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The Merchant Shipping (Fire Appliances) Rules, 1952

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The Minister of Transport in exercise of the powers conferred upon him by Section 427 of the Merchant Shipping Act, 1894(**a**), as substituted by Section 2 of the Merchant Shipping (Safety Convention) Act, 1949(**b**), and of all other powers him enabling in that behalf, hereby makes the following Rules:—

Interpretation and Repeal

1.—(1) These Rules shall come into operation on the 19th November, 1952, and may be cited as the Merchant Shipping (Fire Appliances) Rules, 1952.

(2) In these Rules, unless the context otherwise requires, the following expressions have the meanings hereby respectively assigned to them that is to say:—

"Crew space" means crew accommodation within the meaning of the Merchant Shipping Act, 1948(**c**).

"Length" in relation to a registered ship means registered length.

"Passenger space" means space provided for the use of passengers.

"Passenger steamer" means a steamer carrying more than 12 passengers.

"Portable fire extinguisher", in relation to a carbon dioxide fire extinguisher means a fire extinguisher with a capacity of not more than 15 lb. of carbon dioxide, and in relation to any other fire extinguisher means a fire extinguisher with a capacity of not more than 3 gallons of fluid.

(a) 57 & 58 Vict. c. 60. (b) 12, 13 & 14 Geo. 6. c. 43.
(c) 11 & 12 Geo. 6. c. 44.

" Tanker " means a cargo ship constructed or adapted for the carriage in bulk of liquid cargoes of an inflammable nature.

" The Minister " means the Minister of Transport.

" Tons " means gross tons.

(3) These Rules apply to—

(*a*) British ships, except ships registered in Canada, the Commonwealth of Australia, New Zealand, the Union of South Africa, India, Pakistan, Ceylon, the Republic of Ireland, or in any territory administered by the Government of any of the aforesaid countries ;

(*b*) other ships while they are within any port in the United Kingdom.

Provided that these Rules shall not apply to—

(i) a ship by reason of her being within a port in the United Kingdom if she would not have been in any such port but for stress of weather or any other circumstance that neither the master nor the owner nor the charterer (if any) of the ship could have prevented or forestalled ;

(ii) pleasure yachts which are not passenger steamers and do not exceed 15 tons burden.

(4) The Interpretation Act, 1889(**a**), shall apply to the interpretation of these Rules as it applies to the interpretation of an Act of Parliament.

(5) The Merchant Shipping (Fire Appliances) Rules, 1948(**b**), the Merchant Shipping (Fire Appliances) (No. 2) Rules, 1948(**c**), and the Merchant Shipping (Fire Appliances) (Amendment) Rules, 1951(**d**), are hereby revoked.

Classification of Ships

2. For the purpose of these Rules ships shall be arranged in the same classes in which ships are arranged for the purposes of the Merchant Shipping (Life-Saving Appliances) Rules, 1952(**e**), and any reference in these Rules to a ship of any class shall be construed accordingly.

PASSENGER SHIPS

Ships of Class I

Fire Patrol, Alarm and Detection Systems

3.—(1) In every ship of Class I an efficient patrol system shall be maintained so that any outbreak of fire may be promptly detected. Manual fire alarms shall be fitted throughout the passenger spaces and crew spaces which will enable the fire patrol to give an alarm immediately to the bridge or fire control station.

(2) In every ship of Class I a fire alarm or fire detection system shall be provided which will be capable of indicating, at one or more points in the ship so as to come rapidly to the notice of the master and crew, the presence and position of fire in any part of the ship which is inaccessible to the fire patrol.

(3) The Minister may exempt any ship from the requirements of paragraph (2) of this Rule if he is satisfied that to require compliance therewith would be unreasonable on account of the short duration of the voyages on which the ship is engaged.

(a) 52 & 53 Vict. c. 63. (b) S.I. 1948/1009; Rev. XIV, p. 340; 1948 I, p. 1882.
(c) S.I. 1948/1010; Rev. XIV, p. 364; 1948 I, p. 1904.
(d) S.I. 1951/1719; 1951 I, p. 1300. (e) S.I. 1952/1949, p. 1889 below.

Passenger and Crew Spaces

4. Every ship of Class I shall be provided with appliances whereby at least two powerful jets of water can be rapidly and simultaneously directed upon any part of the passenger spaces and crew spaces when all watertight doors and all doors in the bulkheads constructed in compliance with paragraph (2) of Rule 45 of the Merchant Shipping (Construction) Rules, 1952(**a**) are closed. In addition, on each deck in each of these spaces there shall be provided at least two portable fluid fire extinguishers. When passengers are carried in enclosed spaces above the bulkhead deck there shall be at least one such extinguisher on each side of the ship in such spaces.

Cargo spaces and Store Rooms

5.—(1) Every ship of Class I shall be provided with appliances whereby at least two powerful jets of water can be rapidly and simultaneously directed into any cargo space or store room.

(2) Every ship of Class I of 1,000 tons or over shall be provided with appliances whereby fire-smothering gas can be rapidly conveyed by a permanent piping system into any compartment appropriated for the carriage of cargo. The volume of free gas shall be at least equal to 30 per cent. of the gross volume of the largest hold in the ship which is capable of being effectively closed: Provided that steam may be substituted for fire-smothering gas in any ship in which there are available boilers capable of evaporating 1 lb. of steam per hour for each 12 cubic feet of the gross volume of the largest hold in the ship.

(3) The Minister may exempt any ship from the requirements of paragraph (2) of this Rule if he is satisfied that to require compliance therewith would be unreasonable on account of the short duration of the voyages on which the ship is engaged.

Machinery Spaces: General

6. Every ship of Class I shall be provided with appliances whereby at least two powerful jets of water can be rapidly and simultaneously directed into any part of the coal bunker spaces, if any, and the machinery spaces.

Machinery Spaces: Ships fitted with main or auxiliary oil-fired boilers

7.—(1) Every ship of Class I fitted with main or auxiliary oil-fired boilers, shall be provided in the machinery spaces with

(*a*) at least two fire hydrants, one on the port side and one on the starboard side, and

(*b*) for each such hydrant, a fire hose with a nozzle suitable for spraying water on oil.

(2) In each firing space of every ship of Class I fitted with main or auxiliary oil-fired boilers a receptacle shall be provided which shall contain at least 10 cubic feet of sand, or other dry material suitable for quenching oil fires. Scoops shall be provided for distributing the contents of the receptacle.

(3) In each firing space in every such ship and in each compartment which contains the whole or part of the oil fuel installation, at least two portable fire extinguishers shall be provided which shall be capable of discharging froth or another substance suitable for quenching oil fires.

(**a**) S.I. 1952/1948, p. 1743 above.

(4) A froth installation, complying with the requirements specified in the First Schedule to these Rules, shall be provided in every such ship whereby froth can be rapidly discharged and distributed over each boiler room, and over any space which contains the whole or part of the oil fuel installation. The froth available for discharge shall be sufficient in quantity to cover to a depth of 6 inches the largest single area over which oil fuel may spread in the event of leakage. If the engine room and boiler room are not separated from each other by a bulkhead and fuel oil may drain from the boiler room into the engine room bilges, the engine room and boiler room shall, for the purpose of this sub-paragraph, be regarded as a single area.

The aforesaid appliances shall be capable of being controlled from an easily accessible position which is not likely to be cut off in the event of fire. The Minister may exempt any ship from the requirements of this sub-paragraph if he is satisfied that the boiler room and the spaces containing the oil fuel installation are adequately protected by a permanent piping system for the discharge of smothering-gas, or water at high pressure.

(5) One froth fire extinguisher of at least 30 gallons capacity shall be provided in every such ship with one boiler room, and two such extinguishers shall be provided in every such ship with more than one boiler room. Every such extinguisher shall be provided with a reel of hose capable of reaching every part of the boiler room and of any space which contains the whole or part of the oil fuel installation. A carbon dioxide extinguisher of at least 100 lb. capacity may be provided in lieu of such froth fire extinguisher.

Engine Rooms: Motor Ships

8. Every ship of Class I propelled by internal combustion machinery shall be provided in the compartment containing that machinery with at least—

(*a*) two fire hydrants, one on the port side and one on the starboard side;

(*b*) for each such hydrant, a fire hose with a nozzle suitable for spraying water on oil;

(*c*) one froth fire extinguisher of at least 30 gallons capacity or a carbon dioxide fire extinguisher of at least 100 lb. capacity, so however that in any ship in which fire extinguishers are provided in a boiler room in accordance with paragraph (5) of Rule 7 of these Rules, the extinguisher required by this sub-paragraph shall not be required to exceed 10 gallons in capacity in the case of a froth extinguisher, or 35 lb. in the case of a carbon dioxide extinguisher; and

(*d*) one portable froth fire extinguisher for each 1,000 B.H.P. of the said machinery or fraction thereof, but in no event less than 2 such extinguishers; provided that no more than 6 such extinguishers shall be required in any one compartment.

Fire pumps

9.—(1) Every ship of Class I of 4,000 tons or over shall be provided with at least 3 fire pumps operated by power, and every such ship of under 4,000 tons with at least 2 such fire pumps.

(2) In every ship of Class I fitted with main or auxiliary oil-fired boilers or internal combustion propelling machinery the arrangements of sea connections, pumps and the sources of power for operating them shall be such as will ensure that a fire in any one compartment will not put all the fire pumps out of action.

Water pipes, Hydrants and Fire hoses

10. Every ship of Class I shall be provided with water pipes and hydrants. The diameter of the water pipes shall be sufficient to enable an adequate supply of water to be provided for the simultaneous operation of at least two fire hoses and for the projection thereby of two powerful jets of water. The number and position of the hydrants shall be such that at least two such jets may be directed into any part of the ship by means of two fire hoses each not exceeding 60 feet in length, each jet being supplied from a separate hydrant. At least one fire hose shall be provided for each hydrant.

Firemen's outfits

11. Every ship of Class I shall be provided with at least two firemen's outfits each consisting of:—

(*a*) a safety lamp;

(*b*) a fireman's axe;

(*c*) (i) a breathing apparatus; or (ii) a smoke helmet; or (iii) a smoke mask, complying with the requirements respectively specified in the Sixth Schedule to these Rules.

The outfits shall be kept in widely separated places.

Portable drilling machine

12. Every ship of Class I shall be provided with a portable electric drilling machine to provide emergency means of access to fires through decks, casings or bulkheads.

SHIPS OF CLASS II

13. Rules 3 to 12, inclusive, of these Rules shall apply to ships of Class II as they apply to ships of Class I.

SHIPS OF CLASS II(A)

14. Paragraph (1) of Rule 3 and Rules 4 to 12, inclusive, of these Rules shall apply to ships of Class II(A) as they apply to ships of Class I.

SHIPS OF CLASS III

Passenger and Crew spaces

15.—(1) Every ship of Class III shall be provided with appliances whereby a powerful jet of water can be rapidly directed upon any part of the passenger spaces and crew spaces.

(2) Every such ship shall be provided with at least one portable fluid fire extinguisher in each of the passenger spaces above the upper deck and with at least two extinguishers in each of the crew spaces, and of the passenger spaces below that deck.

Cargo spaces and Store rooms

16. Every ship of Class III shall be provided with appliances whereby a powerful jet of water can be rapidly directed into any cargo space or store room.

Machinery spaces, etc.

17.—(1) Every ship of Class III shall be provided with appliances whereby a powerful jet of water can be rapidly directed into any part of the coal bunker spaces, boiler rooms and engine rooms.

(2) Every ship of Class III fitted with oil-fired boilers or internal combustion propelling machinery shall be provided in the machinery spaces with at least one fire hydrant and fire hose with a nozzle suitable for spraying water on oil.

Machinery spaces: Ships fitted with main or auxiliary oil-fired boilers

18.—(1) Every ship of Class III fitted with main or auxiliary oil-fired boilers shall be provided in each firing space with a receptacle which shall contain an adequate quantity of sand, or other dry material suitable for quenching oil fires. Scoops shall be provided for distributing the contents of the receptacle.

(2) Two portable fire extinguishers, capable of discharging froth or another substance suitable for quenching oil fires, shall be provided in the boiler room of every such ship and in each machinery space therein which contains a part of the oil fuel installation.

(3) A froth installation, complying with the requirements specified in the First Schedule to these Rules, shall be provided in every such ship whereby froth can be rapidly discharged and distributed over each boiler room, and over any space which contains the whole or part of the oil fuel installation. The froth available for discharge shall be sufficient in quantity to cover to a depth of 6 inches the largest single area over which oil fuel may spread in the event of leakage. If the engine room and boiler room are not separated from each other by a bulkhead and fuel oil may drain from the boiler room into the engine room bilges, the engine room and boiler room shall, for the purpose of this sub-paragraph, be regarded as a single area. The aforesaid appliances shall be capable of being controlled from an easily accessible position which is not likely to be cut off in the event of fire. The Minister may exempt any ship from the requirements of this sub-paragraph if he is satisfied that the boiler room and the spaces containing the oil fuel installation are adequately protected by a permanent piping system for the discharge of smothering-gas, or water at high pressure.

(4) Two froth fire extinguishers of at least 10 gallons capacity shall be provided in the machinery spaces of every such ship. Every such extinguisher shall be provided with a fire hose capable of reaching every part of the boiler room and of any space which contains a part of the oil fuel installation. A carbon dioxide fire extinguisher of at least 35 lb. capacity may be provided in lieu of a froth fire extinguisher of 10 gallons capacity.

Engine Rooms: Motor Ships

19. Every ship of Class III propelled by internal combustion machinery shall be provided in each machinery compartment with at least—

(*a*) one froth fire extinguisher of at least 10 gallons capacity or one carbon dioxide fire extinguisher of at least 35 lb. capacity;

(*b*) one portable froth fire extinguisher for each 1,000 B.H.P. or fraction thereof of the said machinery, but in no event less than 2 such extinguishers; provided that not more than 6 such extinguishers shall be required in any ship.

Water Pipes, Hydrants and Fire hoses

20. Every ship of Class III shall be provided with water pipes and hydrants. The diameter of the water service pipes shall be sufficient to enable an adequate supply of water to be provided for the operation of at least one fire hose and the projection thereby of a powerful jet of water. The number and position of the fire hydrants shall be such that at least one such jet may be directed into any part of the ship by means of a fire hose not exceeding 60 feet in length. At least one fire hose shall be provided for each hydrant.

Fire pumps

21.—(1) Every ship of Class III shall be provided with at least one fire pump operated by power.

(2) Every ship of Class III fitted with oil-fired main or auxiliary boilers or internal combustion propelling machinery shall be provided with an additional fire pump, which shall not be required to be operated by power and shall be permanently connected to the water pipes referred to in Rule 20 of these Rules. Such pump and its source of power, if any, shall not be situated in the same compartment as the pump required by paragraph (1) of this Rule. If a hand pump is provided in compliance with this paragraph it shall be of the rotary type. A sea suction valve for use with the additional pump shall be provided and shall be capable of being controlled from outside the machinery space.

SHIPS OF CLASS IV

Passenger and Crew spaces

22.—(1) Every ship of Class IV shall be provided with appliances whereby a powerful jet of water can be rapidly directed upon any part of the passenger spaces and crew spaces.

(2) Every such ship shall be provided with at least one portable fluid fire extinguisher in each of the passenger spaces above the upper deck, and with at least two such extinguishers in each of the crew spaces and of the passenger spaces below that deck.

Cargo spaces and Store rooms

23. Every ship of Class IV shall be provided with appliances whereby a powerful jet of water can be rapidly directed into any cargo space or store room.

Machinery spaces, etc.

24.—(1) Every ship of Class IV shall be provided with appliances whereby a powerful jet of water can be rapidly directed into any part of the coal bunker spaces, boiler rooms and engine rooms.

(2) Every ship of Class IV fitted with oil-fired boilers or internal combustion propelling machinery shall be provided in the machinery spaces with at least one fire hydrant and fire hose with a nozzle suitable for spraying water on oil.

Machinery spaces: Ships fitted with main or auxiliary oil-fired boilers

25.—(1) Every ship of Class IV fitted with main or auxiliary oil-fired boilers shall be provided in the machinery spaces with at least—

(*a*) a receptacle containing an adequate quantity of sand, or other dry material suitable for quenching oil fires ;

(*b*) a scoop for distributing the contents of the receptacle ;

(*c*) two portable fire extinguishers capable of discharging froth or some other substance suitable for quenching oil fires.

(2) One froth fire extinguisher of at least 30 gallons capacity shall be provided in the machinery spaces of every such ship. The extinguisher shall be provided with fire hoses capable of reaching every part of the boiler

room and of any space which contains a part of the oil fuel installation. A carbon dioxide fire extinguisher of at least 100 lb. capacity may be provided in lieu of a froth fire extinguisher of 30 gallons capacity.

Engine Rooms: Motor Ships

26. Every ship of Class IV propelled by internal combustion machinery shall be provided in each machinery compartment with at least—

(*a*) one froth fire extinguisher of at least 10 gallons capacity or one carbon dioxide fire extinguisher of at least 35 lb. capacity;

(*b*) one portable froth fire extinguisher for each 1,000 B.H.P. of the said machinery or fraction thereof, but in no event less than 2 such extinguishers; provided that not more than 6 such extinguishers shall be required in any ship.

Water Pipes, Hydrants and Fire Hoses

27. Every ship of Class IV shall be provided with water pipes and hydrants. The diameter of the water service pipes shall be sufficient to enable an adequate supply of water to be provided for the operation of at least one fire hose and the projection thereby of a powerful jet of water. The number and position of the fire hydrants shall be such that at least one such jet may be directed into any part of the ship by means of a fire hose not exceeding 60 feet in length. At least one fire hose shall be provided for each hydrant.

Fire pumps

28.—(1) Every ship of Class IV shall be provided with at least one fire pump operated by power.

(2) Every ship of Class IV fitted with oil-fired boilers or internal combustion propelling machinery shall be provided with an additional fire pump, which shall not be required to be operated by power and shall be permanently connected to the water pipes referred to in Rule 27 of these Rules. Such pump and its source of power, if any, shall not be situated in the same compartment as the pump required by paragraph (1) of this Rule. If a hand pump is provided in compliance with this paragraph it shall be of the rotary type. A sea suction valve shall be provided which shall be capable of being controlled from outside the machinery space.

SHIPS OF CLASS V

Fully-decked ships

29. Rules 22 to 28, inclusive, of these Rules shall apply to fully-decked ships of Class V as they apply to ships of Class IV.

Motor Ships not fully-decked

30. Every ship of Class V which is not fully-decked, being a ship propelled by internal combustion machinery, shall be provided with at least—

(*a*) a hand pump with a hose, or two fire buckets;

(*b*) a receptacle containing an adequate quantity of sand, or other dry material suitable for quenching oil fires;

(*c*) a scoop for distributing the contents of the receptacle;

(*d*) froth fire extinguishers and fire extinguishers capable of discharging carbon tetrachloride or another substance suitable for quenching oil fires, in accordance with the following table:—

Length of the ship	Froth extinguishers		Number of extinguishers discharging carbon tetrachloride or another substance suitable for quenching oil fires
	Number	Minimum capacity of each extinguisher	
Not over 30 feet ...	1	1 gallon	2
Over 30 feet but not over 50 feet ...	2	1 gallon	2
Over 50 feet ...	2	2 gallons	3

Partially-decked Motor Ships

31. Every ship of Class V which is not fully-decked but is decked in way of the engine room and is propelled by internal combustion machinery shall be provided with a hand pump and with a fire hose with a nozzle suitable for spraying water on oil.

SHIPS OF CLASSES VI AND VI(A)

32.—(1) Rules 22 to 28, inclusive, of these Rules shall apply to fully-decked ships of Classes VI and VI(A) as they apply to ships of Class IV.

(2) Rules 30 and 31 of these Rules shall apply to ships of Classes VI and VI(A) which are not fully-decked as they apply to ships of Class V.

NON-PASSENGER SHIPS

SHIPS OF CLASS VII

Cargo spaces

33.—(1) Every ship of Class VII of 2,000 tons or over shall be provided with appliances whereby fire-smothering gas can be rapidly conveyed by a permanent piping system into any compartment appropriated for the carriage of cargo. The volume of free gas available shall be at least equal to 30 per cent. of the gross volume of the largest hold in the ship which is capable of being effectively closed.

Provided that—

(*a*) steam may be substituted for fire-smothering gas in any ship in which there are available boilers capable of evaporating 1 lb. of steam per hour for each 12 cubic feet of the gross volume of the largest hold in the ship;

(*b*) in the cargo spaces of any tanker a froth installation, complying with the First Schedule to these Rules, may be substituted for a system for conveying fire-smothering gas.

(2) The Minister may exempt any ship other than a tanker, from the requirements of paragraph (1) of this Rule if he is satisfied that—

(*a*) the holds therein are provided with steel hatch covers and effective means of closing all ventilators and other openings leading to the holds; or

(*b*) the ship is constructed for, and employed solely in, the carriage of ore or coal ; or

(*c*) to require compliance with the requirements of the aforesaid paragraph would be unreasonable on account of the short duration of the voyages on which the ship is engaged.

Fire Hoses and Pumps

34.—(1) Every ship of Class VII of 1,000 tons or over shall be provided with appliances whereby at least two powerful jets of water can be rapidly and simultaneously directed on any part of the ship. Such appliances shall include two fire hoses and a spare fire hose 30 feet in length, together with two pumps operated by power.

(2) Every ship of Class VII of under 1,000 tons shall be provided with appliances whereby at least one powerful jet of water can be rapidly directed into any part of the ship. Such appliances shall include one fire hose and a spare fire hose 30 feet in length, together with two pumps operated by power.

(3) If, in any ship of Class VII, fitted with main or auxiliary oil-fired boilers or with internal combustion propelling machinery, a fire in any one compartment might put out of action every fire pump provided in the ship, alternative means for extinguishing the fire shall be provided.

Portable fire extinguishers

35. Every ship of Class VII shall be provided with a sufficient number of portable fire extinguishers to ensure that at least one such extinguisher will be readily available for use in every compartment of the crew spaces and passenger spaces, if any. The number of such extinguishers shall not be less than five in a ship of 1,000 tons or over and not less than three in a ship of under 1,000 tons.

Firemen's outfits

36.—(1) Every ship of Class VII of 4,000 tons or over shall be provided with at least two firemen's outfits each consisting of :—

(*a*) a safety lamp ;

(*b*) a fireman's axe ;

(*c*) (i) a breathing apparatus ; or (ii) a smoke helmet ; or (iii) a smoke mask, complying with the requirements respectively specified in the Sixth Schedule to these Rules.

The outfits shall be kept in widely separated places.

(2) Every ship of Class VII of under 4,000 tons shall be provided with at least one such outfit.

Portable drilling machine

37. Every ship of Class VII on which a supply of electrical energy is available, other than a tanker, shall be provided with a portable electric drilling machine to provide emergency means of access to fires through decks, casings or bulkheads.

Machinery Spaces : Ships with main or auxiliary oil-fired boilers

38.—(1) Every ship of Class VII fitted with main or auxiliary oil-fired boilers shall be provided in the machinery spaces with—

(*a*) at least two fire hydrants, one on the port side and one on the starboard side, and

(*b*) for each such hydrant a fire hose with a nozzle suitable for spraying water on oil.

(2) In each firing space of every ship of Class VII fitted with main or auxiliary oil-fired boilers a receptacle shall be provided which shall contain at least 10 cubic feet of sand, or other dry material suitable for quenching oil fires. Scoops shall be provided for distributing the contents of the receptacle.

(3) In each firing space in every such ship and in each compartment therein containing the whole or part of the oil fuel installation, at least two portable fire extinguishers shall be provided which shall be capable of discharging froth or another substance suitable for quenching an oil fire.

In addition, one such extinguisher of at least 10 gallons capacity, or a carbon dioxide extinguisher of at least 35 lb. capacity shall be provided in each boiler room if the numbers of burners therein is five or more. If the number of burners in a boiler room is less than five, there shall be provided therein one froth fire extinguisher of at least 2 gallons capacity for each burner.

(4) A froth installation, complying with the requirements specified in the First Schedule to these Rules, shall be provided in every such ship whereby froth can be rapidly discharged and distributed over each boiler room, and over any space which contains the whole or part of the fuel installation. The froth available for discharge shall be sufficient in quantity to cover to a depth of 6 inches the largest single area over which oil fuel may spread in the event of leakage. If the engine room and boiler room are not separated from each other by a bulkhead and fuel oil may drain from the boiler room into the engine room bilges, the engine room and boiler room shall, for the purpose of this sub-paragraph, be regarded as a single area. The aforesaid appliances shall be capable of being controlled from a readily accessible position which is not likely to be cut off in the event of fire. The Minister may exempt any ship from the requirements of this sub-paragraph if he is satisfied that the boiler room and the spaces containing the oil fuel installation are adequately protected by:—

(*a*) a permanent piping system for the discharge of smothering-gas, steam or water at high pressure; and

(*b*) if such system discharges steam and the ship is fitted only with water-tube boilers, a froth fire extinguisher of at least 30 gallons or a carbon dioxide extinguisher of at least 100 lb. capacity.

Engine Rooms: Motor Ships

39. In every ship of Class VII fitted with internal combustion propelling machinery, the following fire appliances shall be provided in the compartment containing that machinery:—

(*a*) two fire hydrants, one on the port side and one on the starboard side;

(*b*) for each such hydrant, a fire hose with a nozzle suitable for spraying water on oil;

(*c*) two froth fire extinguishers each of at least 10 gallons capacity, or two carbon dioxide fire extinguishers each of at least 35 lb. capacity, provided that only one such extinguisher shall be required in any ship in which a froth fire extinguisher of at least 10 gallons capacity or a carbon dioxide extinguisher of at least 35 lb. capacity is provided in compliance with paragraphs (3) or (4) of Rule 38 of these Rules; and

(*d*) portable fire extinguishers, capable of discharging froth or another substance suitable for quenching oil fires, in accordance with the following table:—

B.H.P. of Main Engines	*Number of Portable Extinguishers*
Not over 1,000	2
Over 1,000 but not over 2,000	3
Over 2,000 but not over 3,000	4
Over 3,000 but not over 4,000	5
Over 4,000	6

SHIPS OF CLASS VII(A)

40. Rules 33 to 39, inclusive, of these Rules shall apply to ships of Class VII(A) as they apply to ships of Class VII.

SHIPS OF CLASS VIII

Ships of 1,000 *tons and over*

41. Rules 34 to 39, inclusive, of these Rules shall apply to ships of Class VIII of 1,000 tons and over as they apply to ships of Class VII.

Ships of 500 *tons or over but under* 1,000 *tons*

42.—(1) This Rule applies to ships of Class VIII of 500 tons or over but under 1,000 tons.

(2) Every ship to which this Rule applies shall be provided with at least—

(*a*) one pump operated by power and one fire hose whereby a powerful jet of water can be rapidly directed into any part of the ship, together with a spare fire hose 30 feet in length ;

(*b*) three portable fire extinguishers readily accessible for use in the crew spaces and passenger spaces, if any ; and

(*c*) a fireman's outfit consisting of a safety lamp, a fireman's axe, and (i) a breathing apparatus ; or (ii) a smoke helmet ; or (iii) a smoke mask, complying with the requirements respectively specified in the Sixth Schedule to these Rules.

(3) Every ship to which this Rules applies, being a ship fitted with main or auxiliary oil-fired boilers or internal combustion propelling machinery, shall be provided in the machinery spaces with a hydrant and a fire hose with a nozzle suitable for spraying water on oil.

(4) (*a*) Every ship to which this Rule applies, being a ship fitted with oil-fired boilers, shall be provided in each boiler room with—

(i) a receptacle containing an adequate quantity of sand, or other dry material suitable for quenching oil fires ;

(ii) a scoop for distributing the contents of the receptacle.

(*b*) In each firing space in every such ship and in each compartment therein containing the whole or part of the oil fuel installation, at least two portable fire extinguishers shall be provided which shall be capable of discharging froth or some other substance suitable for quenching an oil fire. In addition one such extinguisher of at least 10 gallons capacity or a carbon dioxide extinguisher of at least 35 lb. capacity shall be provided in each boiler room if the number of burners therein is five or more. If the number of burners in a boiler room is less than five there shall be provided therein one froth extinguisher of at least two gallons capacity for each burner.

(*c*) A froth installation, complying with the requirements specified in the First Schedule to these Rules, shall be provided in every such ship whereby froth can be rapidly discharged and distributed over each boiler room, and over any space which contains the whole or part of the fuel installation. The froth available for discharge shall be sufficient in quantity to cover to a depth of 6 inches the largest single area over which oil fuel may spread in the event of leakage. If the engine room and boiler room are not separated from each other by a bulkhead and fuel oil may drain from the boiler room into the engine room bilges, the engine room and boiler room shall, for the purpose of this sub-paragraph, be regarded as a single area. The aforesaid appliances shall be capable of being controlled from a readily accessible position which is not likely to be cut off in the event of fire. The Minister may exempt any ship from the requirements of this sub-paragraph if he is satisfied that the boiler room and the spaces containing the oil fuel installation are adequately protected by:—

(i) a permanent piping system for the discharge of smothering-gas, steam, or water at high pressure;

(ii) if such system discharges steam and the ship is fitted only with water-tube boilers, a froth fire extinguisher of at least 30 gallons capacity or a carbon dioxide extinguisher of at least 100 lb. capacity.

(5) Every ship to which this Rule applies, being a ship fitted with internal combustion propelling machinery, shall be provided in the machinery spaces with portable fire extinguishers capable of discharging froth or another substance for quenching oil fires, in accordance with the following table:—

B.H.P. of Main Engines	*Number of Portable Extinguishers*
Not over 100	3
Over 100 but not over 150	4
Over 150 but not over 200	5
Over 200 but not over 250	6
Over 250	7

Provided that, for the number of portable fire extinguishers set forth in the foregoing table, there may be substituted two such extinguishers as are referred to in the foregoing provision, and either—

(*a*) one froth fire extinguisher of at least 10 gallons capacity; or

(*b*) one carbon dioxide fire extinguisher of at least 35 lb. capacity.

Ships of 150 *tons or over but under* 500 *tons*

43.—(1) This Rule applies to ships of Class VIII of 150 tons or over but under 500 tons.

(2) Every ship to which this Rule applies shall be provided with at least—

(*a*) one pump operated by power and one fire hose whereby a powerful jet of water can be rapidly directed into any part of the ship;

(*b*) four fire buckets and a fireman's axe.

(3) Every ship to which this Rule applies, being a ship fitted with main or auxiliary oil-fired boilers or internal combustion propelling machinery, shall be provided with a nozzle suitable for spraying water on oil by means of the fire hose referred to in paragraph (2) of this Rule.

(4) (*a*) Every ship to which this Rule applies, being a ship fitted with main or auxiliary oil-fired boilers, shall be provided in the machinery space with—

(i) a receptacle containing an adequate quantity of sand, or other dry material suitable for quenching oil fires ;

(ii) a scoop for distributing the contents of the receptacle.

(*b*) The boiler room in every such ship and each compartment in the ship which contains the whole or part of the oil fuel installation, shall be provided with at least two portable fire extinguishers capable of discharging froth or another substance suitable for quenching oil fires.

(*c*) A froth installation, complying with the requirements specified in the First Schedule to these Rules, shall be provided in every such ship whereby froth can be rapidly discharged and distributed over each boiler room, and over any space which contains the whole or part of the fuel installation. The froth available for discharge shall be sufficient in quantity to cover to a depth of 6 inches the largest single area over which fuel oil may spread in the event of leakage. If the engine room and boiler room are not separated from each other by a bulkhead and fuel oil may drain from the boiler room into the engine room bilges, the engine room and boiler room shall, for the purpose of this sub-paragraph, be regarded as a single area. The aforesaid appliances shall be capable of being controlled from a readily accessible position which is not likely to be cut off in the event of fire. The Minister may exempt any ship from the requirements of this sub-paragraph if he is satisfied that the boiler room and the spaces containing the oil fuel installation are adequately protected by a permanent piping system for the discharge of smothering-gas, steam, or water at high pressure.

(5) Every ship to which this Rule applies, being a ship fitted with internal combustion propelling machinery, shall be provided in the engine room with—

(*a*) a receptacle containing an adequate quantity of sand, or other dry material suitable for quenching oil fires ;

(*b*) a scoop for distributing the contents of the receptacle ;

(*c*) at least two portable fire extinguishers capable of discharging froth or another substance suitable for quenching oil fires.

Ships of under 150 *tons*

44.—(1) This Rule applies to ships of Class VIII of under 150 tons.

(2) Every ship to which this Rule applies shall be provided with—

(*a*) one pump and one fire hose whereby a powerful jet of water can be rapidly directed into any part of the ship ; and

(*b*) at least three fire buckets and a fireman's axe.

Provided that in open ships fitted with internal combustion propelling machinery two fire buckets with lanyards attached may be substituted for a pump and a fire hose. Such buckets shall be additional to the buckets referred to in sub-paragraph (*b*) of this paragraph.

(3) Every ship to which this Rule applies, being a ship fitted with main or auxiliary oil-fired boilers or internal combustion propelling machinery, shall be provided with—

(*a*) a receptacle containing an adequate quantity of sand, or other dry material suitable for quenching oil fires ;

(*b*) a scoop for distributing the contents of the receptacle;

(*c*) if the ship is provided with a fire hose, a nozzle suitable for spraying water on oil by means of that hose;

(*d*) at least two portable fire extinguishers capable of discharging froth or another substance suitable for quenching oil fires.

SHIPS OF CLASSES VIII(A), IX AND IX(A)

45.—(1) Rules 41 to 44, inclusive, of these Rules shall apply to ships of Classes VIII(A), IX and IX(A) as they apply to ships of Class VIII.

(2) The Minister may exempt any ship of Classes VIII(A), IX and IX(A), from any of the requirements of these Rules.

SHIPS OF CLASS X

46.—(1) Every ship of Class X shall be provided with—

(*a*) one pump operated by power and one fire hose whereby a powerful jet of water can rapidly be directed into any part of the ship; provided that a hand pump may be substituted for a power pump in ships of under 70 feet in length and in ships in which sails are the main means of propulsion; and

(*b*) fire buckets in accordance with the following table:—

Length of ship in feet	*Minimum number of buckets*
50 and under	2, one of which shall be fitted with a lanyard
Over 50 but not over 70 ...	3, two of which shall be fitted with lanyards
Over 70	4, two of which shall be fitted with lanyards

(2) Every ship of Class X fitted with oil-fired boilers and every decked ship of Class X fitted with internal combustion propelling machinery shall be provided with a nozzle suitable for spraying water on oil by means of the fire hose referred to in paragraph (1) of this Rule.

(3) Every ship of Class X fitted with main or auxiliary oil-fired boilers shall be provided in the boiler room with—

(*a*) a receptacle containing an adequate quantity of sand, or other dry material suitable for quenching oil fires;

(*b*) a scoop for distributing the contents of the receptacle;

(*c*) at least two portable fire extinguishers capable of discharging froth or another substance suitable for quenching oil fires; and

(*d*) a froth installation, complying with the requirements specified in the First Schedule to these Rules, shall be provided in every such ship whereby froth can be rapidly discharged and distributed over each boiler room, and over any space which contains the whole or part of the fuel installation. The froth available for discharge shall be sufficient in quantity to cover to a depth of 6 inches the largest single area over which oil fuel may spread in the event of leakage. If the engine room and boiler room are not separated from each other by a bulkhead and fuel oil may drain from the boiler room into the engine room bilges, the engine room and boiler room shall, for the purpose of this subparagraph, be regarded as a single area. The aforesaid appliances shall be capable of being controlled from a readily accessible position which

is not likely to be cut off in the event of fire. The Minister may exempt any ship from the requirements of this sub-paragraph if he is satisfied that the boiler room and the spaces containing the oil fuel installation are adequately protected by a permanent piping system for the discharge of smothering-gas, steam, or water at high pressure.

(4) Every ship of Class X fitted with internal combustion propelling machinery shall be provided in the machinery space with portable fire extinguishers capable of discharging froth or another substance suitable for quenching oil fires. The number of such extinguishers shall be in accordance with the following table:—

B.H.P. of Main Engines	*Number of Extinguishers*
Not over 500	2
Over 500 but not over 1,000	3
Over 1,000 but not over 2,000	4

(5) The Minister may exempt any ship of Class X from any of the requirements of these Rules.

Ships of Class XI

47. Every ship of Class XI shall be provided with:—

(*a*) one pump and one fire hose whereby a powerful jet of water can be rapidly directed into any part of the ship;

(*b*) sufficient portable fire extinguishers to ensure that at least one is available for immediate use in each compartment of the crew spaces and of the passenger spaces, if any;

(*c*) fire buckets in accordance with the following table:—

Length of ship in feet	*Minimum number of buckets*
50 or under	2, one of which shall be fitted with a lanyard
Over 50 but not over 70 ...	3, two of which shall be fitted with lanyards
Over 70	4, two of which shall be fitted with lanyards

Ships of Class XII

48.—(1) Every ship of Class XII of 70 feet in length and over shall be provided with a pump and a fire hose whereby a powerful jet of water can rapidly be directed into any part of the ship.

(2) Every ship of Class XII shall be provided with fire buckets in accordance with the following table:—

Length in feet	*Minimum number of buckets*
50 or under	2, one of which shall be fitted with a lanyard
Over 50 but not over 70 ...	3, two of which shall be fitted with lanyards
Over 70	4, two of which shall be fitted with lanyards

(3) Every ship of Class XII of 70 feet in length and over and fitted with internal combustion propelling machinery shall be provided with a nozzle suitable for spraying water on oil by means of the fire hose referred to in paragraph (1) of this Rule.

(4) Every ship of Class XII fitted with internal combustion propelling machinery shall be provided with portable fire extinguishers capable of discharging froth or another substance suitable for quenching oil fires. The number of such extinguishers shall be in accordance with the following table:—

B.H.P. of Main Engines	*Number of Extinguishers*
Not over 500	2
Over 500	3

(5) Every ship of Class XII in which sails are the only means of propulsion shall carry not less than two portable fire extinguishers.

(6) The Minister may exempt any ship of Class XII from any of the requirements of these Rules.

General

Power pumps

49.—(1) Every pump required by these Rules to be operated by power shall be operated by a means other than the ship's main engines, and shall not be used for pumping oil.

(2) Every such pump shall be capable of producing a throw of at least forty feet at every nozzle, other than a spray nozzle, when used with any of the fire hoses and nozzles provided in compliance with these Rules.

(3) Escape valves shall, whenever necessary, be provided in connection with every such pump and shall be so placed and adjusted as to prevent excessive pressure in any part of the water pipes served by the pump.

(4) In every ship required by these Rules to be provided with pumps operated by power, the total pumping capacity of the pumps provided in compliance with that requirement shall not be less than two-thirds of the total pumping capacity of the bilge pumps provided in the ship.

Water pipes and Hydrants

50.—(1) All water pipes and fire hydrants provided in compliance with these Rules shall be so placed that fire hoses may easily be coupled to them. In ships which may carry deck cargo, the hydrants shall be so placed that the deck cargo will not hinder access to them, and the water pipes shall be protected from damage by the cargo.

(2) The water pipes shall not be made of cast iron, and if made of iron or steel shall be galvanised.

(3) Cocks or valves shall be fitted to the water pipes and shall be so arranged that any fire hoses coupled thereto may be removed while fire pumps are in operation.

Fire hoses, Nozzles, etc.

51.—(1) Fire hoses provided in compliance with these Rules shall not exceed 60 feet in length and shall be made of leather, seamless hemp, closely woven flax canvas, or other suitable material and shall be provided

with couplings, conductors and other necessary fittings, and with a plain nozzle of not less than ½ inch diameter in addition to any spray-nozzle required by these Rules.

(2) Every fire hose provided in compliance with these Rules, together with the tools and fittings necessary for its use, shall be kept in a conspicuous position near the water hydrants or connections with which it is intended to be used.

(3) Except in partially decked ships of Classes V, VI and VI(A) and in ships of Classes X and XII, fire hoses provided in compliance with these Rules shall not be used for any purpose other than extinguishing fire or testing with fire appliances.

Fire buckets

52.—(1) Every fire bucket provided in compliance with these Rules shall be painted red and shall be clearly and permanently marked with the word "FIRE". Every such bucket shall be kept filled with sand or water.

(2) At least half the number of fire buckets provided in compliance with these Rules shall be fitted with lanyards of sufficient length to enable the buckets to be filled from the sea.

(3) Fire buckets provided in compliance with these Rules shall not be used for any purpose other than extinguishing fire.

Fire extinguishers

53.—(1) The fire extinguishers provided in compliance with these Rules shall be constructed in accordance with the Schedules to these Rules respectively specified in the second column of the following table:—

Type of Extinguisher	*Schedule*
Non-portable froth	Second
Portable or non-portable carbon dioxide	Third
Portable carbon tetrachloride	Fourth
Any other type of portable extinguisher	Fifth

(2) Not more than two types of portable fire extinguisher shall be provided in the passenger and crew spaces of any ship to which these Rules apply.

(3) A spare charge shall be provided for every portable fire extinguisher provided in compliance with these Rules.

(4) Fire extinguishers in which the substance for extinguishing fire is stored under pressure shall not be provided for use in passenger spaces or crew spaces.

(5) For the purposes of these Rules the capacity of any fire extinguisher other than a carbon dioxide fire extinguisher shall be taken to be the greatest volume of solution which it can contain when sufficient air space is left to ensure the proper operation of the extinguisher.

(6) For the purposes of these Rules the capacity of a carbon dioxide fire extinguisher shall be taken to be the greatest weight of carbon dioxide which it can, without danger of exploding, contain in a tropical climate.

(7) Every fire extinguisher provided in compliance with these Rules shall at all times be kept fully charged.

Smothering-gas or Steam installations

54.—(1) Every piping system provided in a ship to which these Rules apply for conveying smothering-gas or steam shall be capable of being controlled by valves or cocks which shall be capable of being locked and shall be readily accessible from the deck. Such cocks or valves shall be clearly and permanently marked to indicate the compartments which they serve. Every piping system which serves a compartment to which passengers may have access shall be fitted with an additional cock or valve capable of being locked.

(2) The piping shall be so arranged as to distribute the smothering-gas or steam in an efficient manner. Where necessary for that purpose at least two pipes shall be provided in cargo spaces, one in the forward part of the space and the other in the after part. Except in tankers and ships used for the conveyance of coal, pipes for conveying steam shall be fitted with outlets as low as practicable in the space which they serve.

(3) In tankers, the piping system shall be so arranged that the steam or fire smothering-gas will be distributed over the surface of the cargo.

(4) When carbon dioxide is provided as an extinguishing medium discharged into boiler rooms by a piping system, the quantity of gas available shall be sufficient to give a minimum volume of free gas equal to 30 per cent. of the gross volume of the largest boiler room measured to the top of the boilers. If the engine and boiler rooms are not separated by a bulkhead and fuel oil may drain from the boiler room into the engine room bilges, the combined engine and boiler rooms shall, for the purposes of this paragraph, be regarded as a single area.

(5) For the purpose of determining the quantity of liquified carbon dioxide required to produce the volume of smothering-gas required by these Rules, 1 lb. of liquified carbon dioxide shall be deemed to produce 9 cubic feet of gas.

(6) Means shall be provided for giving audible warning when carbon dioxide is about to be released into any working space.

Stopping of fans and Closing of openings

55. In every ship to which these Rules apply, means shall be provided for rapidly stopping all fans and closing all openings which might admit air to spaces provided with a piping system for the discharge of smothering-gas, steam or froth. The means for stopping the fans shall be situated outside such spaces.

Safety Lamps

56. Every safety lamp provided in compliance with these Rules shall be operated by an electric battery and be capable of burning for a period of at least three hours.

Stowage of moveable fire appliances

57. All moveable fire appliances, other than firemen's outfits, provided in compliance with these Rules shall be stowed where they will be readily accessible from the spaces in which they are intended to be used, and, in particular, fire extinguishers shall be stowed near the entrances to the spaces in which they are intended to be used.

Equivalents and Exemptions

58.—(1) Where these Rules require that a particular fitting, appliance or apparatus, or type thereof, shall be fitted or carried in a ship, or that any particular provision shall be made, the Minister may allow any other fitting, appliance or apparatus, or type thereof, to be fitted or carried, or any other provision to be made in that ship, if he is satisfied that that other fitting, appliance or apparatus, or type thereof, or provision, is at least as effective as that required by these Rules.

(2) The Minister may, on such conditions as he thinks fit, exempt any ship constructed before the coming into operation of these Rules from any of the requirements of these Rules if he is satisfied that that requirement is either impracticable or unreasonable in the case of that ship.

Given under the Official Seal of the Minister of Transport this 11th day of November, 1952.

(L.S.) *Gilmour Jenkins,*
Secretary of the Ministry of Transport.

FIRST SCHEDULE

Froth Fire Extinguishing Installations

(1) Every froth fire extinguishing installation of the gravity type provided in compliance with these Rules shall be provided with—

(*a*) containers for the froth-forming solution, so placed that a fire in the space intended to be protected will not interfere with the effective working of the installation;

(*b*) outlet valves for the containers, so arranged that the solutions will be released from the containers simultaneously and in proper proportions by the operation of a control-wheel or control-handle, in either case so placed as not to be rendered inaccessible by a fire in the space intended to be protected;

(*c*) means for agitating and sampling the froth-forming solutions and for testing the expansion rates thereof.

(2) In every froth fire extinguishing installation of the continuous-generator type provided in compliance with these Rules, the froth-forming apparatus, pumps and source of power for the pumps, together with all controlling devices and other accessories necessary for efficient operation, shall be so arranged that a fire in the space intended to be protected will not prevent the efficient working of the installation.

(3) Every such installation of the gravity or continuous-generator type shall be provided with a system of distribution pipes so arranged as to enable the froth to be effectively distributed. Provision shall be made to prevent the obstruction of the pipes or their outlets by water or otherwise, and to enable the efficiency of the pipes to be readily tested. The pipes shall not be led through any refrigerated space unless they are insulated and provision is made for draining them.

(4) Instructions in clear and permanent lettering shall be affixed to the equipment or in a position adjacent thereto.

SECOND SCHEDULE

NON-PORTABLE FROTH FIRE EXTINGUISHERS

(1) Every froth fire extinguisher, other than a portable fire extinguisher, provided in compliance with these Rules shall be so designed and constructed that the interior of the extinguisher can be examined.

(2) The body of the extinguisher shall be cylindrical with ends which shall be dished outwards, without reverse flanging, to a radius not exceeding the diameter of the body. The body and ends shall be made of sheet steel which shall be tinned or lead-coated internally, and every part of the extinguisher shall, where necessary, be protected against corrosion.

(3) The body of the extinguisher shall be welded or riveted. All riveted joints shall be soldered.

(4) The body shall be provided with an opening for the introduction of an inner container. The opening shall be fitted with a cap of gunmetal or other suitable material, screwed with a continuous thread, through the side of which safety holes or slots shall be provided so that when the cap is being removed any pressure of gas remaining in the container may be released gradually should the discharge opening be choked. The cap joint shall be made with acid-resisting rubber, greased leather, or other suitable material.

(5) If the extinguisher is provided with an inner container, such container shall be adequately supported.

(6) A reinforced discharge hose shall be provided, together with a nozzle, the area of which shall be such that, when the extinguisher is operated, the froth is projected a distance of 45 feet for a period of not less than 100 seconds, in the case of an extinguisher of 30 gallons capacity or over, and a distance of 35 feet for a period of not less than 90 seconds in the case of an extinguisher of under 30 gallons capacity.

(7) The charge and the air space above the level of the solution in the body shall be so regulated that the maximum pressure in the extinguisher when put into action, with all outlets closed, does not exceed 280 lb. per square inch with the solution at a temperature of 100° F.

(8) The extinguisher shall be capable of withstanding for a period of 5 minutes an internal pressure of 1½ times the pressure in the extinguisher when put into action with all outlets closed, and in no event of less than 350 lb.

(9) The outside of the extinguisher shall be clearly and permanently marked with—

(*a*) the name of the maker or vendor of the extinguisher;

(*b*) the capacity of the extinguisher;

(*c*) the level of the solution, when the extinguisher is filled to its working capacity;

(*d*) the pressure under which the extinguisher was tested;

(*e*) instructions for operating the extinguisher; and

(*f*) the year in which the extinguisher was manufactured.

THIRD SCHEDULE

CARBON DIOXIDE FIRE EXTINGUISHERS

(1) Every carbon dioxide fire extinguisher provided in compliance with these Rules shall be provided with cylinders constructed in accordance with any one of the following British Standard Specifications:—

No. 401, No. 1287, No. 1288.

(2) Each cylinder shall be provided with an internal discharge tube, and a valve to release the gas.

(3) The extinguisher shall be provided with a discharge hose which shall be reinforced so as to withstand a pressure of at least 1,800 lb. per square inch when the necessary couplings are fitted. The bore of the discharge hose shall not be less than the sizes respectively set forth in the following table:—

Capacity of extinguisher.	*Minimum bore of discharge hose.*
10 lb.	¼ inch.
35 lb.	⅜ inch.
100 lb.	½ inch.

The discharge hose shall be provided with a horn which shall be insulated and of a design which will reduce the velocity of the gas discharged.

(4) At any temperature between 50°F. and 70°F., inclusive, the extinguisher shall discharge gas at such a rate that carbon dioxide equal in weight to ⅔ of the capacity of the container will be discharged in the periods respectively set forth in the following table:—

Capacity of extinguisher.	*Period.*
10 lb.	20 seconds.
35 lb.	35 seconds.
100 lb.	70 seconds.

(5) The outside of the extinguisher shall be clearly and permanently marked with—

(*a*) the name of the vendor of the extinguisher;

(*b*) instructions for operating the extinguisher;

(*c*) markings which will indicate the respective weights of the extinguisher when empty and when filled; and

(*d*) the year in which the extinguisher was manufactured.

FOURTH SCHEDULE

Carbon Tetrachloride Fire Extinguishers

(1) Every carbon tetrachloride fire extinguisher provided in compliance with these Rules shall be of a nominal fluid capacity of one quart.

(2) The body of the extinguisher shall be cylindrical and shall be constructed of copper or brass, in either case of a thickness not less than No. 22 L.S.G. All internal fittings of the extinguisher shall be made of copper, brass, bronze or lead, and all joint washers shall be made of material which will resist carbon tetrachloride.

(3) Provision shall be made by which the carbon tetrachloride in the extinguisher can be sealed off from the atmosphere when the extinguisher is not in use, so as to prevent evaporation of the carbon tetrachloride.

(4) The extinguisher shall be provided with a hand pump which shall be self-contained and double-acting. The plunger-packing shall consist of material which will resist carbon tetrachloride. The extinguisher shall be capable of discharging substantially the whole of the carbon tetrachloride which it contains, whatever the position in which it is held, and of projecting that fluid for a distance of 20 feet throughout a period of one minute.

(5) The carbon tetrachloride provided for use with the extinguisher shall be of a standard of purity not less than that specified in British Standard Specification No. 575.

(6) The outside of the extinguisher shall be clearly and permanently marked with—

(*a*) the name of the maker or vendor of the extinguisher ;

(*b*) the capacity of the extinguisher ;

(*c*) instructions for operating the extinguisher ;

(*d*) the year in which the extinguisher was manufactured ; and

(*e*) a notice indicating that if the extinguisher is used for extinguishing fire in a confined space dangerous fumes will be given off and must not be inhaled.

FIFTH SCHEDULE

PORTABLE FIRE EXTINGUISHERS (OTHER THAN CARBON DIOXIDE AND CARBON TETRACHLORIDE EXTINGUISHERS)

(1) Every portable fire extinguisher provided in compliance with these Rules, other than a carbon dioxide or carbon tetrachloride fire extinguisher, shall be of a capacity of not less than two gallons, except in the case of the extinguishers of one gallon capacity referred to in Rule 30.

(2) The body of every portable extinguisher shall be cylindrical with dished ends or conical with the larger end dished. The dishing shall be outwards, without reverse flanging, to a radius not exceeding the diameter of the body. If the extinguisher stands vertically a metal support shall be securely attached to the body.

(3) The body and ends of the extinguisher shall be made of sheet steel or copper, in either case tinned or lead-covered internally, and every part of the extinguisher shall, where necessary, be protected against corrosion.

(4) If the body is made of sheet steel it shall be solid drawn, welded or riveted. All rivet holes shall be drilled, and all riveted joints shall be soldered.

(5) If the body is made of copper it shall be solid drawn or riveted. All rivet holes shall be drilled and all riveted joints shall be soldered or brazed.

(6) The body shall be provided with an opening for the introduction of an inner container. The opening shall not be less than 3 inches in diameter and shall be fitted with a gun-metal cap the screwed part of which shall be approximately $\frac{3}{4}$ inch deep and shall be screwed with a continuous thread through the side of which safety holes or slots shall be provided so that when the cap is being removed any pressure of gas remaining in the container will be released gradually should the discharge opening be choked. The cap joint shall be made with acid-resisting rubber, greased leather, or other suitable material, and shall not exceed $\frac{1}{8}$ inch in thickness. Any cage for holding glass bottles shall be removable, so as to facilitate the cleaning and inspection of the interior of the extinguisher. Any protector fitted to a plunger shall be of the open or cage type. The body shall be capable of withstanding an internal pressure of 350 lb. per square inch for five minutes.

(7) Extinguishers containing fluid shall be provided with a device which will, when the extinguisher is not in use, prevent the fluid from rising in the discharge tube in consequence of a rise in the temperature of the atmosphere. The discharge tube or opening in such extinguishers shall be fitted with a strainer. Any internal discharge tubes shall be of sufficient length to discharge substantially the whole of the fluid in the extinguisher. No cocks or valves shall be fitted for stopping the discharge of the fluid.

(8) The extinguisher shall be capable of projecting fluid for a distance of 20 feet during a period of one minute.

(9) The extinguisher shall be provided with fixed handles which will enable it to be readily transported and used.

(10) The discharge tube or opening shall be provided with a screwed connection which will facilitate testing.

(11) The charge and the air space above the level of the fluid in the body shall be so regulated that, if the extinguisher is put into action with all outlets closed, the internal pressure will not exceed 200 lb. per square inch when the fluid is at a temperature of 100°F.

(12) The outside of the extinguisher shall be clearly and permanently marked with—

(*a*) the name of the maker or vendor of the extinguisher;

(*b*) the capacity of the extinguisher;

(*c*) the level of the fluid, when the extinguisher is filled to its working capacity;

(*d*) a certificate by the maker that the extinguisher has been tested by hydraulic pressure to 350 lb. per square inch;

(*e*) instructions for operating the extinguisher; and

(*f*) the year in which the extinguisher was manufactured.

SIXTH SCHEDULE

Breathing Apparatus, Smoke Helmets and Smoke Masks

(1) Every breathing apparatus provided in compliance with these Rules shall be self-contained. Means shall be provided for warning the wearer that any reacting chemicals forming part of the apparatus are about to be exhausted.

(2) Every smoke helmet or smoke mask provided in compliance with these Rules shall be provided with a hose for the supply of air from the outside atmosphere. The hose shall be of a non-collapsing type and shall be sufficient in length to enable the inlet end to be on deck or elsewhere in clean air while the wearer of the helmet or mask is in any part of the cargo space, crew space or passenger space, if any. If the hose is more than 90 feet in length a pump or bellows shall be provided which shall be suitable for pumping air through the hose. Efficient couplings shall be provided if two or more lengths of hose are joined in order to reach the aforesaid spaces. The inlet end of the hose shall be capable of being secured in position and shall be so protected as to ensure that the supply of air cannot be obstructed.

(3) The following equipment shall be provided for use with the breathing apparatus, smoke helmet, or smoke mask:—

(*a*) a life-and-signalling-line at least 10 feet longer than is required to reach from the deck or elsewhere in clean air to any part of the cargo space, crew space or passenger space, if any; the line shall be made of hemp-covered wire rope at least 1¼ inches in circumference; the wire incorporated in the rope shall have a breaking strength of not less than 1 ton and shall be made of copper or galvanised steel; provided that, in any tanker, rope made without wire, but having a breaking strength of not less than 1 ton, may be carried in lieu;

(*b*) an adjustable safety belt or harness to which the aforesaid line shall be securely attached;

(*c*) means for protecting the eyes and face of the wearer against smoke.

(4) The breathing apparatus, smoke helmet or smoke mask shall each be clearly and permanently marked with the name of the maker or vendor and the year in which they were manufactured. Operating instructions in clear and permanent lettering shall be affixed to the said equipment.

EXPLANATORY NOTE

(This Note is not part of the Rules, but is intended to indicate their general purport.)

These Rules arrange ships into classes, the classification being uniform with that in the Merchant Shipping (Life-Saving Appliances) Rules, 1952 (S.I.1952/1949). The Rules provide for the fire appliances to be carried in ships of each class, and include such requirements as appear to the Minister of Transport to implement the provisions of the International Convention for the Safety of Life at Sea, 1948, relating to fire appliances.

1952 No. 1959

The Merchant Shipping (Grain) Rules, 1952

Made - - - -	11*th November*, 1952
Laid before Parliament	13*th November*, 1952
Coming into Operation	19*th November*, 1952

The Minister of Transport in exercise of the powers conferred upon him by subsection (3) of Section 24 of the Merchant Shipping (Safety Convention) Act, 1949(**a**), and of all other powers him enabling in that behalf, hereby makes the following Rules:—

1.—(1) These Rules shall come into operation on the 19th day of November, 1952, and may be cited as the Merchant Shipping (Grain) Rules, 1952.

(2) These Rules supersede all regulations made under Section 453 of the Merchant Shipping Act, 1894(**b**), before the coming into operation of these Rules which said regulations are accordingly hereby revoked.

(3) The Interpretation Act, 1889(**c**), shall apply to the interpretation of these Rules as it applies to the interpretation of an Act of Parliament.

2. Every precaution set forth in the Schedule to these Rules is hereby prescribed as being, subject to the provisions of the said Schedule, a precaution to be treated for the purposes of subsections (1) and (2) of the said Section 24 as a necessary or reasonable precaution to prevent grain from shifting, in the case of ships of the following classes:—

(*a*) ships which are loaded with grain within any port in the United Kingdom;

(*b*) ships which, having been loaded with grain outside the United Kingdom, enter any port in the United Kingdom so laden.

3. Where these Rules require that a particular fitting, appliance or apparatus, or type thereof, shall be fitted or carried in a ship or that any particular provision shall be made, the Minister of Transport may allow any other fitting, appliance or apparatus, or type thereof, to be fitted or carried, or any other provision to be made in that ship if he is satisfied that such other fitting, appliance or apparatus, or type thereof, or provision is at least as effective as that required by these Rules.

Given under the Official Seal of the Minister of Transport this 11th day of November, 1952.

(L.S.)

Gilmour Jenkins,
Secretary of the Ministry of Transport.

(a) 12, 13 & 14 Geo. 6. c. 43. (b) 57 & 58 Vict. c. 60. (c) 52 & 53 Vict. c. 63.