
STATUTORY INSTRUMENTS

1998 No. 1012

**The Merchant Shipping (Fire Protection:
Large Ships) Regulations 1998**

PASSENGER SHIPS

SHIPS OF CLASSES I, II, AND II(A)

Additional requirements for a ship constructed on or after 1st October 1994

(5) In the application of paragraph (1) to a ship constructed on or after 1st October 1994 carrying more than 36 passengers, the references to “A” Class divisions shall be references to those divisions insulated to “A-60” standard: provided that if open deck spaces, sanitary and similar spaces and tanks, voids and auxiliary machinery spaces having little or no fire risk, defined in Category 5, 9 and 10 of Schedule 1 in Merchant Shipping Notice MSN 1667 are on one side of the division, or fuel oil tanks are on both sides the standard may be reduced to “A-0”.

(6) In the case of a ship constructed on or after 1st October 1994, the length and width of main vertical zones may be extended to a maximum of 48 metres in order to bring the ends of main vertical zones to coincide with watertight sub-division bulkheads or in order to accommodate a large public space extending for the whole length of the main vertical zone provided that the total area of the main vertical zone is not greater than 1,600 metres² on any deck. The length or width of a main vertical, zone is the maximum distance between the furthestmost points of the bulkheads bounding it.

Bulkheads within a main vertical zone

55.—(1) Every bulkhead within the accommodation spaces or service spaces not being a bulkhead required to consist of an “A” Class division, shall consist of a “B” Class division or “C” Class division as required in the case of—

- (a) ships carrying more than 36 passengers, by the Tables set out in Schedule 1 in Merchant Shipping Notice MSN 1667; and
- (b) ships carrying 36 passengers or less, by the Tables set out in Schedule 2 in Merchant Shipping Notice MSN 1667.

All such divisions may be faced with combustible materials in accordance with regulation 62.

(2) Except in the case of ships constructed on or after 1st October 1994 carrying more than 36 passengers, all corridor bulkheads where not required to be “A” Class divisions shall be “B” Class divisions which shall extend from deck to deck except that—

- (a) when continuous “B” Class ceilings and/or linings are fitted on both sides of the bulkhead, the portion of the bulkhead behind the continuous ceiling or lining shall be of material which in thickness and composition meets the requirements of “B” Class divisions, but which is required to meet “B” Class fire integrity standards only so far as is reasonable and practicable; and
- (b) in the case of a ship protected by an automatic sprinkler, fire detection and fire alarm system complying with the provisions of Schedule 1 in Merchant Shipping Notice MSN 1666 the corridor bulkheads of “B” Class materials may terminate at a ceiling in the

corridor, provided that such a ceiling is of material which in thickness and composition meets the requirements of “B” Class divisions; notwithstanding the requirements for fire integrity of bulkheads in Merchant Shipping Notice MSN 1667 such bulkheads and ceilings shall be required to meet “B” Class fire integrity standards only so far as is reasonable and practicable; all doors and their frames in such bulkheads shall be of non-combustible materials and shall be constructed and erected so as to provide substantial fire resistance.

(3) Except as provided in paragraph (2), every bulkhead required to be a “B” Class division shall extend from deck to deck and to the shell or other boundaries unless continuous “B” Class ceilings and/or linings fitted on both sides of the bulkhead are of at least the same fire resistance as the bulkhead in which case the bulkhead may terminate at the continuous ceiling or lining.

Fire Integrity of bulkheads and decks

56.—(1) In addition to complying with the specific provisions for fire integrity of bulkheads and decks the minimum fire integrity and insulation standards of all bulkheads and decks shall be as prescribed in the Tables given in Merchant Shipping Notice MSN 1667.

(2) Where due to any structural arrangement there may be doubt in determining from the Tables the minimum fire integrity and insulation standard of any division, such standard shall be determined to the satisfaction of the Secretary of State.

Protection of stairways and lifts in accommodation and service spaces

57.—(1) All stairways shall be of steel frame construction, except where the Secretary of State may approve the use of other equivalent material, and shall be within enclosures formed of “A” Class divisions, except that—

- (a) an isolated stairway connecting only two decks need not be enclosed on both decks provided that the integrity of the deck is maintained by bulkheads or doors at one between-deck space; when a stairway is closed at one between-deck space, the stairway enclosure shall have the same integrity standard as is required in the case of—
 - (i) a passenger ship carrying more than 36 passengers, by the Tables set out in Schedule 1 in Merchant Shipping Notice MSN 1667 for the deck which separates the between-deck space;
 - (ii) a ship carrying 36 passengers or less, by the Tables set out in Schedule 2 in Merchant Shipping Notice MSN 1667 for the deck which separates the between-deck space;
- (b) stairways may be fitted within the open part of a public space, provided that they lie wholly within such public space.

(2) Every opening in a stairway enclosure shall be provided with a means of closure which shall be permanently attached thereto.

(3) Every lift trunk shall be so fitted as to prevent the passage of smoke and flame from one between-deck to another and shall be provided with means of closing so as to permit the control of draught and smoke.

- (a) (4) (a) Stairway enclosures shall have direct access to the corridors and be of a sufficient area to prevent congestion, having in view the number of persons likely to use them in an emergency.
- (b) In ships constructed on or after 1st October 1994 and in ships constructed before 1st October 1994 carrying more than 36 passengers, only public toilets, lifts, lockers of non-combustible material providing storage for safety equipment and open information counters may be located within the stairway enclosure boundaries.

- (c) In ships constructed on or after 1st October 1994 and in ships constructed before 1st October 1994 carrying more than 36 passengers, only public spaces, corridors, public toilets, special category spaces and other escape stairways required by regulation 68(2)(c), open deck spaces and, in the case of ships constructed before 1st October 1997, spaces to which paragraph (5) applies, are permitted to have direct access to these stairway enclosures.
- (5) Every ship constructed before 1st October 1994 carrying more than 36 passengers shall comply with the following—
- (a) existing spaces other than those referred to in paragraph (4)(b) within the stairway enclosure boundaries—
- (i) shall be emptied, permanently closed and disconnected from the electrical system; or
- (ii) shall be separated from the stairway enclosure by the provision of “A” Class divisions in accordance with regulation 56 except as it applies to ships constructed on or after 1st October 1994. Such spaces may have direct access to stairway enclosures by the provision of “A” Class doors, subject to a sprinkler system being provided in these spaces. However, cabins shall not open directly into the stairway enclosure;
- (b) spaces other than public spaces, corridors, public toilets, special category spaces, other stairways required by regulation 68(3)(c), open deck spaces and spaces covered by paragraph (a)(ii) above are not permitted to have direct access to stairway enclosures;
- (c) existing machinery spaces of category 10 described in Schedule 1 in Merchant Shipping Notice MSN 1667 and existing back offices for information counters opening directly into the stairway enclosure may be retained, provided that they are protected by smoke detectors connected to a fixed fire detection and fire alarm system complying with the requirements of Schedule 5 in Merchant Shipping Notice MSN 1666 and such offices contain only furniture of restricted fire risk;
- (d) hinged fire doors in stairway enclosures which are normally kept open shall be self-closing and be capable of release from a central control station and from a position at the door. All other fire doors in stairway enclosures which are normally kept open shall be capable of release from a central control station and from a position at the door;
- (e) a panel shall be placed in a continuously manned central control station to indicate whether the fire doors in the stairway enclosures are closed.
- (6) Furniture in stairway enclosures shall be limited to seating. It shall be fixed, limited to 6 seats on each deck in each stairway enclosure, be of restricted fire risk, and shall not restrict the passenger escape route. The Secretary of State may permit additional seating in the main reception area within stairway enclosures, if it is fixed, non-combustible, and does not restrict the passenger escape route. Furniture is not permitted in passenger and crew corridors forming escape routes in cabin areas except that lockers of non-combustible material, providing storage for safety equipment are permitted.

Openings in “A” Class divisions

58.—(1) Where an “A” Class division is pierced for the passage of electric cables, pipes, trunks, girders, beams or for other purposes, the arrangements shall be such that the effectiveness of the division in resisting fire is not thereby impaired except as provided in paragraph (7).

(2) Where ventilation ducts pass through “A” Class divisions the requirements of regulation 60 shall apply.

(3) Except for hatches between special category spaces or ro-ro cargo spaces within a single horizontal zone, or hatches between cargo spaces or stores or baggage spaces, and hatches between such spaces and the weather decks, every opening shall be provided with permanently attached

means of closing which shall be at least as effective for resisting fire as the division in which it is fitted.

(4) Every door and door frame in an “A” Class division shall be constructed of steel or other equivalent material and the means of securing the door when closed shall provide resistance to fire as well as to the passage of smoke and flame, as far as practicable, equivalent to that of the bulkhead in which the door is situated: provided that a watertight door shall not be required to be insulated.

(5) Any door in such a division shall be so constructed that it can be opened and closed by one person from either side of the division.

(6) In ships constructed before 1st October 1994 carrying more than 36 passengers—

- (a) hinged fire doors in main vertical zone bulkheads and galley boundaries which are normally kept open shall be self-closing and be capable of release from a central control station and from a position at the door;
- (b) all other fire doors in main vertical zone bulkheads and galley boundaries which are normally kept open shall be capable of release from a central control station and from a position at the door; and
- (c) a panel shall be placed in a continuously manned central control station to indicate whether the fire doors in main vertical zone bulkheads and galley boundaries are closed.

(7) In the case of a ship constructed before 1st October 1994, every door in a division constructed in compliance with regulation 54(1) or 57(1) except a watertight door or one which is normally locked shut, shall be self-closing and capable of closing against an adverse inclination of up to 3.5 degrees. The speed of door closure shall be controlled so as to prevent undue danger to personnel. All such doors which are held in the open position shall be capable of release from a control station, either simultaneously or in groups, and also individually from a position at the door. The release mechanism shall be so designed that the door will automatically close in the event of disruption of the control system; except that this requirement shall not apply to a watertight door. Hold-back hooks, not subject to control station release, are not permitted.

(8) In the case of a ship constructed on or after 1st October 1994, every door in a division constructed in compliance with regulations 54(1) or 57(1), shall satisfy the following requirements—

- (a) it shall be self-closing and be capable of closing against an adverse inclination of up to 3.5 degrees at an approximately uniform rate of not more than 40 seconds and no less than 10 seconds with the ship in the upright position;
- (b) remote-controlled sliding or power-operated doors shall be equipped with an alarm that sounds at least 5 seconds but no more than 10 seconds before the door begins to move and continues sounding until the door is completely closed. A door designed to re-open upon contacting an object in its path shall re-open sufficiently to allow a clear passage of at least 0.75 metres but not more than 1 metre;
- (c) all doors shall be capable of remote and automatic release from a continuously manned central control station, either simultaneously or in groups, and also individually from a position at both sides of the door;
- (d) a panel shall be placed in the continuously manned central control station to indicate whether each of the remote-controlled doors are closed;
- (e) the release mechanism shall be so designed that the door will automatically close in the event of disruption of the control system or central power supply;
- (f) release switches shall have on-off function to prevent automatic resetting of the system;
- (g) hold-back hooks not subject to central control station release are prohibited;

- (h) local power accumulators for power-operated doors shall be provided in the immediate vicinity of the doors to enable the doors to be operated at least 10 times (fully opened and closed) using the local controls;
- (i) double-leaf doors equipped with a latch necessary to their fire integrity shall have a latch that is automatically activated by the operation of the doors when released by the system;
- (j) doors giving direct access to special category spaces which are power-operated and automatically closed need not be equipped with the alarms and remote-release mechanisms specified in sub-paragraph (b).

(9) In ships carrying not more than 36 passengers and in ships carrying more than 36 passengers constructed before 1st October 1994, where a space is protected by an automatic sprinkler, fire detection and fire alarm system complying with the provisions of Schedule 1 in Merchant Shipping Notice MSN 1666 or fitted with a continuous “B” Class ceiling, the closing of openings in decks not forming steps in main vertical zones or bounding horizontal zones shall be reasonably tight and such decks shall meet the “A” Class integrity requirements in so far as is reasonable and practicable.

(10) The requirements for “A” Class integrity of the outer boundaries of a ship shall not apply to glass partitions, windows and sidescuttles, subject to the requirements of regulation 61 provided that, in the case of ships constructed on or after 1st October 1994 there is no requirement for such boundaries to have “A” Class integrity in regulation 61(3). The requirements for “A” Class integrity shall not apply to exterior doors in superstructures and deckhouses, except that doors opening on to lifeboat and liferaft handling and embarkation areas shall be of such construction as to protect these areas from a space having a potential fire hazard,

(11) In the case of a ship constructed on or after 1st October 1994 all “A” Class doors located in stairways, public spaces and main vertical zone bulkheads in escape routes shall be equipped with a self-closing hose port of material, construction and fire resistance which is equivalent to the door in which it is fitted, and which shall furnish a 150 mm square clear opening with the port open and door closed, and shall be inset into the lower edge of the door opposite the door hinges or, in the case of sliding doors, nearest the opening.

Openings in “B” Class divisions

59.—(1) Where a “B” Class division is pierced for the passage of electric cables, pipes, trunks, girders, beams or for other purposes the arrangements shall be such that the effectiveness of the division in resisting fire is not thereby impaired except as provided in paragraph (4). Where ventilation ducts pass through “B” Class divisions the requirements of paragraph 6 of Schedule 3 of Merchant Shipping Notice MSN 1667 shall apply.

- (a) (2) (a) Doors and door frames in “B” Class divisions and the means of securing them shall provide a method of closure which shall have resistance to fire as far as practicable equivalent to the division, except that ventilation openings may be permitted in the lower portion of such doors. Where such an opening is in or under a door, its total net area shall not exceed 0.05 square metre. When such an opening is cut in a door, it shall be fitted with a grille made of steel and shall be capable of being manually closed from each side of the door. Doors shall be non-combustible, except that in ships carrying 36 passengers or less a door which separates a cabin from an individual interior sanitary space such as a shower space may be of combustible material.
- (b) In the case of a ship constructed on or after 1st October 1994, cabin doors in “B” Class divisions shall be of the self-closing type. Hold-backs are not permitted.

(3) The requirements for “B” Class integrity of the outer boundaries of a ship shall not apply to glass partitions, windows and sidescuttles subject to the requirements of regulation 61. The requirements for “B” Class integrity shall not apply to exterior doors in superstructures and

deckhouses, except that doors opening on to lifeboat and liferaft handling and embarkation areas shall be of such construction as to protect these areas from a space having a potential fire hazard.

(4) Except in the case of a ship constructed on or after 1st October 1994 carrying more than 36 passengers, where an automatic sprinkler, fire detection and fire alarm system complying with the provisions of Schedule 1 of Merchant Shipping Notice MSN 1666 is fitted—

- (a) the closing of openings in decks need only meet the “B” Class integrity requirements in so far as is reasonable and practicable;
- (b) openings in corridor bulkheads of “B” Class materials shall be protected in accordance with the provisions of regulation 55.

Ventilation systems

60.—(1) Wherever practicable the system of ducts leading from each ventilation fan shall be within one main vertical or horizontal zone.

(2) Where ventilation systems penetrate decks precautions shall be taken, in addition to those relating to the fire integrity of the decks required by regulation 58(1), to reduce the likelihood of smoke and hot gases passing from one between-deck space to another through the system. In addition to insulation requirements contained in this regulation, vertical ducts shall be insulated as required by the Tables in Schedules 1 and 2 in Merchant Shipping Notice MSN 1667 as appropriate.

- (a) (3) (a) Ducts serving a stairway enclosure shall be taken from the fan room independently of other ducts in the ventilation system and shall not serve any other space.
- (b) In the case of a ship constructed on or after 1st October 1994, carrying more than 36 passengers stairway enclosures shall be ventilated and shall be served only by an independent fan and duct system which shall not serve any other spaces in the ventilation system.

(4) There shall be provided for every control station situation below deck, other than a control station situated in the machinery space, means to ensure ventilation, visibility and freedom from smoke within it so that, in the event of a fire in the ship, the equipment it contains may be operated effectively. Unless a control station is situated on, and has access to, an open deck or is provided with local closing arrangements equally effective to maintain ventilation, visibility and freedom from smoke in the event of a fire in the ship, there shall be provided at least two entirely separate means of supplying air to such control stations and the air inlets to these sources of supply shall be so situated that the risk of both drawing in smoke simultaneously is, as far as practicable, eliminated.

(5) Ventilation ducts except those in cargo spaces, shall be constructed in accordance with the specifications set out in Schedule 3 in Merchant Shipping Notice MSN 1667.