SAFETY OF LIFE AT SEA

Convention signed at London May 31, 1929, with annexes of regulations
Senate advice and consent to ratification of convention, with understandings, June 19, 1936 [1]
Convention ratified by the President of the United States, with understandings, July 7, 1936 [1]
Ratification of the United States deposited at London August 7, 1936
Entered into force January 1, 1933; for the United States November 7, 1936
Proclaimed by the President of the United States September 30, 1936
Regulation XIX of annex I amended January 17, 1933 [2]
Replaced by convention of June 10, 1948,[3] *as amended, as between contracting parties to the later convention*
Terminated as to the United States November 19, 1953 [4]

50 Stat. 1121; Treaty Series 910

INTERNATIONAL CONVENTION FOR THE SAFETY OF LIFE AT SEA

PREAMBLE

The Governments of Germany, the Commonwealth of Australia, Belgium, Canada, Denmark, Spain, the Irish Free State, the United States of America,

[1] The U.S. understandings read as follows:

"(1) That nothing in this convention shall be so construed as to authorize any person to hold any seaman, whether a citizen of the United States of America or an alien, on board any merchant vessel, domestic or foreign, against his will in a safe harbor within the jurisdiction of the United States of America, when such seaman has been officially admitted thereto as a member of the crew of such vessel or to compel such seaman to proceed to sea on such vessel against his will;

"(2) That nothing in this convention shall be so construed as to nullify or modify Section 4 of the Seaman's Act approved March 4, 1915, 38 Stat. 1164, as interpreted by the Supreme Court of the United States in Strathearn vs. Dillon, 252 U.S. 348, and

"(3) That nothing in this convention shall be so construed as to prevent the officers of the United States of America who exercise the control over vessels provided for in Article 54 from making such inspection of any vessel within the jurisdiction of the United States as may be necessary to determine that the condition of the vessel's seaworthiness corresponds substantially with the particulars set forth in its certificate, that the vessel is sufficiently and efficiently manned, and that it may proceed to sea without danger to either passengers or crew, or to prevent such officers from withholding clearance to any vessel which they find may not proceed to sea with safety, until such time as any such vessel shall be put in condition so that it can proceed to sea without danger to the passengers or crew."

[2] See footnote 10, p. 831.

[3] 3 UST 3450; TIAS 2495.

[4] Pursuant to notice of denunciation given by the United States on Nov. 19, 1952.

Finland, France, the United Kingdom of Great Britain and Northern Ireland, India, Italy, Japan, Norway, the Netherlands, Sweden, the Union of Socialist Soviet Republics; being desirous of promoting safety of life at sea by establishing in common agreement uniform principles and rules directed thereto;

Considering that this end may best be achieved by the conclusion of a Convention;

Have appointed their Plenipotentiaries, namely:

The Government of Germany:

Dr. Friedrich Sthamer, Ambassador Extraordinary and Plenipotentiary of the German Reich in London.

Mr. Gustav Koenigs, Ministerialdirigent in the Reichsverkehrsministerium, Geheimer Regierungsrat, Berlin.

Mr. Arthur Werner, Oberregierungsrat in the Reichsverkehrsministerium, Geheimer Justizrat, Berlin.

Mr. Walter Laas, Professor, Director of the "Germanischer Lloyd" Classification Society, Berlin.

Dr. Otto Riess, Director ret. of the Reichsschiffsvermessungsamt, Geheimer Regierungsrat, Neubrandenburg.

Mr. Hermann Giess, Ministerialrat in the Reichspostministerium, Berlin.

Vice-Admiral Hugo Dominik, President of the "Deutsche Seewarte, Hamburg."

The Government of the Commonwealth of Australia:

Captain Henry James Feakes, Royal Australian Navy, Commonwealth Naval Representative in London.

Lieut.-Commander Thomas Free, Royal Naval Reserve, (Retired).

Captain J. K. Davis, Commonwealth Director of Navigation.

The Government of Belgium:

Baron de Gerlache de Gomery, Director-General of the Marine Department

Mr. Gustave de Winne, Ingénieur en Chef, Director of the Marine Department.

Mr. Georges Goor, Adviser to the Marine Department.

The Government of Canada:

Mr. Alexander Johnston, Deputy Minister of Marine.

Mr. Lucien Pacaud, Secretary in the Office of the Canadian High Commissioner in London.

The Government of Denmark:

Mr. Emil Krogh, Assistant-Secretary in the Marine Department, Ministry of Industry, Commerce and Shipping.

Mr. V. Topsöe-Jensen, Judge of the Supreme Court of Appeal.

Captain V. Lorck, Chief Examiner of Masters and Mates.

Mr. J. A. Körbing, Technical Managing Director of the United Steam Ship Company, Copenhagen.
Mr. Aage H. Larsen, Engineer in Chief of the Ministry of Industry, Commerce and Shipping.
Mr. Arnold Poulsen, Engineer Commissioner to the Ministry of Industry, Commerce and Shipping.

The Government of Spain:
Rear-Admiral Don Francisco Javier de Salas y Gonzalez, Head of the Naval Commission in Europe.

The Government of the Irish Free State:
Mr. J. W. Dulanty, Commissioner for Trade for the Irish Free State in Great Britain.
Mr. E. C. Foster, Chief Surveyor in the Marine Branch, Department of Industry and Commerce.

The Government of the United States of America:
The Honourable Wallace H. White, Junior, Member of Congress, Chairman of the Committee on Merchant Marine and Fisheries.
Mr. Arthur J. Tyrer, Commissioner of Navigation, Department of Commerce.
Mr. Charles M. Barnes, Chief of the Treaty Division, Department of State.
Rear-Admiral George H. Rock, Construction Corps, United States Navy, Assistant Chief of the Bureau of Construction and Repair, Navy Department.
Captain Clarence S. Kempff, United States Navy, Hydrographer, Navy Department.
Mr. Dickerson N. Hoover, Supervising Inspector-General of the Steamboat Inspection Service, Department of Commerce.
Mr. William D. Terrell, Chief of the Radio Division, Department of Commerce.
Rear-Admiral John G. Tawresey, Construction Corps, United States Navy (Retired), United States Shipping Board.
Mr. Herbert B. Walker, President of the American Steamship Owners' Association.
Mr. Henry G. Smith, President of the National Council of American Shipbuilders.
Captain Charles A. McAllister, President of the American Bureau of Shipping.

The Government of Finland:
Baron Gustaf Wrede, President of the Shipping Board.
Captain Väinö Bergman, Inspector of Shipping.
Consul Karl Kurten, Manager of the Finnish Shipowners' Association.

The Government of France:
Mr. Rio, Senator and former Minister.
Captain Haarbleicher, Naval Construction Corps, Director of Mercantile Shipping Service, Department of Public Works.
Commander Marie, Naval Construction Corps, Direction of Mercantile Shipping.
Captain Thouroude, Naval Attaché to the French Embassy in London.

The Government of the United Kingdom of Great Britain and Northern Ireland:
Sir Herbert W. Richmond, Vice-Admiral, Royal Navy.
Sir Westcott Abell, Professor of Naval Architecture, Armstrong College, Newcastle-on-Tyne.
Mr. A. L. Ayre, Vice-President of the Shipbuilding Employers' Federation.
Captain F. W. Bate, Professional Officer, Mercantile Marine Department, Board of Trade.
Mr. C. H. Boyd, Mercantile Marine Department, Board of Trade.
Sir William C. Currie, President of the Chamber of Shipping of the United Kingdom.
Mr. A. J. Daniel, Principal Ship Surveyor, Board of Trade.
Sir Norman Hill, Chairman of the Merchant Shipping Advisory Committee.
Sir Charles Hipwood, Principal Assistant Secretary, Mercantile Marine Department, Board of Trade.
Captain A. R. H. Morrell, Trinity House.

The Government of India:
Sir Geoffrey L. Corbett, Commerce Department, Government of India.
Captain E. V. Whish, Port Officer, Bombay.
Mr. M. A. Master, General Manager of the Scindia Steam Navigation Company.

The Government of Italy:
Lieut.-General of Port G. Ingianni, General Director of the Mercantile Marine.
Vice-Admiral A. Alessio, Chief of the Technical Inspectorate of the Mercantile Marine.
Count D. Rogeri di Villanova, Counsellor to the Italian Embassy in London.
Dr. T. C. Giannini, Counsellor of Emigration.
Major-General of Port F. Marena, Vice-Inspector of Harbour Master Offices.
Engineer-General E. Ferretti, Chief of the Technical Office of the Italian Naval and Aeronautical Register.

Mr. G. Gneme, Chief of the Telegraph Service of the General Direction of Postal and Telegraphic Services.
Commander L. Biancheri, Royal Italian Navy.

The Government of Japan:
Mr. Yukio Yamamoto, Inspector-General of the Mercantile Marine Bureau, Expert in the Department of Communications.
Captain Shichihei Ota, Imperial Japanese Navy.
Mr. Itaro Ishii, First Class Secretary of Embassy.

The Government of Norway:
Mr. B. Vogt, Norwegian Minister in London.
Mr. L. T. Hansen, Director of the Department of Shipping, Ministry of Commerce and Navigation.
Mr. J. Schönheyder, Surveyor-in-Chief of the Ship and Engineer Division, Ministry of Commerce and Navigation.
Mr. Arth H. Mathiesen, Vice-President of the Norwegian Shipowners' Association.
Captain N. Marstrander, Chairman of the Board of the Norwegian Masters' Association.
Mr. A. Birkeland, Manager of the Norwegian Seamen's and Firemen's Union.

The Government of the Netherlands:
Vice-Admiral C. Fock, Inspector-General of Navigation.
Mr. C. H. de Goeje, Ex-Inspector-General of Navigation, Netherland East Indies.
Mr. A. van Driel, Adviser on Naval Architecture, Shipping Inspection Service.
Mr. J. A. Bland van den Berg, Inspector of Coastal and Ships' Radiotelegraphy.
Mr. Phs. van Ommeren, Junior, Chairman of Phs. van Ommeren, Ltd.
Mr. H. G. J. Uilkens, Ex-Commodore of the Netherland Steamship Company.

The Government of Sweden:
Baron Palmstierna, Swedish Minister in London.
Mr. Nils Gustaf Nilsson, Assistant Under-Secretary in the Board of Trade.
Captain Erik Axel Fredrik Eggert, Maritime Expert to the Social Board.

The Government of the Union of Socialist Soviet Republics:
Mr. Jan Lvovitch Arens, Counsellor to the U.S.S.R. Embassy in Paris.
Captain Karl Pavlovitch Eggi, Commander of the Icebreaker "Lenin," Soviet Merchant Fleet (Sovtorgflot).

Who, having communicated their full powers, found in good and due form, have agreed as follows:—

CHAPTER I. PRELIMINARY

ARTICLE 1

THE Contracting Governments undertake to give effect to the provisions of the present Convention for the purpose of promoting safety of life at sea, to promulgate all regulations and to take all other steps which may be necessary to give the present Convention full and complete effect.

The provisions of the present Convention are completed by regulations contained in Annex I, which have the same force and take effect at the same time as the present Convention. Every reference to the present Convention implies at the same time a reference to the Regulations annexed thereto.

ARTICLE 2

Applications and Definitions

1. The provisions of the present Convention shall apply to ships belonging to countries the Governments of which are Contracting Governments, and to ships belonging to territories to which the present Convention is applied under Article 62, as follows:—

Chapter II.—(*Construction*) to passenger ships (mechanically propelled) on international voyages.

Chapter III.—(*Life-saving Appliances*) to passenger ships (mechanically propelled) on international voyages.

Chapter IV.—(*Radiotelegraphy*) to all ships engaged on international voyages except cargo ships of less than 1,600 tons gross tonnage.

Chapter V.—(*Safety of Navigation*) to all ships on all voyages.

Chapter VI.—(*Certificates*) to all the ships to which Chapters II, III and IV apply.

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

3. In the present Convention, unless expressly provided otherwise—

(*a*) a ship is regarded as belonging to a country if it is registered at a port of that country;

(*b*) the expression "Administration" means the Government of the country in which the ship is registered;

(*c*) an international voyage is a voyage from a country to which the present Convention applies to a port outside such country, or conversely; and for this purpose every colony, overseas territory, protectorate or territory under suzerainty or mandate is regarded as a separate country;

(*d*) a ship is a passenger ship if it carries more than 12 passengers;

(*e*) the expression "Regulations" means the Regulations contained in Annex I.

4. The present Convention, unless expressly provided otherwise, does not apply to ships of war.

ARTICLE 3

Cases of "Force Majeure"

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.*

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.

CHAPTER II. CONSTRUCTION

ARTICLE 4

Application

1. This Chapter, except where it is otherwise expressly provided, applies to new passenger ships engaged on international voyages.

2. A new passenger ship is a ship the keel of which is laid on or after the 1st July, 1931, or a ship which is converted to passenger service on or after that date, all other passenger ships being described as existing passenger ships.

3. Each Administration may, if it considers that the route and the conditions of the voyage are such as to render the application of the requirements of this Chapter unreasonable or unnecessary, exempt from the requirements of this Chapter 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.

4. In the case of a passenger ship which, in the course of its voyage, does not proceed more than 200 miles from the nearest land, the Administration of the country to which the ship belongs may allow relaxations from such of the requirements of Regulations IX, X, XV and XIX as may be proved to the satisfaction of the Administration to be neither reasonable nor practicable.

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

6. In the case of passenger ships engaged on international voyages which are employed in the carriage of large numbers of unberthed passengers in special trades, such, for example, as the pilgrim trade, an 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:—

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

(*b.*) 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.

7. This Chapter does not apply to ships which are not mechanically propelled or to wooden ships of primitive build, such as dhows, junks, &c.

ARTICLE 5

Watertight Subdivision of Ships

1. Ships shall be as efficiently subdivided as is possible having regard to the nature of the service for which they are intended. The requirements respecting subdivision are given in the following Articles and in the Regulations.

2. The degree of subdivision provided for by these requirements varies 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.

3. Regulations I to V indicate the method to be followed in order to determine the degree of subdivision applicable to a ship.

4. In order that the required degree of subdivision shall be maintained, a loadline corresponding to the approved subdivision draft 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 loadlines assigned and marked to correspond with the subdivision drafts which the Administration may approve for the alternative service conditions. The freeboard corresponding to each approved subdivision loadline, and the conditions of service for which it is approved, shall be clearly indicated on the Safety Certificate. Subdivision loadlines shall be marked and recorded in the manner provided in Regulation VII.

ARTICLE 6

Peak and Machinery Space Bulkheads, Shaft Tunnels, &c.

All ships shall be fitted with watertight forward and after peak bulkheads and with watertight bulkheads at the extremities of the machinery space, and,

in screw ships, with watertight shaft tunnels or equivalent subdivision in accordance with the provisions of Regulation VI.

ARTICLE 7

Construction, Testing, &c.

Regulations VIII to XIII and XV to XXI prescribe rules for—

(*a*) the construction and testing of subdivision bulkheads, inner bottoms, watertight decks, trunks, ventilators, fire-resisting bulkheads, &c.;

(*b*) the conditions governing openings in bulkheads, in the ship's sides and in the weather deck, and the character and use of means which shall be provided for closing these openings;

(*c*) the tests and the periodical inspections and operation of the means of closing openings in bulkheads and in the ship's side;

(*d*) exits from watertight compartments;

(*e*) pumping arrangements; and

(*f*) power for going astern and auxiliary steering apparatus.

ARTICLE 8

Stability Test

Every new passenger ship shall be inclined upon its completion and the elements of its stability determined. The operating personnel shall be supplied with such information on this subject as is necessary to permit efficient handling of the ship.

ARTICLE 9

Entries in the Official Log Book

A record of the closing and opening of watertight doors, &c., and of all inspections and drills, shall be entered in the official log book as required by Regulation XIV.

ARTICLE 10

Initial and Subsequent Surveys of Ships

The general principles which shall govern the survey of ships, whether new or existing, as regards hull, main and auxiliary boilers and machinery, and equipments, are stated in Regulation XXII. Each Contracting Government undertakes—

(1) to draw up detailed regulations in accordance with these general principles, or to bring its existing regulations into agreement with these principles;

(2) to secure that these regulations shall be enforced.

The detailed regulations referred to in the preceding paragraph shall be in all respects such as to secure that, from the point of view of safety of life, the ship is fit for the service for which it is intended.

CHAPTER III. LIFE-SAVING APPLIANCES, &c.

ARTICLE 11

Interpretation

For the purposes of this Chapter—

(*a*) the expression "new ship" means a ship the keel of which is laid on or after the 1st July, 1931, all other ships being described as existing ships;

(*b*) the expression "short international voyage" means an international voyage in the course of which a ship is not more than 200 miles from the nearest land;

(*c*) the expression "buoyant apparatus" means buoyant deck seats, or buoyant deck chairs, or any other buoyant apparatus excepting boats, life-buoys and life-jackets.

ARTICLE 12

Application

1. This Chapter, except where it is otherwise expressly provided, applies to new passenger ships which are mechanically propelled and engaged on international voyages.

2. Special provisions are laid down in Articles 13, 14, 19 and 25 with regard to new passenger ships engaged on short international voyages.

3. Each Administration, if it considers that the route and the conditions of the voyage are such as to render the application of the full requirements of this Chapter unreasonable or unnecessary, may to that extent exempt from the requirements of this Chapter individual ships or classes of ships belonging to its country which, in the course of their voyage, do not go more than 20 miles from the nearest land.

4. In the case of existing passenger ships which are mechanically propelled and engaged on international voyages and which do not already comply with the provisions of this Chapter relating to new passenger ships, the arrangements on each ship shall be considered by the Administration of the country to which the ship belongs, with a view to securing, so far as this is practicable and reasonable, compliance with the general principles set out in Article 13 not later than the 1st July, 1931, and substantial compliance with the other requirements of this Chapter.

5. In the case of passenger ships which are mechanically propelled and engaged on international voyages and which are employed in the carriage of large numbers of unberthed passengers in special trades, such, for example, as the pilgrim trade, an 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:

(*a.*) That the fullest provision which the circumstances of the trade will permit shall be made in the matter of lifeboats and other lifesaving appliances and fire protection.

(*b.*) That all such boats and apparatus shall be readily available within the meaning of Article 13.

(*c.*) That a life-jacket shall be provided for every person on board.

(*d.*) 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.

Article 13

Lifeboats and Buoyant Apparatus

The general principles governing the provision of lifeboats and buoyant apparatus in a ship to which this Chapter applies are that they shall be readily available in case of emergency and shall be adequate.

1. To be readily available, the lifeboats and buoyant apparatus must comply with the following conditions:—

(*a.*) They must be capable of being got into the water safely and rapidly even under unfavourable conditions of list and trim.

(*b.*) It must be possible to embark the passengers in the boats rapidly and in good order.

(*c.*) The arrangement of each boat and article of buoyant apparatus must be such that it will not interfere with the operation of other boats and buoyant apparatus.

2. To be adequate, the provision of lifeboats and buoyant apparatus must satisfy the following conditions:—

(*a.*) Subject to the provisions of sub-paragraph (*b*) of this paragraph there must be accommodation in boats for all persons on board, and there must, in addition, be buoyant apparatus for 25 per cent. of the persons on board.

(*b.*) In the case of passenger ships engaged on short international voyages, the boats must be provided in accordance with the requirements set out in the table in Regulation XXXIX, and there must be, in addition, buoyant apparatus so that the boats and buoyant apparatus together provide accommodation for all on board as set out in Regulation XXXVIII. There must, in addition, be buoyant apparatus for 10 per cent. of the persons on board.

(*c.*) No more boats shall be required on any passenger ship than are sufficient to accommodate all persons on board.

ARTICLE 14

Ready Availability and Adequacy

The arrangements for securing the principles of ready availability and adequacy mentioned in Article 13 shall be in accordance with the provisions of Regulations XXXVII, XXXVIII and XXXIX.

ARTICLE 15

Standard types of Boats. Life Rafts. Buoyant Apparatus

All the lifeboats, life rafts and buoyant apparatus shall comply with the conditions fixed by the Convention and Regulations XXIV to XXIX .

ARTICLE 16

Construction of Boats

All boats must be properly constructed, and shall be of such form and proportion that they shall have ample stability in a seaway, and sufficient freeboard when loaded with their full complement of persons and equipment.

Each boat must be of sufficient strength to enable it to be safely lowered into the water when loaded with its full complement of persons and equipment.

ARTICLE 17

Embarkation of the Passengers in the Boats

Suitable arrangements shall be made for embarking the passengers in the boats at an embarkation deck. There shall also be a suitable ladder provided at each set of davits.

ARTICLE 18

Capacity of Boats and Life Rafts

The number of persons that a boat of one of the standard types or an approved life raft or buoyant apparatus can accommodate and the conditions of approval of life rafts and buoyant apparatus shall be ascertained in accordance with the provisions of Regulations XXX to XXXV inclusive.

ARTICLE 19

Equipment of Boats and Life Rafts

Regulation XXXVI prescribes the equipment for boats and life rafts.

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ARTICLE 20

Life-jackets and Life-buoys

1. Every ship to which this Chapter applies shall carry for every person on board a life-jacket of a type approved by the Administration, and in addition, unless these life-jackets can be adapted for use by children, a sufficient number of life-jackets suitable for children.

2. Every such ship shall also carry life-buoys of a type approved as aforesaid to the number required by Regulation XL.

3. A life-jacket or life-buoy shall not be approved by an Administration unless it satisfies the requirements of Regulation XL applicable to life-jackets and life-buoys respectively.

4. In this Article the expression "life-jacket" includes any appliance capable of being fitted on the body, having the same buoyancy as a life-jacket.

ARTICLE 21

Means of Ingress and Egress. Emergency Lighting

1. Proper arrangements shall be made for ingress to and egress from the different compartments, decks, &c.

2. Provision shall be made for an electric or other system of lighting, sufficient for all requirements of safety, in the different parts of the ship, and particularly upon the decks on which the lifeboats are stowed. On ships in which the boat deck is more than 9·15 metres (30 feet) above the waterline at the lightest seagoing draught, provision shall be made for the illumination from the ship of the lifeboats when alongside and in process of or immediately after being launched. There must be a self-contained source capable of supplying, when necessary, this safety lighting system, and placed in the upper parts of the ship above the bulkhead deck.

3. 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 independent installation referred to in the preceding paragraph in the event of failure of the main generating plant.

ARTICLE 22

Certificated Lifeboatmen. Manning of the Boats

1. In every ship to which this Chapter applies there must be, for any boat or life raft carried in order to comply with this Chapter, such number of certificated lifeboatmen as is required by Regulation XLI for that boat.

2. The allocation of the certificated lifeboatmen to each boat and life raft remains within the discretion of the master, according to the circumstances.

3. By "certificated lifeboatman" is meant any member of the crew who holds a certificate of efficiency issued under the authority of the Administration in accordance with the conditions laid down in the afore-mentioned Regulation.

4. The manning of the boats shall be as prescribed in Regulation XLII.

ARTICLE 23

Line-Throwing Appliances

Every ship to which this Chapter applies shall carry a line-throwing appliance of a type approved by the Administration.

ARTICLE 24

Dangerous Goods. Fire Protection

1. The carriage, either as cargo or ballast, of goods which by reason of their nature, quantity, or mode of stowage, are, either singly or collectively, liable to endanger the lives of the passengers or the safety of the ship, is forbidden.

This provision does not apply to the ship's distress signals, nor to the carriage of naval or military stores for the public service of the State under conditions authorised by the Administration.

Each Administration shall, from time to time by official notice, determine what goods are to be considered dangerous goods, and shall indicate the precautions which must be taken in the packing and stowage thereof.

2. The arrangements to be made for the detection and extinction of fire shall be as prescribed in Regulation XLIII.

ARTICLE 25

Muster Roll and Drills

Special duties for the event of an emergency shall be allotted to each member of the crew.

The muster list shall show all these special duties and shall indicate, in particular, the station to which each man must go, and the duties that he has to perform.

Before the vessel sails, the muster list shall be drawn up and exhibited, and the proper authority shall be satisfied that the muster list has been prepared for the ship. It shall be posted in several parts of the ship, and in particular in the crew's quarters.

Regulations XLIV and XLV prescribe the conditions under which musters of the crew and drills shall take place.

CHAPTER IV. RADIOTELEGRAPHY

ARTICLE 26

Application and Definition

1. This Chapter applies to all ships engaged on international voyages except cargo ships of less than 1,600 tons gross tonnage.

2. For the purposes of this Chapter a cargo ship means any ship not being a passenger ship.

ARTICLE 27

Fitting of Radio Installation

1. All ships to which this Chapter applies shall, unless exempted under Article 28, be fitted with a radiotelegraph installation complying with the provisions of Article 31, as follows:—

(*a.*) All passenger ships, irrespective of size.

(*b.*) All cargo ships of 1,600 tons gross tonnage and upwards.

2. Each Administration may delay the application of the provisions of paragraph 1 (*b*) to cargo ships belonging to its country of less than 2,000 tons gross tonnage for a period not exceeding five years from the date of the coming into force of the present Convention.

ARTICLE 28

Exemptions from the Requirements of Article 27

1. Each Administration may, if it considers that the route and the conditions of the voyage are such as to render a radiotelegraph installation unreasonable or unnecessary, exempt ships belonging to its country from the requirements of Article 27 as follows:—

I. Passenger Ships.

(*a.*) Individual passenger ships or classes of passenger ships which, in the course of their voyage, do not go more than—

(i) 20 miles from the nearest land;

or

(ii) 200 miles in the open sea between two consecutive ports.

(*b.*) Passenger ships which make voyages entirely within the restricted areas specified in the Annex to this Article.

II. Cargo Ships.

Individual cargo ships or classes of cargo ships which, in the course of their voyage, do not go more than 150 miles from the nearest land.

2. Each Administration may, in addition, exempt ships belonging to its country of the following classes:—

I.—Barges in tow and existing sailing ships.

An existing sailing ship is one the keel of which is laid before the 1st July, 1931.

II.—Ships of primitive build, such as dhows, junks, &c., if it is practically impossible to fit them with a radiotelegraph installation.

III.—Ships which are not normally engaged on international voyages, but which in exceptional circumstances are required to undertake a single voyage of that kind.

ANNEX TO ARTICLE 28

1. The Baltic Sea and approaches thereto East of a line drawn from Utsire (Norway) in the North to Texel (Netherlands) in the South, outside the territorial jurisdiction of the Union of Socialist Soviet Republics.

2. The portions of the Gulf of Tartary and the Sea of Okhotsk covered in voyages between ports in Hokkaido and ports in Japanese Sakhalin.

3. The Chosen (Tyosen) Strait between a line in the North drawn from Kawajiri Misaki (Cape Natsungu) to Fusan, and a line in the South drawn from Nagasaki to Giffard Island (off the South-West point of Quelpart Island) and thence to Tin To (Amherst Island).

4. The Yellow Sea North of Parallel 37° North.

5. The Formosa Strait between a line in the North drawn from Fuki Kaku (Syauki Point) to Foochow and a line in the South drawn from South Cape (the South point of Formosa) to Hong Kong.

6. The area within the following limits:—

Parallel 10° N. from long. 94° E. to the coast of Asia, coast of Asia to Saigon (Cape Tiwan), straight lines between Cape Tiwan, lat. 4°30′ N. long. 110° E., south point of Palawan Island, Palmas (Miangas) Island, lat. 0° long. 140° E., lat. 0° long. 148° E., lat. 10° S. long. 148° E., Cape York, north coast of Australia from Cape York to Port Darwin (Cape Charles), straight lines between Cape Charles, Ashmore Reef (East Island), lat. 10° S. long. 109° E., Christmas Island, lat. 2° N. long. 94° E., lat. 10° N. long. 94° E., outside the territorial jurisdiction of Australia and of the United States of America.

7. The Caribbean Sea, outside the territorial jurisdiction of the United States of America, in relation to voyages made by sailing ships only.

8. The area of the South Pacific Ocean bounded by the Equator, Meridian 130° W., Parallel 34° S., and the coast of Australia, outside the territorial jurisdiction of Australia.

9. The Tong King Gulf and portions of the China Sea lying to the West of a line drawn from Hong Kong to Lat. 17° N. Long. 110° E., thence due South to Latitude 10° N., and thence West to Saigon.

10. The portions of the Indian Ocean covered in voyages between ports in Madagascar, Reunion and the Mauritius Islands.

11. The portions of the North Atlantic Ocean and Mediterranean Sea covered in voyages between Casablanca (Morocco) and Oran (Algeria) and intermediate ports.

ARTICLE 29

Watches

1. Passenger Ships.

Each passenger ship which, in accordance with Article 27, is required to be fitted with a radiotelegraph installation, shall, for safety purposes, carry a qualified operator, and, if not fitted with an auto-alarm, shall, whilst at sea, keep watches by means of a qualified operator or a certified watcher, as under:—

(*a.*) All passenger ships under 3,000 tons gross tonnage, as determined by the Administration concerned;

(*b.*) All passenger ships of 3,000 tons gross tonnage and over, continuous watch.

Each Administration is authorised to exempt passenger ships belonging to its country from 3,000 tons to 5,500 tons gross tonnage, both included, from the requirement of a continuous watch for a period not exceeding one year from the date of the coming into force of the present Convention, provided that during the period of such exemption they shall maintain a watch of at least 8 hours per day.

2. Cargo Ships.

Each cargo ship which, in accordance with Article 27, is required to be fitted with a radiotelegraph installation, shall, for safety purposes, carry a qualified operator, and, if not fitted with an auto-alarm, shall, whilst at sea, keep watches by means of a qualified operator or a certified watcher, as under:—

(*a.*) All cargo ships under 3,000 tons gross tonnage, as determined by the Administration concerned;

(*b.*) Cargo ships from 3,000 to 5,500 tons gross tonnage, both included, at least 8 hours' watch per day;

(*c.*) Cargo ships over 5,500 tons gross tonnage, continuous watch.

Each Administration is authorised to exempt ships belonging to its country included in (*c*) above from the requirement of a continuous watch for a period not exceeding one year from the date of the coming into force of the present Convention, provided that during the period of such exemption they shall maintain a watch of at least 8 hours per day.

Each Administration is also authorised to exempt ships belonging to its country from 5,500 tons to 8,000 tons gross tonnage from the requirement of a continuous watch for a further period of one year, provided that during this further period of exemption they shall maintain a watch of at least 16 hours per day.

3. On all ships fitted with an auto-alarm this auto-alarm shall, whilst the ship is at sea, always be in operation when the operator or watcher is not on watch.

On ships for which the hours of watch are to be determined by the Administration concerned, such watch should be maintained preferably at hours prescribed for radiotelegraph service by the International Radiotelegraph Convention in force.

On ships which are required to keep 8 hours' or 16 hours' watch per day, such watch shall be maintained at the hours prescribed for radiotelegraph service by the International Radiotelegraph Convention in force.

4. By *auto-alarm* is meant an automatic alarm receiver which complies with the requirements of Article 19, § 21, of the General Regulations annexed to the International Radiotelegraph Convention, 1927.[5]

5. By *qualified operator* is meant a person holding a certificate complying with the provisions of the General Regulations annexed to the International Radiotelegraph Convention in force.

6. By *certified watcher* is meant any person holding a watcher's certificate issued under the authority of the Administration.

ARTICLE 30

Watchers

1. A watcher's certificate shall not be granted by a Contracting Government unless the applicant proves that he is capable—

(*a*) of receiving and understanding the alarm, distress, safety and urgency signals when these signals occur among a series of other signals;

(*b*) of correct reception by ear of code groups (mixed letters, figures and punctuation marks) at a speed of sixteen groups per minute, each group being composed of five characters and each figure or punctuation mark counting as two characters;

(*c*) of regulating the receivers used in the ship's radiotelegraph installation.

2. The Contracting Governments undertake to take steps to ensure that certified watchers observe the secrecy of correspondence.

ARTICLE 31

Technical Requirements

The radiotelegraph installations required by Article 27 above and the direction-finding apparatus required by Article 47 shall comply with the following requirements:—

1. The ship's station must be placed in accordance with the detailed Regulations of the Government of the country to which the ship belongs, in the

[5] For text of convention signed at Washington Nov. 25, 1927 (TS 767), see *ante*, p. 683; for text of general and supplementary regulations annexed to the convention, see 45 Stat. 2848 or TS 767, p. 13.

upper part of the ship in a position of the greatest possible safety, as high as practicable above the deepest load water line.

2. There shall be provided, between the bridge of the ship and the wireless telegraph room, means of communication either by voice pipe or by telephone or in some other manner equally efficient.

3. A reliable clock with a seconds hand must be provided in the wireless telegraph room.

4. A reliable emergency light must be provided in the wireless telegraph room.

5. The installation shall comprise a main installation and an emergency (reserve) installation. If, however, the main installation complies with all the requirements of an emergency (reserve) installation the latter is not then obligatory.

6. The main and emergency (reserve) installations must be capable of transmitting and receiving on the frequencies (wave lengths) and types of waves assigned by the International Radiotelegraph Convention in force for the purpose of distress and safety of navigation to ships compulsorily fitted with radiotelegraph installations in accordance with the present Convention.

7. The main and emergency (reserve) transmitters shall have a note frequency of at least 100.

8. The main transmitter shall have a *normal range* of 100 nautical miles, that is to say, it must be capable of transmitting clearly perceptible signals from ship to ship over a range of at least 100 nautical miles by day under normal conditions and circumstances, the receiver being assumed to be one employing a rectifier of the crystal type without amplification.[6]

9. Sufficient power must be available in a ship station at all times to operate the main radiotelegraph installation efficiently under normal conditions over the above range.

10. All parts of the emergency (reserve) installation shall be placed in the upper part of the ship, in a position of the greatest possible safety, as high above the deepest load water line as practicable. The emergency (reserve) installation must be provided with a source of energy independent of the propelling power of the ship and of the main electricity system and must be capable of being put into operation rapidly and of working for at least six continuous hours.

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[6] Unless a more precise and practical method is available to determine the range of transmitters it is recommended that, as a guide, the following relations between the range in nautical miles (from ship to ship under normal conditions in daytime) and the power of the ship transmitter in metre ampères for 500 kilocycles per second (600 m) be used:—

100 nautical miles	60 M A
80 nautical miles	45 M A
50 nautical miles	25 M A

M being the actual height in metres of the aerial from its highest point to the load line.
A being the current in ampères measured at the base of the aerial in case of B, or fully modulated A 2, transmitters. [Footnote in original.]

For the emergency (reserve) installation, the normal range as defined in paragraph 8 above must be at least 80 nautical miles for ships required to maintain a continuous watch and at least 50 nautical miles for all other ships.[6]

11. The receiving installation must permit of the reception of such of the waves used for the transmission of time signals and meteorological messages as may be considered necessary by the Administration.

12. The receiver must be so arranged as to be capable of maintaining reception by means of a rectifier of the crystal type.

13. In ships in which watch is kept by means of an automatic alarm receiver a means of giving audible warning shall be provided in the wireless telegraph room, in the wireless operator's cabin, and on the bridge, which shall operate continuously after the receiver has been operated by the alarm signal or distress call until stopped. Only one switch for stopping the warning shall be provided and this shall be situated in the wireless telegraph room.

14. In such ships the wireless operator, when going off watch, shall connect the automatic alarm receiver to the aerial and test its efficiency. He shall report to the master or the officer on watch on the bridge whether it is in working order.

15. Whilst the ship is at sea the emergency source of power shall be maintained at its full efficiency and the automatic alarm receiver shall be tested at least once every 24 hours. A statement that both these requirements have been fulfilled must be inserted in the ship's official log daily.

16. A wireless log shall be carried by every ship compulsorily equipped with wireless transmitting apparatus. This document shall be kept in the wireless telegraph room, and in it shall be inserted the names of the operators and watchers as well as all incidents and occurrences connected with the wireless service which may appear to be of importance to safety of life at sea, and in particular all distress messages and distress traffic in full.

17. The direction-finding apparatus required by Article 47 shall be efficient and capable of receiving clearly perceptible signals and of taking bearings from which the true bearing and direction may be determined. It shall be capable of receiving signals on the frequencies prescribed for distress, direction finding and wireless telegraph beacons by the International Radiotelegraph Convention in force.

Efficient communication shall be provided between the apparatus and the bridge.

ARTICLE 32

Competence

The matters governed by the International Radiotelegraph Convention, Washington, 1927, and the Regulations annexed thereto remain, and will continue, subject to the provisions:—

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(1.) Of that Convention and of the Regulations annexed thereto, and of any Convention and Regulations which may in the future be substituted therefor;

(2.) Of the present Convention in regard to all the points in which it supplements the aforementioned documents.

CHAPTER V. SAFETY OF NAVIGATION

ARTICLE 33

Application

The provisions of this Chapter referring to ships, unless otherwise expressly provided, apply to all ships on all voyages.

ARTICLE 34

Danger Messages

The master of every ship which meets with dangerous ice, a dangerous derelict, a dangerous tropical storm or any other direct danger to navigation is bound to communicate the information, by all the means of communication at his disposal, to the ships in the vicinity, and also to the competent authorities at the first point of the coast with which he can communicate. It is desirable that the said information be sent in the manner set out in Regulation XLVI.

Each Administration will take all steps which it thinks necessary to ensure that when intelligence of any of the dangers specified in the previous paragraph is received, it will be promptly brought to the knowledge of those concerned and communicated to other Administrations interested.

The transmission of messages respecting the dangers specified is free of cost to the ships concerned.

ARTICLE 35

Meteorological Services

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.

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

(*a*) to warn ships of gales, storms and tropical storms, both by the issue of wireless messages and by the display of appropriate signals at coastal points;

(*b*) to issue daily, by radio, weather bulletins suitable for shipping, containing data of existing weather conditions and forecasts;

(*c*) to arrange for certain selected ships to take meteorological observations at specified hours, and to transmit such observations by wireless telegraphy for the benefit of other ships and of the various official meteorological services; and to provide coast stations for the reception of the messages transmitted;

(*d*) to encourage all ship-masters to inform surrounding ships whenever they experience wind force of 10 or above on the Beaufort scale (force 8 or above on the decimal scale).

The information provided for in paragraphs (*a*) and (*b*) of this article will be furnished in form for transmission in accordance with Article 31, §§ 1, 3 and 5, and Article 19, § 25, of the General Regulations annexed to the International Radiotelegraph Convention, Washington, 1927, and during transmission "to all stations" of meteorological information, forecasts and warnings, all ship stations must conform to the provisions of Article 31, § 2, of those General Regulations.

Weather observations from ships addressed to national meteorological services will be transmitted with the priority specified in Article 3, Additional Regulations, International Radiotelegraph Convention, Washington, 1927.

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 countries concerned.

Every endeavour will be made to obtain a uniform procedure in regard to the international meteorological services specified in this Article, and, as far as is practicable, to conform to the recommendations made by the International Meteorological Organization, to which organization the Contracting Governments may refer for study and advice any meteorological questions which may arise in carrying out the present Convention.

ARTICLE 36

Ice Patrol. Derelicts

The Contracting Governments undertake to continue a service of ice patrol and a service for study and observation of ice conditions in the North Atlantic. Further, they undertake to take all practicable steps to ensure the destruction or removal of derelicts in the northern part of the Atlantic Ocean east of the line drawn from Cape Sable to a point in latitude 34° N. longitude 70° W. if this destruction or removal is considered necessary at the time.

The Contracting Governments undertake to provide not more than three vessels for these three services. During the whole of the ice season they shall be employed in guarding the south-eastern, southern and south-western limits of the regions of icebergs in the vicinity of the Great Bank of Newfoundland for the purpose of informing trans-Atlantic and other passing vessels of the extent of this dangerous region; for the observation and study of ice conditions in general; for the destruction or removal of derelicts; and for the purpose of affording assistance to vessels and crews requiring aid within the limits of operation of the patrol vessels.

During the rest of the year the study and observation of ice conditions shall be maintained as advisable, and one vessel shall always be available for the search for, and destruction or removal of derelicts.

ARTICLE 37

Ice Patrol. Management and Cost

The Government of the United States is invited to continue the management of these services of ice patrol, study and observation of ice conditions, and derelict destruction and removal. The Contracting Governments specially interested in these services, whose names are given below, undertake to contribute to the expense of maintaining and operating these services in the following proportions:—

	Per cent
Belgium	2
Canada	3
Denmark	2
France	6
Germany	10
Great Britain and Northern Ireland	40
Italy	6
Japan	1
Netherlands	5
Norway	3
Spain	1
Sweden	2
Union of Socialist Soviet Republics	1
United States of America	18

Each of the Contracting Governments has the right to discontinue its contribution to the expense of maintaining and operating these services after the 1st September, 1932. Nevertheless, the Contracting Government which avails itself of this right will continue responsible for the expense of working up to the 1st September following the date of giving notice of intention to discontinue its contribution. To take advantage of the said right it must give notice to the other Contracting Governments at least six months before the said 1st September; so that, to be free from this obligation on the 1st September, 1932, it must give notice on the 1st March, 1932, at the latest, and similarly for each subsequent year.

If, at any time, the United States Government should not desire to continue these services, or if one of the Contracting Governments should express a

wish to relinquish responsibility for the pecuniary contribution defined above, or to have its percentage of obligation altered, the Contracting Governments shall settle the question in accordance with their mutual interests.

The Contracting Governments which contribute to the cost of the three above-mentioned services shall have the right by common consent to make from time to time such alterations in the provisions of this Article and of Article 36 as appear desirable.

ARTICLE 38

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.

ARTICLE 39

North Atlantic Routes

The practice of following recognised routes across the North Atlantic in both directions has contributed to safety of life at sea, but the working of these routes should be further investigated and studied with a view to the introduction of such variations as experience may show to be necessary.

The selection of the routes and the initiation of action with regard to them is left to the responsibility of the steamship 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.

The Contracting Governments undertake to impose on the companies the obligation to give public notice of the regular routes which they propose their vessels should follow, and of any changes made in these routes; they will also use their influence to induce the owners of all vessels crossing the Atlantic to follow, so far as circumstances will permit, the recognised routes, and to induce the owners of all vessels crossing the Atlantic bound to or from ports of the United States via the vicinity of the Great Bank 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.

The Administration managing the ice patrol service is requested to report to the Administration concerned any ship which is observed not to be on any regular, recognised or advertised route, or which crosses the above-mentioned fishing banks during the fishing season, or which, when proceeding to or from ports of the United States, passes through regions known or believed to be endangered by ice.

ARTICLE 40

Collision Regulations

The Contracting Governments agree that the alterations in the International Regulations for Preventing Collisions at Sea shown in Annex II are desirable and ought to be made. The Government of the United Kingdom of Great Britain and Northern Ireland is requested to forward full particulars of the alterations to the other Governments who have accepted the International Regulations for Preventing Collisions at Sea, and ascertain whether they will adopt these alterations; to report the result to the Governments represented at this Conference, and to endeavour to arrange that the revised regulations shall come in force on the 1st July, 1931.

ARTICLE 41

Helm Orders

The Contracting Governments agree that after midnight on the 30th June, 1931, helm or steering orders, *i. e.,* orders to the steersman, shall on all their ships be given in the direct sense, *e. g.,* when the ship is going ahead an order containing the word "starboard" or "right" or any equivalent of "starboard" or "right" shall only be used when it is intended, on ships as at present generally constructed and arranged, that the wheel, the rudder-blade and the head of the ship, shall all move to the right.

ARTICLE 42

Misuse of Distress Signals

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

ARTICLE 43

Alarm, Distress and Urgency Signals

The alarm signal and the distress signal may only be used by ships in serious and imminent danger which require immediate assistance. In all other cases in which assistance is required, or in which a vessel desires to issue a warning that it may become necessary to send out the alarm signal or the distress signal at a later stage, use must be made of the urgency signal (XXX) established by the International Radiotelegraph Convention, Washington, 1927.

If a ship has sent out the alarm or distress signal and subsequently finds that assistance is no longer required such ship shall immediately notify all stations concerned as provided for by the Radiotelegraph Convention in force.

ARTICLE 44

Speed of Distress Messages

The speed of transmission of messages in connection with cases of distress, urgency or safety, shall not exceed 16 words per minute.

ARTICLE 45

Distress Messages. Procedure

1. The master of a ship on receiving on his ship a wireless distress signal from any other ship, is bound to proceed with all speed to the assistance of the persons in distress, unless he is unable, or in the special circumstances of the case, considers it unreasonable or unnecessary to do so, or unless he is released under the provisions of paragraphs 3 and 4 of this Article.

2. 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 the persons in distress.

3. A master shall be released from the obligation imposed by paragraph 1 of this Article as soon as he is informed by the master of the ship requisitioned, or, where more ships than one are requisitioned, all the masters of the ships requisitioned, that he or they are complying with the requisition.

4. A master shall be released from the obligation imposed by paragraph 1 of this Article, and, if his ship has been requisitioned, from the obligation imposed by paragraph 2 of this Article, if he is informed by a ship which has reached the persons in distress, that assistance is no longer necessary.

5. If a master of a ship, on receiving a wireless distress call from another ship, is unable, or in the special circumstances of the case considers it unreasonable or unnecessary to go to the assistance of that other ship, he must immediately inform the master of that other ship accordingly, and enter in his log-book his reasons for failing to proceed to the assistance of the persons in distress.

6. The provisions of this Article do not prejudice the International Convention for the unification of certain rules with respect to Assistance and Salvage at Sea, signed at Brussels on the 23rd September, 1910,[7] particularly the obligation to render assistance imposed by Article 11 of that Convention.

ARTICLE 46

Signalling Lamp

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

[7] TS 576, *ante*, vol. 1, p. 780.

ARTICLE 47

Direction-Finding Apparatus

Every passenger ship of 5,000 tons gross tonnage and upwards shall, within two years from the date on which the present Convention comes in force, be provided with an approved direction-finding apparatus (radio compass), complying with the provisions of Article 31 (17) of the present Convention.

ARTICLE 48

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.

CHAPTER VI. CERTIFICATES

ARTICLE 49

Issue of Certificates

A certificate called a *Safety Certificate* shall be issued, after inspection and survey, to every passenger ship which complies in an efficient manner with the requirements of Chapters II, III and IV of the Convention.

A certificate called a *Safety Radiotelegraphy Certificate* shall be issued after inspection to every ship other than a passenger ship which complies in an efficient manner with the requirements of Chapter IV of the present Convention.

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, the provisions of Chapters II, III and IV of the present Convention.

The inspection and survey of ships, so far as regards the enforcement of the provisions of the present Convention and the annexed Regulations applicable to such ships and the granting of exemptions therefrom, 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 of its ships either to Surveyors nominated for this purpose or to organisations recognised by it. In every case the Government concerned fully guarantees the completeness and efficiency of the inspection and survey.

A Safety Certificate, Safety Radiotelegraphy Certificate, and Exemption Certificate shall be issued either by the Government of the country in which the ship is registered or by any person or organisation duly authorised by that Government. In every case that Government assumes full responsibility for the certificate.

ARTICLE 50

Issue of Certificate by Another Government

A Contracting Government may, at the request of the Government of a country in which a ship coming under the present Convention is registered, cause that ship to be surveyed, and, if satisfied that the requirements of the present Convention are complied with, issue a Safety Certificate or Safety Radiotelegraphy Certificate to such ship, under its own responsibility. 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 Article 49 of the present Convention.

ARTICLE 51

Form of Certificates

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

The form of the certificates shall be that of the models given in Regulation XLVII. The arrangement of the printed part of the standard certificates shall be exactly reproduced in the certificates issued, or in certified copies thereof, and the particulars inserted by hand shall in the certificates issued, or in certified copies thereof, be inserted in Roman characters and Arabic figures.

The Contracting Governments undertake to communicate one to another a sufficient number of specimens of their certificates for the information of their officers. This exchange shall be made, so far as possible, before the 1st January, 1932.

ARTICLE 52

Duration of Certificates

Certificates shall not be issued for a period of more than twelve months.

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

No certificate shall be extended for a longer period than five months, and a ship to which such extension is granted shall not, on returning to its own country, be entitled by virtue of such extension to leave that country again without having obtained a new certificate.

ARTICLE 53

Acceptance of Certificates

Certificates issued under the authority of a Contracting Government shall be accepted by the other Contracting Governments 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.

ARTICLE 54 [8]

Control

Every ship holding a certificate issued under Article 49 or Article 50 is subject, in the ports of the other Contracting Governments, to control by officers duly authorised by such Governments 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 vessel's seaworthiness correspond substantially with the particulars of that certificate; that is to say, so that the ship can proceed to sea without danger to the passengers and the crew.

In the event of this control giving rise to intervention of any kind, the officer carrying out the control shall forthwith inform the Consul of the country in which the ship is registered of all the circumstances in which intervention is deemed to be necessary.

ARTICLE 55

Privileges

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

ARTICLE 56

Qualification of Certificate

If in the course of a particular voyage the ship has on board a number of crew and passengers less than the maximum number which the ship is licensed to carry, and is in consequence, in accordance with the provisions of the present Convention, free to carry a smaller number of life-boats and other life-saving appliances than that stated in the certificate, a memorandum may be issued by the officers or other authorised persons referred to in Articles 49 and 52 above.

This memorandum shall state that in the circumstances there is no infringement of the provisions of the present Convention. It shall be annexed to the certificate and shall be substituted for it in so far as the life-saving appliances are concerned. It shall be valid only for the particular voyage in regard to which it is issued.

[8] For U.S. understandings, see footnote 1, p. 782.

CHAPTER VII. GENERAL PROVISIONS

ARTICLE 57

Equivalents

Where in the present Convention 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, any Administration may accept in substitution therefor any other fitting, appliance or apparatus, or type thereof, or any other arrangement, provided that such 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 Convention.

Any Administration which so accepts a new fitting, appliance or apparatus, or type thereof, or new arrangement, shall communicate the fact to the other Administrations, and, upon request, the particulars thereof, together with a report on the trials made.

ARTICLE 58

Laws, Regulations, Reports

The Contracting Governments undertake to communicate to each other—

(1) the text of laws, decrees and regulations which shall have been promulgated on the various matters within the scope of the present Convention;

(2) 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.

The Government of the United Kingdom of Great Britain and Northern Ireland is invited to serve as an intermediary for collecting all this information and for bringing it to the knowledge of the other Contracting Governments.

ARTICLE 59

Measures taken after Agreement

Where the present Convention provides that a measure may be taken after agreement between all or some of the Contracting Governments, the Government of the United Kingdom of Great Britain and Northern Ireland is invited to approach the other Contracting Governments with a view to ascertaining whether they accept such proposals as may be made by any Contracting Government for effecting such a measure, and to inform the other Contracting Governments of the results of the enquiries thus made.

ARTICLE 60

Prior Treaties and Conventions

1. The present Convention replaces and abrogates the Convention for the Safety of Life at Sea, which was signed at London on the 20th January, 1914.[9]

2. 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—

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

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

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.

3. All subjects which are not expressly provided for in the present Convention remain subject to the legislation of the Contracting Governments.

ARTICLE 61

Modifications. Future Conferences

1. Modifications of the present Convention which may be deemed useful or necessary improvements may be at any time proposed by any Contracting Government to the Government of the United Kingdom of Great Britain and Northern Ireland, and such proposals shall be communicated by the latter to all the other Contracting Governments, and if any such modifications are accepted by all the Contracting Governments (including Governments which have deposited ratifications or accessions which have not yet become effective) the present Convention shall be modified accordingly.

2. Conferences for the purpose of revising the present Convention shall be held at such times and places as may be agreed upon by the Contracting Governments.

A Conference for this purpose shall be convoked by the Government of the United Kingdom of Great Britain and Northern Ireland whenever, after the present Convention has been in force for five years, one-third of the Contracting Governments express a desire to that effect.

CHAPTER VIII. FINAL PROVISIONS

ARTICLE 62

Application to Colonies, &c.

1. A Contracting Government may, at the time of signature, ratification, accession or thereafter, by a declaration in writing addressed to the Govern-

[9] S. Ex. B, 63d Cong., 2d sess. The United States did not become a party.

ment of the United Kingdom of Great Britain and Northern Ireland, declare its desire that the present Convention shall apply to all or any of its colonies, overseas territories, protectorates or territories under suzerainty or mandate, and the present Convention shall apply to all the territories named in such declaration, two months after the date of the receipt thereof, but failing such declaration, the present Convention will not apply to any such territories.

2. A Contracting Government may at any time by a notification in writing addressed to the Government of the United Kingdom of Great Britain and Northern Ireland express its desire that the present Convention shall cease to apply to all or any of its colonies, overseas territories, protectorates or territories under suzerainty or mandate to which the present Convention shall have, under the provisions of the preceding paragraph, been applicable for a period of not less than five years, and in such case the present Convention shall cease to apply one year after the date of the receipt of such notification by the Government of the United Kingdom of Great Britain and Northern Ireland to all territories mentioned therein.

3. The Government of the United Kingdom of Great Britain and Northern Ireland shall inform all the other Contracting Governments of the application of the present Convention to any colony, overseas territory, protectorate or territory under suzerainty or mandate under the provisions of paragraph 1 of this Article, and of the cessation of any such application under the provisions of paragraph 2, stating in each case the date from which the present Convention has become or will cease to be applicable.

ARTICLE 63

Authentic Texts. Ratification

The present Convention of which both the English and French texts shall be authentic shall bear this day's date.

The present Convention shall be ratified.

The instruments of ratification shall be deposited in the archives of the Government of the United Kingdom of Great Britain and Northern Ireland which will notify all the other signatory or acceding Governments of all ratifications deposited and the date of their deposit.

ARTICLE 64

Accession

A Government (other than the Government of a territory to which Article 62 applies) on behalf of which the present Convention has not been signed shall be allowed to accede thereto at any time after the Convention has come into force. Accessions may be effected by means of notifications in writing

addressed to the Government of the United Kingdom of Great Britain and Northern Ireland, and shall take effect three months after their receipt.

The Government of the United Kingdom of Great Britain and Northern Ireland shall inform all signatory and acceding Governments of all accessions received and of the date of their receipt.

A Government which intends to accede to the present Convention but desires to add an area to those specified in the Annex to Article 28 shall, before notifying its accession, inform the Government of the United Kingdom of Great Britain and Northern Ireland of its desire for communication to all the other Contracting Governments. If all the Contracting Governments signify their assent thereto, the area shall be added to those mentioned in the aforesaid Annex when such Government notifies its accession.

Article 65

Date of coming in Force

The present Convention shall come into force on the 1st July, 1931, as between the Governments which have deposited their ratifications by that date, and provided that at least five ratifications have been deposited with the Government of the United Kingdom of Great Britain and Northern Ireland. Should five ratifications not have been deposited on that date, the present Convention shall come into force three months after the date on which the fifth ratification is deposited. Ratifications deposited after the date on which the present Convention has come into force shall take effect three months after the date of their deposit.

Article 66

Denunciation

The present Convention may be denounced on behalf of any Contracting Government at any time after the expiration of five years from the date on which the Convention comes into force in so far as that Government is concerned. Denunciation shall be effected by a notification in writing addressed to the Government of the United Kingdom of Great Britain and Northern Ireland, which will notify all the other Contracting Governments of all denunciations received and of the date of their receipt.

A denunciation shall take effect twelve months after the date on which notification thereof is received by the Government of the United Kingdom of Great Britain and Northern Ireland.

In faith whereof, the Plenipotentiaries have signed hereafter.

Done at London this thirty-first day of May, 1929, in a single copy, which shall remain deposited in the archives of the Government of the United King-

dom of Great Britain and Northern Ireland, which shall transmit certified true copies thereof to all signatory Governments.

[For Germany:]
STHAMER
GUSTAV KOENIGS
ARTHUR WERNER
WALTER LAAS
OTTO RIESS
HERMANN GIESS
HUGO DOMINIK

[For Australia:]
HENRY JAMES FEAKES
THOMAS FREE

[For Belgium:]
A. DE GERLACHE DE GOMERY
G. DE WINNE

[For Canada:]
A. JOHNSTON
LUCIEN PACAUD

[For Denmark:]
EMIL KROGH
V. LORCK

[For Spain:]
JAVIER DE SALAS

[For the Irish Free State:]
JOHN WHELAN DULANTY
E. C. FOSTER

[For the United States:]
WALLACE H. WHITE
ARTHUR J. TYRER
CHARLES M. BARNES
GEO. H. ROCK
CLARENCE S. KEMPFF
DICKERSON N. HOOVER
W. D. TERRELL
JOHN G. TAWRESEY
HERBERT B. WALKER
CHARLES A. MCALLISTER

[For Finland:]
GUSTAF WREDE
V. BERGMAN
KARL KURTEN

[For France:]
RIO
A. HAARBLEICHER
JEAN MARIE
F. THOUROUDE

[For the United Kingdom:]
H. W. RICHMOND
WESTCOTT ABELL
A. L. AYRE
F. W. BATE
C. H. BOYD
WILLIAM C. CURRIE
A. J. DANIEL
NORMAN HILL
C. HIPWOOD
A. MORRELL

[For India:]
G. L. CORBETT
E. V. WHISH
MANSUKHLAL ATMARAM MASTER

[For Italy:]
GIULIO INGIANNI
ALBERTO ALESSIO
DELFINO ROGERI DI VILLANOVA
TORQUATO C. GIANNINI
FRANCESCO MARENA
ERNESTO FERRETTI
G. GNEME
LUIGI BIANCHERI

[For Japan:]
YUKIO YAMAMOTO
SHICHIHEI OTA
ITARO ISHII

[For Norway:]
B. VOGT
L. T. HANSEN
ARTH H. MATHIESEN

[For the Netherlands:]
C. FOCK
C. H. DE GOEJE
A. VAN DRIEL
J. A. BLAND-V.-D.-BERG
PHS. VAN OMMEREN
H. G. J. UILKENS

[For Sweden:]
ERIK PALMSTIERNA
NILS GUSTAF NILSSON

[For the Union of Soviet Socialist Republics:]
J. ARENS
K. EGGI

ANNEX I

REGULATIONS

CONSTRUCTION

REGULATION I

Definitions

(1.) The *subdivision loadline* is the waterline used in determining the subdivision of the ship.

The *deepest subdivision loadline* is that which corresponds to the greatest draught.

(2.) The *length of the ship* is the length measured between perpendiculars taken at the extremities of the deepest subdivision loadline.

(3.) The *breadth of the ship* is the extreme width from outside of frame to outside of frame at or below the deepest subdivision loadline.

(4.) The *bulkhead deck* is the uppermost deck up to which the transverse watertight bulkheads are carried.

(5.) The *margin line* is a line drawn parallel to the bulkhead deck at side and 3 inches (76 millimetres) below the upper surface of that deck at side.

(6.) The *draught* is the vertical distance from the top of keel amidships to the subdivision loadline in question.

(7.) 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.

(8.) The *machinery space* is to be taken as extending from the top of keel 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.

(9.) *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 III and IV, spaces provided below the margin line for the accommodation and use of the crew shall be regarded as passenger spaces.

(10.) In all cases *volumes* shall be calculated to moulded lines.

REGULATION II

Floodable Length

(1.) 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.

(2.) 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 III without the ship being submerged beyond the margin line.

(3.) 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, up to which, having regard to sinkage and trim after damage, the sides of the ship and the bulkheads concerned are carried watertight.

REGULATION III

Permeability

(1.) The definite assumptions referred to in Regulation II 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:—

(*a*) the machinery space as defined in Regulation I (8);
(*b*) the portion forward of the machinery space; and
(*c*) the portion abaft the machinery space.

(2.)—(*a*.) For steamships the uniform average permeability throughout the machinery space shall be determined from the formula—

$$80+12{\cdot}5\left(\frac{a-c}{v}\right), \text{ where}$$

a = volume of the passenger spaces, as defined in Regulation I(9), 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.

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

(*c*.) Where it is shown to the satisfaction of the Administration that the average permeability, as determined by detail calculation, is less than that given by the formula, the calculated value may be substituted. For the purposes of such calculation, the permeabilities of passenger spaces, as defined in Regulation I (9), 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.

(3.) The uniform average permeability throughout the portion of the ship before (or abaft) the machinery space shall be determined from the formula—

$$63+35\,\frac{a}{v}, \text{ where}$$

a=volume of the passenger spaces, as defined in Regulation I(9), 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.

(4.) 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 IV

Permissible Length of Compartments

(1.) *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—

(*a*) as the length of the ship increases, and

(*b*) 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 I(2):—

L in feet.		L in metres.		
$A=\frac{190}{L-198}+.18$	(L=430 and upwards).	$A=\frac{58.2}{L-60}+.18$	(L=131 and upwards)	(i)
$B=\frac{100}{L-138}+.18$	(L=260 and upwards).	$B=\frac{30.3}{L-42}+.18$	(L=79 and upwards)	(ii)

(2.) *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 formulae (iii) and (iv) where:—

C_s = the Criterion Numeral;
L = length of the ship, as defined in Regulation I(2);
M = the volume of the machinery space, as defined in Regulation I(8); 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 I(9);
V = the whole volume of the ship below the margin line;
P_1 = 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 metres and volumes in cubic metres	.056 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 lower figure may be taken provided that the value of P_1 used is not less than $\frac{2}{3}$ KN.

When P_1 is greater than P

$$C_s = 72 \frac{M+2P_1}{V+P_1-P} \quad \text{(iii)}$$

and in other cases

$$C_s = 72 \frac{M+2P}{V} \quad \text{(iv)}$$

For 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.

(3.) *Rules for Subdivision.—(a.) The subdivision abaft the fore peak* of ships 430 feet (131 metres) 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:—

$$F = A - \frac{(A-B)(C_s-23)}{100} \quad \text{(v)}$$

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.

(*b.*) *The subdivision abaft the fore peak* of ships less than 430 feet (131 metres) but not less than 260 feet (79 metres) in length having a criterion numeral equal to S, where $S=\frac{9382-20L}{34}$ (L in feet) $=\frac{3574-25L}{13}$ (L in metres) 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:—

$$F=1-\frac{(1-B)\ (C_s-S)}{123-S} \qquad \text{(vi)}$$

(*c.*) *The subdivision abaft the fore peak* of ships less than 430 feet (131 metres) but not less than 260 feet (79 metres) in length and having a criterion numeral less than S, and of all ships less than 260 feet (79 metres) 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 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.

(*d.*) The provisions of sub-paragraph (*c*) shall apply also to ships of whatever length, which are to be certified to carry a number of passengers exceeding 12 but not exceeding $\frac{L^2(\text{in feet})}{7000}\left(\frac{L^2(\text{in metres})}{650}\right)$ or 50, whichever is the less.

Regulation V

Special Rules concerning Subdivision

(1.) A compartment may exceed the permissible length determined by the rules of Regulation IV 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.

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 the mean average permeability of the two portions of the ship in which the compartments are situated.

Where the two adjacent compartments have different factors of subdivision, the combined length of the two compartments shall be determined proportionately.

(2.) In ships 430 feet (131 metres) in length and upwards, one of the main transverse bulkheads abaft the fore peak shall be fitted at a distance from the forward perpendicular which is not greater than the permissible length.

(3.) 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 I (3), and measured at right angles to the centreline at the level of the deepest subdivision loadline.

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

(4.) A main transverse bulkhead may be stepped provided that—

(*a*) the combined length of the two compartments, separated by the bulkhead in question, does not exceed 90 per cent. of the floodable length, or

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

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

(6.) 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 (3·05 metres) plus 2 per cent. of the length of the ship, only one of these bulkheads shall be regarded as forming part of the subdivision of the ship in accordance with the provisions of Regulation IV.

(7.) 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 (3·05 metres) plus 2 per cent. of the length of the ship, 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.

(8.) Where it is proposed to fit watertight decks, inner skins or longitudinal bulkheads, watertight or non-watertight, the Administration shall be satisfied that the safety of the ship will not be diminished in any respect, particularly having in view the possible listing effect of flooding in way of such structural arrangements.

Regulation VI

Peak and Machinery Space Bulkheads, Shaft Tunnels, &c.

(1.) Every 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 (3·05 metres) plus 5 per cent. of the length of the ship from the forward perpendicular.

If the ship has a long forward superstructure, the forepeak bulkhead shall be extended weathertight 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 weathertight.

(2.) An afterpeak bulkhead, and bulkheads dividing the machinery space, as defined in Regulation I (8), from the cargo and passenger spaces forward and aft, shall also be fitted and made watertight up to the bulkhead deck. The afterpeak bulkhead may, however, be stopped below the bulkhead deck, provided the degree of safety of the ship as regards subdivision is not thereby diminished.

(3.) In all cases stern tubes shall be enclosed in watertight spaces. The stern gland shall be situated within a watertight shaft tunnel or other space of such volume that if flooded by leakage through the stern gland the margin line will not be submerged.

Regulation VII

Assigning, Marking and Recording of Subdivision Loadlines

(1.) The subdivision loadlines assigned and marked under the provisions of Article 5 of the Convention 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.

(2.) The freeboard corresponding to each of these loadlines inserted in the Safety Certificate shall be measured at the same position and from the same deck line as the freeboards determined by recognised national Freeboard Regulations.

(3.) In no case shall any subdivision loadline mark be placed above the deepest loadline in salt water as determined by the strength of the ship and/or recognised national Freeboard Regulations.

(4.) Whatever may be the position of the subdivision loadline marks, a ship shall in no case be loaded so as to submerge the loadline mark appropriate to the season and locality as determined by the recognised national Freeboard Regulations.

REGULATION VIII

Construction and Initial Testing of Watertight Bulkheads, &c.

(1.) 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.

(2.) Steps and recesses in bulkheads shall be watertight and as strong as the bulkhead at the place where each occurs.

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.

(3.) 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.

(4.) The forepeak shall be tested with water to a head up to the deepest subdivision loadline.

(5.) Double bottoms, including duct keels, and inner skins are to be subjected to a head of water up to the margin line.

(6.) 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 loadline 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 (·92 metre) above the top of the tank.

REGULATION IX

Openings in Watertight Bulkheads

(1.) 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.

(2.)—(*a.*) Where pipes, scuppers, electric-light cables, &c., are carried through watertight subdivision bulkheads, arrangements shall be made to ensure the integrity of the watertightness of the bulkheads.

(*b.*) Sluice valves shall not be permitted in the watertight subdivision bulkheads.

(3.)—(*a.*) No doors, manholes, or access openings are permitted—

(i) in the collision bulkhead below the margin line;

(ii) in watertight transverse bulkheads dividing a cargo space from an adjoining cargo space or from a permanent or reserve bunker, except as provided in paragraph (7).

(*b.*) The collision bulkhead may be pierced below the margin line by not more than one pipe for dealing with fluid in the fore peak tank, provided that the pipe is fitted with a screwdown valve capable of being operated from above the bulkhead deck, the valve chest being secured inside the fore peak to the collision bulkhead.

(4.)—(*a.*) Watertight doors fitted in bulkheads between permanent and reserve bunkers, shall be always accessible, except as provided in sub-paragraph 9 (*b*) for between deck bunker doors.

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

(5.) 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 located so as to have the sills as high as practicable.

(6.)—(*a.*) 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.

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

(*c.*) A sliding door may have a horizontal or vertical motion. If required to be hand operated only, the gearing shall be capable of being worked at the door itself and also at an accessible position above the bulkhead deck.

(*d.*) If a door is required to be closed by dropping or by the action of a dropping weight, it shall be fitted with a suitable arrangement to regulate the closing movement, and the gearing shall be so arranged that the door can be released both at the door itself and at an accessible position above the bulkhead deck. Hand gear shall also be provided, so arranged as to operate at the door itself and above the bulkhead deck, and also, so that after being disengaged for dropping, it can be quickly re-engaged from either the upper or the lower position.

(*e.*) 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 arrangements 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. 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.

(*f.*) 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.

(7.)—(*a.*) 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 (2·13 metres) above the deepest subdivision loadline, and they are not permitted in those spaces below such deck.

(*b.*) Hinged watertight doors of satisfactory construction may be fitted in bulkheads dividing cargo between deck spaces, in levels in which side cargo doors would be permitted under the provisions of Regulation X (11). These doors shall be closed before the voyage commences and shall be kept closed during the voyage, and the time of opening such doors in port and of closing them before the ship leaves port shall be entered in the official log book. 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.

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

(9.)—(*a.*) 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 loadline, the following rules shall apply:—

(I.) When the number of such doors exceeds 5 all the watertight sliding doors shall be power operated and shall be capable of being simultaneously closed from a station situated on the bridge, simultaneous closing of these doors being preceded by a warning sound signal.

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

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

(ii) if the criterion numeral exceeds 30, but does not exceed 60, all the watertight sliding doors may be either dropping doors fitted with releasing and hand gear operated at the door and from above the bulkhead deck or doors operated by power.

(iii) if the criterion numeral exceeds 60, all the watertight sliding doors shall be operated by power.

(*b.*) 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 closing of these doors shall be recorded in the official log book.

(*c.*) When trunkways 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 (2·13 metres) above the deepest subdivision loadline, the watertight doors at such openings shall be operated by power.

(10.) 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 at sea except in case of urgent necessity. The necessary precautions shall be taken in replacing them to ensure that the joints shall be watertight.

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(11.) 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.

(12.) Where trunkways 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 XII. The access to at least one end of each such tunnel or trunkway, 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 trunkway or tunnel may be through a watertight door of the type required by its location in the ship. Such trunkways or tunnels shall not extend through the first subdivision bulkhead abaft the collision bulkhead.

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

Regulation X

Openings in Ship's Sides below the Margin Line

(1.) The arrangement and efficiency of the means for closing any opening in the ship's sides shall be consistent with its intended purpose and the position in which it is fitted and generally to the satisfaction of the Administration.

(2.)—(*a.*) If in a between decks, the sills of any sidescuttles are below a line drawn parallel to the bulkhead deck at side and having its lowest point 2½ per cent. of the breadth of the ship above the deepest subdivision loadline, all sidescuttles in that between deck shall be of a non-opening type.

(*b.*) If in a between decks, the sills of any sidescuttles other than those required to be of a non-opening type by sub-paragraph (*a*) are below a line drawn parallel to the bulkhead deck at side and having its lowest point at a height of 12 feet (3 · 66 metres) plus 2½ per cent. of the breadth of the ship above the deepest subdivision loadline, all sidescuttles in that between decks shall be of such construction as will effectively prevent any person opening them without the consent of the master of the ship.

(*c.*) Other sidescuttles may be of an ordinary opening type.

(*d.*) If in a between decks, the sills of any of the sidescuttles referred to in sub-paragraph (*b*) are below a line drawn parallel to the bulkhead deck at side and having its lowest point 4½ feet (1 · 37 metres), plus 2½ per cent. of the breadth of the ship above the loadline at which the ship is floating on her departure from any port, all the sidescuttles in that between decks shall be closed watertight and locked before the ship leaves port and they shall not be opened during navigation.

The time of opening such sidescuttles in port and of closing and locking them before the ship leaves port shall be entered in the official log book.

The Administration may indicate the limiting mean draught at which these sidescuttles will have their sills above the line defined in this paragraph and at which it will be permissible to open them at sea on the responsibility of the master. In tropical waters in fair weather this limiting draught may be increased by 1 foot (·305 metres).

(3.) Efficient hinged inside deadlights arranged so that they can be easily and effectively closed and secured watertight shall be fitted to all sidescuttles—

(*a*) which are required to be of a non-opening type;

(*b*) which are to be fitted within one-eighth of the ship's length of the forward perpendicular;

(*c*) which are to be fitted in positions defined in sub-paragraph (2) (*b*);

(*d*) which will not be accessible during navigation;

(*e*) which are to be fitted in spaces intended for the accommodation of sailors and firemen;

(*f*) which are to be fitted in spaces intended for the accommodation of steerage passengers.

(4.) Sidescuttles fitted below the bulkhead deck, other than those referred to in the preceding paragraph, shall be fitted with efficient inside deadlights which may be portable and stowed adjacent to the sidescuttles.

(5.) Sidescuttles and their deadlights, which will not be accessible during navigation, shall be closed and secured before the ship proceeds to sea.

(6.) No sidescuttles shall be fitted in any spaces which are appropriated exclusively to the carriage of cargo or coal.

(7.) Automatic ventilating sidescuttles shall not be fitted in the ship's sides below the margin line without the special sanction of the Administration.

(8.) All machinery and other inlets and discharges in the ship's sides shall be arranged so as to prevent the accidental admission of water into the ship.

(9.) The number of scuppers, sanitary discharges and other similar openings in the ship's sides 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.

(10.) Discharges led through the ship's sides from spaces below the margin line shall be fitted with efficient and accessible means for preventing water from passing inboard. It is permissible to have for each separate discharge either one automatic non-return valve fitted with a positive means of closing it from above the bulkhead deck, or, alternatively, two automatic non-return valves without such means, the upper of which valves is so situated above the deepest subdivision loadline as to be always accessible for examination under service conditions.

Where a positive action valve 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.

(11.) 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.

Cargo and coaling ports which are to be fitted partly or entirely below the deepest subdivision loadline shall receive the special consideration of the Administration.

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

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 subdivision loadline. When the shoot is not in use both the cover and the valve shall be kept closed and secured.

Regulation XI

Construction and Initial Tests of Watertight Doors, Sidescuttles, &c.

(1.) The design, materials and construction of all watertight doors, sidescuttles, 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.

(2.) 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 XII

Construction and Initial Tests of Watertight Decks, Trunks, &c.

(1.) 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 margin line.

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

Regulation XIII

Periodical Operation and Inspection of Watertight Doors, &c.

In all new and existing ships drills for the operating of watertight doors, sidescuttles, valves, and closing mechanisms of scuppers, ash-shoots and rub-

bish-shoots, shall take place weekly. In 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.

The watertight doors and all mechanisms and indicators connected therewith, and all valves the closing of which is necessary to make a compartment watertight, shall be periodically inspected at sea, at least once a week.

REGULATION XIV

Entries in the Official Log Book

In all new and existing ships hinged doors, portable plates, sidescuttles, 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 the official log book.

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

REGULATION XV

Double Bottoms

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

(2.) In ships 249 feet (76 metres) and under 330 feet (100 metres) 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.

(3.) In ships 330 feet (100 metres) 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.

(4.) 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 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 of 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.

(5.) Wells constructed in the double bottom in connection with the drainage arrangements shall not extend downwards more than necessary, nor shall they be less than 18 inches (457 millimetres) 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.

Regulation XVI

Fire-resisting Bulkheads

Ships shall be fitted above the bulkhead deck with fire-resisting bulkheads which shall be continuous from side to side of the ship and arranged to the satisfaction of the Administration.

They shall be constructed of metal or other fire-resisting material, effective to prevent for one hour, under the conditions for which the bulkheads are to be fitted in the ship, the spread of fire generating a temperature of 1,500° F. (815° C.) at the bulkhead.

Steps and recesses and the means for closing all openings in these bulkheads shall be fire-resisting and flametight.

The mean distance between any two adjacent fire-resisting bulkheads in any superstructure shall in general not exceed 131 feet (40 metres).

Regulation XVII

Side and other Openings, &c., above the Margin Line

(1.) Sidescuttles, gangway, cargo and coaling ports, and other means for closing openings in the ship's sides 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 loadline.

(2.) The bulkhead deck or a deck above it shall be weathertight 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 coamings of ample height and strength, and shall be provided with efficient means for expeditiously closing them weathertight.

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

Regulation XVIII

Exits from Watertight Compartments

(1.) In passenger and crew spaces, practicable means of exit to the open deck shall be provided for the occupants from each watertight compartment.

(2.) Practicable means of escape for the crew shall be provided from each

engine room, shaft tunnel, stokehold compartment, and other working spaces, independent of watertight doors.

REGULATION XIX

Pumping Arrangements

Steamships.

(1.) 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 suctions will generally be necessary except in narrow compartments at the ends of the ship. Where close ceiling is fitted over the bilges, 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.

(2.) In addition to the ordinary bilge pump, worked by the main engines, or its equivalent engine room pump, two independent power bilge pumps shall be provided, except that in ships less than 300 feet (91 · 5 metres) in length, having a criterion numeral less than 30, either two efficient hand pumps of the crank type fitted one forward and one aft, or a portable power pump, may be substituted for one of the additional independent power bilge pumps.

In all cases an additional independent power pump shall be fitted when the criterion numeral exceeds 30.[10]

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.

(3.) Where two or more independent power pumps are required, the arrangement shall be such that at least one power pump will be available for use in all ordinary circumstances in which a vessel may be flooded at sea. One of the power pumps shall, therefore, be an emergency pump of a reliable submersible type. A source of power situated above the bulkhead deck shall be available for this pump in any case of emergency.

(4.) Where practicable, the power bilge pumps shall be placed in separate watertight compartments so arranged or situated that these compartments

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[10] This paragraph was inadvertently omitted from the regulations annexed to the original convention. In a note dated Dec. 31, 1930, the British Ambassador at Washington inquired whether the United States would concur in a proposal made by the British Board of Trade that the convention be amended by inserting this paragraph. A statement by the British Secretary of State for Foreign Affairs dated Jan. 17, 1933, certified that the proposed insertion had been accepted by the contracting governments and declared that the convention was regarded as modified accordingly. The President submitted the amendment to the Senate Apr. 15, 1937 (S. Ex. I, 75th Cong., 1st sess.); the Senate gave its advice and consent to ratification May 28, 1937; it was ratified by the President June 9, 1937, and proclaimed Sept. 3, 1937 (51 Stat. 13; TS 921).

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.

(5.) 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.

(6.) 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 (122 metres) per minute, and it shall have a separate direct suction, to the compartment in which it is situated, of a diameter not less than that of the bilge main. The direct suctions from each independent power bilge pump shall be arranged to pump from either side of the ship.

(7.) 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 boilers, a direct discharge overboard shall be fitted from at least one circulating pump, or, alternatively, a bye-pass may be fitted to the circulating discharge.

(8.)—(*a.*) 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 filling or emptying spaces where water or oil is carried.

(*b.*) Lead pipes shall not be used under coal bunkers or oil fuel storage tanks, nor in boiler or machinery spaces, including motor rooms in which oil settling tanks or oil fuel pump units are situated.

(9.) The Administration shall make rules relating to the diameters of the bilge main and branch pipes which shall be proportioned respectively in relation to the size of the ship and the sizes of the compartments to be drained.

(10.) 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.

(11.) 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 near the side of the ship or in a duct keel, there shall be fitted to the pipe in the compartment

containing the open end either a non-return valve, or a screw-down valve which can be operated from a position above the bulkhead deck.

(12.) All distribution boxes, cocks and valves in connection with the bilge pumping arrangement shall be in positions which are accessible at all times under ordinary circumstances. They shall be so arranged that in the event of flooding the emergency bilge pump 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 suctions 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 the emergency pump is capable of operating on any compartment under flooding conditions.

Motor Ships.

(13.) The bilge pumping arrangements in motor ships shall, so far as practicable, be equivalent to those required for steamships of similar size, except as regards main circulating pumps.

REGULATION XX

Power for Going Astern

Ships shall have sufficient power for going astern to secure proper control of the ship in all circumstances.

REGULATION XXI

Auxiliary Steering Apparatus

Ships shall be provided with an auxiliary steering apparatus which, however, may be of less power than the main apparatus, and need not be worked by steam or other mechanical power, provided adequate arrangements for manual operation are practicable. A duplicate main steering power plant shall be considered as an auxiliary steering apparatus within the meaning of this Regulation.

REGULATION XXII

Initial and Subsequent Surveys of Ships

(1.) Every new or existing ship shall be subjected to the surveys specified below:—

(*a.*) A survey before the ship is put in service.
(*b.*) A periodical survey once every twelve months.
(*c.*) Additional surveys, as occasion arises.

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(2.) The surveys referred to above shall be carried out as follows:—

(*a.*) *The survey before the ship is put in service* shall include a complete inspection of the hull, 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 hull, boilers, and their appurtenances, main and auxiliary machinery-life-saving appliances, and other equipments, fully comply with the requirements of the present Convention and of the detailed regulations promulgated as a result thereof by the Government of the country to which the ship belongs 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.

(*b.*) *The periodical survey* shall include an inspection of the whole of the hull, 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 hull, boilers, and their appurtenances, main and auxiliary machinery, life-saving 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 detailed regulations promulgated as a result thereof by the Government of the country to which the ship belongs.

(*c.*) *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 detailed regulations promulgated as a result thereof by the Government of the country to which the ship belongs.

(3.) The detailed regulations referred to in sub-paragraph (2) shall 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 oil motors are to be submitted, including the test pressure to be applied, and the intervals between two consecutive tests.

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

REGULATION XXIII

Maintenance of Conditions after Survey

After the survey of the ship as provided in Regulation XXII 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.

LIFE SAVING APPLIANCES, &C

REGULATION XXIV

Standard Types of Boats

The standard types of boats are classified as follows:—

Class I.—Open boats with rigid sides having either (*a*) internal buoyancy only, or (*b*) internal and external buoyancy.

Class II.—(*a*) Open boats with internal and external buoyancy—upper parts of sides collapsible, and (*b*) decked boats with either fixed or collapsible watertight bulwarks.

No boat may be approved the buoyancy of which depends upon the previous adjustment of one of the principal parts of the hull, or which has not a cubic capacity of at least 3.5 cubic metres (equivalent to 125 cubic feet).

No boat may be approved the weight of which when fully laden with persons and equipment exceeds 20,300 kilogrammes (equivalent to 20 tons).

REGULATION XXV

Lifeboats of Class I

Lifeboats of Class I must have a mean sheer at least equal to four per cent. of their length.

The air cases of lifeboats of Class I shall be so placed as to secure stability when fully laden under adverse weather conditions.

In boats certified to carry 100 or more persons the volume of the buoyancy shall be increased to the satisfaction of the Administration.

Lifeboats of Class I must also satisfy the following conditions:—

(*a.*) *Lifeboats with Internal Buoyancy only.*

The buoyancy of a wooden boat of this type shall be provided by watertight air-cases, the total volume of which shall be at least equal to one-tenth of the cubic capacity of the boat.

The buoyancy of a metal boat of this type shall not be less than that required above for a wooden boat of the same cubic capacity, the volume of watertight air-cases being increased accordingly.

(*b.*) *Lifeboats with Internal and External Buoyancy.*

The internal buoyancy of a wooden boat of this type shall be provided by watertight air-cases, the total volume of which is at least equal to seven and a half per cent. of the cubic capacity of the boat.

The external buoyancy may be of cork or of any other equally efficient material, but such buoyancy shall not be obtained by the use of rushes, cork shavings, loose granulated cork or any other loose granulated substance, or by any means dependent upon inflation by air.

If the buoyancy is of cork, its volume, for a wooden boat, shall not be less than thirty-three thousandths of the cubic capacity of the boat; if of any material other than cork, its volume and distribution shall be such that the buoyancy and stability of the boat are not less than that of a similar boat provided with buoyancy of cork.

The buoyancy of a metal boat shall be not less than that required above for a wooden boat of the same cubic capacity, the volume of the watertight air-cases and that of the external buoyancy being increased accordingly.

Regulation XXVI

Boats of Class II

Boats of Class II must satisfy the following conditions:—

(*a.*) *Open Boats with Internal and External Buoyancy—Upper Part of Sides collapsible.*

A boat of this type shall be fitted both with watertight air-cases and with external buoyancy the aggregate volume of which, for each person which the boat is able to accommodate, shall be at least equal to the following amounts:—

	Cubic Decimetres	Cubic Feet
Air-cases	43	1. 5
External buoyancy (if of cork)	6	0. 2

The external buoyancy may be of cork or of any other equally efficient material, but such buoyancy shall not be obtained by the use of rushes, cork shavings, loose granulated cork, or any other loose granulated substance, or by any means dependent upon inflation by air.

If of any material other than cork, its volume and distribution shall be such that the buoyancy and stability of the boat are not less than that of a similar boat provided with buoyancy of cork.

A metal boat of this type shall be provided with internal and external buoyancy to ensure that the buoyancy of the boat shall be at least equal to that of a wooden boat.

The minimum freeboard of boats of this type shall be fixed in relation to their length; and it shall be measured vertically to the top of the solid hull at the side amidships, from the water-level, when the boat is loaded.

The freeboard in fresh water shall not be less than the following amounts:—

Length of Lifeboat		Minimum Freeboard	
Metres	Equivalent in Feet to—	Millimetres	Equivalent in Inches to—
7.90	26	200	8
8.50	28	225	9
9.15	30	250	10

The freeboard of boats of intermediate lengths is to be found by interpolation.

The collapsible sides must be watertight.

(*b.*) *Decked Boats with either Fixed or Collapsible Watertight Bulwarks.*

(i.) *Decked Boats having a Well Deck.*—The area of the well deck of a boat of this type shall be at least 30 per cent. of the total deck area. The height of the well deck above the water-line at all points shall be at least equal to one-half per cent. of the length of the boat, this height being increased to one-and-a-half per cent. of the length of the boat at the ends of the well.

The freeboard of a boat of this type shall be such as to provide for a reserve buoyancy of at least 35 per cent.

(ii.) *Decked Boats Having a Flush Deck.*—The minimum freeboard of boats of this type is independent of their lengths and depends only upon their depths. The depth of the boat is to be measured vertically from the underside of the garboard strake to the top of the deck at the side amidships and the freeboard is to be measured from the top of the deck at the side amidships to the water-level when the boat is loaded.

The freeboard in fresh water shall not be less than the following amounts, which are applicable without correction to boats having a mean sheer equal to three per cent. of their length:—

Depth of Lifeboat		Minimum Freeboard	
Millimetres	Equivalent in Inches to—	Millimetres	Equivalent in Inches to—
310	12	70	2¾
460	18	95	3¾
610	24	130	5⅛
760	30	165	6½

For intermediate depths the freeboard is obtained by interpolation.

If the sheer is less than the standard sheer defined above, the minimum freeboard is obtained by adding to the figures in the table one-seventh of the difference between the standard sheer and the actual mean sheer measured at the stem and stern post; no deduction is to be made from the freeboard on account of the sheer being greater than the standard sheer or on account of the camber of the deck.

(iii.) All decked lifeboats shall be fitted with efficient means for clearing the deck of water.

Regulation XXVII

Motor Boats

A motor boat carried as part of the lifesaving appliances of a vessel, whether required by Regulation XXXVI (2) or not, shall comply with the following conditions:—

(*a.*) It shall comply with the requirements for a lifeboat of Class I, and proper appliances shall be provided for putting it into the water speedily.

(*b.*) It shall be adequately provided with fuel, and kept so as to be at all times ready for use.

(*c.*) The motor and its accessories shall be suitably enclosed to ensure operation under adverse weather conditions, and provision shall be made for going astern.

(*d.*) The speed shall be at least six knots when fully loaded in smooth water.

The volume of the internal buoyancy and, where fitted, the external buoyancy shall be increased in sufficient proportion to compensate for the difference between the weight of the motor, the searchlight, and the wireless telegraph installation and their accessories, and the weight of the additional persons which the boat could accommodate if the motor, the searchlight and the wireless telegraph installation and their accessories were removed.

Regulation XXVIII

Life Rafts

No type of life raft may be approved unless it satifies the following conditions:—

(*a.*) It shall be of approved material and construction;

(*b.*) It shall be effective and stable when floating either way up;

(*c.*) It shall be fitted with fixed or collapsible bulwarks of wood, canvas or other suitable material on both sides;

(*d.*) It shall have a line securely becketed round the outside;

(*e.*) It shall be of such strength that it can be launched or thrown from the vessel's deck without being damaged, and if to be thrown it shall be of such size and weight that it can be easily handled;

(*f.*) It shall have not less than 85 cubic decimetres (equivalent to three cubic feet) of air-cases or equivalent buoyancy for each person to be carried thereon;

(*g.*) It shall have a deck area of not less than 3,720 square centimetres (equivalent to four square feet) for each person to be carried thereon, and it shall effectively support the occupants out of the water;

(*h.*) The air-cases or equivalent buoyancy shall be placed as near as

possible to the sides of the life raft, and such buoyancy shall not be by any means dependent on inflation by air.

REGULATION XXIX

Buoyant Apparatus

Buoyant apparatus, whether buoyant deck seats, buoyant deck chairs or other buoyant apparatus, shall be deemed sufficient, so far as buoyancy is concerned, for a person or number of persons to be ascertained by dividing the number of kilogrammes of iron which it is capable of supporting in fresh water by 14·5 (equivalent to the number of pounds divided by 32), and if the apparatus depends for its buoyancy on air it shall not require to be inflated before use in an emergency.

The number of persons for whom the apparatus is deemed suitable shall be determined by the least of the numbers ascertained either as above or by the number of 30·5 centimetres (equivalent to one foot) in the perimeter.

Such approved buoyant apparatus shall comply with the following conditions:—

1. It shall be constructed with proper workmanship and materials.
2. It shall be effective and stable when floating either way up.
3. It shall be of such size, strength and weight that it can be handled without mechanical appliances and, if necessary, thrown without damage from the vessel's deck on which it is stowed.
4. The air-cases or equivalent buoyancy shall be placed as near as possible to the sides of the apparatus.
5. It shall have a line securely becketed round the outside of the apparatus.

REGULATION XXX

Cubic Capacity of Lifeboats of Class I

1. The cubic capacity of a lifeboat of Class I shall be determined by Stirling's (Simpson's) Rule or by any other method giving the same degree of accuracy. The capacity of a square-sterned boat shall be calculated as if the boat had a pointed stern.

2. For example, the capacity in cubic metres (or cubic feet) of a boat, calculated by the aid of Stirling's Rule, may be considered as given by the following formula:—

$$\text{Capacity} = \frac{l}{12}(4A+2B+4C)$$

l being the length of the boat in metres (or feet) from the inside of the planking or plating at the stem to the corresponding point at the stern post; in the case of a boat with a square stern, the length is measured to the inside of the transom.

A, B, C denote respectively the areas of the cross-sections at the quarter length forward, amidships, and the quarter length aft, which correspond to

the three points obtained by dividing l into four equal parts (the areas corresponding to the two ends of the boat are considered negligible).

The areas A, B, C shall be deemed to be given in square metres (or square feet) by the successive application of the following formula to each of the three cross-sections:—

$$\text{Area}=\frac{h}{12}(a+4b+2c+4d+e)$$

h being the depth measured in metres (or in feet) inside the planking or plating from the keel to the level of the gunwale, or, in certain cases, to a lower level, as determined hereafter.

a, b, c, d, e denote the horizontal breadths of the boat measured in metres (or in feet) at the upper and lower points of the depth and at the three points obtained by dividing h into four equal parts (a and e being the breadths at the extreme points, and c at the middle point, of h).

3. If the sheer of the gunwale, measured at the two points situated at a quarter of the length of the boat from the ends, exceeds 1 per cent. of the length of the boat, the depth employed in calculating the area of the cross-sections A or C shall be deemed to be the depth amidships plus 1 per cent. of the length of the boat.

4. If the depth of the boat amidships exceeds 45 per cent. of the breadth, the depth employed in calculating the area of the midship cross-section B shall be deemed to be equal to 45 per cent. of the breadth, and the depth employed in calculating the areas of the quarter length sections A and C is obtained by increasing this last figure by an amount equal to 1 per cent. of the length of the boat, provided that in no case shall the depths employed in the calculation exceed the actual depths at these points.

5. If the depth of the boat is greater than 122 centimetres (equivalent to 4 feet) the number of persons given by the application of this rule shall be reduced in proportion to the ratio of 122 centimetres to the actual depth, until the boat has been satisfactorily tested afloat with that number of persons on board, all wearing lifejackets.

6. Each Administration shall impose, by suitable formulæ, a limit for the number of persons allowed in boats with very fine ends and in boats very full in form.

7. Each Administration reserves the right to assign to a boat a capacity equal to the product of the length, the breadth and the depth multiplied by 0·6 if it is evident that this formula does not give a greater capacity than that obtained by the above method. The dimensions shall then be measured in the following manner:—

Length.—From the intersection of the outside of the planking with the stem to the corresponding point at the stern post or, in the case of a square sterned boat, to the after side of the transom.

Breadth.—From the outside of the planking at the point where the breadth of the boat is greatest.

Depth.—Amidships inside the planking from the keel to the level of the gunwale, but the depth used in calculating the cubic capacity may not in any case exceed 45 per cent. of the breadth.

In all cases the shipowner has the right to require that the cubic capacity of the boat shall be determined by exact measurement.

8. The cubic capacity of a motorboat is obtained from the gross capacity by deducting a volume equal to that occupied by the motor and its accessories, and, when carried, the wireless telegraphy installation and the searchlight with their accessories.

REGULATION XXXI

Deck Area of Boats of Class II

1. The area of the deck of a decked boat shall be determined by the method indicated below or by any other method giving the same degree of accuracy. The same rule is to be applied in determining the area within the fixed bulwarks of a boat of Class II (*a*).

2. For example, the surface in square metres (or square feet) of a boat may be deemed to be given by the following formula:—

$$\text{Area} = \frac{l}{12}(2a + 1{\cdot}5b + 4c + 1{\cdot}5d + 2e)$$

l being the length in metres (or in feet) from the intersection of the outside of the planking with the stem to the corresponding point at the stern post.

a, b, c, d, e denote the horizontal breadths in metres (or in feet) outside the planking at the points obtained by dividing l into four equal parts and sub-dividing the foremost and aftermost parts into two equal parts (a and e being the breadths at the extreme sub-divisions, c at the middle point of the length, and b and d at the intermediate points).

REGULATION XXXII

Marking of Boats, Life Rafts and Buoyant Apparatus

The dimensions of the boat and the number of persons which it is authorised to carry, shall be marked on it in clear permanent characters. These marks shall be specifically approved by the officers appointed to inspect the ship.

Life rafts and buoyant apparatus shall be marked with the number of persons in the same manner.

REGULATION XXXIII

Carrying Capacity of Boats

1. The number of persons which a boat of one of the standard types can accommodate is equal to the greatest whole number obtained by divid-

ing the capacity in cubic metres (or cubic feet), or the surface in square metres (or square feet), of the boat by the standard unit of capacity, or unit of surface (according to circumstances), defined below for each type.

2. The standard units of capacity and surface for determining the number of persons are as follows:—

Unit of Capacity	Cubic Metres	Equivalent in Cubic Feet
Open boats, Class I(*a*)	0.283	10
Open boats, Class I(*b*)	0.255	9
Unit of Surface	**Square Metres**	**Equivalent in Square Feet**
Class II	0·325	3½

3. The Administration may accept, in place of 0·325 or 3½, as the case may be, a smaller divisor, if it is satisfied after trial that the number of persons for whom there is seating accommodation in the decked boat in question is greater than the number obtained by applying the above divisor, provided always that the divisor adopted in place of 0·325 or 3½, as the case may be, may never be less than 0·280 or 3, as the case may be.

The Administration which accepts a lower divisor in this way shall communicate to the other Administrations particulars of the trial and drawings of the decked boat in question.

Regulation XXXIV

Capacity Limits

No boat shall be marked for a greater number of persons than that obtained in the manner specified in these Regulations.

This number shall be reduced—

(1) when it is greater than the number of persons for which there is proper seating accommodation; the latter number shall be determined in such a way that the persons when seated do not interfere in any way with the use of the oars;

(2) when, in the case of boats other than those of Class I, the freeboard when the boat is fully loaded is less than the freeboard laid down for each type respectively; the number shall be reduced until the freeboard when the boat is fully loaded is at least equal to the standard freeboard laid down above.

In boats of Class II (*b*) (i), the raised part of the deck at the sides may be regarded as affording seating accommodation.

Regulation XXXV

Equivalents for and Weight of the Persons

In the tests for determining the number of persons which a boat or life raft can accommodate, each person shall be assumed to be an adult person wearing a life-jacket.

In verifications of freeboard the decked boats shall be loaded with a weight of at least 75 kilogrammes (165 lbs.) for each adult person that the decked boat is authorised to carry.

In all cases two children under 12 years of age shall be reckoned as one person.

REGULATION XXXVI

Equipment of Boats and Life Rafts

1. The normal equipment of every boat shall consist of:—

(*a.*) A single banked complement of oars, two spare oars and a steering oar; one set and a half of thole pins or crutches; a boat hook.

(*b.*) Two plugs for each plug hole (plugs are not required when proper automatic valves are fitted); a bailer and a galvanised iron bucket.

(*c.*) A rudder and a tiller or yoke and yoke lines.

(*d.*) Two hatchets.

(*e.*) A lamp filled with oil and trimmed.

(*f.*) A mast or masts with one good sail at least, and proper gear for each.

(*g.*) An efficient compass.

(*h.*) A life-line becketed round the outside.

(*i.*) A sea-anchor.

(*j.*) A painter.

(*k.*) A vessel containing four and a half litres (equivalent to one gallon) of vegetable or animal oil. The vessel shall be so constructed that the oil can be easily distributed on the water, and so arranged that it can be attached to the sea-anchor.

(*l.*) An airtight receptacle containing one kilogramme (equivalent to two pounds) of provisions for each person.

(*m.*) A watertight receptacle provided with a dipper with lanyard containing one litre (equivalent to one quart) of fresh water for each person.

(*n.*) At least one dozen self-igniting "red lights" and a box of matches in watertight containers.

(*o.*) Half a kilogramme (equivalent to one pound) of condensed milk for each person.

(*p.*) A suitable locker for the stowage of the small items of the equipment.

(*q.*) Any boat which is certified to carry 100 or more persons shall be fitted with a motor and shall comply with the requirements of Regulation XXVII.

A motor lifeboat need not carry a mast or sails or more than half the complement of oars, but it shall carry two boathooks.

Decked lifeboats shall have no plug-hole, but shall be provided with at least two bilge-pumps.

In the case of a ship which carries passengers in the North Atlantic north of 35° North Latitude, only a proportion of the boats, to be fixed by the

Administration, need be equipped with masts and sails, and only one-half the quantity of condensed milk need be carried.

2. Where the number of lifeboats carried on a ship is more than 13, one shall be a motor boat, and where the number is more than 19, two shall be motor boats. These motor lifeboats shall be fitted with a wireless telegraph installation and a searchlight.

The wireless telegraph installation shall comply with conditions as to range and efficiency to be decided by each Administration.

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 coloured object over a width of about 18 metres (60 feet) at a distance of 180 metres (200 yards) for a total period of six hours, and it shall be capable of working for three hours continuously.

Where the power for the wireless equipment and the searchlight are derived from the same source, this shall be sufficient to provide for the adequate working of both appliances.

3. The normal equipment of every approved life raft shall consist of—

(*a.*) Four oars.
(*b.*) Five rowlocks.
(*c.*) A self-igniting lifebuoy light.
(*d.*) A sea-anchor.
(*e.*) A painter.
(*f.*) A vessel containing four and a half litres (equivalent to one gallon) of vegetable or animal oil. The vessel shall be so constructed that the oil can be easily distributed on the water, and so arranged that it can be attached to the sea-anchor.
(*g.*) An airtight receptacle containing one kilogramme (equivalent to two pounds) of provisions for each person.
(*h.*) A watertight receptacle provided with a dipper with lanyard containing one litre (equivalent to one quart) of fresh water for each person.
(*i.*) At least one dozen self-igniting red lights and a box of matches in watertight containers.

4. In the case of a ship which is engaged in short international voyages, the Administration may exempt the boats from carrying the equipment specified under sub-paragraphs (*f*), (*l*) and (*o*) of paragraph 1 and from the requirements of paragraph 2, and may also exempt the life rafts from carrying the equipment specified in paragraph 3 (*g*).

Regulation XXXVII

Stowage and Handling of Boats and Life Rafts

1. Subject to the conditions of Regulation XXXVIII, the lifeboats may 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 boats so fitted require lifting before being launched they shall only be permitted if mechanical power appliances for lifting are provided.

2. The lifeboats and life rafts additional to boats stowed under boats attached to davits may be stowed across a deck, bridge or poop and so secured that they will have the best chance of floating free of the ship if there is no time to launch them.

3. As large a number as possible of the additional boats referred to in paragraph 2 shall be capable of being launched on either side of the ship by means of approved appliances for transferring them from one side of the deck to the other.

4. Boats may only be stowed on more than one deck on condition that proper measures are taken to prevent boats on a lower deck being fouled by those stowed on a deck above.

5. Boats shall not be placed in the bows of the ship or in any positions in which they would be brought into dangerous proximity to the propellers at the time of launching.

6. Davits shall be of approved form and so disposed on one or more decks that the boats placed under them can be safely lowered without interference from the operation of any other davits.

7. The davits, blocks, falls and all other gear shall be of such strength that the boats can be safely lowered with the full complement of persons and equipment, with the ship listed to 15 degrees either way. The falls shall be long enough to reach the water with the vessel at her lightest seagoing draught and with a list of 15 degrees.

8. The davits shall be fitted with gear of sufficient power to ensure that the boats, fully equipped and manned, but not otherwise loaded with passengers, can be turned out against the maximum list at which the lowering of the boats is possible.

9. The boats attached to the davits shall have the falls ready for service, and means shall be provided for speedily, but not necessarily simultaneously, detaching the boats from the falls.

10. Where more than one boat is served by the same set of davits, if the falls are of rope, separate falls shall be provided to serve each boat, but where wire falls are used with mechanical appliances for recovering them, separate falls need not be provided. The appliances used must be such as to ensure lowering the boats in turn and rapidly.

Where mechanical appliances are fitted for the recovery of the falls efficient hand gear shall also be provided.

11. On short international voyages where the height of the boat deck above the water line when the vessel is at her lightest sea-going draught does not exceed 4·5 metres (15 feet), the requirements as to strength of davits and turning-out gear in sub-paragraphs 7, 8 and 10 shall not apply.

Regulation XXXVIII

Number and Capacity of Boats, Life Rafts, &c., and Davits

1. A ship shall be provided with sets of davits in accordance with its length as provided in Column A of the Table in Regulation XXXIX, provided that a number of sets of davits greater than the number of boats necessary for the accommodation of all the persons on board shall not be required.

Each set of davits shall have a boat of Class I attached to it. If the lifeboats attached to davits do not provide sufficient accommodation for all the persons on board, additional lifeboats of one of the standard types shall be provided. One additional lifeboat shall, in the first place, be stowed under each of the boats attached to davits. After these have been fitted other boats shall be carried inboard, but an Administration may, if it is of opinion that life rafts will be more readily available and otherwise more satisfactory than these lifeboats in a case of emergency, allow life rafts to be carried provided that the total capacity of the boats on the ship will be at least up to the minimum capacity required by Column C of the Table in Regulation XXXIX.

When in the opinion of the Administration it is neither practicable nor reasonable to place on a ship the number of sets of davits required by Column A of the Table in Regulation XXXIX, the Administration may authorise, under exceptional conditions, a smaller number of sets of davits, provided always 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 boats on the ship will be at least up to the minimum capacity required by Column C.

2. A ship engaged on short international voyages shall be provided with sets of davits in accordance with its length as provided in Column A of the Table in Regulation XXXIX. Each set of davits shall have a boat of Class I attached to it. If the lifeboats attached to davits do not provide the minimum cubic capacity specified in Column D of the Table in Regulation XXXIX or provide accommodation for all persons on board, additional lifeboats of one of the standard types, approved life rafts or other approved buoyant apparatus shall be provided, and the accommodation thus provided shall be sufficient for all on board.

When in the opinion of the Administration it is neither practicable nor reasonable to place on a ship engaged in short international voyages, the number of sets of davits required by Column A of the Table in Regulation XXXIX, the Administration may authorise, under exceptional conditions, a smaller number of sets of davits, provided always 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 boats on the ship will be at least up to the minimum capacity required by Column D.

REGULATION XXXIX

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 boat of Class I in accordance with Regulation XXXVIII above.

(B.) *The smaller number of sets of davits which may be authorised exceptionally* under Regulation XXXVIII.

(C.) *The minimum life-boat capacity required*, including the life-boats attached to davits and the additional boats, in accordance with Regulation XXXVIII.

(D.) *The minimum life-boat capacity* required for a ship engaged in short international voyages.

Registered Length of the Ship		(A.) Minimum Number of Sets of Davits	(B.) Smaller Number of Sets of Davits authorised exceptionally	(C.) Minimum Capacity of Lifeboats		(D.) Minimum Capacity of Lifeboats	
Metres	Feet			Cubic Metres	Cubic Feet	Cubic Metres	Cubic Feet
31 and under 37	100 and under 120	2	2	28	980	11	400
37 " 43	120 " 140	2	2	35	1,220	17	600
43 " 49	140 " 160	2	2	44	1,550	24	850
49 " 53	160 " 175	3	3	53	1,880	33	1,150
53 " 58	175 " 190	3	3	68	2,390	37	1,300
58 " 63	190 " 205	4	4	78	2,740	41	1,450
63 " 67	205 " 220	4	4	94	3,330	45	1,600
67 " 70	220 " 230	5	4	110	3,900	48	1,700
70 " 75	230 " 245	5	4	129	4,560	52	1,850
75 " 78	245 " 255	6	5	144	5,100	60	2,100
78 " 82	255 " 270	6	5	160	5,640	68	2,400
82 " 87	270 " 285	7	5	175	6,190	76	2,700
87 " 91	285 " 300	7	5	196	6,930	85	3,000
91 " 96	300 " 315	8	6	214	7,550	94	3,300
96 " 101	315 " 330	8	6	235	8,290	105	3,700
101 " 107	330 " 350	9	7	255	9,000	116	4,100
107 " 113	350 " 370	9	7	273	9,630	125	4,400
113 " 119	370 " 390	10	7	301	10,650	133	4,700
119 " 125	390 " 410	10	7	331	11,700	144	5,100
125 " 133	410 " 435	12	9	370	13,060	156	5,500
133 " 140	435 " 460	12	9	408	14,430	170	6,000
140 " 149	460 " 490	14	10	451	15,920	185	6,550
149 " 159	490 " 520	14	10	490	17,310	201	7,100
159 " 168	520 " 550	16	12	530	18,720	217	7,650
168 " 177	550 " 580	16	12	576	20,350		
177 " 186	580 " 610	18	13	620	21,900		
186 " 195	610 " 640	18	13	671	23,700		
195 " 204	640 " 670	20	14	717	25,350		
204 " 213	670 " 700	20	14	766	27,050		
213 " 223	700 " 730	22	15	808	28,560		
223 " 232	730 " 760	22	15	854	30,180		
232 " 241	760 " 790	24	17	908	32,100		
241 " 250	790 " 820	24	17	972	34,350		
250 " 261	820 " 855	26	18	1,031	36,450		
261 " 271	855 " 890	26	18	1,097	38,750		
271 " 282	890 " 925	28	19	1,160	41,000		
282 " 293	925 " 960	28	19	1,242	43,880		
293 " 303	960 " 995	30	20	1,312	46,350		
303 " 314	995 " 1,030	30	20	1,380	48,750		

Note on (A) and (B).—When the length of the ship exceeds 314 metres (equivalent to 1,030 feet) the Administration shall determine the minimum number of sets of davits for that ship; full particulars of its decision shall be communicated to the other Administrations.

Note on (C) and (D).—For the purposes of this table the capacity of a boat of Class II is obtained by multiplying the number of persons for which the boat is certified by 0·283 to obtain the capacity in cubic metres and by 10 to obtain the capacity in cubic feet.

Note on (D).—When the length of a ship is under 31 metres (equivalent to 100 feet) or over 168 metres (equivalent to 550 feet) the cubic capacity of the lifeboats shall be prescribed by the Administration.

Regulation XL

Life-Jackets and Life-Buoys

1. A life-jacket shall satisfy the following requirements:—

(*a.*) It shall be constructed with proper workmanship and materials.

(*b.*) It shall be capable of supporting in fresh water for 24 hours 7·5 kilogrammes of iron (equivalent to 16½ pounds);

(*c.*) It shall be reversible.

Life-jackets the buoyancy of which depends on air compartments are prohibited.

2. A lifebuoy shall satisfy the following requirements:—

(*a.*) It shall be of solid cork or any other equivalent material;

(*b.*) It shall be capable of supporting in fresh water for 24 hours at least 14·5 kilogrammes (equivalent to 32 pounds) of iron.

Life-buoys filled with rushes, cork shavings or granulated cork, or any other loose granulated material, or whose buoyancy depends upon air compartments which require to be inflated, are prohibited.

3. The minimum number of life-buoys with which ships are to be provided is fixed by the following table:—

Length of the Ship		Minimum Number of Buoys
Metres	Equivalent in Feet	
Under 61	Under 200	8
61 and under 122	200 and under 400	12
122 and under 183	400 and under 600	18
183 and under 244	600 and under 800	24
244 and over	800 and over	30

4. All the buoys shall be fitted with beckets securely seized. At least one buoy on each side shall be fitted with a life-line of at least 27·5 metres (15 fathoms) in length. Not less than one-half of the total number of life-buoys, and in no case less than six, shall be provided with efficient self-igniting lights which cannot be extinguished in water, and these shall be kept near the buoys to which they belong, with the necessary means of attachment.

5. All the life-buoys and life-jackets shall be so placed as to be readily accessible to the persons on board; their position shall be plainly indicated so as to be known to the persons concerned.

The life-buoys shall always be capable of being rapidly cast loose and shall not be permanently secured in any way.

Regulation XLI

Certificated Lifeboatmen

In order to obtain the special lifeboatman's certificate provided for in Article 22 of the present Convention, 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 lifeboat service.

There shall be for each boat or life-raft a number of lifeboatmen at least equal to that specified in the following table:—

If the Prescribed Complement is—	The Minimum Number 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

REGULATION XLII

Manning of Boats

A deck officer or certificated lifeboatman shall be placed in charge of each boat or life-raft and a second in command shall also be nominated. The person in charge shall have a list of its crew, and shall see that the men placed under his orders are acquainted with their several duties.

A man capable of working the motor shall be assigned to each motor boat.

A man capable of working the wireless and searchlight installations shall be assigned to boats carrying this equipment.

The duty of seeing that the boats, life-rafts and buoyant apparatus and other lifesaving apparatus are at all times ready for use shall be assigned to one or more officers.

REGULATION XLIII

Fire Detection and Extinction

1. An efficient patrol system shall be maintained, so that any outbreak of fire may be promptly detected. In addition, a fire alarm or fire detecting system shall be provided, which will automatically indicate or register at one or more points or stations, where it can be most quickly observed by officers and crew, the presence or indication of fire in any part of the ship not accessible to the patrol system.

2. Every ship shall be provided with powerful pumps, operated by steam or other means. On ships of less than 4,000 tons gross there shall be two, and on larger ships three of these pumps. Each of the pumps shall be capable of delivering a sufficient quantity of water in two powerful jets simultaneously in any given part of the ship, and shall be available for immediate use before the ship leaves port.

3. The service pipes shall permit of two powerful jets of water being simultaneously directed on any given part of a deck occupied by passengers and crew, when the watertight and fire-resisting doors are closed. The service

pipes and hoses shall be of ample size and made of suitable material. The branches of the pipes shall be so placed on each deck that the fire hose can be easily coupled to them.

4. Provision shall be made whereby at least two powerful jets of water can be rapidly and simultaneously directed into any space containing cargo. In addition, arrangements shall be made whereby smothering gas sufficient to give a minimum volume of free gas equal to 30 per cent. of the gross volume of the largest hold in the ship can be promptly conveyed by a permanent piping system into each compartment in which cargo is carried. Steam in adequately equivalent proportion may be accepted in place of smothering gas on steam-driven ships. Provision for the supply of smothering gas or steam need not be required in ships of less than 1,000 tons gross.

5. A sufficient number of portable fluid fire extinguishers shall be provided, at least two being carried in each machinery space.

6. Two equipments, consisting of a smoke helmet or breathing apparatus and a safety lamp, shall be carried on board, and kept in two widely separated places.

7. In steamships in which the main boilers are oil fired, there shall be provided in addition to means whereby two powerful jets of water may be rapidly and simultaneously directed into any part of the machinery spaces—

(*a.*) Suitable conductors for spraying water on oil without undue disturbance of the surface.

(*b.*) In each firing space, a receptacle containing 283 cubic decimetres (10 cubic feet) of sand, sawdust impregnated with soda, or other approved dry materials, and scoops for distributing the same.

(*c.*) In each boiler room, and in each of the machinery spaces in which a part of the oil fuel installation is situated, two approved portable extinguishers of a type discharging froth or other approved medium suitable for quenching oil fires.

(*d.*) Means whereby froth may be rapidly discharged and distributed over the whole of the lower part of the boiler room or of any one boiler room, if there are more than one, or of any machinery space in which oil fuel units or settling tanks are situated. The quantity of froth which can be discharged shall be ample to cover to a depth of 15·24 centimetres (6 inches) the whole area of the plating formed in any one compartment by the inner bottom plating, or by the shell plating of the vessel, if there is no double-bottom tank. If the engine and boiler rooms are not entirely separate, and fuel can drain from the boiler room bilges into the engine room, the combined engine and boiler rooms shall be considered as one compartment. The apparatus shall be operated and controlled from outside the compartment in which the fire may occur.

(*e.*) In addition to the foregoing, one extinguisher of the froth type of at least 136 litres (30 gallons) capacity in steamships having one boiler room

and two such extinguishers in steamships with more than one boiler room. These extinguishers shall be provided with hoses on reels suitable for reaching any part of the boiler rooms and spaces containing oil-fuel pumping units. Equally efficient apparatus may be accepted in place of the 136 litres (30-gallons) extinguishers.

(*f.*) All containers and valves by which they are operated shall be easily accessible and so placed that they will not readily be cut off from use by an outbreak of fire.

8. In vessels propelled by internal combustion engines there shall be provided in each of the machinery spaces, in addition to means whereby two powerful jets of water may be rapidly and simultaneously directed into any part of the machinery spaces, together with suitable spraying conductors, froth extinguishers as follows:—

(*a.*) At least one approved 45 litres (10-gallons) extinguisher with an addition of one approved 9 litres (2-gallons) extinguisher for each 1,000 B.H.P. of the engines, but the total number of 9 litres (2-gallons) extinguishers so supplied shall be not less than two and need not exceed six.

(*b.*) When a donkey boiler is situated in the machinery space there shall be provided, in place of the 45 litres (10-gallons) extinguisher mentioned above, one of 136 litres (30 gallons) capacity, fitted with suitable hose attachments or other approved methods for distributing the froth.

9. In steamships using oil fuel, if the engine and boiler rooms are not entirely separated by a steel bulkhead, and if fuel oil can drain from the boiler-room bilges into the engine room, one of the fire pumps shall be situated in the tunnel or other space outside the machinery compartment. When more than two pumps are required they shall not all be fitted in the same space.

10. Where any special type of appliance, extinguishing medium or arrangement is specified, any other type of appliance, &c., may be allowed, provided that it is not less effective than the specified one. For example—a Carbon Dioxide system may be accepted in place of a froth installation (paragraph (7), sub-paragraphs (*d*) and (*e*)), provided that the quantity of carbon dioxide carried is sufficient to give a gas saturation of about 25 per cent. for the gross volume of the stokehold to about the top of the boilers.

11. All the fire-extinguishing appliances shall be thoroughly examined at least once each year by a surveyor appointed by the Administration.

REGULATION XLIV

Muster List

The muster list shall assign duties to the different members of the crew in connexion with—

(*a.*) The closing of the watertight doors, valves, &c.

(*b.*) The equipment of the boats, life rafts and buoyant apparatus generally.

(*c.*) The launching of the boats attached to davits.

(*d.*) The general preparation of the other boats, the life rafts, and buoyant apparatus.

(*e.*) The muster of the passengers.

(*f.*) The extinction of fire.

The muster list shall assign to the members of the stewards' department their several duties in relation to the passengers at a time of emergency. These duties shall include:—

(*a.*) Warning the passengers.

(*b.*) Seeing that they are dressed and have put on their lifejackets in a proper manner.

(*c.*) Assembling the passengers at muster stations.

(*d.*) Keeping order in the passages and on the stairways, and, generally, controlling the movements of the passengers.

The muster list shall specify definite signals for calling all the crew to their boat and fire stations, and shall give full particulars of these signals.

Regulation XLV

Musters and Drills

Musters of the crew for boat drill shall take place weekly when practicable, and in vessels in which the voyage exceeds one week, before leaving port. The dates upon which musters are held shall be recorded in the Official Log Book and, if in any week a muster is not held, an entry shall be made stating why a muster was not practicable.

In ships in which the voyage exceeds one week practice musters of passengers should be held at an early period of each voyage.

Different groups of boats shall be used in turn at successive boat drills. The drills and inspections shall be so arranged that the crew thoroughly understand and are practised in the duties they have to perform, and that all lifesaving appliances with the gear appertaining to them are always ready for immediate use.

The emergency signal for summoning passengers to muster stations shall be a succession of more than six short blasts followed by one long blast on the whistle or syren. This shall be supplemented on all ships except those engaged in short international voyages by other electrically operated signals throughout the ship controlled from the bridge. The meaning of all signals affecting passengers shall be clearly stated in different languages on cards posted in their cabins and in other passenger quarters.

SAFETY OF NAVIGATION

REGULATION XLVI

Transmission of Information

The transmission of information regarding ice, derelicts, tropical storms or any other direct danger to navigation is obligatory. 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 (Wireless Telegraphy Section). It should be issued CQ to all ships, and should also be sent to the first point of the coast to which communication can be made with a request that it be transmitted to the appropriate authority.

All messages issued under Article 34 of the present Convention will be preceded by the safety signal TTT followed by an indication of the nature of the danger, thus: TTT Ice; TTT Derelict; TTT Storm; TTT Navigation.

Information Required

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

(*a.*) *Ice, Derelicts and other Direct Dangers to Navigation.*

(1) the kind of ice, derelict or danger observed;
(2) the position of the ice, derelict or danger when last observed;
(3) the time and date when the observation was made.

(*b.*) *Tropical Storms.*—(Hurricanes in the West Indies, Typhoons in the China Seas, Cyclones in Indian waters, and storms of a similar nature in other regions.)

(1.) *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 neighbourhood.

(2.) *Meteorological Information.*—In view of the great assistance given by accurate meteorological data in fixing the position and movement of storm centres, each shipmaster should add to his warning message as much of the following meteorological information as he finds practicable:—

(*a*) barometric pressure (millibars, inches or millimetres);
(*b*) change in barometric pressure (the change during the previous two to four hours);
(*c*) wind direction (true not magnetic);
(*d*) wind force (Beaufort or decimal scale);
(*e*) state of the sea (smooth, moderate, rough, high);
(*f*) swell (slight, medium, heavy) and the direction from which it comes.

When barometric pressure is given the word "millibars," "inches" or "millimetres," as the case may be, should be added to the reading, and *it should always be stated whether the reading is corrected or uncorrected.*

When changes of the barometer are reported the course and speed of the ship should also be given.

All directions should be true, not magnetic.

(3.) *Time and Date and Position of the Ship.*—These should be for the time and position when the meteorological observations reported were made and not when the message was prepared or despatched. The time used in all cases should be Greenwich Mean Time.

(4.) *Subsequent Observations.*—When a master has reported a tropical storm it is desirable, but not obligatory, that other observations be made and transmitted at intervals of 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.

Derelict.

TTT Derelict. Observed derelict almost submerged in 4006 N., 1243 W., at 1630 GMT. April 21.

Danger to Navigation.

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

Tropical Storm.

TTT Storm. Experiencing tropical storm. Barometer corrected 994 millibars, falling rapidly. Wind NW., force 9, heavy squalls. Swell E. Course ENE., 5 knots. 2204 N., 11354 E. 0030 GMT. August 18.

TTT Storm. Appearances indicate approach of hurricane. Barometer corrected 29·64 inches falling. Wind NE., force 8. Swell medium from NE. Frequent rain squalls. Course 35°, 9 knots. 2200 N., 7236 W. 1300 GMT. September 14.

TTT Storm. Conditions indicate intense cyclone has formed. Wind S. by W. force 5. Barometer uncorrected 753 millimetres, fell 5 millimetres last three hours. Course N. 60 W., 8 knots. 1620 N., 9302 E. 0200 GMT. May 4.

TTT Storm. Typhoon to south-east. Wind increasing from N. and barometer falling rapidly. Position 1812 N., 12605 E. 0300 GMT. June 12.

CERTIFICATES

REGULATION XLVII

Form of Safety Certificate for Passenger Ships

SAFETY CERTIFICATE

(*Official Seal*) (*Country*)

for $\frac{\text{an}}{\text{a short}}$ international voyage

Issued under the provisions of the

INTERNATIONAL CONVENTION FOR SAFETY OF LIFE AT SEA, 1929

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 surveyed in accordance with the provisions of the International Convention referred to above.

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

(1) the hull, main and auxiliary boilers and machinery;
(2) the watertight subdivision arrangements and details;
(3) the following subdivision loadlines:—

Subdivision loadlines assigned and marked on the ship's side at amidships (Convention Article 5)	Freeboard	To apply when the spaces in which passengers are carried include the following alternative spaces
C. 1	.....	.....
C. 2	.....	.....
C. 3	.....	.....

(4) the boats, life-rafts and life-saving appliances which provide for a total number (crew and passengers) of.....persons, and no more, viz:—

.....boats capable of accommodating.....persons.
.....life-rafts " " ..... "
.....buoyant apparatus capable of supporting..... persons.
.....life-buoys.
.....life-jackets.
.....certificated lifeboatmen.

(5) the radiotelegraph installations:—

———	Requirements of Articles.....of the said Convention	Actual provision
Hours of watch	.....	.....
Whether approved auto-alarm fitted	.....	.....
Whether separate emergency installation fitted	.....	.....
Minimum number of operators	.....	.....
Additional operators or watchers	.....	.....
Whether direction-finding apparatus fitted	.....	.....

III. That in all other respects the ship complies with the requirements of the said Convention, so far as those requirements apply thereto.

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

Issued at the day of

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 that he is duly authorised 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 SAFETY OF LIFE AT SEA, 1929

Name of Ship	Distinctive Number or Letters	Port of Registry	Gross Tonnage

The (*Name*) Government certify
I, the undersigned, (*Name*) certify

That the above-mentioned ship complies with the provisions of the International Convention referred to above as regards Radiotelegraphy:—

———	Requirements of Articles.....of the said Convention	Actual Provision
Hours of watch	.....	.....
Whether approved auto-alarm fitted	.....	.....
Whether separate emergency installation fitted	.....	.....
Minimum number of operators	.....	.....
Additional operators or watchers	.....	.....
Whether direction-finding apparatus fitted	.....	.....

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

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 that he is duly authorised 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 SAFETY OF LIFE AT SEA, 1929

Name of Ship	Distinctive Number or Letters	Port of Registry	Gross Tonnage

The (*Name*) Government certify
I, the undersigned, (*Name*) certify

That the above-mentioned ship is under the authority conferred by Article .... of the International 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
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 that he is duly authorised by the said Government to issue this certificate.
(*Signature.*)

† Insert here references to Articles and Regulations, specifying particular paragraphs.

Annex II

INTERNATIONAL REGULATIONS FOR PREVENTING COLLISIONS AT SEA [11]

PRELIMINARY

These Rules shall be followed by all vessels upon the high seas and in all waters connected therewith, navigable by sea-going vessels.

In the following Rules every steam vessel which is under sail and not under steam is to be considered a sailing vessel, and every vessel under steam, whether under sail or not, is to be considered a steam vessel.

The words "steam vessel" shall include any vessel propelled by machinery.

The term "under steam" shall mean under any mechanical power.

A vessel is "under way" within the meaning of these Rules when she is not at anchor or made fast to the shore or aground.

The length of a vessel shall be deemed to be the length appearing in her certificate of registry.

[11] This revision of the International Regulations for Preventing Collisions at Sea, recommended by the 1929 London conference for adoption by individual states, was based on "rules of the road" in general use at the time. It was set up to indicate the addition of new material in italics and the deletion of previous material by cancelled lettering. For text of the regulations as promulgated by a British Order in Council of Oct. 13, 1910, see R. G. Marsden, *A Treatise on the Law of Collisions at Sea* (London, 1919), p. 491. For regulations adopted by the United States Congress on Aug. 19, 1890, under which the United States operated until 1952, which were very similar to the British rules, see 26 Stat. 320.

RULES CONCERNING LIGHTS, &c.

The word "visible" in these Rules, when applied to lights, shall mean visible on a dark night with a clear atmosphere.

ARTICLE 1

The Rules concerning lights shall be complied with in all weathers from sunset to sunrise, and during such time no other lights which may be mistaken for the prescribed lights *or impair their visibility* shall be exhibited.

ARTICLE 2

A steam vessel when under way shall carry:—

(*a.*) On or in front of the foremast, or if a vessel without a foremast, then in the fore part of the vessel, ~~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 carried at a greater height above the hull than 40 feet~~, a bright white light, so constructed as to show an unbroken light over an arc of the horizon of 20 points of the compass, so fixed as to throw the light 10 points on each side of the vessel, viz., from right ahead to 2 points abaft the beam on either side, and of such a character as to be visible at a distance of at least 5 miles.

(*b.*) *Either forward or aft of the white light mentioned in sub-division* (*a*) *a second white light similar in construction and character to that light.*

Vessels of less than 150 feet in length shall not be required to carry this second white light, but may do so.

(*c.*) *These two white lights shall be so placed in a line with 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, and higher than the lights mentioned in Article 2* (*d*) *and* (*e*). *The vertical distance between the two white lights shall be less than the horizontal 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 carried at a greater height above the hull than 40 feet.*

~~(b.)~~ (*d.*) 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, so fixed as to throw the light from right ahead to 2 points abaft the beam on the starboard side, and of such a character as to be visible at a distance of at least 2 miles.

~~(c.)~~ (*e.*) 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, so fixed as to throw the light from right ahead to 2 points abaft the beam on the port side, and of such a character as to be visible at a distance of at least 2 miles.

~~(d.)~~ (*f.*) The said green and red side lights 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 bow.

~~(e.) A steam vessel when under way may carry an additional white light similar in construction to the light mentioned in sub-division (a). These two lights shall be so placed in line with the keel that one shall be at least 15 feet higher than the other, and in such a position with reference to each other that the lower light shall be forward of the upper one. The vertical distance between these lights shall be less than the horizontal distance.~~

In naval vessels of special construction in which it is not possible to comply fully with the provisions of this Article as to the position of lights or their range of visibility, those provisions shall be followed as closely as circumstances will permit.

ARTICLE 3

A steam vessel when towing another vessel shall, in addition to her side lights, 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 Article 2 (*a*), ~~except the additional light which may~~ *and the lowest light shall* be carried at a height of not less than 14 feet above the hull.

~~Such steam vessel~~ *The vessel towing and the vessels towed, except the last vessel of the tow,* may carry *in lieu of the light required in Article 10,* a small white light abaft the funnel or aftermast, for the ~~vessel towed~~ tow to steer by, but such light shall not be visible forward of the beam.

ARTICLE 4

(*a.*) A vessel which ~~from any accident~~ is not under command shall carry ~~at the same height as the white light mentioned in Article 2 (a)~~, where they can best be seen, and, if a steam vessel, in lieu of ~~that light~~ *the lights required in Article 2 (a) and (b)*, two red lights, in a vertical line one over the other, not less than 6 feet apart, *so placed that the lower light shall not be less than 14 feet above the hull,* and of such a character as to be visible all round the horizon at a distance of at least 2 miles; and shall by day carry 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 2 feet in diameter.

(*b.*) A vessel employed in laying or in picking up a ~~telegraph~~ *submarine* cable shall carry ~~in the same position as the white light mentioned in Article 2 (a), and if a steam vessel,~~ in lieu of ~~that light~~ *the lights required in Article 2 (a) and (b),* three lights in a vertical line, one over the other, not less than

6 feet apart, *so placed that the lowest of these lights shall be not less than 14 feet above the hull.* 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 around 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 not less than 2 feet in diameter, of which the highest and lowest shall be globular in shape and red in colour, and the middle one diamond in shape and white.

(*c.*) The vessels referred to in this Article, when not making way through the water, shall not carry the side-lights, but when making way shall carry them.

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

These signals are not signals of vessels in distress and requiring assistance. Such signals are contained in Article 31.

ARTICLE 5

A sailing vessel under way, and any vessel being towed, shall carry the same lights as are prescribed by Article 2 for a steam vessel under way, with the exception of the white lights mentioned therein, which they shall never carry.

ARTICLE 6

Whenever, as in the case of small vessels under way during bad weather, the green and red side lights cannot be fixed, these lights shall be kept at hand lighted and ready for 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 abaft the beam on their respective sides.

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

ARTICLE 7

Steam vessels of less than 40, and vessels under oars or sails of less than 20, tons gross tonnage, respectively, and rowing boats, when under way, shall not be ~~obliged~~ *required* to carry the lights mentioned in Article 2 ~~(a), (b) and (c),~~ but if they do not carry them they shall be provided with the following lights:—

1. Steam vessels of less than 40 tons shall carry:

(*a.*) In the fore part of the vessel, ~~or~~ on or in front of the funnel, 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 Article 2 (*a*), and of such a character as to be visible at a distance of at least ~~2~~ *3* miles.

(*b.*) Green and red side-lights constructed and fixed as prescribed in Article 2 ~~(b) and (c),~~ (*d*) and (*e*), 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 abaft the beam on their respective sides. Such lantern shall be carried not less than 3 feet below the white light.

2. Small steamboats, such as are carried by sea-going vessels, may carry the white light at a less height than 9 feet above the gunwale, but it shall be carried above *the side-lights or* the combined lantern, mentioned in sub-division 1 (*b*).

3. Vessels under oars or sails, of less than 20 tons, shall ~~have ready at hand~~ *if they do not carry the side-lights, carry, where it can best be seen,* a lantern ~~with~~ *showing* a green ~~glass~~ *light* on one side and a red ~~glass~~ *light* on the other, ~~which, on the approach of or to other vessels, shall be exhibited in sufficient time to prevent collision~~, *of such a character as to be visible at a distance of at least 1 mile* so that the green light shall not be seen on the port side nor the red light on the starboard side; *provided that, where it is not possible to fix this light, it shall be kept lighted and ready for use, and shall be exhibited in sufficient time to prevent collision.*

4. *Small* rowing boats, whether under oars or sail, shall *only be required to* have ready at hand a *lighted* lantern showing a white light, which shall be temporarily exhibited in sufficient time to prevent collision.

The vessels referred to in this Article shall not be obliged to carry the lights prescribed by Article 4 (*a*), and Article 11, last paragraph.

Article 8

Sailing pilot-vessels, when engaged on their station on pilotage duty, *and not at anchor,* shall not show the lights required for other vessels, but shall carry a white light at the masthead, visible all around 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 ~~fifteen~~ *ten* minutes.

On the near approach of or to other vessels they shall have their side-lights 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.

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 ~~coloured~~ *side*-lights 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.

A steam pilot-vessel ~~exclusively employed for the service of pilots licensed or certified by any pilotage authority or the Committee of any pilotage dis-~~

~~trict~~, when engaged on her station on pilotage duty and not at anchor, shall, in addition to the lights *and flares* required for ~~all pilot boats~~ *sailing pilot-vessels,* carry at a distance of eight feet below her white mast head light, a red light, visible all round the horizon ~~and of such a character as to be visible on a dark night with a clear atmosphere~~ at a distance of at least ~~two~~ *three* miles, and also the ~~coloured~~ side-lights required to be carried by vessels when under way.

All pilot-vessels, when engaged on their stations on pilotage duty and at anchor, shall carry the lights and show the flares prescribed above, except that the side-lights shall not be shown.

When not engaged on their stations on pilotage duty, they shall carry the same lights as other vessels of their class and tonnage.

~~When engaged on her station on pilotage duty and at anchor she shall carry, in addition to the lights required for all pilot boats, the red light above mentioned, but not the coloured side lights.~~

~~Pilot vessels, when not engaged on their station on pilotage duty, shall carry lights similar to those of other vessels of their tonnage.~~

ARTICLE 9 [12] [13]

Fishing-vessels and fishing-boats, when under way and when not required by this Article to carry or show the lights hereinafter specified, shall carry or show the lights prescribed for vessels of their tonnage under way.

(*a.*) Open boats, by which it is to be understood boats not protected from the entry of sea water by means of a continuous deck, when engaged in any fishing at night with outlying tackle extending not more than 150 feet horizontally from the boat into the seaway, shall carry one all-round white light.

Open boats, when fishing at night, with outlying tackle extending more than 150 feet horizontally from the boat into the seaway, shall carry one all-round white light, and, in addition, on approaching or being approached by other vessels, shall show a second white light at least 3 feet below the first light and at a horizontal distance of at least 5 feet away from it in the direction in which the outlying tackle is attached.

The lights mentioned in this sub-division shall be of such a character as to be visible at a distance of at least 2 miles.

[14](*b.*) Vessels and boats, except open boats as defined in sub-division (*a*), when fishing with drift-nets, shall, so long as the nets are wholly or partly in the water, carry two white lights where they can best be seen. Such lights shall be placed so that the vertical distance between them shall be not less

[12] This article does not apply to Chinese or Siamese vessels. [Footnote in original.]

[13] The expression "Mediterranean Sea" contained in sub-sections (*b*) and (*c*) of this Article includes the Black Sea and the other adjacent inland seas in communication with it. [Footnote in original.]

[14] Dutch vessels and boats when engaged in the "kol," or hand-line, fishing will carry the lights prescribed for vessels fishing with drift-nets. [Footnote in original.]

than 6 feet and not more than 15 feet, and so that the horizontal distance between them, measured in a line with the keel, shall be not less than 5 feet and not more than 10 feet. The lower of these two lights shall be in the direction of the nets, and both of them shall be of such a character as to show all round the horizon, and to be visible at a distance of not less than 3 miles.

Within the Mediterranean Sea and in the seas bordering the coasts of Japan and Korea,[15] sailing fishing-vessels of less than 20 tons gross tonnage shall not be obliged to carry the lower of these two lights; should they, however, not carry it, they shall show in the same position (in the direction of the net or gear) a white light visible at a distance of not less than one sea mile on the approach of or to other vessels.

(*c.*) Vessels and boats, except open boats as defined in sub-division (*a*), when line-fishing with their lines out and attached to or hauling their lines, and when not at anchor or stationary within the meaning of sub-division (*h*), shall carry the same lights as vessels fishing with drift-nets. When shooting lines, or fishing with towing lines, they shall carry the lights prescribed for a steam or sailing vessel under way respectively.

Within the Mediterranean Sea and in the seas bordering the coasts of Japan and Korea,[15] sailing fishing vessels of less than 20 tons gross tonnage shall not be obliged to carry the lower of these two lights; should they, however, not carry it, they shall show in the same position (in the direction of the lines) a white light, visible at a distance of not less than one sea mile on the approach of or to other vessels.

(*d.*) Vessels, when engaged in trawling, by which is meant the dragging of an apparatus along the bottom of the sea—

1. If steam vessels, shall carry in the same position as the white light mentioned in Article 2 (*a*), a tri-coloured lantern so constructed and fixed as to show a white light from right ahead to two points on each bow, and a green light and a red light over an arc of the horizon from two points on each bow to two points abaft the beam on the starboard and port sides respectively; and not less than 6 nor more than 12 feet below the tri-coloured lantern a white light in a lantern, so constructed as to show a clear, uniform and unbroken light all round the horizon.

2. 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 or torch in sufficient time to prevent collision.

All lights mentioned in sub-division (*d*), 1 and 2, shall be visible at a distance of at least 2 miles.

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[15] Also, as regards Russian vessels, in the seas (excluding the Baltic) bordering the coasts of Russia. [Footnote in original.]

(*e.*) Oyster dredgers and other vessels fishing with dredge-nets shall carry and show the same lights as trawlers.

(*f.*) Fishing-vessels and fishing-boats may at any time use a flare-up light in addition to the lights which they are by this Article required to carry and show, and they may also use working lights.

(*g.*) Every fishing-vessel and every fishing-boat under 150 feet in length, when at anchor, shall exhibit a white light visible all round the horizon at a distance of at least ~~one~~ 2 miles.

Every fishing-vessel of 150 feet in length or upwards, when at anchor, shall exhibit a white light visible all round the horizon at a distance of at least ~~one~~ 2 miles and shall exhibit a second light as provided for vessels of such length by Article 11.

Should any such vessel, whether under 150 feet in length, or of 150 feet in length or upwards, be attached to a net or other fishing gear, she shall, on the approach of other vessels, show an additional white light at least 3 feet below the anchor light, and at a horizontal distance of at least 5 feet away from it in the direction of the net or gear.

(*h.*) If a vessel or boat when fishing becomes stationary in consequence of her gear getting fast to a rock or other obstruction, she shall in day-time haul down the day-signal required by sub-division (*k*); at night show the light or lights prescribed for a vessel at anchor; and, during fog, mist, falling snow, or heavy rain-storms, make the signal prescribed for a vessel at anchor. (See sub-division (*d*), and the last paragraph of Article 15.)

(*i.*) In fog, mist, falling snow, or heavy rain-storms, drift-net vessels attached to their nets, and vessels when trawling, dredging, or fishing with any kind of drag-net, and vessels line fishing with their lines out, shall, if of 20 tons gross tonnage or upwards, respectively, at intervals of not more than one minute, make a blast; if steam vessels, with the whistle or siren, and, if sailing vessels, with the foghorn; each blast to be followed by ringing the bell. Fishing vessels and boats of less than 20 tons gross tonnage shall not be obliged to give the above-mentioned signals; but, if they do not, they shall make some other efficient sound signal at intervals of not more than one minute.

(*k.*) All vessels or boats fishing with nets or lines or trawls, when under way, shall in daytime indicate their occupation ~~to an approaching vessel~~ by displaying a basket ~~or other efficient signal~~ where it can best be seen. If vessels or boats at anchor have their gear out, they shall, on the approach of other vessels, show the same signal on the side on which those vessels can pass.

The vessels required by this Article to carry or show the lights hereinbefore specified shall not be obliged to carry the lights prescribed by Article 4 (*a*) and the last paragraph of Article 11.

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ARTICLE 10

~~A vessel which is being overtaken by another shall show from her stern to such last-mentioned vessel a white light or a flare-up light.~~

~~The white light required to be shown by this Article may be fixed and carried in a lantern, but in such case the lantern shall be~~ *A vessel when under way shall carry at her stern, a white light* so constructed, fitted, and screened, that it shall throw an unbroken light over an arc of the horizon of 12 points of the compass, viz., for 6 points from right aft on each side of the vessel, *and of such a character* ~~so~~ as to be visible at a distance of at least ~~1 mile~~ *2 miles*. Such light shall be carried as nearly as practicable on the same level as the side lights.

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

For vessels engaged in towing, see Article 3, last paragraph.

ARTICLE 11

A vessel under 150 feet in length, when at anchor, shall carry forward, where it can best be seen, but at a height not exceeding 20 feet above the hull, 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 ~~1~~ *2* miles.

A vessel of 150 feet or upwards in length, when at anchor, shall carry in the forward part of the vessel, at a height of not less than 20, and not exceeding 40, 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.

Between sunrise and sunset all vessels when at anchor in or near a fairway shall carry, forward, where it can best be seen, one black ball, 2 feet in diameter. ~~The length of a vessel shall be deemed to be the length appearing in her certificate of registry~~.

A vessel aground in or near a fairway shall carry *by night* the above light or lights and the two red lights prescribed by Article 4 (*a*), *and by day, where they can best be seen, 3 black balls, each 2 feet in diameter, placed in a vertical line one over the other.*

ARTICLE 12

Every vessel 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 any detonating *or other efficient sound* signal that cannot be mistaken for *a prescribed* distress *or fog* signal.

ARTICLE 13

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 two or more ships of war or for vessels sailing under convoy, or with the exhibition of recognition signals adopted by shipowners, which have been authorised by their respective Governments and duly registered and published.

ARTICLE 14

A ~~steam~~ vessel proceeding under sail ~~only, but having her funnel up,~~ *when also under steam or other mechanical power* shall carry in *the* daytime, forward, where it can best be seen, one ~~black ball~~ *black cone, point upwards,* 2 feet in diameter *at its base.*

SOUND SIGNALS FOR FOG, &C.

ARTICLE 15

All signals prescribed by this Article for vessels under way shall be given—

1. By "steam vessels" on the whistle or siren.
2. By "sailing vessels and vessels towed" on the fog horn.

The words "prolonged blast" used in this Article, shall mean a blast of from 4 to 6 seconds' duration.

A steam vessel shall be provided with an efficient whistle or siren, sounded by steam or 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.[16] A sailing vessel of 20 tons gross tonnage or upwards shall be provided with a similar fog-horn and bell.

In fog, mist, falling snow or heavy rain-storms, whether by day or night, the signals described in this Article shall be used as follows, viz.:—

(*a.*) A steam vessel having way upon her, shall sound, at intervals of not more than 2 minutes, a prolonged blast.

(*b.*) A steam vessel under way, but stopped and having no way upon her, shall sound, at intervals of not more than 2 minutes, 2 prolonged blasts, with an interval of about 1 second between them.

(*c.*) A sailing vessel under way shall sound, at intervals of not more than 1 minute, when on the starboard tack, 1 blast, when on the port tack, 2 blasts in succession, and when with the wind abaft the beam, 3 blasts in succession.

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[16] In all cases where the rules require a bell to be used a drum may be substituted on board Turkish vessels, or a gong where such articles are used on board small sea-going vessels. [Footnote in original.]

(*d.*) 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 afterpart of the vessel, at intervals of not more than 1 minute, a gong or other instrument, the tone of which cannot be confused with the ringing of the bell.

(*e.*) A vessel, when towing, a vessel employed in laying or in picking up a ~~telegraph~~ *submarine* cable, 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 manœuvre as required by these Rules shall, instead of the signals prescribed in subdivisions (*a*), (*b*) and (*c*) of this Article, at intervals of not more than 2 minutes, sound 3 blasts in succession, viz., 1 prolonged blast followed by 2 short blasts. ~~A vessel towed may give this signal and she shall not give any other.~~

A vessel towed, or if more than one vessel is towed, the last vessel of the tow, shall, at intervals of not more than 2 minutes, sound 4 blasts in succession, viz., 1 prolonged blast followed by 3 short blasts, provided that this signal is not required when it is impossible to keep the vessel manned.

When practicable, the vessel towed shall make this signal immediately after the signal made by the towing vessel.

(*f.*) *A vessel aground in or near a fairway shall give the signal prescribed in paragraph (d), and shall, in addition, give 3 separate and distinct strokes on the bell immediately preceding and following each such signal.*

Sailing vessels and boats of less than 20 tons gross tonnage shall not be obliged to give the above-mentioned signals, but, if they do not, they shall make some other efficient sound-signal at intervals of not more than 1 minute.[17]

SPEED OF SHIPS TO BE MODERATE IN FOG, &C.

ARTICLE 16

Every vessel shall, in a fog, mist, falling snow, or heavy rain-storms, go at a moderate speed, having careful regard to the existing circumstances and conditions.

A steam 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.

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[17] Dutch steam pilot-vessels, when engaged on their station on pilotage duty in fog, mist, falling snow, or heavy rain-storms are required to make at intervals of 2 minutes at most one long blast with the siren, followed after 1 second by a long blast with the steam whistle and again after 1 second by a long blast on the siren. When not engaged on their station on pilotage duty, they make the same signals as other steamships. [Footnote in original.]

Steering and Sailing Rules

Preliminary—Risk of Collision

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.

ARTICLE 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, viz.:—

(*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 closed-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.

ARTICLE 18

When two steam 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 Article 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 the 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 side-lights 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.

ARTICLE 19

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

ARTICLE 20

When a steam vessel and a sailing vessel are proceeding in such directions as to involve risk of collision, the steam vessel shall keep out of the way of the sailing vessel.

ARTICLE 21

Where by way of these Rules one of two vessels is to keep out of the way, the other shall keep her course and speed.

NOTE.—When, in consequence of thick weather or other causes, such 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 Articles 27 and 29.)

ARTICLE 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.

ARTICLE 23

Every steam 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.

ARTICLE 24

Notwithstanding anything contained in these Rules, every vessel, overtaking any other, shall keep out of the way of the overtaken vessel.

Every vessel coming up with another vessel from any direction more than two points abaft her beam, *i. e.*, in such a position, with reference to the vessel which she is overtaking, that at night she would be unable to see either of that vessel's side-lights, 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.

As by day the overtaking vessel cannot always know with certainty whether she is forward or abaft this direction from the other vessel, she should, if in doubt, assume that she is an overtaking vessel and keep out of the way.

ARTICLE 25

In narrow channels every steam vessel 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.

ARTICLE 26

Sailing vessels under way shall keep out of the way of sailing vessels or boats fishing with nets, or lines, or trawls. This Rule shall not give to any vessel or boat engaged in fishing the right of obstructing a fair-way used by vessels other than fishing-vessels or boats.

ARTICLE 27

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

SOUND-SIGNALS FOR VESSELS IN SIGHT OF ONE ANOTHER

ARTICLE 28

The words "short blast" used in this Article shall mean a blast of about one second's duration.

When vessels are in sight of one another, a steam vessel under way, in taking any course authorized or required by these Rules, shall indicate that course by the following signals on her whistle or siren, viz.:—

One short blast to mean, "I am directing my course to starboard."

Two short blasts to mean, "I am directing my course to port."

Three short blasts to mean, "My engines are going full speed astern."

NO VESSEL UNDER ANY CIRCUMSTANCES TO NEGLECT PROPER PRECAUTIONS

ARTICLE 29

Nothing in these Rules shall exonerate any vessel, or the owner, or 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.

RESERVATION OF RULES FOR HARBOURS AND INLAND NAVIGATION

ARTICLE 30

Nothing in these Rules shall interfere with the operation of a special rule, duly made by local authority, relative to the navigation of any harbour, river, or inland waters.

DISTRESS SIGNALS

ARTICLE 31

When a vessel 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, viz.:—

In the daytime—

1. A gun or other explosive signal fired at intervals of about a minute;
2. The International Code signal of distress; ~~indicated by N.C.~~
3. The ~~distant~~ *distance* signal, consisting of a square flag, having either above or below it a ball or anything resembling a ball;
4. A continuous sounding with any fog-signal apparatus;
5. *The international distress signal made by radiotelegraphy or radiotelephony, or by any other distance signalling method.*

At night—

1. A gun or other explosive signal fired at intervals of about a minute;
2. Flames on the vessel (as from a burning tar-barrel, oil-barrel, &c.);
3. Rockets or shells, throwing stars of any colour or description, fired one at a time, at short intervals;
4. A continuous sounding with any fog-signal apparatus;
5. *The international distress signal made by radiotelegraphy or radiotelephony, or by any other distance signalling method.*

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