SCHEDULES.

FIRST SCHEDULE

INTERNATIONAL CONVENTION FOR THE SAFETY OF LIFE AT SEA, 1929.

CHAPTER IV

RADIOTELEGRAPHY.

ARTICLE 26.

Application and Definition.

- 1 This Chapter applies to all ships engaged on international voyages except cargo ships of less than 1,600 tons gross tonnage.
- 2 For the purposes of this Chapter a cargo ship means any ship not being a passenger ship.

ARTICLE 27

Fitting of Radio Installation.

- 1 All ships to which this Chapter applies shall, unless exempted under Article 28, be fitted with a radiotelegraph installation complying with the provisions of Article 31, as follows:—
 - (a) All passenger ships, irrespective of size :
 - (b) All cargo ships of 1,600 tons gross tonnage and upwards.
- 2 Each Administration may delay the application of the provisions of paragraph 1 (b) to cargo ships belonging to its country of less than 2,000 tons gross tonnage for a period not exceeding five years from the date of the coming into force of the present Convention.

ARTICLE 28

Exemptions from the Requirements of Article 27.

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

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- (a) Individual passenger ships or classes of passenger ships which, in the course of their voyage, do not go more than—
 - (i) 20 miles from the nearest land; or
 - (ii) 200 miles in the open sea between two consecutive ports.

- (b) Passenger ships which make voyages entirely within the restricted areas specified in the Annex to this Article.
- II. —Cargo Ships.

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

- Each Administration may, in addition, exempt ships belonging to its country of the following classes :—
 - I. —Barges in tow and existing sailing ships.

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

- II. —Ships of primitive build, such as dhows, junks, &c, if it is practically impossible to fit them with a radiotelegraph installation.
- III. —Ships which are not normally engaged on international voyages, but which in exceptional circumstances are required to undertake a single voyage of that kind.

Annex to Article 28.

- 1 The Baltic Sea and approaches thereto East of a line drawn from Utsire (Norway) in the North to Texel (Netherlands) in the South, outside the territorial jurisdiction of the Union of Socialist Soviet Republics.
- 2 The portions of the Gulf of Tartary and the Sea of Okhotsk covered in voyages between ports in Hokkaido and ports in Japanese Sakhalin.
- 3 The Chosen (Tyosen) Strait between a line in the North drawn from Kawajiri Misaki (Cape Natsungu) to Pusan, and a line in the South drawn from Nagasaki to Giffard Island (off the South-West point of Quelpart Island) and thence to Tin To (Amherst Island).
- 4 The Yellow Sea North of Parallel 37° North.
- 5 The Formosa Strait between a line in the North drawn from Fuki Kaku (Syauki Point) to Foochow and a line in the South drawn from South Cape (the South point of Formosa) to Hong Kong.
- 6 The area within the following limits :—

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

- 7 The Caribbean Sea, outside the territorial jurisdiction of the United States of America, in relation to voyages made by sailing ships only.
- 8 The area of the South Pacific Ocean bounded by the Equator, Meridian 130° W., Parallel 34° S., and the coast of Australia, outside the territorial jurisdiction of Australia.
- 9 The Tong King Gulf and portions of the China Sea lying to the West of a line drawn from Hong Kong to lat. 17° N. long 110° E., thence due South to lat. 10° N., and thence West to Saigon.

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- 10 The portions of the Indian Ocean covered in voyages between ports in Madagascar, Reunion and the Mauritius Islands.
- 11 The portions of the North Atlantic Ocean and Mediterranean Sea covered in voyages between Casablanca (Morocco) and Oran (Algeria) and intermediate ports.

ARTICLE 29

Watches.

1 Passenger Ships.

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

- (a) All passenger ships under 3,000 tons gross tonnage, as determined by the Administration concerned:
- (b) All passenger ships of 3,000 tons gross tonnage and over, continuous watch.

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

2 Cargo Ships

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

- (a) All cargo ships under 3,000 tons gross tonnage, as determined by the Administration concerned:
- (b) Cargo ships from 3,000 to 5,500 tons gross tonnage, both included, at least 8 hours' watch per day:
- (c) Cargo ships over 5,500 tons gross tonnage, continuous watch.

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

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

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

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

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

- 4 By " auto-alarm " is meant an automatic alarm receiver which complies with the requirements of Article 19, section 21, of the General Regulations annexed to the International Radiotelegraph Convention, 1927.
- 5 By " qualified operator " is meant a person holding a certificate complying with the provisions of the General Regulations annexed to the International Radiotelegraph Convention in force.
- 6 By " certified watcher " is meant any person holding a watcher's certificate issued under the authority of the Administration.

ARTICLE 30

Watchers.

- 1 A watcher's certificate shall not be granted by a Contracting Government unless the applicant proves that he is capable—
 - (a) of receiving and understanding the alarm, distress, safety and urgency signals when these signals occur among a series of other signals;
 - (b) of correct reception by ear of code groups (mixed letters, figures and punctuation marks) at a speed of sixteen groups per minute, each group being composed of five characters and each figure or punctuation mark counting as two characters;
 - (c) of regulating the receivers used in the ship's radiotelegraph installation.
- 2 The Contracting Governments undertake to take steps to ensure that certified watchers observe the secrecy of correspondence.

ARTICLE 31

Technical Requirements.

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

- 1 The ship's station must be placed in accordance with the detailed Regulations of the Government of the country to which the ship belongs, in the upper part of the ship in a position of the greatest possible safety, as high as practicable above the deepest load water line.
- 2 There shall be provided, between the bridge of the ship and the wireless telegraph room, means of communication either by voice pipe or by telephone or in some other manner equally efficient.
- 3 A reliable clock with a seconds hand must be provided in the wireless telegraph room.
- 4 A reliable emergency light must be provided in the wireless telegraph room.
- 6 The installation shall comprise a main installation and an emergency (reserve) installation. If, however, the main installation complies with all the requirements of an emergency (reserve) installation the latter is not then obligatory.

- 6 The main and emergency (reserve) installations must be capable of transmitting and receiving on the frequencies (wave lengths) and types of waves assigned by the International Radiotelegraph Convention in force for the purpose of distress and safety of navigation to ships compulsorily fitted with radiotelegraph installations in accordance with the present Convention.
- 7 The main and emergency (reserve) transmitters shall have a note frequency of at least 100.
- 8 The main transmitter shall have a normal range of 100 nautical miles, that is to say, it must be capable of transmitting clearly perceptible signals from ship to ship over a range of at least 100 nautical miles by day under normal conditions and circumstances, the receiver being assumed to be one employing a rectifier of the crystal type without amplification.(1)
- 9 Sufficient power must be available in a ship station at all times to operate the main radiotelegraph installation efficiently under normal conditions over the above range.
- 10 All parts of the emergency (reserve) installation shall be placed in the upper part of the ship in a position of the greatest possible safety, as high above the deepest load water line as practicable. The emergency (reserve) installation must be provided with a source of energy independent of the propelling power of the ship and of the main electricity system and must be capable of being put into operation rapidly and of working for at least six continuous hours.

For the emergency (reserve) installation, the normal range as defined in paragraph 8 above must be at least 80 nautical miles for ships required to maintain a continuous watch and at least 50 nautical miles for all other ships.(1)

- 11 The receiving installation must permit of the reception of such of the waves used for the transmission of time signals and meteorological messages as may be considered necessary by the Administration.
- 12 The receiver must be so arranged as to be capable of maintaining reception by means of a rectifier of the crystal type.

⁽¹⁾ Unless a more precise and practical method is available to determine the range of transmitters it is recommended that, as a guide, the following relations between the range in nautical miles (from ship to ship under normal conditions in daytime) and the power of the ship transmitter in metre amperes for 500 kilocycles per second (600 m.) be used :---

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

M being the actual height in metres of the aerial from its highest point to the load line.

A being the current in amperes measured at the base of the aerial in case of B, or fully modulated A2, transmitters.

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

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

M being the actual height in metres of the aerial from its highest point to the load line.

A being the current in amperes measured at the base of the aerial in case of B, or fully modulated A2, transmitters.

- 13 In ships in which watch is kept by means of an automatic alarm receiver a means of giving audible warning shall be provided in the wireless telegraph room, in the wireless operator's cabin, and on the bridge, which shall operate continuously after the receiver has been operated by the alarm signal or distress call until stopped. Only one switch for stopping the warning shall be provided and this shall be situated in the wireless telegraph room.
- 14 In such ships the wireless operator, when going off watch, shall connect the automatic alarm receiver to the aerial and test its efficiency. He shall report to the master or the officer on watch on the bridge whether it is in working order.
- 15 Whilst the ship is at sea the emergency source of power shall be maintained at its full efficiency and the automatic alarm receiver shall be tested at least once every 24 hours. A statement that both these requirements have been fulfilled must be inserted in the ship's official log daily.
- 16 A wireless log shall be carried by every ship compulsorily equipped with wireless transmitting apparatus. This document shall be kept in the wireless telegraph room, and in it shall be inserted the names of the operators and watchers as well as all incidents and occurrences connected with the wireless service which may appear to be of importance to safety of life at sea, and in particular all distress messages and distress traffic in full.
- 17 The direction-finding apparatus required by Article 47 shall be efficient and capable of receiving clearly perceptible signals and of taking bearings from which the true bearing and direction may be determined. It shall be capable of receiving signals on the frequencies prescribed for distress, direction finding and wireless telegraph beacons by the International Radiotelegraph Convention in force.

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

ARTICLE 32

Competence.

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

- (1) Of that Convention and of the Regulations annexed thereto, and of any Convention and Regulations which may in the future be substituted therefor;
- (2) Of the present Convention in regard to all the points in which it supplements the aforementioned documents.