



THE SHIPPING FIRE APPLIANCES RULES 1954

C. W. M. NORRIE, Governor-General
ORDER IN COUNCIL

At the Government House at Wellington this 6th day of October 1954

Present:

HIS EXCELLENCY THE GOVERNOR-GENERAL IN COUNCIL

PURSUANT to the Shipping and Seamen Act 1952, His Excellency the Governor-General, acting by and with the advice and consent of the Executive Council, hereby makes the following rules.

RULES

PART I—PRELIMINARY

Title and Commencement

1. (1) These rules may be cited as the Shipping Fire Appliances Rules 1954.
- (2) These rules shall come into force on the date of their notification in the *Gazette*.

Arrangement of Rules

2. These rules are arranged as follows:

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- II. Non-portable Froth Fire Extinguishers.
- III. Carbon Dioxide Fire Extinguishers.
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- V. Portable Fire Extinguishers (other than Carbon Dioxide and Carbon Tetrachloride Extinguishers).
- VI. Breathing Apparatus, Smoke Helmets, and Smoke Masks.

Interpretation

3. In these rules, unless the context otherwise requires,—

“Crew space” has the same meaning as the expression “crew accommodation”, as defined in section 148 (4) of the Shipping and Seamen Act 1952:

“Length” in relation to a registered ship means registered length:

“Passenger space” means space provided for the use of 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:

“Tanker” means a cargo ship constructed or adapted for the carriage in bulk of liquid cargoes of an inflammable nature:

“Tons” means gross tons.

Application of Rules

4. These rules apply to—

(a) New Zealand ships:

(b) Other ships while they are within any port in New Zealand:

Provided that these rules shall not apply to—

(c) A ship by reason of her being within a port in New Zealand 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:

(d) Pleasure yachts which do not exceed 15 tons gross tonnage.

Classification of Ships

5. For the purpose of these rules ships shall be arranged in the same classes in which ships are arranged for the purposes of the Shipping Life Saving Appliances Rules 1954,* and any reference in these rules to a ship of any class shall be construed accordingly.

PART II—PASSENGER SHIPS

SHIPS OF CLASS I

Fire Patrol, Alarm, and Detection Systems

6. (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 subclause (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.

* Statutory Regulations 1954, Serial number 1954/168, page 940.

Passenger and Crew Spaces

7. 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 subclause (2) of rule 46 of the Shipping Construction Rules 1954* 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 those spaces.

Cargo Spaces and Store Rooms

8. (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 subclause (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

9. 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

10. (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.

* Statutory Regulations 1954, Serial number 1954/167, page 866.

(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 in. 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 subclause, 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 subclause 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 any such froth fire extinguisher.

Engine Rooms : Motor Ships

11. 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 subclause (5) of rule 10 of these rules, the extinguisher required by this 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 two such extinguishers :

Provided that no more than six such extinguishers shall be required in any one compartment.

Fire Pumps

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

13. 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 ft. in length, each jet being supplied from a separate hydrant. At least one fire hose shall be provided for each hydrant.

Firemen's Outfits

14. (1) 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 ; and
- (c) Either—
 - (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.

(2) The outfits shall be kept in widely separated places.

Portable Drilling Machine

15. 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 CLASSES II AND II (A)

16. (1) Rules 6 to 15 inclusive of these rules shall apply to ships of Class II as they apply to ships of Class I.

(2) Subclause (1) of rule 6 and rules 7 to 15 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

17. (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

18. 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.

19. (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

20. (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 in. 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 subclause, 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 subclause 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

21. 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; and

- (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 two such extinguishers:

Provided that not more than six such extinguishers shall be required in any ship.

Water Pipes, Hydrants and Fire Hoses

22. 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 ft. in length. At least one fire hose shall be provided for each hydrant.

Fire Pumps

23. (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 22 of these rules. The pump and its source of power, if any, shall not be situated in the same compartment as the pump required by subclause (1) of this rule. If a hand pump is provided in compliance with this subclause 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

24. (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

25. 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.

26. (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

27. (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; and
- (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

28. 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; and
- (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 two such extinguishers:

Provided that not more than six such extinguishers shall be required in any ship.

Water Pipes, Hydrants, and Fire Hoses

29. 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 ft. in length. At least one fire hose shall be provided for each hydrant.

Fire Pumps

30. (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 29 of these rules. The pump and its source of power, if any, shall not be situated in the same compartment as the pump required by subclause (1) of this rule. If a hand pump is provided in compliance with this subclause 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

31. Rules 24 to 30 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

32. 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; and
- (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 ft.	1	1 gallon	2
Over 30 ft. but not over 50 ft.	2	1 gallon	2
Over 50 ft.	2	2 gallons	3

Partially Decked Motor Ships

33. 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 CLASS VI

34. (1) Rules 24 to 30 inclusive of these rules shall apply to fully decked ships of Class VI as they apply to ships of Class IV.

(2) Rules 32 and 33 of these rules shall apply to ships of Class VI which are not fully decked as they apply to ships of Class V.

PART III—NON PASSENGER SHIPS

SHIPS OF CLASS VII

Cargo Spaces

35. (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; and
 - (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 subclause (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 subclause would be unreasonable on account of the short duration of the voyages on which the ship is engaged.

Fire Hoses and Pumps

36. (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. Those appliances shall include two fire hoses and a spare fire hose 30 ft. 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. Those appliances shall include one fire hose and a spare fire hose 30 ft. 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

37. 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 those 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

38. (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; and
- (c) Either—

- (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.

(2) The outfits shall be kept in widely separated places.

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

Portable Drilling Machine

39. 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

40. (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 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 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 in. 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 subclause, 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 subclause 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 that 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

41. 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 subclause (3) or subclause (4) of rule 40 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)

42. Rules 35 to 41 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

43. Rules 36 to 41 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

44. (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 ft. 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 either—

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

- (a) A receptacle containing an adequate quantity of sand, or other dry material suitable for quenching oil fires; and
- (b) A scoop for distributing the contents of the receptacle.

(5) 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 2 gallons capacity for each burner.

(6) 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 in. 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 subclause, 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 subclause 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;
- (b) If that 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.

(7) 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

45. (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; and

- (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 subclause (2) of this rule.

(4) 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—

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

- (b) A scoop for distributing the contents of the receptacle.

(5) 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.

(6) 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 in. 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 subclause, 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 subclause 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.

(7) 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; and

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

Ships of under 150 tons

46. (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. Those buckets shall be additional to the buckets referred to in paragraph (b) of this subclause.

(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; and

(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)

47. (1) Rules 43 to 46 inclusive of these rules shall apply to ships of any of the Classes VIII (A), IX, and IX (A) as they apply to ships of Class VIII.

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

SHIPS OF CLASS X

48. (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 ft. 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 subclause (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 in. 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 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 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 those 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

49. 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 ; and
- (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

50. (1) Every ship of Class XII of 70 ft. 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 ft. 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 subclause (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 those 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.

PART IV—GENERAL

Power Pumps

51. (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 40 ft. 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

52. (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 galvanized.

(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.

53. (1) Fire hoses provided in compliance with these rules shall not exceed 60 ft. 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 half an 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 Class V or Class VI and in ships of Class X or Class 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

54. (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

55. (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

56. (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. The 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 subclause 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

57. 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 those spaces.

Safety Lamps

58. 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

59. 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

60. (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 commencement 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.

SCHEDULES

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; and
- (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.

SECOND SCHEDULE—*continued*

(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, the 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 ft. 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 ft. 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 five minutes an internal pressure of one and a half 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 New Zealand Standard Specifications:

No. 275, No. 533, No. 534.

(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.	$\frac{1}{4}$ inch.
35 lb.	$\frac{3}{8}$ inch.
100 lb.	$\frac{1}{2}$ 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 three-quarters 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 ft. 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 New Zealand Standard Specification No. 182.
- (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 2 gallons, except in the case of the extinguishers of 1 gallon capacity referred to in rule 32.
- (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 in. in diameter and shall be fitted with a gun metal cap the screwed part of which shall be approximately three-quarters of an 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 an eighth of an 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 ft. during a period of one minute.

FIFTH SCHEDULE—*continued*

(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 ft. 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 ft. 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 1½ in. 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 instead;

- (b) An adjustable safety belt or harness to which the aforesaid line shall be securely attached; and
- (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.

T. J. SHERRARD,
Clerk of the Executive Council.

EXPLANATORY NOTE

[This note is not part of the rules, but is intended to indicate their general effect.]

These rules arrange ships into classes, the classification being uniform with that in the Shipping Lifesaving Appliances Rules 1954. The rules provide for the fire appliances to be carried in ships of each class, and include such requirements as appear to the Governor-General to be necessary to implement the provisions of the International Convention for the Safety of Life at Sea 1948 relating to fire appliances.

Issued under the authority of the Regulations Act 1936.

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These regulations are administered in the Marine Department.