
The Merchant Shipping (Fire Protection) Regulations 1998: Exemptions

Notice to Shipowners, Shipbuilders, Masters, Certifying Authorities and Surveyors

Summary

This Notice advises all Shipowners, Shipbuilders, Masters, Certifying Authorities and Surveyors of the new 1998 Fire Protection Regulations exemptions.

Key Points : -

- This Notice forms an integral part of the Merchant Shipping (Fire Protection: Large Ships) Regulations 1998 and the Merchant Shipping (Fire Protection: Small Ships) Regulations 1998.
- Schedules contained in this Notice are invoked by those Regulations and are therefore a statutory obligation.

Schedule 1 : Conditions for General Exemptions and provisions to be complied with, for ships constructed before 26th May 1965.

Schedule 2 : Structural fire protection for ships of Classes I, II and II(A) of 21.34 metres in length or over constructed before 25th May 1980.

Schedule 3 : Structural fire protection for certain tankers constructed between 25th May 1980 and 1st September 1984.

Schedule 4 : Structural fire protection for cargo ships of 500 tons or more built between 26th May 1965 and 1st September 1984, other than tankers to which Schedule 3 applies.

In this Merchant Shipping Notice -

- (1) references to regulations in the Schedules, unless otherwise stated, refer to regulations in the Merchant Shipping (Fire Protection: Large Ships) Regulations 1998;
- (2) a reference to a numbered paragraph is, unless otherwise stated, a reference to a paragraph of that number in that Schedule;
- (3) a reference to a numbered Schedule is, unless otherwise stated, a reference to the Schedule of that number in this Merchant Shipping Notice.

SCHEDULE 1

**Condition for General Exemption and provisions to be complied with, for
ships constructed before 26th May 1965**

1. Subject to paragraphs 2, 3, 4 and Schedule 2 the conditions on which every ship, the keel of which was laid before 26th May 1965 is exempted from the requirements of the Merchant Shipping (Fire Protection: Large Ships) Regulations 1998 or, as the case may be, the Merchant Shipping (Fire Protection: Small Ships) Regulations 1998 are that it complies with all the requirements of the Merchant Shipping (Fire Appliances) Rules 1952(a) which would have applied to it if those Rules had not been revoked.
2. Ships of the Classes or description specified in column 1 of the Annex hereto are not however exempt from, and must comply with, the provisions of the Regulations specified in relation to them in column 2 of that Annex.
3. A ship to which regulation 18(1) of the Merchant Shipping (Fire Protection: Large Ships) Regulations 1998 applies (ships of Classes VII and VII(A) which is carrying explosives is exempt from the requirement of that regulation to provide a fixed fire smothering installation if, and only if -
 - (a) the compartments containing explosives and any adjacent compartments are not fitted with steam for fire smothering purposes; and
 - (b) it is provided in such compartments with either -
 - (i) an efficient temporary fire smothering gas installation; or
 - (ii) a system of perforated pipes so designed and fitted that water can be sprayed into the compartment at the rate of 5 litres per square metre per minute.
4. A ship to which regulation 102(1) of the Merchant Shipping (Fire Protection: Large Ships) Regulations 1998 applies (ships (other than a passenger ship) carrying explosives) is exempt from the requirement of that regulation to provide a fire detection system if, and only if -
 - (a) efficient means in the form of pipes or ventilators are provided in every compartment containing explosives and in every adjacent cargo compartment by which fire in any such compartment may readily be detected in other parts of the ship by sense of smell; and
 - (b) the Standing Instructions to ships' officers and crew require the inspection of every such compartment at intervals of not more than 2 hours and that the making of every such inspection be recorded in the ship's log together with the time at which it was made.

ANNEX TO SCHEDULE 1

LARGE SHIPS

<p align="center">Column 1 (Class of Ship)</p>	<p align="center">Column 2 (Provisions of the Merchant Shipping (Fire Protection: Large Ships) Regulations 1998 from which exemption is not given)</p>
<p>Passenger ships of Classes I and II and of Class II(A) of 21.34 metres in length or over</p>	<p>regulation 3(8) (provision of dual purpose nozzles)</p> <p>regulation 4 (portable fire extinguishers in accommodation and service spaces, galleys, control stations, special category spaces and spaces containing motor vehicles) and regulation 44</p> <p>regulation 11(1)(c) (training of fire patrol)</p> <p>regulation 11(4) (response to fire alarm)</p> <p>regulation 12 (firemen's outfits) and regulation 46</p> <p>regulation 13 (international shore connection)</p>

Column 1 (Class of Ship)	Column 2 (Provisions of the Merchant Shipping (Fire Protection: Large Ships) Regulations 1998 from which exemption is not given)
<p>Passenger ships of Classes I and II and of Class II(A) of 21.34 metres in length or over and carrying more than 36 passengers</p>	<p>regulation 3(7) (availability of water supply)</p> <p>regulation 3(8) (provision of dual purpose nozzles)</p> <p>regulation 3(9) (water-fog applicators in special category spaces)</p> <p>regulation 3(11) (water-fog applicators in machinery spaces)</p> <p>regulation 4(4)(b) (foam-applicator unit in special category spaces)</p> <p>regulation 7(3)(b) (foam-applicator unit in spaces containing boilers)</p> <p>regulation 7(4)(b) (foam-applicator units in spaces containing internal combustion type machinery)</p> <p>regulation 11(1)(d) (two-way portable radio telephones for fire patrols)</p> <p>regulation 11(5) and (6) (special alarm and public address system)</p> <p>regulation 12(3)(a) (water-fog applicator in firemen's outfits)</p> <p>regulation 49(2) (information on structural fire protection measures to be included in General Arrangement plans)</p>

<p style="text-align: center;">Column 1 (Class of Ship)</p>	<p style="text-align: center;">Column 2 (Provisions of the Merchant Shipping (Fire Protection: Large Ships) Regulations 1998 from which exemption is not given)</p>
<p>Ships of Class VII and VII (A)- (1) of 500 tons or over</p>	<p>regulation 16(4)(b)(i) and (iv) (fire hoses) and regulation 40(1), (2) and (3)</p> <p>regulation 24(1) (fire detection in machinery spaces when operating with unmanned machinery spaces)</p> <p>regulation 25(1),(2) and (3) (firemen’s outfits) and regulation 46</p> <p>regulation 26 (international shore connection)</p> <p>regulation 37 (additional requirements for ships with helicopter facilities)</p> <p>paragraph 2 of Schedule 7 in Merchant Shipping Notice MSN 1665 (M) (availability of water supply when operating with unmanned machinery spaces)</p>
<p>Ships of Class VII(T), VIII(T), VIII(A)(T) and IX(A)(T) of 500 tons or over</p>	<p>regulation 24(1) (fire detection in machinery spaces when operating with unmanned machinery spaces)</p> <p>regulation 30(1) to (7) inclusive (requirements for inert gas systems)</p> <p>regulation 30(8) to (13) inclusive (requirements for deck foam systems)</p> <p>regulation 34 (firemen’s outfits)</p> <p>regulation 37 (additional requirements for ships with helicopter facilities)</p> <p>Paragraph 2 of Schedule 7 in Merchant Shipping Notice MSN 1665 (M) (availability of water supply when operating with unmanned machinery spaces)</p>

<p style="text-align: center;">Column 1 (Class of Ship)</p>	<p style="text-align: center;">Column 2 (Provisions of the Merchant Shipping (Fire Protection: Large Ships) Regulations 1998 from which exemption is not given)</p>
<p>Ships of Classes VII, VIII(A), IX, IX(A) and XI - (1) of 1,000 tons or over</p>	<p>regulation 16(4)(b)(i) (fire hoses) and regulation 40(1),(2) and (3)</p> <p>regulation 24(1) (fire detection in machinery spaces when operating with unmanned machinery spaces)</p> <p>regulation 25(1),(2) and (3) (firemen's outfits) and regulation 46 regulation 26 (international shore connection)</p> <p>regulation 37 (additional requirements for ships with helicopter facilities)</p> <p>paragraph 2 of Schedule 7 in Merchant Shipping Notice MSN 1665 (M) (availability of water supply when operating with unmanned machinery spaces)</p>
<p>(2) of 500 tons or over but under 1,000 tons</p>	<p>regulation 16(4)(b)(iv) (fire hoses) and regulation 40(1),(2) and (3)</p> <p>regulation 20(2)(a) and (3)(c) (fire extinguishers in machinery spaces containing internal combustion type machinery) and regulation 44</p>
<p>Ships of any class to which this exemption applies other than passenger ships</p>	<p>regulation 102 (requirements for ships carrying explosives) in so far as it prohibits the use of steam for fire smothering purposes in any compartment containing explosives</p>
<p>Ships of Class XII- (1) of 1,000 tons or over</p>	<p>regulation 20(1),(2) and (3) (fixed fire extinguishing installation and fire extinguishers for machinery spaces containing oil-fired boilers or oil burning equipment)</p>
<p>(2) of 500 tons or over but under 1,000 tons</p>	<p>regulation 20(1),(2) and (3) inclusive (fixed fire extinguishing installation and fire extinguishers for machinery spaces as above)</p>

SMALL SHIPS

<p align="center">Column 1 (Class of Ship)</p>	<p align="center">Column 2 (Provisions of the Merchant Shipping (Fire Protection: Large Ships) Regulations 1998 from which exemption is not given)</p>
<p>Passenger ships of Class III of 21.34 metres in length or over</p>	<p>regulation 9 (firemen's outfits)</p>
<p>Passenger ships of Class IV of 21.34 metres in length or over</p>	<p>regulation 8(2)(a) (non-portable fire extinguishers in spaces containing oil-fired boilers or oil burning equipment) and regulation 35</p> <p>paragraphs 10 and 11 in Schedule 8 of Merchant Shipping Notice MSN 1665 (M)</p>
<p>Ships of Class VII and VII(A) of under 500 tons</p>	<p>regulation 17(2)(d) in so far as it requires the provision of fire hoses, and regulation 32(1),(2) and (3)</p> <p>paragraph 2 of Schedule 7 in Merchant Shipping Notice MSN 1665 (M) (availability of water supply when operating with unmanned machinery spaces)</p>
<p>Ships of Classes VIII, VIII(A), IX, IX(A) and XI of 150 tons or over but under 500 tons</p> <p>of under 150 tons</p>	<p>regulation 17(6) (fire extinguishers in machinery spaces containing internal combustion type machinery) and regulation 35</p> <p>regulation 20(5) (additional requirement for ships of wooden construction)</p>
<p>Ships of Class XII of 150 tons or over but under 500 tons</p>	<p>regulation 8 inclusive (fixed fire extinguishing installation and fire extinguishers for machinery spaces as above)</p>

SCHEDULE 2

**Structural fire protection for ships of Classes I, II and Class II(A) of
21.34m in length or over, constructed before 25th May 1980**

For ships carrying more than 36 passengers

1. From 1st October 2010 this Schedule shall cease to have effect on passenger ships carrying more than 36 passengers.
2. Except as provided *for* otherwise in the Regulations -
 - (a) Ships constructed before 19th November 1952 shall comply with the provisions of paragraphs 3 to 15.
 - (b) Ships constructed on or after 19th November 1952 but before 26th May 1965 shall comply with the provisions relating to fire safety measures of the Merchant Shipping (Construction) Rules 1952(a) as though those Rules had not been revoked, and shall comply with the provisions of paragraphs 5(a) and (b), 13 and 15(2).
 - (c) Ships constructed on or after 26th May 1965 but before 25th May 1980 shall comply with the provisions of the Merchant Shipping (Passenger Ship Construction) Rules 1965 as though those Rules had not been revoked, relating to fire safety measures and shall also comply with the provisions of paragraph 5(a) and (b).
 - (d) On or after 1st October 2000 -
 - (i) special category spaces;
 - (ii) ro-ro cargo spaces; and
 - (iii) cargo spaces other than special category spaces and ro-ro spaces intended for the carriage of motor vehicles with fuel in their tanks for their own propulsion shall comply, so far as they are relevant to those spaces, with regulations 3(12), 5(4), 5(5), 5(6), 6, 11(1), 11(2), 65 and 66 of the Merchant Shipping (Fire Protection: Large Ships) Regulations 1998 (except so far as those regulations relate to post-1994 ships).
 - (e) On or after 1st October 2000, ships shall comply with the provisions of regulation 57(1) and 58(6)(b).
 - (f) On or after 1st October 1997 ships shall comply with the provisions of regulations 57(4)(b), 57(5)(a), (b), (c), (d) and (e), 57(6), 58(6)(a), 58(6)(c), 64(5)(a), 64(4), 68(7) and paragraphs 2(2) and 4(a), (b), (c), (d) and (e) of Schedule 3 in Merchant Shipping Notice MSN 1667 (M).
 - (g) On or after 1st October 1997 ships shall comply with the following provisions -
 - (i) in all stairways and corridors, in areas where ceilings are of combustible construction there shall be fitted above such ceilings smoke detectors connected to a fixed fire detection and fire alarm system of an approved type and complying with the requirements of Schedule 5 in Merchant Shipping Notice MSN 1666 (M).

(a) S.I. 1952/1948.

- (ii) to all ventilation ducts serving both accommodation or service spaces and stairway enclosures, where they pierce such enclosures there shall be fitted automatic fail-safe fire dampers operable from within the stairway enclosures. Where ventilation ducts pass through, but do not serve stairway enclosures, they shall be constructed and insulated to "A-60" standard within the stairway enclosure, or shall be fitted with fire dampers operable from within the enclosure, at the boundaries penetrated.

Structure

- 3. The structure of the ship shall be of steel or other suitable material in compliance with Rule 45(1) of the Merchant Shipping (Construction) Rules 1952, except that isolated deckhouses containing no accommodation and decks exposed to the weather may be of wood if structural fire protection measures are taken to the satisfaction of the Secretary of State.

Main vertical zones

- 4. The ship shall be subdivided by "A" Class divisions into main vertical zones in compliance with Rule 45(2) and (3) of the Merchant Shipping (Construction) Rules 1952. Such divisions shall have as far as practicable adequate insulating value, having regard to the nature of the adjacent spaces as provided for in Rule 44(1) of those rules.

Openings in main vertical zone bulkheads

- 5. The ship shall comply substantially with Rule 46 of the Merchant Shipping (Construction) Rules 1952.
 - (a) Fire doors shall be of steel.
 - (b) In case of ventilation trunks and ducts having a cross-sectional area of 0.02 square metre or more which pass through main zone divisions, the following provisions shall apply -
 - (i) for trunks and ducts having cross-sectional areas between 0.02 square metre and 0.075 square metre inclusive, fire dampers shall be of a fail-safe automatic closing type, or such trunks and ducts shall be insulated for at least 450 millimetres on each side of the division to meet the applicable bulkhead requirements;
 - (ii) for trunks and ducts having a cross-sectional area exceeding 0.075 square metre, fire dampers shall be of the fail-safe automatic closing type.

Separation of accommodation spaces from machinery, cargo and service spaces

- 6. The ship shall comply with Rule 47 of the Merchant Shipping (Construction) Rules 1952.

Methods of fire protection and application

- 7. (1) The accommodation spaces and service spaces in every ship to which this Schedule applies shall be constructed in accordance with anyone of the following methods of fire protection, or a combination thereof -

Method I : The construction in the accommodation spaces and service spaces of a system of internal bulkheading consisting of "B" Class divisions, together with an automatic fire alarm and fire detection system in all accommodation spaces and service spaces and a restriction of the provision of combustible material in these spaces;

Method II : The fitting of an automatic sprinkler, fire detection and fire alarm system in the accommodation spaces and service spaces; or

Method III : The subdivision of the accommodation spaces and service spaces by “A” Class and “B” Class divisions, together with the fitting of an automatic fire alarm and fire detection system in all accommodation spaces and service spaces and a restriction of the provision of combustible material in these spaces.

- 2 Each accommodation space and service space in a ship shall comply with all the provisions stipulated in any one of paragraphs (a), (b), (c) or (d) of the following paragraphs as appropriate.
- (a) A ship shall be accepted for the purposes of Method I if a network of non-combustible “B” Class divisions is provided in substantial compliance with Rule 57(1) of the Merchant Shipping (Construction) Rules 1952 together with maximum use of non-combustible material in compliance with Rule 60(1) of those Rules.
- (b) A ship shall be accepted for the purposes of Method II if -
- (i) an automatic sprinkler, fire alarm and fire detection system is provided in substantial compliance with Rule 59 of, and the sixth Schedule to, the Merchant Shipping (Construction) Rules 1952; and
 - (ii) the use of combustible materials of all kinds is reduced as far as is reasonable and practicable.
- (c) A ship shall be accepted for the purposes of Method III if a network of “A” and “B” Class divisions is fitted from deck to deck in substantial compliance with rule 57(2) of the Merchant Shipping (Construction) Rules 1952, together with an automatic fire alarm and fire detection system in substantial compliance with Rule 58 of those Rules. The use of combustible and highly flammable materials shall be restricted as prescribed in Rule 60(2) of those Rules. Departure from the requirements of Rule 60(2) of those Rules may be permitted if a fire patrol is provided at intervals not exceeding 20 minutes.
- (d) A ship shall be accepted for the purposes of Method III if -
- (i) additional “A” Class divisions are provided within the accommodation spaces in order to reduce in those spaces the mean length of the main vertical zones to about 20 metres; and
 - (ii) an automatic fire alarm and fire detection system is provided in substantial compliance with Rule 58 of the Merchant Shipping (Construction) Rules 1952; and
 - (iii) all exposed surfaces, and their coatings, of corridor and cabin bulkheads in accommodation spaces have surfaces of low flame spread; and
 - (iv) the use of combustible materials is restricted as prescribed in Rule 60(2) of the Merchant Shipping (Construction) Rules 1952. Departure from the requirements of Rule 60(2) of those Rules may be permitted if a fire patrol is provided at intervals not exceeding 20 minutes; and
 - (v) additional non-combustible “B” Class divisions are fitted from deck to deck to form a network of bulkheads within which the area of any compartment, except public spaces, does not in general exceed 300 square metres.

Protection of ceilings

8. On and after 1st October 1997 smoke detectors connected to a fixed fire detection and fire alarm system shall be fitted above ceilings in stairways and corridors in the areas where ceilings are of combustible construction.

Protection of vertical stairways

9. The stairways shall comply with Rule 48 of the Merchant Shipping (Construction) Rules 1952 except that, in exceptional cases, (a) the use of non-combustible "B" Class divisions and doors instead of "A" Class divisions and doors for stairway enclosures and (b) the retention of a wooden stairway if it is sprinkler-protected and satisfactorily enclosed may be permitted.

Protection of lifts and vertical trunks for light and air

10. The ship shall comply with Rule 49 of the Merchant Shipping (Construction) Rules 1952.

Protection of control stations

11. The ship shall comply with Rule 50 of the Merchant Shipping (Construction) Rules 1952 except that, in cases where the disposition or construction of control stations is such as to preclude full compliance, such as timber construction of the wheelhouse, the Secretary of State may permit the use of free-standing non-combustible "B" Class divisions to protect the boundaries of such control stations. In such cases, where spaces immediately below such control stations constitute a significant fire hazard, the deck between shall be fully insulated as an "A" Class division.

Protection of store-rooms etc.

12. The ship shall comply with Rule 51 of the Merchant Shipping (Construction) Rules 1952.

Windows and sidescuttles

13. Skylights of engine and boiler spaces shall be capable of being closed from outside such spaces.

Ventilation systems

14. (a) All power ventilation, except cargo and machinery space ventilation, shall be fitted with master controls so located outside the machinery space and in readily accessible positions that it shall not be necessary to go to more than three stations in order to stop all the ventilation fans to spaces other than machinery and cargo spaces. Machinery space ventilation shall be provided with a master control operable from a position outside the machinery space.
 - (b) On and after 1st October 1997 in ships carrying more than 36 passengers, the galley range exhaust ducts shall comply with the requirements set out in paragraph 4 of Schedule 3 in Merchant Shipping Notice MSN 1667 (M) omitting any reference therein to paragraph 2 of that Shipping Notice.
 - (c) On and after 1st October 2000, on ships constructed before 1st October 1994 carrying more than 36 passengers, ventilation ducts passing through divisions between main vertical zones shall be equipped with a fail-safe automatic closing fire damper which shall also be capable of being manually closed from each side of the division. In addition, fail-safe automatic closing fire dampers with manual operation from within the enclosure shall be fitted to all ventilation ducts serving both accommodation and surface spaces and stairway enclosures where they pierce such enclosures, except that ventilation ducts passing through a main fire zone division without serving spaces on both sides or passing through a stairway enclosure without serving that enclosure need not be fitted with dampers provided that the ducts are constructed to A-60 standard and have no openings within the stairway enclosure or in the trunk on the side which is not directly served.

Miscellaneous items

15. (1) The ship shall comply with Rule 54(1) and (2) of the Merchant Shipping (Construction) Rules 1952, except that in Rule 54(1), 20 metres shall be substituted for 13.73 metres.
 - (2) Fuel pumps shall be fitted with remote controls situated outside the space concerned so that they may be stopped in the event of a fire arising in the space in which they are isolated.

For ships carrying less than 36 passengers

General

16. (a) Every ship to which this part of the Schedule applies shall comply with Rules 48 to 51 inclusive, Rule 58, Rule 59(1), Rule 61, Rule 63(1), (a), (b), (c) and (d), Rule 63(2), (c), (d), (e), (f) and (g) of the Merchant Shipping (Passenger Ship Construction) Rules 1965. Where insulated "A" Class divisions are required by those rules, the Secretary of State may permit smaller amounts of insulation to be fitted than are required by Rule 50(1) of those Rules.
- (b) In every ship to which this part of the Schedule applies the following additional provisions shall apply -
- (i) all stairways and means of escape in accommodation and service spaces shall be of steel or other equivalent material;
 - (ii) power ventilation of a machinery space shall be capable of being stopped from an easily accessible position outside the space;
 - (iii) except where all bulkheads in accommodation spaces conform with the requirements of Rules 53(1) and 54(1) of the Merchant Shipping (Passenger Ship Construction) Rules 1965, such ships shall be provided with an automatic fire alarm and fire detection system conforming with Rule 55 of those Rules, and in accommodation spaces the corridor bulkheads shall be of steel and shall be non-combustible "B" Class divisions.

SCHEDULE 3

**Structural fire protection for Ships of Classes VII(T), VIII(T),
VIII(A)(T) and IX(A)(T) constructed between 25th May 1980 and 1st September 1984**

Application

1. This Schedule applies to sea-going United Kingdom tankers of 500 tons or over carrying crude oil and petroleum products having a closed flashpoint not exceeding 60°C and the Reid vapour pressure of which is below that of atmospheric pressure, or other liquids having similar fire hazards, and the keels of which were laid, or were at a similar stage of construction on or after 25th May 1980 but before 1st September 1984.

Structure

2. The hull, superstructures, structural bulkheads, decks and deckhouses shall be constructed of steel or other equivalent material except that the crowns and casings of machinery spaces of Category A and the exterior boundaries of superstructures and deckhouses which are required to be insulated to "A-60" standard by paragraph 3(a) of this Schedule shall be constructed only of steel.

Exterior boundaries of superstructure and deckhouses

3. (a) The exterior boundaries of superstructures and deckhouses enclosing accommodation and service spaces, control stations and cargo control stations and any overhanging deck which supports such spaces shall be insulated to "A-60" standard on the portions of such boundaries which face cargo oil tanks and on the sides of such boundaries for a distance of 3 metres measured horizontally and parallel to the middle line of the ship from the front boundary at each deck level, except that such insulation need not be fitted to -
 - (i) the external bulkheads and overhanging decks of the wheelhouse; and
 - (ii) the external boundaries of spaces in which doors referred to in sub-paragraph (b)(i) below are fitted.
- (b) In the exterior boundary bulkheads facing cargo oil tanks of superstructures and deckhouses enclosing accommodation and service spaces
 - (i) doors shall not be fitted except to provide access to those spaces which do not have access to accommodation and service spaces and whose internal boundaries are insulated to "A-60" standard;
 - (ii) sidescuttles and windows other than wheelhouse windows shall be of a non-opening type;
 - (iii) windows shall not be fitted in the first tier of such superstructures and deckhouses on the upper deck and sidescuttles fitted in such a tier shall be fitted internally with permanently attached covers of steel;
 - (iv) sidescuttles and windows fitted in tiers above the first tier of such superstructures and deckhouses shall either be fitted internally with permanently attached covers of steel or be provided with portable covers of steel which shall be stowed within the space they are intended to serve.

- (c) The provisions of paragraph (b) shall apply to the exterior boundary bulkheads at the sides of the superstructures and deckhouses enclosing accommodation and service spaces for a distance of 5 metres measured horizontally and parallel to the middle line of the ship from the front exterior boundary bulkhead at each deck level as the said provisions apply to exterior boundary bulkheads of the wheelhouse.

Separation of cargo pump rooms from machinery spaces of Category A

- 4 (a) The bulkheads and decks separating cargo pump rooms from machinery spaces of Category A shall be "A" Class divisions of "A-0" standard.
- (b) Where lighting enclosures are fitted in bulkheads and decks to which subparagraph (a) refers for the purpose of illuminating the cargo pump room, such lighting enclosures shall be such that the "A" Class integrity and gas-tightness of such bulkheads and decks are not impaired.

Boundary bulkheads and decks of machinery spaces of Category A and cargo pump rooms

- 5 (a) Windows and sidescuttles shall not be fitted in internal and external boundary bulkheads or decks of machinery spaces of Category A and cargo pump rooms, including skylights to such spaces, except that such windows and sidescuttles may be fitted in the bulkhead between a machinery space of Category A and a machinery control room located within the boundaries of such a space.
- (b) Skylights to machinery spaces of Category A and cargo pump rooms shall be capable of being closed and opened from outside the spaces which they serve.

Separation of accommodation spaces and service spaces from machinery spaces of Category A and cargo pump rooms

- 6 (a) Bulkheads and decks separating accommodation spaces and service spaces from machinery spaces of Category A and cargo pump rooms shall be "A" Class divisions of "A-60" standard.
- (b) Where lighting enclosures are fitted in a bulkhead to which paragraph 3(a) refers for the purpose of illuminating the cargo pump room, such lighting enclosures shall be such that the "A" Class integrity, insulation standard and gas tightness of such divisions are not impaired.

Separation of accommodation spaces from galleys, storerooms and similar spaces

- 7 The boundary bulkheads separating accommodation spaces from galleys, paint rooms, lamp rooms or boatswain's stores shall be constructed of steel or other equivalent material.

Protection of control stations from other enclosed spaces

- 8 (a) Bulkheads and decks separating control stations from other enclosed spaces shall be "A" Class divisions having insulation standards in accordance with Tables 1 and 2 set out in the Annex to this Schedule.
- (b) The deck separating the navigating space from the open space required by regulation 54(3)(b) of the Merchant Shipping (Cargo Ship Construction and Survey) Regulations 1981(a) when the navigation spaces are positioned above cargo tank spaces shall be an "A" Class division of "A-60" standard.

(a) S.I. 1981/572.

Bulkheads within accommodation spaces, service spaces and control stations

9. (a) All bulkheads within accommodation spaces, service spaces and control stations which are not required to be either "A" Class divisions or "B" Class divisions of "B-0" standard shall be "C" Class divisions.
- (b) Corridor bulkheads serving accommodation spaces, service spaces and control stations which are not required to be "A" Class divisions shall be "B" Class divisions of "B-0" standard.
- (c) All bulkheads required to be "B" Class divisions of "B-0" standard shall extend from deck to deck and to the shell plating or other boundaries, except that where continuous "B" Class ceilings or linings of "B-0" standard are fitted on both sides of the bulkheads the bulkheads may terminate at such ceilings or linings.
- (d) All materials used in the construction of bulkheads and doors in such bulkheads shall be non combustible.

Restriction of combustible materials

10. (a) Within accommodation spaces, service spaces and control stations
- (i) all ceilings, linings, draft stops and insulating materials shall be of non-combustible materials except for -
- (a) materials used to insulate refrigerated compartments;
- (b) materials used to insulate valves associated with hot and cold service systems, provided that their exposed surfaces are such that a Class 1 or 2 surface spread of flame will not be exceeded;
- (c) vapour barriers and adhesives used in conjunction with insulating materials, provided that their exposed surfaces are such that a Class 1 or 2 surface spread of flame will not be exceeded;
- (ii) the framing, grounds and joint pieces of linings, ceilings and draught stops shall be non combustible;
- (iii) bulkheads, ceilings and linings shall be faced with a combustible veneer unless the thickness of such a veneer does not exceed 2.0 millimetres, except in corridors, stairway enclosures and control stations where it shall not exceed 1.5 millimetres;
- (iv) all exposed surfaces in corridors and stairway enclosures and surfaces in concealed or inaccessible spaces shall be such that a Class 1 or 2 surface spread of flame is not exceeded;
- (v) primary deck coverings shall be of a type which will not readily ignite.
- (b) The surface of insulating materials fitted to the inside of the bulkheads and decks forming the casings and crowns of machinery spaces of Category A shall be impervious to oil and oil vapours.
- (c) Paints, varnishes and other finishes used on exposed surfaces within accommodation and service spaces, control stations and machinery spaces shall not contain nitrocellulose or other highly flammable base products and such surfaces, except where otherwise required by these Regulations, shall be such that a Class 3 surface spread of flame will not be exceeded; provided that these requirements shall not apply to furniture, furnishings, machinery and similar items.

Draught stops

11. Every air space enclosed behind a ceiling, panel or lining within accommodation spaces, service spaces and control stations shall be divided by close-fitting draught stops which shall be spaced not more than 14 metres apart and which shall be closed at each deck.

Openings in "A" Class divisions

12. (a) Where an "A" Class division is pierced for the passage of electric cables, pipes, trunks, girders or beams, or for other purposes, the arrangements shall be such that the effectiveness of the division in resisting fire is not thereby impaired, except that this requirement shall not apply to shaft glands and similar glanded penetrations in bulkheads and decks between cargo pump rooms, including their trunks, and machinery spaces of Category A.
- (b) The construction of all doors and frames in "A" Class bulkheads, with the means of securing them when closed, shall provide resistance to fire as well as to the passage of smoke and flame, as far as is reasonably practicable, equivalent to that of the bulkheads in which the doors are situated.
- (c) Every door in an "A" Class bulkhead shall be so constructed that it can be opened and closed by one person from either side of the division.
- (d) Every door in an "A" Class bulkhead which forms part of a stairway enclosure or lift trunk serving accommodation spaces, service spaces or control stations and every door in a casing of a machinery space of Category A shall be self-closing.
- (e) Hold-back arrangements may be fitted to doors to which paragraph (d) refers provided that such arrangements -
- (i) have remote release fittings of a type which in the event of disruption of the control system will automatically close the doors; and
 - (ii) will permit each door to be closed manually.

Openings in "B" Class divisions

13. (a) Where a "B" Class division is pierced for the passage of electric cables, pipes, trunks, girders or beams, or for other purposes, the arrangements shall be such that the effectiveness of the division in resisting fire is not thereby impaired.
- (b) The construction of all doors and door frames in "B" Class bulkheads shall provide resistance to fire as well as the passage of flame, as far as is reasonably practicable, equivalent to that of the bulkheads in which the doors are situated.
- (c) The number of ventilation openings in "B" Class divisions shall be kept to a minimum and shall be provided as far as is reasonably practicable only in the lower part of a door and fitted with a grille constructed of steel or under a door except that such openings shall not be provided in a door in a "B" Class division forming a stairway enclosure. The net area of any such opening or openings shall not exceed 0.05 square metre and in no case shall a gap under a door exceed 25 millimetres.
- (d) Every door in a "B" Class bulkhead which forms a stairway enclosure or part thereof shall be self-closing.
- (e) Hold-back arrangements may be fitted to doors to which paragraph (d) refers provided that such arrangements -
- (i) have remote release fittings of a type which in the event of disruption of the control system will automatically close the doors; and
 - (ii) will permit each door to be closed manually.

Protection of stairway enclosures and lift trucks

14. (a) Every stairway within accommodation spaces, service spaces and control stations shall be constructed of steel or other suitable material and every such stairway and lift shall lie respectively within an enclosure or trunk constructed of "A" Class divisions of "A-0" standard except that a stairway serving only two decks shall only be required to be enclosed at one level by either "A" Class divisions of "A-0" standard or "B" Class divisions of "B-0" standard; provided that any bulkhead which separates a stairway from a machinery space of Category A shall be an "A" Class division of "A-60" standard.
- (b) Every opening in a stairway enclosure and lift trunk shall be provided with a means of closure which shall be permanently attached thereto and which shall comply with the requirements of paragraph 11 and 12 whichever is applicable.

Ventilating systems

15. (a) Ducts providing ventilation to machinery spaces of Category A shall not pass through accommodation spaces, service spaces or control stations, except that this requirement shall not apply to such ducts which -
- (i) are constructed of steel having a minimum thickness of 3 millimetres for ducts the width or diameter of which does not exceed 300 millimetres, increasing pro rata up to a minimum thickness of 5 millimetres for ducts the width or diameter of which is 760 millimetres or more; and
 - (ii) are suitably supported and stiffened; and
 - (iii) are insulated to "A-60" standard.
- (b) Ducts providing ventilation to accommodation spaces, service spaces, or control stations other than ducts which comply with paragraph (a)(i), (ii) and (iii) shall not pass through machinery spaces of Category A.
- (c) Ventilation inlets and outlets to accommodation and service spaces, control stations and machinery spaces, and other openings in the boundaries of superstructures and deckhouses enclosing such spaces shall be positioned as far aft as is practicable taking into account stern cargo handling facilities where these are provided.
16. (a) In accommodation spaces, service spaces or control stations, pipes intended to convey oil or other flammable liquids shall be of a suitable material having regard to the risk of fire.
- (b) Overboard scuppers, sanitary discharges or other outlets close to the waterline shall not be of a material likely to fail in the event of a fire and give rise to a danger of flooding.
- (c) Electrical radiators shall -
- (i) be permanently fixed in position;
 - (ii) be so constructed as to reduce the risk of fire to a minimum; and
 - (iii) not be equipped with elements so exposed as to scorch or ignite clothing, curtains or other similar materials.
- (d) Cellulose-nitrate film shall not be used in cinematograph installations.

Means of escape

17. (a) Stairways and ladderways shall be arranged so as to provide ready means of escape to the lifeboat embarkation deck from all crew spaces, passenger spaces and other spaces in which the crew are normally employed.
- (b) There shall be provided from each engine room, shaft tunnel and boiler room two means of escape as widely separated as practicable, one of which may be a watertight door if such a door is available as a means of escape. Where no such watertight door is available, the two means of escape shall consist of two sets of steel ladders leading to separate doors in the casing or elsewhere from which there is access to the lifeboat or liferaft embarkation deck or decks. The Secretary of State may exempt any ship of less than 2,000 tons from the requirements of this paragraph if at least one effective means of escape is provided.

**TABLE 1 - FIRE INTEGRITY AND INSULATION STANDARDS OF BULKHEADS
SEPARATING CONTROL STATIONS FROM OTHER SPACES**

Space ¹	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Space J-							
Control Station	A01	A0	A15	A0	A15	A60	A15

Where (1) are control stations
 (2) are corridors
 (3) are accommodation spaces
 (4) are stairways
 (5) are service spaces
 (6) are machinery spaces of Category A
 (7) are machinery spaces other than machinery spaces of Category A

Superscription ¹ - bulkheads separating the wheelhouse, chartroom and radio room from each other may be alternatively "B" Class bulkheads of "B-0" standard.

**TABLE 2 - FIRE INTEGRITY AND INSULATION STANDARDS OF DECKS
SEPARATING CONTROL STATIONS FROM OTHER SPACES**

Space Above ¹	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Space Below J-							
Control Stations (1)	AD	AU	AD	AD	AD	A6D	AD
Corridors (2)	AD						
Accommodation Spaces (3)	A15						
Stairways (4)	AD						
Service Spaces (5)	A15						
Machinery Spaces of Category A (6)	A6D						
Machinery Spaces Other Than Machinery Spaces of Category A (7)	A15						

SCHEDULE 4

Structural fire protection for ships of Classes VII, VII (A), VIII, VIII(A), IX and IX(A), and tankers of Classes VII(T), VIII(T), VIII(A)(T) and IX(A)(T) of 500 tons or over constructed between 26th May 1965 and 1st September 1984 other than tankers to which Schedule 3 applies.

Application

1. The requirements of paragraph 2 to 9 inclusive apply to ships of 4,000 tons or over, and the requirements of paragraph 10 applies to ships of 500 tons or over.

Structure

2. The hull, superstructure, structural bulkheads, decks and deckhouses shall be constructed of steel or of such other suitable materials as the Secretary of State may permit in special cases, having regard to the risk of fire.

Bulkheads

3. Where a bulkhead is required to be constructed of "B" Class panels, such panels shall be capable of preventing the passage of flame throughout a standard fire test of 30 minutes duration. Every "B" Class panel shall be such that if either face is exposed to a standard fire test of 30 minutes duration, the average temperature on the unexposed face of the panel will not increase at any time during the first 15 minutes of the test in the case of a non-combustible panel or the duration of the test in the case of a combustible panel by more than 139°C above the initial temperature on that face, nor shall the temperature at any point increase by more than 225°C above the initial temperature.
4. The corridor bulkheads serving accommodation spaces and control stations shall be constructed of steel or of non-combustible "B" Class panels, except that combustible "B" Class panels may be fitted
 - (a) in any portion of a corridor bulkhead which abuts on spaces containing no significant fire load; and
 - (b) where a corridor is provided with two or more exits through doors leading directly to an open deck on the same level, in the end portions of the corridor bulkheads over a distance not exceeding 6 metres measured from any such exit.
5. The boundary bulkheads of any emergency generator room and the bulkheads separating a galley, paint-room, lamp-room or boatswain's store from an accommodation space shall be constructed of steel or other equivalent material.
6. Doorways and similar openings in corridor bulkheads shall be capable of being closed by permanently attached doors or by shutters.

Ventilation systems

7. The number of ventilation openings in such bulkheads shall be kept to a minimum. Such openings shall, so far as is reasonably practicable, be provided only in or under doors and shall, wherever practicable, be in the lower part of the door.

Restriction of combustible materials

8. Deck coverings within accommodation spaces and control stations on the deck forming the crown of machinery and cargo spaces shall be of a type which will not readily ignite.

9. (a) Paints, varnishes and other surface materials having a nitrocellulose or other highly flammable base shall not be used in accommodation spaces, machinery spaces or control stations.
- (b) Pipes intended to convey oil or other flammable liquids shall be of a material acceptable to the Certifying Authority having regard to the risk of fire.
- (c) Overboard scuppers, sanitary discharges or other outlets close to or below the waterline shall not be of a material likely to fail in the event of fire and thereby give rise to a danger of flooding.
- (d) Cellulose-nitrate film shall not be used in cinematograph installations.

Protection of stairways

10. Interior stairways, ladders and crew lift trunks within accommodation spaces shall be constructed of steel or other equivalent material.

Boundaries of machinery spaces

11. (a) Skylights to spaces containing main propulsion machinery or oil-fired boilers or auxiliary internal combustion type machinery of a total power of 746 kilowatts or over shall be capable of being closed and, where practicable, opened from outside the space in the event of fire and, where they contain glass panels, such panels shall be of fire resisting construction fitted with wire reinforced glass and shall have external, permanently attached shutters of steel or other equivalent material.
- (b) Windows shall not be fitted in engine casings except where they are necessary and will not constitute a fire hazard. Where such windows are fitted they shall be of a non-opening type and shall be of fire resisting construction fitted with wire reinforced glass and shall have external, permanently attached shutters of steel or other equivalent material.

Means of escape

12. (a) Stairways and ladderways shall be arranged so as to provide ready means of escape to the lifeboat embarkation deck from all crew spaces, passenger spaces and other spaces in which the crew are normally employed.
- (b) There shall be provided from each engine room, shaft tunnel and boiler room two means of escape as widely separated as practicable, one of which may be a watertight door if such a door is available as a means of escape. Where no such watertight door is available, the two means of escape shall consist of two sets of steel ladders leading to separate doors in the casing or elsewhere from which there is access to the lifeboat or liferaft embarkation deck or decks. The Secretary of State may exempt any such ship of less than 2,000 tons from the requirements of this paragraph if at least one effective means of escape is provided.

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