INTERNATIONAL CONFERENCE ON SAFETY OF LIFE AT SEA.

TEXT OF THE CONVENTION

FOR THE

SAFETY OF LIFE AT SEA.

SIGNED AT LONDON, JANUARY 20, 1914.

[WITH TRANSLATION.]

Presented to both Houses of Parliament by Command of His Majesty.
February 1914.

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CONTENTS.

[233] Wt. 2676/21 | 21 : 4 : 14. 1,000. 4 | 14. H. & S.

English Translation.*

INTERNATIONAL CONVENTION

ON

SAFETY OF LIFE AT SEA.

CONVENTION.

PREAMBLE.

His Majesty the German Emperor, King of Prussia, in the name of the German Empire; H.M. the Emperor of Austria, King of Bohemia, &c., and Apostolic King of Hungary; H.M. the King of the Belgians; H.M. the King of Denmark; H.M. the King of Spain; the President of the United States of America; the President of the French Republic; H.M. the King of the United Kingdom of Great Britain and Ireland and of the British Dominions beyond the Seas, Emperor of India; H.M. the King of Italy; H.M. the King of Norway; H.M. the Queen of the Netherlands; H.M. the Emperor of all the Russias; H.M. the King of Sweden;

Having recognised the desirability of determining by common agreement certain uniform rules with respect to the safety of life at sea, have decided to conclude a Convention to that end, and have appointed as their plenipotentiaries, that is to say:—

H.M. the EMPEROR OF GERMANY, KING OF PRUSSIA, in the name of the German Empire:—

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M. Paul Schreckenthal, Doctor of Law, Secretary in the Austrian Ministry of Commerce;
M. Ladislaus Dunay, Sektionsrat at the Royal Hungarian Maritime Administration at Fiume.

* This translation has been prepared at the Board of Trade for convenience of reference. It is, however, to be clearly understood that the French text is the only one which possesses any official authority.

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Mr. E. G. Moggridge, Assistant Secretary of the Board of Trade for the Marine Department ;
Sir Archibald Denny, Bart., Chairman of the Departmental Committee on Bulkheads and Watertight Compartments ;
Sir Norman Hill, Chairman of the Merchant Shipping Advisory Committee ;
Sir John Biles, late Chairman of the Departmental Committee on Boats and Davits ;
Captain Acton Blake, Deputy Master of Trinity House ;
Captain A. H. F. Young, Professional Officer to the Marine Department of the Board of Trade ;
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H.M. THE EMPEROR OF ALL THE RUSSIAS :—

M. N. de Etter, Councillor of the Russian Embassy in London.

H.M. THE KING OF SWEDEN :—

Vice-Admiral Olsen, late President General of the Naval Services ;
M. N. G. Nilsson, Inspector of Life-Saving Appliances at the Ministry of Commerce.

Who, having been duly authorised to that effect, have drawn up by common consent the following Convention :—

CHAPTER I.—SAFETY OF LIFE AT SEA.

Article 1.

The High Contracting Parties undertake to give effect to the provisions of this Convention, for the purpose of securing safety of life at sea, to promulgate all regulations and to take all steps which may be necessary to give the Convention full and complete effect.

The provisions of this Convention are completed by Regulations which have the same force and take effect at the same time as the Convention. Every reference to the Convention implies at the same time a reference to the Regulations annexed thereto.

CHAPTER II.—SHIPS TO WHICH THIS CONVENTION APPLIES.

Article 2.

Except where otherwise provided by this Convention, the merchant ships of any of the States of the High Contracting Parties, which are mechanically propelled, which carry more than 12 passengers and which proceed from a port of one of the said States to a port situated outside that State, or conversely, are subject to the provisions of this Convention. Ports situated in the Colonies, Possessions or Protectorates of the High Contracting Parties are considered to be ports outside the States of the High Contracting Parties.

Persons who are on board by reason of *force majeure* or in consequence of the obligation laid upon the master to carry shipwrecked or other persons are not deemed to be passengers.

Article 3.

There are excepted from this Convention, save in the cases where the Convention otherwise provides, ships making voyages specified in a schedule to be communicated by each High Contracting Party to the British Government at the time of ratifying the Convention.

No schedule may include voyages in the course of which the ships go more than 200 sea miles from the nearest coast.

Each High Contracting Party has the right subsequently to modify its schedule of voyages in conformity with this Article on condition that it notifies the British Government of such modification.

Each High Contracting Party has the right to claim from another Contracting Party the benefit of the privileges of the Convention for all of its ships which are engaged in any one of the voyages mentioned in its own schedule. For this purpose the Party claiming such benefit shall impose on the said ships the obligations prescribed by the Convention in so far as, having regard to the nature of the voyage, these obligations would not be unnecessary or unreasonable.

Article 4.

No ship, not subject to the provisions of the Convention at the time of its departure, can be subjected to the Convention in the course of its voyage, if stress of weather or any other cause of *force majeure* compels it to take refuge in a port of one of the States of the High Contracting Parties.

Chapter III.—Safety of Navigation.

Article 5.

When the expression 'every ship' is used in this Chapter and in the corresponding part of the annexed Regulations, it includes all merchant ships, whether they are the ships defined in Article 2 or not, which belong to any of the Contracting States.

Article 6.

The High Contracting Parties undertake to take all steps to ensure the destruction of derelicts in the northern part of the Atlantic Ocean east of a line drawn from Cape Sable to a point situated in latitude 34° north and longitude 70° west. Further, they will establish in the North Atlantic with the least possible delay a service for the study and observation of ice conditions and a service of ice patrol. For this purpose :—

Two vessels shall be charged with these three services.

During the whole of the ice season, they shall be employed in ice patrol.

During the rest of the year the two vessels shall be employed in the study and observation of ice conditions and in the destruction of derelicts ; nevertheless the study and observation of ice conditions shall be effectively maintained, in particular from the beginning of February to the opening of the ice season.

While the two vessels are employed in ice patrol the High Contracting Parties, to the extent of their ability and so far as the exigencies of the Naval Service will permit, will send warships or other vessels to destroy any dangerous derelicts, if this destruction is considered necessary at that time.

Article 7.

The Government of the United States is invited to undertake the management of the three services of derelict destruction, study and observation of ice conditions, and ice patrol. The High Contracting Parties which are specially interested in these services, and whose names are given below, undertake to contribute to the expense of establishing and working the said services in the following proportions :—

	Per cent.
Austria-Hungary	2
Belgium	4
Canada	2
Denmark	2
France	15
Germany	15
Great Britain	30
Italy	4
Netherlands	4
Norway	3
Russia	2
Sweden	2
United States of America	15

Each of the High Contracting Parties has the right to discontinue its contribution to the expense of working these services after the 1st September, 1916. Nevertheless,

the High Contracting Party which avails itself of this right will continue responsible for the expenses of working up to the 1st September following the date of denunciation of the Convention on this particular point. To take advantage of the said right, it must give notice to the other Contracting Parties at least six months before the said 1st September; so that, to be free from its obligations on the 1st September, 1916, it must give notice on the 1st March, 1916, at the latest, and similarly for each subsequent year.

In case the United States Government should not accept the proposal made to them, or in case one of the High Contracting Parties, for any reason, should not assume responsibility for the pecuniary contribution defined above, the High Contracting Parties shall settle the question in accordance with their mutual interests.

The Government of the High Contracting Party which undertakes the management of the service of derelict destruction is invited to devise means of granting, at the expense of this service, to merchant ships, which have contributed in an effective manner to the destruction of ocean derelicts, rewards to be fixed by the Government in accordance with the services rendered.

The High Contracting Parties 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 6 as appear desirable.

Article 8.

The master of every ship which meets with dangerous ice or a dangerous derelict 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.

Every Administration which receives intelligence of dangerous ice or a dangerous derelict shall take all steps which it thinks necessary for bringing the information to the knowledge of those concerned and for communicating it to the other Administrations.

The transmission of messages respecting ice and derelicts is free of cost to the ships concerned.

It is desirable that the said information should be sent in a uniform manner. For this purpose, a code, the use of which is optional, appears in Article I of the Regulations annexed hereto.

Article 9.

The master of every ship fitted with a radio-telegraph installation, on becoming aware of the existence of an imminent and serious danger to navigation, shall report it immediately in the manner prescribed by Article II of the Regulations annexed hereto.

Article 10.

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

Article 11.

The ships defined by Article 2 shall have on board a Morse signalling lamp of sufficient range.

The use of Morse signals is regulated by the Code appearing in Article III, as well as by Article IV of the Regulations annexed hereto.

Article 12.

The use of the international distress signals for any other purpose than that of signals of distress is prohibited on every ship.

The use of private signals which are liable to be confused with the international distress signals is prohibited on every ship.

Article 13.

The selection of the routes across the North Atlantic in both directions is left to the responsibility of the steamship companies. Nevertheless the High Contracting Parties undertake to impose on these companies the obligation to give public notice of the regular routes which they propose their vessels should follow, and of any changes which they make in them.

The High Contracting Parties undertake, further, to use their influence to induce the owners of all vessels crossing the Atlantic to follow as far as possible the routes adopted by the principal companies.

Article 14.

The High Contracting Parties undertake to use all diligence to obtain from the Governments which are not parties to this Convention their agreement to the revision of the International Regulations for Preventing Collisions at Sea as indicated below :—

(*A*) The Regulations shall be completed or revised in regard to the following points :—

(1) The second white light.
(2) The stern light.
(3) A day signal for motor vessels.
(4) A sound signal for a vessel towed.
(5) The prohibition of signals similar to distress signals.

(*B*) Articles 2, 10, 14, 15, 31 of the said Regulations shall be amended in accordance with the following provisions :—

Article 2. The second white mast-head light to be compulsory.
Article 10. A permanent fixed stern light to be compulsory.
Article 14. A special day signal to be compulsory for motor vessels.
Article 15. A special sound signal to be established for use by a vessel in tow, or if the tow is composed of several vessels by the last vessel of the tow.
Article 31. Article 31 to be modified in the following manner :— Add to the lists of both day and night signals the international radio-telegraph distress signal.

Article 15.

The Governments of the High Contracting Parties undertake 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, the ships defined in Article 2 shall be sufficiently and efficiently manned.

Chapter IV.—Construction.

Article 16.

New ships and existing ships.

For the application of the Articles contained in this Chapter and in the corresponding part of the Regulations annexed hereto, the ships defined in Article 2 are divided into "new ships" and "existing ships."

New ships are those the keel of which is laid after the 1st July, 1915. The following Articles of this Chapter, namely, Articles 17 to 30, are applicable to them in full.

Other ships are considered as existing ships. Existing arrangements on each of these ships shall be considered by the Administration of the State to which the ship belongs, with a view to improvements providing increased safety where practicable and reasonable.

Article 17.

Subdivision of Ships.

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

The degree of safety provided for by these minimum requirements varies in a regular and continuous manner with the length of the vessel and with a certain "criterion of service." The requirements of the annexed Regulations are such that the highest degree of safety corresponds with the ships of greatest length primarily engaged in the carriage of passengers.

Articles V to IX of the annexed Regulations indicate the method to be followed in order to determine the permissible length of compartments on the basis of the floodable length; prescribe a limit to the length of compartments; and fix the conditions governing certain special cases.

When the watertight sub-division of a ship is such as to provide for a degree of safety greater than that provided by the rules prescribed by this Convention, the Administration of the State to which the ship belongs shall, if so requested by the owner, record this fact on the Safety Certificate of the ship to the extent and in the manner provided in Article X of the annexed Regulations.

Article 18.

Peak and Machinery Space Bulkheads.

Ships shall be fitted with forward and after peak bulkheads and bulkheads at the extremities of the machinery space in accordance with the provisions of Article XI. of the annexed Regulations.

Article 19.

Fireproof Bulkheads.

With a view to retarding the spread of fire, ships shall be fitted with fireproof bulkheads in accordance with the provisions of Article XII. of the annexed Regulations.

Article 20.

Exits from Watertight Compartments.

The conditions under which means of escape from the various watertight compartments shall be provided are indicated in Article XIII. of the annexed Regulations.

Article 21.

Construction and Tests of Watertight Bulkheads.

In order to ensure their strength and watertightness, watertight bulkheads shall be constructed and tested in accordance with the provisions of Article XIV. of the annexed Regulations.

Article 22.

Openings in Watertight Bulkheads.

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. Articles XV. and XVII. of the annexed Regulations indicate the conditions governing the number of openings, the character and use of the means of closing with which these openings shall be provided, and the tests to which watertight doors shall be subjected.

Article 23.

Openings in Ship's Side.

Side-scuttles and other openings in the side of the ship and the inboard openings of discharges through the shell shall be provided with means of closing them, and shall be arranged in such manner as to prevent so far as possible the accidental admission of water into the ship. Articles XVI. and XVII. of the annexed Regulations indicate the conditions under which openings may be made in the ship's side, the appliances which shall be provided for closing these openings, and the requirements as to operating the closing appliances.

Article 24.

Construction and Tests of Watertight Decks, &c.

In order to ensure their strength and watertightness, watertight decks, trunks and ventilators shall be constructed and tested in accordance with the provisions of Article XVIII. of the annexed Regulations.

Article 25.

Periodical Operation and Inspection of Watertight Doors, &c.

The conditions under which inspections of watertight doors, &c., and drills for their operation, shall be made periodically during a voyage are indicated in Article XIX. of the annexed Regulations.

Article 26.

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 Article XX. of the annexed Regulations.

Article 27.

Double Bottoms.

The conditions under which a double bottom shall be fitted in ships of different lengths, and in particular the minimum extent of the double bottom longitudinally and transversely, are indicated in Article XXI. of the annexed Regulations.

Article 28.

Going astern and auxiliary steering apparatus.

Ships shall comply, as regards their power of going astern and the fitting of auxiliary steering apparatus, with the provisions of Articles XXII. and XXIII. of the annexed Regulations.

Article 29.

Initial and Subsequent Surveys of Ships.

The general principles which shall govern the survey of the ships defined in Article 2, whether new ships or existing ships, as regards hull, main and auxiliary boilers and machinery, and equipments, are stated in Articles XXIV. to XXVI. of the annexed Regulations. The Government of each of the High Contracting Parties 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 communicate these regulations to each of the other contracting States ; and

(3) 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.

Article 30.

Questions for further Study and Agreement.—Exchange of Information.

The High Contracting Parties undertake to cause the study of the criterion of service referred to in Article 17 to be pressed forward, and to communicate to each other the results of that study.

The British Government is invited to undertake the duty of circulating this information, and, as soon as a definite result is attainable, of endeavouring to secure, through the diplomatic channel, the acceptance by the contracting States of the criterion. Upon its acceptance by each of the contracting States, as from a date and subject to conditions to be agreed upon, such criterion shall have effect as if it were prescribed in the Convention.

The above procedure shall also be applied to the following items :—

(1.) The fitting of longitudinal watertight bulkheads, double skins and watertight decks and flats, and the question whether there may be allowed any increase in the length of transverse watertight compartments in way of which such longitudinal sub-division is fitted, and, if so, to what extent :

(2.) The method of sub-division for obtaining the highest practicable degree of safety to be applied to ships of shorter lengths than those covered by Article VIII. of the annexed Regulations ; and

(3.) The results of experiments in regard to the proper margin of resistance above the pressure which watertight bulkheads are required to be capable of supporting, as referred to in Article XIV. of the annexed Regulations.

The contracting States undertake to exchange information as freely as possible in regard to the application of the rules of this Convention in matters relating to safety of construction. They shall communicate to each other the methods or rules which they adopt, information concerning any new fittings or appliances which they sanction, the decisions which they make in regard to points of principle not covered by the foregoing articles and the corresponding portion of the annexed Regulations, and the final results of their further studies in matters not definitely determined.

Chapter V.—Radiotelegraphy.

Article 31.

All merchant ships belonging to any of the Contracting States, whether they are propelled by machinery or by sails, and whether they carry passengers or not, shall, when engaged on the voyages specified in Article 2, be fitted with a radiotelegraph installation, if they have on board fifty or more persons in all.

Advantage may not be taken of the provisions of Articles 2 and 3 of this Convention to exempt a ship from the requirements of this Chapter.

Article 32.

Ships on which the number of persons on board is exceptionally and temporarily increased up to or beyond fifty as the result of *force majeure*, or because the master is under the necessity of increasing the number of his crew to fill the places of those who are ill, or is obliged to carry shipwrecked or other persons, are exempted from the above obligation.

Moreover, the Governments of each of the Contracting States, if they consider that the route and the conditions of the voyage are such as to render a radiotelegraph installation unreasonable or unnecessary, may exempt from the above requirement the following ships :—

(1) Ships which in the course of their voyage do not go more than 150 sea miles from the nearest coast.

(2) Ships on which the number of persons on board is exceptionally or temporarily increased up to or beyond fifty by the carriage of cargo hands for a part of the voyage, provided that the said ships are not going from one continent to another, and that, during that part of their voyage, they remain within the limits of latitude 30° N. and 30° S.

(3) Sailing vessels of primitive build, such as *dhows*, *junks*, &c., if it is practically impossible to instal a radiotelegraph apparatus.

Article 33.

Ships which, in accordance with Article 31 above, are required to be fitted with a radiotelegraph installation are divided, for the purpose of radiotelegraph service, into three classes, in accordance with the classification established for ship stations in Article XIII. (*b*) of the Regulations annexed to the Radiotelegraph Convention, signed in London on the 5th July, 1912, viz. :—

First Class.—Ships having a continuous service.

There shall be placed in the First Class ships which are intended to carry twenty-five or more passengers :—

(1) if they have an average speed in service of fifteen knots or more ;

(2) if they have average speed in service of more than thirteen knots, but only subject to the twofold condition that they have on board two hundred persons or more (passengers and crew), and that, in the course of their voyage, they go a distance of more than five hundred sea miles between any two consecutive ports. Nevertheless these ships may be placed in the Second Class on condition that they have a continuous watch.

Second Class.—Ships having a service of limited duration.

There shall be placed in the Second Class all ships which are intended to carry twenty-five or more passengers, if they are not, for other reasons, placed in the First Class.

Ships placed in the Second Class must, during navigation, maintain a continuous watch for at least seven hours a day, and a watch of ten minutes at the beginning of every other hour.

Third Class.—Ships which have no fixed periods of service.

All ships which are placed neither in the First nor in the Second Class shall be placed in the Third Class.

The owner of a ship placed in the Second or in the Third Class has the right to require that, if the ship complies with all the requirements for a superior class, a statement to the effect that it belongs to that superior class shall be inserted in the Safety Certificate.

Article 34.

Ships which are required by Article 31 above to be fitted with a radiotelegraph installation shall be required, by the Governments of the countries to which they belong, to maintain a continuous watch during navigation as soon as the said Governments consider that it will be of service for the purpose of safety of life at sea.

Meanwhile, the High Contracting Parties undertake to require, from the date of the ratification of the present Convention subject to the delays specified below, a continuous watch on the following ships :—

(1) Ships whose average speed in service exceeds 13 knots, which have on board 200 persons or more, and which, in the course of their voyage, go a distance of more than 500 sea miles between two consecutive ports, when these ships are placed in the Second Class.

(2) Ships in the Second Class, for the whole of the time during which they are more than 500 sea miles from the nearest coast.

(3) Other ships specified in Article 31, when they are engaged in the Trans-Atlantic trade, or when they are engaged in other trades if their route takes them more than 1,000 sea miles from the nearest coast.

Ships connected with all kinds of fishing business including whaling, which are required to be fitted with a radiotelegraph installation, shall not be required to maintain a continuous watch.

The continuous watch may be kept by one or more operators, holding certificates in accordance with Article X of the Regulations annexed to the International Radiotelegraph Convention, 1912, together, if necessary, with one or more certificated watchers. Nevertheless, if an efficient automatic calling apparatus is invented, the continuous watch may be maintained by this means by agreement between the Governments of the High Contracting Parties.

By "certificated watcher" is meant any person holding a certificate issued under the authority of the Administration concerned. To obtain this certificate, the applicant must prove that he is capable of receiving and understanding the radiotelegraph distress signal and the safety signal described in the Regulations annexed hereto.

The High Contracting Parties undertake to take steps to ensure that the certificated watchers observe the secrecy of correspondence.

Article 35.

The radiotelegraph installations required by Article 31 above shall be capable of transmitting clearly perceptible signals from ship to ship over a range of at least 100 sea miles by day under normal conditions and circumstances.

Every ship which is required, in conformity with the provisions of Article 31 above, to be fitted with a radiotelegraph installation, shall, whatever be the class in which it is placed, be provided in accordance with Article XI. of the Regulations annexed to the International Radiotelegraph Convention, 1912, with an emergency installation, every part of which is placed in a position of the greatest possible safety to be determined by the Government of the country to which the ship belongs.

In all cases the emergency installation must be placed, in its entirety, in the upper part of the ship, as high as practically possible.

The emergency installation includes, as provided by Article XI. of the Regulations annexed to the International Radiotelegraph Convention, 1912, an independent source of energy capable of being put into operation rapidly and of working for at least six hours with a minimum range of eighty sea miles for ships in the First Class and fifty sea miles for ships in the two other Classes.

If the normal installation, which, in accordance with this Article, has a range of at least one hundred sea miles, satisfies all the conditions prescribed above, an emergency installation is not required.

The licence provided for in Article 1X. of the Regulations annexed to the International Radiotelegraph Convention, 1912, may not be issued unless the installation complies both with the provisions of that Convention, and also with the provisions of this Convention.

Article 36.

The matters governed by the International Radiotelegraph Convention, 1912, and the Regulations annexed thereto, and in particular the radiotelegraph installations on ships, the transmission of messages, and the certificates of the operators, remain and will continue subject to the provisions :

(1) of that Convention and the Regulations annexed thereto, or of any other instruments which may in the future be substituted therefor,

(2) of this Convention, in regard to all the points in which it supplements the aforementioned documents.

Article 37.

Every master of a ship, who receives a call for assistance from a vessel in distress is bound to proceed to the assistance of the persons in distress.

Every master of a vessel in distress has the right to requisition from among the ships which answer his call for assistance the ship or ships which he considers best able to render him assistance, but he must exercise this right only after consultation, so far as may be possible, with the masters of those ships. Such ships are then bound to comply immediately with the requisition by proceeding with all speed to the assistance of the persons in distress.

The masters of the ships which are required to render assistance are released from this obligation as soon as the master or masters requisitioned have made known that they will comply with the requisition, or as soon as the master of one of the ships which has reached the scene of the casualty has made known to them that their assistance is no longer necessary.

If the master of a ship is unable, or considers it unreasonable or unnecessary, in the special circumstances of the case, to go to the assistance of the vessel in distress, he must immediately inform the master of the vessel in distress accordingly. Moreover he must enter in his log-book the reasons justifying his action.

The above provisions 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, and, in particular, the obligation to render assistance laid down in Article 11 of that Convention.

Article 38.

The High Contracting Parties undertake to take all steps necessary for giving effect to the provisions of this Chapter with the least possible delay. Nevertheless, they may allow :

A delay not exceeding one year, from the date of the ratification of this Convention, for the provision and training of operators and for the installation of the apparatus on ships placed in the First and Second Classes.

A delay not exceeding two years, from the date of the ratification of this Convention, for the provision and training of the operators and watchers on the ships in the Third Class, for the installation of the apparatus on ships in the Third Class and for the establishment of a continuous watch on ships placed in the Second and Third Classes.

Chapter VI.—Life-saving Appliances and Fire Protection.

Article 39.

New ships and existing ships.

For the application of the Articles contained in this Chapter and of the corresponding part of the Regulations annexed hereto the ships defined in Article 2 are divided into *new ships* and *existing ships*.

New ships are those of which the keel is laid after the 31st December, 1914.

Other ships are considered as *existing ships*.

Article 40.

Fundamental Principle.

At no moment of its voyage may a ship have on board a total number of persons greater than that for whom accommodation is provided in the lifeboats and the pontoon life-rafts on board.

The number and arrangement of the boats, and (where they are allowed) of the pontoon rafts, on a ship depends upon the total number of persons which the ship is intended to carry ; provided that there shall not be required on any voyage a total capacity in boats, and (where they are allowed) pontoon-rafts, greater than that necessary to accommodate all the persons on board.

Article 41.

Standard types of boats—Pontoon rafts.

All the life boats allowed for a ship shall comply with the conditions fixed by this Convention and Articles XXVII to XXXII of the Regulations annexed hereto ; the same Articles describe the standard types, which are divided into two classes.

The conditions required for the pontoon-rafts are given in Article XXXIII of the same Regulations.

Article 42.

Strength of boats.

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 43.

Alternative types of boats and rafts.

Any type of boat may be accepted as equivalent to a boat of one of the prescribed classes and any type of raft as equivalent to an approved pontoon-raft, if the Administrations concerned are satisfied by suitable trials that it is as effective as the standard types of the class in question, or as the approved type of pontoon-raft, as the case may be.

The Government of the High Contracting Party which accepts a new type of boat or raft will communicate to the Governments of the other Contracting Parties particulars of the trials made. It will also inform them of the class in which a new type of boat has been placed.

Article 44.

Embarkation of the passengers in the boats and rafts.

Suitable arrangements shall be made for embarking the passengers in the boats.

In ships which carry rafts there shall be a number of rope ladders always available for use in embarking the persons on to the rafts.

Article 45.

Capacity of boats and pontoon rafts.

The number of persons that a boat of one of the standard types or an approved pontoon raft can accommodate is determined by the methods indicated in Articles XXXIV to XXXIX, inclusive, of the Regulations annexed hereto.

Article 46.

Equipment of boats and pontoon rafts.

Article XL of the annexed Regulations prescribes the equipment for boats and pontoon-rafts. All loose equipment must be securely attached to the boat or pontoon-raft to which it belongs.

Article 47.

Stowage of boats—Number of davits.

The arrangements to be made for the stowage of the boats and in particular the extent to which pontoon rafts may be accepted are specified in Articles XLI, XLII, and XLIII of the annexed Regulations.

The minimum number of sets of davits is fixed in relation to the length of the ship; provided that a number of sets of davits greater than the number of boats necessary for the accommodation of all the persons on board may not be required.

Article 48.

Handling of the boats and rafts.

All the boats and rafts must be stowed in such a way that they can be launched in the shortest possible time and that, even under unfavourable conditions of list and trim from the point of view of the handling of the boats and rafts, it may be possible to embark in them as large a number of persons as possible.

The arrangements must be such that it may be possible to launch on either side of the ship as large a number of boats and rafts as possible.

Supplementary instructions are given in Article XLIV of the annexed Regulations.

Article 49.

Strength and operation of the davits.

The davits shall be of such strength that the boats can be lowered with their full complement of persons and equipment, the ship being assumed to have a list of 15 degrees.

The davits must be fitted with a gear of sufficient power to ensure that the boat can be turned out against the maximum list under which the lowering of the boats is possible on the vessel in question.

Article 50.

Other appliances equivalent to davits.

Any appliance may be accepted in lieu of davits or sets of davits if the Administration concerned is satisfied, after proper trials, that the appliance in question is as effective as davits for placing the boats in the water.

The Government of the High Contracting Party which accepts a new type of appliance shall communicate to the other Contracting Parties particulars of the appliance with details of the trials made.

Article 51.

Life-jackets and life-buoys.

(1) A life-jacket of an approved type, or other appliance of equal buoyancy and capable of being fitted on the body, shall be carried for every person on board, and, in addition, a sufficient number of life-jackets, or other equivalent appliances, suitable for children.

(2) Article XLV of the annexed Regulations fixes in accordance with the length of the ship the number of life-buoys of an approved type to be carried, and also the conditions with which life-jackets and life-buoys must comply, and in accordance with which they must be stowed.

Article 52.

Existing ships.

The Government of each of the High Contracting Parties undertakes to apply to existing ships, as soon as possible and not later than the 1st July, 1915, all the provisions of the preceding articles of the present Chapter, namely, Articles 40 to 51 inclusive, requiring, in the first place, accommodation for all the persons on board in boats and

rafts; provided that, in cases where the strict application of these principles would not be practicable or reasonable, the Government of each of the High Contracting Parties has the right to allow the exemptions specified in Article XLVI of the Regulations annexed hereto.

Article 53.

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 both new and existing ships, and particularly upon the decks on which the life-boats are stowed. On new ships 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, as high as practically possible.

(3) The exit from every compartment must always be lighted by an emergency lamp, which shall be kept locked, and which shall be independent of the ordinary lighting of the ship. These emergency lamps may be supplied from the independent installation referred to in the preceding paragraph, if an independent circuit is employed for this purpose and if this installation works concurrently with the ordinary lighting of the ship.

Article 54.

Certificated Lifeboatmen—Manning of the Boats.

There must be, for each boat or raft required, a minimum number of certificated lifeboatmen. The minimum total number of certificated lifeboatmen is determined by the provisions of Article XLVII of the annexed Regulations.

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

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

Article XLVIII of the Regulations deals with the manning of the boats.

Article 55.

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, likely 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 authorised conditions.

(2) The Government of each High Contracting Party 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.

(3) Article XLIX of the annexed Regulations indicates the arrangements to be made for the detection and extinction of fire.

Article 56.

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.

Articles L and LI of the annexed Regulations indicate the conditions under which musters of the crew and drills shall take place.

Chapter VII.—Safety Certificates.

Article 57.

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

The inspection and survey of ships, so far as regards the enforcement of the provisions of this Convention and the annexed Regulations, shall be carried out by officers of the State to which the ship belongs; provided always that the Government of each State may entrust the inspection and survey of ships of its own country either to surveyors nominated by it 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.

The Safety Certificate shall be issued either by the officers of the State to which the ship belongs, or by any other person duly authorised by that State. In either case the State to which the ship belongs assumes full responsibility for the certificate.

Article 58.

The Safety Certificate shall be drawn up in the official language or languages of the State by which it is issued.

The form of the certificate shall be that of the model given in Article LII of the Regulations annexed hereto. The arrangement of the printed part of this standard certificate shall be exactly reproduced, and the particulars inserted by hand shall be inserted in Roman characters and Arabic figures.

The High Contracting parties undertake to communicate one to another a sufficient number of specimens of their Safety Certificates for the information of their officers. This exchange shall be made, so far as possible, before the 1st April, 1915.

Article 59.

The Safety Certificate shall not be issued for a period of more than twelve months.

If the ship is not in a port of the State to which it belongs at the time when the period of the validity of the Safety Certificate expires a duly authorised officer of this State may extend this period; but such an 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.

The extension cannot have effect for more than five months, and the ship shall not thereby be entitled to leave its own country again without having obtained a new certificate.

Article 60.

The Safety Certificate issued under the authority of a Contracting State shall be accepted by the Governments of the other Contracting States for all purposes covered by this Convention. It shall be regarded by the Governments of the other Contracting States as having the same force as the certificates issued by them to their own ships.

Article 61.

Every ship holding a Safety Certificate issued by the officers of the Contracting State to which it belongs, or by persons duly authorised by that State, is subject in the ports of the other Contracting States to control by officers duly authorised by their Governments in so far as this control is directed towards verifying that there is on board a valid Safety 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.

Article 62.

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

Article 63.

If, in the course of a particular voyage, the ship has on board a number of passengers less than the maximum number indicated in the Safety Certificate, and is, in consequence,

in accordance with the provisions of this Convention free to carry a smaller number of life boats and other life-saving appliances than that stated in the afore-mentioned Certificate, a memorandum may be issued by the officers or other authorised persons referred to in Articles 57 (paragraph 3) and 59 above.

This memorandum shall state that in the circumstances there is no infringement of the provisions of the Convention. It shall be annexed to the Safety 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.

Chapter VIII.—General.

Article 64.

The Governments of the High Contracting Parties undertake to communicate mutually, in addition to the documents which, in this Convention, are the subject of special provisions to that effect, all information which they possess affecting safety of life on those of their ships which are subject to the rules of this Convention, provided always that such information is not of a confidential nature.

They will communicate to each other in particular :—

1. The text of Laws, Decrees and Regulations which shall have been promulgated on the various matters within the scope of the Convention.
2. The description of the characteristics of new appliances approved in administering the rules of the Convention.
3. All official reports, or official summaries of reports, in so far as they show the results of the provisions of this Convention.

Until other arrangements may be made, the British Government is invited to serve as intermediary for collecting all this information and for bringing it to the knowledge of the Governments of the Contracting Parties.

Article 65.

The High Contracting Parties undertake to take, or to propose to their respective legislatures, the measures necessary for the repression of infractions of the requirements imposed by this Convention.

The High Contracting Parties will communicate mutually, as soon as possible, the laws and regulations which are issued for this purpose.

Article 66.

The High Contracting Parties which intend the Convention to apply to the whole of their Colonies, Possessions and Protectorates, or to one or to some of these countries, shall declare this intention either at the time of signing these presents or subsequently. To this effect they shall be able either to make a general declaration embracing the whole of their Colonies, Possessions and Protectorates, or to enumerate by name the countries which they intend to come within the scope of the law of the Convention, or, alternatively, to enumerate by name those which they intend to be excepted.

This declaration, unless it be made at the time of signing this Convention, shall be made in writing to the Government of Great Britain, and communicated by the latter Government to all the Governments of the other States parties to the Convention.

The High Contracting Parties may also in the same way, provided that they comply with the provisions of Article 69 hereafter, denounce this Convention as regards their Colonies, Possessions or Protectorates, or one or some of those countries.

Article 67.

The States which are not Parties to this Convention shall be allowed to accede thereto at their request. Their accession shall be notified through the diplomatic channel to the Government of Great Britain, and by the latter to the Governments of the other States parties to the Convention.

This accession will carry the full acceptance of all the obligations imposed by this Convention and the full right to all the privileges specified therein. It will have full and complete effect two months after the date on which notification of the accession is sent by the Government of Great Britain to all the other Governments of the States which

are parties to the Convention, unless a later date had been proposed by the acceding State.

The Governments of the States which accede to the present Convention shall annex to their declaration of accession the schedule provided for by Article 3 of this Convention. This schedule shall be added to those already deposited by the other Governments. The British Government shall transmit a copy thereof to the other Governments.

Article 68.

The treaties, conventions and arrangements concluded prior to this Convention shall continue to have full and complete effect, as regards :—

(1) ships excepted from the Convention ;

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

It is understood that, the subject of this Convention being safety of life at sea, questions relating to the well-being and health of passengers, and in particular of emigrants, as well as other matters relative to their transport, continue subject to the legislation of the different States.

Article 69.

This Convention shall come into force on the 1st July, 1915, and shall remain in force without any prescribed limit of time. Nevertheless, each High Contracting Party may denounce the Convention at any time after an interval of five years from the date on which the Convention comes into force in that State.

This denunciation shall be notified through the diplomatic channel to the Government of Great Britain and by the latter to the Governments of the other Contracting Parties. It shall take effect twelve months after the day on which the notification is received by the Government of Great Britain.

A denunciation shall only affect the State which makes it, the Convention remaining fully and completely operative as regards all the other States which have ratified it, or which have acceded thereto or which thereafter accede thereto.

Article 70.

This Convention with the Regulations annexed thereto shall be drawn up in a single copy which shall be deposited in the archives of the Government of Great Britain. A true and certified copy shall be delivered by the latter to each of the Governments of the High Contracting Parties.

Article 71.

This Convention shall be ratified and the instruments of ratification, accompanied by the schedules specified in Article 3, shall be deposited at London not later than the 31st December, 1914. The British Government shall give notice of the ratifications and shall furnish a copy of each schedule to the Governments of the other Contracting Parties.

Notwithstanding failure to ratify on the part of a High Contracting Party, the Convention shall continue to have full and complete effect as regards the Contracting Parties which ratify it.

Article 72.

To render ratification easier for a Contracting State which, prior to the date of signature of this Convention, has laid down requirements in regard to any matter within the scope of this Convention, it is agreed that no ship which has complied with those requirements before the 1st July, 1915, may avail itself of the periods of grace allowed by the Convention in order to cease to comply with those requirements.

Article 73.

Where this Convention provides that a measure may be taken after agreement between all or some of the Contracting States, the Government of His Britannic Majesty is invited to approach the said States with a view to ascertaining whether they accept the proposals made by one of these States for effecting such a measure. The Government of His Britannic Majesty will make known to the Contracting States the result of the enquiries which it thus makes.

A State from which observations on the proposals in question do not reach His Britannic Majesty's Government within six months from the communication of these proposals will be presumed to acquiesce therein.

Article 74.

This Convention may be modified at subsequent Conferences, of which the first shall be held, if necessary, in 1920. The place and time of these Conferences shall be fixed by common consent by the Governments of the High Contracting Parties.

The Governments may, through the diplomatic channel, introduce into this Convention, by common consent and at any time, improvements which may be judged useful or necessary.

In witness whereof the Plenipotentiaries have signed hereafter.

Done at London, 20th January, 1914.

VON KOERNER.
SEELIGER.
SCHÜTT.
RIESS.
PAGEL.
SCHRADER.
BEHM.

G. FRANCKENSTEIN.
SCHRECKENTHAL.
DUNAY.

E. A. PIERRARD.
CH. LE JEUNE.
LOUIS FRANCK.

EMIL KROGH.
V. TOPSÖE-JENSEN.

RAFAEL BAUSÁ.

JOSHUA W. ALEXANDER.
J. HAMILTON LEWIS.
EUGENE T. CHAMBERLAIN.
ELLSWORTH P. BERTHOLF.
WASHINGTON LEE CAPPS.
GEORGE F. COOPER.
HOMER L. FERGUSON.
ALFRED GILBERT SMITH.
WM. H. G. BULLARD.
GEO. UHLER.

GUERNIER.

MERSEY.
ERNEST G. MOGGRIDGE.
A. DENNY.
NORMAN HILL.
J. H. BILES.
H. ACTON BLAKE.
ALFRED H. F. YOUNG.
C. HIPWOOD.
W. DAVID ARCHER.

R. MUIRHEAD COLLINS.

ALEXANDER JOHNSTON.

THOS. MACKENZIE.

CARLO BRUNO.
VITTORIO RIPA DI MEANA.
GUSTAVO TOSTI.

HARALD PEDERSEN.
J. BRUHN.
JENS EVANG.
} *ad referendum.*

J. V. WIERDSMA.
H. S. J. MAAS.
A. D. MULLER.
WILMINK.
J. W. G. COOPS.

N. DE ETTER.

C. O. OLSEN.
NILS GUSTAF NILSSON.

REGULATIONS.

SAFETY OF NAVIGATION.

ARTICLE 1.

Code for the transmission by Radiotelegraphy of Information relating to Ice, Derelicts, and Weather.

INSTRUCTIONS.

Transmission of Information.—The transmission of information concerning ice and derelicts is obligatory. This information may be sent from ship to ship or to the Hydrographic Office, Washington, either in clear or by means of the abbreviations used in Part I. of this Code.

The transmission of information relating to weather is optional. Part II. of this Code may be used for this purpose, but may be modified at any time by the Meteorological Congress.

Information required:

PART I.—ICE AND DERELICTS.

1. The kind of ice or derelict observed.
2. The position of ice or derelict when last determined.

PART II.—METEOROLOGICAL INFORMATION.

1. The direction and force of the wind.
2. The set and velocity of the current.
3. Weather or state of the sky at a fixed hour.
4. Height of barometer and air temperature.
5. Barometric tendency and sea-surface temperature.

The time to be adopted:

In all radiotelegrams relating to ice or derelicts the time shall be given in Greenwich mean time.

The Address:

Reports, when sent to the Hydrographic Office, Washington, should be addressed "Hydrographic"; reports to the Meteorological Office, London, should be addressed "Meteorology."

The Message:

1. When sending information about ice or derelicts alone, two groups of five figures each are used, preceded by the word "ice"; these groups may be repeated as often as necessary.

2. If meteorological information is to be sent in addition, a further four groups of five figures each are used, preceded by the word "weather." These groups are inserted at the end of the message after all the information relating to ice has been given.

N.B.—If the message contains the word "weather," all the code groups before that word give information relating to ice, and those after the word "weather" give meteorological information. If there is no word "weather" in the message, it only contains information about ice. (See examples of the two kinds of message given in this Article.)

PART I.

Ice and Derelicts.

Information respecting ice and derelicts is given by means of ten figures divided into two groups of five figures each. These groups are preceded by the word "ice."

Two figures	... ...	The day of the month (*dd*), according to Code I.
One figure	... ...	The time of observation (*T*), according to Code II.
One figure	... ...	The kind of ice observed (*I*), according to Code III.
Three figures	... ...	The latitude of the ice observed ($p\ p\ p$), to tenths of a degree (see table below).
Three figures	... ...	The longitude of the ice observed ($p'p'p'$), to tenths of a degree (see table below).

The first group consists of *ddTIp*.
The second group consists of $ppp'p'p'$.

Codes.

Code I.—*Day of the Month.*

The day of the month is given by two figures, of which the first may be zero : 01 to 31.

Code II.—*Time of observation.*

The time of observation is included between—

		Code No.
1 a.m. and 4 a.m.	... Greenwich Mean Time. ...	1
4 a.m. and 7 a.m.	... ...	2
7 a.m. and 10 a.m.	... ...	3
10 a.m. and 1 p.m.	... ...	4
1 p.m. and 4 p.m.	... ...	5
4 p.m. and 7 p.m.	... ...	6
7 p.m. and 10 p.m.	... ...	7
10 p.m. and 1 a.m.	... ...	8

Code III.—*Nature of Ice or Derelict observed.*

0. No ice observed.
1. Single iceberg. Huge mass of floating ice.
2. Several icebergs.
3. Numerous icebergs.
4. Floeberg. Thick piece of salt-water ice like a small iceberg.
5. Field ice. Ice extending as far as the eye can reach, but through which it is possible to navigate.
6. Pack ice. Pieces of ice broken from berg or floe, partly closed together.
7. Land ice. Ice attached to the shore since the winter.
8. Derelict.
9. (Not allotted.)

EXAMPLE.

Message sent from Ship to Ship.

——	First Message.	Coded as	Second Message.	Coded as	Third Message.	Coded as	Fourth Message.	Coded as
Date of observation ...	15	15	15	15	15	15	16	16
Time of observation ...	10 a.m.–1 p.m.	4	4 p.m.–7 p.m.	6	7 p.m.–10 p.m.	7	4 p.m.–7 a.m.	2
Nature of ice or derelict	Field	5	Numerous icebergs	3	Derelict	8	Single iceberg	1
Position of ice or derelict	Latitude 45° 42′	457	Latitude 46° 5′	461	Latitude 46° 25′	464	Latitude 47° 19′	473
	Longitude 46° 11′	462	Longitude 44° 40′	447	Longitude 43° 58′	440	Longitude 40° 15′	402

The code of the above message would thus be :

S.S. to S.S. .

Ice, 15454, 57462 : 15634, 61447 : 15784, 64440 ; 16214, 73402.

PART II.

METEOROLOGICAL INFORMATION.

Information respecting weather, &c., is given by four groups of five figures each. These groups are preceded by the word " weather."

First Group (DDPPP) :

The day of the month : two figures (*DD*), according to Code I.

The position of the ship when transmitting the message, indicated by three figures (*PPP*), representing the 1° square in which the ship is situated, according to Code IV and the numbered chart annexed to this Article.

Second Group (WWCCX) :

Wind direction and force, at 8 a.m. at the 75th meridian of west longitude : two figures (*WW*), according to Code V.

Set and velocity of current : two figures (*CC*), according to Code VI.

Weather or state of the sky at the same hour : one figure (*X*), according to Code VII.

Third Group (BBBAA) :

The barometric height to tenths of a millimetre, at 8 A.M. at the 75th meridian of west longitude : three figures (*BBB*), according to Code VIII.

Air temperature at the same hour : two figures (*AA*), according to Code IX.

Fourth Group (bbSSS) :

Barometric tendency, at 8 A.M. at the 75th meridian of west longitude : two figures (*bb*), according to Code X.

Sea surface temperature at the same hour : three figures (*SSS*), according to Code XI.

CODES.

Code IV. *Position of Ship.*

The chart* annexed to this Article gives the numbers to be assigned to each 1° square in the North Atlantic. The position of the ship, when the meteorological data given in Part II were observed, is indicated by the three figures representing the 1° square in which the ship is situated. For example :—A position 51° 55′ N., 26° 49′ W. would be reported as 561.

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* See opposite page 28 (French text).

Code V.

Wind Direction (to 16 points) and *Wind Force*, at 8 A.M. mean time at the 75th meridian of west longitude (*WW*).

—	Wind Force, Beaufort Scale.	N.N.E.	N.E.	E.N.E.	E.	E.S.E.	S.E.	S.S.E.	S.	S.S.W.	S.W.	W.S.W.	W.	W.N.W.	N.W.	N.N.W.	N.
Calm	0	00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Light breeze ...	1, 2, or 3	01	07	13	19	25	31	37	43	49	55	61	67	73	79	85	91
Moderate breeze	4 or 5	02	08	14	20	26	32	38	44	50	56	62	68	74	80	86	92
Strong wind ...	6 or 7	03	09	15	21	27	33	39	45	51	57	63	69	75	81	87	93
Gale force ...	8 or 9	04	10	16	22	28	34	40	46	52	58	64	70	76	82	88	94
Storm force ..	10 or 11	05	11	17	23	29	35	41	47	53	59	65	71	77	83	89	95
Hurricane ...	12	06	12	18	24	30	36	42	48	54	60	66	72	78	84	90	96

N.B.—The wind direction is to be referred to true bearings.

Code VI.

Direction (to 16 points) and *Velocity of the Current* (*CC*).

Nautical Miles per hour.	N.N.E.	N.E.	E.N.E.	E.	E.S.E.	S.E.	S.S.E.	S.	S.S.W.	S.W.	W.S.W.	W.	W.N.W.	N.W.	N.N.W.	N.
0·25	01	07	13	19	25	31	37	43	49	55	61	67	73	79	85	91
0·5	02	08	14	20	26	32	38	44	50	56	62	68	74	80	86	92
1	03	09	15	21	27	33	39	45	51	57	63	69	75	81	87	93
2	04	10	16	22	28	34	40	46	52	58	64	70	76	82	88	94
3	05	11	17	23	29	35	41	47	53	59	65	71	77	83	89	95
4	06	12	18	24	30	36	42	48	54	60	66	72	78	84	90	96
	00	No current.														
	99	No observation.														

N.B.—The current is to be referred to true bearings.

Code VII.

The State of the Sky, at 8 A.M. mean time at the 75th meridian of west longitude:

0. Sky quite clear.
1. Sky quarter clouded.
2. Sky half clouded.
3. Sky three-quarters clouded.
4. Sky entirely overcast.
5. Rain falling.
6. Snow or hail falling.
7. Haze or mist.
8. Fog.
9. Thunderstorm.

Code VIII.—*Height of Barometer.*

The reading of the mercury barometer is to be corrected for index error, and reduced to 0° C. and sea level. A table of corrections is given below.

The corrected reading is coded by omitting the first figure of the barometer reading in tenths of a millimetre: for example, 761·2 mm. is coded as 612.

A table for converting hundredths of an inch to tenths of a millimetre is given below.

Code IX.

Air Temperature is coded in two figures according to the following table :—

Degrees Centigrade.	Degrees Fahrenheit.	Code No.	Degrees Centigrade.	Degrees Fahrenheit.	Code No.
−15·0	5·0	00	10·0	50·0	50
−14·5	5·9	01	10·5	50·9	51
−14·0	6·8	02	11·0	51·8	52
−13·5	7·7	03	11·5	52·7	53
−13·0	8·6	04	12·0	53·6	54
−12·5	9·5	05	12·5	54·5	55
−12·0	10·4	06	13·0	55·4	56
−11·5	11·3	07	13·5	56·3	57
−11·0	12·2	08	14·0	57·2	58
−10·5	13·1	09	14·5	58·1	59
−10·0	14·0	10	15·0	59·0	60
− 9·5	14·9	11	15·5	59·9	61
− 9·0	15·8	12	16·0	60·8	62
− 8·5	16·7	13	16·5	61·7	63
− 8·0	17·6	14	17·0	62·6	64
− 7·5	18·5	15	17·5	63·5	65
− 7·0	19·4	16	18·0	64·4	66
− 6·5	20·3	17	18·5	65·3	67
− 6·0	21·2	18	19·0	66·2	68
− 5·5	22·1	19	19·5	67·1	69
− 5·0	23·0	20	20·0	68·0	70
− 4·5	23·9	21	20·5	68·9	71
− 4·0	24·8	22	21·0	69·8	72
− 3·5	25·7	23	21·5	70·7	73
− 3·0	26·6	24	22·0	71·6	74
− 2·5	27·5	25	22·5	72·5	75
− 2·0	28·4	26	23·0	73·4	76
− 1·5	29·3	27	23·5	74·3	77
− 1·0	30·2	28	24·0	75·2	78
− 0·5	31·1	29	24·5	76·1	79
0·0	32·0	30	25·0	77·0	80
0·5	32·9	31	25·5	77·9	81
1·0	33·8	32	26·0	78·8	82
1·5	34·7	33	26·5	79·7	83
2·0	35·6	34	27·0	80·6	84
2·5	36·5	35	27·5	81·5	85
3·0	37·4	36	28·0	82·4	86
3·5	38·3	37	28·5	83·3	87
4·0	39·2	38	29·0	84·2	88
4·5	40·1	39	29·5	85·1	89
5·0	41·0	40	30·0	86·0	90
5·5	41·9	41	30·5	86·9	91
6·0	42·8	42	31·0	87·8	92
6·5	43·7	43	31·5	88·7	93
7·0	44·6	44	32·0	89·6	94
7·5	45·5	45	32·5	90·5	95
8·0	46·4	46	33·0	91·4	96
8·5	47·3	47	33·5	92·3	97
9·0	48·2	48	34·0	93·2	98
9·5	49·1	49	34·5	94·1	99

Code X.—*Barometric Tendency.*

By the "barometric tendency at a given hour" is meant the amount by which the barometric height has changed during the preceding three hours. It is to be expressed in millimetres. For example, the barometric tendency at 8 A.M. could be obtained by comparing the reading taken at that hour, say 755·7 mm., with a reading taken at 5 A.M., say 759·3 mm. In this case the barometric tendency would be expressed by a fall of 3·6 millimetres. As a general rule the barometric tendency is to be determined from the trace of the barograph.

The barometric tendency is coded in two figures, according to the following table :—

Rise in Barometer.		Code No.	Fall in Barometer.		Code No.
Millimetres.	Inches.		Millimetres.	Inches.	
0·0— 0·4	0·00—0·01	01	0·0— 0·4	0·00—0·01	51
0·5— 0·9	0·02—0·03	02	0·5— 0·9	0·02—0·03	52
1·0— 1·4	0·04—0·05	03	1·0— 1·4	0·04—0·05	53
1·5— 1·9	0·06—0·07	04	1·5— 1·9	0·06—0·07	54
2·0— 2·4	0·08—0·09	05	2·0— 2·4	0·08—0·09	55
2·5— 2·9	0·10—0·11	06	2·5— 2·9	0·10—0·11	56
3·0— 3·4	0·12—0·13	07	3·0— 3·4	0·12—0·13	57
3·5— 3·9	0·14—0·15	08	3·5— 3·9	0·14—0·15	58
4·0— 4·4	0·16—0·17	09	4·0— 4·4	0·16—0·17	59
4·5— 4·9	0·18—0·19	10	4·5— 4·9	0·18—0·19	60
5·0— 5·4	0·20—0·21	11	5·0— 5·4	0·20—0·21	61
5·5— 5·9	0·22—0·23	12	5·5— 5·9	0·22—0·23	62
6·0— 6·4	0·24—0·25	13	6·0— 6·4	0·24—0·25	63
6·5— 6·9	0·26—0·27	14	6·5— 6·9	0·26—0·27	64
7·0— 7·4	0·28—0·29	15	7·0— 7·4	0·28—0·29	65
7·5— 7·9	0·30—0·31	16	7·5— 7·9	0·30—0·31	66
8·0— 8·4	0·32—0·33	17	8·0— 8·4	0·32—0·33	67
8·5— 8·9	0·34—0·35	18	8·5— 8·9	0·34—0·35	68
9·0— 9·4	0·36—0·37	19	9·0— 9·4	0·36—0·37	69
9·5— 9·9	0·38—0·38	20	9·5— 9·9	0·38—0·38	70
10·0—10·4	0·39—0·40	21	10·0—10·4	0·39—0·40	71
10·5—10·9	0·41—0·42	22	10·5—10·9	0·41—0·42	72
11·0—11·4	0·43—0·44	23	11·0—11·4	0·43—0·44	73
11·5—11·9	0·45—0·46	24	11·5—11·9	0·45—0·46	74
12·0—12·4	0·47—0·48	25	12·0—12·4	0·47—0·48	75
12·5—12·9	0·49—0·50	26	12·5—12·9	0·49—0·50	76
13·0—13·4	0·51—0·52	27	13·0—13·4	0·51—0·52	77
13·5—13·9	0·53—0·54	28	13·5—13·9	0·53—0·54	78
14·0—14·4	0·55—0·56	29	14·0—14·4	0·55—0·56	79
14·5—14·9	0·57—0·58	30	14·5—14·9	0·57—0·58	80
15·0—15·4	0·59—0·60	31	15·0—15·4	0·59—0·60	81
15·5—15·9	0·61—0·62	32	15·5—15·9	0·61—0·62	82
16·0—16·4	0·63—0·64	33	16·0 16·4	0·63—0·64	83
16·5—16·9	0·65—0·66	34	16·5—16·9	0·65—0·66	84
17·0—17·4	0·67—0·68	35	17·0—17·4	0·67—0·68	85
17·5—17·9	0·69—0·70	36	17·5—17·9	0·69—0·70	86
18·0—18·4	0·71—0·72	37	18·0—18·4	0·71—0·72	87
18·5—18·9	0·73—0·74	38	18·5—18·9	0·73—0·74	88
19·0—19·4	0·75—0·76	39	19·0—19·4	0·75—0·76	89
19·5—19·9	0·77—0·78	40	19·5—19·9	0·77—0·78	90
20·0—20·4	0·79—0·80	41	20·0—20·4	0·79—0·80	91
20·5—20·9	0·81—0·82	42	20·5—20·9	0·81—0·82	92
21·0—21·4	0·83—0·84	43	21·0—21·4	0·83—0·84	93
21·5—21·9	0·85—0·86	44	21·5—21·9	0·85—0·86	94
22·0—22·4	0·87—0·88	45	22·0—22·4	0·87—0·88	95
22·5—22·9	0·89—0·90	46	22·5—22·9	0·89—0·90	96
23·0—23·4	0·91—0·92	47	23·0—23·4	0·91—0·92	97
23·5—23·9	0·93—0·94	48	23·5—23·9	0·93—0·94	98
24·0—24·4	0·95—0·96	49	The barometric tendency cannot be reported.		99

Code XI.—*Sea Surface Temperature.*

Sea surface temperature to tenths of a degree Centigrade, is coded by three figures, or, when necessary, by two figures preceded by zero. If the temperature is negative, the first of these three figures is 5.

For example :—

− 2·2° C. is coded as 522.
+ 1·0° C. „ 010.
+ 15·6° C. „ 156.

Table of Corrections for reducing Barometric Heights to 0° C. and to Sea Level.

Note.—The barometric reading should first be corrected for index error. This error may be neglected if it is less than 0·3 mm.

The + sign indicates that the correction is to be *added* to the barometric reading.

The − sign indicates that the correction is to be *subtracted*.

Temperature by the thermometer attached to the barometer.	−4° C. 24·8° F.	−2° C. 28·4° F.	0° C. 32° F.	+2° C. 35·6° F.	4° C. 39·2° F.	6° C. 42·8° F.	8° C. 46·4° F.	10° C. 50° F.	12° C. 53·6° F.	14° C. 57·2° F.	16° C. 60·8° F.	18° C. 64·4° F.	20° C. 68° F.	22° C. 71·6° F.	24° C. 75·2° F.	26° C. 78·8° F.	28° C. 82·4° F.
	Corrections to be made.																
Height of barometer cistern above sea level.																	
Metres.	Ft. In.	Mm.	Mm.	Mm.	Mm.	Mm.	Mm.	Mm.	Mm.	Mm.	Mm.	Mm.	Mm.	Mm.	Mm.	Mm.	Mm.
0	0 0	+0·5	+0·3	0·0	−0·2	−0·5	−0·7	−1·0	−1·2	−1·5	−1·7	−2·0	−2·2	−2·5	−2·7	−3·0	−3·2	−3·5
1	3 3	+0·6	0·4	+0·1	0·1	0·4	0·6	0·9	1·1	1·4	1·6	1·9	2·1	2·4	2·6	2·9	3·1	3·4
2	6 7	+0·8	0·5	0·3	0·0	0·3	0·5	0·7	1·0	1·2	1·5	1·7	2·0	2·2	2·5	2·8	3·0	3·2
3	9 10	+0·9	0·6	0·4	+0·1	0·1	0·4	0·6	0·9	1·1	1·4	1·6	1·9	2·1	2·4	2·6	2·9	3·1
4	13 1	+1·0	0·8	0·5	0·2	0·0	0·3	0·5	0·8	1·0	1·2	1·5	1·7	2·0	2·2	2·5	2·8	3·0
5	16 5	+1·2	0·9	0·7	0·4	+0·1	0·1	0·4	0·6	0·9	1·1	1·4	1·6	1·9	2·1	2·4	2·7	2·9
6	19 8	+1·3	1·0	0·8	0·5	0·2	0·0	0·3	0·5	0·8	1·0	1·3	1·5	1·8	2·0	2·3	2·6	2·8
7	22 0	+1·4	1·2	0·9	0·6	0·3	+0·1	0·1	0·4	0·6	0·9	1·1	1·4	1·6	1·9	2·2	2·4	2·7
8	26 3	+1·5	1·3	1·0	0·7	0·5	0·2	0·0	0·3	0·5	0·8	1·0	1·3	1·5	1·8	2·1	2·3	2·6
9	29 6	+1·7	1·4	1·2	0·8	0·6	0·3	+0·1	0·2	0·4	0·6	0·9	1·1	1·4	1·6	2·0	2·2	2·5
10	32 10	+1·8	1·6	1·3	1·0	0·7	0·5	0·2	0·0	0·3	0·5	0·8	1·0	1·3	1·5	1·9	2·1	2·4
11	36 1	+1·9	1·7	1·4	1·1	0·8	0·6	0·3	+0·1	0·2	0·4	0·7	0·9	1·2	1·4	1·8	2·0	2·2
12	39 4	+2·0	1·8	1·5	1·2	1·0	0·7	0·5	0·2	0·0	0·3	0·5	0·8	1·1	1·3	1·6	1·9	2·1
13	42 8	+2·2	1·9	1·7	1·3	1·1	0·8	0·6	0·3	+0·1	0·2	0·4	0·7	0·9	1·2	1·5	1·8	2·0
14	45 11	+2·3	2·0	1·8	1·5	1·2	0·9	0·7	0·4	0·2	0·0	0·3	0·6	0·8	1·1	1·4	1·6	1·9
15	49 3	+2·4	2·2	1·9	1·6	1·4	1·1	0·8	0·6	0·3	+0·1	0·2	0·5	0·7	1·0	1·3	1·5	1·8
16	52 6	+2·5	2·3	2·0	1·7	1·5	1·2	0·9	0·7	0·4	0·2	0·1	0·4	0·6	0·9	1·2	1·4	1·6
17	55 9	+2·6	2·4	2·1	1·9	1·6	1·3	1·1	0·8	0·6	0·3	+0·1	0·3	0·5	0·8	1·0	1·3	1·5
18	59 1	+2·8	2·5	2·3	2·0	1·7	1·4	1·2	0·9	0·7	0·4	0·2	0·1	0·4	0·6	0·9	1·2	1·4
19	62 4	+2·9	2·6	2·4	2·1	1·9	1·5	1·3	1·0	0·8	0·6	0·3	0·0	0·3	0·5	0·8	1·0	1·3
20	65 7	+3·0	2·8	2·5	2·3	2·0	1·7	1·4	1·2	0·9	0·7	0·4	+0·1	0·2	0·4	0·7	0·9	1·2
21	68 11	+3·1	2·9	2·6	2·4	2·1	1·8	1·5	1·3	1·0	0·8	0·5	0·2	0·1	0·3	0·6	0·8	1·1
22	72 2	+3·3	3·0	2·8	2·5	2·2	1·9	1·7	1·4	1·2	0·9	0·6	0·3	+0·1	0·2	0·4	0·7	0·9
23	75 6	+3·4	3·1	2·9	2·6	2·4	2·1	1·8	1·5	1·3	1·0	0·8	0·4	0·2	0·1	0·3	0·6	0·8

Table for converting barometric readings in inches into millimetres.

Inches and Tenths.	Hundredths of an Inch.									
	0.	1.	2.	3.	4.	5.	6.	7.	8.	9.
	Mm.	Mm.	Mm.	Mm.	Mm.	Mm.	Mm.	Mm.	Mm.	Mm.
27·0	685·8	686·0	686·3	686·6	686·8	687·1	687·3	687·6	687·8	688·1
·1	688·3	688·6	688·8	689·1	689·3	689·6	689·9	690·1	690·4	690·6
·2	690·9	691·1	691·4	691·6	691·9	692·1	692·4	692·7	692·9	693·2
·3	693·4	693·7	693·9	694·2	694·4	694·7	694·9	695·2	695·4	695·7
·4	696·0	696·2	696·5	696·7	697·0	697·2	697·5	697·7	697·9	698·2
·5	698·5	698·7	699·0	699·3	699·5	699·8	700·1	700·3	700·5	700·8
·6	701·0	701·3	701·5	701·8	702·0	702·3	702·6	702·8	703·1	703·3
·7	703·6	703·8	704·1	704·3	704·6	704·8	705·1	705·4	705·6	705·9
·8	706·1	706·4	706·6	706·9	707·1	707·4	707·6	707·9	708·1	708·4
·9	708·7	708·9	709·2	709·4	709·7	709·9	710·2	710·4	710·7	710·9
28·0	711·2	711·4	711·7	712·0	712·2	712·5	712·7	713·0	713·2	713·5
·1	713·7	714·0	714·2	714·5	714·7	715·0	715·3	715·5	715·8	716·0
·2	716·3	716·5	716·8	717·1	717·3	717·5	717·8	718·0	718·3	718·6
·3	718·8	719·1	719·3	719·6	719·8	720·1	720·3	720·6	720·8	721·1
·4	721·4	721·6	721·9	722·1	722·4	722·6	722·9	723·1	723·4	723·6
·5	723·9	724·1	724·4	724·7	724·9	725·2	725·4	725·7	725·9	726·2
·6	726·4	726·7	726·9	727·2	727·4	727·7	728·0	728·2	728·5	728·7
·7	729·0	729·2	729·5	729·7	729·9	730·2	730·5	730·7	731·0	731·3
·8	731·5	731·8	732·0	732·3	732·5	732·8	733·0	733·3	733·5	733·8
·9	734·1	734·3	734·6	734·8	735·1	735·3	735·6	735·8	736·1	736·3
29·0	736·6	736·8	737·1	737·4	737·6	737·9	738·1	738·4	738·6	738·9
·1	739·1	739·4	739·6	739·9	740·1	740·4	340·7	740·9	741·2	741·4
·2	741·7	741·9	742·2	742·4	742·7	742·9	743·2	743·4	743·7	744·0
·3	744·2	744·5	744·7	745·0	745·2	745·5	745·7	745·9	746·2	746·5
·4	746·8	747·0	747·3	747·5	747·7	748·1	748·3	748·5	748·8	749·0
·5	749·3	749·5	749·8	750·1	750·3	750·6	750·8	751·1	751·3	751·6
·6	751·8	752·1	752·3	752·6	752·8	753·1	753·4	753·6	753·9	754·1
·7	754·4	754·6	754·8	755·1	755·4	755·6	755·9	756·1	756·4	756·7
·8	756·9	757·2	757·4	757·7	757·9	758·2	758·4	758·7	758·9	759·2
·9	759·5	759·7	760·0	760·2	760·5	760·7	761·0	761·2	761·5	761·7
30·0	762·0	762·2	762·5	762·8	763·0	763·3	763·5	763·8	764·0	764·3
·1	764·5	764·8	765·0	765·3	765·5	765·8	766·1	766·3	766·6	766·8
·2	767·1	767·3	767·6	767·8	768·1	768·3	768·6	768·8	769·1	769·4
·3	769·6	769·9	770·1	770·4	770·6	770·9	771·1	771·4	771·6	771·9
·4	772·2	772·4	772·7	772·9	773·2	773·4	773·7	773·9	774·2	774·4
·5	774·7	774·9	775·2	775·5	775·7	776·0	776·2	776·5	776·7	777·0
·6	777·2	777·5	777·7	778·0	778·2	778·5	778·8	779·0	779·3	779·5
·7	779·8	780·0	780·3	780·5	780·8	781·0	781·3	781·5	781·8	782·1
·8	782·3	782·6	782·8	783·1	783·3	783·6	783·8	784·1	784·3	784·6
·9	784·9	785·1	785·4	785·6	785·9	786·2	786·4	786·6	786·9	787·1
31·0	787·4	787·6	787·9	788·2	788·4	788·7	788·9	789·2	789·4	789·7
·1	789·9	790·2	790·4	790·7	790·9	791·2	791·5	791·7	792·0	792·2
·2	792·5	792·7	793·0	793·2	793·5	793·7	794·0	794·2	794·5	794·8
·3	795·1	795·3	795·5	795·8	796·0	796·3	796·5	796·8	797·0	797·3
·4	797·6	797·8	798·1	798·3	798·6	798·8	799·1	799·3	799·6	799·8

TABLE for converting Minutes to Tenths of a Degree.

Minutes.	Tenths of a degree.
0–3	0
4–9	1
10–15	2
16–21	3
22–27	4
28–33	5
34–39	6
40–45	7
46–51	8
52–57	9
58–59	10

EXAMPLE.

Message containing Meteorological Information.

Ice :

——	First Message.	Coded as	Second Message.	Coded as
Date of observation	21	21	22	22
Time of observation	1 p.m.—4 p.m.	5	4 a.m.—7 a.m.	2
Nature of ice or derelict ...	Single iceberg	1	Field ice	5
Position of ice or derelict	Latitude 44° 35′	446	Latitude 42° 58′	430
	Longitude 43° 15′	432	Longitude 47° 3′	470

Weather :

——	First Message.	Coded as	Second Message.	Coded as
Date of observation	21	21	22	22
Position of ship ...	Latitude 45° 13′ Longitude 42° 5′	825	Latitude 43° 47′ Longitude 46° 33′	863
Direction and force of wind...	E.S.E. 5	26	S.W. 2	55
Set and velocity of current ...	N.W. 2 m-h	82	S.S.E. 1 m-h.	39
Weather	Sky clear	0	Fog	8
Barometer	765·3 mm.	653	753·2 mm.	532
Air temperature	15·3° C.	61	9·8° C.	50
Barometric tendency	Rise ·8	02	Fall 2·7	56
Sea-surface temperature ...	1·4° C.	014	— ·7° C.	507

The Code of the above message sent to the Meteorological Office would thus be :—

Meteorology : Ice : 21514, 46432 : 22254, 30470 : Weather ; 21825, 26820, 65361, 02014 : 22863, 55398, 53250, 56507.

ARTICLE II.

SAFETY SIGNAL.

The radiotelegraph stations which have to transmit to ships information involving safety of navigation and being of an urgent character (icebergs, derelicts, cyclones, typhoons, sudden changes in the position or form of fixed obstructions or of land marks) shall make use of the following signal, called the safety signal, repeated at short intervals ten times at full power :

▬ ▬ ▬ (T T T)

In principle, all radiotelegraph stations receiving the safety signal, shall, if the transmission of messages by them would interfere with the receipt by any other station of the safety signal and the following safety message, keep silence, in order to allow all interested stations to receive that message. This does not apply to cases of distress.

The safety message shall be transmitted one minute after the safety signal has been sent out, and shall be repeated thereafter three times at intervals of ten minutes.

The Governments of the Contracting States will select the stations which are to send out to mariners safety information of an urgent character.

When the information in question has been sent out by stations performing the time service, it shall be again sent out after the transmission of the time signal and the weather report.

ARTICLE III.

MORSE CODE.

INTERNATIONAL SIGNALS.

These signals may be made at night or in thick weather, either by long and short flashes of light, or by long and short sound signals (whistles, fog-horns, &c.), or during the day by hand flags.

1.—URGENT AND IMPORTANT SIGNALS.

You are standing into danger	▪ ▪ ▬
I want assistance ; remain by me	▪ ▪ ▪ ▬
Have encountered ice	▪ ▬ ▪
Your lights are out (*or*, burning badly)	▪ ▬ ▪ ▬ ▪
The way is off my ship ; you may feel your way past me	▪ ▬ ▪
Stop (*or* heave to) ; I have something important to communicate ...	▪ ▬ ▪ ▪
Am disabled ; communicate with me	▪ ▪ ▬ ▪

2.—GENERAL SIGNALS.

Meaning.	Signal.	Equivalent Letters and How Made.	How Answered.
Preparative ...	▬▬▬▬▬▬▬▬▬ &c.	A succession of E's in one group	By the general answer T.
Answer	▬	T (singly).	
Spelling	▬▬ ▬ ▬ ▬ ▬▬ ▬	F F in one group	By the general answer T.
Use International Code of Signals	▬▬ ▬▬ ▬▬ ▬▬ ▬▬	M M M in one group	By the general answer T.
International Code Flag Sign	▬▬ ▬▬ ▬▬ ▬▬	M M in one group.	
Break sign	▬ ▬ ▬ ▬	I I as separate letters.	
Stop	▬ ▬ ▬ ▬ ▬ ▬	I I I as separate letters.	
Finish of the message.	▬ ▬ ▬ ▬ ∞	V E as one group	▬ ▬ ▬ R. ▬ ▬ ▬ D. As separate letters.
Erase sign	▬ ▬ ▬ ▬ &c.	A succession of E's as separate letters	By a succession of E's as separate letters.
Annul	W W ▬ ▬ ▬ ▬ ▬ ▬	W W as one group	By W W as one group.
Repeat word after— (when a single word is required)	I M I ▬ ▬ ▬ ▬ ▬ W A ▬ ▬ ▬ ▬ Followed by the word preceeding the one required.	I M I as one group W A as separate letters	By the general answer T.
Repeat all after— (if more than one word is required)	I M I ▬ ▬ ▬ ▬ ▬ A A ▬ ▬ ▬ ▬	I M I as one group A A as separate letters	By the general answer T.
Repeat all— (if the whole message is to be repeated)	I M I ▬ ▬ ▬ ▬ ▬ A L L ▬ ▬ ▬ ▬ ▬ ▬ ▬ ▬ ▬	I M I as one group A L L as separate letters.	By the general answer T.

3.—NATIONALITY SIGNALS.

Meaning.	Signal.	Equivalent Letters and How Made.
American		C D as separate letters.
Argentine		C G „ „
Austro-Hungarian		C F „ „
Belgian		D C „ „
Brazilian		D E „ „
British		F.
Bulgarian		D F as separate letters.
Chilian		D G „ „
Chinese		E C „ „
Colombian		E D „ „
Danish		E F „ „
Dutch		E G „ „
French		E.
German		G.
Greek		M M in one group followed by D.
Italian		C E as separate letters.
Japanese		C.
Mexican		F C as separate letters.
Norwegian		M M in one group followed by C.
Peruvian		F D as separate letters.
Portuguese		F E „ „
Russian		D.
Siamese		F G as separate letters.
Spanish		G C „ „
Swedish		M M in one group followed by E.
Turkish		G D as separate letters.
Uruguayan		G E „ „
Venezuelan		G F „ „

4.—INSTRUCTIONS.

1. THE URGENT AND IMPORTANT SIGNALS may be made without the Preparative Signal being answered if it is supposed that the person addressed cannot reply, or in other special circumstances; but in this case a pause should be made between the Preparative Signal and the message.

2. THE SIGNAL ..--..-- (FF) is used previous to any letters which are intended to spell words.

3. THE SIGNAL --- --- --- (MMM) is used previous to any message sent by means of the International Code o Signals.

4. THE SIGNAL --- --- (MM) means the Code Flag of the International Code of Signals, and is used as indicated in the Code Book.

5. THE BREAK SIGN is used between the address of the receiver and the text of the message, and after the message if the name of the sender is to be signalled.

6. THE STOP is used, where necessary, in the text of the signal.

7. THE ERASE is used to cancel the last word or signal group, sent by mistake.

8. THE ANNUL is used to cancel *all* the message.

9. METHOD OF ANSWERING. Each word or signal group, when understood is to be answered by one long flash — (T).

If a word or signal group is not answered, the sender is to repeat it until answered by a long flash.

At the end of the message, if understood, the receiver will make .--. --.. (RD).

The Erase and Annul signs are to be answered by their own signs.

10. THE NATIONALITY SIGNAL is made immediately after the answer to the Preparatory Signal has been received, to indicate the nationality of the vessel making the signal. It is answered by the nationality signal of the vessel receiving the message.

Article IV.

A printed copy of the code of urgent and important signals shall be placed in a prominent position in the chart room of every ship.

CONSTRUCTION.

Article V.

Definitions.

The meaning of the principal technical and other expressions contained both in the Convention and in these Regulations, under the heading of Construction, is as follows :—

(1.) The *load water-line* is the water-line used in determining the sub-division of the ship.

(2.) The *length* of the ship is the extreme length at the load water-line.

(3.) The *breadth* of the ship is the extreme width from outside of frame to outside of frame at or below the load water-line.

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

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

(6.) The *draught* is the vertical distance from the top of keel amidships to the load water-line.

(7.) The *freeboard* is the vertical distance from the load water line to the margin line amidships.

(8.) The *depth* of the ship is the sum of the draught and freeboard as above defined.

(9.) The *sheer* of the bulkhead deck at any point is the vertical distance between the beam at side line at that point and a line drawn parallel to the load water line at the height of the beam at side line amidships.

(10.) If *block coefficient of fineness of displacement to load water line* is used, this coefficient shall be determined as follows:—

$$\frac{\text{Volume of displacement to moulded lines.}}{\text{Length} \times \text{Breadth} \times \text{Draught.}}$$

(11.) The *permeability* of a space is the percentage of that space which can be occupied by water.

The volume of a compartment which extends above the margin line shall be measured only to the height of that line. Volumes shall be understood as volumes to moulded lines.

(12.) The *machinery space* is to be taken as extending in length between the extreme main transverse watertight bulkheads bounding the spaces devoted to the main and auxiliary propelling machinery, including boilers when installed.

Article VI.

Floodable Length.

The floodable length at any point of the length of a ship shall be determined taking into consideration form, draught, and other limiting characteristics of the ship in question.

This floodable length for a given point in a ship with a continuous bulkhead deck is the maximum percentage 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 Article VII. without the ship being submerged beyond the margin line.

In the case of ships not having a continuous bulkhead deck, the floodable length must be such as to secure to the ship in question, for each portion of its length, and for all conditions of trim after damage, a measure of safety at least equal in effectiveness to that laid down for the ship with continuous bulkhead deck.

Article VII.

Permeability.

The definite assumptions referred to in Article VI. relate to the permeabilities of the spaces in question below the margin line.

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

(1.) The machinery space ;

(2.) The portion forward of the machinery space ; and

(3.) The portion abaft the machinery space.

For steam ships the permeability of the machinery space, including the double bottom in wake thereof, shall be taken as eighty per cent. For ships fitted with internal combustion engines the corresponding permeability shall be taken as eighty-five per cent., unless it is proved by actual calculation that a lower figure may be adopted, provided that in no case shall that figure be less than eighty per cent.

The permeabilities for spaces forward and aft of the machinery space shall be as follows :—

(*a.*) Sixty per cent. in cargo spaces, bunkers (permanent or reserve), store-rooms, baggage and mail rooms, chain-lockers, watertight shaft or pipe tunnels, and fresh-water tanks above the double bottom.

It must be proved that the spaces just enumerated are practicable for the purpose intended and that they are in fact to be so used. The same permeability shall not be assigned to any other space without the approval of the Administration.

(*b.*) Ninety-five per cent. in passenger and crew spaces, peaks, trimming-tanks exclusively so used, double bottoms, and all other spaces not specifically appropriated to one of the purposes indicated in the foregoing section (*a*).

If in a 'tween deck space enclosed by complete transverse permanent steel bulkheads any portion thereof is appropriated to passengers, the whole of that space shall be regarded as passenger space ; and, similarly, 'tween deck spaces appropriated for the carriage of *either* passengers *or* cargo shall be regarded as passenger spaces.

Where the spaces before or abaft the machinery space below the margin line consist partly of spaces mentioned in section (*a*) and partly of spaces mentioned in section (*b*), the average percentage of permeability shall be determined separately for each end by the formula $95—35\ r$, where r is the ratio between the volume of the spaces mentioned in section (*a*) and the total volume of the space in the portion of the ship under consideration.

Article VIII.

Permissible Length of Compartments.

(1.) The maximum permissible length of one compartment having its centre at any point in the ship's length is obtained from the floodable length (Article VI) by multiplying that length by an appropriate factor, called the *factor of sub-division*.

(2.) This factor of sub-division depends on the length of the ship, and, for a given length, varies according to the nature of the service for which the ship is intended. This factor decreases in a regular and continuous manner—

(*a.*) As the length of ship increases ; and

(*b.*) As, for a given length, the ship departs from the type of ship engaged in a mixed cargo and passenger service, and approaches to the type of ship primarily engaged in the carriage of passengers.

(3.) For each of the two types of ships referred to in the previous paragraph (2) (*b*) the variation of the factor of sub-division may be expressed by a curve, of which the co-ordinates represent the length of the ship and the value of the factor. The following table gives certain points on two curves the higher of which corresponds to the minimum requirements for the "mixed" type, and the lower to the minimum requirements for the "passenger" type.

Table.

A.	B.		C.	
	Metres.	Feet.	Metres.	Feet.
1·00	90	295	79	259
0·90	114	374	87	285
0·84	123	404	93	305
0·65	149	489	116	380
0·50	174	571	149	489
0·39	213	699	209	685
0·34	274	899	274	899

Column (A) gives the maximum permissible values of the factor of subdivision for the length of ships given in Columns (B) and (C).

Column (B) is applicable to ships engaged in a mixed cargo and passenger service.

Column (C) is applicable to ships primarily engaged in the carriage of passengers.

(4.) For a given length, the value of the factor of subdivision appropriate to a ship between the two extreme limits will be between the values of the factors determined by the two curves before mentioned, and will be automatically fixed by a *criterion of service* which is to form the subject of further study.

Article IX.

(1.) When the factor of subdivision is equal to or less than ·5, it may be doubled in order to give at any point of the ship's length the total length of two adjacent compartments; but, in that case, the length of the shorter compartment of any pair shall not be less than one-quarter of the total length so obtained. 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 eighty per cent., the length of the pair of compartments shall be adjusted to the proper value by applying a suitable correction.

(2.) In no case whatever shall the length of any watertight compartment exceed 28 metres (equivalent to 92 feet).

(3.) When the factor of subdivision applicable to any ship is less than ·84, but more than ·5, the combined length of the two foremost compartments shall not exceed the floodable length at the extreme forward end, provided also that the length of the second compartment is not greater than that permissible by Article VIII. above and not less than 3 metres (equivalent to 10 feet).

(4.) When the length of the ship is more than 213 metres (equivalent to 699 feet) but less than 251 metres (equivalent to 823 feet) the floodable length at the forward end of the ship shall be at least 20 per cent. of the ship's length; and the ship, forward of a bulkhead placed either at the distance of the actual floodable length abaft the stem or not nearer to the stem than 20 per cent. of the ship's length, shall be divided into at least three compartments.

(5.) When the length of the ship is equal to or greater than 251 metres (equivalent to 823 feet) the same method shall be adopted, but the floodable length shall be at least 28 per cent. and the number of compartments at least four.

(6.) A bulkhead may be recessed transversely, provided the sides of the recess are at a sufficient distance from the sides of the ship.

Vertical steps are inadmissible in the main transverse watertight bulkheads of ships to which the sub-division rules of Article VIII. apply where the factor of subdivision is greater than ·5, unless such arrangements are made by additional sub-division as shall maintain the same measure of safety as that secured by bulkheads without steps. The total length of the steps in any bulkhead shall not exceed 2 per cent. of the ship's length, plus 3 metres (equivalent to 10 feet).

(7.) The existence of recesses or steps in a bulkhead shall in no case affect the permissible volumes of the compartments adjacent to such bulkhead, as determined by this and the preceding Article.

Article X.

If the degree of safety of a ship is greater than that prescribed by Articles VIII. and IX. above, and if the owner requests that this fact be recorded on the Safety Certificate, in accordance with Article 17 (paragraph 4) of the Convention, this request shall be accompanied with all the data necessary to justify the claim.

In such case, the record shall state the fact that the subdivision is equal or superior to that provided for a ship of equal length in Column (C) of the Table in Article VIII., with an additional statement giving the length of the ship in Column (C) whose factor of subdivision according to the rules would be exactly equal to that employed in determining the subdivision of the ship in question.

Values of length and factors for lengths not specifically stated in Columns (C) and (A) respectively of the Table in Article VIII. shall be obtained by interpolation.

Article XI.

Peak and Machinery Space Bulkheads.

Ships shall be fitted with a forepeak bulkhead to extend to the bulkhead deck, and to the weather deck in ships having continuous super-structures. This bulkhead shall be placed at a distance of not less than 5 per cent. of the ship's length from the stem at the load water-line.

An afterpeak bulkhead and bulkheads dividing the machinery space from the cargo and the passenger spaces shall also be fitted and carried up to the bulkhead deck. The afterpeak bulkhead may, however, be stopped below the bulkhead deck, provided that it shall at least be carried to the first deck above the load water-line, and that such deck forms a watertight flat from the afterpeak bulkhead to the stern, and also provided that the degree of safety of the ship as regards sub-division is not thereby dimished.

Article XII.

Fireproof Bulkheads.

In parts of a ship above the margin line there shall be fitted fireproof bulkheads which will serve to retard the spread of fire. The mean distance between any two consecutive bulkheads of this description shall not be greater than 40 metres (equivalent to 131 feet). Recesses in these bulkheads shall be fireproof, and the openings in these bulkheads shall be fitted with fireproof doors.

Article XIII.

Exits from Watertight Compartments.

(1.) In passenger and crew spaces a practicable means of escape for the occupants shall be provided from each watertight compartment.

(2.) There shall be a means of escape for the crew from each engine room, shaft tunnel and stokehold compartment independent of the watertight doors.

Article XIV.

Construction and Initial Testing of Watertight Bulkheads.

(1.) Watertight bulkheads 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.

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

Where frames or beams pass through a watertight deck or bulkhead, the watertightness shall be obtained by caulked angle chocks, or cast iron or steel chocks efficiently secured and rust-jointed, and not by 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 foremost and aftermost compartments shall be tested with water to a head up to the margin line.

Double bottoms, deep tanks, and all compartments intended to hold liquids shall be tested with water to a head 2·44 metres (eight feet) above the top of the tank or to the load water line, whichever is the greater.

(5.) No change may be made in the structure of the bulkheads after the completion of the survey without the permission of the Administration.

(6.) All provisions relating to main transverse watertight bulkheads shall apply to longitudinal bulkheads, so far as is practicable.

Article XV.

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.) No doors, sluice valves, manholes, or access openings are permitted—

(*a.*) In the collision bulkhead below the margin line.

(*b.*) In watertight transverse bulkheads dividing a cargo space from an adjoining cargo space or from a reserve bunker, except as provided in paragraph (6) of this Article.

(3.) In the machinery space and apart from bunker and shaft-tunnel doors, not more than one door may be fitted in each main transverse bulkhead within the machinery space for intercommunication, but where more than one separate shaft tunnel is fitted a door may be cut for each tunnel.

If a tunnel is fitted forward either for the purpose of pipes or as a communication passage it shall be fitted with a watertight door.

(4.) The only types of watertight doors permissible are hinged doors, sliding doors, and doors of any other equivalent pattern, excluding plate doors secured only by bolts.

A hinged door shall be fitted with lever-operated catches workable from each side of the bulkhead.

A sliding door may have a horizontal or vertical motion. If hand-operated only, the door shall be capable of being operated at the door itself and also from an accessible position above the margin line. If operated by power, it shall be capable of being operated from the bridge, and by hand both at the door itself and from an accessible position above the margin line. A door dropping by its own weight, and fitted with a cataract cylinder or equivalent arrangement, may be considered as being operated by power, if capable of being released from the bridge.

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

(6.) Hinged watertight doors in passenger, crew, and working spaces are only permitted above a deck, the under side of which, at its lowest point at side, is at least 2·13 metres (7 feet) above the load water line, and they are not permitted in those spaces below such deck.

Hinged watertight doors of specially heavy design may be fitted above the load water-line in bulkheads between cargo tween-deck spaces. They shall be closed before the voyage commences, and kept closed while at sea by efficient closing gear. None of these doors shall be fitted, even at the ends of the ship, in a cargo 'tween-deck space in the amidship region of which 'tween-deck space it would not be permissible to fit such doors.

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

(8.)—(*a.*) When the number of watertight doors in the main transverse watertight bulkheads at or about the stokehold level in the machinery space exceeds five, excluding the watertight doors at the entrances of tunnels, all watertight doors situated below the load water line shall be capable of being simultaneously closed from a station situated on the bridge, and their opening and closing shall be indicated at that station. The simultaneous closing of these doors shall be preceded by a warning sound signal.

(*b.*) If watertight doors which have sometimes to be open at sea for the purpose of trimming coal are fitted between bunkers in the 'tween decks below the bulkhead deck, these 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 2·13 metres (7 feet) above the load water line, the watertight doors at such openings shall be operated by power.

(9.) 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 joint shall be perfectly watertight.

(10.) 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.

(11.) If trunkways for forced draught, for access from crew's accommodation to the stokehold or for any other purpose, are carried through the main transverse watertight bulkheads, the integrity of the watertight bulkheads shall be maintained by watertight doors or other equally effective means.

(12.) Where pipes, electric-light cables, &c., are carried through transverse watertight bulkheads below the margin line, arrangements shall be made to ensure the integrity of the watertightness of the bulkheads.

(13.) The number of sluice valves in watertight bulkheads shall be reduced to the minimum, and shall not be allowed except in positions where they are sufficiently accessible

at all times to allow of its being ascertained that they are in good order. They shall be strongly constructed, efficiently fitted, and regularly inspected. Satisfactory provision shall be made for operating them from an accessible position above the margin line. Means shall be provided for indicating when they are open or shut.

Article XVI.

Openings in Ship's Side.

(1.) (*a.*) Subject to clause (*b*) below, when side scuttles are fitted below a deck the under side of which at its lowest point at side is less than 2·13 metres (7 feet) above the load water line, they shall be permanently fixed.

(*b.*) Side scuttles which are capable of being opened may be fitted in the positions defined in clause (*a*), provided that—

they shall be closed watertight and locked before the ship leaves port ;
they shall not be opened during navigation ;
the time of opening such scuttles in port and of closing and locking them before the ship leaves port shall be entered in the official log book ;
the construction of such scuttles shall be such as effectively to prevent any person opening them without the consent of the master.

(*c.*) Scuttles fitted in the positions defined in clause (*a*) shall be provided with efficient metal shutters.

(2.) In 'tween decks above the deck mentioned in paragraph (1) (*a*) of this Article, opening side scuttles may be fitted except in spaces exclusively devoted to the carriage of cargo or coal.

(3.) No side scuttles shall be fitted in any spaces which are exclusively devoted to the carriage of cargo or coal.

(4.) All side scuttles which are not accessible during navigation shall be fitted with efficient metal covers, and both the glass and the cover shall be kept closed during navigation.

(5.) No automatic ventilating scuttles shall be fitted in the ship's side below the margin line.

(6.) All inlets and discharges in the side shall be arranged so as to prevent any accidental admission of water into the ship.

(7.) The number of scuppers, sanitary discharges, and other similar openings in the side 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.

(8.) Discharges led through the ship's skin from spaces below the margin line shall be fitted with efficient and accessible means for preventing water from passing inwards. It is permissible to have either one valve, fitted with a means of working it at a distance, or two valves without such gear, one of these valves being always accessible. In either case, the accessibility of the valves or of the means of working shall be assured by their being situated above the deck referred to paragraph (1) (*a*) of this Article.

(9.) In no case shall gangway, cargo, and coaling ports be fitted below the load water line. None of these ports shall be fitted, even towards the ends of the ship, in a space below the lowest 'tween deck space in the amidship region of which it is permissible to fit such ports.

(10.) Gangway, cargo, and coaling ports in the ship's side below the margin line shall be effectively closed and made secure before the ship leaves port, and kept closed during navigation.

(11.) The inboard openings of ash-shoots, rubbish-shoots, &c., shall not be lower than the deck referred to in paragraph (1) (*a*) of this Article. They may be permitted above this deck if fitted, to the satisfaction of the Administration, with covers, which shall be watertight if below the margin line. Such covers shall be so arranged as to prevent their being clogged in any way, and shall be at least as easily and effectively closed as watertight doors and side scuttles.

Article XVII.

Construction and Tests of Watertight Doors, Side Scuttles, &c.

(1.) The design and the materials used in the construction of watertight doors, side scuttles, gangway, coaling, and cargo ports, valves, pipes, ash and rubbish shoots shall be to the satisfaction of the Administration.

(2.) Watertight doors shall be tested by a water pressure equal to that prescribed for the bulkhead where the doors are located. The test shall be made before the vessel is put in service, and either before or after the door is fitted.

Article XVIII.

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

(1.) Watertight decks, trunks, and ventilators shall be of the same strength as the watertight bulkhead at the place where they occur. The means used for making them watertight and the arrangements adopted for closing the openings in them shall be to the satisfaction of the Administration. If watertight covers are used for closing these openings, they shall be fitted in place before the ship leaves port, and kept closed during navigation.

(2.) After completion a hose or flooding test shall be applied to watertight decks and a hose test to watertight trunks. Watertight ventilators and trunks shall be carried at least up to the margin line.

(3.) No change shall be made in the structure of watertight decks, trunks and ventilators after the survey without the permission of the Administration.

Article XIX.

Periodical Operation and Inspection of Watertight Doors, &c.

In all ships defined in Article 2 of the Convention, drills for the operating of watertight doors, side scuttles, valves, and closing mechanisms of scuppers, ash-shoots and rubbish-shoots, shall take place periodically during the voyage. A complete drill shall take place before leaving port, a second as soon as practicable after 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.

Article XX.

Entries in the Official Log Book.

In all ships defined in Article 2 of the Convention, hinged doors, portable plates side scuttles, gangway, cargo and coaling ports, and other openings, which are required by the preceding rules 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 Article XIX shall be entered in the official log book with an explicit record of any defects.

Article XXI.

Double Bottoms.

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

(2.) In ships 76 metres (equivalent to 249 feet) and under 91·5 metres (equivalent to 300 feet) in length, a double bottom shall be fitted at least outside of the machinery space and shall extend to the fore and after peak bulkheads respectively, or as near thereto as practicable.

(3.) In ships 91·5 metres (equivalent to 300 feet) and over in length, a double bottom shall be fitted amidships and shall extend to the fore and after peak bulkheads respectively, or as near thereto as practicable.

(4.) In ships over 91·5 metres (equivalent to 300 feet) in length, the inner bottom shall be continued out to the ship's side in such manner as to protect the bilges.

(5.) In ships over 213 metres (equivalent to 699 feet) in length, the double bottom, for at least half the ship's length amidships and forward to the forepeak bulkhead, shall

extend up the ship's sides to a height above the top of the keel not less than 10 per cent. of the ship's moulded breadth.

(6.) Wells constructed in the double bottom in connection with the drainage arrangements shall not extend downwards from the inner bottom more than half the depth of the double bottom at that point. A well extending to the outer skin is, however, permitted at the after end of the shaft tunnels of screw ships.

Article XXII.

Going Astern.

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

Article XXIII.

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.

Article XXIV.

Initial and Subsequent Surveys of Ships.

Every ship defined in Article 2 of the Convention shall be subjected at least to the following surveys, as specified in detail in Article XXV below :

(*A*) A survey before the ship is put in service ;

(*B*) Periodical surveys, once each year ;

(*C*) Additional surveys, as occasion arises.

Article XXV.

The surveys referred to in the previous Article 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 this Convention and of the detailed regulations promulgated by the Government of the contracting State 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 this Convention, and of the detailed regulations promulgated as a result thereof by the Government of the State 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 equipment, or 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 this Convention and of the detailed regulations promulgated as a result thereof by the Government of the State to which the ship belongs.

Article XXVI.

The detailed regulations referred to in Article XXV 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, as regards the test pressure to be applied, and the intervals between two consecutive tests.

Main and auxiliary boilers, connections, tanks, receivers, and steam-piping more than 102 millimetres (four inches) in diameter shall be satisfactorily tested by hydraulic pressure when new and thereafter periodically.

The initial and subsequent tests of the boilers shall take place under the following conditions :

The test pressure shall be not less than one-and-a-half times the working pressure, or five atmospheres above the working pressure, whichever is the less. If the pressure at the initial test does not exceed the working pressure by more than five atmospheres the interval between two consecutive tests shall not exceed two years. With a higher pressure at the initial test this interval may be increased, and if the pressure at the initial test is double the working pressure, the interval may be six years, but it shall in no case exceed that period.

Life Saving Appliances and Fire Protection.

Article XXVII.

Standard Types of Boats.

The standard types of boats are classified as follows :—

Class.	Section.	Type.
I (Entirely rigid sides).	A Open.	Internal buoyancy only.
	B Open.	Internal and external buoyancy.
	C Pontoon.	Well deck ; fixed watertight bulwarks.
II (Partially collapsible sides)	A Open.	Upper part of sides collapsible.
	B Pontoon.	Well deck ; collapsible watertight bulwarks.
	C Pontoon.	Flush deck ; collapsible watertight bulwarks.

Motor boats may be accepted if they comply with the requirements laid down for boats of the first class, but only to a limited number, which number shall be determined by each Government in its own regulations.

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).

Article XXVIII.

Boats of the First Class.

The standard types of boats of the first class must satisfy the following conditions :—

1A. *Open boats with internal buoyancy only.*

The buoyancy of a wooden boat of this type shall be provided by water-tight 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.

1B. *Open boats with internal and external buoyancy.*

The internal buoyancy of a wooden boat of this type shall be provided by water-tight 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 secured 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 air-cases and external buoyancy being increased accordingly.

1C. *Pontoon boats, in which persons cannot be accommodated below the deck, having a well deck and fixed watertight bulwarks.*

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 thirty-five per cent.

Article XXIX.

Boats of the Second Class.

The standard types of boats of the second class must satisfy the following conditions :—

2A. *Open boats having the upper part of the sides collapsible.*

A boat of this type shall be fitted both with watertight air-cases and with external buoyancy, the 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 minimum freeboard of boats of this type is fixed in relation to their length; it is 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 following amounts :—

Length of the Boat.		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.

2B. *Pontoon boats having a well deck and collapsible bulwarks.*

All the conditions laid down for boats of type 1C are to be applied to boats of this type, which differ from those of type 1C only in regard to the bulwarks.

2C. *Pontoon boats, in which the persons cannot be accommodated below deck, having a flush deck and collapsible bulwarks.*

The minimum freeboard of boats of this type is independent of their lengths and depends only upon their depth. 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 Boat.		Minimum Freeboard.	
Millimetres.	Equivalent, in inches, to	Millimetres.	Equivalent, in inches, to
310	12	70	$2\frac{3}{4}$
460	18	95	$3\frac{3}{4}$
610	24	130	$5\frac{1}{2}$
760	30	165	$6\frac{1}{2}$

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.

Article XXX.

Motor Boats.

When motor boats are accepted, the volume of internal buoyancy and, when fitted, the external buoyancy, must be fixed, having regard to the difference between the weight of the motor and its accessories and the weight of the additional persons which the boat could accommodate if the motor and its accessories were removed.

Article XXXI.

Arrangements for clearing Pontoon Lifeboats of Water.

All pontoon lifeboats shall be fitted with efficient means for quickly clearing the deck of water. The orifices for this purpose shall be such that the water cannot enter the boat through them when they are intermittently submerged. The number and size of the orifices shall be determined for each type of boat by a special test.

For the purpose of this test the pontoon boat shall be loaded with a weight of iron equal to that of its complement of persons and equipment.

In the case of a boat 8·5 metres in length (equivalent to 28 feet) two tons of water shall be cleared from the boat in a time not exceeding the following :—

Type	1C	...	...	...	...	...	60 seconds.
,,	2B	...	...	...	...	...	60 ,,
,,	2C	...	...	...	...	...	20 ,,

In the case of a boat having a length greater or less than 8·5 metres (equivalent to 28 feet) the weight of water to be cleared in the same time shall be, for each type, directly proportional to the length of the boat.

Article XXXII.

Construction of Boats.

Open lifeboats of the first class (types 1A and 1B) must have a mean sheer at least equal to four per cent. of their length.

The air-cases of open boats of the first class shall be placed along the sides of the boat; they may also be placed at the ends of the boat, but not in the bottom of the boat.

Pontoon lifeboats may be built of wood or metal. If constructed of wood, they shall have the bottom and deck made of two thicknesses with textile material between; if of metal, they shall be divided into watertight compartments with means of access to each compartment.

All boats shall be fitted for the use of a steering oar.

Article XXXIII.

Pontoon Rafts.

No type of pontoon raft may be approved unless it satisfies the following conditions :—

1. It should be reversible and fitted with bulwarks of wood, canvas or other suitable material on both sides. These bulwarks may be collapsible.
2. It should be of such size, strength and weight that it can be handled without mechanical appliances, and, if necessary, be thrown from the vessel's deck.
3. It should have not less than 85 cubic decimetres (equivalent to three cubic feet) of air-cases or equivalent buoyancy for each person whom it can accommodate.
4. It should have a deck area of not less than 3,720 square centimetres (equivalent to four square feet) for each person whom it can accommodate and the platform should not be less than 15 centimetres (equivalent to six inches) above the water level when the raft is loaded.
5. The air-cases or equivalent bouyancy should be placed as near as possible to the sides of the raft.

Article XXXIV.

Capacity of Boats and Pontoon Rafts.

1. The number of persons which a boat of one of the standard types or a pontoon raft can accommodate is equal to the greatest whole number obtained by dividing the capacity in cubic metres (or cubic feet), or the surface in square metres (or square feet), of the boat or of the raft by the standard unit of capacity, or unit of surface (according to circumstances), defined below for each type.

2. The cubic capacity in metres of a boat in which the number of persons is determined by the surface shall be assumed to be 0·283 times the number of persons which it is authorised to carry.

3. The standard units of capacity and surface are as follows :—

Unit of Capacity.	Cubic Metres.	Equivalent in Cubic Feet.
Open boats, Type 1A.	0·283	10
Open boats, Type 1B.	0·255	9

Unit of Surface.	Square Metres.	Equivalent in Square Feet.
Open boats, Type 2A. Pontoon boats, Type 2C.	0·325	$3\frac{1}{2}$
,, ,, Type 1C. ,, ,, Type 2B.	0·302	$3\frac{1}{4}$

4. The Government of each High Contracting Party may accept, in place of 0·302 ($3\frac{1}{4}$), a smaller divisor, if it is satisfied after trial that the number of persons for whom there is seating accommodation in the pontoon boat in question is greater than the number obtained by applying the above divisor, provided always that the divisor adopted in place of 0·302 ($3\frac{1}{4}$) may never be less than 0·279 (3).

The Government which accepts a lower divisor in this way shall communicate to the Governments of the other Contracting Parties particulars of the trial and drawings of the pontoon-boat in question.

Article XXXV.

Capacity Limits.

Pontoon boats and pontoon rafts shall never be marked with a number of persons greater 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 being 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 the first two sections of the first class, the freeboard when the boat is fully loaded is less than the freeboard laid down for each type respectively. In such circumstances 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 types 1C and 2B the raised part of the deck at the sides may be regarded as affording seating accommodation.

Article XXXVI.

Equivalents for and Weight of the Persons.

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

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

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

Article XXXVII.

Cubic capacity of Open Boats of the First Class.

1. The cubic capacity of an open boat of type 1A or 1B 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 amidship 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 life jackets.

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 inter-section 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 caculating the cubic capacity may not in any case exceed 45 per cent. of the breadth.

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

8. The cubic capacity of a motor-boat is obtained from the gross capacity by deducting a volume equal to that occupied by the motor and its accessories.

Article XXXVIII.

Deck area of Pontoon Boats and Open Boats of the Second Class.

1. The area of the deck of a pontoon boat of type 1c, 2b, or 2c 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 type 2a.

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 inter-section 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).

Article XXXIX.

Marking of Boats and Pontoon Rafts.

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.

Pontoon rafts shall be marked with the number of persons in the same manner.

Article XL.

Equipment of Boats and Pontoon Rafts.

1. The normal equipment of every boat shall consist of :—
   - (*a*) A single banked complement of oars and two spare oars ; 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 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. (This does not apply to motor lifeboats.)
   - (*g*) A suitable compass.

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

In the case of a ship defined in Article 2 of the Convention, which carries passengers in the North Atlantic, all the boats need not be equipped with masts, sails, and compasses, if the ship is provided with a radio-telegraph installation.

2. The normal equipment of every approved pontoon-raft shall consist of :—
   (*a*) Four oars.
   (*b*) Five rowlocks.
   (*c*) A self-igniting lifebuoy light.
3. In addition every boat and every pontoon-raft shall be equipped with :—
   (*a*) A life-line becketted round the outside.
   (*b*) A sea-anchor.
   (*c*) A painter.
   (*d*) A vessel containing five 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.
   (*e*) A watertight receptacle containing one kilogramme (equivalent to two pounds avoirdupois) of provisions for each person.
   (*f*) A watertight receptacle containing one litre (equivalent to one quart) for each person.
   (*g*) A number of self-igniting "red lights" and a watertight box of matches.

Article XLI.

Davits.

Each set of davits shall have a boat of the first class attached to it, provided that the number of open boats of the first class attached to davits shall not be less than the minimum number fixed by the Table which follows.

If it is neither practicable nor reasonable to place on a ship the minimum number of sets of davits required by the rules, the Government of the State to which the ship belongs may authorise a smaller number of sets of davits to be fitted, provided always that this number shall never be less than the minimum number of open boats of the first class required by the rules.

If a large proportion of the persons on board are accommodated in boats whose length is greater than 15 metres (equivalent to 50 feet) a further reduction in the number of sets of davits may be allowed exceptionally if the Administration concerned is satisfied that the arrangements are in all respects satisfactory.

In all cases in which a reduction in the minimum number of sets of davits or other equivalent appliances required by the rules is allowed, the owner of the ship in question shall be required to prove, by a test made in the presence of a surveyor appointed by the Government, that all the boats can be efficiently launched in a minimum time.

The conditions of this test shall be as follows :—

1. The ship is to be upright and in smooth water ;
2. The time is the time required from the beginning of the removal of the boat covers, or any other operation necessary to prepare the boats for lowering, until the last boat or pontoon raft is afloat ;
3. The number of men employed in the whole operation must not exceed the total number of boat hands that will be carried on the vessel under normal service conditions ;
4. Each boat when being lowered must have on board at least two men and its full equipment as required by the rules.

The time allowed for putting all the boats into the water shall be fixed by a formula to be determined by the Government of each High Contracting Party, each Government undertaking to communicate its decision to the Governments of the other Contracting Parties.

Article XLII.

Additional Boats and Pontoon Rafts.

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,

This addition shall bring the total capacity of the boats on the ship at least up to the greater of the two following amounts :—

(*a*) The minimum capacity required by these Regulations ;

(*b*) A capacity sufficient to accommodate seventy-five per cent. of the persons on board.

The remainder of the accommodation required shall be provided either in boats of Class 1 or Class 2, or in pontoon rafts of an approved type.

Article XLIII.

Minimum Number of Davits and of Open Boats of the First Class.—Minimum Boat 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 the first class in accordance with Chapter VI. Life Saving Appliances, Article 47, of the Convention, and Article XLI above.

(B) *The minimum total number of open boats of the first class*, which must be attached to davits, in accordance with Article XLI above,

(C) *The minimum boat capacity required*, including the boats attached to davits and the additional boats, in accordance with Article XLII above.

Registered Length of the Ship.						(A.) Minimum number of sets of davits.	(B.) Minimum number of open boats of the first class.	(C.) Minimum capacity of life-boats.	
Metres.			Feet.					Cubic metres.	Cubic feet.
31	and under	37	100	and under	120	2	2	28	980
37	,,	43	120	,,	140	2	2	35	1.220
43	,,	49	140	,,	160	2	2	44	1.550
49	,,	53	160	,,	175	3	3	53	1.880
53	,,	58	175	,,	190	3	3	68	2.390
58	,,	63	190	,,	205	4	4	78	2.740
63	,,	67	205	,,	220	4	4	94	3.330
67	,,	70	220	,,	230	5	4	110	3.900
70	,,	75	230	,,	245	5	4	129	4.560
75	,,	78	245	,,	255	6	5	144	5.100
78	,,	82	255	,,	270	6	5	160	5.640
82	,,	87	270	,,	285	7	5	175	6.190
87	,,	91	285	,,	300	7	5	196	6.930
91	,,	96	300	,,	315	8	6	214	7.550
96	,,	101	315	,,	330	8	6	235	8.290
101	,,	107	330	,,	350	9	7	255	9.000
107	,,	113	350	,,	370	9	7	273	9.630
113	,,	119	370	,,	390	10	7	301	10.650
119	,,	125	390	,,	410	10	7	331	11.700
125	,,	133	410	,,	435	12	9	370	13.060
133	,,	140	435	,,	460	12	9	408	14.430
140	,,	149	460	,,	490	14	10	451	15.920
149	,,	159	490	,,	520	14	10	490	17.310
159	,,	168	520	,,	550	16	12	530	18.720
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	,,	1030	30	20	1.380	48.750

When the length of the ship exceeds 314 metres (equivalent to 1,030 feet) the Government of the State to which the ship belongs shall determine the minimum number of sets of davits and of open boats of the first class for that ship ; full particulars of its decision shall be communicated to the Governments of the other Contracting Parties.

Article XLIV.

Handling of Boats and Rafts.

The arrangements for launching boats on either side of the ship may be made either by means of appliances for transferring the boats or rafts from one side of the deck to the other, or by stowing some of the boats not under davits, or rafts, in rows across the deck or by any other equally satisfactory means.

The davits and other appliances for lowering the boats shall be placed on one or more decks in such positions that the handling of the boats can be satisfactorily carried out. They shall not be placed in the bows of the ship or in places where the proximity of the propellers might constitute a danger to the boats at the time of launching.

Boats may only be stowed on more than one deck on condition that proper measures are taken to prevent boats on an upper deck damaging those stowed below them.

If several boats are served by the same set of davits arrangements shall be made to prevent the falls fouling when they are recovered.

Article XLV.

Life-Jackets and Life-Buoys.

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

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

   (*b*) It shall be capable of supporting in fresh water for 24 hours 6·8 kilogrammes of iron (equivalent to 15 pounds avoirdupois).

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

2. A life buoy shall satisfy the following conditions :—

   (*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 kilogrammes (equivalent to 31 pounds avoirdupois) 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 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 122	Under 400	12
122 and under 183	400 and under 600	18
183 „ 244	600 „ 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. The number of luminous buoys shall be not less than one-half of the total number of life-buoys, and in no case less than six. The lights shall be efficient self-igniting lights which cannot be extinguished in water, and they 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.

Article XLVI.

Exemptions applicable to Existing Ships.

The exemptions allowed in the case of existing ships, as provided by Article 52 of the Convention, are as follows :—

(*a*) Until the 1st January, 1920, boats and rafts which have been accepted by the Administration of one of the Contracting States on board an existing ship may be accepted, respectively, in lieu of the lifeboats and pontoon life-rafts prescribed by this Convention.

(*b*) Until the 1st January, 1920, the requirements that pontoon lifeboats should have the bottom and deck made in two thicknesses with textile material between, and that they should have the minimum freeboard specified need not be insisted upon in the case of pontoon boats accepted in accordance with the preceding paragraph (*a*).

(*c*) In the case of ships between 75 metres (245 feet) and 140 metres (460 feet) in length, the minimum number of sets of davits may be reduced by one, below the figure given in Column B of the Table in Article XLIII above. In the case of ships of 140 metres (460 feet) or more in length this number may be reduced by one on each side. These reductions shall only be allowed if proper provision is made for launching the boats :

(*d*) The provisions of Articles 42 and 49 of the Convention, respecting the launching of boats, shall not be applicable to existing ships.

Article XLVII.

Certificated Lifeboatmen.

In order to obtain the special lifeboatman's certificate provided for in Chapter VI, Life Saving Appliances, Article 54, of the Convention, the applicant must prove that he has been trained in all the operations connected with launching life-boats 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 life-boat service.

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

If the boat or raft carries—	The minimum number of certificated lifeboatmen shall be—
Less than 61 persons	3
From 61 to 85 persons	4
„ 86 to 110 „	5
„ 111 to 160 „	6
„ 161 to 210 „	7

and, thereafter, one additional certificated lifeboatman for each additional 50 persons

Article XLVIII.

Manning of Boats.

An officer, petty officer, or seaman shall be placed in charge of each boat or pontoon raft ; he shall have a list of its crew, and shall see that the men placed under his orders are acquainted with their several duties and stations.

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

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

Article XLIX.

Fire Detection and Extinction.

1. A continuous patrol system shall be organised so that any outbreak of fire may be promptly detected.

2. Every ship shall be provided with powerful pumps operated by steam or other means. On ships of less than 4,000 tons there shall be two, and on larger ships three of

these pumps. The pumps shall be capable of delivering a sufficient quantity of water in two powerful jets simultaneously in any given part of the vessel, and shall be available for immediate use before the vessel 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 fireproof 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 both two powerful jets of water and a sufficient supply of steam may be conveyed to every space filled with cargo. Provision for the supply of steam need not be required in ships of less than 1,000 tons.

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

The Governments of the High Contracting Parties may accept other types of extinguishers provided that it is evident after trial that such extinguishers are as effective as the type referred to above. A Government which accepts a new type of extinguisher shall send a description of the apparatus and particulars of the trial to the Governments of the other Contracting Parties.

6. Two equipments, consisting of a smoke helmet and a safety lamp, shall be carried on board and kept in two different places.

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

Article L.

Muster List.

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

(*a*) The closing of the watertight doors, valves, &c.
(*b*) The equipment of the boats and rafts generally.
(*c*) The launching of the boats attached to davits.
(*d*) The general preparation of the other boats and the pontoon rafts.
(*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 life-jackets in a proper manner.
(*c*) Assembling the passengers.
(*d*) Keeping order in the passages and on the stair ways, and, generally, controlling the movements of the passengers.

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

Article LI.

Musters and Drills.

Musters of the crew at their boat and fire stations, followed by boat and fire drills respectively, shall be held at least once a fortnight, either in port or at sea. An entry shall be made in the official log book of these drills, or of the reasons why they could not be held.

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 the boats and pontoon-rafts on the ship with the gear appertaining to them are always ready for immediate use.

SAFETY CERTIFICATES.

ARTICLE LII.

Standard Safety Certificate.

(Official Seal) (Country)

SAFETY CERTIFICATE.

Issued under the provisions of the

INTERNATIONAL CONVENTION FOR SAFETY OF LIFE AT SEA.

Signed at London, 20th January, 1914.

Name of Ship.	Signal Letters (International Code).	Port of Registry.	Gross Tonnage.

(Name)

I, the undersigned 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, watertight subdivision, main and auxiliary boilers and machinery :

Convention, Article 17, and annexed Regulations, Article X.	(To be filled up only on the request of the owner).	
Lengths.	Metres.	Equivalent in feet to.
(1) of the ship for which this certificate is issued ...		
(2) of the standard ship (Column C of the Table in Art. VIII. of the Regulations) the factor of subdivision of which has been employed in the case of the ship for which this certificate is issued.		

(2) the boats and life-saving appliances :

..... boats capable of accommodating ..... persons.

..... rafts " " ..... "

..... life-buoys.

..... life-jackets.

(3) Radiotelegraph installation :—.

—	Class and numbers required by Articles 33 and 34 of the said Convention.	Actual class and numbers.
Class of ship :	..	..
Number of Operators of the 1st Class	..	..
" " 2nd "	..	..
Certificated Watchers ...	—	..

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

The undersigned declares that he is duly authorised by the said Government to issue this certificate.

(Signature)

Issued at the day of

In witness whereof the Plenipotentiaries have signed hereafter.

Done at London, the 20th January, 1914.

VON KOERNER.
SEELIGER.
SCHÜTT.
RIESS.
PAGEL.
SCHRADER.
BEHM.

G. FRANCKENSTEIN.
SCHRECKENTHAL.
DUNAY.

E. A. PIERRARD.
CH. LE JEUNE.
LOUIS FRANCK.

EMIL KROGH.
V. TOPSÖE-JENSEN.

RAFAEL BAUSÁ.

JOSHUA W. ALEXANDER.
J. HAMILTON LEWIS.
EUGENE T. CHAMBERLAIN.
ELLSWORTH P. BERTHOLF.
WASHINGTON LEE CAPPS.
GEORGE F. COOPER.
HOMER L. FERGUSON.
ALFRED GILBERT SMITH.
WM. H. G. BULLARD.
GEO. UHLER.

GUERNIER.

MERSEY.
ERNEST G. MOGGRIDGE.
A. DENNY.
NORMAN HILL.
J. H. BILES.
H. ACTON BLAKE.
ALFRED H. F. YOUNG.
C. HIPWOOD.
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CARLO BRUNO.
VITTORIO RIPA DI MEANA.
GUSTAVO TOSTI.

HARALD PEDERSEN.
J. BRUHN.
JENS EVANG.
} *ad referendum.*

J. V. WIERDSMA.
H. S. J. MAAS.
A. D. MULLER.
WILMINK.
J. W. G. COOPS.

N. DE ETTER.

C. O. OLSEN.
NILS GUSTAF NILSSON.

FINAL PROTOCOL.

At the moment of signing the Convention on Safety of Life at Sea concluded this day, the undersigned Plenipotentiaries have agreed on the following :—

I.

The voyages referred to in Article 2 of this Convention include those from a port situated in a Colony, Possession or Protectorate, in which the Convention is in force, to a port situated outside that country, and conversely.

II.

As regards the ratification of this Convention, a special delay is allowed to the Danish Government which shall have the right of ratifying it until April 1st, 1915.

III.

This Convention shall not apply to ships registered in a Colony, Possession or Protectorate in which the Convention is not in force.

In witness whereof the Plenipotentiaries have drawn up this Final Protocol which shall have the same force and the same validity as if the provisions thereof had been

inserted in the text of the Convention to which it belongs and they have signed it in a single copy which shall remain deposited in the archives of the British Government and of which a copy shall be sent to each Party.

Done at London the 20th January, 1914.

VON KOERNER.
SEELIGER.
SCHUTT.
RIESS.
PAGEL.
SCHRADER.
BEHM.

G. FRANCKENSTEIN.
SCHRECKENTHAL.
DUNAY.

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C. O. OLSEN.
NILS GUSTAF NILSSON.

The Conference makes the following recommendations :—

As regards Safety of Navigation :—

1.

The Government of the United States and the Directors of the Suez Canal Company should be asked to publish at four hourly intervals at Colon and Panama and Suez, the barometric pressure with the necessary corrections for temperature and height above sea level.

2.

The attention of the Governments which have adopted the Regulations for the prevention of Collisions at Sea should be drawn to the necessity of revising these regulations, and in particular as regards—

1. The lights of sailing ships ;
2. The signals intended to indicate the course of a ship in fog ;
3. Regulations relating to warships navigating without lights ;
4. Navigation in the neighbourhood of warships ;
5. Regulations relating to submarines ;
6. The adaptation of lights and sound signals to the dimensions and speed of modern ships.

3.

The administrations concerned should continue to take steps to ensure that the power of ships' lights and sound signals comply fully with the requirements of the International Regulations for preventing Collisions at Sea.

4.

In view of the diversity of practice and opinion in the different countries, the question of the adoption of a uniform system of helm orders should be considered at the same time as the revision of the Regulations for preventing Collisions at Sea.

5.

In districts where fog is frequent, every lightship on an important outside station should be provided with a submarine bell.

6.

Every ship defined in Article 2 of this Convention of large size should be provided with search-lights for use in rescue work and other urgent cases.

7.

Binoculars should not be provided for look-out men.

8.

The tests in use for visual acuity and colour vision for officers and look-out men should be made general.

9.

The question of rendering harbour and tide signals uniform should be considered by the different Governments.

10.

The Governments of the High Contracting Parties should consider the question of approaching the companies and owners concerned with a view to securing that ships crossing the North Atlantic shall not pass over the Newfoundland Banks during the fishing season.

11.

The international services provided for in Articles 6 and 7 of the Convention should, if possible, be established in time for the seasons of 1914 and 1915.

12.

The International Load Line Conference, which the British Government proposes to convene as soon as the necessary preliminary work is completed, should also deal, if possible, with timber deck loads.

As regards Radiotelegraphy :

13.

The Governments of the Contracting States should make the necessary representation to the International Meteorological Committee that it should consider the increase of the number of stations able to send out weather messages to ships at sea and the best distribution of these stations.

14.

In support of the recommendations of the International Time Conference held at Paris in 1912 :

1. A radiotelegraph meteorology service should be established conformably to the provisions of Article XLV. of the Regulations appended to the London Radiotelegraph Convention.

2. Foreign-going sailing and steam ships should be provided with an apparatus for the reception of time and weather signals.

15.

The attention of the Governments of the Contracting States should be drawn to the desirability of making every effort to reduce the delays allowed by Article 38 of this Convention for the installation of radiotelegraph apparatus and the provision and training of operators for ships in the First and Second Classes, as well as those provided in the same article for the installation of the said apparatus, the provision and training of operators and the establishment of a continuous watch on ships of the Second and Third Classes.

As regards Life Saving Appliances :

16.

The attention of each of the Governments of the Contracting States should be drawn to the desirability of applying at the earliest possible moment the provisions of the Convention relating to the handling of boats and boat-drills and fire-drills, as well as the provisions for preventing, discovering and extinguishing fire.

In witness whereof the Plenipotentiaries have decided that the above recommendations should be annexed to the Final Protocol in order that they may have all reasonable authority.

VON KOERNER.
SEELIGER.
SCHÜTT.
RIESS.
PAGEL.
SCHRADER.
BEHM.

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SCHRECKENTHAL.
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INTERNATIONAL CONFERENCE ON SAFETY OF LIFE AT SEA.

TEXT OF THE CONVENTION

FOR THE

SAFETY OF LIFE AT SEA.

SIGNED AT LONDON, JANUARY 20, 1914.

[WITH TRANSLATION.]

Presented to both Houses of Parliament by Command of His Majesty.
February 1914.

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