits with lifeboats attached shall be fitted if practicable. If the lifeboats attached to davits do not provide accommodation for all persons on board, additional lifeboats shall be carried under the lifeboats attached to davits so that accommodation for all persons is provided.

(iii) When in the opinion of the Administration it is impracticable or unreasonable to place on a ship the number of sets of davits required by Column A of the Table in Regulation 24, the Administration may authorize, under exceptional conditions, a smaller number of sets of davits as specified in Column B of the Table.

(b) (i) A passenger ship engaged on a short international voyage shall be provided with sets of davits in accordance with its length as specified in Column A of the Table in Regulation 24. Each set of davits shall have a lifeboat attached to it and these lifeboats shall provide at least the minimum capacity required by Column C of the Table or the capacity required provided accommodation for all persons on board if less. In the case of ships certified to carry a number of persons in excess of the lifeboat capacity specified in Column C, additional lifeboats under davits or approved buoyant apparatus shall be provided so that the total accommodation afforded by all the lifeboats, together with the buoyant apparatus, shall be sufficient for all on board. In addition there shall be buoyant apparatus for 10 per cent, of all on board.

(ii) When in the opinion of the Administration it is impracticable or unreasonable to place on a ship engaged on short international voyages the number of sets of davits required by Column A of the Table in Regulation 24, the Administration may authorize, under exceptional conditions, a smaller number of sets of davits, except that this number shall never be less than the minimum number fixed by Column B of the Table, and that the total capacity of the lifeboats on the ship will be at least up to the minimum capacity required by Column C or the capacity required to provide for all persons on board if less.

(c) Passenger ships shall carry two boats attached to davits-one on each side of the ship-for use in an emergency. These boats shall be of a type approved by the Administration and shall normally be not more than 26 feet (or 8 meters) in length. They may be counted for the purposes of Regulation 22, provided that they comply fully with the requirements of this Chapter for lifeboats. They shall be kept ready for immediate use while the ship is at sea. In ships in which the requirements of Regulation 26 (j) are met by means of appliances fitted to the sides of the lifeboats, such appliances shall not be required to be fitted to the two boats provided to meet the requirements of this Regulation.

REGULATION 24**TABLE RELATING TO DAVITS AND LIFEBOAT CAPACITY**

The following table fixes according to the length of the ship—

- (A) The minimum number of sets of davits to be provided to each of which must be attached a lifeboat in accordance with Regulation 23 above;
- (B) the smaller number of sets of davits which may be authorized exceptionally under Regulation 23; and
- (C) the minimum lifeboat capacity required for a ship engaged on short international voyages.

Registered Length of Ship

(A) Minimum Number of Sets of Davits

(B) Smaller Davits authorized Cubic Cubic Exceptionally Feet Meters

(C) Minimum

Capacity of

Number of Sets of Lifeboats

Feet

Meters

Cubic Feet

Cubic Meters

100and under120

31and under 37

2

2

400

11

120 " 140

37 " 43

2

2

650

18

140 " 160

43 " 49

2

2

900

26

160 " 175

49 " 53

3

3

1,150

33

175 " 190

53" 58

3

3

1,350

38

190 " 205

58 " 63

4

4

1,550

44

205 " 220

63 " 67

4

4

1,750

50

220 " 230

67 " 70

5

4

1,850

52

230 " 245

70 " 75

5

4

2,150

61

245 " 255

75 " 78

6

5

2,400

68

255 " 270

78 " 82

6

5

2,700

76

270 " 285

82 " 87

7

5

3,000

85

285 " 300

87 " 91

7

5

3,300

94

300 " 315

91 " 96

8

6

3,600

102

315 " 330

96 " 101

8

6

3,900

110

330 " 350

101 " 107

9

7

4,300

122

350 " 370

107 " 113

9

7

4,750

135

370 " 390

113 " 119

10

7

5,150

146

390 " 410

119 " 125

10

7

5,550

157

410 " 435

125 " 133

12

9

6,050

171

435 " 460

133 " 140

12

9

6,550

185

460 " 490

140 " 149

14

10

7,150

202

490 " 520

149 " 159

14

10

7,800

221

520 " 550

159 " 168

16

12

8,400

238

550 " 580

168 " 177

16

12

580 " 610

177 " 186

18

13

610 " 640

186 " 195

18

13

640 " 670

195 " 204

20

14

670 " 700

204 " 213

20

14

700 " 730

213 " 223

22

15

730 " 760

223 " 232

22

15

760 " 790

232 " 241

24

17

790 " 820

241 " 250

24

17

820 " 855

250 " 261

26

18

855 " 890

261 " 271

26

18

890 " 925

271 " 282

28

19

925 " 960

282 " 293

28

19

960 " 995

293 " 303

30

20

995 " 1,030

303 " 314

30

20

REGULATION 25

RADIO APPARATUS AND SEARCHLIGHTS IN MOTOR LIFEBOATS

- (a) Every motor lifeboat of Class A, required to be carried in compliance with paragraphs (a) and (b) of Regulation 8, must be fitted with a radiotelegraph installation complying with the requirements set out in this Regulation and in Regulation 13 of Chapter IV, and also with a searchlight complying with paragraph (f) of this Regulation.
- (b) The radio installation shall be installed in a cabin large enough to accommodate both the equipment and the person using it.
- (c) The arrangements shall be such that the efficient operation of the transmitter and receiver shall not be interfered with by the engine while it is running, whether a battery is on charge or not.
- (d) The radio battery shall not be used to supply power to any engine-starting motor or ignition system.
- (e) The motor lifeboat engine shall be fitted with a dynamo for recharging the radio battery, and for other services.
- (f) The searchlight shall include a lamp of at least 80 watts, an efficient reflector and a source of power which will give effective illumination of a light-colored object having a width of about 60 feet (or 18 meters) at a distance of 200 yards (or 480 meters) for a total period of six hours and shall be capable of working for at least three hours continuously.

REGULATION 26

STOWAGE AND HANDLINGS OF LIFEBOATS

- (a) Lifeboats shall be stowed to the satisfaction of the Administration in such a way that—
- (i) they can be launched in the shortest possible time;
 - (ii) they will not impede in any way the prompt handling of any of the other lifeboats attached to davits or stowed under lifeboats attached to davits or the buoyant apparatus or the marshalling of the persons on board at the launching stations, or their embarkation; and
 - (iii) even under conditions of list and trim unfavorable from the point of view of the handling of the lifeboats, as large a number of persons as possible can be embarked in them.
- (b) Where practicable not more than one lifeboat shall be served by a single set of davits. In ships where this arrangement is impracticable, the lifeboats may, subject to the foregoing provisions, be stowed one above the other, or they may, subject to such conditions as the Administration may impose, be fitted one within another, but where lifeboats so fitted require lifting before being launched mechanical power appliances for lifting shall be provided.
- (c) Where a lifeboat is stowed underneath another lifeboat, there shall be provided approved removable supports

or other approved appliances, so as to secure that the weight of a lifeboat is not unduly supported by the lifeboat underneath it.

(d) Lifeboats may only be stowed on more than one deck on condition fouled by those stowed on a deck above.

(e) Lifeboats shall not be placed in the bows of the ship. They shall be stowed in such positions as to ensure safe launching.

(f) Davits shall be of approved form and shall be suitably placed to the satisfaction of the Administration. They shall be so disposed on one or more decks that the lifeboats placed under them can be safely lowered without interference from the operation of any other davits.

(g) In ships over 150 feet (or 46 meters) in length, the davits shall be as follows:—

(i) luffing or gravity type for operating lifeboats weighing not more than 4 tons (or 4,064 kilogram's) in their turning out condition;

(ii) gravity type for operating lifeboats weighing more than 4 tons (or 4,064 kilogram's) in their turning out condition.

(h) In ships not exceeding 150 feet (or 46 meters) in length, the davits if of radial type shall be fitted with approved means to prevent them from being jerked from their sockets.

(i) The davits, falls, blocks and all other gear shall be of such strength that the lifeboats can be safely lowered with the full complement of persons and equipment, with the ship listed to 15 degrees either way.

(j) In ships in which the boat deck is more than 15 feet (or 4.6 meters) above the deepest sea-going draught arrangements shall be made to facilitate launching the lifeboats against an adverse list.

(k) The lifeboats, except the emergency boats referred to in Regulation 23 shall be served by wire rope falls, together with winches of an approved type but the Administration may allow manila rope falls with or without winches to be fitted in ships where, having regard, for example, to the height of the boat deck above the lightest sea-going draught, they are satisfied that manila rope falls are adequate.

(l) Two lifelines shall be fitted to the davit spans, and the falls and lifelines shall be long enough to reach the water with the ship at its lightest sea-going draught and listed to 15 degrees either way. Lower fall blocks shall be fitted with a suitable ring or long link for attaching to the sling hooks unless an approved type of disengaging gear is fitted.

(m) Lifeboats attached to davits shall have the falls ready for service, and arrangements shall be made for speedily, but not necessarily simultaneously, detaching the lifeboats from the falls. The points of attachment of the lifeboats to the falls shall be so situated as to ensure the lifeboats being easily swung clear of the davits.

(n) If more than one lifeboat is served by the same set of davits, separate falls shall be provided to serve each lifeboat, unless the falls are of wire rope. The appliances used shall be such as to ensure lowering the lifeboats rapidly and in turn. Where mechanical power appliances are fitted for the recovery of the falls, efficient hand gear shall also be provided.

REGULATION 27

LIGHTING FOR DECKS, LIFEBOATS, &C.

(a) Provision shall be made for an electric or other system of lighting, sufficient for all requirements of safety, in the different parts of a passenger ship, and particularly upon decks on which the lifeboats are stowed. Provision shall also be made for the illumination of the launching gear, and the lifeboats in process of, and Immediately after, being launched. The self-contained emergency source of electrical power required by Regulation 22 of Chapter II shall be capable of supplying, when necessary, this lighting system.

(b) The exit from every main compartment occupied by passengers or crew shall be continuously lighted by an emergency lamp. The power for these emergency lamps shall be so arranged that they will be supplied from the emergency source of power referred to in paragraph (a) of this Regulation in the event of failure of the main generating plant.

REGULATION 28

MANNING OF LIFEBOATS

(a) A deck officer or certificated lifeboat man shall be placed in charge of each lifeboat and a second-in-command shall also be nominated. The person in charge shall have a list of the lifeboat's crew, and shall see that the men placed under his orders are acquainted with their several duties.

(b) A man capable of working the motor shall be assigned to each motor lifeboat.

(c) A man capable of working the radio and searchlight installations shall be assigned to each lifeboat carrying this equipment in accordance with Regulation 25

REGULATION 29

CERTIFICATED LIFEBOAT MEN

(a) In passenger ships there must be, for every lifeboat carried in order to comply with this Chapter, a number of lifeboat men at least equal to that specified in the following table:—

The Minimum Number of Lifeboat

Prescribed Complement of Certificated Lifeboatmen shall be

Less than 41 persons

2

From 41 to 61 persons

3

From 62 to 85 persons

4

Above 85 persons

5

(b) The allocation of the certificated lifeboat men to each lifeboat remains within the discretion of the master.

(c) By "certificated lifeboat man" is meant any member of the crew who holds a certificate of efficiency issued under the authority of the Administration.

(d) In order to obtain this certificate, the applicant must prove that he has been trained in all the operations connected with launching lifeboats and the use of oars; that he is acquainted with the practical handling of the boats themselves; and, further, that he is capable of understanding and answering the orders relative to lifeboats.

REGULATION 30

BUOYANT APPARATUS AND LIFE RAFTS

(a) The expression "buoyant apparatus" means flotation equipment (other than lifeboats, lifebuoys and lifejackets) designed to support a specified number of persons who are in the water and of such construction that it retains its shape and properties.

(b) No type of buoyant apparatus may be approved unless it satisfies the following conditions:—

(i) It shall be of such size and strength that it can be thrown from the place where it is stowed into the water without being damaged.

(ii) It shall not exceed 400 lbs. in weight (or 180 kilograms) unless suitable means to the satisfaction of the Administration are provided to enable it to be launched without lifting by hand.

(iii) It shall be of approved material and construction.

(iv) It shall be effective and stable when floating either way up.

(v) The air cases or equivalent buoyancy shall be placed as near as possible to the sides of the apparatus, and such buoyancy shall not be dependent upon inflation.

(vi) It shall be fitted with a painter and have a line securely becketed round the outside.

(c) The number of persons for which buoyant apparatus is certified shall be the number.

(i) ascertained by dividing the number of pounds of iron which it is capable of supporting in fresh water by 32 (or the number of kilogram's divided by 14.5), or

(ii) equal to the number of feet (equivalent to 30.5 centimeters) in the perimeter whichever is the less.

(d) Life rafts may be carried in lieu of buoyant apparatus, provided that, in addition to complying with the requirements of sub-paragraphs (ii), (iii), (iv), (v) and (vi) of paragraph (b) of this Regulation each life raft satisfies the following conditions:

(i) It shall be of such strength that it can be launched or thrown from the place where it is stowed into the water without being damaged.

(ii) It shall have not less than three cubic feet (or 85 cubic decimeters) of air cases or equivalent buoyancy for each person it is certified to carry.

(iii) It shall have a deck area of not less than four square feet (or 3,720 square centimeters) for each person it is certified to carry, and it shall effectively support the occupants out of the water.

(iv) It shall be equipped with two paddles.

REGULATION 31**NUMBER OF LIFEBOUYS TO BE PROVIDED**

The minimum number of lifebuoys with which passengers ships are to be provided is fixed by the following table:—

Length of Ship

Minimum Number of Buoy

in Feet

in meters

Under 200

under 61

8

200 and under 400

61 and under 122

12

400 and under 600

122 and under 183

18

600 and under 800

183 and under 244

24

800 and over

244 and over

30

PART C.—CARGO SHIPS ONLY**(PART C APPLIES TO CARGO SHIPS ONLY)****REGULATION 32****NUMBER AND CAPACITY OF LIFEBOATS**

(a) Cargo ships, except those employed as whale factory ships, shall carry lifeboats attached to davits on each side of the ship of such aggregate capacity as will accommodate all persons on board.

(b) Every ship employed as a whale factory ship shall carry lifeboats attached to davits on each side of the ship of such aggregate capacity as will accommodate every member of the crew engaged to work the ship. In addition,

every such ship shall carry lifeboats of aggregate capacity sufficient to accommodate the total number of additional persons which the ship carries. These additional lifeboats shall, where practicable, be attached to davits. If not attached to davits, they shall be stowed under lifeboats attached to davits.

(c) Every tanker of 3,000 tons gross tonnage and upwards shall carry not less than four lifeboats attached to davits, two of which shall be carried aft and two amidships.

REGULATION 33

DAVITS AND LAUNCHING ARRANGEMENTS

(a) In cargo ships lifeboats attached to davits shall be stowed to the satisfaction of the Administration.

(b) Lifeboats shall not be placed in the bows of the ship. They shall be stowed in such positions as to ensure safe launching.

(c) Davits shall be of approved form and shall be suitably placed to the satisfaction of the Administration.

(d) In ships of over 150 feet (or 46 meters) in length the davits shall be as follows:—

(i) Luffing or gravity type for operating lifeboats weighing not more than 4 tons (or 4,064 kilogram's) in their turning out condition;

(ii) (ii) gravity type for operating lifeboats weighing more than 4 tons (or 4,064 kilogram's) in their turning out condition.

(e) In cargo ships not exceeding 150 feet (or 46 meters) in length, the davits if of radial type shall be fitted with approved means to prevent them from being jerked from their sockets.

(f) The davits, falls, blocks and all other gear shall be of such strength that the lifeboats can be safely lowered with the full complement of persons and equipment, with the ship listed to 15 degrees either way.

(g) In cargo ships in which the boat deck is more than 15 feet above the deepest sea-going draught arrangements shall be made to facilitate launching the lifeboats against an adverse list.

(h) The lifeboats shall be served by wire rope falls together with winches of an approved type, but the Administration may allow manila rope falls with or without winches to be fitted in ships where, having regard, for example, to the height of the boat deck above the lightest sea-going draught, they are satisfied that manila rope falls are adequate.

(i) Two lifelines shall be fitted to the davit spans and the falls and lifelines shall be long enough to reach the water with the ship at her lightest sea-going draught and listed to 15 degrees either way. Lower fall blocks shall be fitted with a suitable ring or long link for attaching to the sling hooks unless an approved type of disengaging gear is fitted.

(j) Lifeboats attached to davits shall have the falls ready for service, and arrangements shall be made for speedily, but not necessarily simultaneously, detaching the lifeboats from the falls. The points of attachment of the lifeboats to the falls shall be so situated as to ensure the lifeboats being easily swung clear of the davits.

REGULATION 34

NUMBER OF LIFEBUOYS TO BE PROVIDED

- (a) At least eight approved lifebuoys of a type which satisfies the requirements of Regulation 16 shall be carried. All the lifebuoys shall be fitted with beackets securely seized.
- (b) At least half the lifebuoys shall be provided with approved self-igniting lights which cannot be extinguished by water. Self-igniting lights shall be kept near the lifebuoys to which they belong, with the necessary means of attachment. At least one lifebuoy on each side of the ship shall be fitted with a lifeline at least 15 fathoms (or 27.5 metres) in length.
- (c) In the case of tankers, the self-igniting lights shall be of the electric battery type.

CHAPTER IV.—RADIOTELEGRAPHY AND RADIOTELEPHONY

PART A.—APPLICATION AND DEFINITIONS

REGULATION 1

APPLICATION

- (a) Unless expressly provided otherwise, this Chapter applies to all ships to which the present Convention applies.
- (b) No provision in this Chapter shall prevent the use by a ship or survival craft in distress of any means at its disposal to attract attention make known its position and obtain help.

REGULATION 2

DEFINITIONS

For the purpose of this Chapter, unless expressly provided otherwise—

- (a) "Radio Regulations" means the General Radio communication Regulations annexed to the International Telecommunication Convention (Madrid, 1932) or any regulations which have been, or which from time to time in the future may be, substituted for such regulations.
- (b) "Alarm Signal" means the automatic alarm signal prescribed by the Radio Regulations for radiotelegraphy.
- (c) "Auto Alarm" means an automatic alarm receiver which responds to the alarm signal and has been approved.
- (d) "Distress frequencies" means the distress frequencies designated for radio-telegraphy and radiotelephony respectively by the Radio Regulations."
- (e) "Distress Signal" means a distress signal prescribed by the Radio Regulations.
- (f) "Qualified Operator" means a person holding an appropriate certificate complying with the provisions of the Radio Regulations.
- (g) An existing installation is one already installed on board a ship at the time the present Convention comes' into force.
- (h) A new installation is an installation which replaces an existing installation or one installed on a ship after the date on which the present Convention comes into force.

REGULATION 3

RADIOTELEGRAPH INSTALLATION

Passenger ships irrespective of size and cargo ships of 1,600 tons gross tonnage and upwards, unless exempted under Regulation 5, shall be fitted with a radiotelegraph installation complying with the provisions of Regulations 9 and 10.

REGULATION 4

RADIOTELEPHONE INSTALLATION

Cargo ships of 500 tons gross tonnage and upwards but less than 1,600 tons gross tonnage, unless fitted with a radiotelegraph installation complying with the provisions of Regulation 9 and 10, shall, provided they are not exempted under Regulation 6, be fitted with a radiotelephone installation complying with the provisions of Regulation 15,

REGULATION 5

EXEMPTIONS FROM REGULATION 3

(a) The Contracting Governments consider it highly desirable not to deviate from the application of Regulation 3, nevertheless each Administration may grant to individual passenger and cargo ships belonging to its country exemptions of a partial and/or conditional nature, or complete exemption from requirements of Regulation 3.

(b) The exemptions permitted under paragraph (a) of this Regulation shall be granted only to a ship engaged on a voyage where the maximum distance of the ship from the shore, the length of the voyage, the absence of general navigational hazard, and other conditions affecting safety are such as to render the full application of Regulation 3 unreasonable or unnecessary.

(c) Each Administration shall submit to the Organization as soon as possible after the first of January in each year a report showing all exemptions granted under sub-paragraphs (a) and (b) of this Regulation during the previous calendar year.

REGULATION 6

EXEMPTIONS FROM REGULATION 4

Each Administration may, if it considers that the route and conditions of the voyage are such as to render a radiotelephone installation unreasonable or unnecessary, exempt ships belonging to its country from the requirements of Regulation 4.

PART B.—WATCHES

REGULATION 7

WATCHES-RADIOTELEGRAPH

(a) (i) Each ship which in accordance with Regulation 3 is required to be fitted with a radiotelegraph installation shall, while at sea, carry at least one qualified operator[*] and, if not fitted with an auto alarm, shall, subject to the

provisions of paragraph (d) of this Regulation, listen continuously on the radiotelegraph distress frequency in the medium frequency band by means of a qualified operator using some aural method.

(ii) However, in order to permit the installation of auto alarms developed in accordance with the specification in Regulation 11 in existing passenger ships below 3,000 tons gross tonnage and existing cargo ships below 5,500 tons gross tonnage, not fitted with an auto alarm, Administrations may on such ships permit the hours of listening to be limited to those shown in paragraphs (b) and (c) (i) of this Regulation for a period not exceeding two years from the date of coming into force of the present Convention.

Passenger Ships

(b) Each passenger ship which in accordance with Regulation 3 is required be fitted with a radiotelegraph installation, if fitted with an auto alarm shall, subject to the provisions of paragraph (d) of this Regulation, and while at sea, listen on the radiotelegraph distress frequency in the medium frequency band by means of a qualified operator using some aural method as follows:—

(i) if carrying or certificated to carry 250 passengers or less, at least 8 hours listening a day in the aggregate;

(ii) if carrying or certificated to carry more than 250 passengers and engaged on a voyage exceeding 16 hours duration between two consecutive ports, at least 16 hours listening a day in the aggregate. In this case the ship shall carry at least two qualified operators;

(iii) if carrying or certificated to carry more than 250 passengers and engaged on a voyage of less than 16 hours duration between two consecutive ports, at least 8 hours listening a day in the aggregate.

Cargo Ships

(c) (i) Each cargo ship which in accordance with Regulation 3 is required to be fitted with a radiotelegraph installation, if fitted with an auto alarm shall, subject to the provisions of paragraph (d) of this Regulation and, while at sea, listen on the radiotelegraph distress frequency in the medium frequency band by means of a qualified operator using some aural method as follows:-

(a) if of 5,500 tons gross tonnage and upwards, at least 8 hours a day in the aggregate;

(b) ii of 1,600 tons gross tonnage and upwards but less than 5,500 tons gross tonnage for at least 8 hours a day in the aggregate. Administrations which on account of their special conditions find it impracticable to impose 8 hours listening shall take steps to ensure maximum hours of listening possible and not less than 2 hours ft-day in aggregate.[*]

(ii) Each cargo ship of 500 tons gross tonnage and upwards but less than 1,600 tons gross tonnage and, fitted with a radiotelegraph installation as a consequence of Regulation 4, shall carry at least one qualified operator and shall, subject to the provisions of paragraph (d) of this Regulation and while at sea, listen on the radiotelegraph distress frequency in the medium frequency band, by means of a qualified operator using some aural method, during such periods as may be determined by the Administration.

(d) During the period when a qualified operator is required by this Regulation to listen on the distress frequency the operator may discontinue such listening during the time when he is handling traffic on other frequencies, or performing other essential radio duties, but only if it is impracticable to listen by some aural means such as split headphones or loud speaker. When this aural listening is impracticable, the auto alarm if fitted shall be in operation. The provisions of this paragraph shall not relieve the ship from compliance with the provisions of the Radio Regulations in regard to the "silence periods".

(e) In all ships fitted with an auto alarm this auto alarm shall, while the ship is at sea, be in operation whenever

there is no listening being done under paragraphs (B), (c) or (d).

(f) The listening periods provided for by this Regulation, including those which are determined by the Administration, should be maintained preferably during periods prescribed for radiotelegraph service by the Radio Regulations.

REGULATION 8

WATCHES-RADIOTELEPHONE

Each ship which is fitted with a radiotelephone installation in accordance with Regulation 4 shall, for safety purposes, carry at least one qualified operator (who maybe a member of the crew holding only a certificate for radiotelephony) and shall, while at sea, listen on the radiotelephone distress frequency in the medium frequency band during such periods as may be determined by the Administration.

PART C—TECHNICAL REQUIREMENTS

REGULATION 9

RADIOTELEGRAPH STATIONS

(a) The ship's radiotelegraph station shall be so located that no harmful interference from extraneous mechanical or other noise will be caused to the proper reception or radio signals. The station shall be placed as high in the ship as is practicable, so that the greatest possible degree of safety may be secured.

(b) There shall be provided between the radiotelegraph operating room and the bridge and one other place, if any, from which the ship is navigated, an efficient two-way system for calling and voice communication which shall be independent of the main communication system on the ship.

(c) A reliable clock, equipped with a dial not less than 5 inches in diameter and provided with a concentric seconds hand, shall be securely mounted in the radiotelegraph operating room in such a position that the entire dial can be easily and accurately observed by the operator from the telegraph operating position and the auto alarm testing position.

(d) A reliable emergency light shall be provided in the radiotelegraph operating room permanently arranged so as to provide satisfactory illumination of the operating controls of the main and emergency radiotelegraph installations and of the clock required by paragraph (c) of this Regulation.

(e) If a separate emergency radiotelegraph operating room is provided the requirements of paragraphs (&), (c) and (d) shall apply to it.

(f) The ship's radiotelegraph station shall be provided with such spare parts, tools and testing equipment as will enable the radiotelegraph installation to be maintained in efficient working condition while at sea.

REGULATION 10

RADIOTELEGRAPH INSTALLATIONS

(a) Except as otherwise expressly provided in this Regulation—

(i) The radiotelegraph installation shall comprise a main installation and an emergency (reserve) installation, electrically separate and electrically independent of each other.

(ii) A main and an emergency aerial shall be provided and installed, provided that the Administration may except any ship from the provision of an emergency aerial if it is satisfied that the fitting of such an aerial is impracticable or unreasonable, but in such case a spare aerial completely assembled for immediate replacement shall be carried.

The main aerial shall be suitably protected against breakage caused by whipping of the mast or masts.

(iii) The main installation shall include a main transmitter, main receiver, and main source of energy.

(iv) The emergency (reserve) installation shall include an emergency transmitter, emergency receiver, and emergency source of energy.

(b) In case of existing installations on passenger ships the application of the requirement of a separate emergency transmitter and a separate emergency source of energy may, if the main transmitter and main source of energy comply with all the requirements for the emergency transmitter and emergency source of energy as defined in this Regulation, be delayed for a period not exceeding three years from the coming into force of the present Convention.

(c) In the case of—

(i) existing installations on cargo ships, and

(ii) new installations on cargo ships of 500 tons gross tonnage and upwards but less than 1,600 tons gross tonnage.

if the main transmitter and main source of energy comply with all the requirements for the emergency transmitter and the emergency source of energy, the latter are not obligatory.

(d) The main and emergency (reserve) installations shall be capable of being quickly connected with either the main aerial or the emergency aerial if installed.

(e) All parts of the emergency (reserve) installation shall be placed as high in the ship as is practicable so that the greatest possible degree of safety may be secured.

(f) The main and emergency (reserve) transmitters shall be capable of transmitting on the radiotelegraph frequency, and of using a class of emission, assigned by the Radio Regulations for the purpose of distress in the medium frequency band, and shall have a depth of modulation of not less than 70 per cent. In addition, the main transmitter shall be capable of transmitting on the frequencies, and of using a class of emission, assigned by the Radio Regulations for the purpose of safety of navigation in the medium frequency band.

(g) In new installations the main and emergency (reserve) transmitters shall have a note frequency of more than 450 and less than 1,350 cycles per second.

(h) the main and emergency (reserve) transmitters shall have a minimum normal range as specified below, that is to say, they must be capable of transmitting clearly perceptible signals from ship to ship by day and under normal conditions and circumstances over the specified ranges.[*] (Clearly perceptible signals will normally be received if the R.M.S. value of the field strength at the receiver is at least 50 microvolt per meter.)

Minimum normal range in miles

Main transmitter

Emergency transmitter

All passenger ships, and cargo ships of 1,600 tons gross tonnage and over Cargo ships below 1,600

tons gross tonnage

150 100

100 75

(i) (i) The main and emergency receivers shall be capable of receiving the radiotelegraph frequency, and the classes of emission? assigned by the Radio Regulations for the purpose of distress in the medium frequency band.

(ii) In addition, the main receiver shall permit of the reception of such of the frequencies and classes of emission used for the transmission of time signals, meteorological messages and such other communications relating to safety of navigation as may be considered necessary by the Administration.

(iii) The auto alarm receiver may be used as the emergency receiver.

* In the absence of a direct measurement of the field strength the following data may be used as a guide for approximately determining the normal range:—

Normal range in miles

Meter-amperes+

Total aerial + power (watts) +

200

128

200

175

102

125

150

76

71

125

58

41

100

45

25

75

34

14

*This figure represents the product of the maximum height of the aerial above the deepest load water line in metres and aerial current in amperes (R.M.S, value).

The values given in the second column of the table correspond to an average value of the ratio.

effective aerial height

= 0.47

maximum aerial height

This ratio varies with local conditions of the aerial and may vary between about 0.3 and 0.7.

+ The values given in the third column of the table correspond to an average value of the ratio.

radiated aerial power

= 0.08

total aerial power

This ratio varies considerably according to the values of effective aerial height and aerial resistance.

(j) The main receiver shall have sufficient sensitivity to produce signals in headphones or by means of a loudspeaker when the receiver input is as low as

100 microvolt. The emergency receiver shall have the same sensitivity except in cases where an approved auto alarm is used as the emergency receiver.

(k) There shall be available at all times, while the ship is at sea, a supply of electrical power sufficient for operating the main installation over the normal range required by paragraph (h) of this Regulation as well as for the purpose of charging any batteries forming part of the radiotelegraph installation. The voltage of the supply for the main installation shall be maintained as near the rated voltage as possible, and if practicable within $\pm$ 10 per cent.

(l) The emergency (reserve) installation shall be provided with a source of energy independent of the propelling power of the ship and of the ship's electricity system. The source of energy shall preferably consist of accumulator batteries and shall under all circumstances be capable of being put into operation rapidly and of operating the emergency (reserve) transmitter and receiver for at least six hours continuously under normal working conditions besides any of the additional loads mentioned below.

(m) The emergency source of energy may be used only to supply:

(i) the emergency installation and the automatic alarm signal keying device specified in paragraph(s) of this Regulation;

(ii) the emergency light specified in paragraph (d) of Regulation 9;

(iii) the auto alarm; and

(iv) the direction finder.

(n) Notwithstanding the provisions of paragraph (m) of this Regulation, in cargo ships, an Administration may authorize the use of the emergency source of energy for a small number of low-power emergency circuits which are wholly confined to the upper part of the ship, such as emergency lighting on the boat, deck, on condition that these can be readily disconnected if necessary.

(o) The emergency source of energy and its switchboard shall be readily accessible to the radio operator and shall

wherever possible be placed in close proximity to a radio room.

(p) While the ship is at sea, accumulator batteries, whether forming part of the main, installation or emergency (reserve) installation, shall be brought up to the normal fully-charged condition daily.

(q) The radio-telegraph installation shall be provided with a device permitting changeover from transmission to reception and vice versa without manual switching. The application of this requirement may be delayed for one year after the date of the coming into force of the present Convention.

(r) All steps shall be taken to eliminate so far as is possible the causes of, and to suppress, radio interference from electrical and other apparatus on board.

(s) In addition to means for manually transmitting the auto alarm signal, an automatic alarm signal keying device shall be provided, capable of automatically keying the main and the emergency (reserve) installation so as to transmit the alarm signal. If electrically operated, this keying device shall be capable of operation from the emergency power supply. The application of this requirement may be delayed for two years after the date of the coming into force of the present Convention.

(t) At sea, if not used for communications, the emergency transmitter shall be tested daily using suitable artificial aerial, and at least once during each voyage using the emergency aerial if installed. The emergency power supply shall also be tested daily.

(u) Notwithstanding the provisions of Regulation 4, an Administration may, in the case of cargo ships below 1,600 tons gross tonnage, relax the full requirements of Regulation 9 and this Regulation, provided that the standard of the installation shall in no case fall below the equivalent of that prescribed under Regulation 15 for radiotelephone installations so far as applicable.

REGULATION 11

AUTO ALARMS

(a) Any new type of auto alarm which is approved after the date of coming into force of the present Convention for use in accordance with the present Regulations shall comply with the following minimum requirements:—

(i) In the absence of interference of any kind, it must be capable of being operated, without manual adjustment, by any alarm signal transmitted on the radiotelegraph distress frequency in the medium frequency band using the classes of emission assigned by the Radio Regulations for the alarm signal, provided that the frequency does not vary more than 8 kc/s from the nominal frequency and the strength of the signal at the receiver input is greater than 100 microvolt and less than 1 volt.

(ii) In the absence of interference of any kind it shall be operated by either three or four consecutive dashes when the dashes vary in length from 3.5 to as near 6 seconds as possible and the spaces vary in length between 1.5 seconds and the lowest practicable value, preferably not greater than 10 milliseconds.

(iii) It must not be actuated by atmospherics or by any signal other than the alarm signal, provided that the received signals do not in fact constitute a signal falling within the tolerance limits indicated in (ii).

(iv) The selectivity of the auto alarm shall be such as to provide a practically uniform sensitivity within 8 kc/s on each side of the distress frequency and to provide outside this band a sensitivity which decreases as rapidly as possible, in conformity with the best engineering practice.

(v) If practicable, the auto alarm in the presence of atmospherics or interfering signals shall automatically adjust itself so that within a reasonably short time it approaches the condition in which it can most readily

distinguish the alarm signal.

(vi) When operated by an alarm signal, or in the event of failure of the apparatus, the auto alarm shall cause a continuous audible warning to be given in the radiotelegraph operating room, in the radio operator's cabin, and on the bridge. If practicable, warning shall also be given in the case of failure of any part of the whole alarm receiving system. Only one switch for stopping the warning shall also be given in the case of failure of any part of the whole alarm receiving system. Only one switch for stopping the warning shall be provided and this shall be situated in the radiotelegraph operate-room.

(vii) For the purpose of regularly testing the auto alarm, the apparatus shall include a generator pre-tuned to the distress frequency and a keying device by means of which an alarm signal of the minimum strength indicated in (i) is produced.

(viii) The auto alarm shall be capable of withstanding vibration, humidity, and changes of temperature, equivalent to severe conditions experienced on board ships at sea, and shall continue to operate under such conditions.

(b) Before a new type of auto alarm is approved the Administration concerned must be satisfied, by practical test made under operating conditions equivalent to those obtaining in practice, that the apparatus complies with paragraph (a) of this regulation.

(c) In ships fitted with an auto alarm the radio operator shall test the efficiency of the auto alarm at least once every 24 hours while at sea and report to the master or the officer on watch on the bridge whether or not it is in working order.

REGULATION 12

DIRECTION FINDERS

(a) The direction-finding apparatus required by Regulation 12 of Chapter V shall be efficient and capable of receiving signals with the minimum of receiver noise and of taking bearings from which the true bearing and direction may be determined.

(b) It shall be capable of receiving signals on the medium frequencies assigned by the Radio Regulations for the purposes of distress and direction-finding and for maritime radio beacons.

(c) In the absence of interference the apparatus shall have a sensitivity sufficient to permit of accurate bearings being taken on a signal having a field strength as low as 50 microvolt per meter.

(d) Efficient communication shall be provided between the direction-finding apparatus and the bridge.

(e) All direction finders shall be calibrated of the satisfaction of the Administration on first installation and the calibration shall be verified whenever any changes are made in the position of any aerials or of any structures on deck which might affect appreciably the accuracy of the direction finder. The calibration particulars shall be checked at yearly intervals, or as near thereto as possible. A record shall be kept of the calibrations and of any checks made of their accuracy.

REGULATION 13

RADIO EQUIPMENT FOR PULING IN MOTOR LIFEBOATS

(a) The apparatus required by Regulation 25 of Chapter III shall be capable of transmitting and receiving on the radiotelegraph frequency assigned by the Radio Regulations for the purpose of distress in the medium frequency band. The transmitter shall be capable of using a class of emission assigned by the Radio Regulations for the purpose of distress in the medium frequency band and shall be modulated to a depth of at least 70 per cent. The receiver shall be capable of receiving the classes of emission assigned by the Radio Regulations for the purpose of distress in the medium frequency band. In new installations the apparatus shall also be capable of transmitting on the high frequency and the class of emission prescribed for survival craft by the Radio Regulations. An Administration may delay the application of the requirement for high frequency for a period not exceeding one year from the date of coming into force of the present Convention.

(b) The apparatus shall be so designed that it can be used in an emergency by an unskilled person. The transmitter shall be fitted with an automatic keying device for the transmission of the alarm signal and the distress signal, as well as a key for manual transmissions. An Administration may delay the application of the requirement for an automatic keying device for a period not exceeding one year from the date of coming into force of the present Convention.

(c) A fixed-type aerial shall be provided together with means for supporting it at the maximum practicable height. In addition an aerial supported by a kite or balloon shall be provided if practicable.

(d) On the distress frequency the transmitter shall have a minimum normal range (as defined in paragraph (h) of Regulation 10) of 25 miles, using the fixed aerial.*

(e) In new installations the note frequency shall be between 450 and 1,350 cycles per second.

(f) The radio apparatus shall be operated from an accumulator battery with sufficient capacity to supply the transmitter for four hours continuously under normal working conditions. If the battery is of a type that requires charging, means shall be available for charging the battery from the ship's power supply. In addition there shall be means for charging the battery after the lifeboat has been launched.

(g) When the power for the radio apparatus and the searchlight are drawn from the same battery, the battery shall have sufficient capacity to provide for the additional load of the searchlight.

(h) At sea a qualified operator shall at weekly intervals bring the battery up to full charge if the battery is of a type which requires charging, and in any case shall test the transmitter using a suitable artificial aerial.

REGULATION 14

LIFEBOAT PORTABLE RADIO APPARATUS

(a) The apparatus required by Regulation 13 of Chapter III shall be capable of transmitting and receiving on the radiotelegraph frequency assigned by the Radio Regulations for the purpose of distress, in the medium- frequency band. The transmitter shall be capable of using a class of emission assigned by the Radio Regulations for the purpose of distress in the medium frequency band and shall be modulated to a depth of at least 70 per cent. The receiver shall be capable of receiving the classes of emission assigned by the Radio Regulations for the purpose of distress in the medium frequency band. In new equipment the apparatus shall also be capable of transmitting on the high frequency and the class of emission prescribed for survival craft by the Radio Regulations. An Administration may delay the application of the requirement for high frequency in the case of new equipment for a period not exceeding one year from the date of coming into force of the present Convention.

- (b) The apparatus shall be so designed that it may be used in an emergency by an unskilled person. The transmitter shall be fitted with an automatic keying device for the transmission of the alarm signal and the distress signal, as well as a key for manual transmissions. An Administration may delay the application of the requirement for an automatic keying device in the case of new equipment for a period not exceeding one year from the date of coming into force of the present Convention, and in the case of existing equipment for a period not exceeding three years from the date of coming into force of the present Convention.
- (c) In new equipment, the note frequency shall be between 450 and 1,350 cycles per second.
- (d) The apparatus shall be readily portable, watertight and capable of floating in sea water and also capable of being dropped into the sea without damage.
- (e) The transmitter shall have at least 10 watts input to the anode of the final stage, and shall preferably derive its power from a hand generator. If operated from batteries these shall comply with conditions laid down by the Administration to ensure that the batteries are of a durable type and are of sufficient capacity.
- (f) At sea a qualified operator shall at weekly intervals bring the battery up to full charge if the battery is of a type which requires charging and in any case shall test the transmitter, using a suitable artificial aerial.
- (h) For the purpose of this Regulation, new equipment means equipment supplied to a ship after the present Convention comes into force.

REGULATION 15

RADIOTELEPHONE INSTALLATIONS

- (a) The ship's radiotelephone station shall be in the upper part of the ship, and, unless situated on the bridge, there shall be efficient communication with the bridge.
- (b) The installation shall be capable of transmitting and receiving radio-telephony on the radiotelephone distress frequency and on at least one other frequency available for maritime radiotelephone stations in the medium frequency band under the Radio Regulations. In normal operation the depth of modulation shall be at least 70 per cent at peak intensity.
- (c) The transmitter shall have a minimum normal range of 150 miles, i.e., it shall be capable of transmitting clearly perceptible signals from ship to ship by day and under normal conditions and circumstances over this range. (Clearly perceptible signals will normally be received if the R.M.S. value of the field strength produced at the receiver by the unmodulated carrier is at least 25 microvolt per meter).[*]
- (d) The receiver shall have sufficient sensitivity to receive an incoming signal as low as 50 micro volts by means of a loudspeaker.
- (e) While the ship is at sea, there shall be available at all times a source of energy sufficient to operate the installation over the normal range required by paragraph (c) of this Regulation. If batteries are provided they shall have sufficient capacity to operate the transmitter and receiver for at least six hours continuously under normal working conditions. In new installations an emergency source of energy shall be provided in the upper part of the ship unless the main source of energy is so situated.
- (f) While at sea the batteries (if provided) shall be kept charged so as to meet the requirement of paragraph (e) of this Regulation.

PART D.—RADIO LOG

REGULATION 16

RADIO LOG

The radio log (diary of the radio service) required by the Radio Regulations shall be kept in the radio operating room during the voyage. It shall be available for inspection by the officers authorized by the Administration to make such inspections. Every radio operator shall enter in the radio log his name, the time at which he goes on and off watch, and all incidents occurring during his watch connected with the radio service which may appear to be of importance to safety of life at sea. In addition to the entries required by the Radio Regulations there shall be entered in the radio log:—

Radiotelegraph Log

- (i) details of the maintenance, including a record of the charging, of the batteries in such forms as may be prescribed by the Administration;
- (ii) a daily statement that the requirement of paragraph (p) of Regulation 10 has been fulfilled;
- (iii) details of tests of the emergency transmitter and emergency power supply made under paragraph (*) of Regulation 10;
- (iv) in ships fitted with an auto alarm details of tests made, under paragraph (c) of Regulation 11;
- (v) details of the maintenance, including a record of the charging, of the batteries (if applicable), and tests of the transmitter fitted in motor lifeboats, under paragraph (h) of Regulation 13;
- (vi) details of the maintenance, including a record of the charging, of the batteries (if applicable), and tests of lifeboat portable transmitters under paragraph (g) of regulation 14;

Radiotelephone Log

- (vii) in ships fitted with a radiotelephone installation details of the maintenance, including a record of the charging, of the batteries (ii provided), under paragraph (f) of Regulation 15;
- (viii) details of the maintenance, including a record of the charging, of the batteries (if applicable), and tests of lifeboat portable transmitters under paragraph (g) of Regulation 14.

CHAPTER V.—SAFETY OF NAVIGATION

REGULATION 1

APPLICATION

Notwithstanding the provisions of Regulation 3 of Chapter i, this Chapter, unless otherwise expressly provided in this Chapter, refers to all ships on all voyages, except ships of war.

REGULATION 2

DANGER MESSAGES

- (a) The master of every ship which meets with dangerous ice, a dangerous derelict, or any other direct danger to navigation, or a tropical storm, is bound to communicate the information by all means at his disposal to ships in the vicinity, and also to the competent authorities at the first point on the coast with which he can communicate. The form in which the information is sent is not obligatory. It may be transmitted either in plain language (preferably English) or by means of the International Code of Signals (Radio Section)— It should be broadcast to all ships in the vicinity and sent to the first point on- the coast to which communication can be made, with a request that it be transmitted to the appropriate authorities.
- (b) Each Administration will take all steps which it thinks necessary to ensure that when intelligence of any of the dangers specified in paragraph (a) is received, it will be promptly brought to the knowledge of those concerned and communicated to other Administrations interested,
- (c) The transmission of messages respecting the dangers specified is free of cost to the ship concerned.
- (d) All messages issued under this Regulation shall be preceded by the Safety Signal using the procedure as prescribed by the Radio Regulations.

REGULATION 3

INFORMATION REQUIRED IN DANGER MESSAGES

The following information is desired in danger messages, the time in all cases being Greenwich Mean Time:

- (a) Ice, Derelicts and other Direct Dangers to Navigation,
- (i) the kind of ice, derelict or danger observed;
 - (ii) the position of the ice, derelict or danger when last observed; (iii) the time and date when the observation was made.
- (b) Tropical Storms—(Hurricanes in the West Indies, Typhoons in the China Sea, Cyclones in Indian waters, and storms of a similar nature in other regions).
- (i) A statement that a tropical storm has been encountered. This obligation should be interpreted in a broad spirit, and information transmitted whenever the master has good reason to believe that a tropical storm exists in his neighborhood.
 - (ii) Meteorological Information. Each shipmaster should add to his warning message as much of the following meteorological information as he finds practicable:—
 - the Greenwich Mean Time, date and position of the ship when the observations were taken;
 - barometric pressure (stating millibars, inches, or millimeters, and whether corrected or uncorrected;
 - barometric tendency (the change in barometric pressure during the past three hours);
 - true wind direction;
 - wind forces (Beaufort scale);
 - state of the sea (smooth, moderate, rough, high);
 - swell (slight, moderate, heavy) and the true direction from which it comes. Period or lengths of swell (short,

average, long) would also be of value;

—true course and speed of ship.

(c) Subsequent Observations. When a master has reported a tropical or other dangerous storm, it is desirable, but not obligatory, that other observations be made and transmitted, hourly, if practicable, but in any case at intervals of not more than three hours, so long as the ship remains under the influence of the storm.

Examples

Ice

TTT Ice. Large berg sighted in 4605 N., 4410 W., at 0800 GMT, May 15.

Derelicts

TTT Derelict. Observed derelict almost submerged in 4006 N., 1243 W., at 1630 GMT. April 2).

Danger to Navigation

TTT Navigation. Alpha lightship not on station. 1800 GMT. January 3.

Tropical Storm

TTT Storm. 0030 GMT. August 18. 2204 N., 11.354 E. Barometer corrected 994 millibars, tendency down 6 millibars. Wind NW., force 9, heavy squalls. Heavy easterly swell. Course 067., 5 knots.

TTT Storm. Appearances indicate approach of hurricane. 1300 GMT. September 14. 2200 N., 7236 W. Barometer corrected 29.64 inches, tendency down .015 inches. Wind NE., force 8, frequent rain squalls. Course 035, 9 knots.

TTT Storm. Conditions indicate intense cyclone has formed. 0200 GMT. May 4. 1622 N., 9203 E Barometer uncorrected 753 millimeters, tendency down 5 millimeters. Wind S. by W., force 5. Course 300, 8 knots.

TTT Storm. Typhoon to southeast. 0300 GMT. June 12, 1812 N., 12605 E. Barometer falling rapidly. Wind increasing from N.

REGULATION 4

METEOROLOGICAL SERVICES

(a) The Contracting Governments undertake to encourage the collection of meteorological data by ships at sea and to arrange for their examination, dissemination and exchange in the manner most suitable for the purpose of aiding navigation. Administrations shall encourage the use of instruments of a high degree of accuracy, and shall facilitate the checking of such instruments upon request.

(b) In particular, the Contracting Governments undertake to co-operate in carrying out, as far as practicable, the following meteorological arrangements:—

(i) To warn ships of gales, storms and tropical storms, both by the issue of radio messages and by the display of appropriate signals at coastal points.

(ii) To issue daily, by radio, weather bulletins suitable for shipping, containing data of existing weather and ice conditions, forecasts, and when practicable, sufficient additional information to enable simple weather charts to be prepared at sea.

(iii) To prepare and issue such publications as may be necessary for the efficient conduct of meteorological

work at sea.

(iv) To arrange for selected ships to be equipped with tested instruments (such as a barometer, a barograph, a psychrometer, and suitable apparatus for measuring seat temperature) for use in this service, and to take meteorological observations at standard synoptic hours (at least four times daily, whenever circumstances permit) and to encourage other ships to take observations in a modified form, particularly when in areas where shipping is sparse; these ships to transmit their observations by radio for the benefit of the various official meteorological services, repeating the information for the benefit of ships in the vicinity. When in the vicinity of a tropical storm, or of a suspected tropical storm, ships should be encouraged to take and transmit their observations at more frequent intervals whenever practicable, bearing in mind navigational preoccupations of ships' officers during storm conditions.

(v) To arrange for the reception and transmission by coast radio stations of weather messages from and to ships. Ships which are unable to communicate direct with shore shall be encouraged to relay their weather messages through ocean weather ships or through other ships which are in contact with shore.

(vi) To encourage ship masters to inform ships in the vicinity and also shore stations whenever they experience a wind speed of 50 knots or more (force 10 on the Beaufort-scale).

(vii) To endeavor to obtain a uniform procedure in regard to the international meteorological services already specified, and, as far as is practicable, to conform to the recommendations made by the International Meteorological Organization, to which the Contracting Governments may refer for study and advice any meteorological question which may arise in carrying out the present Convention.

(c) The information provided for in this Regulation shall be furnished in form for transmission and transmitted in the order of priority prescribed by the Radio Regulations, and during transmission "to all stations" of meteorological information, forecasts and warnings, all ship stations must conform to the provisions of the Radio Regulations.

(d) Forecasts, warnings, synoptic and other meteorological reports intended for ships shall be issued and disseminated by the national service in the best position to serve various zones and areas, in accordance with mutual arrangements made by the Contracting Governments concerned.

REGULATION 5

ICE PATROL SERVICE

(a) The Contracting Governments undertake to continue an ice patrol and a service for study and observation of ice conditions in the North Atlantic. During the whole of the ice season the south-eastern, southern and south-western limits of the regions of icebergs in the vicinity of the Grand Banks of Newfoundland shall be guarded for the purpose of informing passing ships of the extent of this dangerous region; for the study of ice conditions in general; and for the purpose of affording assistance to ships and crews requiring aid within the limits of operation of the patrol ships. During the rest of the year the study and observation of ice conditions shall be maintained as advisable.

(b) Ships and aircraft used for the ice patrol service and the study and observation of ice conditions may be assigned other duties by the managing Government, provided that such other duties do not interfere with their primary purpose or increase the cost of this service.

REGULATION 6

ICE PATROL, MANAGEMENT AND COST

(a) The Government of the United States of America agrees to continue the management of the ice patrol service and the study and observation of ice conditions, including the dissemination of information received there from. The Contracting Governments specially interested in these services undertake to contribute to the expense of maintaining and operating these services; each contribution to be based, as far as practicable, upon the total gross tonnage of the vessels of each contributing Government passing through the regions of icebergs guarded by the Ice Patrol. The Maritime Safety Committee is invited to undertake studies of these tonnages for the purpose of advising the contributing Governments. The Contracting Governments specially interested undertake to contribute to the expense of maintaining and operating these services in the proportions of their respective contributions as agreed to under the terms of the International Convention for the Safety of Life at Sea, 1929, until such contributions are modified as provided for in this Regulation.

(b) Each of the contributing Governments has the right to alter or discontinue its contribution, and other Contracting Governments may undertake to contribute to the expense. The contributing Government which avails itself of this right will continue responsible for its current contribution up to the 1st September following the date of giving notice of intention to alter or discontinue its contribution. To take advantage of the said right it must give notice to the managing Government at least six months before the said 1st September.

(c) If, at any time, the United States Government should desire to discontinue these services, or if one of the contributing Governments should express a wish to relinquish responsibility for its pecuniary contribution, or to have its contribution altered, or another Contracting Government should desire to undertake to contribute to the expense, the contributing Governments shall settle the question in accordance with their mutual interests.

(d) The contributing Governments shall have the right by common consent to make from time to time such alterations in the provisions of this Regulation and of Regulation 5 as appear desirable.

(e) Where this Regulation provides that a measure may be taken after agreement among the contributing Governments, proposals made by any Contracting Government for effecting such a measure shall be communicated to the managing Government which shall approach the other contributing Governments with a view to ascertaining whether they accept such proposals, and the results of the enquiries thus made shall be sent to the other contributing Governments and the Contracting Government making the proposals. In particular, the scale of contributions to the cost of the services to be made by the Contracting Governments especially interested shall be reviewed by those Governments in consultation at intervals not exceeding three years. The managing Government shall initiate the action necessary to this end.

REGULATION 7

SPEED NEAR ICE

When ice is reported on or near his course the master of every ship at night is bound to proceed at a moderate speed or to alter his course so as to go well clear of the danger zone.

REGULATION 8

NORTH ATLANTIC ROUTES

- (a) The practice of following recognized routes across the North Atlantic in both directions has contributed to safety of life at sea and should be recommended to all ships.
- (b) The selection of the routes and the initiation of action with regard to them is left to the responsibility of the shipping companies concerned. The Contracting Governments will assist the companies, when requested to do so, by placing at their disposal any information bearing on the routes which may be in the possession of the Governments.
- (c) The Contracting Governments undertake to impose on the companies the obligation to give public notice of the regular routes which they propose their ships should follow, and of any changes made in these routes; they will also use their influence to induce the owners of all ships crossing the Atlantic to follow so far as circumstances will permit, the recognized routes, and to induce the owners of all ships crossing the Atlantic bound to or from ports of the United States or Canada via the vicinity of the Grand Banks of Newfoundland to avoid, as far as practicable, the fishing banks of Newfoundland north of latitude 43° N. during the fishing season, and to pass outside regions known or believed to be endangered by ice.
- (d) The Government managing the ice patrol service is requested to report to the Administration concerned any ship which is observed not to be on any regular, recognized or advertised route, or which crosses the above-mentioned fishing banks during the fishing season, or which, when proceeding to or from parts of the United States or Canada, passes through regions known or believed to be endangered by ice.

REGULATION 9

MISUSE OF DISTRESS SIGNALS

The use of an international distress signal, except for the purpose of indicating that a ship or aircraft is in distress, and the use of any signal which may be confused with in an international distress signal, are prohibited on every ship or aircraft.

REGULATION 10

DISTRESS MESSAGES—PROCEDURE

- (a) The master of a ship at sea, on receiving a signal from any source that a ship or aircraft or survival craft thereof is in distress, is bound to proceed with all speed to the assistance of the persons in distress informing them if possible that he is doing so. If he is unable or, in the special circumstances of the case, considers it unreasonable or unnecessary to proceed to their assistance, he must enter in the logbook the reason for failing to proceed to the assistance of the persons in distress.
- (b) The master of a ship in distress, after consultation, so far as may be possible, with the masters of the ships which answer his call for assistance, has the right to requisition such one or more of those ships as he considers best able to render assistance, and it shall be the duty of the master or masters of the ship or ships requisitioned to comply with the requisition by continuing to proceed with all speed to the assistance of persons in distress.
- (c) The master of a ship shall be released from the obligation imposed by paragraph (a) of this Regulation when he learns that one or more ships other than his own have been requisitioned and are complying with the requisition.

(d) The master of a ship shall be released from the obligation imposed by paragraph (a) of this Regulation, and, if his ship has been requisitioned, from the obligation imposed by paragraph (b) of this Regulation, if he is informed by the persons in distress or by the master of another ship which has reached such persons that assistance is no longer necessary.

(e) The provisions of this Regulation do not prejudice the International Convention for the unification of certain rules with regard to Assistance and Salvage at Sea, signed at Brussels on the 23rd September, 1910, particularly the obligation to "render assistance imposed by Article II of that Convention.

REGULATION 11

SIGNALING LAMPS

All ships of over 150 tons gross tonnage, when engaged on international voyages, shall have on board an efficient daylight signaling lamp.

REGULATION 12

DIRECTION-FINDING APPARATUS

(a) All ships of 1,600 tons gross tonnage and upwards, when engaged on international voyages, shall be fitted with direction-finding apparatus complying with the provisions of Regulation 12 of Chapter IV, but the provision of such apparatus on ships between 1,600 and 5,000 tons gross tonnage may be deferred for a period of 2 years from the date on which the present Convention comes into force if in the opinion of the Administration this is necessary.

(b) An Administration may, in areas where it considers it unreasonable or unnecessary for such apparatus to be carried, exempt any ships under 5,000 tons gross tonnage from this requirement, due regard being had to the fact that direction-finding apparatus is of value both as a navigational instrument and as an aid to locating ships, aircraft or survival craft.

REGULATION 13

MANNING

The Contracting Governments undertake, each for its national ships, to maintain, or, if it is necessary, to adopt, measures for the purpose of ensuring that, from the point of view of safety of life at sea, all ships shall be sufficiently and efficiently manned.

REGULATION 14

AIDS TO NAVIGATION

The Contracting Governments undertake to arrange for the establishment and maintenance of such aids to navigation, including radio beacons and electronic aids as, in their opinion, the volume of traffic justifies and the degree of risk requires, and to arrange for information relating to these aids to be made available to all concerned.

REGULATION 15

SEARCH AND RESCUE

(a) Each Contracting Government undertakes to ensure that any necessary arrangements are made for coast watching and for the rescue of persons in distress at sea round its coasts. These arrangements should include the establishment, operation and maintenance of such maritime safety facilities as are deemed practicable and necessary having regard to the density of the seagoing traffic and the navigational dangers and should, so far as possible, afford adequate means of locating and rescuing such persons.

(b) Each Contracting Government undertakes to make available information concerning its existing rescue facilities and the plans for changes therein, if any.

REGULATION 16

LIFE-SAVING SIGNALS

The following signals shall be used by life-saving stations when communicating with ships in distress and by ships in distress when communicating with life-saving stations:—

(a) Replies from shore stations to distress signals made by a ship:—

Signal

Signification

—By day—White smoke signal .

"You are seen—assistance will be given as soon as possible."

By night—White star rocket.

(b) Landing signals for the guidance of small boats bringing away the crew of a wreck ship:—

Signal

Signification

—By day—Vertical motion of a white flag or the arms.

By night—Vertical motion of a white light or flare. A range (indication of direction) may be given by placing a steady white light or flare lower and in line with the observer.

"This is the best place to land."

—By day—horizontal motion of a white flag or arms extended horizontally. By night—Horizontal motion of a white light or flare.

"Landing here highly dangerous."

—By day—Horizontal motion of a white flag, followed by the placing of the white flag in the ground and the carrying of another white flag in the direction indicated.

"Landing here highly dangerous. A more favorable location to land is in direction indicated."

By night—Horizontal motion of a light as in the direction white light or flare, followed by the placing of the white light or flare on the ground and the carrying of another white light or flare in the direction to be indicated.

(c) Signals to be employed in connection with the use of shore life-saving apparatus:—

Signal

Signification

—By day—Vertical motion of a white flag or the arms.

In general—"Affirmative."

Specifically:—

"Rocket line is held."

"Tail block is made fast."

"Hawser is made fast."

"Man is in the breeches buoy." "Haul away."

By night—Vertical motion of a white light or flare.

-By day-Horizontal motion of a white flag or arms extended horizontally. In general—"Negative."

Specifically:—

"Slack away."

"Avast hauling."

By night-Horizontal motion of a white light or flare.

REGULATION 17

PILOT LADDERS

All ships engaged on voyages in which pilots are likely to be embarked should comply with the following requirements respecting pilot ladders:-

(a) The ladder should be kept in good order and used as far as possible only for embarking and disembarking pilots and other officials while a ship is arriving at or leaving a port.

(b) The ladder should be of adequate length and strength.

- (c) The treads should be of adequate width.
- (d) Two man-ropes properly secured, should, where circumstances so require, be used in conjunction with the ladders.
- (e) Arrangements should be such that the pilot can safely pass from the head of the ladder to the ship's deck.
- (f) Spreaders at suitable intervals should be provided if necessary, to prevent the ladder twisting.
- (g) At night, a light shining over side should be available and used.

CHAPTER VI.—CARRIAGE OF GRAIN AND DANGEROUS GOODS

REGULATION 1

APPLICATION

Unless expressly provided otherwise, this Chapter applies to ships to which the present Regulations apply.

REGULATION 2

CARRIAGE OF GRAIN

- (a) The term "grain" includes wheat, maize (corn), oats, rye, barley, rice, pulses, and seeds.
- (b) Where grain is loaded in a ship, all necessary and reasonable precautions shall be taken to prevent the grain from shifting.
- (c) Any compartment which is entirely filled with loose grain in bulk shall be:—
 - (i) fed by properly constructed feeders which shall contain not less than 2 1/2 per cent, nor more than 8 per cent, of the capacity of the compartment served, and
 - (ii) divided by a longitudinal bulkhead or shifting boards, which shall be properly secured and fitted grain tight with proper fillers (fillings) between the beams. In holds such shifting boards shall extend downwards from the underside of the deck to a distance of at least one-third of the depth of the hold or 8 feet, whichever is the greater. In between deck compartments they shall extend from deck to deck.

In all cases they shall extend to the top of the feeders of the hold or compartment in which they are situated.

- (d) In any compartment which is partially filled with loose grain in bulk, the grain shall be leveled and topped off with bagged grain or other suitable cargo extending to a height of not less than 4 feet above the top of the loose grain in bulk and supported on suitable platforms laid over the whole surface of the loose grain in bulk. In addition, the compartment shall be divided by a longitudinal bulkhead or shifting boards in line with the keel which shall extend from the bottom of the hold or deck as the case may be to a height sufficient to prevent the shifting of the loose grain in bulk. The fitting of a longitudinal bulkhead or shifting boards shall not be required if the grain in bulk does not exceed one-third the capacity of the compartment or, in the case of a compartment divided by a shaft tunnel, one-half the capacity of that compartment.
- (e) Loose grain in bulk other than oats, light barley, and cotton seed shall not be carried in the between decks of a two-deck ship, or in the uppermost between decks of ships having more than two decks, except in properly constructed feeders as necessary for feeding the lower compartments. Loose grain in bulk may be carried in positions not otherwise permitted under this Regulation provided that:—

(i) It is carried in one or more bins, which shall be properly constructed and provided with feeders in accordance with the provisions of paragraph (c) (i).

(ii) The hold or compartment below the bin or bins is properly battened down, clear of the feeder to such hold or compartment,

(iii) The quantity of grain so carried does not exceed the capacity fixed by the Administration.

(f) Each Administration may, if it considers that the sheltered nature and conditions of the voyage are such as to render the application of any of the requirements of paragraph (c) and (d) of this Regulation unreasonable or unnecessary, exempt from those particular requirements individual ships or classes of ships.

REGULATION 3

CARRIAGE OF DANGEROUS GOODS

(a) The term "dangerous goods" includes:—

(i) explosives;

(ii) compressed, liquefied and dissolved gases;

(iii) corrosives;

(iv) poisons;

(v) substances giving off inflammable vapors;

(vi) substances which become dangerous by interaction with water or air;

(vii) strong oxidizing agents;

(viii) substances which are liable to spontaneous combustion;

(ix) any other substance which experience has shown, or may shown, to be of such a dangerous character that the provisions of this Regulation should apply to it.

(b) The carriage of dangerous goods is prohibited except in accordance with the provisions of this Regulation.

(c) Explosives other than the following may not be carried on passenger ships:-

(i) safety cartridges and safety fuses;

(ii) small quantities of explosives not exceeding 20 lbs. in the aggregate;

(iii) explosives up to a total of 10 cwt. in approved packages on the deck of a passenger ship on a short voyage.

(d) Notwithstanding the provisions of paragraph (c), explosives may be carried on passenger ships on which there are special approved safety measures.

(e) On ships carrying inflammable liquids adequate precautions shall be taken against fire or explosion.

(f) Substances which are liable to spontaneous combustion (including fodder and other vegetable products especially if damp) shall not be carried unless adequate precautions have been taken to prevent outbreak of fire.

(g) Dangerous goods tendered to a ship for transportation shall be accompanied by a written statement by the shipper correctly describing the shipment according to the classification used in paragraph (a) of this Regulation.

(h) Except for parcels of mixed chemicals in limited quantities, shipments of dangerous goods shall be marked with a distinctive label or stencil which shall indicate their dangerous character. Each package of the shipment shall be so marked except in the case of a large shipment which can be stowed and identified as a unit.

(i) Each ship carrying dangerous goods shall carry a special list setting forth, in accordance with paragraph (a) of this Regulation, the dangerous goods on board.

(j) Each Contracting Government shall issue, or cause to be issued, detailed rules to supplement the provisions of this Regulation. Such detailed rules shall provide for the packing and stowage of dangerous goods when carried with other commodities, and for the stowage of various categories of dangerous goods.

(k) The provisions of this Regulation do not apply to ship's stores and equipment.

APPENDIX

FORM OF SAFETY CERTIFICATE FOR PASSENGER SHIPS SAFETY CERTIFICATE

(Official Seal)

(Country)

for

an

international voyage.

a short

ISSUED UNDER THE PROVISIONS OF THE
INTERNATIONAL CONVENTION FOR THE SAFETY OF LIFE AT SEA, 1948

Name of ship

Distinctive

Number of

Letters

Port of Registry

Gross Tonnage

Particulars of voyages, if any, sanctioned under Regulation 22 (c) of Chapter III

The

(Name) Government certifies

I, the undersigned

(Name) certify

I. That the above-mentioned ship has been duly surveyed in accordance with the provisions of the Convention referred to above.

II. That the survey showed that the ship complied with the requirements of the Regulations annexed to the said Convention as regards:—

(1) the structure, main and auxiliary boilers and machinery;

(2) the watertight subdivision arrangements and details;

(3) the following subdivision load lines:—

Subdivision load lines assigned and marked on the ship's side at amidships (Regulation 30 of Chapter II)

Freeboard

To apply when the spaces in which passengers are carried include the following alternative spaces

C. 1

C. 2

C. 3

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III. The the life-saving appliances provide for a total number of
..... persons and no more, viz.:—

..... lifeboats (including motor lifeboats or
mechanically propelled lifeboats) capable of accommodating persons, and motor
lifeboats fitted with radiotelegraph installation and searchlight (included in the total lifeboats shown above),
requiring certificated lifeboat men;

..... life rafts capable of accommodating.....persons;

..... buoyant apparatus capable of supporting persons;

..... lifebuoys;

..... lifejackets;

IV. That the lifeboats were equipped in accordance with provisions of the Regulations.

V. That the ship was provided with a line-throwing appliance and lifeboat portable radio apparatus in accordance with the provisions of the Regulations.

VI. That the ship complied with the requirements of the Regulations as regards radiotelegraph installations, viz.:—

Requirements of Regulation Actual provision

Hours of listening by operator
 Number of operators
 Whether auto-alarm fitted
 Whether main installation fitted
 Whether emergency installation fitted
 Whether main and emergency transmitters
 electrically separated or combined
 Whether direction-finder fitted
 Number of passengers for which certificated

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VII. That the ship complied with the requirements of the Regulations, as regards fire-detecting and fire-extinguishing appliances and was provided with navigation lights and shapes, and means of making sound signals and distress signals, in accordance with the provisions of the Regulations and also the International Collision Regulations.

VIII. That in all other respects the ship complied with the requirements of the Regulations, so far as these requirements apply thereto.

This certificate is issued under the authority of the Government.

It will remain in force until

Issued at

the

day of

19

Here follows the seal or signature of the authority entitled to issue the certificate.

(Seal)

If signed, the following paragraph is to be added:—

The undersigned declares that he is duly authorized by the said Government to issue this Certificate.

(Signature)

FORM OF CERTIFICATE FOR CARGO SHIPS

SAFETY EQUIPMENT CERTIFICATE

(Official Seal)

(Country)

ISSUED UNDER THE PROVISIONS OF THE

INTERNATIONAL CONVENTION FOR THE SAFETY OF LIFE AT SEA, 1948

Name of Ship

Distinctive Number or
Letters

Port of Registry

Gross Tonnage

The

(Name) Government certifies

I, the undersigned

(Name) certify

I. That the above-mentioned ship has been duly inspected in accordance with the provisions of the Convention referred to above.

II. That the inspection showed that the life-saving appliances provide for a total number of..... persons and no more, viz:—

..... lifeboats on port side capable of accommodating..... persons.

..... lifeboats on starboard side capable of accommodating persons.
..... motor lifeboats and/or mechanically propelled lifeboats (included in the total lifeboats shown above).
..... lifebuoys.
..... lifejackets.

III. That the lifeboats were equipped in accordance with the provisions of the Regulations annexed to the Convention.

IV. That the ship was provided with a line-throwing apparatus and lifeboat portable radio apparatus in accordance with . the provisions of the Regulations.

V. That the inspection showed that the ship complied with the requirements of the said Convention as regards fire-extinguishing appliances and was provided with navigation lights and shapes and means of making sound signals and distress signals, in accordance ,with the provisions of the Regulations and the International Collision Regulations.

VI. Thai in all other respects the ship complied with the requirements of the Regulations so far as these requirements apply thereto.

This certificate is issued under the authority of the Government.

It will remain in force until

Issued at

the

day of

19

Here follows the seal or signature of the authority entitled to issue this certificate.

(Seal)

If signed, the following paragraph is to be added:—

The undersigned declares (hat he is duly authorized by the said Government to issue this Certificate.

(Signature)

FORM OF SAFETY RADIOTELEPHONY CERTIFICATE

SAFETY RADIOTELEPHONY CERTIFICATE

(Official Seal)

(Country)

ISSUED UNDER THE PROVISIONS OF THE

INTERNATIONAL CONVENTION FOR THE SAFETY OF LIFE AT SEA, 1948

Name of Ship

Distinctive

Number or Letters

Port of Registry

Gross Tonnage

The

(Name) Government certifies

I, the undersigned

(Name) certify

That the above-mentioned ship complies with the provisions of the Regulations annexed to the Convention referred to above as regards Radiotelephony;—

Requirements of Regulations

Actual provision

Hours of listening by operator

Number of operators

This certificate is issued under the authority of the Government.

It will remain in force until

Issued at

the

day of

19

Here follows the seal or signature of the authority entitled to issue the certificate.

(Seal)

If signed, the following paragraph is to be added:—

The undersigned declares that he is duly authorized by the said Government to issue this Certificate.

(Signature)

FORM OF SAFETY RADIOTELEGRAPHY CERTIFICATE

SAFETY RADIOTELEGRAPHY CERTIFICATE

(Official Seal)

(Country)

ISSUED UNDER THE PROVISIONS OF THE
INTERNATIONAL CONVENTION FOR THE SAFETY OF LIFE AT SEA, 1948

Name of Ship

Distinctive

Number or Letters

Port of Registry

Gross Tonnage

The

(Name) Government certifies

I, the undersigned

(Name) certify

That the above-mentioned ship complies with the provisions of the Regulations annexed to the Convention referred to above as regards Radiotelegraphy;—

Requirements of Regulations

Actual provision

Hours of listening by operator

Number of operators

Whether auto-alarm fitted

Whether main installation fitted

Whether emergency installation fitted

Whether main and emergency transmitters

electrically separated or combined

Whether direction-finder fitted

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This certificate is issued under the authority of the Government.

It will remain in force until

Issued at

the

day of

19

Here follows the seal or signature of the authority entitled to issue the certificate.

(Seal)

If signed, the following paragraph is to be added:—

The undersigned declares that he is duly authorized by the said Government to issue this Certificate.

(Signature)

FORM OF EXEMPTION CERTIFICATE

EXEMPTION CERTIFICATE

(Official Seal)

(Country)

ISSUED UNDER THE PROVISIONS OF THE

INTERNATIONAL CONVENTION FOR THE SAFETY OF LIFE AT SEA, 1948

Name of Ship

Distinctive

Number or Letters

Port of Registry

Gross Tonnage

The

(Name) Government certifies

I, the undersigned

(Name) certify

That the above-mentioned ship is, under the authority conferred by Regulation of Chapter of the Regulations annexed to the Convention referred to above, exempted from the requirements of

of the Convention on the voyages to

*Insert here the conditions, if any, on which the exemption certificate is granted.

This certificate is issued under the authority of the Government.
It will remain in force until.

Issued at

the

day of

19

Here follows the seal or signature of the authority entitled to issue the certificate.

(Seal)

If signed, the following paragraph is to be added:—

The undersigned declares that he is duly authorized by the said Government to issue this Certificate.

(Signature)

ANNEX B

REGULATIONS FOR PREVENTING COLLISIONS AT SEA

PART A.—PRELIMINARY AND DEFINITIONS

RULE 1

(a) These Rules shall be followed by all vessels and seaplanes upon the high seas and in all waters connected therewith navigable by seagoing vessels, except as provided in Rule 30. Where, as a result of their special construction, it is not possible for seaplanes to comply fully with the provisions of Rules specifying the carrying of lights and shapes, these provisions shall be followed as closely as circumstances permit.

(b) The Rules concerning light shall be complied with in all weathers from sunset to sunrise, and during such times no other lights shall be exhibited, except such lights as cannot be mistaken for the prescribed lights or impair their visibility or distinctive character, or interfere with the keeping of a proper look-out.

(c) In the following Rules, except where the context otherwise requires:—

(i) the word "vessel" includes every description of water craft, other than a seaplane on the water, used or capable of being used as a means of transportation on water;

(ii) the word "seaplane" includes a flying boat and any other aircraft designed to maneuver on the water;

(iii) the term "power-driven vessel" means any vessel propelled by machinery;

(iv) every power-driven vessel which is under sail and not under power is to be considered a sailing vessel, and every vessel under power, whether under sail or not, is to be considered a power-driven vessel;

(v) a vessel or seaplane on the water is "under way" when she is not at anchor, or made fast to the shore, or aground;

(vi) the term "height above the hull" means heights above the uppermost continuous deck;

(vii) the length and breadth of a vessel shall be deemed to be the length and breadth appearing in her certificate of registry;

(viii) the length and span of a seaplane shall be its maximum length and span as shown in its certificate of airworthiness, or as determined by measurement in the absence of such certificate;

(ix) the word "visible," when applied to lights, means visible on a dark night with a clear atmosphere;

(x) the term "short blast" means a blast of about one second's duration;

(xi) the term "prolonged blast" means a blast of from four to six seconds' duration;

(xii) the word "whistle" means whistle or siren;

(xiii) the word "tons" means gross tons.

PART B.—LIGHTS AND SHAPES

RULE 2

(a) A power-driven vessel when under way shall carry:—

(i) On or in front of the foremast, or if a vessel without a foremast then in the forepart of the vessel, a bright white light so constructed as to show an unbroken light over an arc of the horizon of 20 points of the compass (225 degrees), so fixed as to show the light 10 points (112½ degrees) on each side of the vessel, that is, from right ahead to 2 points (22½ degrees) abaft the beam on either side, and of such a character as to be visible at a distance of at least 5 miles.

(ii) Either forward of or abaft the white light mentioned in sub-section (i) a second white light similar in construction and character to that light. Vessels of less than 150 feet in length, and vessels engaged in towing, shall not be required to carry this second white light but may do so.

(iii) These two white lights shall be so placed in a line with and over the keel that one shall be at least 15 feet higher than the other and in such a position that the lower light shall be forward of the upper one. The horizontal distance between the two white lights shall be at least three times the vertical distance. The lower of these two white lights or, if only one is carried, then that light, shall be placed at a height above the hull of not less than 20 feet, and, if the breadth of the vessel exceeds 20 feet, then at a height above the hull not less than such breadth, so however that the light need not be placed at a greater height above the hull than 40 feet. In all circumstances the light or lights, as the case may be, shall be so placed as to be clear of and above all other lights and obstructing superstructures.

(iv) On the starboard side a green light so constructed as to show an unbroken light over an arc of the horizon of 10 points of the compass (112½ degrees), so fixed as to show the light from right ahead to 2 points (22½ degrees) abaft the beam on the starboard side, and of such a character as to be visible at a distance of at least 2 miles.

(v) On the port side a red light so constructed as to show an unbroken light over an arc of the horizon of 10 points of the compass (112½ degrees), so fixed as to show the light from right ahead to 2 points (22½ degrees) abaft the beam on the port side, and of such a character as to be visible at a distance of at least 2 miles.

(vi) The said green and red sidelights shall be fitted with inboard screens projecting at least 3 feet forward from the light, so as to prevent these lights from being seen across the bows.

(b) A seaplane under way on the water shall carry:—

(i) In the forepart amidships where it can best be seen a bright white light, so constructed as to show an unbroken light over an arc of the horizon of 220 degrees of the compass, so fixed as to show the light 110 degrees on each side of the seaplane, namely, from right ahead to 20 degrees abaft the beam on either side, and of such a character as to be visible at a distance of at least 3 miles.

(ii) On the right or starboard wing tip a green light, so constructed as to show an unbroken light over an arc of the horizon of 110 degrees of the compass, so fixed as to show the light from right ahead to 20 degrees abaft the beam on the starboard side, and of such a character as to be visible at a distance of at least 2 miles.

(iii) On the left or port wing tip a red light, so constructed as to show an unbroken light over an arc of the horizon of 110 degrees of the compass, so fixed as to show the light from right ahead to 20 degrees abaft the beam on the port side, and of such a character as to be visible at a distance of at least 2 miles.

RULE 3

(a) A power-driven vessel when towing or pushing another vessel shall, in addition to her sidelights, carry two bright white lights in a vertical line one over the other, not less than 6 feet apart, and when towing more than one vessel shall carry an additional bright white light 6 feet above or below such lights, if the length of the tow, measuring from the stern of the towing vessel to the stern of the last vessel towed, exceeds 600 feet. Each of these lights shall be of the same construction and character and one of them shall be carried in the same position as the white light mentioned in Rule 2 (a) (i), except the additional light, which shall be carried at a height of not less than 14 feet above the hull. In a vessel with a single mast, such lights may be carried on the mast.

(b) The towing vessel shall also show either the stern light specified in Rule 10 or in lieu of that light a small white light abaft the funnel or after mast for the tow to steer by, but such light shall not be visible forward of the beam. The carriage of the white light specified in Rule 2 (a) (ii) is optional.

(c) A seaplane on the water, when towing one or more seaplanes or vessels, shall carry the lights prescribed in Rule 2 (b) (i), (ii), (iii); and, in addition, she shall carry a second white light of the same construction and character as the white light mentioned in Rule 2 (b) (i), and in a vertical line at least 6 feet above or below such light.

RULE 4

(a) A vessel which is not under command shall carry, where they can best be seen, and, if a power-driven vessel, in lieu of the lights required by Rule 2 (a) (i) and (ii), two red lights in a vertical line one over the other not less than 6 feet apart, and of such a character as to be visible all round the horizon at a distance of at least 2 miles. By day, she shall carry in a vertical line one over the other not less than 6 feet apart, where they can best be seen, two black balls or shapes each not less than 2 feet in diameter.

(b) A seaplane on the water which, is not under command may carry, where they can best be seen, two red lights in a vertical line, one over the other, not less than 3 feet apart, and of such a character as to be visible all round the horizon at a distance of at least 2 miles, and may by day carry in a vertical line one over the other not less than 3 feet apart, where they can best be seen, two black balls or shapes, each not less than 2 feet in diameter.

(c) A vessel engaged in laying or in picking up a submarine cable or navigation mark, or a vessel engaged in surveying or underwater operations when from the nature of her work she is unable to get out of the way of approaching vessels, shall carry, in lieu of the lights specified in Rule 2 (a) (i) and (ii), three lights in a vertical line one over the other not less than 6 feet apart. The highest and lowest of these lights shall be red, and the middle light shall be white, and they shall be of such a character as to be visible all round the horizon at a distance of at least 2 miles. By day, she shall carry in a vertical line one over the other not less than 6 feet apart, where they can best be seen, three shapes each not less than 2 feet in diameter, of which the highest and lowest shall be globular in shape and red in color, and the middle one diamond in shape and white.

(d) The vessels and seaplanes referred to in this Rule, when not making way through the water shall not carry the colored sidelights, but when making way they shall carry them.

(e) The lights and shapes required to be shown by this Rule are to be taken by other vessels and seaplanes as signals that the vessel or seaplane showing them is not under command and cannot therefore get out of the way.

(f) These signals are not signals of vessels in distress and requiring assistance. Such signals are contained in Rule 31.

RULE 5

(a) A sailing vessel under way and any vessel or seaplane being towed shall carry the same lights as are prescribed by Rule 2 for a power-driven vessel or a seaplane under way, respectively, with the exception of the white lights specified therein, which they shall never carry. They shall also carry stern lights as specified in Rule 10, provided that vessels towed, except the last vessel of a tow, may carry, in lieu of such stern light, a small white light as specified in Rule 3 (b).

(b) A vessel being pushed ahead shall carry, at the forward end, on the starboard side a green light and on the port side a red light, which shall have the same characteristics as the lights described in Rule 2 (a) (iv) and (v) and shall be screened as provided in Rule 2 (a) (vi), provided that any number of vessels pushed ahead in a group shall be lighted as one vessel.

RULE 6

(a) In small vessels, when it is not possible on account of bad weather or other sufficient cause to fix the green and red sidelights, these lights shall be kept at hand lighted and ready for immediate use, and shall, on the approach of or to other vessels, be exhibited on their respective sides in sufficient time to prevent collision, in such manner as to make them most visible, and so that the green light shall not be seen on the port side nor the red light on the starboard side, nor, if practicable, more than 2 points (22 degrees) abaft the beam on their respective sides.

(b) To make the use of these portable lights more certain and easy, the lanterns containing them shall each be painted outside with the color of the lights they respectively contain, and shall be provided with proper screens.

RULE 7

Power-driven vessels of less than 40 tons, vessels under oars or sails of less than 20 tons, and rowing boats, when under way shall not be required to carry the lights mentioned in Rule 2, but if they do not carry them they shall be provided with the following lights:—

(a) Power-driven vessels of less than 40 tons, except as provided in section (b), shall carry:—

(i) In the forepart of the vessel, where it can best be seen, and at a height above the gunwale of not less than 9 feet, a bright white light constructed and fixed as prescribed in Rule 2 (a) (i) and of such a character as to be visible at a distance of at least 3 miles.

(ii) Green and red sidelights constructed and fixed as prescribed in Rule 2 (a) (iv) and (v), and of such a character as to be visible at a distance of at least 1 mile, or a combined lantern showing a green light and a red light from right ahead to 2 points (22 1/2 degrees) abaft the beam on their respective sides. Such lantern shall be carried not less than 3 feet below the white light.

(b) Small power-driven boats, such as are carried by seagoing vessels, may carry the white light at a less height than 9 feet above the gunwale, but it shall be carried above the sidelights or the combined lantern mentioned in sub-section (a) (ii).

(c) Vessels of less than 20 tons, under oars or sails, except as provided in section (d), shall, if they do not carry the sidelights, carry where it can best be seen a lantern showing a green light on one side and a red light on the other, of such a character as to be visible at a distance of at least 1 mile, and so fixed that the green light shall not be seen on the port side, nor the red light on the starboard side. Where it is not possible to fix this light, it shall be kept ready for immediate use and shall be exhibited in sufficient time to prevent collision and so that the green

light shall not be seen on the port side nor the red light on the starboard side.

(d) Small rowing boats, whether under oars or sail, shall only be required to have ready at hand an electric torch or a lighted lantern showing a white light, which shall be exhibited in sufficient time to prevent collision.

(e) The vessels and boats referred to in this Rule shall not be required to carry the lights or shapes prescribed in Rules 4 (a) and 11 (e).

RULE 8

(a) (i) Sailing pilot-vessels, when engaged on their station on pilot age duty and not at anchor, shall not show the lights prescribed for other vessels, but shall carry a white light at the masthead visible all round the horizon at a distance of at least 3 miles, and shall also exhibit a flare-up light or flare-up lights at short intervals, which shall never exceed 10 minutes.

(ii) On the near approach of or to other vessels they shall have their sidelights lighted ready for use and shall flash or show them at short intervals, to indicate the direction in which they are heading, but the green light shall not be shown on the port side, nor the red light on the starboard side.

(iii) A sailing pilot-vessel of such a class as to be obliged to go alongside of a vessel to put a pilot on board may show the white light instead of carrying it at the masthead and may, instead of the sidelights above mentioned, have at hand ready for use a lantern with a green glass on the one side and a red glass on the other to be used as prescribed above.

(b) A power-driven pilot-vessel when engaged on her station on pilot age duty and not at anchor shall, in addition to the light and flares required for sailing pilot-vessels, carry at a distance of 8 feet below her white masthead light a red light visible all round the horizon at a distance of at least 3 miles, and also the sidelights required to be carried by vessels when under way. A bright intermittent all round white light may be used in place of a flare.

(c) All pilot-vessels, when engaged on their stations on pilot age duty and at anchor, shall carry the lights and show the flares prescribed in sections (a) and (b), except that the sidelights shall not be shown. They shall also carry the anchor light or lights prescribed in Rule 11.

(d) All pilot-vessels, whether at anchor or not at anchor, shall, when not engaged on their stations on pilot age duty, carry the same lights as other vessels of their class and tonnage.

RULE 9

(a) Fishing vessels when not fishing shall show the lights or shapes prescribed for similar vessels of their tonnage. When fishing they shall show only the lights or shapes prescribed by this Rule, which lights or shapes, except as otherwise provided, shall be visible at a distance of at least 2 miles.

(b) Vessels fishing with trolling (towing) lines shall show only the lights prescribed for a power-driven or sailing vessel under way as may be appropriate.

(c) Vessels fishing with nets or lines, except trolling (towing) lines, extending from the vessel not more than 500 feet horizontally into the seaway shall show, where it can best be seen, one all round white light and in addition, on approaching or being approached by another vessel, shall show a second white light at least 6 feet below the first light and at a horizontal distance of at least 10 feet away from it (6 feet in small open boats) in the direction in which the outlying gear is attached. By day such vessels shall indicate their occupation by displaying a basket where it can best be seen; and if they have their gear out while at anchor, they shall, on the approach of other vessels, show the same signal in the direction from the anchor ball towards the net or gear.

(d) Vessels fishing with nets or lines, except trolling (towing) lines, extending from the vessel more than 500 feet horizontally into the seaway shall show, where they can best be seen, three white lights at least 3 feet apart in a vertical triangle visible all round the horizon. When making way through the water, such vessels shall show the proper colored sidelights but when not making way they shall not show them. By day they shall show a basket in the forepart of the vessel as near the stem as possible not less than 10 feet above the rail; and, in addition, where it can best be seen, one black colonial shape, apex upwards. If they have their gear out while at anchor they shall on the approach of other vessels, show the basket in the direction from the anchor ball towards the net or gear.

(e) Vessels when engaged in trawling, by which is meant the dragging of a dredge net or other apparatus along or near the bottom of the sea, and not at anchor:—

(i) If power-driven vessels, shall show in the same position as the white light mentioned in Rule 2 (a) (i) ii tri-colored lantern, so constructed and fixed as to show a white light from right ahead to 2 points (22½ degrees) on each bow, and a green light and a red light over an arc of the horizon from 2 points (22½ degrees) on each bow to 2 points (22½ degrees) abaft the beam on the starboard and port sides, respectively; and not less than 6 nor more than 12 feet below the tri-colored lantern a white light in a lantern, so constructed as to show a clear, uniform, and unbroken light all round the horizon. They shall also show the stern light specified in Rule 10 (a).

(ii) If sailing vessels, shall carry a white light in a lantern so constructed as to show a clear, uniform, and unbroken light all round the horizon, and shall, also, on the approach of or to other vessels, show, where it can best be seen, a white flare-up light in sufficient time to prevent collision.

(iii) By day, each of the foregoing vessels shall show, where it can best be seen, a basket.

(f) In addition to the lights which they are by this Rule required to show vessels fishing may, if necessary in order to attract attention of approaching vessels, show a flare-up light. They may also use working lights.

(g) Every vessel fishing, when at anchor, shall show the lights or shape specified in Rule 11 (a), (b) or (c); and shall, on the approach of another vessel or vessels, show an additional white light at least 6 feet below the forward anchor light and at a horizontal distance of at least 10 feet away from it in the direction of the outlying gear.

(h) If a vessel when fishing becomes fast by her gear to a rock or other obstruction she shall in daytime haul down the basket required by sections (c), (d) or (e) and show the signal specified in Rule 11 (c). By night she shall show the light or lights specified in Rule 11 (a) or (b). In fog, mist, falling snow, heavy rainstorms or any other condition similarly restricting visibility, whether by day or by night, she shall sound the signal prescribed by Rule 15 (c) (v), which signal shall also be used, on the near approach of another vessel, in good visibility.

RULE 10

(a) A vessel when under way shall carry at her stern a white light, so constructed that it shall show an unbroken light over an arc of the horizon of 12 points of the compass (135 degrees), so fixed as to show the light 6 points (67½ degrees) from right aft on each side of the vessel, and of such a character as to be visible at a distance of at least 2 miles. Such light shall be carried as nearly as practicable on the same level as the sidelights.

(b) In a small vessel, if it is not possible on account of bad weather or other sufficient cause for this light to be fixed, an electric torch or a lighted lantern shall be kept at hand ready for use and shall, on the approach of an overtaking vessel, be shown in sufficient time to prevent collision.

(c) A seaplane on the water when under way shall carry on her tail a white light, so constructed as to show an unbroken light over an arc of the horizon of 140 degrees of the compass, so fixed as to show the light 70 degrees from right aft on each side of the seaplane, and of such a character as to be visible at a distance of at least 2 miles.

RULE 11

- (a) A vessel under 150 feet in length, when at anchor, shall carry in the forepart of the vessel, where it can best be seen, a white light in a lantern so constructed as to show a clear, uniform, and unbroken light visible all round the horizon at a distance of at least 2 miles.
- (b) A vessel of 150 feet or upwards in length, when at anchor, shall carry in the forepart of the vessel, at a height of not less than 20 feet above the hull, one such light, and at or near the stern of the vessel and at such a height that it shall be not less than 15 feet lower than the forward light, another such light. Both these lights shall be visible all round the horizon at a distance of at least 3 miles.
- (c) Between sunrise and sunset every vessel when at anchor shall carry in the forepart of the vessel, where it can best be seen, one black ball not less than 2 feet in diameter.
- (d) A vessel engaged in laying or in picking up a submarine cable or navigation mark, or a vessel engaged in surveying or underwater operations, when at anchor, shall carry the lights or shapes prescribed in Rule 4 (c) in addition to those prescribed in the appropriate preceding sections of this Rule.
- (e) A vessel aground shall carry by night the light or lights prescribed in sections (a) or (b) and the two red lights prescribed in Rule 4 (a). By day she shall carry, where they can best be seen, three black balls, each not less than 2 feet in diameter, placed in a vertical line one over the other, not less than 6 feet apart.
- (f) A seaplane on the water under 150 feet in length, when at anchor, shall carry, where it can best be seen, a white light, visible all round the horizon at a distance of at least 2 miles.
- (g) A seaplane on the water 150 feet or upwards in length, when at anchor, shall carry, where they can best be seen, a white light forward and a white light aft, both lights visible all round the horizon at a distance of at least 3 miles; and, in addition, if the seaplane is more than 150 feet in span, a white light on each side to indicate the maximum span, and visible, so far as practicable, all round the horizon at a distance of 1 mile.
- (h) A seaplane aground shall carry an anchor light or lights as prescribed in sections (f) and (g), and in addition may carry two red lights in a vertical line, at least 3 feet apart, so placed as to be visible all round the horizon.

RULE 12

Every vessel or seaplane on the water may, if necessary in order to attract attention, in addition to the lights which she is by these Rules required to carry, show a flare-up light or use a detonating or other efficient sound signal that cannot be mistaken for any signal authorized elsewhere under these Rules.

RULE 13

- (a) Nothing in these Rules shall interfere with the operation of any special rules made by the Government of any nation with respect to additional station and signal lights for ships of war, for vessels sailing under convoy, or for seaplanes on the water; or with the exhibition of recognition signals adopted by ship owners, which have been authorized by their respective Governments and duly registered and published.
- (b) Whenever the Government concerned shall have determined that a naval or other military vessel or waterborne seaplane of special construction or purpose cannot comply fully with the provisions of any of these Rules with respect to the number, position, range or arc of visibility of lights or shapes, without interfering with the military function of the vessel or seaplane, such vessel or seaplane shall comply with such other provisions in regard to the number, position, range or arc of visibility of lights or shapes as her Government shall have determined to be the

closest possible compliance with these Rules in respect of that vessel or seaplane.

RULE 14

A vessel proceeding under sail, when also being propelled by machinery, shall carry in the daytime forward, where it can best be seen, one black conical shape, point upwards, not less than 2 feet in diameter at its base.

RULE 15

(a) A power-driven vessel shall be provided with an efficient whistle, sounded by steam or by some substitute for steam, so placed that the sound may not be intercepted by any obstruction, and with an efficient fog-horn, to be sounded by mechanical means, and also with an efficient bell, A sailing vessel of 20 tons or upwards shall be provided with a similar fog-horn and bell.

(b) All signals prescribed by this Rule for vessels under way shall be given:—

(i) by power-driven vessels on the whistle;

(ii) by sailing vessels on the fog-horn;

(iii) by vessels towed on the whistle or fog-horn.

(c) In fog, mist, falling snow, heavy rainstorms, or any other condition similarly restricting visibility, whether by day or night, the signals prescribed in this Rule shall be used as follows:—

(i) A power-driven vessel making way through the water, shall sound at intervals of not more than 2 minutes a prolonged blast.

(ii) A power-driven vessel under way, but stopped and making no way through the water, shall sound at intervals of not more than 2 minutes two prolonged blasts, with an interval of about 1 second between them.

(iii) A sailing vessel under way shall sound, at intervals of not more than 1 minute, when on the starboard tack one blast, when on the port tack two blasts in succession, and when with the wind abaft the beam three blasts in succession.

(iv) A vessel when at anchor shall at intervals of not more than 1 minute ring the bell rapidly for about 5 seconds. In vessels of more than 350 feet in length the bell shall be sounded in the forepart of the vessel, and in addition there shall be sounded in the after part of the vessel, at intervals of not more than 1 minute for about 5 seconds, a gong or other instrument, the tone and sounding of which cannot be confused with that of the bell. Every vessel at anchor may in addition, in accordance with Rule 12, sound three blasts in succession, namely, one short, one prolonged, and one short blast, to give warning of her position and of the possibility of collision to an approaching vessel.

(v) A vessel when towing, a vessel engaged in laying or in picking up a submarine cable or navigation mark, and a vessel under way which is unable to get out of the way of an approaching vessel through being not under command or unable to maneuver as required by these Rules shall, instead of the signals prescribed in subsections (i), (ii) and (iii) sound, at intervals of not more than 1 minute, three blasts in succession, namely, one prolonged blast followed by two short blasts.

(vi) A vessel, towed, or, if more than one vessel is towed, only the last vessel of the two, if manned, shall, at intervals of not more than 1 minute, sound four blasts in succession, namely, one prolonged blast followed by three short blasts. When practicable, this signal shall be made immediately after the signal made by the towing vessel.

(vii) A vessel aground shall give the signal prescribed in sub-section (iv) and shall, in addition, give three

separate and distinct strokes on the bell immediately before and after each such signal.

(viii) A vessel of less than 20 tons, or rowing boat, or a seaplane on the water, shall not be obliged to give the above-mentioned signals, but if she does not, she shall make some other efficient sound signal at intervals of not more than 1 minute.

(ix) A vessel when fishing, if of 20 tons or upwards, shall at intervals of not more than 1 minute, sound at blast, such blast to be followed by ringing the bell; or she may sound, in lieu of these signals, a blast consisting of a series of several alternate notes of higher and lower pitch.

RULE 16

SPEED TO BE MODERATE IN FOG, &C.

(a) Every vessel, or seaplane when taxiing on the water, shall, in fog, mist, falling snow, heavy rainstorms or any other condition similarly restricting visibility, go at a moderate speed, having careful regard to the existing circumstances and conditions,

(b) A power-driven vessel hearing, apparently forward of her beam, the fog-signal of a vessel the position of which is not ascertained, shall, so far as the circumstances of the case admit, stop her engines, and then navigate with caution until danger of collision is over.

PART C—STEERING AND SAILING RULES

PRELIMINARY

1. In obeying and constructing these Rules, any action taken should be positive, in ample time, and with due regard to the observance of good seamanship.
2. Risk of collision can, when circumstances permit, be ascertained by carefully watching the compass bearing of an approaching vessel. If the bearing does not appreciably change, such risk should be deemed to exist.
3. Mariners should bear in mind that seaplanes in the act of landing or taking off, or operating under adverse weather conditions, may be unable, to change their intended action at the last moment.

RULE 17

When two sailing vessels are approaching one another; so as to involve risk of collision, one of them shall keep out of the way of the other, as follows:—

- (a) A vessel which is running free shall keep out of the way of a vessel which is close-hauled.
- (b) A vessel which is close-hauled on the port tack shall keep out of the way of a vessel which is close-hauled on the starboard tack.
- (c) When both are running free, with the wind on different sides, the vessel which has the wind on the port side shall keep out of the way of the other.
- (d) When both are running free, with the wind on the same side, the vessel which is to windward shall keep out of the way of the vessel which is to leeward.
- (e) A vessel which has the wind aft shall keep out of the way of the other vessel.

RULE 18

(a) When two power-driven vessels are meeting end on, or nearly end on, so as to involve risk of collision, each shall alter her course to starboard, so that each may pass on the port side of the other. This Rule only applies to cases where vessels are meeting end on, or nearly end on, in such a manner as to involve risk of collision, and does not apply to two vessels which must, if both keep on their respective courses, pass clear of each other. The only cases to which it does apply are when each of two vessels is end on, or nearly end on, to the other; in other words, to cases in which, by day, each vessel sees the masts of the other in a line, or nearly in a line, with her own; and by night, to cases in which each vessel is in such a position as to see both the sidelights of the other. It does not apply, by day, to cases in which a vessel sees another ahead crossing her own course; or, by night, to cases where the red light of one vessel is opposed to the red light of the other or where the green light of one vessel is opposed to the green light of the other or where a red light without a green light or a green light without a red light is seen ahead, or where both green and red lights are seen anywhere but ahead.

(b) For the purposes of this Rule and Rules 19 to 29 inclusive, except Rule 20 (b), a seaplane on the water shall be deemed to be a vessel and the expression "power-driven vessel" shall be construed accordingly.

RULE 19

When two power-driven vessels are crossing, so as to involve risk of collision, vessel which has the other on her own starboard side shall keep out of the way of the other.

RULE 20

(a) When a power-driven vessel and a sailing vessel are proceeding in such directions as to involve risk of collision, except as provided in Rules 24 and 26, the power-driven vessel shall keep out of the way of the sailing vessel.

(b) A seaplane on the water shall, in general, keep well clear of all vessels and avoid impeding their navigation. In circumstances, however, where risk of collision exists, she shall comply with these Rules.

RULE 21

Where by-any of these Rules one of two vessels is to keep out of the way, the other shall keep her course and speed. When, from any cause, the latter vessel finds herself so close that collision cannot be avoided by the action of the giving-way vessel alone, she also shall take such action as will best aid to avert collision (see Rules 27 and 29).

RULE 22

Every vessel which is directed by these Rules to keep out of the way of another vessel shall, if the circumstances of the case admit, avoid crossing ahead of the other.

RULE 23

Every power-driven vessel which is directed by these Rules to keep out of the way of another vessel shall, on approaching her, if necessary, slacken her speed or stop or reverse.

RULE 24

(a) Notwithstanding anything contained in these Rules, every vessel over-taking any other shall keep out of the way of the overtaken vessel.

(b) Every vessel coming up with another vessel from any direction more than 2 points (22 1/2 degrees) abaft her beam, i.e. in such a position, with reference to the vessel which is overtaking, that at night she would be unable to see either of that vessel's sidelights, shall be deemed to be an overtaking vessel and no subsequent alteration of the bearing between the two vessels shall make the overtaking vessel a crossing vessel within the meaning of these Rules, or relieve her of the duty of keeping clear of the overtaken vessel until she is finally past and clear.

(c) If the overtaking vessel cannot determine with certainty whether she is forward of or abaft this direction from the other vessel, she shall assume that she is an overtaking vessel and keep out of the way.

RULE 25

(a) In a narrow channel every power-driven vessel when proceeding along the course of the channel shall, when it is safe and practicable, keep to that side of the fairway or mid-channel which lies on the starboard side of such vessel.

(b) Whenever a power-driven vessel is nearing a bend in a channel where a power-driven vessel approaching from the other direction cannot be seen, such vessel, when she shall have arrived within one-half mile of the bend, shall give a signal by one prolonged blast of her whistle, which signal shall be answered by a similar blast given by any approaching power-driven vessel that may be within hearing around the bend. Regardless of whether an approaching vessel on the farther side of the bend is heard, such bend shall be rounded with alertness and caution.

RULE 26

All vessels not engaged in fishing shall, when under way, keep out of the way of any vessels fishing with nets or lines or trawls. This Rule shall not give to any vessel engaged in fishing the right of obstructing a fairway used by vessels other than fishing vessels.

RULE 27

In obeying and construing these Rules due regard shall be had to all dangers of navigation and collision, and to any special circumstances, including the limitations of the craft involved, which may render a departure from the above Rules necessary in order to avoid immediate danger.

PART D.—MISCELLANEOUS**RULE 28**

(a) When vessels are in sight of one another, a power-driven vessel under way, in taking any course authorized or required by these Rules, shall indicate that course by the following signals on her whistle, namely:

One short blast to mean "I am altering my course to starboard." Two short blasts to mean "I am altering my course to port." Three short blasts to mean "My engines are going astern."

(b) Whenever a power-driven vessel which, under these Rules, is to keep her course and speed, is in sight of another vessel and is in doubt whether sufficient action is being taken by the other vessel to avert collision, she may indicate such doubt by giving at least five short and rapid blasts on the whistle. The giving of such a signal

shall not relieve a vessel of her obligations under Rules 21 and 29 or any other Rule, or of her duty to indicate any action taken under these Rules by giving the appropriate sound signals laid down in this Rule.

(c) Nothing in these Rules shall interfere with the operation of any special rules made by the Government of any nation with respect to the use of additional whistle signals between ships of war or vessels sailing under convoy.

RULE 29

Nothing in these Rules shall exonerate any vessel, or the owner, master or crew thereof, from the consequences of any neglect to carry lights or signals, or of any neglect to keep a proper look-out, or of the neglect of any precaution which may be required by the ordinary practice of seamen, or by the special circumstances of the case.

RULE 30

RESERVATION OF RULES FOR HARBORS AND INLAND NAVIGATION

Nothing in these Rules shall interfere with the operation of a special rule duly made by local authority relative to the navigation of any harbor, river, lake, or inland water, including a reserved seaplane area.

RULE. 31

DISTRESS SIGNALS

When a vessel or seaplane on the water is in distress and requires assistance from other vessels or from the shore, the following shall be the signals to be used or displayed by her, either together or separately, namely:—

- (a) A gun or other explosive signal fired at intervals of about a minute.
- (b) A continuous sounding with any fog-signal apparatus.
- (c) Rockets or shells, throwing red signal fired one at a time at short intervals.
- (d) A signal made by radiotelegraphy or by any other signaling method consisting of the group ...?? ?? ?? ... in the Morse Code.
- (e) A signal sent by radio telephony consisting of the spoken word "Mayday."
- (f) The International Code Signal of distress indicated by N.C.
- (g) A signal consisting of a square flag having above or below it a ball or anything resembling a ball.
- (h) Flames on the vessel (as from a burning tar barrel, oil barrel, &c).
- (i) A rocket parachute flares showing a red light.

The use of any of the above signals, except for the purpose of indicating that a vessel or a seaplane is in distress, and the use of any signals which may be confused with any of the above signals, is prohibited.

Note.-A radio signal has been provided for use by vessels in distress for the purpose of actuating the auto-alarms of other vessels and thus securing attention to distress calls or messages. The signal consists of a series of twelve dashes, sent in 1 minute, the duration of each dash being 4 seconds, and the duration of the interval between two consecutive dashes 1 second.

RULE 32

All orders to helmsmen shall be given in the following sense: right rudder or starboard to mean "put the vessel's rudder to starboard"; left rudder or port to mean "put the vessel's rudder to port."

ANNEX C

RESOLUTIONS

RESOLUTION 1

CARRIAGE OF PASSENGERS IN EXCESS OF CONVENTION LIMITS THE INTERNATIONAL CONFERENCE ON SAFETY OF LIFE AT SEA, 1948.

RECOGNIZING

That as a consequence of the situation created by the Second World War the number of passengers needing to be carried by sea at the present time is still considerably greater than the passenger accommodation available, and that a number of Governments signatory to the International Convention for the Safety of Life at Sea, 1929, have accordingly been obliged to allow passengers to be carried in their ships in excess of the limits allowed by that Convention.

RESOLVES

That Government should each bring their practice into conformity with the provisions of the said Convention as soon as practicable, and in any event not later than the 31st day of December, 1950.

RESOLUTION 2

SPAIN

In view of the Resolution of the General Assembly of the United Nations dated 12th December, 1946, the Conference considers that Spain is, for the present, prevented from becoming a party to the International Convention for the Safety of Life at Sea, 1948.

The Conference, however, agrees that Spain may, as soon as the Resolution of the General Assembly of the United Nations shall be abrogated or shall cease to be applicable, become a party to the International Convention for the Safety of Life at Sea, 1948, in accordance with Article X of the said Convention.

ANNEX D

RECOMMENDATIONS

Throughout the following Recommendations "the present Convention" means the International Convention for the Safety of Life at Sea, 1948.

1. Denunciation of the International Convention for the Safety of Life at Sea, 1929.

The Conference recommends:—

That Government should accept the present Convention at as early a date as possible, and

That the Governments which become parties to the present Convention should denounce the International Convention for the Safety of Life at Sea, 1929, and should co-operate with one another with a view to ensuring that their respective denunciations become effective on dates as near as possible to, but not sooner than, the date on which the present Convention comes into force in respect of the Governments which have denounced the Convention of 1929.

2. Special Application of Convention Standards

The Conference, having excluded cargo ships of less than 500 tons gross tonnage and fishing vessels from the scope of particular provisions of the present Convention in recognition that the Convention requirements in question might not be applicable to such ships without modification, recommends that Governments should apply the principles of the present Convention to all such ships belonging to their countries as far as is reasonable and practicable.

The Conference, recognizing that the safety of life at sea will be promoted by the fullest possible availability of radio on ships, recommends that all Governments should consider the possibility of extending with such modifications as may be necessary the requirements for radio installations so that such installations should, in so far as practicable, be carried by ships, including coasting ships and fishing vessels, not covered by the present Convention, on voyages in the open sea.

The Conference further recommends that Governments should take steps to ensure that, when ports in their countries are used by ships belonging to countries whose Governments are not parties to the present Convention, such ships are required to conform to standards not lower than those prescribed by the present Convention.

3. Amendments of the Convention Provisions Relating to Construction

WHEREAS

The Conference has made provision for such amendments to the Regulations annexed to the present Convention as may prove necessary or desirable, but it is the opinion of the Conference that new developments in the art of shipbuilding or in the materials available for ship construction should not call for amendment of the Regulations until their worth has been proved.

The Conference therefore

RECOMMENDS

That Governments or the Intergovernmental Maritime Consultative Organization in applying the provisions of Article IX, which gives them discretion as to the time of the application of amended Regulations governing construction, should take the above factor into consideration.

4. Standards of Watertight Subdivision of Passenger Ships

The Conference has given careful consideration to the question of the watertight subdivision of passenger ships in the light of the results achieved since the International Convention for the Safety of Life at Sea, 1929, came into force, and has agreed on certain additional requirements calculated to secure greater safety. It recognizes, however, that the question of watertight subdivision deserves continued study, including in particular the operation of the Criterion of Service formula by which the factors of subdivision applicable to ships are determined.

The Conference therefore recommends Administrations to continue the study of this subject and to interchange the results of their study from time to time through the Authority charged with the circulation of information on matters within the scope of the present Convention.

5. Intact Stability

The Conference has considered the necessity for and the practicability of adopting Regulations for intact stability. Inasmuch as the rules which have been adopted for damage stability will affect intact stability, the Conference is of the opinion that additional experience should be gained to determine the extent to which any additional Regulations dealing with intact stability are required, before promulgating such rules.

The Conference recommends, however, that a further study be made by Governments of the subject of intact stability and that information on this subject be exchanged between Governments.

6. Openings in Bulkheads and Shell Plating

The Conference recognizes the objection which attaches to openings, which may sometimes be open at sea; in the shell plating of ships and in the main transverse watertight bulkheads, but the Conference does not consider that it is practicable to adopt international regulations concerning such openings which are more exacting than those incorporated in the present Convention.

The Conference recommends, however, that the various Governments make special efforts to ensure that the number of such openings, particularly hinged side scuttles below the margin line and doors low down in the machinery space bulkheads, be kept at the minimum required in each case.

7. Metal Hatchway Covers

The Conference has considered the use of metal hatchway covers on weather decks.

The Conference recommends Governments to exchange information regarding their experience as to the respective efficacy of metal and wood hatchway covers for preventing the spread of fire and other matters within the scope of the present Convention.

8. Fire Hose Couplings

The Conference, having been apprised that difficulty and delay are experienced in using shore-based fire-fighting facilities to deal with fires on board ships in port, owing to differences between the couplings of ships' fire hoses and those used by shore establishments recommends that endeavors should be made towards securing the standardization of all such couplings by international agreement.

9. Cyclone Warnings

The Conference considers that it is better to prevent disaster than merely to render assistance. Use may be made of the auto alarm to prevent disaster.

The Conference recommends Governments to authorize selected radiotelegraph coast stations to precede the initial broadcasting of urgent cyclone warnings by the alarm signal, wherever such a procedure is suitable (e.g., where the station is itself near the centre or anticipated path of the cyclone). In order to minimize interference where several countries lie close together adjoining a sea area, a single coast station might be selected by agreement between the Governments of those countries to make these broadcasts for the area.

10. Frequencies

The Conference draws the attention of Governments to the advisability of ensuring that radiotelegraph signals of

distress utilizing emissions of Class A2 shall be effective over a sufficiently wide band of frequencies.

The Conference also desires to draw attention to the provisions of the Radio Regulations relating to radiotelephone transmissions on frequencies in the neighborhood of the radiotelegraph distress frequency and to point out that such transmissions will render inoperative auto alarm receivers working on the alarm signal defined in the above-mentioned Regulations. The Conference desires therefore to emphasize the importance, in the interest of safety of life at sea, of avoiding the use of radiotelephone transmission in the neighborhood of the distress frequency, except in case of emergency.

11. Listening for— Distress Calls, &c.

The Conference, recognizing that shore-based radio facilities make important contributions to safety of life at sea, recommends:—

1. That Governments give consideration to establishing and maintaining, so far as is practicable during the hours of service, continuous listening on the distress frequency prescribed by the Radio Regulations, by a qualified operator using some aural means, in coastal radiotelegraph stations which work in the medium frequency bands.
2. That Governments give consideration to establishing and maintaining, so far as is practicable during the hours of service, continuous listening on the high frequency radiotelegraph frequency prescribed by the Radio Regulations for survival craft, by a qualified operator using some aural means, in at least one of the land radiotelegraph stations under their jurisdiction which work in the high frequency bands.
3. That in order to encourage for safety purposes the installation of radiotelephone equipment in small ships, each Government, so far as is practicable, endeavor to establish or encourage the establishment of coastal telephone stations working in the medium frequency telephone bands.
4. That each Government, having regard to the area served by its radiotelephone coast stations, endeavor to maintain during the hours of service, continuous listening (by some aural means), so far as is practicable, in a sufficient number of radiotelephone coast stations under its jurisdiction, to reduce to a minimum the possibility of a radiotelephone distress call not being received.

12. Radio telegraphy Distress Facilities in Radiotelephone Installations

The Conference recommends that Governments consider the desirability of radiotelephone installations in ships not equipped with radiotelegraphy being capable of transmitting in distress using the frequency and a class of emission assigned by the Radio Regulations to radiotelegraph stations for distress purposes, and being also provided with an automatic keying device for transmitting the alarm signal.

13. Depth-sounding Apparatus

The Conference recommends that Governments should encourage the development and use of reliable echo depth-sounding apparatus.

14. Lights on Land

The Conference recommends that, so far as practicable, steps should be taken by the Governments concerned to regulate the position and the intensity of lights on land in the vicinity of the entrances to ports so as to ensure that such lights cannot be mistaken for, or do not impair the visibility of, the navigation lights of the port.

15. Transmission of Weather Messages

The Conference, recognizing the value to safety at sea of radio weather messages from ships transmitted to appropriate shore stations in accordance with Regulation 4 of Chapter V of the present Convention, recommends

that each Government should endeavor to arrange that such messages shall be free of cost to the ship concerned.

16. Manning

The Conference, recognizing that safety of life at sea is dependent not only on the construction and equipment of ships, the arrangements made to provide all possible aids to navigation and those made to ensure that assistance is afforded to ships in distress, but also on the adoption of measures as provided in Regulation 13 of Chapter V of the present Convention for the purpose of ensuring that from the point of view of safety all ships are sufficiently and efficiently manned, having noted:—

1. That the International Labor Organization has been concerned with manning and has adopted Conventions relating to—

- (a) minimum requirements of professional capacity for masters and officers on board merchant ships; and
- (b) the certification of able seamen.

2. That the constitution of the Intergovernmental Maritime Consultative Organization provides—

- (a) that the Organization shall, through the Maritime Safety Committee, have the duty of considering, inter alia, matters relating to manning from the safety point of view; and
- (b) that the Maritime Safety Committee shall also have the duty of maintaining such close relationships with other intergovernmental bodies concerned with transport and communications as may further the object of the Organization in promoting maritime safety,

RECOMMENDS

that the Intergovernmental Maritime Consultative Organization, when formed, and the International Labor Organization should maintain the closest liaison and should arrange for a joint examination of this problem in order to ensure:—

- (a) that the jurisdiction of each in regard to this question of manning is clearly defined; and
- (b) that consideration is given to the question whether it is necessary to propose minimum manning standards for adoption internationally.

17. Medium Frequency Direction Finding and Radio Beacons

The Conference, recognizing that medium frequency direction finding will continue to provide a valuable navigational aid, recommends that the existing systems of radio beacons provided for use in connection with ship borne medium frequency direction finders should be maintained universally at a standard not below that at present provided, and that in certain areas (notably those where such systems are established) they should be improved and expanded as navigational needs require and opportunity affords. It also recommends that the Maritime Safety Committee study this question, particularly as regards the adoption of a uniform system of radio beacon operating procedure and characteristics.

18. Radio Aids to Navigation

The Conference, recognizing that the recent advances in radio technique are of great service to shipping, recommends that:—

- (a) Governments should recognize the desirability of adopting new equipment, devices or systems

incorporating advanced techniques in radio aids to navigation which have proved operationally useful or necessary in the promotion of safe navigation.

(b) Governments should study all available information concerning the development of electronic systems of position-fixing, with special reference to their suitability for use in their countries and by their countries' ships.

(c) Governments should ensure that in the selection of systems of navigational aids for aircraft and ships due weight is given to the relative advantages of the various systems from both points of view, and that when systems are selected that can serve the needs of both ship and aircraft they shall be so organized and operated as to serve those needs as fully as practicable.

(d) Governments should participate in the regular exchange of information on the whole subject of radar and radio navigational aids.

(e) The Maritime Safety Committee should regard the subject of radio navigational aids as one of fundamental importance for increasing the safety of navigation, should initiate or pursue such special studies of various aspects of the problem as may seem necessary or desirable, and should undertake the coordination and distribution of the information in this field referred to in paragraph (d) above.

19. Navigation of Ships Equipped with Radar, &c.

The Conference, while recognizing that the recent advances in radar and electronic navigational aids are of great service to shipping, is of the opinion that the possession of any such device in no way relieves the master of a ship from his obligation strictly to observe the requirements laid down in the International Regulations for Preventing Collisions at Sea, and in particular, the obligations contained in Articles 15 and 16 of those Regulations.

The Conference recommends that Governments should call the attention of masters and officers to this opinion.

20. RADAR

THE CONFERENCE,

RECOGNIZING:—

1. That high resolution ship borne radar, having suitable and approved minimum performance capabilities and a simple and reliable overall performance monitor, is a device having wide applicability to maritime use for anti-collision, pilot age, above water obstacle detection, and general position-fixing, within range of suitable fixed radar targets either natural or artificial (active and passive). A high resolution radar should have, among other characteristics, the following:—

(a) Minimum range. Provide display of a target down to a minimum range of 100 yards;

(b) Bearing resolution. Provide display, as two separate indications, of targets at the same range separated by not more than 3° in azimuth;

(c) Range resolution. Provide display, as two separate indications, on the shortest range scale of targets on the same azimuth separated by 100 yards in range.

2. That a ship borne radar with reduced performance requirements and generally understood to be an anti-collision radar against large ships is completely inadequate for the full needs of position-fixing and navigation in coastal and pilot age waters.

RECOMMENDS:—

- (a) That Governments encourage the development, manufacture, and installation of ship borne radar on board their ships, taking these facts into account;
- (b) That the Governments of the countries in which such apparatus is manufactured consider the possibility of issuing specifications serving as an indication of the standards desired for the industry and the purchasers of such apparatus;
- (c) That Government should encourage the training of personnel in the use of ship borne radar.

21. Uniform Buoy age

The Conference, recognizing that unification of buoy age, regional or worldwide, would greatly contribute to the safety of navigation, recommends Governments to unify, so far as may be practicable, the systems of buoy age employed in the various waters open to international navigation. It also recommends that a further study of this matter be undertaken by the Maritime Safety Committee, as soon as may be possible.

22. Carriage of Dangerous Goods

The Conference recognizes the great importance of securing international uniformity in the safety precautions applicable to the carriage of dangerous goods by sea, but, in view of the complexity of the subject, considers that much more time than is available at the Conference would be necessary to secure agreement on detailed regulations. Such regulations already exist in certain countries possessing an extensive export trade in chemicals and these are available in the meantime for the guidance of the Governments of other countries in applying the provisions of Regulation 3 of Chapter VI of the present Convention.

The Conference recommends that the subject should receive further study as a matter of urgency either by the Maritime Safety Committee or by the representatives of the Governments chiefly concerned in consultation with one another, with the object of international regulations being drafted as soon as possible for consideration and adoption by the Governments of all countries from which dangerous goods are exported.

The Conference also recommends that the further study to be given to the subject should include the question whether it would be practicable to frame a system of marking dangerous goods by distinctive symbols or designs so as to distinguish them according to the kind of danger which they respectively involve.

23. Coordination of Safety at Sea and in the Air

The Conference,

Having considered the Report of the Preparatory Committee of Experts on Coordination of Safety at Sea and in the Air submitted to the Conference;

Having recognized that it is desirable to coordinate activities regarding safety on and over the sea;

Having taken into account while drawing up the present Convention the recommendations contained in the said Report and those submitted by the International Organizations concerned;

Recommends that, for the common goal of safety, co-operative action be continued and strengthened along the lines suggested in the Report.

Parties to the Agreement:

Algeria Czechoslovakia

Argentina Dahomey
Australia Denmark[1]
Belgium Dominican Republic
Brazil Finland[1]
Bulgaria France [2]
Cambodia Democratic Republic of Germany
Cameroon Federal Republic of Germany
Canada Ghana
Central African Republic Greece
Chile Guinea
China Haiti
Congo (Brazzaville) Hungary
Cuba Iceland
Cyprus India
Ireland Panama
Israel Philippines
Italy Poland
Ivory Coast Portugal[5]
Japan[1] Rumania
Korea Senegal
Kuwait[1] Somali Republic
Liberia South Africa
Madagascar Spain[6]
Malaysia Sweden
Mauritania Switzerland
Mexico Tunisia
Monaco Turkey
Morocco Union of Soviet Socialist Republics
Netherlands[1],[4] United Arab Republic[7]
New Zealand United Kingdom[8]
Nicaragua United States[1],[9]

Niger Uruguay

Nigeria Venezuela

Norway [1] Viet-Nam[1]

Pakistan Yugoslavia[1]

[*] NOTE.—The frequencies prescribed at the present time are 500 kc/s (Radiotelegraphy) and, when the Radio Regulations annexed to the International Telecommunication Convention (Atlantic City, 1947) come into force, 2,182 kc/s (Radiotelegraphy).

[*] NOTE.—In some countries called radio officer.

[*] NOTE.—The Netherlands Administration find it impracticable to comply entirely with this sub-paragraph, in respect of cargo ships of 1,600 tons gross tonnage and upwards but less than 3,500 tons gross tonnage. Nevertheless this Administration agrees to take steps to ensure the maximum possible hours of listening in such ships.

[*] In the absence of field strength measurements it may be assumed that this range will be obtained by a power in the aerial of 15 watts (unmodulated) with an aerial efficiency of 27 per cent.

[1] Notification of withdrawal given effective May 26, 1966

[2] Including french overseas territories

[3] Including Land Berlin

[4] Including Netherlands Antilles

[5] Including Angola, Cape Verde, Macao, Mozambique, Portuguese Guinea, Portuguese India, S. Tome and Principe, and Timor

[6] Including Spanish Colonies

[7] Notification of withdrawal given effective July 27, 1966

[8] Including Hong Kong

[9] Puerto Rico

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