Interpretations regarding implementation of international statutory requirements which contain references "to the satisfaction of the Administration", "to be specified by the Administration", "in the opinion of the Administration", "at the discretion of the Administration" and "consideration by the Administration"

List includes: SOLAS 2023 Amend, MARPOL 2024 Amend, Assembly Resolutions – 33rd session, MSC Resolutions – 107th session, MEPC Resolutions – 81st session, Directive 2009/45/EC, Directive 1997/70/EC.

Requirements:

III Code / PART 2 – Flag States / Implementation

"16 A flag State should establish resources and processes capable of administering a safety and environmental protection programme, which, as a minimum, should consist of the following:

.5 the development, documentation and provision of guidance concerning those requirements found in the relevant international instruments that are to the satisfaction of the Administration."

National Regulations:

Cabinet Regulations No. 439 adopted on 7 June 2011 "Regulations Regarding the Implementation of Flag State Supervision of Ships", para 3.7.

"3. The Inspectorate shall implement the flag State supervision of Latvian ships by performing the following activities:

3.7. development of guidelines on the application of the requirements specified in the international legal acts and legal acts of the European Union to the satisfaction of the Administration in the cases provided for in the international legal acts, publishing these requirements on the website of the Maritime Administration."

Policy:

Interpretations of the Administration for the international / EU requirements containing references "to the satisfaction of the Administration", "to be specified by the Administration", "in the opinion of the Administration", "at the discretion of the Administration" and "consideration by the Administration" are divided into 3 groups:

1. **Technical** – issues which are applied during the design and construction period of the ship, in some cases during the major conversation or repair works. In this case the Administration considers as a general rule to follow the requirements of authorized Recognized Organizations (RO) taking into account the interpretations of unified IMO and the International Associations of Classification Societies. In case when the Administration has a specific requirement in additional to RO requirement, this specific requirement is given in the table below as well as a reference to the Cabinet regulations.
2. **Specific** – issues for which the Administration has specific requirements laid down in the Laws and Cabinet regulations. The reference to Law or Cabinet regulations and the summary of the requirement are given in the below table.
3. **Indefinite** – issues where the Administration has not specific requirements due to the lack of expertise in that particular sphere thereby the Administration does not have the possibility to lay down justified requirements and explanations. In this case interpretations must be treated as "Technical" and finally accepted by the Administration in each particular case.

Convention reference	Application date for ships constructed (mm/dd/yyyy)	Requirement	Clarification and approach of the Administration to meet the requirement: "to the satisfaction of the Administration", "to be specified by the Administration", "in the opinion of the Administration", "at the discretion of the Administration"" and "consideration by the Administration"
SOLAS 60			
SOLAS 1960 / Chapter I / Reg. 4	Before 5/25/1980	A ship which is not normally engaged on international voyages but which, in exceptional circumstances, is required to undertake a single international voyage may be exempted by the Administration from any of the requirements of the present Regulations provided that it complies with safety requirements which are adequate in the opinion of the Administration for the voyage which is to be undertaken by the ship.	**Specific** Case by case assessment
SOLAS 1960 / Chapter II / Reg. 4(b)(ii)	Before 5/25/1980	(ii)Where it is shown to the satisfaction of the Administration that the average permeability as determined by detailed calculation is less than that given by the formula, the detailed calculated value may be used. For the purpose of such calculation, the permeabilities of passenger spaces, as defined in Regulation 2 of this Chapter, shall be taken as 95, that of all cargo, coal and store spaces as 60, and that of double bottom, oil fuel and other tanks at such values as may be approved in each case.	**Technical**
SOLAS 1960 / Chapter II / Reg. 5(d)(i)	Before 5/25/1980	(i) The subdivision abaft the forepeak of ships 430 feet (or 131 metres) in length and upwards having a criterion numeral of 23 or less shall be governed by the factor A given by formula (I); of those having a criterion numeral of 123 or more by the factor B given by formula (II); and of those having a criterion numeral between 23 and 123 by the factor F obtained by linear interpolation between the factors A and B, using the formula : - $F = A - \frac{(A-B)(C_s-23)}{100}$ .....(V)	**Technical**

		Nevertheless, where the criterion numeral is equal to 45 or more and simultaneously the computed factor of subdivision as given by formula (V) is ·65 or less, but more than ·50, the subdivision abaft the forepeak shall be governed by the factor ·50. Where the factor F is less than ·40 and it is shown to the satisfaction of the Administration to be impracticable to comply with the factor F in a machinery compartment of the ship, the subdivision of such compartment may be governed by an increased factor, which, however, shall not exceed ·40.	
SOLAS 1960 / Chapter II / Reg. 5(d)(iii)	Before 5/25/1980	(iii)The subdivision abaft the forepeak of ships less than 430 feet (or 131 metres) but not less than 260 feet (or 79 metres) in length and having a criterion numeral less than S, and of all ships less than 260 feet (or 79 metres) in length shall be governed by the factor unity, unless, in either case, it is shown to the satisfaction of the Administration to be impracticable to comply with this factor in any part of the ship, in which case the Administration may allow such relaxation as may appear to be justified, having regard to all the circumstances.	**Technical**
SOLAS 1960 / Chapter II / Reg. 5(e)(ii)(5)	Before 5/25/1980	(5) The subdivision abaft the forepeak of ships less than 430 feet (or 131 metres) but not less than 180 feet (or 55 metres) in length and having a criterion numeral less than S1 and of all ships less than 180 feet (or 55 metres) in length shall be governed by the factor unity, unless it is shown to the satisfaction of the Administration to be impracticable to comply with this factor in particular compartments, in which event the Administration may allow such relaxations in respect of those compartments as appear to be justified, having regard to all the circumstances, provided that the aftermost compartment and as many as possible of the forward compartments (between the forepeak and the after end of the machinery space) shall be kept within the floodable length.	**Technical**
SOLAS 1960 / Chapter II / Reg. 6(h)	Before 5/25/1980	(h) Where a main transverse watertight compartment contains local subdivision and it can be shown to the satisfaction of the Administration that, after any assumed side damage extending over a length of 10 feet (or 3·05 metres) plus 3 per cent. of the length of the ship, or 35 feet (or 10·67 metres) whichever is the less, the whole volume of the main compartment will not be flooded, a proportionate allowance may be made in the permissible length otherwise required for such compartment. In such a case the volume of effective buoyancy assumed on the	**Technical**

		undamaged side shall not be greater than that assumed on the damaged side.	
SOLAS 1960 / Chapter II / Reg. 8	Before 5/25/1980	When ballasting with water is necessary, the water ballast should not in general be carried in tanks intended for oil fuel. In ships in which it is not practicable to avoid putting water in oil fuel tanks, oily-water separator equipment to the satisfaction of the Administration shall be fitted, or other alternative means acceptable to the Administration shall be provided for disposing of the oily-water ballast.	**Specific** Maritime Administration and Marine Safety Law / Division C, Chapter 1 "Ship safety and supervision of ship safety" / Section 11 "Safety requirements for ships" The ship shall fully comply with the requirements of MARPOL Convention.
SOLAS 1960 / Chapter II / Reg. 10(b)	Before 5/25/1980	(b) Where a double bottom is required to be fitted its depth shall be to the satisfaction of the Administration and the inner bottom shall be continued out to the ship's sides in such a manner as to protect the bottom to the turn of the bilge. Such protection will be deemed satisfactory if the line of inter- section of the outer edge of the margin plate with the bilge plating is not lower at any part than a horizontal plane passing through the point of intersection with the frame line amidships of a transverse diagonal line inclined at 25 degrees to the base line and cutting it at a point one-half the ship's moulded breadth from the middle line.	**Technical**
SOLAS 1960 / Chapter II / Reg. 10(d)	Before 5/25/1980	(d) A double bottom need not be fitted in way of watertight compartments of moderate size used exclusively for the carriage of liquids, provided the safety of the ship, in the event of bottom or side damage, is not, in the opinion of the Administration, thereby impaired.	**Technical**
SOLAS 1960 / Chapter II / Reg. 12(a)	Before 5/25/1980	(a) Each watertight subdivision bulkhead, whether transverse or longitudinal, shall be constructed in such a manner that it shall be capable of supporting, with a proper margin of resistance, the pressure due to the maximum head of water which it might have to sustain in the event of damage to the ship but at least the pressure due to a head of water up to the margin line. The construction of these bulkheads shall be to the satisfaction of the Administration.	**Technical**
SOLAS 1960 / Chapter II / Reg. 14	Before 5/25/1980	(b) The arrangement and efficiency of the means for closing any opening in the shell plating shall be consistent with its intended purpose and the position in which it is fitted and generally to the satisfaction of the Administration.	**Technical**

SOLAS 1960 / Chapter II / Reg. 15(a)(i)	Before 5/25/1980	(i) The design, materials and construction of all watertight doors, sidescuttles, gangway, cargo and coaling ports, valves, pipes, ash-shoots and rubbish-shoots referred to in these Regulations shall be to the satisfaction of the Administration.	**Technical**
SOLAS 1960 / Chapter II / Reg. 16(a)	Before 5/25/1980	(a) Watertight decks, trunks, tunnels, duct keels and ventilators shall be of the same strength as watertight bulkheads at corresponding levels. The means used for making them watertight, and the arrangements adopted for closing openings in them, shall be to the satisfaction of the Administration. Watertight ventilators and trunks shall be carried at least up to the bulkhead deck.	**Technical**
SOLAS 1960 / Chapter II / Reg. 18(g)(ii)	Before 5/25/1980	(g) (ii)Where in the opinion of the Administration the main circulating pump is not suitable for this purpose, a direct emergency bilge suction shall be led from the largest available independent power driven pump to the drainage level of the machinery space: the suction shall be of the same diameter as the main inlet of the pump used. The capacity of the pump so connected shall exceed that of a required bilge pump by an amount satisfactory to the Administration.	**Technical**
SOLAS 1960 / Chapter II / Reg. 19(c)	Before 5/25/1980	(c) The Administration may allow the inclining test of an individual ship to be dispensed with provided basic stability data are available from the inclining test of a sister ship and it is shown to the satisfaction of the Administration that reliable stability information for the exempted ship can be obtained from such basic data.	**Technical**
SOLAS 1960 / Chapter II / Reg. 25(a)	Before 5/25/1980 Passenger ships	(a) There shall be above the bulkhead deck and outside the machinery casings a self-contained emergency source of electrical power. Its location in relation to the main source or sources of electrical power shall be such as to ensure to the satisfaction of the Administration that a fire of other casualty to the machinery space as defined in paragraph (h) of Regulation 2 of this Chapter will not interfere with the supply or distribution of emergency power. It shall not be forward of the collision bulkhead.	**Technical**
SOLAS 1960 / Chapter II / Reg. 25(b)	Before 5/25/1980 Passenger ships	(b) The power available shall be sufficient to supply all those services that are, in the opinion of the Administration, necessary for the safety of the passengers and the crew in an emergency, due regard being paid to such services as may have to be operated simultaneously, Special consideration shall be given to emergency lighting at every boat station on deck and oversides, in all alleyways, stairways and exits, in the machinery spaces and in the control stations as defined in paragraph (f) of Regulation 35	**Technical**

		of this Chapter, to the sprinkler pump, to navigation lights, and to the daylight signalling lamp if operated from the main source of power. The power shall be adequate for a period of 36 hours, except that, in the case of ships engaged regularly on voyages of short duration, the Administration may ample a lesser supply if satisfied that the same standard of safety would be attained.	
SOLAS 1960 / Chapter II / Reg. 26(a)(i)	Before 5/25/1980 Cargo ships	(a) Cargo ships of 5,000 Ton Gross Tonnage and upwards (i) In cargo ships of 5,000 tons gross tonnage and upwards there shall be a self-contained emergency source of power, located to the satisfaction of the Administration above the uppermost continuous deck and outside the machinery casings, to ensure its functioning in the event of fire or other casualty causing failure to the main electrical installation.	**Technical**
SOLAS 1960 / Chapter II / Reg. 26(a)(ii)	Before 5/25/1980 Cargo ships	(a) Cargo ships of 5,000 Ton Gross Tonnage and upwards ... (ii) The power available shall be sufficient to supply all those services which are, in the opinion of the Administration, necessary for the safety of all on board in an emergency, due regard being paid to such services as may have to be operated simultaneously. Special consideration shall be given to:	**Technical**
SOLAS 1960 / Chapter II / Reg. 26(a)(iii)(2)	Before 5/25/1980 Cargo ships	(2) a generator driven by a suitable prime-mover with an independent fuel supply and with starting arrangements to the satisfaction of the Administration. The fuel used shall have a flash point of not less than 110°F. (or 43°C.).	**Technical**
SOLAS 1960 / Chapter II / Reg. 26(b)(i)	Before 5/25/1980 Cargo ships	(i) In cargo ships of less than 5,000 tons gross tonnage there shall be a self-contained emergency source of power located to the satisfaction of the Administration, and capable of supplying the illumination at launching stations and stowage positions of survival craft proscribed in sub-paragraphs (a) (ii), (b) (ii) and (b) (iii) of Regulation 19 of Chapter III, and in addition such other services as the Administration may require, due regard being Paid to Regulation 38 of Chapter III.	**Technical**
SOLAS 1960 / Chapter II / Reg. 27(a)(ii)	Before 5/25/1980	(ii) Main and emergency switchboards shall be so arranged as to give easy access back and front, without danger to attendants. The sides and backs and, where necessary, the fronts of switchboards shall be suitably guarded. There shall be non-conducting mats or gratings front and rear where necessary. Exposed current carrying parts at voltages to earth (ground) exceeding a voltage to be specified by the Administration shall not be installed on the face of any switchboard or control panel.	**Technical**

SOLAS 1960 / Chapter II / Reg. 27(a)(iii)(1)	Before 5/25/1980	(1) Where the hull return system of distribution is used, special precautions shall be taken to the satisfaction of the Administration.	**Technical**
SOLAS 1960 / Chapter II / Reg. 27(b)(ii)	Before 5/25/1980 Passenger ships	(ii) Electric cables shall be of a dame retarding type to the satisfaction of the Administration. The Administration may require additional safe-guards for electric cables in particular spaces of the ship with a view to the prevention of fire or explosion.	**Technical**
SOLAS 1960 / Chapter II / Reg. 29(a)(i)	Before 5/25/1980	(i) Ships shall be provided with a main steering gear and an auxiliary steering gear to the satisfaction of the Administration.	**Technical**
SOLAS 1960 / Chapter II / Reg. 29(b)(iii)	Before 5/25/1980 Passenger ships	(iii) Where main steering gear power units and their connections are fitted in duplicate to the satisfaction of the Administration, and each power unit enables the steering gear to meet the requirements of sub-paragraph (i) of this paragraph, no auxiliary steering gear need be required.	**Technical**
SOLAS 1960 / Chapter II / Reg. 29(b)(iv)	Before 5/25/1980 Passenger ships	(iv) Where the Administration would require a rudder stock with a diameter in way of the tiller exceeding 9 inches (or 22.86 centimetres) there shall be provided an alternative steering station located to the satisfaction of the Administration. The remote steering control systems from the principal and alternative steering stations shall be so arranged to the satisfaction of the Administration that failure of either system would not result in inability to steer the ship by means of the other system.	**Technical**
SOLAS 1960 / Chapter II / Reg. 29(c)(ii)	Before 5/25/1980 Cargo ships	(ii) Where power operated steering gear units and connections are fitted in duplicate to the satisfaction of the Administration, and each unit complies with sub-paragraph (iii) of paragraph (a) of this Regulation, no auxiliary steering gear need be required, provided that the duplicate units and connections operating together comply with sub-paragraph (ii) of paragraph (a) of this Regulation.	**Technical**
SOLAS 1960 / Chapter II / Reg. 30(a)	Before 5/25/1980	(a) Passenger Ships and Cargo Ships Indicators for running indication of the motors of electric and electro-hydraulic steering gear shall be installed in a suitable location to the satisfaction of the Administration.	**Technical**
SOLAS 1960 / Chapter II / Reg. 34(b)	Before 5/25/1980 Passenger ships carrying more than	(b) The hull, superstructure and deck houses shall be divided into main vertical zones by " A " Class bulkheads (as described in paragraph (c) of Regulation 35 of this Chapter) and further divided by similar bulkheads forming the boundaries protecting spaces which provide vertical access and the boundaries separating the accommodation spaces from the machinery, cargo and service spaces and others. In addition, and supplementary to the patrol	**Technical**

	36 passengers	systems, alarm systems and fire extinguishing apparatus required by Part E of this Chapter, either of the following methods of protection. or a combination of these methods to the satisfaction of the Administration, shall be adopted in accommodation and service spaces with a view to preventing the spread of incipient fires from the spaces of their origin: - Method I.-The construction of internal divisional bulkheading of " B " Class divisions (as defined in paragraph (d) of Regulation 35 of this Chapter) generally without the installation of a detection or sprinkler system in the accommodation and service spaces; or Method II.-The fitting of an automatic sprinkler and fire alarm system for the detection and extinction of fire in all spaces in which a fire might be expected to originate, generally with no restriction on the type of internal divisional bulkheading in spaces so protected; or Method III.-A system of subdivision within each main vertical zone using " A " and " B " Class divisions distributed according to the importance, size and nature of the various compartments, with a automatic fire detection system in all spaces in which a fire might be expected to originate, and with restricted use of combustible and highly inflammable materials and furnishings; but generally without the installation of a sprinkler system. Where appropriate, the headings or sub-headings of the Regulations of this Part of this Chapter indicate under which Method or Methods the Regulation is a requirement.	
SOLAS 1960 / Chapter II / Reg. 35(c)(iv)	Before 5/25/1980	(iv) they shall have an insulating value to the satisfaction of the Administration, having regard to the nature of the adjacent spaces. In general, where such bulkheads and decks are required to form fire-resisting divisions between spaces either of which contains adjacent woodwork, wood lining, or other combustible material, they shall be so insulated that, if either face is exposed to the standard fire test for one hour. The average temperature on the unexposed face will not increase at any time during the test by more than 250°F. (or 139°C.) above the initial temperature nor shall the temperature at any point on the face, including any joint, rise more than 325°F. (or 180°C.) above the initial temperature. Reduced amounts of insulation or none at all may be provided where in the opinion of the Administration a reduced fire hazard is present. The Administration may require a	**Technical**

		test of an assembled prototype bulkhead or deck to ensure that it meets the above requirements for integrity and temperature rise.	
SOLAS 1960 / Chapter II / Reg. 35(d)	Before 5/25/1980	(d) " B " Class or Fire-retarding Division are those divisions formed by bulkheads which are so constructed that they will be capable of preventing the passage of same up to the end of the first one-half hour of the standard fire test. In addition they shall have an insulating value to the satisfaction of the Administration, having regard to the nature of the adjacent spaces. In general where such bulkheads are required to form fire-retarding divisions between spaces, they shall be of such material that, if either face is exposed for the first one-half hour period of the standard fire test, the average temperature on the unexposed face will not increase at any time during the test by more than 250°F. (or 139°C.) above the initial temperature, nor shall the temperature at any point on the face including any joint rise more than 405°F. (or 225°C.) above the initial temperature. For panels which are of incombustible materials it will only be necessary to comply with the above temperature rise limitation during the first 15-minute period of the standard fire test, but the test shall be continued to the end of the one-half hour to test the panel's integrity in the usual manner. All materials entering into the construction and erection of incombustible " B " Class divisions shall themselves be of incombustible material. Reduced amounts of insulation or none at all may be provided where in the opinion of the Administration a reduced fire hazard is present. The Administration may require a test of an assembled prototype bulkhead to ensure that it meets the above requirements for integrity and temperature rise.	**Technical**
SOLAS 1960 / Chapter II / Reg. 35(m)	Before 5/25/1980	(m) Low flame spread means that the surface thus described will adequately restrict the spread of name having regard to the risk of fire in the spaces concerned, this being determined to the satisfaction of the Administration by a suitably established test procedure.	**Technical**
SOLAS 1960 / Chapter II / Reg. 40	Before 5/25/1980	The boundary bulkheads and decks separating accommodation spaces from machinery, cargo and service spaces shall be constructed as " A " Class divisions, and these bulkheads and decks shall have an insulation value to the satisfaction of the Administration having regard to the nature of the adjacent spaces.	**Technical**
SOLAS 1960 / Chapter II / Reg. 42(a)(iii)	Before 5/25/1980	(iii) Stairway enclosure bulkheads shall have an insulation value to the satisfaction of the Administration, having regard to the nature of the adjacent spaces. The means for closure at openings	**Technical**

		in stairway enclosures shall be at least as effective for resisting fire as the bulkheads in which they are fitted. Doors other than watertight doors shall be of the self-closing type, as required for the main vertical zone bulkheads, in accordance with Regulation 38 of this Chapter.	
SOLAS 1960 / Chapter II / Reg. 42(b)(i)	Before 5/25/1980	(i) Main stairways shall be of steel frame construction, except where the Administration sanctions the use of other suitable materials which, together with such supplementary fire protection and/or extinction arrangements as would, in the opinion of the Administration, be equivalent to such construction, and shall be within enclosures formed of " A " Class divisions with positive means of closure at all openings from the lowest accommodation deck at least to a level which is directly accessible to the open deck except that: ...	**Technical**
SOLAS 1960 / Chapter II / Reg. 42(b)(iii)	Before 5/25/1980	(iii) Stairway enclosure bulkheads shall have an insulation value to the satisfaction of the Administration having regard to the nature of the adjacent spaces. The means for closure at openings in stairway enclosures shall be at least as effective for resisting fire as the bulkheads in which they are fitted. Doors other than watertight doors shall be of the self-closing type as required for the main vertical zone bulkheads, in accordance with Regulation 38 of this Chapter.	**Technical**
SOLAS 1960 / Chapter II / Reg. 43(c)	Before 5/25/1980	(c) Where a trunk for light and air communicates with more than one between deck space, and, in the opinion of the Administration, smoke and flame are likely to be conducted from one between deck to another. Smoke shutters, suitably placed, shall be fitted so that each space can be isolated in case of fire.	**Technical**
SOLAS 1960 / Chapter II / Reg. 47(d)	Before 5/25/1980	(d) Such measures as are practicable shall be taken in respect of control stations situated below deck and outside machinery spaces in order to ensure that ventilation, visibility and freedom from smoke are maintained, so that in the event of fire the machinery and equipment contained therein may be supervised and continue to function effectively. Alternative and entirely separate means of air supply shall be provided for these control stations; air inlets to the two sources of supply shall be so disposed that the risk of both inlets drawing in smoke simultaneously is minimized. At the discretion of the Administration, such requirements need not apply to spaces situated on, and opening on to, an open deck, or where local closing arrangements would be equally effective.	**Technical**

SOLAS 1960 / Chapter II / Reg. 49(d)	Before 5/25/1980	(d) The construction of ceiling and bulkheading shall be such that it will be possible, without impairing the efficiency of the fire protection, for the fire patrols to detect any smoke originating in concealed and inaccessible places, except where in the opinion of the Administration there is no risk of fire originating in such places.	**Technical**
SOLAS 1960 / Chapter II / Reg. 56(b)(ii)	Before 5/25/1980	(ii) Each of the required fire pumps (other than any emergency pump required by Regulation 65 of this Chapter) shall have a capacity not less than 80 per cent. of the total required capacity divided by the number of required fire pumps-and shall in any event be capable of delivering at least the two required jets of water. These fire pumps shall be capable of supplying the fire main system under the required conditions. Where more pumps than required are installed their capacity shall be to the satisfaction of the Administration.	**Technical**
SOLAS 1960 / Chapter II / Reg. 56(c)(ii)	Before 5/25/1980	(ii) With the two pumps simultaneously delivering through nozzles specified in paragraph (g) of this Regulation, the quantity of water specified in sub-paragraph (i) of this paragraph, through any adjacent hydrants, the following minimum pressures shall be maintained at all hydrants:- Passenger ships: 4,000 tons gross tonnage and upwards - 45 pounds per square inch (or 3.2 kilogrammes per square centimetre); 1,000 tons gross tonnage and upwards, but under 4,000 tons gross tonnage - 40 pounds per square inch (or 2.8 kilogrammes per square centimetre); Under 1,000 tons gross tonnage - To the satisfaction of the Administration; Cargo ships: 6,000 tons gross tonnage and upwards - 40 pounds per square inch (or 2.8 kilogrammes per square centimetre); 1,000 tons gross tonnage and upwards, but under 6,000 tons gross tonnage - 37 pounds per square inch (or 2.6 kilogrammes per square centimetre); Under 1,000 tons gross tonnage - To the satisfaction of the Administration	**Technical**
SOLAS 1960 / Chapter II / Reg. 56(f)	Before 5/25/1980	(f) Fire Hoses Fire hoses shall be of material approved by the Administration and sufficient in length to project a jet of water to any of the spaces in which they may be required to be used. Their maximum length shall be to the satisfaction of the Administration. Each hose shall be provided with a nozzle and the necessary	**Technical**

		couplings. Hoses specified in these Regulations as " fire hoses " shall together with any necessary fittings and tools be kept ready for use in conspicuous positions near the water service hydrants or connections.	
SOLAS 1960 / Chapter II / Reg. 57(b)	Before 5/25/1980	(b) Spare charges shall be provided in accordance with requirements to be specified by the Administration.	**Technical**
SOLAS 1960 / Chapter II / Reg. 57(c)	Before 5/25/1980	(c) Fire extinguishers containing an extinguishing medium which either itself or when in use gives on gases harmful to persons shall not be permitted. For radio rooms and switchboards extinguishers containing not more than 1 quart (1.136 litres) of carbon tetrachloride or similar media may be permitted at the discretion of the Administration subject to such extinguishers being additional to any required by this part of this Chapter.	**Technical**
SOLAS 1960 / Chapter II / Reg. 59(g)	Before 5/25/1980 Passenger ships	(g) Where Method II of fire protection is employed in a passenger ship the superstructure of which is constructed in aluminium alloy, the whole unit including the sprinkler pump, tank and air compressor shall be situated to the satisfaction of the Administration in a position reasonably remote from the boiler and machinery spaces. If the feeders from the emergency generator to the sprinkler unit pass through any space constituting a lire risk the cables shall be of a fireproof type.	**Technical**
SOLAS 1960 / Chapter II / Reg. 62(b)	Before 5/25/1980	(b) The number and arrangement of the nozzles shall be to the satisfaction of the Administration and be such as to ensure an effective distribution of water in the spaces to be protected. Nozzles shall be fitted above bilges, tank tops and other areas over which oil fuel is liable to spread and also above other main fire hazards in the boiler and engine rooms.	**Technical**
SOLAS 1960 / Chapter II / Reg. 63(e)	Before 5/25/1980	(e) The axe shall be to the satisfaction of the Administration.	**Technical**
SOLAS 1960 / Chapter II / Reg. 64(a)(ii)	Before 5/25/1980 Passenger ships	(ii) An approved fire alarm or fire detecting system shall be provided which will automatically indicate at one or more suitable points or stations, where it can be most quickly observed by officers and crew, the presence or indication of fire and its location in any part of the ship which, in the opinion of the Administration, is not accessible to the patrol system, except where it is shown to the satisfaction of the Administration that the ship is engaged on voyages of such short duration that it would be unreasonable to apply this requirement.	**Technical**

SOLAS 1960 / Chapter II / Reg. 64(b)(iii)	Before 5/25/1980 Passenger ships	(b) Fire Pumps and Water Service Pipes A passenger ship shall be provided with fire pumps, water service pipes, hydrants and hoses complying with Regulation 56 of this Chapter and with the following requirements: (iii) In a passenger ship of less than 1,000 tons gross tonnage the arrangements shall be to the satisfaction of the Administration.	**Technical**
SOLAS 1960 / Chapter II / Reg. 64(f)(ii)	Before 5/25/1980 Passenger ships	(ii) Where it is shown to the satisfaction of the Administration that a passenger ship is engaged on voyages of such short duration that it would be unreasonable to apply the requirements of sub-paragraph (i) of this paragraph and also in passenger ships of less than 1,000 tons gross tonnage, the arrangements in cargo spaces shall be to the satisfaction of the Administration.	**Technical**
SOLAS 1960 / Chapter II / Reg. 65(a)	Before 5/25/1980 Cargo ships	(a) Application Where by virtue of minimum gross tonnage limits smaller cargo ships to which the present Regulations apply are not covered by specific requirements the arrangements for fire detection and extinction shall be to the satisfaction of the Administration.	**Technical**
SOLAS 1960 / Chapter II / Reg. 65(b)(ii)	Before 5/25/1980 Cargo ships	(ii) In a cargo ship of 1,000 tons gross tonnage and upwards if a fire in any one compartment could put all the pumps out of action, there must be an alternative means of providing water for fire fighting. In a cargo ship of 2,000 tons gross tonnage and upwards this alternative means shall be a fixed emergency pump independently driven. This emergency pump shall be capable of supplying two jets of water to the satisfaction of the Administration.	**Technical**
SOLAS 1960 / Chapter II / Reg. 65(f)(ii)	Before 5/25/1980 Tankers	(ii) In tankers, installations discharging froth internally or externally to the tanks may be accepted as a suitable alternative to smothering gas or steam. The details of such installations shall be to the satisfaction of the Administration.	**Technical**
SOLAS 1960 / Chapter II / Reg. 65(f)(iii)(3)	Before 5/25/1980 Cargo ships	(3) where it is shown to the satisfaction of the Administration that the ship is engaged on voyages of such short duration that it would be unreasonable to apply the requirement.	**Technical**
SOLAS 1960 / Chapter II / Reg. 68(a)(i)(3)	Before 5/25/1980 Passenger ships	(3) at least one of the means of escape shall be by means of a readily accessible enclosed stairway, which shall provide as far as practicable continuous fire shelter from the level of its origin to the lifeboat embarkation deck. The width, number and continuity of the stairways shall be to the satisfaction of the Administration.	**Technical**
SOLAS 1960 / Chapter II / Reg. 70	Before 5/25/1980 Passenger ships	In any passenger ship, and, as far as applicable in any cargo ship, there shall be permanently exhibited for the guidance of the ship's officers general arrangement plans showing clearly for each deck the control stations, the various fire sections enclosed by fire-	**Technical**

		resisting bulkheads, the sections enclosed by fire-retarding bulkheads (if any), together with particulars of the fire alarms, detecting systems, the sprinkler installation (if any), the fire extinguishing appliances, means of access to different compartments, decks and the ventilating system including particulars of the master fan controls, the positions of dampers and identification numbers of the ventilating fans serving each section. Alternatively, at the discretion of the Administration, the aforementioned details may be set out in a booklet, a copy of which shall be supplied to each officer, and one copy at all times shall be available on board in an accessible position. Plans and booklets shall be kept up-to-date, any alterations being recorded thereon as soon as practicable.	
SOLAS 1960 / Chapter III / Reg. 5(b)(ii)	Before 5/25/1980	(ii) Motor lifeboats may be fitted to the satisfaction of the Administration with means for preventing the entry of water at the fore end.	**Technical**
SOLAS 1960 / Chapter III / Reg. 5(g)	Before 5/25/1980	(g) In lifeboats permitted to carry 100 or more persons the volume of the buoyancy shall be increased to the satisfaction of the Administration.	**Technical**
SOLAS 1960 / Chapter III / Reg. 11(b)	Before 5/25/1980	(b) In the case of ships engaged on voyages of such duration that in the opinion of the Administration the items specified in sub-paragraphs (vi), (xii), (xix), (xx) and (xxv) of paragraph (a) of this Regulation are unnecessary, the Administration may allow them to be dispensed with.	**Specific** Case by case assessment
SOLAS 1960 / Chapter III / Reg. 13(g)	Before 5/25/1980	(b) In the case of ships engaged on voyages of such duration that in the opinion of the Administration portable radio apparatus for survival craft is unnecessary, the Administration may allow such equipment to be dispensed with.	**Specific** Case by case assessment
SOLAS 1960 / Chapter III / Reg. 15(n)	Before 5/25/1980	(n) No liferaft shall be approved which has a carrying capacity calculated in accordance with paragraph (j) of this Regulation of less than six persons. The maximum number of persons calculated in accordance with that paragraph for which an inflatable liferaft may be approved shall be at the discretion of the Administration, but shall in no case exceed 25.	**Specific** Case by case assessment
SOLAS 1960 / Chapter III / Reg. 17(g)	Before 5/25/1980	(b) In the case of passenger ships engaged on short international voyages of such duration that in the opinion of the Administration all the items specified in paragraph (a) are unnecessary, the Administration may allow one or more liferafts, not being less than one-sixth of the number of the liferafts carried in any such ship, to be provided with the equipment specified in sub-paragraphs (i) to (vii) inclusive, (xi) and (xix) of paragraph (a) of	**Specific** Case by case assessment

		this Regulation, and with one-half of the equipment specified iii sub-paragraphs (xii) and (xiv) of the said paragraph and the remainder of the liferafts carried to be provided with the equipment specified in sub-paragraphs (i) to (vii) inclusive and (xix) of the said paragraph.	
SOLAS 1960 / Chapter III / Reg. 24	Before 5/25/1980	Ships shall be provided, to the satisfaction of the Administration, with means of making effective distress signals by day and by night, including at least twelve parachute signals capable of giving a bright red light at a high altitude.	**Technical**
SOLAS 1960 / Chapter III / Reg. 27(c)(i)	Before 5/25/1980	(c) (i) A passenger ship engaged on short international voyages shall be provided with sets of davits in accordance with its length as specified in Column A of the Table in Regulation 28 of this Chapter. Each set of davits shall have a lifeboat attached to it and these lifeboats shall provide at least the minimum capacity required by Column C of the Table or the capacity required to provide accommodation for all on board if this is less. Provided that when in the opinion of the Administration it is impracticable or unreasonable to place on a ship engaged on short international voyages the number of sets of davits required by Column A of the Table in Regulation 28, the Administration may authorise, under exceptional conditions, a smaller number of davits, except that this number shall never be less than the minimum number fixed by Column B of the Table, and that the total capacity of the lifeboats on the ship will be at least equal to the minimum capacity required by Column C or the capacity required to provide for all persons on board if this is less.	**Specific** Case by case assessment
SOLAS 1960 / Chapter III / Reg. 29(a)	Before 5/25/1980	(a) Lifeboats and liferafts shall be stowed to the satisfaction of the Administration in such a way that : - (i) they can all be launched in the shortest possible time and in not more than 30 minutes; (ii) they will not impede in any way the prompt handling of any of the other lifeboats, liferafts or buoyant apparatus or the marshalling of the persons on board at the launching stations, or their embarkation : (iii) the lifeboats, and the liferafts for which approved launching devices are required to be carried, shall be capable of being put into the water loaded with their full complement of persons and equipment even in unfavourable conditions of trim and of 15 degrees of list either way; and (iv) the liferafts for which approved launching devices are not required to be carried, and the buoyant apparatus, shall be	**Technical**

		capable of being put into the water even in unfavourable conditions of trim and of 15 degrees of list either way.	
SOLAS 1960 / Chapter III / Reg. 29(e)	Before 5/25/1980	(e) Davits shall be of approved design and shall be suitably placed to the satisfaction of the Administration. They shall be so disposed on one or more decks that the lifeboats placed under them can be safely lowered without interference from the operation of any other davits.	**Technical**
SOLAS 1960 / Chapter III / Reg. 29(n)(i)	Before 5/25/1980	(n) (i) In passenger ships engaged on international voyages which are not short international voyages in which there are carried lifeboats and liferafts in accordance with sub-paragraph (b) (i) of Regulation 27 of this Chapter, there shall be provided approved launching devices sufficient in number in the opinion of the Administration to enable that number of liferafts which, together with the lifeboats, is required in accordance with that sub-paragraph to provide accommodation for all on board, to be put into the water loaded with the number of persons they are permitted to accommodate, in not more than thirty minutes in calm conditions. Approved launching devices so provided shall, so far as practicable, be distributed equally on each side of the ship and there shall never be less than one such device on each side. No such devices need, however, be provided for the additional liferafts required to be carried by sub-paragraph (b) (ii) of Regulation 27 of this Chapter for 25 per cent. of all on board, but every liferaft carried in accordance with that sub-paragraph shall, where an approved launching device is provided in the ship, be of a type which is capable of being launched from such a device.	**Technical**
SOLAS 1960 / Chapter III / Reg. 29(n)(ii)	Before 5/25/1980	(n) (ii) In passenger ships engaged on short international voyages, the number of approved launching devices to be provided shall be at the discretion of the Administration. The number of liferafts allocated to each such device carried shall not be more than the number which, in the opinion of the Administration, can be put into the water fully loaded with the number of persons they are permitted to carry by that device in not more than 30 minutes in calm conditions.	**Technical**
SOLAS 1960 / Chapter III / Reg. 33(a)(ii)	Before 5/25/1980	(ii) It shall not exceed 400 lbs. in weight (or 180 kilogrammes) unless suitable means to the satisfaction of the Administration are provided to enable it to be launched without lifting by hand.	**Technical**
SOLAS 1960 / Chapter III / Reg. 36(a)	Before 5/25/1980 Cargo ships	(a) In cargo ships Lifeboats and liferafts shall be stowed to the satisfaction of the Administration.	**Technical**

SOLAS 1960 / Chapter III / Reg. 36(d)	Before 5/25/1980	(d) Davits shall be of approved design and shall be suitably placed to the satisfaction of the Administration.	**Technical**
SOLAS 1960 / Chapter III / Reg. 36(m)	Before 5/25/1980	(m) In ships employed as whale factory ships, ships employed as fish processing or canning factory ships and ships engaged in the carriage of persons employed in the whaling, fish processing or canning industries, in which there are carried lifeboats and liferafts in accordance with sub-paragraph (i) (2) of paragraph (b) of Regulation 35 no approved launching devices need be provided for the liferafts, but there shall be provided such devices sufficient in number, in the opinion of the Administration, to enable the liferafts carried in accordance with sub-paragraph (i) (1) of that paragraph to be put into the water loaded with the number of persons they are permitted to accommodate, in not more than 30 minutes in calm conditions. Approved launching devices so provided shall, so far as practicable, be distributed equally on each side of the ship. Every liferaft carried on ships in which an approved launching device is required to be provided shall be of a type which is capable of being launched by such a device.	**Technical**
SOLAS 1960 / Chapter IV / Reg. 11(g)	Before 5/25/1980	(g) All direction-finders shall be calibrated to the satisfaction of the Administration on first installation. The calibration shall be verified by check bearings or by a further calibration whenever any changes are made in the position of any aerials or of any structures on deck which might affect appreciably the accuracy of the direction-finder. The calibration particulars shall be checked at yearly intervals, or as near thereto as possible. A record shall be kept of the calibrations and of any checks made of their accuracy.	Not actual requirement
SOLAS 60 Amend 1966			By Resolution A.108(ES.3)
SOLAS 1960 Amend 1966 / Chapter II / Reg. 72	Before 5/25/1980	Structure The structural components shall be of steel or other suitable material in compliance with Regulation 27, 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 Administration.	**Technical**
SOLAS 1960 Amend 1966 / Chapter II / Reg. 63(a)(v)	Before 5/25/1980	Fireman's Outfit A fireman's outfit shall consist of: (a) Personal equipment comprising: ... (v) An axe to the satisfaction of the Administration.	**Technical**

SOLAS 60 Amend 1967			By Resolution A.122(V)
SOLAS 1960 Amend 1967 / Chapter II / Reg. 64(a)(ii)	Before 5/25/1980	An approved fire alarm or fire detecting system shall be provided which will automatically indicate at one or more suitable points or stations the presence or indication of fire and its location in any part of the ship which, in the opinion of the Administration, is not accessible to the patrol system, except where it is shown to the satisfaction of the Administration that the ship is engaged on voyages of such short duration that it would be unreasonable to apply this requirement.	**Technical**
SOLAS 1960 Amend 1967 / Chapter II / Reg. 70	Before 5/25/1980	Fire Control Plans There shall be permanently exhibited in all ships for the guidance of the ship's officers general arrangement plans showing clearly for each deck the control stations, the various fire sections enclosed by fire-resisting bulkheads, the sections enclosed by fire-retarding bulkheads (if any), together with particulars of the fire alarms, detecting systems, the sprinkler installation (if any), the fire extinguishing appliances, means of access to different compartments,decks, etc., and the ventilating system including particulars of the master fan controls, the positions of dampers and identification numbers of the ventilating fans serving each section. Alternatively, at the discretion of the Administration, the aforementioned details may be set out in a booklet, a copy of which shall be supplied to each officer, and one copy at all times shall be available on board in an accessible position. Plans and booklets shall be kept up-to-date, any alterations being recorded thereon as soon as practicable. In addition, instructions concerning the maintenance and operation of all the equipment and installations on board for the fighting and containment of fire shall be kept under one cover, readily available in an accessible position.	**Technical**
SOLAS 1960 Amend 1967 / Chapter II / Reg. 94(f)	Before 5/25/1980 Passenger ships	Definitions (f) *Low flame spread* means that the surface thus described will adequately restrict the spread of flame, this being determined to the satisfaction of the Administration by an established test procedure.	**Technical**
SOLAS 1960 Amend 1967 / Chapter II / Reg. 94(q)(iii)	Before 5/25/1980 Passenger ships	Definitions (q) *Rooms containing Furniture and Furnishings of Restricted Fire Risk*. For the purpose of Regulation 98 of this Chapter, rooms containing furniture and furnishings restricted fire risk (wheter	**Technical**

		cabins, public spaces, offices or other types of accommodation) are those in which: ... (iii) all draperies, curtains and other suspended textile materials have, to the satisfaction of the Administration, qualities of resistance to the propagation of flame not inferior to those of wool weighing 0.8 kilogrammes per square metre (24 ounces per square yard);	
SOLAS 1960 Amend 1967 / Chapter II / Reg. 94(q)(iv)	Before 5/25/1980 Passenger ships	Definitions (q) *Rooms containing Furniture and Furnishings of Restricted Fire Risk*. For the purpose of Regulation 98 of this Chapter, rooms containing furniture and furnishings restricted fire risk (wheter cabins, public spaces, offices or other types of accommodation) are those in which: ... (iv) all floor coverings have, to the satisfaction of the Administration, qualities of resistance to the propagation of flame not inferior to those of an equivalent woollen material used for the same purpose;	**Technical**
SOLAS 1960 Amend 1967 / Chapter II / Reg. 95(a)	Before 5/25/1980 Passenger ships	Structure Provided that in cases where any part of the structure is of aluminium alloy, the following requirements shall apply: (a) The insulation of aluminium alloy components of "A" or "B" Class divisions, except structure which in the opinion of the Administration is non-load-bearing, shall be such that the temperature of the structural core does not rise more than 200°C(360°F) above the ambient temperature at any time during the applicable fire exposure to the standard fire test.	**Technical**
SOLAS 1960 Amend 1967 / Chapter II / Reg. 97(b)(ii)	Before 5/25/1980 Passenger ships	Bulkheads within a Main Vertical Zone (b) All corridor bulkheads where not required to be "A" Class shall be "B" Class divisions which shall extend from deck to deck except: (ii) in the case of a ship protected by an automatic sprinkler system complying with the provisions of Regulation 120 of this Chapter, the corridor bulkheads of "B" Class materials may terminate at which in thickness and composition is acceptable in the construction of "B" Class divisions. Notwithstanding the requirements of Regulation 98 of this Chapter, such bulkheads and ceilings shall be required to meet "B" Class integrity standards only in so far as is reasonable and practicable in the opinion of the Administration. All doors and frames in such	**Technical**

		bulkheads shall be of incombustible materials and shall be constructed and erected so as to provide substantial fire resistance to the satisfaction of the Administration.	
SOLAS 1960 Amend 1967 / Chapter II / Reg. 98(a)	Before 5/25/1980 Passenger ships	Fire Integrity of Bulkheads and Decks (a) In addition to complying with the specific provisions for fire integrity of bulkheads and decks metioned elsewhere in the Regulations of this Part, the minimum fire integrity of all bulkheads and decks shall be as prescribed in Tables 1 to 4 in this Regulation. Where, due to any particular structural arrangements in the ship, difficulty is experienced in determining from the tables the minimum fire integrity value of any divisions, such values shall be determined to the satisfaction of the Administration.	**Technical**
SOLAS 1960 Amend 1967 / Chapter II / Reg. 99(a)(iii)	Before 5/25/1980 Passenger ships	Means of Escape (a) In and from all passenger and crew spaces and in spaces in which the crew is normally employed, other than machinery spaces, stairways and ladders shall be arranged to provide ready means of escape to the lifeboat and liferaft embarkation deck. In particular, the following provisions shall be complied with: ... (iii) At least one of the means of escape required by sub-paragraphs (a)(i) and (ii) of this Regulation shall be by means of a readily accessible enclosed stairway, which shall provide continuous fire shelter from the level of its origin to the appropriate lifeboat and liferaft embarkation decks or the highest level serverved by the stairway, whichever level is the hightest. However, where an Administration has granted dispensation under the provisions of sub-paragraph (a)(i) of this Regulation the sole means of escape shall provide safe escape to the satisfaction of the Administration. The width, number and continuity of the stairways shall be to the satisfaction of the Administration.	**Technical**
SOLAS 1960 Amend 1967 / Chapter II / Reg. 99(a)(iii)	Before 5/25/1980 Passenger ships	Means of Escape (a) In and from all passenger and crew spaces and in spaces in which the crew is normally employed, other than machinery spaces, stairways and ladders shall be arranged to provide ready means of escape to the lifeboat and liferaft embarkation deck. In particular, the following provisions shall be complied with: ... (iv) Protection of access from the stairway enclosures to the lifeboat and liferaft embarkation areas shall be to the satisfaction of the Administration.	**Technical**

SOLAS 1960 Amend 1967 / Chapter II / Reg. 99(b)(i)	Before 5/25/1980 Passenger ships	Means of Escape (b) (i) In special category spaces the number and disposition of the means of escape both below and above the bulkhead deck shall be to the satisfaction of the Administration, and in general the safety of access to the embarkation deck shall be at least equivalent to that provided for under sub-paragraphs (a)(i), (ii), (iii), (iv) and (v) of this Regulation.	**Technical**
SOLAS 1960 Amend 1967 / Chapter II / Reg. 103(d)(iii)(1)	Before 5/25/1980 Passenger ships	Ventilation Systems (d) Except in cargo spaces, ventilation ducts shall be contructed of the following materials: ... (iii) Short lengths of duct, not in general exceeding 200 square centimetres (31 square inches) in sectional area nor 2 metres (79 inches) in length, need not be incombustible provided that all of the following conditions are met: (1) the duct is constructed of a meterial of restricted fire risk to the satisfaction of the Administration;	**Technical**
SOLAS 1960 Amend 1967 / Chapter II / Reg. 103(h)	Before 5/25/1980 Passenger ships	Ventilation Systems (h) Such measures as are practicable shall be taken in respect of control stations outside machinery spaces in order to ensure that ventilation, visibility and freedom from smoke are maintained, so that in the event of fire the machinery and equipment contained therein may be supervised and continue to function effectively. Alternative and separate means of air supply shall be provided; air inlets of the two sources of supply shall be so disposed that the risk of both inlets drawing in smoke simultaneously is minimized. At the discretion of the Administration, such requirements need not apply to control stations situated on, and opening on to, an open deck, or where local closing arrangements would be equally effective.	**Technical**
SOLAS 1960 Amend 1967 / Chapter II / Reg. 105(b)	Before 5/25/1980 Passenger ships	Restriction of Combustible Materials (b) Vapour barriers and adhesives used in conjunction with insulation, as well as insulation of pipe fittings, for cold service systems need not be incombustible, but they shall be kept to the minimum quantity practicable and their exposed surfaces shall have qualities of resistance to the propagation of flame to the satisfaction of the Administration.	**Technical**
SOLAS 1960 Amend 1967 /	Before 5/25/1980	Arrangements for Oil Fuel, Lubricating Oil and other Inflammable Oils (a) Oil Fuel Arrangements	**Technical**

Chapter II / Reg. 110(a)(viii)	Passenger ships	In a ship in which oil fuel is used, the arrangements for the storage, distribution and utilization of the oil fuel shall be such as to ensure the safety of the ship and persons on board and shall at least comply with the following provisions: ... (viii) Oil fuel pipes shall be of steel or other approved material, provided that restricted use of flexible pipes shall be permissible in positions where the Administration is satisfied that they are necessary. Such flexible pipes and end attachments shall be of approved fire resisting materials of adequate strength and shall be constructed to the satisfaction of the Administration.	
SOLAS 1960 Amend 1967 / Chapter II / Reg. 111(d)(e)	Before 5/25/1980 Passenger ships	Openings in Machinery Spaces and Means for Closing such Openings, for Stopping Machinery and for Shutting off Oil Fuel Suction Pipes (d) Means of control shall be provided for: ... (e) The controls required for ventilating fans shall comply with the provisions of Regulation 103(f) of this Chapter. The controls for any required fixed fire extinguishing system and those required by sub-paragraphs (d)(i), (ii), (iii) and (v) of this Regulation and of Regulation 110(a)(v) of this Chapter shall situated at one control position, or grouped in as few positions as possible to the satisfaction of the Administration. Such position or positions shall be located where they will not be cut off in the event of fire in the space they serve, and shall have a safe access from the open deck.	**Technical**
SOLAS 1960 Amend 1967 / Chapter II / Reg. 112(a)(iii)	Before 5/25/1980 Passenger ships	Maintenance of Fire Patrols etc., and Provision of Fire Extinguishing Equipment (a) Fire Patrols and Detection, Alarms and Public Address Systems (iii) An approved fire alarm or fire detecting system shall be provided which will automatically indicate at one or more suitable points or stations the presence or indication of fire and its location in any cargo space which, in the opinion of the Administration, is not accessible to the patrol system, except where it is shown to the satisfaction of the Administration that the ship is engaged on voyages of such short duration that it would be unreasonable to apply this requirement.	**Technical**
SOLAS 1960 Amend 1967 / Chapter II / Reg. 112(b)(iv)	Before 5/25/1980 Passenger ships	Maintenance of Fire Patrols etc., and Provision of Fire Extinguishing Equipment (b) Fire Pumps and Fire Main System	**Technical**

		The ships shall be provided with fire pumps, fire main system, hydrants and hoses complying with the provisions of Regulation 113 of this Chapter and shall comply with the following requirements: ... (iv) In a ship of less than 1,000 tons gross tonnage the arrangements shall be to the satisfaction of the Administration.	
SOLAS 1960 Amend 1967 / Chapter II / Reg. 112(c)(i)	Before 5/25/1980 Passenger ships	Maintenance of Fire Patrols etc., and Provision of Fire Extinguishing Equipment (c) Fire Hydrants, Hoses and Nozzles (i) The ship shall be provided with fire hoses the number and diameter of which shall be to the satisfaction of the Administration. There shall be at least one fire hose for each of the hydrants required by Regulation 113(d) of this Chapter and these hoses shall be used only for the purposes of extinguishing fires or testing the fire extinguishing apparatus at fire drills and surveys.	**Technical**
SOLAS 1960 Amend 1967 / Chapter II / Reg. 112(f)(ii)	Before 5/25/1980 Passenger ships	Maintenance of Fire Patrols etc., and Provision of Fire Extinguishing Equipment (f) Fixed Fire Extinguishing Arrangements in Cargo Spaces ... (ii) Where it is shown to the satisfaction of the Administration that a ship is engaged on voyages of such short duration that it would be unreasonable to apply the requirements of sub-paragraph (i) of this paragraph and also in ships of less than 1,000 tons gross tonnage, the arrangements in cargo spaces shall be to the satisfaction of the Administration.	**Technical**
SOLAS 1960 Amend 1967 / Chapter II / Reg. 112(k)	Before 5/25/1980 Passenger ships	Maintenance of Fire Patrols etc., and Provision of Fire Extinguishing Equipment (k) Fixed Fire Extinguishing Appliance not required by this Part Where a fixed fire extinguishing system not required by this Part of this Chapter is installed, such a system shall be to the satisfaction of the Administration.	**Technical**
SOLAS 1960 Amend 1967 / Chapter II / Reg. 113(b)(iii)	Before 5/25/1980 Passenger ships	Detailed Requirements applicable to Fire Pumps, Fire Main, Hydrants and Hoses (b) Fire Pumps ... (iii) Where more pumps than the minimum number of required pumps are installed the capacity of such additional pumps shall be to the satisfaction of the Administration.	**Technical**

SOLAS 1960 Amend 1967 / Chapter II / Reg. 113(f)	Before 5/25/1980 Passenger ships	Detailed Requirements applicable to Fire Pumps, Fire Main, Hydrants and Hoses (f) Fire Hoses Fire hoses shall be of material approved by the Administration and sufficient in length to project a jet of water to any of the spaces in which they may be required to be used. Their maximum length shall be to the satisfaction of the Administration. Each hose shall be provided with a nozzle and the necessary couplings. Hoses specified in these Regulations as "fire hoses" shall together with any necessary fittings and tools be kept ready for use in conspicuous positions near the fire hydrants or connections.	**Technical**
SOLAS 1960 Amend 1967 / Chapter II / Reg. 113(g)(i)	Before 5/25/1980 Passenger ships	Detailed Requirements applicable to Fire Pumps, Fire Main, Hydrants and Hoses (g) Nozzles (i) For the purposes of this Part, standard nozzle sizes shall be 12 millimetres (½ inch), 16 millimetres (⅝ inch) and 19 millimetres (¾ inch), or as near thereto as possible. Larger diameter nozzles may be permitted at the discretion of the Administration.	**Technical**
SOLAS 1960 Amend 1967 / Chapter II / Reg. 115(b)	Before 5/25/1980 Passenger ships	Fire Extinguishers (b) Spare charges shall be provided in accordance with requirements to be specified by the Administration.	**Technical**
SOLAS 1960 Amend 1967 / Chapter II / Reg. 116(d)(vii)	Before 5/25/1980 Passenger ships	Fixed Gas Fire Extinguishing System (d) ... (vii) Carbon dioxide bottle storage rooms shall be situated at a safe and readily accessible position and shall be effectively ventilated to the satisfaction of the Administration. Any entrance to such storage rooms shall preferably be from the open deck, and in any case shall be independent of the protected space. Access doors shall be gas tight and bulkheads and decks which form the boundaries of such rooms shall be gas tight and adequately insulated.	**Technical**
SOLAS 1960 Amend 1967 / Chapter II / Reg. 119(b)	Before 5/25/1980 Passenger ships	Fixed Pressure Water-spraying Fire Extinguishing System (b) The number and arrangement of the nozzles shall be to the satisfaction of the Administration and be such as to ensure an effective average distribution of water of at least 5 litres per square metre (0.1 gallon per square foot) per minute in the spaces to be protected. Where increased application rates are considered necessary, these shall be to the satisfaction of the Administration. Nozzles shall be fitted above bilges, tank tops and	**Technical**

		other areas over which oil fuel is liable to spread and also above other specific fire hazards in the machinery spaces of Category A.	
SOLAS 1960 Amend 1967 / Chapter II / Reg. 120	Before 5/25/1980 Passenger ships	Automatic Sprinkler and Fire Alarm and Fire Detection System Where an automatic sprinkler and fire alarm and fire detection system is provided in compliance with the provisions of Regulation 107 of this Chapter, it shall be to the satisfaction of the Administration and shall comply with the following requirements: ...	**Technical**
SOLAS 1960 Amend 1967 / Chapter II / Reg. 120(c)	Before 5/25/1980 Passenger ships	Automatic Sprinkler and Fire Alarm and Fire Detection System (c) Positioning of Sprinklers Sprinklers shall be placed in an overhead position and spaced in a suitable pattern to maintain an average application rate of not less than 5 litres per square metre per minute (0.1 gallon per square. foot per minute) over the nominal area covered by the sprinklers. Alternatively, the Administration may permit the use of sprinklers providing such other amount of water suitably distributed as has been shown to the satisfaction of the Administration to be not less effective.	**Technical**
SOLAS 1960 Amend 1967 / Chapter II / Reg. 120(j)	Before 5/25/1980 Passenger ships	Automatic Sprinkler and Fire Alarm and Fire Detection System (j) Provision of Spare Sprinkler Heads Spare sprinkler heads shall be provided for each section of sprinklers to the satisfaction of the Administration.	**Technical**
SOLAS 1960 Amend 1967 / Chapter II / Reg. 121	Before 5/25/1980 Passenger ships	Automatic Fire Alarm and Fire Detection System Where an automatic fire alarm and fire detection system is provided in compliance with the provisions of Regulation 107 of this Chapter, it shall be to the satisfaction of the Administration and shall comply with the following requirements:	**Technical**
SOLAS 1960 Amend 1967 / Chapter II / Reg. 121(c)	Before 5/25/1980 Passenger ships	Automatic Fire Alarm and Fire Detection System (c) Type of System The system shall be operated by an abnormal air temperature, by an abnormal concentration of smoke or by other factors indicative of incipient fire in any one of the spaces to be protected. Systems which are sensitive to air temperature shall not operate at less than 57°C (135°F) and shall operate at a temperature not greater than 74°C (165°F) when the temperature increase to those levels is not more than 1°C (1.8°F) per minute. At the discretion of the Administration the permissible temperature of operation may be increased to 30°C (54°F) above the maximum deckhead temperature in drying rooms and similar places of a normally high ambient temperature. Systems which are sensitive to smoke concentration shall operate on the reduction of the intensity of a	**Technical**

		transmitted light beam by an amount to be determined by the Administration. Other equally effective methods of operation may be accepted at the discretion of the Administration. The detection system shall not be used for any purpose other than fire detection.	
SOLAS 1960 Amend 1967 / Chapter II / Reg. 121(h)	Before 5/25/1980 Passenger ships	Automatic Fire Alarm and Fire Detection System (h) Provision of Spare Detector Heads Spare detector heads shall be provided for each section of detectors to the satisfaction of the Administration.	**Technical**
SOLAS 1960 Amend 1967 / Chapter II / Reg. 122	Before 5/25/1980 Passenger ships	Fire Control Plans There shall be permanently exhibited for the guidance of the ship's officers general arrangement plans showing clearly for each deck the control stations, the various fire sections enclosed by "A" Class divisions, the sections enclosed by "B" Class divisions (if any), together with particulars of the fire alarms, detecting systems, the sprinkler installation (if any), the fire extinguishing appliances, means of access to different compartments, decks, etc., and the ventilating system including particulars of the fan control positions, the positions of dampers and identification numbers of the ventilating fans serving each section. Alternatively, at the discretion of the Administration, the aforementioned details may be set out in a booklet, a copy of which shall be supplied to each officer, and one copy at all times shall be available on board in an accessible position. Plans and booklets shall be kept up-to-date, any alterations being recorded thereon as soon as practicable. In addition, instructions concerning the maintenance and operation of all the equipment and installations on board for the fighting and containment of fire shall be kept under one cover, readily available in an accessible position.	**Technical**
SOLAS 1960 Amend 1967 / Chapter V / Reg. 21	Before 5/25/1980	All ships which in accordance with the present Convention are required to carry a radiotelegraph or a radiotelephone installation shall carry the International Code of Signals. This publication shall also be carried by any other ship which in the opinion of the Administration has a need to use it.	**Specific** Cabinet Regulation No. 30 adopted 12 January 2016 "Regulations Regarding the Use and Maintenance of Ship's Radio and Navigation Equipment", Chapter 6.2
SOLAS 60 Amend 1973			Adopted by Resolution A.263(VIII); A.264(VIII)
SOLAS 1960 Amend 1973 /	Before 5/25/1980	(a) Incombustible material means a material which neither burns nor gives off inflammable vapours in sufficient quantity for self-	**Technical**

Chapter II / Reg. 35(a)		ignition when heated to approximately 750°C (1382°F), this being determined to the satisfaction of the Administration by an established test procedure. Any other material is a combustible material.	
SOLAS 1960 Amend 1973 / Chapter II / Reg. 94(a)	Before 5/25/1980 Passenger ships	(a) Incombustible material means a material which neither burns nor gives off inflammable vapours in sufficient quantity for self-ignition when heated to approximately 750°C (1382°F), this being determined to the satisfaction of the Administration by an established test procedure. Any other material is a combustible material.	**Technical**
SOLAS 1960 Amend 1973 / Chapter IV / Reg. 6(d)(ii)(1)	Before 5/25/1980	(ii) In addition to the provisions of sub-paragraph (i) of this paragraph, on ships other than multi-radio officer passenger ships, the radio officer may, in exceptional cases, i.e. when it is impractical to listen-by split headphones or loudspeaker, discontinue listening by order of the master in order to carry ()ut maintenance required to prevent imminent malfunction of: ... provided that: (1) the radio officer, at the discretion of the Administration concerned, is appropriately qualified to perform these duties; and	**Specific** Cabinet Regulation No. 895 adopted 22 November 2005 "Regulations Regarding Certification of Seafarers", para 16 The personnel responsible for radio communication or fulfilling radio watchkeeping duties on ships subject to the requirements laid down in Chapter IV of the SOLAS Convention shall be granted the qualification referred to in Sub-paragraphs 20.1, 20.2, 20.3, and 20.4 of this Regulation, and the Latvian Registry of Seamen shall issue a certificate of competency and an endorsement. The qualification certificate shall certify the conformity with the requirements of Chapter IV of the STCW Code and the Radio Regulations of the International Telecommunication Union, which are annex to the International Telecommunication Convention, 1998.
SOLAS 1960 Amend 1973 / Chapter V / Reg. 17	Before 5/25/1980	Pilot ladders and mechanical pilot hoists (a) Pilot ladders (xi) Where on any ship constructional features such as rubbing bands would prevent the implementation of any of these provisions, special arrangements shall be made to the satisfaction of the Administration to ensure that persons are able to embark and disembark safely.	**Technical**

SOLAS 1960 Amend 1973 / Chapter VI / Part A / Reg. 10(e)	Before 5/25/1980	Regulation 10 Authorization (e) A ship without such a document of authorization shall not load grain until the master demonstrates to the satisfaction of the Administration or the Contracting Government of the port of loading on behalf of the Administration that the ship in its proposed loaded condition will comply with the requirements of these Regulations.	**Specific** Not allowed
SOLAS 74			
SOLAS 1974 Convention / Chapter I / Reg. 4(a)	On or after 5/25/1980	(a) A ship which is not normally engaged on international voyages but which, in exceptional circumstances, is required to undertake a single international voyage may be exempted by the Administration from any of the requirements of the present Regulations provided that it complies with safety requirements which are adequate in the opinion of the Administration for the voyage which is to be undertaken by the ship.	**Specific** Case by case assessment
SOLAS 1974 Convention / Chapter II-1 / Reg. 4(b)(ii)	On or after 5/25/1980 Before 9/1/1984	(ii) Where it is shown to the satisfaction of the Administration that the average permeability as determined by detailed calculation is less than that given by the formula, the detailed calculated value may be used. For the purpose of such calculation, the permeabilities of passenger spaces, as defined in Regulation 2 of this Chapter, shall be taken as 95, that of all cargo, coal and store spaces as 60, and that of double bottom, oil fuel and other tanks at such values as may be approved in each case.	**Technical**
SOLAS 1974 Convention / Chapter II-1 / Reg. 5(d)(i)	On or after 5/25/1980 Before 9/1/1984	(i) The subdivision abaft the forepeak of ships 131 metres (430 feet) in length and upwards having a criterion numeral of 23 or less shall be governed by the factor A given by formula (I); of those having a criterion numeral of 123 or more by the factor B given by formula (II); and of those having a criterion numeral between 23 and 123 by the factor F obtained by linear interpolation between the factors A and B, using the formula: $F = A - \frac{(A-B)(C_s-23)}{100}$ .....(V) Nevertheless, where the criterion numeral is equal to 45 or more and simultaneously the computed factor of subdivision as given by formula (V) is 0.65 or less, but more than 0.50, the subdivision abaft the forepeak shall be governed by the factor 0.50. Where the factor F is less than 0.40 and it is shown to the satisfaction of the Administration to be impracticable to comply with the factor F in a machinery compartment of the ship, the	**Technical**

		subdivision of such compartment may be governed by an increased factor, which, however, shall not exceed 0.40.	
SOLAS 1974 Convention / Chapter II-1 / Reg. 5(d)(iii)	On or after 5/25/1980 Before 9/1/1984	(iii) The subdivision abaft the forepeak of ships less than 131metres (430 feet) but not less than 79 metres (260 feet) in length and having a criterion numeral less than S, and of all ships less than 79 metres (260 feet) in length shall be governed by the factor unity, unless, in either case, it is shown to the satisfaction of the Administration to be impracticable to comply with this factor in any part of the ship, in which case the Administration may allow such relaxation as may appear to be justified, having regard to all the circumstances.	**Technical**
SOLAS 1974 Convention / Chapter II-1 / Reg. 5(e)(ii)(5)	On or after 5/25/1980 Before 9/1/1984	(5) The subdivision abaft the forepeak of ships less than 131 metres (430 feet) but not less than 55 metres (180 feet) in length and having a criterion numeral less than S 1 and of all ships less than 55 metres (180 feet) in length shall be governed by the factor unity, unless it is shown to the satisfaction of the Administration to be impracticable to comply with this factor in particular compartments, in which event the Administration may allow such relaxations in respect of those compartments as appear to be justified, having regard to all the circumstances, provided that the aftermost compartment and as many as possible of the forward compartments (between the forepeak and the after end of the machinery space) shall be kept within the floodable length.	**Technical**
SOLAS 1974 Convention / Chapter II-1 / Reg. 6(h)	On or after 5/25/1980 Before 9/1/1984	(h) Where a main transverse watertight compartment contains local subdivision and it can be shown to the satisfaction of the Administration that, after any assumed side damage extending over a length of 3.05 metres (10 feet) plus 3 per cent of the length of the ship, or 10.67 metres (35 feet) whichever is the less, the whole volume of the main compartment will not be flooded, a proportionate allowance may be made in the permissible length otherwise required for such compartment. In such a case the volume of effective buoyancy assumed on the undamaged side shall not be greater than that assumed on the damaged side.	**Technical**
SOLAS 1974 Convention / Chapter II-1 / Reg. 8	On or after 5/25/1980 Before 9/1/1984	When ballasting with water is necessary, the water ballast should not in general be carried in tanks intended for oil fuel. In ships in which it is not practicable to avoid putting water in oil fuel tanks, oily-water separator equipment to the satisfaction of the Administration shall be fitted, or other alternative means	**Specific** Maritime Administration and Marine Safety Law / Division C, Chapter 1 "Ship safety and supervision of ship safety" / Section 11 "Safety requirements for ships"

		acceptable to the Administration shall be provided for disposing of the oily-water ballast.	The ship shall fully comply with the requirements of MARPOL Convention.
SOLAS 1974 Convention / Chapter II-1 / Reg. 10(b)	On or after 5/25/1980 Before 9/1/1984	(b) Where a double bottom is required to be fitted its depth shall be to the satisfaction of the Administration and the inner bottom shall be continued out to the ship's sides in such a manner as to protect the bottom to the turn of the bilge. Such protection will be deemed satisfactory if the line of intersection of the outer edge of the margin plate with the bilge plating is not lower at any part than a horizontal plane passing through the point of intersection with the frame line amidships of a transverse diagonal line inclined at 25 degrees to the base line and cutting it at a point one-half the ship's moulded breadth from the middle line.	**Technical**
SOLAS 1974 Convention / Chapter II-1 / Reg. 10(d)	On or after 5/25/1980 Before 9/1/1984	(d) A double bottom need not be fitted in way of watertight compartments of moderate size used exclusively for the carriage of liquids, provided the safety of the ship, in the event of bottom or side damage, is not, in the opinion of the Administration, thereby impaired.	**Technical**
SOLAS 1974 Convention / Chapter II-1 / Reg. 12(a)	On or after 5/25/1980 Before 9/1/1984	(a) Each watertight subdivision bulkhead, whether transverse or longitudinal, shall be constructed in such a manner that it shall be capable of supporting, with a proper margin of resistance, the pressure due to the maximum head of water which it might have to sustain in the event of damage to the ship but at least the pressure due to a head of water up to the margin line. The construction of these bulkheads shall be to the satisfaction of the Administration.	**Technical**
SOLAS 1974 Convention / Chapter II-1 / Reg. 14(b)	On or after 5/25/1980 Before 9/1/1984	(b) The arrangement and efficiency of the means of closing any openings in the shell plating shall be consistent with its intended purpose and the position in which it is fitted and generally to the satisfaction of the Administration.	**Technical**
SOLAS 1974 Convention / Chapter II-1 / Reg. 15(a)(i)	On or after 5/25/1980 Before 9/1/1984	(i) The design, materials and construction of all watertight doors, sidescuttles, gangway, cargo and coaling ports, valves, pipes, ash-shoots and rubbish-shoots referred to in these Regulations shall be to the satisfaction of the Administration.	**Technical**
SOLAS 1974 Convention / Chapter II-1 / Reg. 16(a)	On or after 5/25/1980 Before 9/1/1984	(a) Watertight decks, trunks, tunnels, duct keels and ventilators shall be of the same strength as watertight bulkheads at corresponding levels. The means used for making them watertight, and the arrangements adopted for closing openings in them, shall be to the satisfaction of the Administration. Watertight	**Technical**

		ventilators and trunks shall be carried at least up to the bulkhead deck.	
SOLAS 1974 Convention / Chapter II-1 / Reg. 18(g)(ii)	On or after 5/25/1980 Before 9/1/1984 Passenger ships	(g) (ii) Where in the opinion of the Administration the main circulating pump is not suitable for this purpose, a direct emergency bilge suction shall be led from the largest available independent power driven pump to the drainage level of the machinery space; the suction shall be of the same diameter as the main inlet of the pump used. The capacity of the pump so connected shall exceed that of a required bilge pump by an amount satisfactory to the Administration.	**Technical**
SOLAS 1974 Convention / Chapter II-1 / Reg. 19(c)	On or after 5/25/1980 Before 9/1/1984	(c) The Administration may allow the inclining test of an individual ship to be dispensed with provided basic stability data are available from the inclining test of a sister ship and it is shown to the satisfaction of the Administration that reliable stability information for the exempted ship can be obtained from such basic data.	**Technical**
SOLAS 1974 Convention / Chapter II-1 / Reg. 25(a)	On or after 5/25/1980 Before 9/1/1984 Passenger ships	(a) There shall be above the bulkhead deck and outside the machinery casings a self-contained emergency source of electrical power. Its location in relation to the main source or sources of electrical power shall be such as to ensure to the satisfaction of the Administration that a fire or other casualty to the machinery space as defined in paragraph (h) of Regulation 2 of this Chapter will not interfere with the supply or distribution of emergency power. It shall not be forward of the collision bulkhead.	**Technical**
SOLAS 1974 Convention / Chapter II-1 / Reg. 25(b)	On or after 5/25/1980 Before 9/1/1984 Passenger ships	b) The power available shall be sufficient to supply all those services that are, in the opinion of the Administration, necessary for the safety of the passengers and the crew in an emergency, due regard being paid to such services as may have to be operated simultaneously. Special consideration shall be given to emergency lighting at every boat station on deck and oversides, in all alleyways, stairways and exits, in the machinery spaces and in the control stations as defined in paragraph (r) of Regulation 3 of Chapter II-2, to the sprinkler pump, to navigation lights, and to the daylight signalling lamp if operated from the main source of power. The power shall be adequate for a period of 36 hours, except that, in the case of ships engaged regularly on voyages of short duration, the Administration may accept a lesser supply if satisfied that the same standard of safety would be attained.	**Technical**
SOLAS 1974 Convention /	On or after 5/25/1980 Before	(i) In cargo ships of 5,000 tons gross tonnage and upwards there shall be a self-contained emergency source of power, located to the satisfaction of the Administration above the uppermost	**Technical**

Chapter II-1 / Reg. 26(a)(i)	9/1/1984 Cargo ships	continuous deck and outside the machinery casings, to ensure its functioning in the event of fire or other casualty causing failure to the main electrical installation.	
SOLAS 1974 Convention / Chapter II-1 / Reg. 26(a)(ii)	On or after 5/25/1980 Before 9/1/1984 Cargo ships	(ii) The power available shall be sufficient to supply all those services which are, in the opinion of the Administration, necessary for the safety of all on board in an emergency, due regard being paid to such services as may have to be operated simultaneously. Special consideration shall be given to : (1) emergency lighting at every boat station on deck and oversides, in all alleyways, stairways and exits, in the main machinery space and main generating set space, on the navigating bridge and in the chartroom; (2) the general alarm; and (3) navigation lights if solely electric, and the daylight signalling lamp if operated by the main source of electrical power. The power shall be adequate for a period of 6 hours.	**Technical**
SOLAS 1974 Convention / Chapter II-1 / Reg. 26(a)(iii)(2)	On or after 5/25/1980 Before 9/1/1984 Cargo ships	(2) a generator driven by a suitable prime-mover with an independent fuel supply and with starting arrangements to the satisfaction of the Administration. The fuel used shall have a flashpoint of not less than 43°C (110°F)	**Technical**
SOLAS 1974 Convention / Chapter II-1 / Reg. 26(b)(i)	On or after 5/25/1980 Before 9/1/1984 Cargo ships	(i) In cargo ships of less than 5,000 tons gross tonnage there shall be a self-contained emergency source of power located to the satisfaction of the Administration, and capable of supplying the illumination at launching stations and stowage positions of survival craft prescribed in sub-paragraphs (a)(ii), (b)(ii) and (b)(iii) of Regulation 19 of Chapter III, and in addition such other services as the Administration may require, due regard being paid to Regulation 38 of Chapter III.	**Technical**
SOLAS 1974 Convention / Chapter II-1 / Reg. 27(a)(ii)	On or after 5/25/1980 Before 9/1/1984	(ii) Main and emergency switchboards shall be so arranged as to give easy access back and front, without danger to attendants. The sides and backs and, where necessary, the fronts of switchboards shall be suitably guarded. There shall be non-conducting mats or gratings front and rear where necessary. Exposed current-carrying parts at voltages to earth (ground) exceeding a voltage to be specified by the Administration shall not be installed on the face of any switchboard or control panel.	**Technical**
SOLAS 1974 Convention / Chapter II-1 / Reg. 27(a)(iii)(1)	On or after 5/25/1980 Before 9/1/1984	(1) Where the hull return system of distribution is used, special precautions shall be taken to the satisfaction of the Administration.	**Technical**

SOLAS 1974 Convention / Chapter II-1 / Reg. 27(b)(ii)	On or after 5/25/1980 Before 9/1/1984 Passenger ships	(ii) Electric cables shall be of a flame retarding type to the satisfaction of the Administration. The Administration may require additional safeguards for electric cables in particular spaces of the ship with a view to the prevention of fire or explosion.	**Technical**
SOLAS 1974 Convention / Chapter II-1 / Reg. 29(a)(i)	On or after 5/25/1980 Before 9/1/1984	(i) Ships shall be provided with a main steering gear and an auxiliary steering gear to the satisfaction of the Administration.	**Technical**
SOLAS 1974 Convention / Chapter II-1 / Reg. 29(b)(iii)	On or after 5/25/1980 Before 9/1/1984 Passenger ships	(iii) Where main steering gear power units and their connexions are fitted in duplicate to the satisfaction of the Administration, and each power unit enables the steering gear to meet the requirements of sub-paragraph (i) of this paragraph, no auxiliary steering gear need be required.	**Technical**
SOLAS 1974 Convention / Chapter II-1 / Reg. 29(b)(iv)	On or after 5/25/1980 Before 9/1/1984 Passenger ships	(iv) Where the Administration would require a rudder stock with a diameter in way of the tiller exceeding 228.6 millimetres (9 inches) there shall be provided an alternative steering station located to the satisfaction of the Administration. The remote steering control systems from the principal and alternative steering stations shall be so arranged to the satisfaction of the Administration that failure of either system would not result in inability to steer the ship by means of the other system.	**Technical**
SOLAS 1974 Convention / Chapter II-1 / Reg. 29	On or after 5/25/1980 Before 9/1/1984 Cargo ships	(ii) Where power-operated steering gear units and connections are fitted in duplicate to the satisfaction of the Administration, and each unit complies with sub-paragraph (iii) of paragraph (a) of this Regulation, no auxiliary steering gear need be required, provided that the duplicate units and connexions operating together comply with sub-paragraph (ii) of paragraph (a) of this Regulation.	**Technical**
SOLAS 1974 Convention / Chapter II-1 / Reg. 30	On or after 5/25/1980 Before 9/1/1984	Indicators for running indication of the motors of electric and electrohydraulic steering gear shall be installed in a suitable location to the satisfaction of the Administration.	**Technical**
SOLAS 1974 Convention / Chapter II-2 / Reg. 3(a)	On or after 5/25/1980 Before 5/1/1981	(a) "Non-combustible material" means a material which neither burns nor gives off inflammable vapours in sufficient quantity for self-ignition when heated to approximately 750°C (1,382°F) this being determined to the satisfaction of the Administration by an established test procedure. Any other material is a combustible material.	**Technical**

SOLAS 1974 Convention / Chapter II-2 / Reg. 3(h)	On or after 5/25/1980 Before 5/1/1981	(h) "Low Flame Spread" means that the surface thus described will adequately restrict the spread of flame, this being determined to the satisfaction of the Administration by an established test procedure.	**Technical**
SOLAS 1974 Convention / Chapter II-2 / Reg. 3(s)(iii)	On or after 5/25/1980 Before 5/1/1981	(iii) all draperies, curtains and other suspended textile materials have, to the satisfaction of the Administration, qualities of resistance to the propagation of flame not inferior to those of wool weighing 0.8 kilogrammes per square metre (24 ounces per square yard);	**Technical**
SOLAS 1974 Convention / Chapter II-2 / Reg. 3(s)(iv)	On or after 5/25/1980 Before 5/1/1981	(iv) all floor coverings have, to the satisfaction of the Administration, qualities of resistance to the propagation of flame not inferior to those of an equivalent woollen material used for the same purpose;	**Technical**
SOLAS 1974 Convention / Chapter II-2 / Reg. 4	On or after 5/25/1980 Before 9/1/1984	There shall be permanently exhibited in all new and existing ships for the guidance of the ship's officers general arrangement plans showing clearly for each deck the control stations, the various fire sections enclosed by "A" Class division, the sections enclosed by "B" Class divisions (if any), together with particulars of the fire alarms, detecting systems, the sprinkler installation (if any) the fire extinguishing appliances, means of access to different compartments, decks, etc. and the ventilating system including particulars of the fan control positions, the position of dampers and identification numbers of the ventilating fans serving each section. Alternatively, at the discretion of the Administration, the aforementioned details may be set out in a booklet, a copy of which shall be supplied to each officer, and one copy at all times shall be available on board in an being recorded thereon as soon as practicable. Description in such plans and booklets shall be in the national language. If the language is neither English nor French, a translation into one of those languages shall be included. In addition, instructions concerning the maintenance and operation of all the equipment and installations on board for the fighting and containment of fire shall be kept under one cover, readily available in an accessible position.	**Technical**
SOLAS 1974 Convention / Chapter II-2 / Reg. 5(b)(ii)(1)	On or after 5/25/1980 Before 9/1/1984	(1) In passenger ships carrying more than 36 passengers, each of the required fire pumps shall have a capacity not less than 80 per cent of the total required capacity divided by the minimum number of required fire pumps and each such pump shall in any event be capable of delivering at least the two required jets of water. These fire pumps shall be capable of supplying the fire main system under the required conditions. Where more pumps	**Technical**

		than the minimum of required pumps are installed the capacity of such additional pumps shall be to the satisfaction of the Administration.	
SOLAS 1974 Convention / Chapter II-2 / Reg. 5(b)(ii)(2)	On or after 5/25/1980 Before 9/1/1984	(2) In all other types of ships (e. g. passenger ships carrying not more than 36 passengers), each of the required fire pumps (other than any emergency pump required by Regulation 52 of this Chapter) shall have a capacity not less than 80 per cent of the total required capacity divided by the number of required fire pumps, and shall in any event be capable of supplying the fire main system under the required conditions. Where more pumps than required are installed their capacity shall be to the satisfaction of the Administration.	**Technical**
SOLAS 1974 Convention / Chapter II-2 / Reg. 5(c)(ii)	On or after 5/25/1980 Before 9/1/1984	(ii) With the two pumps simultaneously delivering through nozzles specified in paragraph (g) of this Regulation the quantity of water specified in sub-paragraph (i) of this paragraph, through any adjacent hydrants, the following minimum pressures shall be maintained at all hydrants: Passenger ships: 4,000 tons gross tonnage and upwards - 3.2 kilogrammes per square centimetre (45 pounds per square inch); 1,000 tons gross tonnage and upwards, but under 4,000 tons gross tonnage - 2.8 kilogrammes per square centimetre (40 pounds per square inch); Under 1,000 tons gross tonnage - To the satisfaction of the Administration; Cargo ships: 6,000 tons gross tonnage and upwards - 2.8 kilogrammes per square centimetre (40 pounds per square inch); 1,000 tons gross tonnage and upwards, but under 6,000 tons gross tonnage - 2.6 kilogrammes per square centimetre (37 pounds per square inch); Under 1,000 tons gross tonnage - To the satisfaction of the Administration	**Technical**
SOLAS 1974 Convention / Chapter II-2 / Reg. 5(f)	On or after 5/25/1980 Before 9/1/1984	(f) Fire hoses shall be of material approved by the Administration and sufficient in length to project a jet of water to any of the spaces in which they may be required to be used. Their maximum length shall be to the satisfaction of the Administration. Each hose shall be provided **with** a nozzle and the necessary couplings. Hoses specified in this Chapter as "fire hoses" shall together with any necessary fittings and tools be kept ready for use in conspicuous positions near the water service hydrants or	**Technical**

		connections. Additionally in interior locations in passenger ships carrying more than 36 passengers, fire hoses shall be connected to the hydrants at all times.	
SOLAS 1974 Convention / Chapter II-2 / Reg. 5(g)	On or after 5/25/1980 Before 9/1/1984	(g) Nozzles (i) For the purposes of this Chapter, standard nozzle sizes shall be 12 millimetres (½ inch), 16 millimetres(5/8 inch) and 19 millimetres (3/4 inch) or as near thereto as possible. Larger diameter nozzles may be permitted at the discretion of the Administration.	**Technical**
SOLAS 1974 Convention / Chapter II-2 / Reg. 7(b)	On or after 5/25/1980 Before 9/1/1984	(b) Spare charges shall be provided in accordance with requirements to be specified by the Administration.	**Technical**
SOLAS 1974 Convention / Chapter II-2 / Reg. 7(c)	On or after 5/25/1980 Before 9/1/1984	(c) Fire extinguishers containing an extinguishing medium which, in the opinion of the Administration, either by itself or under expected conditions of use gives off toxic gases in such quantities as to endanger persons shall not be permitted.	**Technical**
SOLAS 1974 Convention / Chapter II-2 / Reg. 8(a)	On or after 5/25/1980 Before 9/1/1984	(a) The use of a fire-extinguishing medium which, in the opinion of the Administration, either by itself or under expected conditions of use gives off toxic gases in such quantities as to endanger persons shall not be permitted.	**Technical**
SOLAS 1974 Convention / Chapter II-2 / Reg. 8(d)(vii)	On or after 5/25/1980 Before 9/1/1984	(vii) Carbon dioxide bottle storage rooms shall be situated at a safe and readily accessible position and shall be effectively ventilated to the satisfaction of the Administration. Any entrance to such storage rooms shall preferably be from the open deck, and in any case shall be independent of the protected space. Access doors shall be gastight and bulkheads and decks which form the boundaries of such rooms shall be gastight and adequately insulated.	**Technical**
SOLAS 1974 Convention / Chapter II-2 / Reg. 8(f)	On or after 5/25/1980 Before 9/1/1984	(f) In general, the Administration shall not permit the use of steam as a fire-extinguishing medium in fixed fire-extinguishing systems of new ships. Where the use of steam is permitted by the Administration it shall be used only in restricted areas as an addition to the required fire-extinguishing medium and with the proviso that the boiler or boilers available for supplying steam shall have an evaporation of at least 1 kilogramme of steam per hour for each 0.75 cubic metres (1 pound of steam per hour per 12 cubic feet) of the gross volume of the largest space so protected. In addition to complying with the foregoing requirements the systems in all respects shall be as determined by, and to the satisfaction of the Administration.	**Technical**

SOLAS 1974 Convention / Chapter II-2 / Reg. 10(b)	On or after 5/25/1980 Before 9/1/1984	(b) Supply ducts for delivering froth, air intakes to the froth generator and the number of froth-producing units shall in the opinion of the Administration be such as will provide effective froth production and distribution.	**Technical**
SOLAS 1974 Convention / Chapter II-2 / Reg. 11(b)	On or after 5/25/1980 Before 9/1/1984	(b) The number and arrangement of the nozzles shall be to the satisfaction of the Administration and be such as to ensure an effective average distribution of water of at least 5 litres per square metre (0.1 gallon per square foot) per minute in the spaces to be protected. Where increased application rates are considered necessary, these shall be to the satisfaction of the Administration. Nozzles shall be fitted above bilges, tank tops and other areas over which oil fuel is liable to spread and also above other specific fire hazards in the machinery spaces.	**Technical**
SOLAS 1974 Convention / Chapter II-2 / Reg. 12(a)(i)	On or after 5/25/1980 Before 9/1/1984	(a) (i) Any required automatic sprinkler and fire alarm and fire detection system shall be capable of immediate operation at all times and no action by the crew shall be necessary to set it in operation. It shall be of the wet pipe type but small exposed sections may be of the dry pipe type where in the opinion of the Administration this is a necessary precaution. Any parts of the system which may be subjected to freezing temperatures in service shall be suitably protected against freezing. It shall be kept charged at the necessary pressure and shall have provision for a continuous supply of water as required in this Regulation.	**Technical**
SOLAS 1974 Convention / Chapter II-2 / Reg. 12(c)	On or after 5/25/1980 Before 9/1/1984	(c) Sprinklers shall be placed in an overhead position and spaced in a suitable pattern to maintain an average application rate of not less than 5 litres per square metre (0.1 gallon per square foot) per minute over the nominal area covered by the sprinklers. Alternatively, the Administration may permit the use of sprinklers providing such other amount of water suitably distributed as has been shown to the satisfaction of the Administration to be not less effective.	**Technical**
SOLAS 1974 Convention / Chapter II-2 / Reg. 12(j)	On or after 5/25/1980 Before 9/1/1984	(j) Spare sprinkler heads shall be provided for each section of sprinklers to the satisfaction of the Administration.	**Technical**
SOLAS 1974 Convention / Chapter II-2 / Reg. 13(c)	On or after 5/25/1980 Before 9/1/1984	(c) The system shall be operated by an abnormal air temperature, by an abnormal concentration of smoke or by other factors indicative of incipient fire in any one of the spaces to be protected. Systems which are sensitive to air temperature shall not operate at less than 57°C(135°F) and shall operate at a temperature not greater than 7 4°C(165°F) when the temperature	**Technical**

		increase to those levels is not more than 1°C(1.8°F) per minute. At the discretion of the Administration the permissible temperature of operation may be increased to 30°C(54°F) above the maximum deckhead temperature in drying rooms and similar places of a normally high ambient temperature. Systems which are sensitive to smoke concentration shall operate on the reduction of the intensity of a transmitted light beam by an amount to be determined by the Administration. Other equally effective methods of operation may be accepted at the discretion of the Administration. The detection system shall not be used for any purpose other than fire detection.	
SOLAS 1974 Convention / Chapter II-2 / Reg. 13(h)	On or after 5/25/1980 Before 9/1/1984	(h) Spare detector heads shall be provided for each section of detectors to the satisfaction of the Administration.	**Technical**
SOLAS 1974 Convention / Chapter II-2 / Reg. 14(v)	On or after 5/25/1980 Before 9/1/1984	(v) An axe to the satisfaction of the Administration.	**Technical**
SOLAS 1974 Convention / Chapter II-2 / Reg. 17(a)	On or after 5/25/1980 Before 9/1/1984 Passenger ships carrying more than 36 passengers	The hull, superstructure, structural bulkheads, decks and deckhouses shall be constructed of steel or other equivalent material. For the purpose of applying the definition of steel or other equivalent material as given in Regulation 3(g) of this Chapter the "applicable fire exposure" shall be according to the integrity and insulation standards given in the tables of Regulation 20 of this Chapter. An example where divisions such as decks or sides and ends of deckhouses are permitted to have "B-0" fire integrity, the "applicable fire exposure" shall be one half-hour. Provided that in cases where any part of the structure is of aluminium alloy, the following requirements shall apply: (a) The insulation of aluminium alloy components of "A" or "B" Class divisions, except structure which in the opinion of the Administration is non-load- bearing, shall be such that the temperature of the structural core does not rise more than 200°C(360 °F) above the ambient temperature at any time during the applicable fire exposure to the standard fire test.	**Technical**
SOLAS 1974 Convention / Chapter II-2 / Reg. 19(b)(i)	On or after 5/25/1980 Before 9/1/1984 Passenger	b) All corridor bulkheads where not required to be "A" Class shall be "B" Class divisions which shall extend from deck to deck except: (i) when continuous "B" Class ceilings and/or linings are fitted on both sides of the bulkhead, the portion of the bulkhead behind the	**Technical**

	ships carrying more than 36 passengers	continuous ceiling or lining shall be of material which in thickness and composition is acceptable in the construction of "B" Class divisions but which shall be required to meet "B" Class integrity standards only in so far as is reasonable and practicable in the opinion of the Administration;	
SOLAS 1974 Convention / Chapter II-2 / Reg. 19(b)(ii)	On or after 5/25/1980 Before 9/1/1984 Passenger ships carrying more than 36 passengers	b) All corridor bulkheads where not required to be "A" Class shall be "B" Class divisions which shall extend from deck to deck except: (ii) in the case of a ship protected by an automatic sprinkler system complying with the provisions of Regulation 12 of this Chapter, the corridor bulkheads of "B" Class materials may terminate at a ceiling in the corridor provided such a ceiling is of material which in thickness and composition is acceptable in the construction of "B" Class divisions. Notwithstanding the requirements of Regulation 20 of this Chapter, such bulkheads and ceilings shall be required to meet "B" Class integrity standards only in so far as is reasonable and practicable in the opinion of the Administration. All doors and frames in such bulkheads shall be of incombustible materials and shall be constructed and erected so as to provide substantial fire resistance to the satisfaction of the Administration.	**Technical**
SOLAS 1974 Convention / Chapter II-2 / Reg. 20(a)	On or after 5/25/1980 Before 9/1/1984 Passenger ships carrying more than 36 passengers	(a) In addition to complying with the specific provisions for fire integrity of bulkheads and decks mentioned elsewhere in the Regulations of this Part, the minimum fire integrity of all bulkheads and decks shall be as prescribed in Tables 1 to 4 in this Regulation. Where, due to any particular structural arrangements in the ship, difficulty is experienced in determining from the tables the minimum fire integrity value of any divisions, such values shall be determined to the satisfaction of the Administration.	**Technical**
SOLAS 1974 Convention / Chapter II-2 / Reg. 20(b)(ix)	On or after 5/25/1980 Before 9/1/1984 Passenger ships carrying more than 36 passengers	(b) (ix) The Administration shall determine in respect of Category (5) spaces whether the insulation values in Table 1 or 2 shall apply to ends of deckhouses and superstructures, and whether the insulation values in Table 3 or 4 shall apply to weather decks. In no case shall the requirements of Category (5) of Tables 1 to 4 necessitate enclosure of spaces which in the opinion of the Administration need not be enclosed.	**Technical**

SOLAS 1974 Convention / Chapter II-2 / Reg. 21(a)(iii)	On or after 5/25/1980 Before 9/1/1984 Passenger ships carrying more than 36 passengers	(iii) At least one of the means of escape required by sub-paragraphs (a) (i) and (ii) of this Regulation shall be by means of a readily accessible enclosed stairway, which shall provide continuous fire shelter from the level of its origin to the appropriate lifeboat and liferaft embarkation decks or the highest level served by the stairway, whichever level is the highest. However, where an Administration has granted dispensation under the provisions of sub-paragraph (a) (i) of this Regulation the sole means of escape shall provide safe escape to the satisfaction of the Administration. The width, number and continuity of the stairways shall be to the satisfaction of the Administration.	**Technical**
SOLAS 1974 Convention / Chapter II-2 / Reg. 21(a)(iv)	On or after 5/25/1980 Before 9/1/1984 Passenger ships carrying more than 36 passengers	(iv) Protection of access from the stairway enclosures to the lifeboat and liferaft embarkation areas shall be to the satisfaction of the Administration.	**Technical**
SOLAS 1974 Convention / Chapter II-2 / Reg. 21(b)(i)	On or after 5/25/1980 Before 9/1/1984 Passenger ships carrying more than 36 passengers	(i) In special category spaces the number and disposition of the means of escape both below and above the bulkhead deck shall be to the satisfaction of the Administration, and in general the safety of access to the embarkation deck shall be at least equivalent to that provided for under sub-paragraphs (a)(i), (ii), (iii), (iv) and (v) of this Regulation.	**Technical**
SOLAS 1974 Convention / Chapter II-2 / Reg. 23(g)	On or after 5/25/1980 Before 9/1/1984 Passenger ships carrying more than	Openings in "A" Class Divisions (g) Where a space is protected by an automatic sprinkler system complying with the provisions of Regulation 12 of this Chapter or fitted with a continuous "B" Class ceiling, openings in decks not forming steps in main vertical zones nor bounding horizontal zones shall be closed reasonably tight and such decks shall meet the "A" Class integrity requirements in so far as is reasonable and practicable in the opinion of the Administration.	**Technical**

	36 passengers		
SOLAS 1974 Convention / Chapter II-2 / Reg. 24(d)(i)	On or after 5/25/1980 Before 9/1/1984 Passenger ships carrying more than 36 passengers	Openings in "B" Class Divisions (d) Where an automatic sprinkler system complying with the provisions of Regulation 12 of this Chapter is fitted: (i) openings in decks not forming steps in main vertical zones nor bounding horizontal zones shall be closed reasonably tight and such decks shall meet the "B" Class integrity requirements in so far as is reasonable and practicable in the opinion of the Administration; and	**Technical**
SOLAS 1974 Convention / Chapter II-2 / Reg. 25(d)(iii)(1)	On or after 5/25/1980 Before 9/1/1984 Passenger ships carrying more than 36 passengers	(1) the duct is constructed of a material of restricted fire risk to the satisfaction of the Administration;	**Technical**
SOLAS 1974 Convention / Chapter II-2 / Reg. 25(h)	On or after 5/25/1980 Before 9/1/1984 Passenger ships carrying more than 36 passengers	(h) Such measures as are practicable shall be taken in respect of control stations outside machinery spaces in order to ensure that ventilation, visibility and freedom from smoke are maintained, so that in the event of fire the machinery and equipment contained therein may be supervised and continue to function effectively. Alternative and separate means of air supply shall be provided; air inlets of the two sources of supply shall be so disposed that the risk of both inlets drawing in smoke simultaneously is minimized. At the discretion of the Administration, such requirements need not apply to control stations situated on, and opening on to, an open deck, or where local closing arrangements would be equally effective.	**Technical**
SOLAS 1974 Convention / Chapter II-2 / Reg. 27(b)	On or after 5/25/1980 Before 9/1/1984 Passenger ships carrying	(b) Vapour barriers and adhesives used in conjunction with insulation, as well as insulation of pipe fittings, for cold service systems need not be non-combustible, but they shall be kept to the minimum quantity practicable and their exposed surfaces shall have qualities of resistance to the propagation of flame to the satisfaction of the Administration.	**Technical**

	more than 36 passengers		
SOLAS 1974 Convention / Chapter II-2 / Reg. 28(c)	On or after 5/25/1980 Before 9/1/1984 Passenger ships carrying more than 36 passengers	Requirements Applicable to Accommodation and Service Spaces, Control Stations, Corridors and Stairways. (c) The construction of ceiling and bulkheading shall be such that it will be possible, without impairing the efficiency of the fire protection, for the fire patrols to detect any smoke originating in concealed and inaccessible places, except where in the opinion of the Administration there is no risk of fire originating in such places.	**Technical**
SOLAS 1974 Convention / Chapter II-2 / Reg. 32(a)(iii)	On or after 5/25/1980 Before 9/1/1984 Passenger ships carrying more than 36 passengers	(iii) An approved fire alarm or fire detecting system shall be provided which will automatically indicate at one or more suitable points or stations the presence or indication of fire and its location in any cargo space which, in the opinion of the Administration, is not accessible to the patrol system, except where it is shown to the satisfaction of the Administration that the ship is engaged on voyages of such short duration that it would be unreasonable to apply this requirement.	**Technical**
SOLAS 1974 Convention / Chapter II-2 / Reg. 32(b)(iv)	On or after 5/25/1980 Before 9/1/1984 Passenger ships carrying more than 36 passengers	(b) Fire Pumps and Fire Main System: The ship shall be provided with fire pumps, fire main system, hydrants and hoses complying with the provisions of Regulation 5 of this Chapter and shall comply with the following requirements: (iv) In a ship of less than 1,000 tons gross tonnage the arrangements shall be to the satisfaction of the Administration.	**Technical**
SOLAS 1974 Convention / Chapter II-2 / Reg. 32(c)(i)	On or after 5/25/1980 Before 9/1/1984 Passenger ships carrying more than	(i) The ship shall be provided with fire hoses the number and diameter of which shall be to the satisfaction of the Administration. There shall be at least one fire hose for each of the hydrants required by paragraph (d) of Regulation 5 of this Chapter and these hoses shall be used only for the purposes of extinguishing fires or testing the fire-extinguishing apparatus at fire drills and surveys.	**Technical**

	36 passengers		
SOLAS 1974 Convention / Chapter II-2 / Reg. 32(f)(ii)	On or after 5/25/1980 Before 9/1/1984 Passenger ships carrying more than 36 passengers	(f) Fixed Fire-Extinguishing Arrangements in Cargo Spaces: (ii) Where it is shown to the satisfaction of the Administration that a ship is engaged on voyages of such short duration that it would be unreasonable to apply the requirements of sub-paragraph (i) of this paragraph and also in ships of less than 1,000 tons gross tonnage, the arrangements in cargo spaces shall be to the satisfaction of the Administration.	**Technical**
SOLAS 1974 Convention / Chapter II-2 / Reg. 32(j)	On or after 5/25/1980 Before 9/1/1984 Passenger ships carrying more than 36 passengers	(j) Fire-Extinguishing Appliances in other Machinery Spaces Where, in the opinion of the Administration, a fire hazard exists in any machinery space for which no specific provisions for fire-extinguishing appliances are prescribed in paragraphs (g), (h) and (i) of this Regulation there shall be provided in, or adjacent to, that space such number of approved portable fire extinguishers or other means of fire extinction as the Administration may deem sufficient.	**Technical**
SOLAS 1974 Convention / Chapter II-2 / Reg. 32(k)	On or after 5/25/1980 Before 9/1/1984 Passenger ships carrying more than 36 passengers	Where a fixed fire-extinguishing system not required by this Part of this Chapter is installed, such a system shall be to the satisfaction of the Administration.	**Technical**
SOLAS 1974 Convention / Chapter II-2 / Reg. 33(a)(vii)	On or after 5/25/1980 Before 9/1/1984 Passenger ships carrying more than	(a) Oil Fuel Arrangements (vii) Provision shall be made to prevent over-pressure in any oil tank or in any part of the oil fuel system, including the filling pipes. Any relief valves and air or overflow pipes shall discharge to a position which, in the opinion of the Administration, is safe.	**Technical**

	36 passengers		
SOLAS 1974 Convention / Chapter II-2 / Reg. 33(a)(viii)	On or after 5/25/1980 Before 9/1/1984 Passenger ships carrying more than 36 passengers	(a) Oil Fuel Arrangements (viii) Oil fuel pipes shall be of steel or other approved material, provided that restricted use of flexible pipes shall be permissible in positions where the Administration is satisfied that they are necessary. Such flexible pipes and end attachments shall be of approved fire-resisting materials of adequate strength and shall be constructed to the satisfaction of the Administration.	**Technical**
SOLAS 1974 Convention / Chapter II-2 / Reg. 34(e)	On or after 5/25/1980 Before 9/1/1984 Passenger ships carrying more than 36 passengers	(e) The controls required for ventilating fans shall comply with the provisions of paragraph (f) of Regulation 25 of this Chapter. The controls for any required fixed fire-extinguishing system and those required by sub-paragraphs (d)(i), (ii), (iii) and (v) of this Regulation and of sub-paragraph (a)(v) of Regulation 33 of this Chapter shall be situated at one control position, or grouped in as few positions as possible to the satisfaction of the Administration. Such position or positions shall be located where they will not be cut off in the event of fire in the space they serve, and shall have a safe access from the open deck.	**Technical**
SOLAS 1974 Convention / Chapter II-2 / Reg. 39	On or after 5/25/1980 Before 9/1/1984 Passenger ships carrying not more than 36 passengers	The boundary bulkheads and decks separating accommodation spaces from machinery, cargo and service spaces shall be constructed of "A" Class divisions, and these bulkheads and decks shall have an insulation value to the satisfaction of the Administration having regard to the nature of the adjacent spaces.	**Technical**
SOLAS 1974 Convention / Chapter II-2 / Reg. 47(a)(ii)	On or after 5/25/1980 Before 9/1/1984 Passenger ships carrying not more	(ii) An approved fire alarm or fire detecting system shall be provided which will automatically indicate at one or more suitable points or stations the presence or indication of fire and its location in any part of the ship which, in the opinion of the Administration, is not accessible to the patrol system, except where it is shown to the satisfaction of the Administration that the ship is engaged on voyages of such short duration that it would be unreasonable to apply this requirement.	**Technical**

	than 36 passengers		
SOLAS 1974 Convention / Chapter II-2 / Reg. 47(b)(iii)	On or after 5/25/1980 Before 9/1/1984 Passenger ships carrying not more than 36 passengers	(b) Fire Pumps and Fire Main System. The ship shall be provided with fire pumps, fire main system, hydrants and hoses complying with Regulation 5 of this Chapter and with the following requirements: (iii) In a ship of less than 1,000 tons gross tonnage the arrangements shall be to the satisfaction of the Administration.	**Technical**
SOLAS 1974 Convention / Chapter II-2 / Reg. 47(f)(ii)	On or after 5/25/1980 Before 9/1/1984 Passenger ships carrying not more than 36 passengers	(f) Fixed Fire-Extinguishing Arrangements in Cargo Spaces: (ii) Where it is shown to the satisfaction of the Administration that a ship is engaged on voyages of such short duration that it would be unreasonable to apply the requirements of sub-paragraph (i) of this paragraph and also in ships of less than 1,000 tons gross tonnage, the arrangements in cargo spaces shall be to the satisfaction of the Administration.	**Technical**
SOLAS 1974 Convention / Chapter II-2 / Reg. 48(a)(iii)	On or after 5/25/1980 Before 9/1/1984 Passenger ships carrying not more than 36 passengers	(iii) at least one of the means of escape shall be by means of a readily accessible enclosed stairway, which shall provide as far as practicable continuous fire shelter from the level of its origin to the lifeboat embarkation deck. The width, number and continuity of the stairways shall be to the satisfaction of the Administration.	**Technical**
SOLAS 1974 Convention / Chapter II-2 / Reg. 52(a)	On or after 5/25/1980 Before 9/1/1984 Cargo ships	(a) Where ships have a lower gross tonnage than those quoted in this Regulation, the arrangements for the items covered in this Regulation shall be to the satisfaction of the Administration.	**Technical**
SOLAS 1974 Convention / Chapter II-2 / Reg. 52(b)(ii)	On or after 5/25/1980 Before 9/1/1984	(ii) In a ship of 1,000 tons gross tonnage and upwards if a fire in any one compartment could put all the pumps out of action, there must be an alternative means of providing water for fire fighting. In a ship of 2,000 tons gross tonnage and upwards this	**Technical**

	Cargo ships	alternative means shall be a fixed emergency pump independently driven. This emergency pump shall be capable of supplying two jets of water to the satisfaction of the Administration.	
SOLAS 1974 Convention / Chapter II-2 / Reg. 52(f)(ii)(3)	On or after 5/25/1980 Before 9/1/1984 Cargo ships	(f) Fixed Fire-Extinguishing Arrangements in Cargo Spaces: (3) where it is shown to the satisfaction of the Administration that the ship is engaged on voyages of such short duration that it would be unreasonable to apply the requirement.	**Technical**
SOLAS 1974 Convention / Chapter II-2 / Reg. 55(c)	On or after 5/25/1980 Before 5/1/1981 Tankers	(c) Where cargoes other than those referred to in paragraph (a) of this Regulation which introduce additional fire hazards are intended to be carried, additional safety measures shall be required to the satisfaction of the Administration.	**Technical**
SOLAS 1974 Convention / Chapter II-2 / Reg. 56(b)	On or after 5/25/1980 Before 5/1/1981 Tankers	(b) Accommodation spaces, main cargo control stations, control stations and service spaces shall be positioned aft of all cargo tanks, slop tanks, cargo pump rooms and cofferdams which isolate cargo or slop tanks from machinery spaces of Category A. Any common bulkhead separating a cargo pump room, including the pump room entrance, from accommodation and service spaces and control stations shall be constructed to "A-60" Class. Where deemed necessary, accommodation spaces, control stations, machinery spaces other than those of Category A and service spaces may be permitted forward of all cargo tanks, slop tanks, cargo pump rooms and cofferdams subject to an equivalent standard of safety and appropriate availability of fire-extinguishing arrangements being provided to the satisfaction of the Administration.	**Technical**
SOLAS 1974 Convention / Chapter II-2 / Reg. 57(a)(v)	On or after 5/25/1980 Before 5/1/1981 Tankers	(v) Control stations shall be separated from adjacent enclosed spaces by means of "A" Class bulkheads and decks. The insulation of these control station boundaries shall be to the satisfaction of the Administration having in mind the risk of fire in adjacent spaces.	**Technical**
SOLAS 1974 Convention / Chapter II-2 / Reg. 57(b)(iii)	On or after 5/25/1980 Before 5/1/1981 Tankers	(iii) Ceilings, linings, bulkheads and insulation except for insulation in refrigerated compartments shall be of non-combustible material. Vapour barriers and adhesives used in conjunction with insulation, as well as insulation of pipe fittings for cold service systems need not be non-combustible, but they shall be kept to the minimum quantity practicable and their exposed surfaces shall have resistance to propagation of flame to the satisfaction of the Administration.	**Technical**

SOLAS 1974 Convention / Chapter II-2 / Reg. 60(d)	On or after 5/25/1980 Before 5/1/1981 Tankers	(d) In tankers of less than 100,000 metric tons deadweight and combination carriers of less than 50,000 metric tons deadweight the Administration, in applying the requirements of paragraph (f) of Regulation 52 of this Chapter, may accept a froth system, capable of discharging froth internally or externally, to the tanks. The details of such installation shall be to the satisfaction of the Administration.	**Technical**
SOLAS 1974 Convention / Chapter II-2 / Reg. 61(c)(ii)	On or after 5/25/1980 Before 5/1/1981 Tankers	(ii) 6 litres per minute per square metre of the horizontal sectional area of the single tank having the largest such area. Sufficient froth concentrate shall be supplied to ensure at least 20 minutes of froth generation when using solution rates stipulated in sub-paragraph (i) or (ii) of this paragraph, whichever is the greater. The froth expansion ratio (i.e. the ratio of the volume of froth produced to the volume of the mixture of water and froth-making concentrate supplied) shall not generally exceed 12 to 1. Where systems essentially produce low expansion froth but at an expansion ratio slightly in excess of 12 to 1, the quantity of froth solution available shall be calculated as for 12 to 1 expansion ratio systems. When medium expansion ratio froth (between 50 to 1 and 150 to 1 expansion ratio) is employed the application rate of the froth and the capacity of a monitor installation shall be to the satisfaction of the Administration.	**Technical**
SOLAS 1974 Convention / Chapter II-2 / Reg. 66	Before 11/19/1952 Passenger ships	The structural components shall be of steel or other suitable material in compliance with Regulation 27 (1948), 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 Administration.	**Technical**
SOLAS 1974 Convention / Chapter III / Reg. 5(b)(ii)	On or after 5/25/1980 Before 7/1/1986	(ii) Motor lifeboats may be fitted to the satisfaction of the Administration with a means for preventing the entry of water at the fore end.	**Technical**
SOLAS 1974 Convention / Chapter III / Reg. 5(g)	On or after 5/25/1980 Before 7/1/1986	(g) In lifeboats permitted to carry 100 or more persons the volume of the buoyancy shall be increased to the satisfaction of the Administration.	**Technical**
SOLAS 1974 Convention / Chapter III / Reg. 11(b)	On or after 5/25/1980 Before 7/1/1986	(b) In the case of ships engaged on voyages of such duration that in the opinion of the Administration the items specified in sub-paragraphs (vi), (xii), (xix), (xx) and (xxv) of paragraph (a) of this Regulation are unnecessary, the Administration may allow them to be dispensed with.	**Specific** Case by case assessment

SOLAS 1974 Convention / Chapter III / Reg. 13(b)	On or after 5/25/1980 Before 7/1/1986	(b) In the case of ships engaged on voyages of such duration that in the opinion of the Administration portable radio apparatus for survival craft is unnecessary, the Administration may allow such equipment to be dispensed with.	**Specific** Case by case assessment
SOLAS 1974 Convention / Chapter III / Reg. 15(n)	On or after 5/25/1980 Before 7/1/1986	(n) No liferaft shall be approved which has a carrying capacity calculated in accordance with paragraph (j) of this Regulation of less than six persons. The maximum number of persons calculated in accordance with that paragraph for which an inflatable liferaft may be approved shall be at the discretion of the Administration, but shall in no case exceed 25.	**Specific** Case by case assessment
SOLAS 1974 Convention / Chapter III / Reg. 17(b)	On or after 5/25/1980 Before 7/1/1986 Passenger ships	(b) In the case of passenger ships engaged on short international voyages of such duration that in the opinion of the Administration all the items specified in paragraph (a) of this Regulation are unnecessary, the Administration may allow one or more liferafts, not being less than one-sixth of the number of liferafts carried in any such ship, to be provided with the equipment specified in sub-paragraphs (i) to (vii) inclusive, (xi) and (xix) of paragraph (a) of this Regulation, and with one-half of the equipment specified in sub-paragraphs (xiii) and (xiv) of that paragraph and the remainder of the liferafts carried to be provided with the equipment specified in sub-paragraphs (i) to (vii) inclusive and (xix) of that paragraph.	**Specific** Case by case assessment
SOLAS 1974 Convention / Chapter III / Reg. 27(c)(i)	On or after 5/25/1980 Before 9/1/1984 Passenger ships	(c) (i) A passenger ship engaged on short international voyages shall be provided with sets of davits in accordance with its length as specified in Column A of the Table in Regulation 28 of this Chapter. Each set of davits shall have a lifeboat attached to it and these lifeboats shall provide at least the minimum capacity required by Column C of the Table or the capacity required to provide accommodation for all on board if this is less. Provided that when in the opinion of the Administration it is impracticable or unreasonable to place on a ship engaged on short international voyages the number of sets of davits required by Column A of the Table in Regulation 28, the Administration may authorize, under exceptional conditions, a smaller number of davits, except that this number shall never be less than the minimum number fixed by Column B of the Table, and that the total capacity of the lifeboats on the ship will be at least equal to the minimum capacity required by Column C or the capacity required to provide for all persons on board if this is less.	**Specific** Case by case assessment
SOLAS 1974 Convention /	On or after 5/25/1980	Ships shall be provided, to the satisfaction of the Administration, with means of making effective distress signals by day and by	**Technical**

Chapter III / Reg. 24	Before 7/1/1986	night, including at least twelve parachute signals capable of giving a bright red light at a high altitude.	
SOLAS 1974 Convention / Chapter III / Reg. 29(a)	On or after 5/25/1980 Before 7/1/1986 Passenger ships	(a) Lifeboats and liferafts shall be stowed to the satisfaction of the Administration in such a way that: (i) they can all be launched in the shortest possible time and in not more than 30 minutes; (ii) they will not impede in any way the prompt handling of any of the other lifeboats, liferafts or buoyant apparatus or the marshalling of the persons on board at the launching stations, or their embarkation; (iii) the lifeboats, and the liferafts for which approved launching devices are required to be carried, shall be capable of being put into the water loaded with their full complement of persons and equipment even in unfavourable conditions of trim and of 15 degrees of list either way; and (iv) the liferafts for which approved launching devices are not required to be carried, and the buoyant apparatus, shall be capable of being put into the water even in unfavourable conditions of trim and of 15 degrees of list either way.	**Technical**
SOLAS 1974 Convention / Chapter III / Reg. 29(e)	On or after 5/25/1980 Before 7/1/1986 Passenger ships	(e) Davits shall be of approved design and shall be suitably placed to the satisfaction of the Administration. They shall be so disposed on one or more decks that the lifeboats placed under them can be safely lowered without interference from the operation of any other davits.	**Technical**
SOLAS 1974 Convention / Chapter III / Reg. 29(n)(i)	On or after 5/25/1980 Before 7/1/1986 Passenger ships	(n) (i) In passenger ships engaged on international voyages which are not short international voyages in which there are carried lifeboats and liferafts in accordance with sub-paragraph (b)(i) of Regulation 27 of this Chapter, there shall be provided approved launching devices sufficient in number in the opinion of the Administration to enable that number of liferafts which, together with the lifeboats, is required in accordance with that sub-paragraph to provide accommodation for all on board, to be put into the water loaded with the number of persons they are permitted to accommodate, in not more than thirty minutes in calm conditions. Approved launching devices so provided shall, so far as practicable, be distributed equally on each side of the ship and there shall never be less than one such device on each side. No such devices need, however, be provided for the additional liferafts required to be carried by sub-paragraph (b)(ii) of Regulation 27 of this Chapter for 25 per cent of all on board, but	**Technical**

		every liferaft carried in accordance with that sub-paragraph shall, where an approved launching device is provided in the ship, be of a type which is capable of being launched from such a device.	
SOLAS 1974 Convention / Chapter III / Reg. 29(n)(ii)	On or after 5/25/1980 Before 7/1/1986 Passenger ships	(n) (ii) In passenger ships engaged on short international voyages, the number of approved launching devices to be provided shall be at the discretion of the Administration. The number of liferafts allocated to each such device carried shall not be more than the number which, in the opinion of the Administration, can be put into the water fully loaded with the number of persons they are permitted to carry by that device in not more than 30 minutes in calm conditions.	**Technical**
SOLAS 1974 Convention / Chapter III / Reg. 33(a)(ii)	On or after 5/25/1980 Before 7/1/1986 Passenger ships	(a) No type of buoyant apparatus shall be approved unless it satisfies the following conditions: (ii) It shall not exceed 180 kilogrammes (400 lbs.) in weight unless suitable means to the satisfaction of the Administration are provided to enable it to be launched without lifting by hand.	**Technical**
SOLAS 1974 Convention / Chapter III / Reg. 36(a)	On or after 5/25/1980 Before 7/1/1986 Cargo ships	(a) In cargo ships lifeboats and liferafts shall be stowed to the satisfaction of the Administration.	**Technical**
SOLAS 1974 Convention / Chapter III / Reg. 36(d)	On or after 5/25/1980 Before 7/1/1986 Cargo ships	(d) Davits shall be of approved design and shall be suitably placed to the satisfaction of the Administration.	**Technical**
SOLAS 1974 Convention / Chapter III / Reg. 36(m)	On or after 5/25/1980 Before 7/1/1986 Cargo ships	(m) In ships employed as whale factory ships, ships employed as fish processing or canning factory ships and ships engaged in the carriage of persons employed in the whaling, fish processing or canning industries, in which there are carried lifeboats and life-rafts in accordance with sub-paragraph (b)(i)(2) of Regulation 35 no approved launching devices need be provided for the liferafts, but there shall be provided such devices sufficient in number, in the opinion of the Administration, to enable the liferafts carried in accordance with sub-paragraph (b)(i)(l) of that Regulation to be put into the water loaded with the number of persons they are permitted to accommodate, in not more than 30 minutes in calm conditions. Approved launching devices so provided shall, so far as practicable, be distributed equally on each side of the ship. Every liferaft carried on ships in which an approved launching	**Technical**

		device is required to be provided shall be of a type which is capable of being launched by such a device.	
SOLAS 1974 Convention / Chapter IV / Reg. 6	On or after 5/25/1980 Before 2/1/1992	(d) (ii) In addition to the provisions of sub-paragraph (i) of this paragraph, on ships other than multi-radio officer passenger ships, the radio officer may, in exceptional cases, i.e. when it is impractical to listen by split headphones or loudspeaker, discontinue listening by order of the master in order to carry out maintenance required to prevent imminent malfunction of: - equipment for radiocommunication used for safety; - radio navigational equipment; - other electronic navigational equipment including its repair; provided that: (1) the radio officer, at the discretion of the Administration concerned, is appropriately qualified to perform these duties; and ...	**Specific** Cabinet Regulation No. 895 adopted 22 November 2005 "Regulations Regarding Certification of Seafarers", para 16 The personnel responsible for radio communication or fulfilling radio watchkeeping duties on ships subject to the requirements laid down in Chapter IV of the SOLAS Convention shall be granted the qualification referred to in Sub-paragraphs 20.1, 20.2, 20.3, and 20.4 of this Regulation, and the Latvian Registry of Seamen shall issue a certificate of competency and an endorsement. The qualification certificate shall certify the conformity with the requirements of Chapter IV of the STCW Code and the Radio Regulations of the International Telecommunication Union, which are annex to the International Telecommunication Convention, 1998.
SOLAS 1974 Convention / Chapter IV / Reg. 12(a)(vii)	On or after 5/25/1980 Before 2/1/1992	(vii) All direction-finders shall be calibrated to the satisfaction of the Administration on first installation. The calibration shall be verified by check bearings or by a further calibration whenever any changes are made in the position of any antennae or of any structures on deck which might affect appreciably the accuracy of the direction-finder. The calibration particulars shall be checked at yearly intervals, or as near thereto as possible. A record shall be kept of the calibrations and of any checks made of their accuracy.	Not actual requirement
SOLAS 1974 Convention / Chapter V (Reg.1~21) / Reg. 17(a)(xi)	On or after 5/25/1980 Before 1/1/1994	(a) Pilot Ladders: (xi) Where on any ship constructional features such as rubbing bands would prevent the implementation of any of these provisions, special arrangements shall be made to the satisfaction of the Administration to ensure that persons are able to embark and disembark safely.	**Technical**

SOLAS 1974 / Chapter VI / Part A / Reg. 10(e)	On or after 5/25/1980 Before 1/1/1994	(e) A ship without such a document of authorization shall not load grain until the master demonstrates to the satisfaction of the Administration or the Contracting Government of the port of loading on behalf of the Administration that the ship in its proposed loaded condition will comply with the requirements of these Regulations.	**Specific** Not allowed
SOLAS 1974 Convention / Chapter V / Reg. 21	On or after 5/25/1980 Before 2/1/1992	All ships which in accordance with the present Convention are required to carry a radiotelegraph or a radiotelephone installation shall carry the International Code of Signals. This publication shall also be carried by any other ship which in the opinion of the Administration has a need to use it.	**Specific** Cabinet Regulation No. 30 adopted 12 January 2016 "Regulations Regarding the Use and Maintenance of Ship's Radio and Navigation Equipment", Chapter 6.2
SOLAS 1978 Protocol			
SOLAS 1978 Protocol / Chapter II-1 / Reg. 29(a)(i)	On or after 5/1/1981 Before 9/1/1984	(i) Ships shall be provided with a main steering gear and an auxiliary steering gear to the satisfaction of the Administration.	**Technical**
SOLAS 1978 Protocol / Chapter II-1 / Reg. 29(b)(iii)	On or after 5/1/1981 Before 9/1/1984 Passenger ships	(iii) Where main steering gear power units and their connections are fitted in duplicate to the satisfaction of the Administration, and each power unit enables the steering gear to meet the requirements of sub-paragraph (i) of this paragraph, no auxiliary steering gear need be required.	**Technical**
SOLAS 1978 Protocol / Chapter II-1 / Reg. 29(b)(iv)	On or after 5/1/1981 Before 9/1/1984 Passenger ships	(iv) Where the Administration would require a rudder stock with a diameter in way of the tiller exceeding 228.6 millimetres (9 inches) there shall be provided an alternative steering station located to the satisfaction of the Administration. The remote steering control systems from the principal and alternative steering stations shall be so arranged to the satisfaction of the Administration that failure of either system would not result in inability to steer the ship by means of the other system.	**Technical**
SOLAS 1978 Protocol / Chapter II-1 / Reg. 29(c)(ii)	On or after 5/1/1981 Before 9/1/1984 Cargo ships	(ii) Where power-operated steering gear units and connections are fitted in duplicate to the satisfaction of the Administration, and each unit complies with sub-paragraph (iii) of paragraph (a) of this Regulation, no auxiliary steering gear need be required, provided that the duplicate units and connections operating together comply with sub-paragraph (ii) of paragraph (a) of this Regulation.	**Technical**

SOLAS 1978 Protocol / Chapter II-1 / Reg. 29(d)(ii)(1)	On or after 5/1/1981 Before 9/1/1984 Tankers GT>10000	(1) the main steering gear shall comprise two or more identical power units and it shall be capable of operating the rudder as required by sub-paragraph (d)(ii)(2) of this Regulation while operating with one or more power units. As far as reasonable and practicable, the main steering gear shall be so arranged that a single failure in its piping or in one of the power units will not impair the integrity of the remaining part of the steering gear. All mechanical couplings which are part of the steering gear and the mechanical connection with any remote steering gear control system, if any, shall be of sound and reliable construction to the satisfaction of the Administration;	**Technical**
SOLAS 1978 Protocol / Chapter II-2 / Reg. 3(a)	On or after 5/1/1981 Before 9/1/1984	(a) "Non-combustible material" means a material which neither burns nor gives off inflammable vapours in sufficient quantity for self-ignition when heated to approximately 750°C(1,382°F) this being determined to the satisfaction of the Administration by an established test procedure. Any other material is a combustible material.	**Technical**
SOLAS 1978 Protocol / Chapter II-2 / Reg. 3(h)	On or after 5/1/1981 Before 9/1/1984	(h) "Low Flame Spread" means that the surface thus described will adequately restrict the spread of flame, this being determined to the satisfaction of the Administration by an established test procedure.	**Technical**
SOLAS 1978 Protocol / Chapter II-2 / Reg. 3(s)(iii)	On or after 5/1/1981 Before 9/1/1984	(iii) all draperies, curtains and other suspended textile materials have, to the satisfaction of the Administration, qualities of resistance to the propagation of flame not inferior to those of wool weighing 0.8 kilogrammes per square metre (24 ounces per square yard);	**Technical**
SOLAS 1978 Protocol / Chapter II-2 / Reg. 3(s)(iv)	On or after 5/1/1981 Before 9/1/1984	(iv) all floor coverings have, to the satisfaction of the Administration, qualities of resistance to the propagation of flame not inferior to those of an equivalent woollen material used for the same purpose; and	**Technical**
SOLAS 1978 Protocol / Chapter II-2 / Reg. 55(a)(ii)	On or after 5/1/1981 Before 9/1/1984 Tankers	(ii) In addition, all ships covered by this Part shall comply with the requirements of Regulations 52, 53 and 54 of this Chapter II-2 of the Convention except that fixed gas fire-extinguishing system for cargo spaces shall not be used for new tankers and for those existing tankers complying with Regulation 60 of this Chapter. For existing tankers not required to comply with Regulation 60, the Administration, in applying the requirement of paragraph (f) of Regulation 52, may accept a froth system capable of discharging froth internally to the tanks. The details of the installation shall be to the satisfaction of the Administration.	**Technical**

SOLAS 1978 Protocol / Chapter II-2 / Reg. 55(b)	On or after 5/1/1981 Before 9/1/1984 Tankers	(b) Where cargos other than those referred to in sub-paragraph (a)(i) of this Regulation which introduce additional fire hazards are intended to be carried, additional safety measures shall be required to the satisfaction of the Administration.	**Technical**
SOLAS 1978 Protocol / Chapter II-2 / Reg. 60(h)	On or after 5/1/1981 Before 9/1/1984 Tankers GT>2000	(h) Any new tanker of 2,000 tons gross tonnage and upwards not covered by paragraph (a) of this Regulation shall be provided with a froth system, capable of discharging froth internally or externally, to the tanks. The details of such installation shall be to the satisfaction of the Administration.	**Technical**
SOLAS 1981 Amend			Adopted by Res.MSC.1(45)
SOLAS 1981 Amend / Chapter II-1 / Reg. 5.2.2	On or after 9/1/1984 Before 7/1/1986 Passenger ships	2.2 Where it is shown to the satisfaction of the Administration that the average permeability as determined by detailed calculation is less than that given by the formula, the detailed calculated value may be used. For the purpose of such calculation, the permeability of passenger spaces, as defined in Regulation 2, shall be taken as 95, that of all cargo, coal and store spaces as 60, and that of double bottom, oil fuel and other tanks at such value as may be approved in each case.	**Technical**
SOLAS 1981 Amend / Chapter II-1 / Reg. 6.4.2	On or after 9/1/1984 Before 7/1/1986 Passenger ships	4.2 Where the factor F is less than .40 and it is shown to the satisfaction of the Administration to be impracticable to comply with the factor F in a machinery compartment of the ship, the subdivision of such compartment may be governed by an increased factor, which, however, shall not exceed .40.	**Technical**
SOLAS 1981 Amend / Chapter II-1 / Reg. 6.4.4	On or after 9/1/1984 Before 7/1/1986 Passenger ships	4.4 The subdivision abaft the forepeak of ships of less than 131 m but not less than 79 m in length and having a criterion numeral less than S, and of ships of less than 79 m in length shall be governed by the factor unity, unless, in either case, it is shown to the satisfaction of the Administration to be impracticable to comply with this factor in any part of the ship, in which case the Administration may allow such relaxation as may appear to be justified, having regard to all the circumstances.	**Technical**
SOLAS 1981 Amend / Chapter II-1 / Reg. 6.5.2.5	On or after 9/1/1984 Before 7/1/1986 Passenger ships	.5 The subdivision abaft the forepeak of ships of less than 131 m but not less than 55m in length and having a criterion numeral less than S_1 and of ships of less than 55m in length shall be governed by the factor unity, unless it is shown to the satisfaction of the Administration to be impracticable to comply with this factor in particular compartments, in which event the	**Technical**

		Administration may allow such relaxations in respect of those compartments as appear to be justified, having regard to all the circumstances, provided that the aftermost compartment and as many as possible of the forward compartments (between the forepeak and the after end of the machinery space) shall be kept within the floodable length.	
SOLAS 1981 Amend / Chapter II-1 / Reg. 7	On or after 9/1/1984 Before 1/1/2009 Passenger ships	8 Where a main transverse watertight compartment contains local subdivision and it can be shown to the satisfaction of the Administration that, after any assumed side damage extending over a length of 3.0 m plus 3 percent of the length of the ship, or 11.0 m whichever is the less, the whole volume of the main compartment will not be flooded, a proportionate allowance may be made in the permissible length otherwise required for such compartment. In such a case the volume of effective buoyancy assumed on the undamaged side shall not be greater than that assumed on the damaged side.	**Technical**
SOLAS 1981 Amend / Chapter II-1 / Reg. 9.1	On or after 9/1/1984 Before 1/1/2009 Passenger ships	1 Water ballast should not in general be carried in tanks intended for oil fuel. In ships in which it is not practicable to avoid putting water in oil fuel tanks, oily-water separating equipment to the satisfaction of the Administration shall be fitted, or other alternative means, such as discharge to shore facilities, acceptable to the Administration shall be provided for disposing of the oily-water ballast.	**Technical**
SOLAS 1981 Amend / Chapter II-1 / Reg. 12.2	On or after 9/1/1984 Before 2/1/1992 Passenger ships	2 Where a double bottom is required to be fitted its depth shall be to the satisfaction of the Administration and the inner bottom shall be continued out to the ship's sides in such a manner as to protect the bottom to the turn of the bilge. Such protection will be deemed satisfactory if the line of intersection of the outer edge of the margin plate with the bilge plating is not lower at any part than a horizontal plane passing through the point of intersection with the frame line amidships of a transverse diagonal line inclined at 25° to the base line and cutting it at a point one-half the ship's moulded breadth from the middle line.	**Technical**
SOLAS 1981 Amend / Chapter II-1 / Reg. 12.4	On or after 9/1/1984 Before 2/1/1992 Passenger ships	4 A double bottom need not be fitted in way of watertight compartments of moderate size used exclusively for the carriage of liquids, provided the safety of the ship, in the event of bottom or side damage, is not, in the opinion of the Administration, thereby impaired.	**Technical**

SOLAS 1981 Amend / Chapter II-1 / Reg. 14.1	On or after 9/1/1984 Before 7/1/2002	1 Each watertight subdivision bulkhead, whether transverse or longitudinal, shall be constructed in such a manner that it shall be capable of supporting, with a proper margin of resistance, the pressure due to the maximum head of water which it might have to sustain in the event of damage to the ship but at least the pressure due to a head of water up to the margin line. The construction of these bulkheads shall be to the satisfaction of the Administration.	**Technical**
SOLAS 1981 Amend / Chapter II-1 / Reg. 17.2	On or after 9/1/1984 Before 1/1/2009 Passenger ships	2 The arrangement and efficiency of the means for closing any opening in the shell plating shall be consistent with its intended purpose and the position in which it is fitted and generally to the satisfaction of the Administration.	**Technical**
SOLAS 1981 Amend / Chapter II-1 / Reg. 17.9.4	On or after 9/1/1984 Before 1/1/2009 Passenger ships	9.4 All shell fittings and valves required by this Regulation shall be of steel, bronze or other approved ductile material. Valves of ordinary cast iron or similar material are not acceptable. All pipes to which this Reg. refers shall be of steel or other equivalent material to the satisfaction of the Administration.	**Technical**
SOLAS 1981 Amend / Chapter II-1 / Reg. 18.1.1	On or after 9/1/1984 Before 7/1/2006 Passenger ships	.1 the design, materials and construction of all watertight doors, sidescuttles, gangway, cargo and coaling ports, valves, pipes, ash-shoots and rubbish-shoots referred to in these Regulations shall be to the satisfaction of the Administration;	**Technical**
SOLAS 1981 Amend / Chapter II-1 / Reg. 19.1	On or after 9/1/1984 Before 7/1/1997	1 Watertight decks, trunks, tunnels, duct keels and ventilators shall be of the same strength as watertight bulkheads at corresponding levels. The means used for making them watertight, and the arrangements adopted for closing openings in them, shall be to the satisfaction of the Administration. Watertight ventilators and trunks shall be carried at least up to the bulkhead deck in passenger ships and up to the freeboard deck in cargo ships.	**Technical**
SOLAS 1981 Amend / Chapter II-1 / Reg. 21.2.7.2	On or after 9/1/1984 Before 2/1/1992 Passenger ships	2.7.2 Where in the opinion of the Administration the main circulating pump is not suitable for this purpose, a direct emergency bilge suction shall be led from the largest available independent power driven pump to the drainage level of the machinery space; the suction shall be of the same diameter as the main inlet of the pump used. The capacity of the pump so	**Technical**

		connected shall exceed that of are a required bilge pump by an amount deemed satisfactory by the Administration.	
SOLAS 1981 Amend / Chapter II-1 / Reg. 22.3	On or after 9/1/1984 Before 4/29/1990	3 The Administration may allow the inclining test of an individual ship to be dispensed with provided basic stability data are available from the inclining test of a sister ship and it is shown to the satisfaction of the Administration that reliable stability information for the exempted ship can be obtained from such basic data.	**Technical**
SOLAS 1981 Amend / Chapter II-1 / Reg. 29.1	On or after 9/1/1984 Before 1/1/2016 Retroactive	1 Unless expressly provided otherwise, every ship shall be provided with a main steering gear and an auxiliary steering gear to the satisfaction of the Administration. The main steering gear and the auxiliary steering gear shall be so arranged that the failure of one of them will not render the other one inoperative.	**Technical**
SOLAS 1981 Amend / Chapter II-1 / Reg. 29.2.1	On or after 9/1/1984 Before 1/1/2016 Retroactive	2.1 All the steering gear components and the rudder stock shall be of sound and reliable construction to the satisfaction of the Administration. Special consideration shall be given to the suitability of any essential component which is not duplicated. Any such essential component shall, where appropriate, utilize anti-friction bearings such as ball bearings, roller bearings or sleeve bearings which shall be permanently lubricated or provided with lubrication fittings.	**Technical**
SOLAS 1981 Amend / Chapter II-1 / Reg. 29.2.2	On or after 9/1/1984 Before 1/1/2016 Retroactive	2.2 The design pressure for calculations to determine the scantlings of piping and other steering gear components subjected to internal hydraulic pressure shall be at least 1.25 times the maximum working pressure to be expected under the operational conditions specified in paragraph 3.2, taking into account any pressure which may exist in the low pressure side of the system. At the discretion of the Administration, fatigue criteria shall be applied for the design of piping and components, taking into account pulsating pressures due to dynamic loads.	**Technical**
SOLAS 1981 Amend / Chapter II-1 / Reg. 29.6.3	On or after 9/1/1984 Before 1/1/2016 Retroactive	6.3 Steering gears, other than of the hydraulic type, shall achieve standards equivalent to the requirements of this paragraph to the satisfaction of the Administration.	**Technical**
SOLAS 1981 Amend / Chapter II-1 / Reg. 41.4	On or after 9/1/1984 Before 7/1/1986	4. Where the total installed electrical power of the main generating sets is in excess of 3 MW, the main busbars shall be subdivided into at least two parts which shall normally be connected by removable links or other approved means; so far as is practicable, the connection of generating sets and any other duplicated equipment shall be equally divided between the parts.	**Technical**

		Equivalent arrangements may be permitted to the satisfaction of the Administration.	
SOLAS 1981 Amend / Chapter II-1 / Reg. 42.1.3	On or after 9/1/1984 Before 7/1/1986 Passenger ships	1.3 The location of the emergency source of electrical power and associated transforming equipment, if any, the transitional source of emergency power, the emergency switchboard and the emergency electric lighting switchboards in relation to the main source of electrical power, associated transforming equipment, if any, and the main switchboard shall be such as to ensure to the satisfaction of the Administration that a fire or other casualty in spaces containing the main source of electrical power, associated transforming equipment, if any, and the main switchboard or in any machinery space of category A will not interfere with the supply, control and distribution of emergency electrical power. As far as practicable the space containing the emergency source of electrical power, associated transforming equipment, if any, the transitional source of emergency electrical power and the emergency switchboard shall not be contiguous to the boundaries of machinery spaces of category A or those spaces containing the main source of electrical power, associated transforming equipment, if any, or the main switchboard.	**Technical**
SOLAS 1981 Amend / Chapter II-1 / Reg. 45.2	On or after 9/1/1984 Before 10/1/1994	2 Main and emergency switchboards shall be so arranged as to give easy access as may be needed to apparatus and equipment, without danger to personnel. The sides and the rear and, where necessary, the front of the switchboards shall be suitably guarded. Exposed live parts having voltages to earth exceeding a voltage to be specified by the Administration shall not be installed on the front of such switchboards. Where necessary, non-conducting mats or gratings shall be provided at the front and rear of the switchboard.	**Technical**
SOLAS 1981 Amend / Chapter II-1 / Reg. 45.3.3	On or after 9/1/1984 Before 10/1/1994	3.3 Where the hull return system is used, all final subcircuits, i.e. all circuits fitted after the last protective device, shall be two-wire and special precautions shall be taken to the satisfaction of the Administration.	**Technical**
SOLAS 1981 Amend / Chapter II-1 / Reg. 45.5.4	On or after 9/1/1984 Before 10/1/1994	5.4 Where cables which are installed in hazardous areas introduce the risk of fire or explosion in the event of an electrical fault in such areas, special precautions against such risks shall be taken to the satisfaction of the Administration.	**Technical**
SOLAS 1981 Amend / Chapter II-1 / Reg. 45.9.3	On or after 9/1/1984 Before 10/1/1994	9.3 Accumulator batteries shall not be located in sleeping quarters except where hermetically sealed to the satisfaction of the Administration.	**Technical**

SOLAS 1981 Amend / Chapter II-1 / Reg. 46.2	On or after 9/1/1984	2 Measures shall be taken to the satisfaction of the Administration to ensure that the equipment is functioning in a reliable manner and that satisfactory arrangements are made for regular inspections and routine tests to ensure continuous reliable operation.	**Technical**
SOLAS 1981 Amend / Chapter II-1 / Reg. 46.3	On or after 9/1/1984	3 Every ship shall be provided with documentary evidence, to the satisfaction of the Administration, of its fitness to operate with periodically unattended machinery spaces.	**Technical**
SOLAS 1981 Amend / Chapter II-1 / Reg. 53.1	On or after 9/1/1984	1 The special requirements for the machinery, boiler and electrical installations shall be to the satisfaction of the Administration and shall include at least the requirements of this Regulation.	**Technical**
SOLAS 1981 Amend / Chapter II-2 / Reg. 3.1	On or after 9/1/1984 Before 7/1/1986	1 "Non-combustible material" is a material which neither burns nor gives off flammable vapours in sufficient quantity for self-ignition when heated to approximately 750°C, this being determined to the satisfaction of the Administration by an established test procedure. Any other material is a combustible material.	**Technical**
SOLAS 1981 Amend / Chapter II-2 / Reg. 3.8	On or after 9/1/1984 Before 7/1/1986	8 "Low flame spread" means that the surface thus described will adequately restrict the spread of flame, this being determined to the satisfaction of the Administration by an established test procedure.	**Technical**
SOLAS 1981 Amend / Chapter II-2 / Reg. 3.15	On or after 9/1/1984 Before 7/1/1986	15 "Open ro/ro cargo spaces" are ro/ro cargo spaces either open at both ends, or open at one end and provided with adequate natural ventilation effective over their entire length through permanent openings in the side plating or deckhead to the satisfaction of the Administration.	**Technical**
SOLAS 1981 Amend / Chapter II-2 / Reg. 3.23.3	On or after 9/1/1984 Before 7/1/1986	.3 all draperies, curtains and other suspended textile materials have, to the satisfaction of the Administration, qualities of resistance to the propagation of flame not inferior to those of wool of mass 0.8 kg/m²*;	**Technical**
SOLAS 1981 Amend / Chapter II-2 / Reg. 3.23.4	On or after 9/1/1984 Before 7/1/1986	.4 all floor coverings have, to the satisfaction of the Administration, qualities of resistance to the propagation of flame not inferior to those of an equivalent woollen material used for the same purpose;	**Technical**
SOLAS 1981 Amend / Chapter II-2 / Reg. 3.23.6	On or after 9/1/1984 Before 7/1/1986	.6 all upholstered furniture has qualities of resistance to the ignition and propagation of flame to the satisfaction of the Administration.	**Technical**
SOLAS 1981 Amend / Chapter II-2 / Reg. 4.2.2	On or after 9/1/1984	2.2 Each of the required fire pumps (other than any emergency pump required in paragraph 3.3.2 for cargo ships) shall have a capacity not less than 80 percent of the total required capacity	**Technical**

	Before 7/1/1986	divided by the minimum number of required fire pumps but in any case not less than 25m³/hour and each such pump shall in any event be capable of delivering at least the two required jets of water. These fire pumps shall be capable of supplying the fire main system under the required conditions. Where more pumps than the minimum of required pumps are installed the capacity of such additional pumps shall be to the satisfaction of the Administration.	
SOLAS 1981 Amend / Chapter II-2 / Reg. 4.3.1.3	On or after 9/1/1984 Before 7/1/1986	3.1 Ships shall be provided with independently driven fire pumps as follows: .3 Cargo ships of less than 1,000 tons gross tonnage to the satisfaction of the Administration	**Specific** Portable independently driven emergency fire pump to be provided on board. Suction hose to be resistant to the vacuum.
SOLAS 1981 Amend / Chapter II-2 / Reg. 4.3.3.2	On or after 9/1/1984 Before 7/1/1986	3.3 The arrangement of sea connections, fire pumps and their sources of power shall be such as to ensure that: .2 In cargo ships of 2,000 tons gross tonnage and upwards if a fire in any one compartment could put all the pumps out of action there shall be an alternative means consisting of a fixed independently driven emergency pump which shall be capable of supplying two jets of water to the satisfaction of the Administration. The pump and its location shall comply with the following requirements:	**Technical**
SOLAS 1981 Amend / Chapter II-2 / Reg. 4.3.3.3	On or after 9/1/1984 Before 7/1/1986	.3 In passenger ships of less than 1,000 tons gross tonnage and cargo ships of less than 2,000 tons gross tonnage, if a fire in any one compartment could put all the pumps out of action the alternative means of providing water for fire-fighting purposes are to the satisfaction of the Administration.	**Technical**
SOLAS 1981 Amend / Chapter II-2 / Reg. 4.3.4.2	On or after 9/1/1984 Before 7/1/1986	3.4 The arrangements for the ready availability of water supply shall be: .2 in passenger ships of less than 1,000 tons gross tonnage and in cargo ships to the satisfaction of the Administration;	**Technical**
SOLAS 1981 Amend / Chapter II-2 / Reg. 4.4.2	On or after 9/1/1984 Before 7/1/1986	4.2 With the two pumps simultaneously delivering through nozzles specified in paragraph 8 the quantity of water specified in paragraph 4.1, through any adjacent hydrants, the following minimum pressures shall be maintained at all hydrants: Passenger ships: 4,000 tons gross tonnage and upwards: 0.31 N/mm² 1,000 tons gross tonnage and upwards but under 4,000 tons gross tonnage: 0.27 N/mm² Under 1,000 tons gross: To the satisfaction of the Administration	**Technical**

		Cargo ships: 6,000 tons gross tonnage and upwards: 0.27 N/mm² 1,000 tons gross tonnage and upwards but under 6,000 tons gross tonnage: 0.25 N/mm² Under 1,000 tons gross tonnage: To the satisfaction of the Administration	
SOLAS 1981 Amend / Chapter II-2 / Reg. 4.6.3	On or after 9/1/1984 Before 7/1/1986	6.3 Isolating valves to separate the section of the fire main within the machinery space containing the main fire pump or pumps from the rest of the fire main shall be fitted in an easily accessible and tenable position outside the machinery spaces. The fire main shall be so arranged that when the isolating valves are shut all the hydrants on the ship, except those in the machinery space referred to above, can be supplied with water by a fire pump not located in this machinery space through pipes which do not enter this space. Exceptionally, the Administration may permit short lengths of the emergency fire pump suction and discharge piping to penetrate the machinery space if it is impracticable to route it externally provided that the integrity of the fire main is maintained by the enclosure of the piping in a substantial steel casing. 4,000 tons gross tonnage and upwards 0.31 N/mm² 1,000 tons gross tonnage and upwards but under 4,000 tons gross tonnage 0.27 N/mm² Under 1,000 tons gross tonnage To the satisfaction of the Administration 6,000 tons gross tonnage and upwards 0.27 N/mm² 1,000 tons gross tonnage and upwards but under 6,000 tons gross tonnage 0.25 N/mm² Under 1,000 tons gross tonnage To the satisfaction of the Administration	**Technical**
SOLAS 1981 Amend / Chapter II-2 / Reg. 4.7.1	On or after 9/1/1984 Before 7/1/1986	7.1 Fire hoses shall be of material approved by the Administration and shall be sufficient in length to project a jet of water to any of the spaces in which they may be required to be used. Their maximum length shall be to the satisfaction of the Administration. Each hose shall be provided with a nozzle and the necessary couplings. Hoses specified in this Chapter as "fire hoses" shall together with any necessary fittings and tools be kept ready for use in conspicuous positions near the water service hydrants or connections. Additionally in interior locations in passenger ships carrying more than 36 passengers fire hoses shall be connected to the hydrants at all times.	**Technical**
SOLAS 1981 Amend / Chapter II-2 / Reg. 4.7.2	On or after 9/1/1984 Before 7/1/1986	7.2 Ships shall be provided with fire hoses the number and diameter of which shall be to the satisfaction of the Administration.	**Technical**

SOLAS 1981 Amend / Chapter II-2 / Reg. 4.7.4.2	On or after 9/1/1984 Before 7/1/1986	7.4.2 In cargo ships of less than 1,000 tons gross tonnage the number of fire hoses to be provided shall be to the satisfaction of the Administration.	**Technical**
SOLAS 1981 Amend / Chapter II-2 / Reg. 4.8.1	On or after 9/1/1984 Before 7/1/1986	8 Nozzles 8.1 For the purposes of this Chapter, standard nozzle sizes shall be 12mm, 16mm and 19mm or as near thereto as possible. Larger diameter nozzles may be permitted at the discretion of the Administration.	**Technical**
SOLAS 1981 Amend / Chapter II-2 / Reg. 5.1.1	On or after 9/1/1984 Before 7/1/1986	1.1 The use of a fire-extinguishing medium which, in the opinion of the Administration, either by itself or under expected conditions of use gives off toxic gases in such quantities as to endanger persons shall not be permitted.	**Technical**
SOLAS 1981 Amend / Chapter II-2 / Reg. 5.1.12	On or after 9/1/1984 Before 7/1/1986	1.12 Containers for the storage of fire-extinguishing medium and associated pressure components shall be designed to pressure codes of practice to the satisfaction of the Administration having regard to their locations and maximum ambient temperatures expected in service.	**Technical**
SOLAS 1981 Amend / Chapter II-2 / Reg. 5.1.13	On or after 9/1/1984 Before 7/1/1986	1.13 When the fire-extinguishing medium is stored outside a protected space, it shall be stored in a room which shall be situated in a safe and readily accessible position and shall be effectively ventilated to the satisfaction of the Administration. Any entrance to such a storage room shall preferably be from the open deck and in any case shall be independent of the protected space. Access doors shall open outwards, and bulkheads and decks including doors and other means of closing any opening therein, which form the boundaries between such rooms and adjoining enclosed spaces shall be gastight. For the purpose of the application of the integrity tables in Regulations 26, 27, 44 and 58, such storage rooms shall be treated as control stations.	**Technical**
SOLAS 1981 Amend / Chapter II-2 / Reg. 5.1.14	On or after 9/1/1984 Before 7/1/1986	1.14 Spare parts for the system shall be stored on board and be to the satisfaction of the Administration.	**Technical**
SOLAS 1981 Amend / Chapter II-2 / Reg. 5.3.2.6	On or after 9/1/1984 Before 7/1/1986	3 Halogenated hydrocarbon systems .6 The system shall be designed to operate within a temperature range to the satisfaction of the Administration.	**Technical**
SOLAS 1981 Amend / Chapter	On or after 9/1/1984	3.3 Only Halon 1301 may be stored within a protected machinery space. Containers shall be individually distributed throughout that space and the following requirements shall be complied with:	**Specific** Not allowed

II-2 / Reg. 5.3.3.4	Before 7/1/1986	.4 Within the protected space, electrical circuits essential for the release of the system shall be heat resistant e.g. mineral insulated cable or equivalent. Piping systems essential for the release of systems designed to be operated hydraulically or pneumatically shall be of steel or other equivalent heat-resisting material to the satisfaction of the Administration.	
SOLAS 1981 Amend / Chapter II-2 / Reg. 5.3.3.6	On or after 9/1/1984 Before 7/1/1986	3.3 Only Halon 1301 may be stored within a protected machinery space. Containers shall be individually distributed throughout that space and the following requirements shall be complied with: .6 The arrangement of containers and the electrical circuits and piping essential for the release of any system shall be such that in the event of damage to any one power release line through fire or explosion in a protected space, i.e. a single fault concept, at least two-thirds of the fire-extinguishing charge required by paragraphs 3.2.9 or 3.2.10 for that space can still be discharged having regard to the requirement for uniform distribution of medium throughout the space. The arrangements in respect of systems for spaces requiring only one or two containers shall be to the satisfaction of the Administration.	**Specific** Not allowed
SOLAS 1981 Amend / Chapter II-2 / Reg. 5.3.3.7	On or after 9/1/1984 Before 7/1/1986	3.3 Only Halon 1301 may be stored within a protected machinery space. Containers shall be individually distributed throughout that space and the following requirements shall be complied with: .7 Not more than two discharge nozzles shall be fitted to any pressure container and the maximum quantity of agent in each container shall be to the satisfaction of the Administration having regard to the requirement for uniform distribution of medium throughout the space.	**Specific** Not allowed
SOLAS 1981 Amend / Chapter II-2 / Reg. 5.3.4.1	On or after 9/1/1984 Before 7/1/1986	3.4 Local automatically operated fixed fire-extinguishing units containing Halon 1301 or 1211, fitted in enclosed areas of high fire risk within machinery spaces, in addition to, and independent of, any required fixed fire-extinguishing system may be accepted subject to compliance with the following: .1 The space in which such additional local protection is provided shall preferably be on one working level and on the same level as the access. At the discretion of the Administration more than one working level may be permitted subject to an access being provided on each level.	**Specific** Not allowed
SOLAS 1981 Amend / Chapter II-2 / Reg. 5.3.4.6	On or after 9/1/1984 Before 7/1/1986	3.4 Local automatically operated fixed fire-extinguishing units containing Halon 1301 or 1211, fitted in enclosed areas of high fire risk within machinery spaces, in addition to, and independent	**Specific** Not allowed

		of, any required fixed fire-extinguishing system may be accepted subject to compliance with the following: .6 The fire-extinguishing units shall be designed to operate within a temperature range to the satisfaction of the Administration.	
SOLAS 1981 Amend / Chapter II-2 / Reg. 6.2	On or after 9/1/1984 Before 7/1/1986	2 Spare charges shall be provided in accordance with requirements to be specified by the Administration.	**Technical**
SOLAS 1981 Amend / Chapter II-2 / Reg. 6.3	On or after 9/1/1984 Before 7/1/1986	3 Fire extinguishers containing an extinguishing medium which, in the opinion of the Administration, either by itself or under expected conditions of use gives off toxic gases in such quantities as to endanger persons shall not be permitted.	**Technical**
SOLAS 1981 Amend / Chapter II-2 / Reg. 6.7	On or after 9/1/1984 Before 7/1/1986	7 Accommodation spaces, service spaces and control stations shall be provided with portable fire extinguishers of appropriate types and in sufficient number to the satisfaction of the Administration. Ships of 1,000 tons gross tonnage and upwards shall carry at least five portable fire extinguishers.	**Technical**
SOLAS 1981 Amend / Chapter II-2 / Reg. 7.4	On or after 9/1/1984 Before 7/1/1986	4 Fire-extinguishing appliances in other machinery spaces Where, in the opinion of the Administration, a fire hazard exists in any machinery space for which no specific provisions for fire-extinguishing appliances are prescribed in paragraphs 1, 2 and 3, there shall be provided in, or adjacent to, that space such a number of approved portable fire extinguishers or other means of fire extinction as the Administration may deem sufficient.	**Technical**
SOLAS 1981 Amend / Chapter II-2 / Reg. 7.5	On or after 9/1/1984 Before 7/1/1986	5 Fixed fire-extinguishing systems not required by this Chapter Where a fixed fire-extinguishing system not required by this Chapter is installed, such a system shall be to the satisfaction of the Administration.	**Technical**
SOLAS 1981 Amend / Chapter II-2 / Reg. 9.2	On or after 9/1/1984 Before 7/1/1986	2 Supply ducts for delivering foam, air intakes to the foam generator and the number of foam-producing units shall in the opinion of the Administration be such as will provide effective foam production and distribution.	**Technical**
SOLAS 1981 Amend / Chapter II-2 / Reg. 10.2	On or after 9/1/1984 Before 7/1/2002	2 The number and arrangement of the nozzles shall be to the satisfaction of the Administration and shall be such as to ensure an effective average distribution of water of at least 5ℓ/m²per minute in the spaces to be protected. Where increased application rates are considered necessary, these shall be to the satisfaction of the Administration. Nozzles shall be fitted above bilges, tank tops and other areas over which oil fuel is liable to spread and also above other specific fire hazards in the machinery spaces.	**Technical**

SOLAS 1981 Amend / Chapter II-2 / Reg. 11.5	On or after 9/1/1984 Before 7/1/1986	5 The controls required in paragraph 4 and in Regulation 15.2.5 shall be located outside the space concerned, where they will not be cut off in the event of fire in the space they serve. In passenger ships such controls and the controls for any required fire-extinguishing system shall be situated at one control position or grouped in as few positions as possible to the satisfaction of the Administration. Such positions shall have a safe access from the open deck.	**Technical**
SOLAS 1981 Amend / Chapter II-2 / Reg. 12.1.1	On or after 9/1/1984 Before 7/1/1986	1.1 Any required automatic sprinkler, fire detection and fire alarm system shall be capable of immediate operation at all times and no action by the crew shall be necessary to set it in operation. It shall be of the wet pipe type but small exposed sections may be of the dry pipe type where in the opinion of the Administration this is a necessary precaution. Any parts of the system which may be subjected to freezing temperatures in service shall be suitably protected against freezing. It shall be kept charged at the necessary pressure and shall have provision for a continuous supply of water as required in this Regulation.	**Technical**
SOLAS 1981 Amend / Chapter II-2 / Reg. 12.3	On or after 9/1/1984 Before 7/1/1986	3 Sprinklers shall be placed in an overhead position and spaced in a suitable pattern to maintain an average application rate of not less than 5ℓ/m² per minute over the nominal area covered by the sprinklers. However, the Administration may permit the use of sprinklers providing such an alternative amount of water suitably distributed as has been shown to the satisfaction of the Administration to be not less effective.	**Technical**
SOLAS 1981 Amend / Chapter II-2 / Reg. 12.10	On or after 9/1/1984 Before 7/1/1986	10 Spare sprinkler heads shall be provided for each section of sprinklers to the satisfaction of the Administration.	**Technical**
SOLAS 1981 Amend / Chapter II-2 / Reg. 13.1.13	On or after 9/1/1984 Before 7/1/1986	1.13 The function of the detection system shall be periodically tested to the satisfaction of the Administration by means of equipment producing hot air at the appropriate temperature, or smoke or aerosol particles having the appropriate range of density or particle size, or other phenomena associated with incipient fires to which the detector is designed to respond. All detectors shall be of a type such that they can be tested for correct operation and restored to normal surveillance without the renewal of any component.	**Technical**
SOLAS 1981 Amend / Chapter	On or after 9/1/1984	3 Design requirements 3.2 Smoke detectors required by paragraph 2.2 shall be certified to operate before the smoke density exceeds 12.5 percent	**Technical**

II-2 / Reg. 13.3.2	Before 7/1/1986	obscuration per metre, but not until the smoke density exceeds 2 percent obscuration per metre. Smoke detectors to be installed in other spaces shall operate within sensitivity limits to the satisfaction of the Administration having regard to the avoidance of detector insensitivity or oversensitivity.	
SOLAS 1981 Amend / Chapter II-2 / Reg. 13.3.3	On or after 9/1/1984 Before 7/1/1986	3 Design requirements 3.3 Heat detectors shall be certified to operate before the temperature exceeds 78°C but not until the temperature exceeds 54°C, when the temperature is raised to those limits at a rate less than 1°C per minute. At higher rates of temperature rise, the heat detector shall operate within temperature limits to the satisfaction of the Administration having regard to the avoidance of detector insensitivity or over sensitivity.	**Technical**
SOLAS 1981 Amend / Chapter II-2 / Reg. 13.3.4	On or after 9/1/1984 Before 7/1/1986	3 Design requirements 3.4 At the discretion of the Administration, the permissible temperature of operation of heat detectors may be increased to 30°C above the maximum deck head temperature in drying rooms and similar spaces of a normal high ambient temperature.	**Technical**
SOLAS 1981 Amend / Chapter II-2 / Reg. 15.2.7	On or after 9/1/1984 Before 7/1/2002	.7 Provision shall be made to prevent overpressure in any oil tank or in any part of the oil fuel system, including the filling pipes. Any relief valves and air or overflow pipes shall discharge to a position which, in the opinion of the Administration, is safe.	**Technical**
SOLAS 1981 Amend / Chapter II-2 / Reg. 15.2.8	On or after 9/1/1984 Before 7/1/2002	.8 Oil fuel pipes and their valves and fittings shall be of steel or other approved material, except that restricted use of flexible pipes shall be permissible in positions where the Administration is satisfied that they are necessary. Such flexible pipes and end attachments shall be of approved fire-resisting materials of adequate strength and shall be constructed to the satisfaction of the Administration.	**Technical**
SOLAS 1981 Amend / Chapter II-2 / Reg. 16.1.1	On or after 9/1/1984 Before 7/1/1998 Passenger ships carrying more than 36 passengers	1 Ventilation ducts shall be of non-combustible material. Short ducts, however, not generally exceeding 2m in length and with a cross-section not exceeding 0.02m² need not be non-combustible, subject to the following conditions: .1 these ducts shall be of a material which, in the opinion of the Administration, has a low fire risk; ...	**Technical**
SOLAS 1981 Amend / Chapter	On or after 9/1/1984	2 Where the ventilation ducts with a free-sectional area exceeding 0.02m² pass through class "A" bulkheads or decks, the opening	**Technical**

II-2 / Reg. 16.2.1	Before 7/1/1998 Passenger ships carrying more than 36 passengers	shall be lined with a steel sheet sleeve unless the ducts passing through the bulkheads or decks are of steel in the vicinity of passage through the deck or bulkhead and the ducts and sleeves shall comply in this part with the following: .1 The sleeves shall have a thickness of at least 3mmand a length of at least 900mm. When passing through bulkheads, this length shall be divided preferably into 450 mm on each side of the bulkhead. These ducts, or sleeves lining such ducts, shall be provided with fire insulation. The insulation shall have at least the same fire integrity as the bulkhead or deck through which the duct passes. Equivalent penetration protection may be provided to the satisfaction of the Administration.	
SOLAS 1981 Amend / Chapter II-2 / Reg. 16.6	On or after 9/1/1984 Before 7/1/1998 Passenger ships carrying more than 36 passengers	6 Such measures as are practicable shall be taken in respect of control stations outside machinery spaces in order to ensure that ventilation, visibility and freedom from smoke are maintained, so that in the event of fire the machinery and equipment contained therein may be supervised and continue to function effectively. Alternative and separate means of air supply shall be provided; air inlets of the two sources of supply shall be so disposed that the risk of both inlets drawing in smoke simultaneously is minimized. At the discretion of the Administration, such requirements need not apply to control stations situated on, and opening on to, an open deck, or where local closing arrangements would be equally effective.	**Technical**
SOLAS 1981 Amend / Chapter II-2 / Reg. 17.1.1.5	On or after 9/1/1984 Before 10/1/1994	.5 An axe to the satisfaction of the Administration.	**Technical**
SOLAS 1981 Amend / Chapter II-2 / Reg. 17.1.2.2	On or after 9/1/1984 Before 10/1/1994	1.2 A breathing apparatus of an approved type which may be either: .2 a self-contained compressed air-operated breathing apparatus, the volume of air contained in the cylinders of which shall be at least 1,200 ℓ, or other self-contained breathing apparatus which shall be capable of functioning for at least 30 minutes. A number of spare charges, suitable for use with the apparatus provided, shall be available on board to the satisfaction of the Administration.	**Technical**
SOLAS 1981 Amend / Chapter II-2 / Reg. 20.1	On or after 9/1/1984 Before 7/1/1986	Fire control plans 1 In all ships general arrangement plans shall be permanently exhibited for the guidance of the ship's officers, showing clearly for each deck the control stations, the various fire sections	**Technical**

		enclosed by "A" class divisions, the sections enclosed by "B" class divisions together with particulars of the fire detection and fire alarm systems, the sprinkler installation, the fire-extinguishing appliances, means of access to different compartments, decks, etc. and the ventilating system including particulars of the fan control positions, the position of dampers and identification numbers of the ventilating fans serving each section. Alternatively, at the discretion of the Administration, the aforementioned details may be set out in a booklet a copy of which shall be supplied to each officer, and one copy shall at all times be available on board in an accessible position. Plans and booklets shall be kept up to date, any alterations being recorded thereon as soon as practicable. Description in such plans and booklets shall be in the national language of the flag state. If the language is neither English nor French, a translation into one of those languages shall be included. In addition, instructions concerning the maintenance and operation of all the equipment and installations on board for the fighting and containment of fire shall be kept under one cover, readily available in an accessible position.	
SOLAS 1981 Amend / Chapter II-2 / Reg. 23.2.1	On or after 9/1/1984 Before 7/1/2002 Passenger ships	2 However, in cases where any part of the structure is of aluminium alloy, the following shall apply: .1 The insulation of aluminium alloy components of "A" or "B" class divisions, except structure which, in the opinion of the Administration, is non-load-bearing, shall be such that the temperature of the structural core does not rise more than 200°C above the ambient temperature at any time during the applicable fire exposure to the standard fire test.	**Technical**
SOLAS 1981 Amend / Chapter II-2 / Reg. 25.2.1	On or after 9/1/1984 Before 10/1/1994 Passenger ships	2. All corridor bulkheads where not required to be "A" class shall be "B" class divisions which shall extend from deck to deck except: .1 when continuous "B" class ceilings 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, is acceptable in the construction of "B" class divisions but which shall be required to meet "B" class integrity standards only in so far as is reasonable and practicable in the opinion of the Administration; ...	**Technical**

SOLAS 1981 Amend / Chapter II-2 / Reg. 25.2.2	On or after 9/1/1984 Before 10/1/1994 Passenger ships	2. All corridor bulkheads where not required to be "A" class shall be "B" class divisions which shall extend from deck to deck except: ... .2 in the case of a ship protected by an automatic sprinkler system complying with the provisions of Regulation 12 the corridor bulkheads of "B" class materials may terminate at a ceiling in the corridor provided such a ceiling is of material which, in thickness and composition, is acceptable in the construction of "B" class divisions. Notwithstanding the requirements of Regulations 26 and 27 such bulkheads and ceiling s shall be required to meet "B" class integrity standards only in so far as is reasonable and practicable in the opinion of the Administration. All doors and frames in such bulkheads shall be of non-combustible materials and shall be so constructed and erected as to provide substantial fire resistance to the satisfaction of the Administration.	**Technical**
SOLAS 1981 Amend / Chapter II-2 / Reg. 26.1	On or after 9/1/1984 Before 7/1/1986 Passenger ships carrying more than 36 passengers	1 In addition to complying with the specific provisions for fire integrity of bulkheads and decks mentioned elsewhere in this Part, the minimum fire integrity of all bulkheads and decks shall be as prescribed in tables 26.1 to 26.4. Where, due to any particular structural arrangements in the ship, difficulty is experienced in determining from the tables the minimum fire integrity value of any divisions, such values shall be determined to the satisfaction of the Administration.	**Technical**
SOLAS 1981 Amend / Chapter II-2 / Reg. 27.2.7	On or after 9/1/1984 Before 7/1/1986 Passenger ships carrying not more than 36 passengers	.7 The Administration shall determine in respect of category (5) spaces whether the insulation values in table 26.1 or 26.2 shall apply to ends of deckhouses and superstructures, and whether the insulation values in table 26.3 or 26.4 shall apply to weather decks. In no case shall the requirements of category (5) of tables 26.1 to 26.4 necessitate enclosure of spaces which in the opinion of the Administration need not be enclosed.	**Technical**
SOLAS 1981 Amend / Chapter II-2 / Reg. 27.4	On or after 9/1/1984 Before 7/1/1986 Passenger	4 External boundaries which are required in Regulation 23.1 to be of steel or other equivalent material may be pierced for the fitting of windows and sidescuttles provided that there is no requirement for such boundaries to have "A" class integrity elsewhere in this Part. Similarly, in such boundaries which are not required to have	**Technical**

	ships carrying not more than 36 passengers	"A"class integrity, doors may be of materials to the satisfaction of the Administration.	
SOLAS 1981 Amend / Chapter II-2 / Reg. 28.1.3	On or after 9/1/1984 Before 1/1/1994 Passenger ships	.3 If a radiotelegraph station has no direct access to the open deck, two means of escape from or access to such station shall be provided, one of which may be a porthole or window of sufficient size or another means to the satisfaction of the Administration.	**Technical**
SOLAS 1981 Amend / Chapter II-2 / Reg. 28.1.5	On or after 9/1/1984 Before 1/1/1994 Passenger ships	.5 At least one of the means of escape required by paragraphs 1.1 and 1.2 shall consist of a readily accessible enclosed stairway, which shall provide continuous fire shelter from the level of its origin to the appropriate lifeboat and liferaft embarkation decks or the highest level served by the stairway, whichever level is the highest. However, where the Administration has granted dispensation under the provisions of paragraph 1.1 the sole means of escape shall provide safe escape to the satisfaction of the Administration. The width, number and continuity of the stairways shall be to the satisfaction of the Administration.	**Technical**
SOLAS 1981 Amend / Chapter II-2 / Reg. 28.1.6	On or after 9/1/1984 Before 1/1/1994 Passenger ships	.6 Protection of access from the stairway enclosures to the lifeboat and liferaft embarkation areas shall be to the satisfaction of the Administration.	**Technical**
SOLAS 1981 Amend / Chapter II-2 / Reg. 28.2.1	On or after 9/1/1984 Before 1/1/1994 Passenger ships	2.1 In special category spaces the number and disposition of the means of escape both below and above the bulkhead deck shall be to the satisfaction of the Administration and in general the safety of access to the embarkation deck shall be at least equivalent to that provided for under paragraphs 1.1, 1.2, 1.5 and 1.6.	**Technical**
SOLAS 1981 Amend / Chapter II-2 / Reg. 30.5	On or after 9/1/1984 Before 10/1/1994	5 Where a space is protected by an automatic sprinkler system complying with the provisions of Regulation 12 or fitted with a continuous "B" class ceiling, openings in decks not forming steps in main vertical zones nor bounding horizontal zones shall be closed reasonably tight and such decks shall meet the "A" class integrity requirements in so far as is reasonable and practicable in the opinion of the Administration.	**Technical**

SOLAS 1981 Amend / Chapter II-2 / Reg. 31.3.1	On or after 9/1/1984 Before 10/1/1994	3 Where an automatic sprinkler system complying with the provisions of Regulation 12 is fitted: .1 openings in decks not forming steps in main vertical zones nor bounding horizontal zones shall be closed reasonably tight and such decks shall meet the "B" class integrity requirements in so far as is reasonable and practicable in the opinion of the Administration; and ...	**Technical**
SOLAS 1981 Amend / Chapter II-2 / Reg. 32.1.4.3.1	On or after 9/1/1984 Before 7/1/1986 Passenger ships carrying more than 36 passengers	1.4 Except in cargo spaces, ventilation ducts shall be constructed of the following materials: .3 short lengths of duct, not in general exceeding 0.02m²in sectional area nor 2m in length, need not be non-combustible provided that all of the following conditions are met: .3.1 the duct is constructed of a material of restricted fire risk to the satisfaction of the Administration;	**Technical**
SOLAS 1981 Amend / Chapter II-2 / Reg. 34.2	On or after 9/1/1984 Before 10/1/1994 Passenger ships	2 Vapour barriers and adhesives used in conjunction with insulation, as well as insulation of pipe fittings, for cold service systems need not be non-combustible, but they shall be kept to the minimum quantity practicable and their exposed surfaces shall have qualities of resistance to the propagation of flame to the satisfaction of the Administration.	**Technical**
SOLAS 1981 Amend / Chapter II-2 / Reg. 35.2	On or after 9/1/1984 Before 7/1/2002	2 The construction of ceiling and bulkheading shall be such that it will be possible, without impairing the efficiency of the fire protection, for the fire patrols to detect any smoke originating in concealed and inaccessible places, except where in the opinion of the Administration there is no risk of fire originating in such places.	**Technical**
SOLAS 1981 Amend / Chapter II-2 / Reg. 37.1.6.5	On or after 9/1/1984 Before 7/1/1986 Passenger ships	1.6.5 Ventilation ducts, including dampers, shall be made of steel and their arrangement shall be to the satisfaction of the Administration.	**Technical**
SOLAS 1981 Amend / Chapter II-2 / Reg. 38.3.5	On or after 9/1/1984 Before 7/1/1986	3.5 Ventilation ducts, including dampers, shall be made of steel and their arrangement shall be to the satisfaction of the Administration.	**Technical**

	Passenger ships		
SOLAS 1981 Amend / Chapter II-2 / Reg. 39.2	On or after 9/1/1984 Before 7/1/2002 Passenger ships	2 Where it is shown to the satisfaction of the Administration that a ship is engaged on voyages of such short duration that it would be unreasonable to apply the requirements of paragraph 1 and also in ships of less than 1,000 tons gross tonnage, the arrangements in cargo spaces shall be to the satisfaction of the Administration.	**Technical**
SOLAS 1981 Amend / Chapter II-2 / Reg. 39.3	On or after 9/1/1984 Before 7/1/2002 Passenger ships	3 A ship engaged in the carriage of dangerous goods shall be provided in any cargo spaces with a fixed gas fire-extinguishing system complying with the provisions of Regulation 5 or with a fire-extinguishing system which in the opinion of the Administration gives equivalent protection for the cargoes carried.	**Technical**
SOLAS 1981 Amend / Chapter II-2 / Reg. 40.2	On or after 9/1/1984 Before 7/1/1986 Passenger ships	2. An approved fire detection or fire alarm system shall be provided which will automatically indicate at one or more suitable points or stations the presence or indication of fire and its location in any cargo space which, in the opinion of the Administration, is not accessible except where it is shown to the satisfaction of the Administration that the ship is engaged on voyages of such short duration that it would be unreasonable to apply this requirement.	**Technical**
SOLAS 1981 Amend / Chapter II-2 / Reg. 42.2	On or after 9/1/1984 Before 7/1/2002	2 The insulation of aluminium alloy components of "A" or "B" class divisions, except structure which in the opinion of the Administration is non-load-bearing, shall be such that the temperature of the structural core does not rise more than 200 °C above the ambient temperature at any time during the applicable exposure to the standard fire test.	**Technical**
SOLAS 1981 Amend / Chapter II-2 / Reg. 44 / Table 44.1 / Note h	On or after 9/1/1984 Before 7/1/1986 Cargo ships	h Bulkheads and desks separating ro/ro cargo spaces shall be capable of being closed reasonably gastight and such divisions shall have "A" class integrity in so far as is reasonable and practicable in the opinion of the Administration.	**Technical**
SOLAS 1981 Amend / Chapter II-2 / Reg. 44 / Table 44.1 / Note i	On or after 9/1/1984 Before 7/1/1986 Cargo ships	I Fire insulation need not be fitted if the machinery space in category (7), in the opinion of the Administration, has little or no fire risk.	**Technical**
SOLAS 1981 Amend / Chapter II-2 / Reg. 44.4	On or after 9/1/1984 Before	4 External boundaries which are required in Regulation 42.1 to be of steel or other equivalent material may be pierced for the fitting of windows and sidescuttles provided that there is no requirement for such boundaries to have "A" class integrity elsewhere in this	**Technical**

	7/1/1986 Cargo ships	Part. Similarly, in such boundaries which are not required to have "A"class integrity, doors may be of materials to the satisfaction of the Administration.	
SOLAS 1981 Amend / Chapter II-2 / Reg. 45.1.1	On or after 9/1/1984 Before 7/1/2002 Cargo ships	1 Stairways and ladders shall be so arranged as to provide, from all accommodation spaces and from spaces in which the crew is normally employed, other than machinery spaces, ready means of escape to the open deck and thence to the lifeboats and liferafts. In particular the following general provisions shall be complied with: .5 The width and continuity of the means of escape shall be to the satisfaction of the Administration.	**Technical**
SOLAS 1981 Amend / Chapter II-2 / Reg. 45.1.6	On or after 9/1/1984 Before 7/1/2002 Cargo ships	1 Stairways and ladders shall be so arranged as to provide, from all accommodation spaces and from spaces in which the crew is normally employed, other than machinery spaces, ready means of escape to the open deck and thence to the lifeboats and liferafts. In particular the following general provisions shall be complied with: .6 If a radiotelegraph station has no direct access to the open deck, two means of access to or egress from such station shall be provided, one of which may be a porthole or window of sufficient size or other means to the satisfaction of the Administration, to provide an emergency escape.	**Technical**
SOLAS 1981 Amend / Chapter II-2 / Reg. 45.2	On or after 9/1/1984 Before 7/1/2002 Cargo ships	2 In all ro-ro cargo spaces where the crew is normally employed the number and locations of escape routes to the open deck shall be to the satisfaction of the Administration, but shall in no case be less than two and shall be widely separated.	**Technical**
SOLAS 1981 Amend / Chapter II-2 / Reg. 45.3.1	On or after 9/1/1984 Before 7/1/2002 Cargo ships	3 Except as provided in paragraph 4, two means of escape shall be provided from each machinery space of category A. In particular, one of the following provisions shall be complied with: .1 two sets of steel ladders as widely separated as possible leading to doors in the upper part of the space similarly separated and from which access is provided to the open deck. In general, one of these ladders shall provide continuous fire shelter from the lower part of the space to a safe position outside the space. However, the Administration may not require the shelter if, due to the special arrangement or dimensions of the machinery space, a safe escape route from the lower part of this space is provided. This shelter shall be of steel, insulated, where necessary, to the satisfaction of the Administration and be provided with a self-closing steel door at the lower end;	**Technical**

SOLAS 1981 Amend / Chapter II-2 / Reg. 45.5	On or after 9/1/1984 Before 7/1/2002 Cargo ships	5 From machinery spaces other than those of category A, escape routes shall be provided to the satisfaction of the Administration having regard to the nature and location of the space and whether persons are normally employed in that space.	**Technical**
SOLAS 1981 Amend / Chapter II-2 / Reg. 50.3.1	On or after 9/1/1984 Before 7/1/1986 Cargo ships	3 Methods IC, IIC and IIIC 3.1 Except in cargo spaces or refrigerated compartments of service spaces, insulating materials shall be non-combustible. Vapour barriers and adhesives used in conjunction with insulation, as well as the insulation of pipe fittings, for cold service systems, need not be of non-combustible materials, but they shall be kept to the minimum quantity practicable and their exposed surfaces shall have qualities of resistance to the propagation of flame to the satisfaction of the Administration.	**Technical**
SOLAS 1981 Amend / Chapter II-2 / Reg. 53.1.2	On or after 9/1/1984 Before 7/1/1986 Cargo ships	1.2 The Administration may exempt from the requirements of paragraph 1.1 cargo spaces of any ship if constructed and solely intended for carrying ore, coal, grain, unseasoned timber, non-combustible cargoes or cargoes which, in the opinion of the Administration, constitute a low fire risk. Such exemptions may be granted only if the ship is fitted with steel hatch covers and effective means of closing all ventilators and other openings leading to the cargo spaces.	**Specific** Case by case assessment
SOLAS 1981 Amend / Chapter II-2 / Reg. 53.1.3	On or after 9/1/1984 Before 7/1/1986 Cargo ships	1.3 Notwithstanding the provisions of paragraph 1.1, any ship engaged in the carriage of dangerous goods shall be provided in any cargo spaces with a fixed gas fire-extinguishing system complying with the provisions of Regulation 5 or by fire-extinguishing system which in the opinion of the Administration give equivalent protection for the cargoes carried.	**Technical**
SOLAS 1981 Amend / Chapter II-2 / Reg. 53.2.3.5	On or after 9/1/1984 Before 7/1/1986 Cargo ships	2.3.5 Ventilation ducts, including dampers, shall be made of steel and their arrangement shall be to the satisfaction of the Administration.	**Technical**
SOLAS 1981 Amend / Chapter II-2 / Reg. 54 / Table 54.1 / Note d	On or after 9/1/1984 Before 8/1/1986 Retroactive Cargo ships	[d] In the special case where the barges are capable of containing flammable vapours or alternatively if they are capable of discharging flammable vapours to a safe space outside the barge carrier compartment by means of ventilation ducts connected to the barges, these requirements may be reduced or waived to the satisfaction of the Administration.	**Technical**
SOLAS 1981 Amend / Chapter	On or after 9/1/1984	[h] At least natural ventilation is required in enclosed cargo spaces intended for carriage of solid dangerous goods in bulk. In cases	**Technical**

II-2 / Reg. 54 / Table 54.2 / Note h	Before 8/1/1986 Retroactive Cargo ships	where power ventilation is required in the Code of Safe Practice for Solid Bulk Cargoes (resolution A.434(XI) as amended), the use of portable ventilation units (equipment) to the satisfaction of the Administration may suffice.	
SOLAS 1981 Amend / Chapter II-2 / Reg. 54.2.1.2	On or after 9/1/1984 Before 8/1/1986 Retroactive Cargo ships	2.1.2 The quantity of water delivered shall be capable of supplying four nozzles of a size and at pressures as specified in Regulation 4, capable of being trained on any part of the cargo space when empty. This amount of water may be applied by equivalent means to the satisfaction of the Administration.	**Technical**
SOLAS 1981 Amend / Chapter II-2 / Reg. 54.2.1.3	On or after 9/1/1984 Before 8/1/1986 Retroactive Cargo ships	2.1.3 Means of effectively cooling the designated under deck cargo space by copious quantities of water, either by a fixed arrangement of spraying nozzles, or flooding the cargo space with water, shall be provided. Hoses may be used for this purpose in small cargo spaces and in small areas of larger cargo spaces at the discretion of the Administration. In any event the drainage and pumping arrangements shall be such as to prevent the build-up of free surfaces. If this is not possible the adverse effect upon stability of the added weight and free surface of water shall be taken into account to the extent deemed necessary by the Administration in its approval of the stability information.	**Technical**
SOLAS 1981 Amend / Chapter II-2 / Reg. 54.2.2	On or after 9/1/1984 Before 8/1/1986 Retroactive Cargo ships	2.2 Sources of ignition Electrical equipment and wiring shall not be fitted in enclosed cargo spaces, closed vehicle deck spaces, or open vehicle deck spaces unless it is essential for operational purposes in the opinion of the Administration. However, if electrical equipment is fitted in such spaces, it shall be of a certified safe type** for use in the dangerous environments to which it may be exposed unless it is possible to completely isolate the electrical system (by removal of links in the system, other than fuses). Cable penetrations of the decks and bulkheads shall be sealed against the passage of gas or vapour. Through runs of cables and cables within the cargo spaces shall be protected against damage from impact. Any other equipment which may constitute a source of ignition of flammable vapour shall not be permitted.	**Technical**
SOLAS 1981 Amend / Chapter II-2 / Reg. 54.2.5	On or after 9/1/1984 Before 8/1/1986 Retroactive Cargo ships	2.5 Bilge pumping Where it is intended to carry flammable or toxic liquids in enclosed cargo spaces the bilge pumping system shall be designed to ensure against inadvertent pumping of such liquids through machinery space piping or pumps. Where large quantities of such liquids are carried, consideration shall be given to the	**Technical**

		provision of additional means of draining those cargo spaces. These means shall be to the satisfaction of the Administration.	
SOLAS 1981 Amend / Chapter II-2 / Reg. 55.2	On or after 9/1/1984 Before 7/1/1986 Tankers	2 Where liquid cargoes other than those referred to in paragraph 1 or liquefied gases which introduce additional fire hazards are intended to be carried, additional safety measures shall be required to the satisfaction of the Administration, having due regard to the provisions of the Bulk Chemical Code and the Gas Carrier Code.	**Technical**
SOLAS 1981 Amend / Chapter II-2 / Reg. 55.3	On or after 9/1/1984 Before 7/1/1986 Tankers	3 This paragraph applies to all ships which are combination carriers. Such ships shall not carry solid cargoes unless all cargo tanks are empty of oil and gas freed or unless the arrangements provided in each case are to the satisfaction of the Administration and in accordance with the relevant operational requirements contained in the Guidelines for Inert Gas Systems.*	**Indefinite**
SOLAS 1981 Amend / Chapter II-2 / Reg. 55.6	On or after 9/1/1984 Before 7/1/1986 Tankers	6 Chemical tankers and gas carriers shall comply with the requirements of this Part, except where alternative and supplementary arrangements are provided to the satisfaction of the Administration, having due regard to the provisions of the Bulk Chemical Code and the Gas Carrier Code.	**Indefinite**
SOLAS 1981 Amend / Chapter II-2 / Reg. 56.2	On or after 9/1/1984 Before 7/1/1986 Tankers	2 Accommodation spaces, main cargo control stations, control stations and service spaces (excluding isolated cargo handling gear lockers) shall be positioned aft of all cargo tanks, slop tanks, cargo pump rooms and cofferdams which isolate cargo or slop tanks from machinery spaces of category A. Any common bulkheads separating a cargo pump room, including the cargo pump room entrance, from accommodation and service spaces and control stations shall be constructed to "A-60" standard. Where deemed necessary, accommodation spaces, control stations, machinery spaces other than those of category A, and service spaces may be permitted forward of all cargo tanks, slop tanks, cargo pump rooms and cofferdams subject to an equivalent standard of safety and appropriate availability of fire-extinguishing arrangements being provided to the satisfaction of the Administration.	**Technical**
SOLAS 1981 Amend / Chapter II-2 / Reg. 58 / Table 58.1 / Note / e	On or after 9/1/1984 Before 2/1/1992 Tankers	e Fire insulation need not be fitted if the machinery space in category (7) , in the opinion of the Administration, has little or no fire risk.	**Technical**

SOLAS 1981 Amend / Chapter II-2 / Reg. 58.4	On or after 9/1/1984 Before 2/1/1992 Tankers	4 External boundaries which are required in Regulation 57.1 to be of steel or other equivalent material may be pierced for the fitting of windows and sidescutties provided that there is no requirement for such boundaries to have "A" class integrity elsewhere in this Part. Similarly, in such boundaries which are not required to have "A" class integrity, doors may be of materials to the satisfaction of the Administration.	**Technical**
SOLAS 1981 Amend / Chapter II-2 / Reg. 61.4	On or after 9/1/1984 Before 7/1/1986 Tankers	4 Sufficient foam concentrate shall be supplied to ensure at least 20 minutes of foam generation in tankers fitted with an inert gas installation or 30 minutes of foam generation in tankers not fitted with an inert gas installation when using solution rates stipulated in paragraphs 3.1, 3.2 or 3.3, whichever is the greatest. The foam expansion ratio (i.e. the ratio of the volume of foam produced to the volume of the mixture of water and foam-making concentrate supplied) shall not generally exceed 12 to 1. Where systems essentially produce low expansion foam but at an expansion ratio slightly in excess of 12 to 1 the quantity of foam solution available shall be calculated as for 12 to 1 expansion ratio systems. When medium expansion ratio foam (between 50 to 1 and 150 to 1 expansion ratio) is employed the application rate of the foam and the capacity of a monitor installation shall be to the satisfaction of the Administration.	**Technical**
SOLAS 1981 Amend / Chapter II-2 / Reg. 62.1	On or after 9/1/1984 Before 7/1/1986 Tankers	1 The inert gas system referred to in Regulation 60 shall be designed, constructed and tested to the satisfaction of the Administration. It shall be so designed and operated as to render and maintain the atmosphere of the cargo tanks non-flammable at all times, except when such tanks are required to be gas free. In the event that the inert gas system is unable to meet the operational requirement set out above and it has been assessed that it is impractical to effect a repair, then cargo discharge, deballasting and necessary tank cleaning shall only be resumed when the "emergency conditions" laid down in the Guidelines on Inert Gas Systems are complied with.	**Technical**
SOLAS 1981 Amend / Chapter II-2 / Reg. 62.13	On or after 9/1/1984 Before 7/1/1986 Tankers	13 The arrangements for inerting, purging or gas freeing of empty tanks as required in paragraph 2 shall be to the satisfaction of the Administration and shall be such that the accumulation of hydrocarbon vapours in pockets formed by the internal structural members in a tank is minimized and that:	**Technical**
SOLAS 1981 Amend / Chapter	On or after 9/1/1984	(c) (i) A passenger ship engaged on short international voyages shall be provided with sets of davits in accordance with its length as specified in Column A of the Table in Regulation 28 of this	**Technical**

III / Reg. 27(c)(i)	Before 7/1/1986 Passenger ships	Chapter. Each set of davits shall have a lifeboat attached to it and these lifeboats shall provide at least the minimum capacity required by Column C of the Table or the capacity required to provide accommodation for all on board if this is less. Provided that when in the opinion of the Administration it is impracticable or unreasonable to place on a ship engaged on short international voyages the number of sets of davits required by Column A of the Table in Regulation 28, the Administration may authorize, under exceptional conditions, a smaller number of davits, except that this number shall never be less than the minimum number fixed by Column B of the Table, and that the total capacity of the lifeboats on the ship will be at least equal to the minimum capacity required by Column C or the capacity required to provide for all persons on board if this is less.	
SOLAS 1981 Amend / Chapter V (Reg.1~21) / Reg. 12(b)(i)(3)	On or after 9/1/1984 Before 2/1/1992 Retroactive	(3) adequate means of communication between the standard compass position and the normal navigation control position to the satisfaction of the Administration;	**Technical**
SOLAS 1983 Amend			Adopted by Res.MSC.6(48)
SOLAS 1983 Amend / Chapter II-1 / Reg. 5.2.2	On or after 7/1/1986 Before 1/1/2009 Passenger ships	2.2 Where it is shown to the satisfaction of the Administration that the average permeability as determined by detailed calculation is less than that given by the formula, the detailed calculated value may be used. For the purpose of such calculation, the permeability of passenger spaces, as defined in Regulation 2, shall be taken as 95, that of all cargo, coal and store spaces as 60, and that of double bottom, oil fuel and other tanks at such value as may be approved in each case.	**Technical**
SOLAS 1983 Amend / Chapter II-1 / Reg. 6.4.2	On or after 7/1/1986 Before 1/1/2009 Passenger ships	4.2 Where the factor F is less than .40 and it is shown to the satisfaction of the Administration to be impracticable to comply with the factor F in a machinery compartment of the ship, the subdivision of such compartment may be governed by an increased factor, which, however, shall not exceed .40.	**Technical**
SOLAS 1983 Amend / Chapter II-1 / Reg. 6.4.4	On or after 7/1/1986 Before 1/1/2009 Passenger ships	4.4 The subdivision abaft the forepeak of ships of less than 131 m but not less than 79 m in length and having a criterion numeral less than S, and of ships of less than 79 m in length shall be governed by the factor unity, unless, in either case, it is shown to the satisfaction of the Administration to be impracticable to comply with this factor in any part of the ship, in which case the	**Technical**

		Administration may allow such relaxation as may appear to be justified, having regard to all the circumstances.	
SOLAS 1983 Amend / Chapter II-1 / Reg. 6.5.2.5	On or after 7/1/1986 Before 1/1/2009 Passenger ships	.5 The subdivision abaft the fore peak of ships of less than 131m but not less than 55m in length and having a criterion numeral less than S1 and of ships of less than 55m in length shall be governed by the factor unity, unless it is shown to the satisfaction of the Administration to be impracticable to comply with this factor in particular compartments, in which event the Administration may allow such relaxations in respect of those compartments as appear to be justified, having regard to all the circumstances, provided that the after most compartment and as many as possible of the forward compartments (between the forepeak and the after end of the machinery space) shall be kept within the floodable length.	**Technical**
SOLAS 1983 Amend / Chapter II-1 / Reg. 41.4	On or after 7/1/1986 Before 7/1/1998	4. Where the total installed electrical power of the main generating sets is in excess of 3 MW, the main bus bars shall be subdivided into at least two parts which shall normally be connected by removable links or other approved means; so far as is practicable, the connection of generating sets and any other duplicated equipment shall be equally divided between the parts. Equivalent arrangements may be permitted to the satisfaction of the Administration.	**Technical**
SOLAS 1983 Amend / Chapter II-1 / Reg. 42.1.3	On or after 7/1/1986 Before 2/1/1992 Passenger ships	1.3 The location of the emergency source of electrical power and associated transforming equipment, if any, the transitional source of emergency power, the emergency switchboard and the emergency electric lighting switchboards in relation to the main source of electrical power, associated transforming equipment, if any, and the main switchboard shall be such as to ensure to the satisfaction of the Administration that a fire or other casualty in spaces containing the main source of electrical power, associated transforming equipment, if any, and the main switchboard or in any machinery space of category A will not interfere with the supply, control and distribution of emergency electrical power. As far as practicable the space containing the emergency source of electrical power, associated transforming equipment, if any, the transitional source of emergency electrical power and the emergency switchboard shall not be contiguous to the boundaries of machinery spaces of category A or those spaces containing the main source of electrical power, associated transforming equipment, if any, or the main switchboard.	**Technical**

SOLAS 1983 Amend / Chapter II-1 / Reg. 43.1.3	On or after 7/1/1986 Before 2/1/1992 Cargo ships	1.3 The location of the emergency source of electrical power, associated transforming equipment, if any, the transitional source of emergency power, the emergency switchboard and the emergency lighting switchboard in relation to the main source of electrical power, associated transforming equipment, if any, and the main switchboard shall be such as to ensure to the satisfaction of the Administration that a fire or other casualty in the space containing the main source of electrical power, associated transforming equipment, if any, and the main switchboard, or in any machinery space of category A will not interfere with the supply, control and distribution of emergency electrical power. As far as practicable the space containing the emergency source of electrical power, associated transforming equipment, if any, the transitional source of emergency electrical power and the emergency switchboard shall not be contiguous to the boundaries of machinery spaces of category A or those spaces containing the main source of electrical power, associated transforming equipment, if any, and the main switchboard.	**Technical**
SOLAS 1983 Amend / Chapter II-2 / Reg. 3.1	On or after 7/1/1986 Before 10/1/1994	1 "Non-combustible material" is a material which neither burns nor gives off flammable vapours in sufficient quantity for self-ignition when heated to approximately 750°C , this being determined to the satisfaction of the Administration by an established test procedure. Any other material is a combustible material.	**Technical**
SOLAS 1983 Amend / Chapter II-2 / Reg. 3.8	On or after 7/1/1986 Before 10/1/1994	8 "Low flame spread" means that the surface thus described will adequately restrict the spread of flame, this being determined to the satisfaction of the Administration by an established test procedure.	**Technical**
SOLAS 1983 Amend / Chapter II-2 / Reg. 3.15	On or after 7/1/1986 Before 10/1/1994	15 "Open ro/ro cargo spaces" are ro/ro cargo spaces either open at both ends, or open at one end and provided with adequate natural ventilation effective over their entire length through permanent openings in the side plating or deckhead to the satisfaction of the Administration.	**Technical**
SOLAS 1983 Amend / Chapter II-2 / Reg. 3.23.3	On or after 7/1/1986 Before 10/1/1994	.3 all draperies, curtains and other suspended textile materials have, to the satisfaction of the Administration, qualities of resistance to the propagation of flame not inferior to those of wool of mass 0.8kg/m²*;	**Technical**
SOLAS 1983 Amend / Chapter II-2 / Reg. 3. 23.4	On or after 7/1/1986 Before 10/1/1994	.4 all floor coverings have, to the satisfaction of the Administration, qualities of resistance to the propagation of flame not inferior to those of an equivalent woollen material used for the same purpose;	**Technical**

SOLAS 1983 Amend / Chapter II-2 / Reg. 3. 23.6	On or after 7/1/1986 Before 10/1/1994	.6 all upholstered furniture has qualities of resistance to the ignition and propagation of flame to the satisfaction of the Administration.	**Technical**
SOLAS 1983 Amend / Chapter II-2 / Reg. 4.2.2	On or after 7/1/1986 Before 2/1/1992	2.2 Each of the required fire pumps (other than any emergency pump required in paragraph 3.3.2 for cargo ships) shall have a capacity not less than 80 per cent of the total required capacity divided by the minimum number of required fire pumps but in any case not less than 25m³/hour and each such pump shall in any event be capable of delivering at least the two required jets of water. These fire pumps shall be capable of supplying the fire main system under the required conditions. Where more pumps than the minimum of required pumps are installed the capacity of such additional pumps shall be to the satisfaction of the Administration.	**Technical**
SOLAS 1983 Amend / Chapter II-2 / Reg. 4.3.1.3	On or after 7/1/1986 Before 2/1/1992 Cargo ships	3.1 Ships shall be provided with independently driven fire pumps as follows: .3 Cargo ships of less than 1,000 tons gross tonnage: to the satisfaction of the Administration	**Specific** Portable independently driven emergency fire pump to be provided on board. Suction hose to be resistant to the vacuum.
SOLAS 1983 Amend / Chapter II-2 / Reg. 4.3.3.2	On or after 7/1/1986 Before 2/1/1992 Cargo ships	3.3 The arrangement of sea connections, fire pumps and their sources of power shall be such as to ensure that: .2 In cargo ships of 2,000 tons gross tonnage and upwards if a fire in any one compartment could put all the pumps out of action there shall be an alternative means consisting of a fixed independently driven emergency pump which shall be capable of supplying two jets of water to the satisfaction of the Administration. The pump and its location shall comply with the following requirements:	**Technical**
SOLAS 1983 Amend / Chapter II-2 / Reg. 4.3.3.3	On or after 7/1/1986 Before 2/1/1992 Passenger ships	.3 In passenger ships of less than 1,000 tons gross tonnage and cargo ships of less than 2,000 tons gross tonnage, if a fire in any one compartment could put all the pumps out of action the alternative means of providing water for fire-fighting purposes are to the satisfaction of the Administration.	**Technical**
SOLAS 1983 Amend / Chapter II-2 / Reg. 4.3.4.2	On or after 7/1/1986 Before 2/1/1992	3.4 The arrangements for the ready availability of water supply shall be: .2 in passenger ships of less than 1,000 tons gross tonnage and in cargo ships to the satisfaction of the Administration;	**Technical**

SOLAS 1983 Amend / Chapter II-2 / Reg. 4.4.2	On or after 7/1/1986 Before 2/1/1992	4.2 With the two pumps simultaneously delivering through nozzles specified in paragraph 8 the quantity of water specified in paragraph 4.1, through any adjacent hydrants, the following minimum pressures shall be maintained at all hydrants: Passenger ships: 4,000 tons gross tonnage and upwards: 0.31 N/mm² 1,000 tons gross tonnage and upwards but under 4,000 tons gross tonnage: 0.27 N/mm² Under 1,000 tons gross: To the satisfaction of the Administration Cargo ships: 6,000 tons gross tonnage and upwards: 0.27 N/mm² 1,000 tons gross tonnage and upwards but under 6,000 tons gross tonnage: 0.25 N/mm² Under 1,000 tons gross tonnage: To the satisfaction of the Administration	**Technical**
SOLAS 1983 Amend / Chapter II-2 / Reg. 4.7.1	On or after 7/1/1986 Before 2/1/1992	7.1 Fire hoses shall be of material approved by the Administration and shall be sufficient in length to project a jet of water to any of the spaces in which they may be required to be used. Their maximum length shall be to the satisfaction of the Administration. Each hose shall be provided with a nozzle and the necessary couplings. Hoses specified in this Chapter as "fire hoses" shall together with any necessary fittings and tools be kept ready for use in conspicuous positions near the water service hydrants or connections. Additionally in interior locations in passenger ships carrying more than 36 passengers fire hoses shall be connected to the hydrants at all times.	**Technical**
SOLAS 1983 Amend / Chapter II-2 / Reg. 4.7.2	On or after 7/1/1986 Before 2/1/1992	7.2 Ships shall be provided with fire hoses the number and diameter of which shall be to the satisfaction of the Administration.	**Technical**
SOLAS 1983 Amend / Chapter II-2 / Reg. 4.7.4.2	On or after 7/1/1986 Before 2/1/1992	7.4.2 In cargo ships of less than 1,000 tons gross tonnage the number of fire hoses to be provided shall be to the satisfaction of the Administration.	**Technical**
SOLAS 1983 Amend / Chapter II-2 / Reg. 5.1.1	On or after 7/1/1986 Before 10/1/1994	1.1 The use of a fire-extinguishing medium which, in the opinion of the Administration, either by itself or under expected conditions of use gives off toxic gases in such quantities as to endanger persons shall not be permitted.	**Technical**
SOLAS 1983 Amend / Chapter	On or after 7/1/1986	1.12 Containers for the storage of fire-extinguishing medium and associated pressure components shall be designed to pressure	**Technical**

II-2 / Reg. 5.1.12	Before 10/1/1994	codes of practice to the satisfaction of the Administration having regard to their locations and maximum ambient temperatures expected in service.	
SOLAS 1983 Amend / Chapter II-2 / Reg. 5.1.13	On or after 7/1/1986 Before 10/1/1994	1.13 When the fire-extinguishing medium is stored outside a protected space, it shall be stored in a room which shall be situated in a safe and readily accessible position and shall be effectively ventilated to the satisfaction of the Administration. Any entrance to such a storage room shall preferably be from the open deck and in any case shall be independent of the protected space. Access doors shall open outwards, and bulkheads and decks including doors and other means of closing any opening therein, which form the boundaries between such rooms and adjoining enclosed spaces shall be gastight. For the purpose of the application of the integrity tables in Regulations 26, 27, 44 and 58, such storage rooms shall be treated as control stations.	**Technical**
SOLAS 1983 Amend / Chapter II-2 / Reg. 5.1.14	On or after 7/1/1986 Before 10/1/1994	1.14 Spare parts for the system shall be stored on board and be to the satisfaction of the Administration.	**Technical**
SOLAS 1983 Amend / Chapter II-2 / Reg. 5.3.2.6	On or after 7/1/1986 Before 10/1/1994	3.2 When halogenated hydrocarbons are used as the fire-extinguishing media in total flooding systems: .6 The system shall be designed to operate within a temperature range to the satisfaction of the Administration.	**Technical**
SOLAS 1983 Amend / Chapter II-2 / Reg. 5.3.3.4	On or after 7/1/1986 Before 10/1/1994	3.3 Only Halon 1301 may be stored within a protected machinery space. Containers shall be individually distributed throughout that space and the following requirements shall be complied with: .4 Within the protected space, electrical circuits essential for the release of the system shall be heat resistant e.g. mineral insulated cable or equivalent. Piping systems essential for the release of systems designed to be operated hydraulically or pneumatically shall be of steel or other equivalent heat-resisting material to the satisfaction of the Administration.	**Specific** Not allowed
SOLAS 1983 Amend / Chapter II-2 / Reg. 5.3.3.6	On or after 7/1/1986 Before 10/1/1994	3.3 Only Halon 1301 may be stored within a protected machinery space. Containers shall be individually distributed throughout that space and the following requirements shall be complied with: .6 The arrangement of containers and the electrical circuits and piping essential for the release of any system shall be such that in the event of damage to any one power release line through fire or explosion in a protected space, i.e. a single fault concept, at least two-thirds of the fire-extinguishing charge required by paragraphs 3.2.9 or 3.2.10 for that space can still be discharged having	**Specific** Not allowed

		regard to the requirement for uniform distribution of medium throughout the space. The arrangements in respect of systems for spaces requiring only one or two containers shall be to the satisfaction of the Administration.	
SOLAS 1983 Amend / Chapter II-2 / Reg. 5.3.3.7	On or after 7/1/1986 Before 10/1/1994	3.3 Only Halon 1301 may be stored within a protected machinery space. Containers shall be individually distributed throughout that space and the following requirements shall be complied with: .7 Not more than two discharge nozzles shall be fitted to any pressure container and the maximum quantity of agent in each container shall be to the satisfaction of the Administration having regard to the requirement for uniform distribution of medium throughout the space.	**Specific** Not allowed
SOLAS 1983 Amend / Chapter II-2 / Reg. 5.3.4.6	On or after 7/1/1986 Before 10/1/1994	3.4 Local automatically operated fixed fire-extinguishing units containing Halon 1301 or 1211, fitted in enclosed areas of high fire risk within machinery spaces, in addition to, and independent of, any required fixed fire-extinguishing system may be accepted subject to compliance with the following: .6 The fire-extinguishing units shall be designed to operate within a temperature range to the satisfaction of the Administration.	**Specific** Not allowed
SOLAS 1983 Amend / Chapter II-2 / Reg. 6.2	On or after 7/1/1986 Before 7/1/2002	2 Spare charges shall be provided in accordance with requirements to be specified by the Administration.	**Technical**
SOLAS 1983 Amend / Chapter II-2 / Reg. 6.3	On or after 7/1/1986 Before 7/1/2002	3 Fire extinguishers containing an extinguishing medium which, in the opinion of the Administration, either by itself or under expected conditions of use gives off toxic gases in such quantities as to endanger persons shall not be permitted.	**Technical**
SOLAS 1983 Amend / Chapter II-2 / Reg. 6.7	On or after 7/1/1986 Before 7/1/2002	7 Accommodation spaces, service spaces and control stations shall be provided with portable fire extinguishers of appropriate types and in sufficient number to the satisfaction of the Administration. Ships of 1,000 tons gross tonnage and upwards shall carry at least five portable fire extinguishers.	**Technical**
SOLAS 1983 Amend / Chapter II-2 / Reg. 7.4	On or after 7/1/1986 Before 7/1/2002	4 Fire-extinguishing appliances in other machinery spaces Where, in the opinion of the Administration, a fire hazard exists in any machinery space for which no specific provisions for fire-extinguishing appliances are prescribed in paragraphs 1, 2 and 3, there shall be provided in, or adjacent to, that space such a number of approved portable fire extinguishers or other means of fire extinction as the Administration may deem sufficient.	**Technical**

SOLAS 1983 Amend / Chapter II-2 / Reg. 7.5	On or after 7/1/1986 Before 7/1/2002	5 Where a fixed fire-extinguishing system not required by this Chapter is installed, such a system shall be to the satisfaction of the Administration.	**Technical**
SOLAS 1983 Amend / Chapter II-2 / Reg. 11.5	On or after 7/1/1986 Before 7/1/2002	5 The controls required in paragraph 4 and in Regulation 15.2.5 shall be located outside the space concerned, where they will not be cut off in the event of fire in the space they serve. In passenger ships such controls and the controls for any required fire-extinguishing system shall be situated at one control position or grouped in as few positions as possible to the satisfaction of the Administration. Such positions shall have a safe access from the open deck.	**Technical**
SOLAS 1983 Amend / Chapter II-2 / Reg. 12.1.1	On or after 7/1/1986 Before 7/1/1998	1.1 Any required automatic sprinkler, fire detection and fire alarm system shall be capable of immediate operation at all times and no action by the crew shall be necessary to set it in operation. It shall be of the wet pipe type but small exposed sections may be of the dry pipe type where in the opinion of the Administration this is a necessary precaution. Any parts of the system which may be subjected to freezing temperatures in service shall be suitably protected against freezing. It shall be kept charged at the necessary pressure and shall have provision for a continuous supply of water as required in this Regulation.	**Technical**
SOLAS 1983 Amend / Chapter II-2 / Reg. 12.3	On or after 7/1/1986 Before 7/1/1998	3 Sprinklers shall be placed in an overhead position and spaced in a suitable pattern to maintain an average application rate of not less than 5l/m²per minute over the nominal area covered by the sprinklers. However, the Administration may permit the use of sprinklers providing such an alternative amount of water suitably distributed as has been shown to the satisfaction of the Administration to be not less effective.	**Technical**
SOLAS 1983 Amend / Chapter II-2 / Reg. 12.10	On or after 7/1/1986 Before 7/1/1998	10 Spare sprinkler heads shall be provided for each section of sprinklers to the satisfaction of the Administration.	**Technical**
SOLAS 1983 Amend / Chapter II-2 / Reg. 13.1.13	On or after 7/1/1986 Before 10/1/1994	1.13 The function of the detection system shall be periodically tested to the satisfaction of the Administration by means of equipment producing hot air at the appropriate temperature, or smoke or aerosol particles having the appropriate range of density or particle size, or other phenomena associated with incipient fires to which the detector is designed to respond. All detectors shall be of a type such that they can be tested for correct operation and	**Technical**

		restored to normal surveillance without the renewal of any component.	
SOLAS 1983 Amend / Chapter II-2 / Reg. 13.3.2	On or after 7/1/1986 Before 10/1/1994	3 Design requirements 3.2 Smoke detectors required by paragraph 2.2 shall be certified to operate before the smoke density exceeds 12.5 per cent obscuration per metre, but not until the smoke density exceeds 2 per cent obscuration per metre. Smoke detectors to be installed in other spaces shall operate within sensitivity limits to the satisfaction of the Administration having regard to the avoidance of detector insensitivity or over sensitivity.	**Technical**
SOLAS 1983 Amend / Chapter II-2 / Reg. 13.3.3	On or after 7/1/1986 Before 10/1/1994	3 Design requirements 3.3 Heat detectors shall be certified to operate before the temperature exceeds 78°C but not until the temperature exceeds 54°C, when the temperature is raised to those limits at a rate less than 1°C per minute. At higher rates of temperature rise, the heat detector shall operate within temperature limits to the satisfaction of the Administration having regard to the avoidance of detector insensitivity or over sensitivity.	**Technical**
SOLAS 1983 Amend / Chapter II-2 / Reg. 26.1	On or after 7/1/1986 Before 2/1/1992 Passenger ships carrying more than 36 passengers	1 In addition to complying with the specific provisions for fire integrity of bulkheads and decks mentioned elsewhere in this Part, the minimum fire integrity of all bulkheads and decks shall be as prescribed in tables 26.1 to 26.4. Where, due to any particular structural arrangements in the ship, difficulty is experienced in determining from the tables the minimum fire integrity value of any divisions, such values shall be determined to the satisfaction of the Administration.	**Technical**
SOLAS 1983 Amend / Chapter II-2 / Reg. 26.2.7	On or after 7/1/1986 Before 2/1/1992 Passenger ships carrying more than 36 passengers	.7 The Administration shall determine in respect of category (5) spaces whether the insulation values in table 26.1 or 26.2 shall apply to ends of deckhouses and superstructures, and whether the insulation values in table 26.3 or 26.4 shall apply to weather decks. In no case shall the requirements of category (5) of tables 26.1 to 26.4 necessitate enclosure of spaces which in the opinion of the Administration need not be enclosed.	**Technical**
SOLAS 1983 Amend / Chapter II-2 / Reg. 27 /	On or after 7/1/1986 Before	f Fire insulation need not be fitted if the machinery space of category (7), in the opinion of the Administration, has little or no fire risk.	**Technical**

Table 27.1 / Note / f	2/1/1992 Passenger ships carrying not more than 36 passengers		
SOLAS 1983 Amend / Chapter II-2 / Reg. 27.4	On or after 7/1/1986 Before 2/1/1992 Passenger ships carrying not more than 36 passengers	4 External boundaries which are required in Regulation 23.1 to be of steel or other equivalent material may be pierced for the fitting of windows and side scuttles provided that there is no requirement for such boundaries to have "A" class integrity elsewhere in this Part. Similarly, in such boundaries which are not required to have "A"class integrity, doors may be of materials to the satisfaction of the Administration.	**Technical**
SOLAS 1983 Amend / Chapter II-2 / Reg. 32.1.4.3.1	On or after 7/1/1986 Before 1/1/1994 Passenger ships	1.4 Except in cargo spaces, ventilation ducts shall be constructed of the following materials: .3.1 the duct is constructed of a material of low fire risk to the satisfaction of the Administration;	**Technical**
SOLAS 1983 Amend / Chapter II-2 / Reg. 37.1.4.1	On or after 7/1/1986 Before 10/1/1994 Passenger ships	1.4.1 An efficient patrol system shall be maintained in special category spaces. In any such space in which the patrol is not maintained by a continuous fire watch at all times during the voyage there shall be provided a fixed fire detection and fire alarm system of an approved type complying with the requirements of regulation 13. The fixed fire detection system shall be capable of rapidly detecting the onset of fire. The spacing and location of detectors shall be tested to the satisfaction of the Administration taking into account the effects of ventilation and other relevant factors.	**Technical**
SOLAS 1983 Amend / Chapter II-2 / Reg. 37.1.6.5	On or after 7/1/1986 Before 10/1/1994 Passenger ships	1.6.5 Ventilation ducts, including dampers, shall be made of steel and their arrangement shall be to the satisfaction of the Administration.	**Technical**
SOLAS 1983 Amend / Chapter	On or after 7/1/1986	1.2 The Administration may exempt from the requirements of paragraph 1.1 cargo spaces of any ship if constructed and solely	**Specific** Case by case assessment

II-2 / Reg. 53.1.2	Before 2/1/1992 Cargo ships	intended for carrying ore, coal, grain, unseasoned timber and non-combustible cargoes or cargoes which, in the opinion of the Administration, constitute a low fire risk. Such exemptions may be granted only if the ship is fitted with steel hatch covers and effective means of closing all ventilators and other openings leading to the cargo spaces.	
SOLAS 1983 Amend / Chapter II-2 / Reg. 53.1.3	On or after 7/1/1986 Before 2/1/1992 Cargo ships	1.3 Notwithstanding the provisions of paragraph 1.1, any ship engaged in the carriage of dangerous goods shall be provided in any cargo spaces with a fixed gas fire-extinguishing system complying with the provisions of Regulation 5 or with a fire-extinguishing system which in the opinion of the Administration give equivalent protection for the cargoes carried.	**Technical**
SOLAS 1983 Amend / Chapter II-2 / Reg. 53.2.3.5	On or after 7/1/1986 Before 2/1/1992 Cargo ships	2.3.5 Ventilation ducts, including dampers, shall be made of steel and their arrangement shall be to the satisfaction of the Administration.	**Technical**
SOLAS 1983 Amend / Chapter II-2 / Reg. 54 / Table 54.1 / Note d	On or after 7/1/1986 Before 2/1/1992 Retroactive Cargo ships	[d] In the special case where the barges are capable of containing flammable vapours or alternatively if they are capable of discharging flammable vapours to a safe space outside the barge carrier compartment by means of ventilation ducts connected to the barges, these requirements may be reduced or waived to the satisfaction of the Administration.	**Technical**
SOLAS 1983 Amend / Chapter II-2 / Reg. 54 / Table 54.2 / Note h	On or after 7/1/1986 Before 2/1/1992 Retroactive Cargo ships	[h] At least natural ventilation is required in enclosed cargo spaces intended for carriage of solid dangerous goods in bulk. In cases where power ventilation is required in the Code of Safe Practice for Solid Bulk Cargoes (resolution A.434(XI) as amended), the use of portable ventilation units (equipment) to the satisfaction of the Administration may suffice.	**Technical**
SOLAS 1983 Amend / Chapter II-2 / Reg. 54.2.1.2	On or after 7/1/1986 Before 2/1/1992 Retroactive Cargo ships	2.1.2 The quantity of water delivered shall be capable of supplying four nozzles of a size and at pressures as specified in Regulation 4, capable of being trained on any part of the cargo space when empty. This amount of water may be applied by equivalent means to the satisfaction of the Administration.	**Technical**
SOLAS 1983 Amend / Chapter II-2 / Reg. 54.2.2	On or after 7/1/1986 Before 2/1/1992 Retroactive Cargo ships	2.2 Sources of ignition Electrical equipment and wiring shall not be fitted in enclosed cargo spaces, closed vehicle deck spaces, or open vehicle deck spaces unless it is essential for operational purposes in the opinion of the Administration. However, if electrical equipment is fitted in such spaces, it shall be of a certified safe type** for use	**Technical**

		in the dangerous environments to which it may be exposed unless it is possible to completely isolate the electrical system (by removal of links in the system, other than fuses). Cable penetrations of the decks and bulkheads shall be sealed against the passage of gas or vapour. Through runs of cables and cables within the cargo spaces shall be protected against damage from impact. Any other equipment which may constitute a source of ignition of flammable vapour shall not be permitted.	
SOLAS 1983 Amend / Chapter II-2 / Reg. 54.2.5	On or after 7/1/1986 Before 2/1/1992 Retroactive Cargo ships	2.5 Bilge pumping Where it is intended to carry flammable or toxic liquids in enclosed cargo spaces the bilge pumping system shall be designed to ensure against inadvertent pumping of such liquids through machinery space piping or pumps. Where large quantities of such liquids are carried, consideration shall be given to the provision of additional means of draining those cargo spaces. These means shall be to the satisfaction of the Administration.	**Technical**
SOLAS 1983 Amend / Chapter II-2 / Reg. 55.2	On or after 7/1/1986 Before 2/1/1992 Tankers	2 Where liquid cargoes other than those referred to in paragraph 1 or liquefied gases which introduce additional fire hazards are intended to be carried, additional safety measures shall be required to the satisfaction of the Administration, having due regard to the provisions of the International Bulk Chemical Code, the Bulk Chemical Code, the International Gas Carrier Code and the Gas Carrier Code, as appropriate.	**Indefinite**
SOLAS 1983 Amend / Chapter II-2 / Reg. 55.3	On or after 7/1/1986 Before 2/1/1992 Tankers	3 This paragraph applies to all ships which are combination carriers. Such ships shall not carry solid cargoes unless all cargo tanks are empty of oil and gas freed or unless the arrangements provided in each case are to the satisfaction of the Administration and in accordance with the relevant operational requirements contained in the Guidelines for Inert Gas Systems.	**Indefinite**
SOLAS 1983 Amend / Chapter II-2 / Reg. 55.6	On or after 7/1/1986 Before 2/1/1992 Tankers	6 Chemical tankers and gas carriers shall comply with the requirements of this Part, except where alternative and supplementary arrangements are provided to the satisfaction of the Administration, having due regard to the provisions of the International Bulk Chemical Code, the Bulk Chemical Code, the International Gas Carrier Code and the Gas Carrier Code, as appropriate.	**Indefinite**
SOLAS 1983 Amend / Chapter II-2 / Reg. 56.3	On or after 7/1/1986 Before 2/1/1992 Tankers	3 However, where deemed necessary, accommodation spaces, control stations, machinery spaces other than those of category A, and service spaces may be permitted forward of the cargo area, provided they are isolated from the cargo tanks and slop tanks by cofferdams, cargo pump rooms, oil fuel bunker tanks or	**Indefinite**

		permanent ballast tanks and subject to an equivalent standard of safety and appropriate availability of fire-extinguishing arrangements being provided to the satisfaction of the Administration. In addition, where deemed necessary for the safety of navigation of the ship, the Administration may permit machinery spaces containing internal combustion machinery not being main propulsion machinery having an output greater than 375Kw to be located forward of the cargo area provided the arrangements are in accordance with the provisions of this paragraph.	
SOLAS 1983 Amend / Chapter II-2 / Reg. 56.4.4	On or after 7/1/1986 Before 2/1/1992 Tankers	4 In combination carriers only: .4 Where cargo wing tanks are provided, cargo oil lines below deck shall be installed inside these tanks. However, the Administration may permit cargo oil lines to be placed in special ducts which shall be capable of being adequately cleaned and ventilated and be to the satisfaction of the Administration. Where cargo wing tanks are not provided cargo oil lines below deck shall be placed in special ducts.	**Indefinite**
SOLAS 1983 Amend / Chapter II-2 / Reg. 61.4	On or after 7/1/1986 Before 7/1/2002 Tankers	4 Sufficient foam concentrate shall be supplied to ensure at least 20 minutes of foam generation in tankers fitted with an inert gas installation or 30 minutes of foam generation in tankers not fitted with an inert gas installation when using solution rates stipulated in paragraphs 3.1, 3.2 or 3.3, whichever is the greatest. The foam expansion ratio (i.e. the ratio of the volume of foam produced to the volume of the mixture of water and foam-making concentrate supplied) shall not generally exceed 12 to 1. Where systems essentially produce low expansion foam but at an expansion ratio slightly in excess of 12 to 1 the quantity of foam solution available shall be calculated as for 12 to 1 expansion ratio systems. When medium expansion ratio foam (between 50 to 1 and 150 to 1 expansion ratio) is employed the application rate of the foam and the capacity of a monitor installation shall be to the satisfaction of the Administration.	**Technical**
SOLAS 1983 Amend / Chapter II-2 / Reg. 62.1	On or after 7/1/1986 Before 2/1/1992 Tankers	1 The inert gas system referred to in Regulation 60 shall be designed, constructed and tested to the satisfaction of the Administration. It shall be so designed and operated as to render and maintain the atmosphere of the cargo tanks non-flammable at all times, except when such tanks are required to be gas free. In the event that the inert gas system is unable to meet the operational requirement set out above and it has been assessed that it is impractical to effect a repair, then cargo discharge,	**Indefinite**

		deballasting and necessary tank cleaning shall only be resumed when the "emergency conditions" laid down in the Guidelines on Inert Gas Systems are complied with.	
SOLAS 1983 Amend / Chapter II-2 / Reg. 62.13	On or after 7/1/1986 Before 2/1/1992 Tankers	13 The arrangements for inerting, purging or gas freeing of empty tanks as required in paragraph 2 shall be to the satisfaction of the Administration and shall be such that the accumulation of hydrocarbon vapours in pockets formed by the internal structural members in a tank is minimized and that:	**Indefinite**
SOLAS 1983 Amend / Chapter III / Reg. 4.2.2	On or after 7/1/1986 Before 7/1/1998	2 Before giving approval to life saving appliances and arrangements, the Administration shall ensure that such life-saving appliances and arrangements: .2 have successfully undergone, to the satisfaction of the Administration tests which are substantially equivalent to those specified in those recommendations.	**Technical**
SOLAS 1983 Amend / Chapter III / Reg. 4.3.2	On or after 7/1/1986 Before 7/1/1998	3 Before giving approval to novel life saving appliances or arrangements, the Administration shall ensure that such appliances or arrangements: .2 have successfully undergone to the satisfaction of the Administration, evaluation end tests which are substantially equivalent to those recommendations.	**Technical**
SOLAS 1983 Amend / Chapter III / Reg. 4.6	On or after 7/1/1986 Before 7/1/1998	6 Life saving appliances required by this chapter for which detailed specifications are not included in part C shall be to the satisfaction of the Administration.	**Technical**
SOLAS 1983 Amend / Chapter III / Reg. 6.2.1.3	On or after 7/1/1986 Before 2/1/1992	2.1 Portable radio apparatus for survival craft. ... 2.1.3 On ships engaged on voyages of such duration that in the opinion of the Administration portable radio apparatus for survival craft is unnecessary, the Administration may allow such equipment to be dispensed with.	**Technical**
SOLAS 1983 Amend / Chapter III / Reg. 7.2.2	On or after 7/1/1986 Before 7/1/1998	2.2 Life jackets shall be so placed as to be ready accessible and their position shall be plainly indicated. Where, due to the particular arrangements of the ship, the life jackets provided in compliance with the requirements of paragraph 2.1 may become inaccessible, alternative provisions shall be made to the satisfaction of the Administration which may include an increase in the number of life jackets to be carried.	**Technical**
SOLAS 1983 Amend / Chapter III / Reg. 21.4.2.2	On or after 7/1/1986 Before 7/1/1998	4 Immersion suits and thermal protective aids 4.2 Passenger ships shall carry for each lifeboat on the ship at least three immersion suits complying with the requirements of regulation 33 and, in addition, a thermal protective aid complying	**Specific** Case by case assessment

	Passenger ships	with the requirements of regulation 34 for every person to be accommodated in the lifeboat and not provided with an immersion suit. These immersion suits and thermal protective aids need not be carried: ... .2 if the ship is constantly engaged on voyages in warm climates where, in the opinion of the Administration, thermal protective aids are unnecessary.	
SOLAS 1983 Amend / Chapter III / Reg. 27.3.2.3	On or after 7/1/1986 Before 7/1/1998 Cargo ships	3 Immersion suits and thermal protective aids 3.2 Cargo ships shall carry for each lifeboat on the ship at least three immersion suits complying with the requirements of regulation 33 or, if the Administration considers it necessary and practicable, one immersion suit complying with the requirements of regulation 33 for every person on board the ship; however, the ship shall carry in addition to the thermal protective aids required by regulations 38.5.1.24, 41.8.31 and 47.2.2.13, thermal protective aids complying with the requirements of regulation 34 for persons on board not provided with immersion suits. These immersion suits and thermal protective aids need not be required if the ship: ... .3 is constantly engaged on voyages in warm climates where, in the opinion of the Administration, immersion suits are unnecessary.	**Technical**
SOLAS 1983 Amend / Chapter III / Reg. 27.3.3.3	On or after 7/1/1986 Before 7/1/1998 Cargo ships	3 Immersion suits and thermal protective aids 3.3 Cargo ships complying with the requirements of regulation 26.1.3 shall carry immersion suits complying with the requirements of regulation 33 for every person on board unless the ship: ... .3 is constantly engaged on voyages in warm climates where, in the opinion of the Administration, immersion suits are unnecessary.	**Specific** Case by case assessment
SOLAS 1983 Amend / Chapter III / Reg. 30.2	On or after 7/1/1986 Before 7/1/1998	2 Unless expressly provided otherwise or unless, in the opinion of the Administration having regard to the particular voyages on which the ship is constantly engaged, other requirements are appropriate, all life-saving appliances prescribed in this part shall: ...	**Specific** Cabinet Regulation No. 34 adopted 17 January 2017 "Regulations Regarding the Marine Equipment" Life-saving appliances shall comply with MED directive.

SOLAS 1983 Amend / Chapter III / Reg. 38.5.3	On or after 7/1/1986 Before 2/1/1992	5.3 In the case of passenger ships engaged on short international voyages of such a nature and duration that, in the opinion of the Administration, not all the items specified in paragraph 5.1 are necessary, the Administration may allow the liferafts carried on any such ships to be provided with the equipment specified in paragraphs 5.1.1 to 5.1.6 inclusive, 5.1.8, 5.1.9, 5.1.13 to 5.1.16 inclusive and 5.1.21 to 5.1.24 inclusive and one half of the equipment specified in paragraphs 5.1.1 0 to 5.1.12 inclusive. The marking required by regulations 39.7.3.5 and 40.7.7 on such liferafts shall be "SOLAS B PACK" in block capitals of the Roman alphabet.	**Specific** Case by case assessment
SOLAS 1983 Amend / Chapter III / Reg. 41.6.2	On or after 7/1/1986 Before 2/1/1992	6.2 The engine shall be provided with either a manual starting system, or a power starting system with two independent rechargeable energy sources. Any necessary starting aids shall also be provided. The engine starting systems and starting aids shall start the engine at an ambient temperature of -15°C within 2 min of commencing the start procedure unless, in the opinion of the Administration having regard to the particular voyages in which the ship carrying the lifeboat is constantly engaged, a different temperature is appropriate. The starting systems shall not be impeded by the engine casing, thwarts or other obstructions.	**Technical**
SOLAS 1983 Amend / Chapter III / Reg. 41.8.32	On or after 7/1/1986 Before 2/1/1992	Except where otherwise stated, the normal equipment of every lifeboat shall consist of: .32 In the case of ships engaged on voyages of such a nature and duration that, in the opinion of the Administration, the items specified in paragraphs 8.12 and 8.26 are unnecessary, the Administration may allow these items to be dispensed with.	**Specific** Case by case assessment
SOLAS 1983 Amend / Chapter III / Reg. 42.5	On or after 7/1/1986 Before 2/1/1992	5 The radiotelegraph installation required by regulation 6.2.2 shall be installed in a cabin large enough to accommodate both the equipment and the person using it. No separate cabin is required if the construction of the lifeboat provides a sheltered space to the satisfaction of the Administration.	**Technical**
SOLAS 1983 Amend / Chapter III / Reg. 47.1.3	On or after 7/1/1986 Before 7/1/1998	1.3 Rescue boats which are a combination of rigid and inflated construction shall comply with the appropriate requirements of this regulation to the satisfaction of the Administration.	**Technical**
SOLAS 1983 Amend / Chapter III / Reg. 47.3.8	On or after 7/1/1986 Before 7/1/1998	3.8 Underneath the bottom and on vulnerable places on the outside of the inflated rescue boat, rubbing strips shall be provided to the satisfaction of the Administration.	**Technical**

SOLAS 1988 Amend			Adopted by Res.MSC.11(55) and Res.MSC.12(56)
SOLAS 1988 Amend / Chapter II-1 / Reg. 23-2.1	On or after 10/22/1989 Before 7/1/1997	1 Indicators shall be provided on the navigating bridge for all shell doors, loading doors and other closing appliances which, if left open or not properly secured could, in the opinion of the Administration, lead to major flooding of a special category space or ro-ro cargo space. The indicator system shall be designed on the fail safe principle and shall show if the door is not fully closed or not secured. The power supply for the indicator system shall be independent of the power supply for operating and securing the doors.	**Technical**
SOLAS 1988 Amend / Chapter II-1 / Reg. 42.1.3	On or after 2/1/1992 Passenger ships	1.3 The location of the emergency source of electrical power and associated transforming equipment, if any, the transitional source of emergency power, the emergency switchboard and the emergency electric lighting switchboards in relation to the main source of electrical power, associated transforming equipment, if any, and the main switchboard shall be such as to ensure to the satisfaction of the Administration that a fire or other casualty in spaces containing the main source of electrical power, associated transforming equipment, if any, and the main switchboard or in any machinery space of category A will not interfere with the supply, control and distribution of emergency electrical power, associated transforming equipment, if any, the transitional source of emergency electrical power and the emergency switchboard shall not be contiguous to the boundaries of machinery spaces of category A or those spaces containing the main source of electrical power, associated transforming equipment, if any, or the main switchboard.	**Technical**
SOLAS 1988 Amend / Chapter II-1 / Reg. 43.1.3	On or after 2/1/1992 Before 10/1/1994 Cargo ships	1.3 The location of the emergency source of electrical power, associated transforming equipment, if any, the transitional source of emergency power, the emergency switchboard and the emergency lighting switchboard in relation to the main source of electrical power, associated transforming equipment, if any, and the main switchboard shall be such as to ensure to the satisfaction of the Administration that a fire or other casualty in the space containing the main source of electrical power, associated transforming equipment, if any, and the main switchboard, or in any machinery space of category A will not interfere with the supply, control and distribution of emergency electrical power. As far as practicable the space containing the emergency source of electrical power, associated transforming	**Technical**

		equipment, if any, the transitional source of emergency electrical power and the emergency switchboard shall not be contiguous to the boundaries of machinery spaces of category A or those spaces containing the main source of electrical power, associated transforming equipment, if any, and the main switchboard.	
SOLAS 1988 Amend / Chapter III / Reg. 38.5.3	On or after 2/1/1992 Before 7/1/1998	5.3 In the case of passenger ships engaged on short international voyages of such a nature and duration that, in the opinion of the Administration, not all the items specified in paragraph 5.1 are necessary, the Administration may allow the liferafts carried on any such ships to be provided with the equipment specified in paragraphs 5.1.1 to 5.1.6 inclusive, 5.1.8, 5.1.9, 5.1.13 to 5.1.16 inclusive and 5.1.21 to 5.1.24 inclusive and one half of the equipment specified in paragraphs 5.1.10 to 5.1.12 inclusive. The marking required by regulations 39.7.3.5 and 40.7.7 on such liferafts shall be "SOLAS B PACK" in block capitals of the Roman alphabet.	**Specific** Case by case assessment
SOLAS 1988 Amend / Chapter III / Reg. 41.6.2	On or after 2/1/1992	6.2 The engine shall be provided with either a manual starting system, or a power starting system with two independent rechargeable energy sources. Any necessary starting aids shall also be provided. The engine starting systems and starting aids shall start the engine at an ambient temperature of -15°C within 2 min of commencing the start procedure unless, in the opinion of the Administration having regard to the particular voyages in which the ship carrying the lifeboat is constantly engaged, a different temperature is appropriate. The starting systems shall not be impeded by the engine casing, thwarts or other obstructions.	Invalid requirement **Technical**
SOLAS 1983 Amend / Chapter III / Reg. 41.8.32	On or after 2/1/1992	Except where otherwise stated, the normal equipment of every lifeboat shall consist of: .32 In the case of ships engaged on voyages of such a nature and duration that, in the opinion of the Administration, the items specified in paragraphs 8.12 and 8.26 are unnecessary, the Administration may allow these items to be dispensed with.	Invalid requirement **Specific** Case by case assessment
SOLAS 1988 Amend / Chapter III / Reg. 42.5	On or after 2/1/1992 Before 7/1/1998	5 If a fixed two-way VHF radiotelephone apparatus is fitted in the lifeboat, it shall be installed in a cabin large enough to accommodate both the equipment and the person using it. No separate cabin is required if the construction of the lifeboat provides a sheltered space to the satisfaction of the Administration.	**Technical**

SOLAS 1988 Amend / Chapter IV / Reg. 14.2	On or after 2/1/1992 Retroactive	2 Equipment installed prior to the dates of application prescribed by regulation 1 may be exempted from full compliance with the appropriate performance standards at the discretion of the Administration, provided that the equipment is compatible with equipment complying with the performance standards, having due regard to the criteria which the Organization may adopt in connection with such standards.	**Specific** Casa by case assessment
SOLAS 1988 Amend / Chapter IV / Reg. 16	On or after 2/1/1992 Before 7/1/1997 Retroactive	Every ship shall carry personnel qualified for distress and safety radiocommunication purposes to the satisfaction of the Administration. The personnel shall be holders of certificates specified in the Radio Regulations as appropriate, any one of whom shall be designated to have primary responsibility for radiocommunications during distress incidents.	**Specific** Cabinet Regulation No. 895 adopted 22 November 2005 "Regulations Regarding Certification of Seafarers", para 16 The personnel responsible for radio communication or fulfilling radio watchkeeping duties on ships subject to the requirements laid down in Chapter IV of the SOLAS Convention shall be granted the qualification referred to in Sub-paragraphs 20.1, 20.2, 20.3, and 20.4 of this Regulation, and the Latvian Registry of Seamen shall issue a certificate of competency and an endorsement. The qualification certificate shall certify the conformity with the requirements of Chapter IV of the STCW Code and the Radio Regulations of the International Telecommunication Union, which are annex to the International Telecommunication Convention, 1998.
SOLAS 1988 Amend / Chapter IV / Reg. 17	On or after 2/1/1992 Retroactive	A record shall be kept, to the satisfaction of the Administration and as required by the Radio Regulations, of all incidents connected with the radio communication service which appear to be of importance to safety of life at sea.	**Specific** Maritime Administration and Marine Safety Law / Division C / Section 21. Cabinet Regulation No. 30 adopted 12 January 2016 "Regulations Regarding the Use and Maintenance of Ship's Radio and Navigation Equipment", para 53.

			Entries regarding radiocommunications which are of importance for human life and safety at sea shall be made in the GMDSS Radio Logbook of the ship.
SOLAS 1988 Amend / Chapter V / Reg. 12(b)(i)(3)	On or after 2/1/1992 Before 4/11/1989 Retroactive	(i) Ships of 150 tons gross tonnage and upwards shall be fitted with: (3) adequate means of communication between the standard compass position and the normal navigation control position to the satisfaction of the Administration;	**Specific** Cabinet Regulation No. 30 adopted 12 January 2016 "Regulations Regarding the Use and Maintenance of Ship's Radio and Navigation Equipment", para 8. The control of very high frequency radiotelephone channels which is necessary for maritime safety shall be readily available in the navigation bridge at the ship's conning position and the possibility of radiocommunications from the navigation bridge wings shall be ensured.
SOLAS 1988 Amend / Chapter V / Reg. 12 (g)	On or after 2/1/1992 Before 4/11/1989 Retroactive	(g) Ships of 500 tons gross tonnage and upwards constructed on or after 1 September 1984 and ships of 1,600 tons gross tonnage and upwards constructed before 1 September 1984 shall be fitted with a radar installation. From 1 February 1995, the radar installation shall be capable of operating in the 9GHz frequency band. In addition, after 1 February 1995, passenger ships irrespective of size and cargo ships of 300 tons gross tonnage and upwards when engaged on international voyages, shall be fitted with a radar installation capable of operating in the 9GHz frequency band. Passenger ships of less than 500 tons gross tonnage and cargo ships of 300 tons gross tonnage and upwards but less than 500 tons gross tonnage may be exempted from compliance with the requirements of paragraph (r) at the discretion of the Administration, provided that the equipment is fully compatible with the radar transponder for search and rescue.	**Specific** Cabinet Regulation No. 30 adopted 12 January 2016 "Regulations Regarding the Use and Maintenance of Ship's Radio and Navigation Equipment", Chapter 6
SOLAS 1988 Amend / Chapter V / Reg. 12 (j)(ii)	On or after 2/1/1992 Before 4/11/1989 Retroactive	(j) (ii) Automatic radar plotting aids fitted prior to 1 September 1984 which do not fully conform to the performance standards adopted by the Organization may, at the discretion of the Administration, be retained until 1 January 1991.	**Specific** Not allowed

SOLAS 1988 Amend / Chapter V / Reg. 12 (r)	On or after 2/1/1992 Before 4/11/1989 Retroactive	(r) All equipment fitted in compliance with this regulation shall be of a type approved by the Administration. Equipment installed on board ships on or after 1 September 1984 shall conform to appropriate performance standards not inferior to those adopted by the Organization. Equipment fitted prior to the adoption of related performance standards may be exempted from full compliance with those standards at the discretion of the Administration, having due regard to the recommended criteria which the Organization might adopt in connection with the standards concerned	**Specific** Case by case assessment
SOLAS 1988 Amend / Chapter V / Reg. 21	On or after 2/1/1992 Before 7/1/2002	All ships which, in accordance with the present Convention, are required to carry radio installations shall carry the International Code of Signals. This publication shall also be carried by any other ship which, in the opinion of the Administration, has a need to use it.	**Specific** Cabinet Regulation No. 30 adopted 12 January 2016 "Regulations Regarding the Use and Maintenance of Ship's Radio and Navigation Equipment", Chapter 6.2
SOLAS 1989/1990 Amend			Adopted by Res.MSC.13(57)
SOLAS 1989/1990 Amend / Chapter II-1 / Reg. 11	On or after 2/1/1992 Before 1/1/2009	9 Stern tubes shall be enclosed in a watertight space (or spaces) of moderate volume. Other measures to minimize the danger of water penetrating into the ship in case of damage to stern tube arrangements may be taken at the discretion of the Administration.	**Technical**
SOLAS 1989/1990 Amend / Chapter II-1 / Reg. 12.2	On or after 2/1/1992 Before 1/1/2009 Passenger ships	2 Where a double bottom is required to be fitted its depth shall be to the satisfaction of the Administration and the inner bottom shall be continued out to the ship's sides in such a manner as to protect the bottom to the turn of the bilge. Such protection will be deemed satisfactory if the line of intersection of the outer edge of the margin plate with the bilge plating is not lower at any part than a horizontal plane passing through the point of intersection with the frame line amidships of a transverse diagonal line inclined at 25 degrees to the base line and cutting it at a point one-half the ship's moulded breadth from the middle line.	**Technical**
SOLAS 1989/1990 Amend / Chapter II-1 / Reg. 12.4	On or after 2/1/1992 Before 1/1/2009 Passenger ships	4 A double bottom need not be fitted in way of watertight compartments of moderate size used exclusively for the carriage of liquids, provided the safety of the ship, in the event of bottom or side damage, is not, in the opinion of the Administration, there by impaired.	**Technical**

SOLAS 1989/1990 Amend / Chapter II-1 / Reg. 12-1.2	On or after 2/1/1992 Before 1/1/2009 Cargo ships except tankers	2 Where a double bottom is required to be fitted, its depth shall be to the satisfaction of the Administration and the inner bottom shall be continued out to the ship's side in such a manner as to protect the bottom to the turn of the bilge.	**Technical**
SOLAS 1989/1990 Amend / Chapter II-1 / Reg. 21.2.7.2	On or after 2/1/1992 Before 1/1/2009 Passenger ships	2.7.2 Where in the opinion of the Administration the main circulating pump is not suitable for this purpose, a direct emergency bilge suction shall be led from the largest available independent power driven pump to the drainage level of the machinery space; the suction shall be of the same diameter as the main inlet of the pump used. The capacity of the pump so connected shall exceed that of a required bilge pump by an amount deemed satisfactory by the Administration.	**Technical**
SOLAS 1989/1990 Amend / Chapter II-1 / Reg. 23-1.2	On or after 2/1/1992 Cargo ships	2 Indicators shall be provided for all sliding doors and for hinged doors in watertight bulkheads. Indication showing whether the doors are open or closed shall be given on the navigating bridge. In addition, shell doors and other openings which, in the opinion of the Administration, could lead to major flooding if left open or not properly secured, shall be provided with such indicators.	**Technical**
SOLAS 1989/1990 Amend / Chapter II-1 / Reg. 42.1.3	On or after 2/1/1992 Before 10/1/1994 Passenger ships	1.3 The location of the emergency source of electrical power and associated transforming equipment, if any, the transitional source of emergency power, the emergency switchboard and the emergency electric lighting switchboards in relation to the main source of electrical power, associated transforming equipment, if any, and the main switchboard shall be such as to ensure to the satisfaction of the Administration that a fire or other casualty in spaces containing the main source of electrical power, associated transforming equipment, if any, and the main switchboard or in any machinery space of category A will not interfere with the supply, control and distribution of emergency electrical power, associated transforming equipment, if any, the transitional source of emergency electrical power and the emergency switchboard shall not be contiguous to the boundaries of machinery spaces of category A or those spaces containing the main source of electrical power, associated transforming equipment, if any, or the main switchboard.	**Technical**
SOLAS 1989/1990	On or after 7/1/1986	2.2 Each of the required fire pumps (other than any emergency pump required in paragraph 3.3.2 for cargo ships)shall have a capacity not less than 80 per cent of the total required capacity	**Technical**

Amend / Chapter II-2 / Reg. 4.2.2	Before 10/1/1994	divided by the minimum number of required fire pumps but in any case not less than 25m³/hour and each such pump shall in any event be capable of delivering at least the two required jets of water. These fire pumps shall be capable of supplying the fire main system under the required conditions. Where more pumps than the minimum of required pumps are installed the capacity of such additional pumps shall be to the satisfaction of the Administration.	
SOLAS 1989/1990 Amend / Chapter II-2 / Reg. 4.3.1.3	On or after 7/1/1986 Before 10/1/1994 Cargo ships	3.1 Ships shall be provided with independently driven fire pumps as follows: .3 Cargo ships of less than 1,000 tons gross tonnage: to the satisfaction of the Administration	**Specific** Portable independently driven emergency fire pump to be provided on board. Suction hose to be resistant to the vacuum.
SOLAS 1989/1990 Amend / Chapter II-2 / Reg. 4.3.3.2	On or after 7/1/1986 Before 10/1/1994 Cargo ships	3.3 The arrangement of sea connections, fire pumps and their sources of power shall be such as to ensure that: .2 In cargo ships of 2,000 tons gross tonnage and upwards if a fire in any one compartment could put all the pumps out of action there shall be an alternative means consisting of a fixed independently driven emergency pump which shall be capable of supplying two jets of water to the satisfaction of the Administration. The pump and its location shall comply with the following requirements:	**Technical**
SOLAS 1989/1990 Amend / Chapter II-2 / Reg. 4.3.3.3	On or after 7/1/1986 Before 10/1/1994	.3 In passenger ships of less than 1,000 tons gross tonnage and cargo ships of less than 2,000 tons gross tonnage, if a fire in any one compartment could put all the pumps out of action the alternative means of providing water for fire-fighting purposes are to the satisfaction of the Administration.	**Technical**
SOLAS 1989/1990 Amend / Chapter II-2 / Reg. 4.3.4.2	On or after 7/1/1986 Before 10/1/1994	3.4 The arrangements for the ready availability of water supply shall be: .2 in passenger ships of less than 1,000 tons gross tonnage and in cargo ships to the satisfaction of the Administration;	**Technical**
SOLAS 1989/1990 Amend / Chapter II-2 / Reg. 4.4.2	On or after 7/1/1986 Before 10/1/1994	4.2 With the two pumps simultaneously delivering through nozzles specified in paragraph 8 the quantity of water specified in paragraph 4.1, through any adjacent hydrants, the following minimum pressures shall be maintained at all hydrants: Passenger ships: 4,000 tons gross tonnage and upwards: 0.31 N/mm² 1,000 tons gross tonnage and upwards but under 4,000 tons gross tonnage: 0.27 N/mm²	**Technical**

		Under 1,000 tons gross: To the satisfaction of the Administration Cargo ships: 6,000 tons gross tonnage and upwards: 0.27 N/mm² 1,000 tons gross tonnage and upwards but under 6,000 tons gross tonnage: 0.25 N/mm² Under 1,000 tons gross tonnage: To the satisfaction of the Administration	
SOLAS 1989/1990 Amend / Chapter II-2 / Reg. 4.7.1	On or after 7/1/1986 Before 10/1/1994	7.1 Fire hoses shall be of material approved by the Administration and shall be sufficient in length to project a jet of water to any of the spaces in which they may be required to be used. Fire hoses of non-perishable material shall be provided in ships constructed on or after 1 February 1992, and on ships constructed before 1 February 1992 when the existing fire hoses are replaced. Their maximum length shall be to the satisfaction of the Administration. Each hose shall be provided with a nozzle and the necessary couplings. Hoses specified in this Chapter as "fire hoses" shall together with any necessary fitting s and tools be kept ready for use in conspicuous positions near the water service hydrants or connections. Additionally, in interior locations in passenger ships carrying more than 36 passengers fire hoses shall be connected to the hydrants at all times.	**Technical**
SOLAS 1989/1990 Amend / Chapter II-2 / Reg. 4.7.2	On or after 7/1/1986 Before 10/1/1994	7.2 Ships shall be provided with fire hoses the number and diameter of which shall be to the satisfaction of the Administration.	**Technical**
SOLAS 1989/1990 Amend / Chapter II-2 / Reg. 4.7.4.2	On or after 7/1/1986 Before 10/1/1994	7.4.2 In cargo ships of less than 1,000 tons gross tonnage the number of fire hoses to be provided shall be to the satisfaction of the Administration.	**Technical**
SOLAS 1989/1990 Amend / Chapter II-2 / Reg. 4.8.1	On or after 7/1/1986 Before 10/1/1994	8 Nozzles 8.1 For the purposes of this Chapter, standard nozzle sizes shall be 12mm, 16mm and 19mm or as near thereto as possible. Larger diameter nozzles may be permitted at the discretion of the Administration.	**Technical**
SOLAS 1989/1990 Amend / Chapter II-2 / Reg. 13-1.1.2	On or after 2/1/1992 Before 7/1/2002	1.2 Any required system shall be capable of continuous operation at all times except that systems operating on a sequential scanning principle may be accepted, provided that the interval between scanning the same position twice gives an overall response time to the satisfaction of the Administration.	**Technical**

SOLAS 1989/1990 Amend / Chapter II-2 / Reg. 13-1.1.10	On or after 2/1/1992 Before 7/1/2002	1.10 The functioning of the system shall be periodically tested to the satisfaction of the Administration. The system shall be of a type that can be tested for correct operation and restored to normal surveillance without the renewal of any component.	**Technical**
SOLAS 1989/1990 Amend / Chapter II-2 / Reg. 13-1.2.1	On or after 2/1/1992 Before 7/1/2002	2 Installation requirements 2.1 At least one smoke accumulator shall be located in every enclosed space for which smoke detection is required. However, where a space is designed to carry oil or refrigerated cargo alternatively with cargoes for which a smoke sampling system is required, means may be provided to isolate the smoke accumulators in such compartments for the system. Such means shall be to the satisfaction of the Administration.	**Technical**
SOLAS 1989/1990 Amend / Chapter II-2 / Reg. 13-1.3.3	On or after 2/1/1992 Before 7/1/2002	3 Design requirements: 3.3 Duplicate sample extraction fans shall be provided. The fans shall be of sufficient capacity to operate with the normal conditions or ventilation in the protected area and shall give an overall response time to the satisfaction of the Administration.	**Technical**
SOLAS 1989/1990 Amend / Chapter II-2 / Reg. 18.8	On or after 2/1/1992 Before 7/1/1998	8 Helicopter decks shall be of a steel or steel equivalent fire-resistant construction. If the space below the helicopter deck is a high fire risk space, the insulation standard shall be to the satisfaction of the Administration. Each helicopter facility shall have an operations manual, including a description and a checklist of safety precautions, procedures, and equipment requirements. If the Administration permits aluminium or other low melting metal construction that is not made equivalent to steel, the following provisions shall be satisfied:	**Technical**
SOLAS 1989/1990 Amend / Chapter II-2 / Reg. 18.8.2.3	On or after 2/1/1992 Before 7/1/1998	.2 If the platform is located above the ship's deckhouse or similar structure, the following conditions shall be satisfied: .2.3 the required fire-fighting equipment shall be to the satisfaction of the Administration;	**Technical**
SOLAS 1989/1990 Amend / Chapter II-2 / Reg. 26.1	On or after 7/1/1986 Before 10/1/1994 Passenger ships carrying more than	1 In addition to complying with the specific provisions for fire integrity of bulkheads and decks mentioned elsewhere in this Part, the minimum fire integrity of all bulkheads and decks shall be as prescribed in tables 26.1 to 26.4. Where, due to any particular structural arrangements in the ship, difficulty is experienced in determining from the tables the minimum fire integrity value of any divisions, such values shall be determined to the satisfaction of the Administration.	**Technical**

	36 passengers		
SOLAS 1989/1990 Amend / Chapter II-2 / Reg. 26.2.7	On or after 7/1/1986 Before 10/1/1994 Passenger ships carrying more than 36 passengers	.7 The Administration shall determine in respect of category (5) spaces whether the insulation values in table 26.1 or 26.2 shall apply to ends of deckhouses and superstructures, and whether the insulation values in table 26.3 or 26.4 shall apply to weather decks. In no case shall the requirements of category (5) of tables 26.1 to 26.4 necessitate enclosure of spaces which in the opinion of the Administration need not be enclosed.	**Technical**
SOLAS 1989/1990 Amend / Chapter II-2 / Reg. 27 / Table 27.1 / Note / f	On or after 7/1/1986 Before 7/1/2002 Passenger ships carrying not more than 36 passengers	f Fire insulation need not be fitted if the machinery space of category (7), in the opinion of the Administration, has little or no fire risk.	**Technical**
SOLAS 1989/1990 Amend / Chapter II-2 / Reg. 27.4	On or after 7/1/1986 Before 7/1/2002 Passenger ships carrying not more than 36 passengers	4 External boundaries which are required in Regulation 23.1 to be of steel or other equivalent material may be pierced for the fitting of windows and side scuttles provided that there is no requirement for such boundaries to have "A" class integrity elsewhere in this Part. Similarly, in such boundaries which are not required to have "A"class integrity, doors may be of materials to the satisfaction of the Administration.	**Technical**
SOLAS 1989/1990 Amend / Chapter II-2 / Reg. 38.3.5	On or after 7/1/1986 Before 7/1/1998 Passenger ships	3.5 Ventilation ducts, including dampers, shall be made of steel and their arrangement shall be to the satisfaction of the Administration.	**Technical**
SOLAS 1989/1990	On or after 2/1/1992 Before	2 A fixed fire detection and fire alarm system complying with the requirements of regulation 13 or a sample extraction smoke detection system complying with the requirements of regulation	**Technical**

Amend / Chapter II-2 / Reg. 40.2	1/1/1994 Passenger ships	13-1 shall be provided in any cargo space which, in the opinion of the Administration, is not accessible, except where it is shown to the satisfaction of the Administration that the ship is engaged on voyages of such short duration that it would be unreasonable to apply this requirement.	
SOLAS 1989/1990 Amend / Chapter II-2 / Reg. 44 / Table 44.1 / Notes / h	On or after 7/1/1986 Before 7/1/2002 Cargo ships	h Bulkheads and desks separating ro/ro cargo spaces shall be capable of being closed reasonably gastight and such divisions shall have "A" class integrity in so far as is reasonable and practicable in the opinion of the Administration.	**Technical**
SOLAS 1989/1990 Amend / Chapter II-2 / Reg. 44 / Table 44.1 / Notes / i	On or after 7/1/1986 Before 7/1/2002 Cargo ships	i Fire insulation need not be fitted if the machinery space in category (7), in the opinion of the Administration, has little or no fire risk.	**Technical**
SOLAS 1989/1990 Amend / Chapter II-2 / Reg. 44.4	On or after 7/1/1986 Before 7/1/2002 Cargo ships	4 External boundaries which are required in Regulation 42.1 to be of steel or other equivalent material may be pierced for the fitting of windows and sidescuttles provided that there is no requirement for such boundaries to have "A" class integrity elsewhere in this Part. Similarly, in such boundaries which are not required to have "A"class integrity, doors may be of materials to the satisfaction of the Administration.	**Technical**
SOLAS 1989/1990 Amend / Chapter II-2 / Reg. 50.3.1	On or after 7/1/1986 Before 7/1/1998 Cargo ships	3 Methods IC, IIC and IIIC 3.1 Except in cargo spaces or refrigerated compartments of service spaces, insulating materials shall be non-combustible. Vapour barriers and adhesives used in conjunction with insulation, as well as the insulation of pipe fittings, for cold service systems, need not be of non-combustible materials, but they shall be kept to the minimum quantity practicable and their exposed surfaces shall have qualities of resistance to the propagation of flame to the satisfaction of the Administration.	**Technical**
SOLAS 1989/1990 Amend / Chapter II-2 / Reg. 53.1.2	On or after 7/1/1986 Before 7/1/1998	1.2 The Administration may exempt from the requirements of paragraph 1.1 cargo spaces of any ship if constructed and solely intended for carrying ore, coal, grain, unseasoned timber, non-combustible cargoes or cargoes which, in the opinion of the Administration, constitute a low fire risk. Such exemptions may be granted only if the ship is fitted with steel hatch covers and effective means of closing all ventilators and other openings leading to the cargo spaces.	**Specific** Case by case assessment

SOLAS 1989/1990 Amend / Chapter II-2 / Reg. 53.1.3	On or after 7/1/1986 Before 7/1/1998	1.3 Notwithstanding the provisions of paragraph 1.1, any ship engaged in the carriage of dangerous goods shall be provided in any cargo spaces with a fixed gas fire-extinguishing system complying with the provisions of Regulation 5 or with a fire-extinguishing system which in the opinion of the Administration give equivalent protection for the cargoes carried.	**Technical**
SOLAS 1989/1990 Amend / Chapter II-2 / Reg. 53.2.1	On or after 2/1/1992 Before 7/1/1998 Cargo ships	2.1 There shall be provided a fixed fire detection and fire alarm system complying with the requirements of regulation 13. The fixed fire detection system shall be capable of rapidly detecting the onset of fire. The type of detectors and their spacing and location shall be to the satisfaction of the Administration taking into account the effects of ventilation and other relevant factors. After being installed, the system shall be tested under normal ventilation conditions and shall give an overall response time to the satisfaction of the Administration.	**Technical**
SOLAS 1989/1990 Amend / Chapter II-2 / Reg. 53.2.3.5	On or after 2/1/1992 Before 7/1/1998 Cargo ships	2.3.5 Ventilation ducts, including dampers, shall be made of steel and their arrangement shall be to the satisfaction of the Administration.	**Technical**
SOLAS 1989/1990 Amend / Chapter II-2 / Reg. 54.2.1.3	On or after 7/1/1986 Before 7/1/1998 Retroactive Cargo ships	2.1 Water suplies 2.1.3 Means of effectively cooling the designated under deck cargo space by copious quantities of water, either by a fixed arrangement of spraying nozzles, or flooding the cargo space with water, shall be provided. Hoses may be used for this purpose in small cargo spaces and in small areas of larger cargo spaces at the discretion of the Administration. In any event the drainage and pumping arrangements shall be such as to prevent the build-up of free surfaces. If this is not possible the adverse effect upon stability of the added weight and free surface of water shall be taken into account to the extent deemed necessary by the Administration in its approval of the stability information.	**Technical**
SOLAS 1989/1990 Amend / Chapter II-2 / Reg. 54.2.2	On or after 7/1/1986 Before 7/1/1998 Retroactive Cargo ships	2.2 Sources of ignition Electrical equipment and wiring shall not be fitted in enclosed cargo spaces, closed vehicle deck spaces, or open vehicle deck spaces unless it is essential for operational purposes in the opinion of the Administration. However, if electrical equipment is fitted in such spaces, it shall be of a certified safe type** for use in the dangerous environments to which it may be exposed unless it is possible to completely isolate the electrical system (by removal of links in the system, other than fuses). Cable	**Technical**

		penetrations of the decks and bulkheads shall be sealed against the passage of gas or vapour. Through runs of cables and cables within the cargo spaces shall be protected against damage from impact. Any other equipment which may constitute a source of ignition of flammable vapour shall not be permitted.	
SOLAS 1989/1990 Amend / Chapter II-2 / Reg. 54 / Table 54.1 / Note d	On or after 7/1/1986 Before 7/1/1998 Retroactive Cargo ships	[d] In the special case where the barges are capable of containing flammable vapours or alternatively if they are capable of discharging flammable vapours to a safe space outside the barge carrier compartment by means of ventilation ducts connected to the barges, these requirements may be reduced or waived to the satisfaction of the Administration.	**Technical**
SOLAS 1989/1990 Amend / Chapter II-2 / Reg. 54 / Table 54.2 / Note h	On or after 7/1/1986 Before 7/1/1998 Retroactive Cargo ships	[h] At least natural ventilation is required in enclosed cargo spaces intended for carriage of solid dangerous goods in bulk. In cases where power ventilation is required in the Code of Safe Practice for Solid Bulk Cargoes (resolution A.434(XI) as amended), the use of portable ventilation units (equipment) to the satisfaction of the Administration may suffice.	**Technical**
SOLAS 1989/1990 Amend / Chapter II-2 / Reg. 54.2.1.2	On or after 7/1/1986 Before 7/1/1998 Retroactive Cargo ships	2.1.2 The quantity of water delivered shall be capable of supplying four nozzles of a size and at pressures as specified in Regulation 4, capable of being trained on any part of the cargo space when empty. This amount of water may be applied by equivalent means to the satisfaction of the Administration.	**Technical**
SOLAS 1989/1990 Amend / Chapter II-2 / Reg. 54.2.5	On or after 7/1/1986 Before 7/1/1998 Retroactive Cargo ships	2.5 Bilge pumping Where it is intended to carry flammable or toxic liquids in enclosed cargo spaces the bilge pumping system shall be designed to ensure against inadvertent pumping of such liquids through machinery space piping or pumps. Where large quantities of such liquids are carried, consideration shall be given to the provision of additional means of draining those cargo spaces. These means shall be to the satisfaction of the Administration.	**Technical**
SOLAS 1989/1990 Amend / Chapter II-2 / Reg. 55.2	On or after 7/1/1986 Before 7/1/2002 Tankers	2 Where liquid cargoes other than those referred to in paragraph 1 or liquefied gases which introduce additional fire hazards are intended to be carried, additional safety measures shall be required to the satisfaction of the Administration, having due regard to the provisions of the Bulk Chemical Code and the Gas Carrier Code.	**Indefinite**
SOLAS 1989/1990 Amend / Chapter II-2 / Reg. 55.3	On or after 7/1/1986 Before	3 This paragraph applies to all ships which are combination carriers. Such ships shall not carry solid cargoes unless all cargo tanks are empty of oil and gas freed or unless the arrangements provided in each case are to the satisfaction of the Administration	**Indefinite**

	7/1/2002 Tankers	and in accordance with the relevant operational requirements contained in the Guidelines for Inert Gas Systems.	
SOLAS 1989/1990 Amend / Chapter II-2 / Reg. 55.6	On or after 7/1/1986 Before 7/1/2002 Tankers	6 Chemical tankers and gas carriers shall comply with the requirements of this Part, except where alternative and supplementary arrangements are provided to the satisfaction of the Administration, having due regard to the provisions of the International Bulk Chemical Code, the Bulk Chemical Code, the International Gas Carrier Code and the Gas Carrier Code, as appropriate.	**Indefinite**
SOLAS 1989/1990 Amend / Chapter II-2 / Reg. 56.3	On or after 2/1/1992 Before 7/1/1998 Tankers	3 However, where deemed necessary, the Administration may permit accommodation spaces, main cargo control stations, control stations, and service spaces forward of the cargo tanks, slop tanks and spaces which isolate cargo and slop tanks from machinery spaces, but not necessarily forward of oil fuel bunker tanks or ballast tanks. Machinery spaces, other than those of category A, may be permitted forward of the cargo tanks and slop tanks provided they are isolated from the cargo tanks and slop tanks by cofferdams, cargo pump-rooms, oil fuel bunker tanks or ballast tanks. All of the above spaces shall be subject to an equivalent standard of safety and appropriate availability of fire-extinguishing arrangements being provided to the satisfaction of the Administration. Accommodation spaces, main cargo control spaces, control stations and service spaces shall be arranged in such a way that a single failure of a deck or bulkhead shall not permit the entry of gas or fumes from the cargo tanks into such spaces. In addition, where deemed necessary for the safety or navigation of the ship, the Administration may permit machinery spaces containing internal combustion machinery not being main propulsion machinery having an output greater than 375 kW to be located forward of the cargo area provided the arrangements are in accordance with the provisions of this paragraph.	**Indefinite**
SOLAS 1989/1990 Amend / Chapter II-2 / Reg. 56.4.4	On or after 2/1/1992 Before 7/1/1998 Tankers	4 In combination carriers only: .4 Where cargo wing tanks are provided, cargo oil lines below deck shall be installed inside these tanks. However, the Administration may permit cargo oil lines to be placed in special ducts which shall be capable of being adequately cleaned and ventilated and be to the satisfaction of the Administration. Where cargo wing tanks are not provided cargo oil lines below deck shall be placed in special ducts.	**Indefinite**

SOLAS 1989/1990 Amend / Chapter II-2 / Reg. 58 / Table 58.1 / Notes / e	On or after 7/1/1986 Before 7/1/2002 Tankers	e Fire insulation need not be fitted if the machinery space in category (7) , in the opinion of the Administration, has little or no fire risk.	**Indefinite**
SOLAS 1989/1990 Amend / Chapter II-2 / Reg. 58.4	On or after 7/1/1986 Before 7/1/2002 Tankers	4 External boundaries which are required in Regulation 57.1 to be of steel or other equivalent material may be pierced for the fitting of windows and sidescuttles provided that there is no requirement for such boundaries to have "A" class integrity elsewhere in this Part. Similarly, in such boundaries which are not required to have "A" class integrity, doors may be of materials to the satisfaction of the Administration.	**Indefinite**
SOLAS 1989/1990 Amend / Chapter II-2 / Reg. 62.1	On or after 7/1/1986 Before 7/1/1998 Tankers	1 The inert gas system referred to in Regulation 60 shall be designed, constructed and tested to the satisfaction of the Administration. It shall be so designed and operated as to render and maintain the atmosphere of the cargo tanks non-flammable at all times, except when such tanks are required to be gas free. In the event that the inert gas system is unable to meet the operational requirement set out above and it has been assessed that it is impractical to effect a repair, then cargo discharge, deballasting and necessary tank cleaning shall only be resumed when the "emergency conditions" laid down in the Guidelines on Inert Gas Systems are complied with.	**Indefinite**
SOLAS 1989/1990 Amend / Chapter II-2 / Reg. 62.13	On or after 7/1/1986 Before 7/1/1998 Tankers	13 The arrangements for inerting, purging or gas freeing of empty tanks as required in paragraph 2 shall be to the satisfaction of the Administration and shall be such that the accumulation of hydrocarbon vapours in pockets formed by the internal structural members in a tank is minimized and that:	**Indefinite**
SOLAS 1989/1990 Amend / Chapter III / Reg. 41.6.2	On or after 2/1/1992 Before 7/1/1998	6.2 The engine shall be provided with either a manual starting system, or a power starting system with two independent rechargeable energy sources. Any necessary starting aids shall also be provided. The engine starting systems and starting aids shall start the engine at an ambient temperature of -15 degrees C within 2 min of commencing the start procedure unless, in the opinion of the Administration having regard to the particular voyages in which the ship carrying the lifeboat is constantly engaged, a different temperature is appropriate. The starting systems shall not be impeded by the engine casing, thwarts or other obstructions.	**Technical**

SOLAS 1989/1990 Amend / Chapter III / Reg. 41.8.32	On or after 2/1/1992 Before 7/1/1998	.32 In the case of ships engaged on voyages of such a nature and duration that, in the opinion of the Administration, the items specified in paragraphs 8.12 and 8.26 are unnecessary, the Administration may allow these items to be dispensed with.	**Specific** Case by case assessment
SOLAS 1989/1990 Amend / Chapter V (Reg.1~21) / Reg. 12(b)(i)(3)	On or after 2/1/1992 Before 7/1/2002 Retroactive	(i) Ships of 150 tons gross tonnage and upwards shall be fitted with: (3) adequate means of communication between the standard compass position and the normal navigation control position to the satisfaction of the Administration;	**Specific** Cabinet Regulation No. 30 adopted 12 January 2016 "Regulations Regarding the Use and Maintenance of Ship's Radio and Navigation Equipment", para 8. The control of very high frequency radiotelephone channels which is necessary for maritime safety shall be readily available in the navigation bridge at the ship's conning position and the possibility of radiocommunications from the navigation bridge wings shall be ensured.
SOLAS 1989/1990 Amend / Chapter V (Reg.1~21) / Reg. 12(g)	On or after 2/1/1992 Before 7/1/2002 Retroactive	(g) Ships of 500 tons gross tonnage and upwards constructed on or after 1 September 1984 and ships of 1,600 tons gross tonnage and upwards constructed before 1 September 1984 shall be fitted with a radar installation. From 1 February 1995, the radar installation shall be capable of operating in the 9 GHz frequency band. In addition, after 1 February 1995, passenger ships irrespective of size and cargo ships of 300 tons gross tonnage and upwards when engaged on international voyages, shall be fitted with a radar installation capable of operating in the 9 GHz frequency band. Passenger ships of less than 500 tons gross tonnage and cargo ships of 300 tons gross tonnage and upwards but less than 500 tons gross tonnage may be exempted from compliance with the requirements of paragraph (r) at the discretion of the Administration, provided that the equipment is fully compatible with the radar transponder for search and rescue.	**Specific** Cabinet Regulation No. 30 adopted 12 January 2016 "Regulations Regarding the Use and Maintenance of Ship's Radio and Navigation Equipment", Chapter 6
SOLAS 1989/1990 Amend / Chapter	On or after 2/1/1992 Before	(j) (ii) Automatic radar plotting aids fitted prior to 1 September 1984 which do not fully conform to the performance standards adopted by the Organization** may, at the discretion of the Administration, be retained until 1 January 1991.	**Specific** Not allowed

V (Reg.1~21) / Reg. 12(j)(ii)	7/1/2002 Retroactive		
SOLAS 1989/1990 Amend / Chapter V (Reg.1~21) / Reg. 12(r)	On or after 2/1/1992 Before 7/1/2002 Retroactive	(r) All equipment fitted in compliance with this regulation shall be of a type approved by the Administration. Equipment installed on board ships on or after 1 September 1984 shall conform to appropriate performance standards not inferior to those adopted by the Organization. Equipment fitted prior to the adoption of related performance standards may be exempted from full compliance with those standards at the discretion of the Administration, having due regard to the recommended criteria which the Organization might adopt in connection with the standards concerned.	**Specific** Case by case assessment
SOLAS 1989/1990 Amend / Chapter IV / Reg. 14.2	On or after 2/1/1992 Before 10/1/1994	2 Equipment installed prior to the dates of application prescribed by regulation 1 may be exempted from full compliance with the appropriate performance standards at the discretion of the Administration, provided that the equipment is compatible with equipment complying with the performance standards, having due regard to the criteria which the Organization may adopt in connection with such standards.	**Specific** Case by case assessment
SOLAS 1991/1992 Amend			Adopted by MSC.22(59); MSC.27(61)
SOLAS 1991/1992 Amend / Chapter II-1 / Reg. 12-2.5	On or after 10/1/1994 Before 1/1/2005	5 For oil tankers of less than 5,000 tonnes deadweight smaller dimensions may be approved by the Administration in special circumstances, if the ability to traverse such openings or to remove an injured person can be proved to the satisfaction of the Administration.	**Technical**
SOLAS 1991/1992 Amend / Chapter II-1 / Reg. 42.1.3	On or after 10/1/1994 Before 7/1/1998 Passenger ships	1.3 The location of the emergency source of electrical power and associated transforming equipment, if any, the transitional source of emergency power, the emergency switchboard and the emergency electric lighting switchboards in relation to the main source of electrical power, associated transforming equipment, if any, and the main switchboard shall be such as to ensure to the satisfaction of the Administration that a fire or other casualty in spaces containing the main source of electrical power, associated transforming equipment, if any, and the main switchboard or in any machinery space of category A will not interfere with the supply, control and distribution of emergency electrical power, associated transforming equipment, if any, the transitional source of emergency electrical power and the emergency switchboard shall not be contiguous to the boundaries of machinery spaces of	**Technical**

		category A or those spaces containing the main source of electrical power, associated transforming equipment, if any, or the main switchboard.	
SOLAS 1991/1992 Amend / Chapter II-1 / Reg. 43.1.3	On or after 10/1/1994 Before 7/1/1998 Cargo ships	1.3 The location of the emergency source of electrical power, associated transforming equipment, if any, the transitional source of emergency power, the emergency switchboard and the emergency lightings witch board in relation to the main source of electrical power, associated transforming equipment, if any, and the main switchboard shall be such as to ensure to the satisfaction of the Administration that a fire or other casualty in the space containing the main source of electrical power, associated transforming equipment, if any, and the main switchboard, or in any machinery space of category A will not interfere with the supply, control and distribution of emergency electrical power. As far as practicable the space containing the emergency source of electrical power, associated transforming equipment, if any, the transitional source of emergency electrical power and the emergency switchboard shall not be contiguous to the boundaries of machinery spaces of category A or those spaces containing the main source of electrical power, associated transforming equipment, if any, and the main switchboard.	**Technical**
SOLAS 1991/1992 Amend / Chapter II-1 / Reg. 45.2	On or after 10/1/1994 Before 7/1/1998	2 Main and emergency switchboards shall be so arranged as to give easy access as may be needed to apparatus and equipment, without danger to personnel. The sides and the rear and, where necessary, the front of the switchboards shall be suitably guarded. Exposed live parts having voltages to earth exceeding a voltage to be specified by the Administration shall not be installed on the front of such switchboards. Where necessary, non-conducting mats or gratings shall be provided at the front and rear of the switchboard.	**Technical**
SOLAS 1991/1992 Amend / Chapter II-1 / Reg. 45.3.3	On or after 10/1/1994 Before 7/1/1998	3.3 Where the hull return system is used, all final subcircuits, i.e. all circuits fitted after the last protective device, shall be two-wire and special precautions shall be taken to the satisfaction of the Administration.	**Technical**
SOLAS 1991/1992 Amend / Chapter II-1 / Reg. 45.5.4	On or after 10/1/1994 Before 7/1/1998	5.4 Where cables which are installed in hazardous areas introduce the risk of fire or explosion in the event of an electrical fault in such areas, special precautions against such risks shall be taken to the satisfaction of the Administration.	**Technical**

SOLAS 1991/1992 Amend / Chapter II-1 / Reg. 45.9.3	On or after 10/1/1994 Before 7/1/1998	9.3 Accumulator batteries shall not be located in sleeping quarters except where hermetically sealed to the satisfaction of the Administration.	**Technical**
SOLAS 1991/1992 Amend / Chapter II-2 / Reg. 3.1	On or after 7/1/1986 Before 7/1/1997	1 "Non-combustible material"* is a material which neither burns nor gives off flammable vapours in sufficient quantity for self-ignition when heated to approximately 750°C, this being determined to the satisfaction of the Administration by an established test procedure.** Any other material is a combustible material.	**Technical**
SOLAS 1991/1992 Amend / Chapter II-2 / Reg. 3.8	On or after 7/1/1986 Before 7/1/1997	8 "Low flame spread" means that the surface thus described will adequately restrict the spread of flame, this being determined to the satisfaction of the Administration by an established test procedure.	**Technical**
SOLAS 1991/1992 Amend / Chapter II-2 / Reg. 3.15	On or after 7/1/1986 Before 7/1/1997	15 "Open ro-ro cargo spaces" are ro-ro cargo spaces either open at both ends, or open at one end and provided with adequate natural ventilation effective over their entire length through permanent openings in the side plating or deckhead to the satisfaction of the Administration.	**Technical**
SOLAS 1991/1992 Amend / Chapter II-2 / Reg. 3.23.3	On or after 7/1/1986 Before 7/1/1997	.3 all draperies, curtains and other suspended textile materials have, to the satisfaction of the Administration, qualities of resistance to the propagation of flame not inferior to those of wool of mass 0.8 kg/m²;	**Technical**
SOLAS 1991/1992 Amend / Chapter II-2 / Reg. 3.23.4	On or after 7/1/1986 Before 7/1/1997	.4 all floor coverings have, to the satisfaction of the Administration, qualities of resistance to the propagation of flame not inferior to those of an equivalent woollen material used for the same purpose;	**Technical**
SOLAS 1991/1992 Amend / Chapter II-2 / Reg. 3.23.6	On or after 7/1/1986 Before 7/1/1997	.6 all upholstered furniture has qualities of resistance to the ignition and propagation of flame to the satisfaction of the Administration.*	**Technical**
SOLAS 1991/1992 Amend / Chapter II-2 / Reg. 4.2.2	On or after 7/1/1986 Before 7/1/2002	2.2 Each of the required fire pumps (other than any emergency pump required in paragraph 3.3.2 for cargo ships) shall have a capacity not less than 80 per cent of the total required capacity divided by the minimum number of required fire pumps but in any case not less than 25m³/hour and each such pump shall in any event be capable of delivering at least the two required jets of	**Technical**

		water. These fire pumps shall be capable of supplying the fire main system under the required conditions. Where more pumps than the minimum of required pumps are installed the capacity of such additional pumps shall be to the satisfaction of the Administration.	
SOLAS 1991/1992 Amend / Chapter II-2 / Reg. 4.3.1.3	On or after 7/1/1986 Before 7/1/2002 Cargo ships	3.1 Ships shall be provided with independently driven fire pumps as follows: .3 Cargo ships of less than 1,000 tons gross tonnage: to the satisfaction of the Administration	**Specific** Portable independently driven emergency fire pump to be provided on board. Suction hose to be resistant to the vacuum.
SOLAS 1991/1992 Amend / Chapter II-2 / Reg. 4.3.3.2	On or after 7/1/1986 Before 7/1/2002 Cargo ships	3.3 The arrangement of sea connections, fire pumps and their sources of power shall be such as to ensure that: .2 In cargo ships of 2,000 tons gross tonnage and upwards if a fire in any one compartment could put all the pumps out of action there shall be an alternative means consisting of a fixed independently driven emergency pump which shall be capable of supplying two jets of water to the satisfaction of the Administration. The pump and its location shall comply with the following requirements:	**Technical**
SOLAS 1991/1992 Amend / Chapter II-2 / Reg. 4.3.3.3	On or after 7/1/1986 Before 7/1/2002	3.3 The arrangement of sea connections, fire pumps and their sources of power shall be such as to ensure that: .3 In passenger ships of less than 1,000 tons gross tonnage and cargo ships of less than 2,000 tons gross tonnage, if a fire in any one compartment could put all the pumps out of action the alternative means of providing water for fire-fighting purposes are to the satisfaction of the Administration.	**Technical**
SOLAS 1991/1992 Amend / Chapter II-2 / Reg. 4.3.4.2	On or after 7/1/1986 Before 7/1/2002	3.4 The arrangements for the ready availability of water supply shall be: .2 in passenger ships of less than 1,000 tons gross tonnage and in cargo ships to the satisfaction of the Administration;	**Technical**
SOLAS 1991/1992 Amend / Chapter II-2 / Reg. 4.4.2	On or after 7/1/1986 Before 7/1/2002	4.2 With the two pumps simultaneously delivering through nozzles specified in paragraph 8 the quantity of water specified in paragraph 4.1, through any adjacent hydrants, the following minimum pressures shall be maintained at all hydrants: Passenger ships: 4,000 tons gross tonnage and upwards: 0.31 N/mm² 1,000 tons gross tonnage and upwards but under 4,000 tons gross tonnage: 0.27 N/mm² Under 1,000 tons gross: To the satisfaction of the Administration	**Technical**

		Cargo ships: 6,000 tons gross tonnage and upwards: 0.27 N/mm² 1,000 tons gross tonnage and upwards but under 6,000 tons gross tonnage: 0.25 N/mm² Under 1,000 tons gross tonnage: To the satisfaction of the Administration	
SOLAS 1991/1992 Amend / Chapter II-2 / Reg. 4.7.1	On or after 7/1/1986 Before 7/1/2002	7.1 Fire hoses shall be of material approved by the Administration and shall be sufficient in length to project a jet of water to any of the spaces in which they may be required to be used. Fire hoses of non-perishable material shall be provided in ships constructed on or after 1 February 1992, and on ships constructed before 1 February 1992 when the existing fire hoses are replaced. Their maximum length shall be to the satisfaction of the Administration. Each hose shall be provided with a nozzle and the necessary couplings. Hoses specified in this Chapter as "fire hoses" shall together with any necessary fitting s and tools be kept ready for use in conspicuous positions near the water service hydrants or connections. Additionally, in interior locations in passenger ships carrying more than 36 passengers fire hoses shall be connected to the hydrants at all times.	**Technical**
SOLAS 1991/1992 Amend / Chapter II-2 / Reg. 4.7.2	On or after 7/1/1986 Before 7/1/2002	7.2 Ships shall be provided with fire hoses the number and diameter of which shall be to the satisfaction of the Administration.	**Technical**
SOLAS 1991/1992 Amend / Chapter II-2 / Reg. 4.7.4.2	On or after 7/1/1986 Before 7/1/2002	7.4.2 In cargo ships of less than 1,000 tons gross tonnage the number of fire hoses to be provided shall be to the satisfaction of the Administration.	**Technical**
SOLAS 1991/1992 Amend / Chapter II-2 / Reg. 4.8.1	On or after 7/1/1986 Before 7/1/2002	8 Nozzles 8.1 For the purposes of this Chapter, standard nozzle sizes shall be 12mm , 16mm and 19mm or as near thereto as possible. Larger diameter nozzles may be permitted at the discretion of the Administration.	**Technical**
SOLAS 1991/1992 Amend / Chapter II-2 / Reg. 5.1.1	On or after 7/1/1986 Before 7/1/2002	1.1 The use of a fire-extinguishing medium which, in the opinion of the Administration, either by itself or under expected conditions of use gives off toxic gases in such quantities as to endanger persons shall not be permitted.	**Technical**
SOLAS 1991/1992 Amend / Chapter	On or after 7/1/1986	1.12 Containers for the storage of fire-extinguishing medium and associated pressure components shall be designed to pressure codes of practice to the satisfaction of the Administration having	**Technical**

II-2 / Reg. 5.1.12	Before 7/1/2002	regard to their locations and maximum ambient temperatures expected in service.	
SOLAS 1991/1992 Amend / Chapter II-2 / Reg. 5.1.13	On or after 7/1/1986 Before 7/1/2002	1.13 When the fire-extinguishing medium is stored outside a protected space, it shall be stored in a room which shall be situated in a safe and readily accessible position and shall be effectively ventilated to the satisfaction of the Administration. Any entrance to such a storage room shall preferably be from the open deck and in any case shall be independent of the protected space. Access doors shall open outwards, and bulkheads and decks including doors and other means of closing any opening therein, which form the boundaries between such rooms and adjoining enclosed spaces shall be gastight. For the purpose of the application of the integrity tables in Regulations 26, 27, 44 and 58, such storage rooms shall be treated as control stations.	**Technical**
SOLAS 1991/1992 Amend / Chapter II-2 / Reg. 5.1.14	On or after 7/1/1986 Before 7/1/2002	1.14 Spare parts for the system shall be stored on board and be to the satisfaction of the Administration.	**Technical**
SOLAS 1991/1992 Amend / Chapter II-2 / Reg. 5.3.2.6	On or after 7/1/1986 Before 7/1/2002	3.2 When halogenated hydrocarbons are used as the fire-extinguishing media in total flooding systems: .6 The system shall be designed to operate within a temperature range to the satisfaction of the Administration.	**Specific** Not allowed
SOLAS 1991/1992 Amend / Chapter II-2 / Reg. 5.3.3.4	On or after 7/1/1986 Before 7/1/2002	3.3 Only Halon 1301 may be stored within a protected machinery space. Containers shall be individually distributed throughout that space and the following requirements shall be complied with: .4 Within the protected space, electrical circuits essential for the release of the system shall be heat resistant e.g. mineral insulated cable or equivalent. Piping systems essential for the release of systems designed to be operated hydraulically or pneumatically shall be of steel or other equivalent heat-resisting material to the satisfaction of the Administration.	**Specific** Not allowed
SOLAS 1991/1992 Amend / Chapter II-2 / Reg. 5.3.3.6	On or after 7/1/1986 Before 7/1/2002	3.3 Only Halon 1301 may be stored within a protected machinery space. Containers shall be individually distributed throughout that space and the following requirements shall be complied with: .6 The arrangement of containers and the electrical circuits and piping essential for the release of any system shall be such that in the event of damage to any one power release line through fire or explosion in a protected space, i.e. a single fault concept, at least two-thirds of the fire-extinguishing charge required by paragraphs	**Specific** Not allowed

		3.2.9 or 3.2.10 for that space can still be discharged having regard to the requirement for uniform distribution of medium throughout the space. The arrangements in respect of systems for spaces requiring only one or two containers shall be to the satisfaction of the Administration.	
SOLAS 1991/1992 Amend / Chapter II-2 / Reg. 5.3.3.7	On or after 7/1/1986 Before 7/1/2002	3.3 Only Halon 1301 may be stored within a protected machinery space. Containers shall be individually distributed throughout that space and the following requirements shall be complied with: .7 Not more than two discharge nozzles shall be fitted to any pressure container and the maximum quantity of agent in each container shall be to the satisfaction of the Administration having regard to the requirement for uniform distribution of medium throughout the space.	**Specific** Not allowed
SOLAS 1991/1992 Amend / Chapter II-2 / Reg. 5.3.4.1	On or after 7/1/1986 Before 7/1/2002	3.4 Local automatically operated fixed fire-extinguishing units containing Halon 1301 or 1211, fitted in enclosed areas of high fire risk within machinery spaces, in addition to, and independent of, any required fixed fire-extinguishing system may be accepted subject to compliance with the following: .1 The space in which such additional local protection is provided shall preferably be on one working level and on the same level as the access. At the discretion of the Administration more than one working level may be permitted subject to an access being provided on each level.	**Specific** Not allowed
SOLAS 1991/1992 Amend / Chapter II-2 / Reg. 5.3.4.6	On or after 7/1/1986 Before 7/1/2002	3.4 Local automatically operated fixed fire-extinguishing units containing Halon 1301 or 1211, fitted in enclosed areas of high fire risk within machinery spaces, in addition to, and independent of, any required fixed fire-extinguishing system may be accepted subject to compliance with the following: .6 The fire-extinguishing units shall be designed to operate within a temperature range to the satisfaction of the Administration.	**Specific** Not allowed
SOLAS 1991/1992 Amend / Chapter II-2 / Reg. 13.1.13	On or after 7/1/1986 Before 7/1/2002	1.13 The function of the detection system shall be periodically tested to the satisfaction of the Administration by means of equipment producing hot air at the appropriate temperature, or smoke or aerosol particles having the appropriate range of density or particle size, or other phenomena associated with incipient fires to which the detector is designed to respond. All detectors shall be of a type such that they can be tested for correct operation and restored to normal surveillance without the renewal of any component.	**Technical**
SOLAS 1991/1992	On or after 7/1/1986	3 Design requirements	**Technical**

Amend / Chapter II-2 / Reg. 13.3.2	Before 7/1/2002	3.2 Smoke detectors required by paragraph 2.2 shall be certified to operate before the smoke density exceeds 12.5 per cent obscuration per metre, but not until the smoke density exceeds 2 percent obscuration per metre. Smoke detectors to be installed in other spaces shall operate within sensitivity limits to the satisfaction of the Administration having regard to the avoidance of detection sensitivity or over sensitivity.	
SOLAS 1991/1992 Amend / Chapter II-2 / Reg. 13.3.3	On or after 7/1/1986 Before 7/1/2002	3 Design requirements 3.3 Heat detectors shall be certified to operate before the temperature exceeds 78°C but not until the temperature exceeds 54°C, when the temperature is raised to those limits at a rate less than 1°C per minute. At higher rates of temperature rise, the heat detector shall operate within temperature limits to the satisfaction of the Administration having regard to the avoidance of detector insensitivity or over sensitivity.	**Technical**
SOLAS 1991/1992 Amend / Chapter II-2 / Reg. 13.3.4	On or after 7/1/1986 Before 7/1/2002	3 Design requirements 3.4 At the discretion of the Administration, the permissible temperature of operation of heat detectors may be increased to 30°C above the maximum deckhead temperature in drying rooms and similar spaces of a normal high ambient temperature.	**Technical**
SOLAS 1991/1992 Amend / Chapter II-2 / Reg. 17.1.1.5	On or after 9/1/1984 Before 7/1/1998	.5 An axe to the satisfaction of the Administration.	**Technical**
SOLAS 1991/1992 Amend / Chapter II-2 / Reg. 17.1.2.2	On or after 9/1/1984 Before 7/1/1998	1.2 A breathing apparatus of an approved type which may be either: .2 a self-contained compressed air-operated breathing apparatus, the volume of air contained in the cylinders of which shall be at least 1,200ℓ, or other self-contained breathing apparatus which shall be capable of functioning for at least 30 minutes. A number of spare charges, suitable for use with the apparatus provided, shall be available on board to the satisfaction of the Administration. In passenger ships carrying more than 36 passengers, at least two spare charges for each breathing apparatus shall be provided, and all air cylinders for breathing apparatus shall be interchangeable.	**Technical**
SOLAS 1991/1992 Amend / Chapter II-2 / Reg. 20.1	On or after 7/1/1986 Before 7/1/2002	1 In all ships general arrangement plans shall be permanently exhibited for the guidance of the ship's officers, showing clearly for each deck the control stations, the various fire sections enclosed by "A" class divisions, the sections enclosed by "B" class	**Technical**

		divisions together with particulars of the fire detection and fire alarm systems, the sprinkler installation, the fire-extinguishing appliances, means of access to different compartments, decks, etc. and the ventilating system including particulars of the fan control positions, the position of dampers and identification numbers of the ventilating fans serving each section. Alternatively, at the discretion of the Administration, the aforementioned details may be set out in a booklet a copy of which shall be supplied to each officer, and one copy shall at all times be available on board in an accessible position. Plans and booklets shall be kept up to date, any alterations being recorded thereon as soon as practicable. Description in such plans and booklets shall be in the official language of the flag state. If the language is neither English nor French, a translation into one of those languages shall be included. In addition, instructions concerning the maintenance and operation of all the equipment and installations on board for the fighting and containment of fire shall be kept under one cover, readily available in an accessible position.	
SOLAS 1991/1992 Amend / Chapter II-2 / Reg. 25.2.1	On or after 10/1/1994 Before 7/1/2002 Passenger ships carrying not more than 36 passengers	2 In ships carrying not more than 36 passengers, all corridor bulkheads where not required to be "A" class shall be "B" class divisions which shall extend from deck to deck except: .1 when continuous "B" class ceilings 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, is acceptable in the construction of "B" class divisions but which shall be required to meet "B" class integrity standards only in so far as is reasonable and practicable in the opinion of the Administration;	**Technical**
SOLAS 1991/1992 Amend / Chapter II-2 / Reg. 25.2.2	On or after 10/1/1994 Before 7/1/2002 Passenger ships carrying not more than 36 passengers	2 In ships carrying not more than 36 passengers, all corridor bulkheads where not required to be "A" class shall be "B" class divisions which shall extend from deck to deck except: .2 in the case of a ship protected by an automatic sprinkler system complying with the provisions of regulation 12 the corridor bulkheads of "B" class materials may terminate at a ceiling in the corridor provided such a ceiling is of material which, in thickness and composition, is acceptable in the construction of "B" class divisions. Notwithstanding the requirements of regulations 26 and 27 such bulkheads and ceilings shall be required to meet "B" class integrity standards only in so far as is reasonable and practicable in the opinion of the Administration. All doors and frames in such	**Technical**

		bulkheads shall be of non-combustible materials and shall be so constructed and erected as to provide substantial fire resistance to the satisfaction of the Administration.	
SOLAS 1991/1992 Amend / Chapter II-2 / Reg. 26.1	On or after 10/1/1994 Before 7/1/1998 Passenger ships carrying more than 36 passengers	1 In addition to complying with the specific provisions for fire integrity of bulkheads and decks mentioned elsewhere in this Part, the minimum fire integrity of all bulkheads and decks shall be as prescribed in tables 26.1 to 26.2. Where, due to any particular structural arrangements in the ship, difficulty is experienced in determining from the tables the minimum fire integrity value of any divisions, such values shall be determined to the satisfaction of the Administration.	**Technical**
SOLAS 1991/1992 Amend / Chapter II-2 / Reg. 26.2.5	On or after 10/1/1994 Before 7/1/1998 Passenger ships carrying more than 36 passengers	.5 The Administration shall determine in respect of category (5) spaces whether the insulation values in table 26.1 or 26.2 shall apply to ends of deckhouses and superstructures, and whether the insulation values in table 26.3 or 26.4 shall apply to weather decks. In no case shall the requirements of category (5) of tables 26.1 to 26.4 necessitate enclosure of spaces which in the opinion of the Administration need not be enclosed.	**Technical**
SOLAS 1991/1992 Amend / Chapter II-2 / Reg. 28.1.3 (91 Amend)	On or after 1/1/1994 Before 10/1/1994 Passenger ships	.3 If a radiotelegraph station has no direct access to the open deck, two means of escape from or access to such station shall be provided, one of which may be a porthole or window of sufficient size or another means to the satisfaction of the Administration.	**Technical**
SOLAS 1991/1992 Amend / Chapter II-2 / Reg. 28.1.5 (91 Amend)	On or after 1/1/1994 Before 10/1/1994 Passenger ships	.5 At least one of the means of escape required by paragraphs 1.1 and 1.2 shall consist of a readily accessible enclosed stairway, which shall provide continuous fire shelter from the level of its origin to the appropriate lifeboat and liferaft embarkation decks or the highest level served by the stairway, whichever level is the highest. However, where the Administration has granted dispensation under the provisions of paragraph 1.1 the sole means of escape shall provide safe escape to the satisfaction of the Administration. The width, number and continuity of the stairways shall be to the satisfaction of the Administration.	**Technical**

SOLAS 1991/1992 Amend / Chapter II-2 / Reg. 28.1.6 (91 Amend)	On or after 1/1/1994 Before 10/1/1994 Passenger ships	.6 Protection of access from the stairway enclosures to the lifeboat and liferaft embarkation areas shall be to the satisfaction of the Administration.	**Technical**
SOLAS 1991/1992 Amend / Chapter II-2 / Reg. 28.2.1 (91 Amend)	On or after 1/1/1994 Before 10/1/1994 Passenger ships	2.1 In special category spaces the number and disposition of the means of escape both below and above the bulkhead deck shall be to the satisfaction of the Administration and in general the safety of access to the embarkation deck shall be at least equivalent to that provided for under paragraphs 1.1, 1.2, 1.5 and 1.6.	**Technical**
SOLAS 1991/1992 Amend / Chapter II-2 / Reg. 28.1.3 (92 Amend)	On or after 10/1/1994 Before 7/1/1998 Passenger ships	.3 If a radiotelegraph station has no direct access to the open deck, two means of escape from or access to such station shall be provided, one of which may be a porthole or window of sufficient size or another means to the satisfaction of the Administration.	**Technical**
SOLAS 1991/1992 Amend / Chapter II-2 / Reg. 28.1.6 (92 Amend)	On or after 10/1/1994 Before 7/1/1998 Passenger ships	.6 Protection of access from the stairway enclosures to the lifeboat and liferaft embarkation areas shall be to the satisfaction of the Administration.	**Technical**
SOLAS 1991/1992 Amend / Chapter II-2 / Reg. 28.2.1 (92 Amend)	On or after 10/1/1994 Before 7/1/1998 Passenger ships	2.1 In special category spaces the number and disposition of the means of escape both below and above the bulkhead deck shall be to the satisfaction of the Administration and in general the safety of access to the embarkation deck shall be at least equivalent to that provided for under paragraphs 1.1, 1.2, 1.5 and 1.6.	**Technical**
SOLAS 1991/1992 Amend / Chapter II-2 / Reg. 30.5	On or after 10/1/1994 Before 7/1/1998 Passenger ships carrying not more than 36 passengers	5 In ships carrying not more than 36 passengers, where a space is protected by an automatic sprinkler system complying with the provisions of regulation 12 or fitted with a continuous "B" class ceiling, openings in decks not forming steps in main vertical zones nor bounding horizontal zones shall be closed reasonably tight and such decks shall meet the "A" class integrity requirements in so far as is reasonable and practicable in the opinion of the Administration.	**Technical**

SOLAS 1991/1992 Amend / Chapter II-2 / Reg. 31.3.1	On or after 10/1/1994 Before 7/1/2002 Passenger ships carrying not more than 36 passengers	3 In ships carrying not more than 36 passengers, where an automatic sprinkler system complying with the provisions of regulation 12 is fitted: .1 openings in decks not forming steps in main vertical zones nor bounding horizontal zones shall be closed reasonably tight and such decks shall meet the "B" class integrity requirements in so far as is reasonable and practicable in the opinion of the Administration;	**Technical**
SOLAS 1991/1992 Amend / Chapter II-2 / Reg. 32.1.4.3.1 (91 Amend)	On or after 1/1/1994 Before 10/1/1994 Passenger ships carrying more than 36 passengers	1.4 Except in cargo spaces, ventilation ducts shall be constructed of the following materials: .3.1 the duct is constructed of a material of low fire risk to the satisfaction of the Administration;	**Technical**
SOLAS 1991/1992 Amend / Chapter II-2 / Reg. 32.1.4.3.1 (92 Amend)	On or after 10/1/1994 Before 7/1/1998 Passenger ships carrying more than 36 passengers	1.4 Except in cargo spaces, ventilation ducts shall be constructed of the following materials: .3.1 the duct is constructed of a material of low fire risk to the satisfaction of the Administration;	**Technical**
SOLAS 1991/1992 Amend / Chapter II-2 / Reg. 34.2	On or after 10/1/1994 Before 7/1/1998 Passenger ships	2 Vapour barriers and adhesives used in conjunction with insulation, as well as insulation of pipe fittings, for cold service systems need not be non-combustible, but they shall be kept to the minimum quantity practicable and their exposed surfaces shall have qualities of resistance to the propagation of flame to the satisfaction of the Administration.	**Technical**
SOLAS 1991/1992 Amend / Chapter II-2 / Reg. 37.1.4.1	On or after 10/1/1994 Before 7/1/1997	1.4.1 An efficient patrol system shall be maintained in special category spaces. In any such space in which the patrol is not maintained by a continuous fire watch at all times during the voyage there shall be provided a fixed fire detection and fire alarm system of an approved type complying with the	**Technical**

	Passenger ships	requirements of regulation 13. The fixed fire detection system shall be capable of rapidly detecting the onset of fire. The spacing and location of detectors shall be tested to the satisfaction of the Administration taking into account the effects of ventilation and other relevant factors.	
SOLAS 1991/1992 Amend / Chapter II-2 / Reg. 37.1.6.5	On or after 10/1/1994 Before 7/1/1997 Passenger ships	1.6.5 Ventilation ducts, including dampers, shall be made of steel and their arrangement shall be to the satisfaction of the Administration.	**Technical**
SOLAS 1991/1992 Amend / Chapter II-2 / Reg. 40.2 (91 Amend)	On or after 2/1/1992 Before 7/1/2002 Passenger ships	2 A fixed fire detection and fire alarm system complying with the requirements of regulation 13 or a sample extraction smoke detection system complying with the requirements of regulation 13-1 shall be provided in any cargo space which, in the opinion of the Administration, is not accessible, except where it is shown to the satisfaction of the Administration that the ship is engaged on voyages of such short duration that it would be unreasonable to apply this requirement.	**Technical**
SOLAS 1991/1992 Amend / Chapter II-2 / Reg. 40.2 (92 Amend)	On or after 10/1/1994 Before 7/1/2002 Passenger ships	2 A fixed fire detection and fire alarm system complying with the requirements of regulation 13 or a sample extraction smoke detection system complying with the requirements of regulation 13-1 shall be provided in any cargo space which, in the opinion of the Administration, is not accessible, except where it is shown to the satisfaction of the Administration that the ship is engaged on voyages of such short duration that it would be unreasonable to apply this requirement.	**Technical**
SOLAS 1991/1992 Amend / Chapter IV / Reg. 14.2	On or after 10/1/1994 Before 1/1/2004	2 Equipment installed prior to the dated of application prescribed by regulation 1 may be exempted from full compliance with the appropriate performance standards at the discretion of the Administration, provided that the equipment is compatible with equipment complying with the performance standards, having due regard to the criteria which the Organization may adopt in connection with such standards.	**Specific** Case by case assessment
SOLAS 1991/1992 Amend / Chapter V (Reg.1~21) / Reg. 17(c)(iii)(1)(cc)	On or after 1/1/1994 Before 7/1/2002	(iii) Safe and convenient access to, and egress from, the ship shall be provided by either: (1) a pilot ladder requiring a climb of not less than 1.5m and not more than 9m above the surface of the water so positioned and secured that: (cc) each step rests firmly against the ship's side; where constructional features, such as rubbing bands, would prevent the	**Technical**

		implementation of this provision, special arrangements shall, to the satisfaction of the Administration, be made to ensure that persons are able to embark and disembark safely;	
SOLAS 1991/1992 Amend / Chapter VI / Reg. 3	On or after 1/1/1994 Before 1/1/2011 Retroactive	1 When transporting a bulk cargo which is liable to emit a toxic or flammable gas, or cause oxygen depletion in the cargo space, an appropriate instrument for measuring the concentration of gas or oxygen in the air shall be provided together with detailed instructions for its use. Such an instrument shall be to the satisfaction of the Administration.	**Technical**
SOLAS 1991/1992 Amend / Chapter VI / Reg. 6.1	On or after 1/1/1994 Before 1/1/2004 Retroactive	1 Prior to loading a bulk cargo, the master shall be in possession of comprehensive information on the ship's stability and on the distribution of cargo for the standard loading conditions. The method of providing such information shall be to the satisfaction of the Administration.*	**Technical**
SOLAS 1991/1992 Amend / Chapter VI / Reg. 6.2	On or after 1/1/1994 Before 1/1/2004 Retroactive	2 Concentrates or other cargoes which may liquefy shall only be accepted for loading when the actual moisture content of the cargo is less than its transportable moisture limit. However, such concentrates and other cargoes may be accepted for loading even when their moisture content exceeds the above limit, provided that safety arrangements to the satisfaction of the Administration are made to ensure adequate stability in the case of cargo shifting and further provided that the ship has adequate structural integrity.	**Technical**
SOLAS 1994/1995 Amend			Adopted by Res.MSC.31(63), Res.MSC.42(64) and SOLAS Conference 2/21
SOLAS 1994/1995 Amend / Chapter II-1 / Reg. 19.1	On or after 7/1/1997 Before 1/1/2009	1 Watertight decks, trunks, tunnels, duct keels and ventilators shall be of the same strength as watertight bulkheads at corresponding levels. The means used for making them watertight, and the arrangements adopted for closing openings in them, shall be to the satisfaction of the Administration. Watertight ventilators and trunks shall be carried at least up to the bulkhead deck in passenger ships and up to the freeboard deck in cargo ships.	**Technical**
SOLAS 1994/1995 Amend / Chapter II-1 / Reg. 23-2.1	On or after 7/1/1997 Before 1/1/2009 Retroactive	1 Indicators shall be provided on the navigation bridge for all shell doors, loading doors and other closing appliances which, if left open or not properly secured, could, in the opinion of the Administration, lead to flooding of a special category space or ro-ro cargo space. The indicator system shall be designed on the fail-safe principle and shall show by visual alarms if the door is not	**Technical**

		fully closed or if any of the securing arrangements are not in place and fully locked and by audible alarms if such door or closing appliances become open or the securing arrangements become unsecured. The indicator panel on the navigation bridge shall be equipped with a mode selection function "harbour/sea voyage" so arranged that an audible alarm is given on the navigation bridge if the ship leaves harbour with the bow doors, inner doors, stern ramp or any other side shell doors not closed or any closing device not in the correct position. The power supply for the indicator system shall be independent of the power supply for operating and securing the doors. The indicator systems, approved by the Administration, which were installed on ships constructed before 1 July 1997 need not be changed.	
SOLAS 1994/1995 Amend / Chapter II-1 / Reg. 23-2.4	On or after 7/1/1997 Before 1/1/2009 Retroactive	4 Documented operating procedures for closing and securing all shell doors, loading doors and other closing appliances which, if left open or not properly secured, could, in the opinion of the Administration, lead to flooding of a special category space ro-ro cargo space, shall be kept on board and posted at an appropriate place.	**Technical**
SOLAS 1994/1995 Amend / Chapter II-1 / Reg. 45.2	On or after 7/1/1997 Before 7/1/1998	2 Main and emergency switchboards shall be so arranged as to give easy access as may be needed to apparatus and equipment, without danger to personnel. The sides and the rear and, where necessary, the front of the switchboards shall be suitably guarded. Exposed live parts having voltages to earth exceeding a voltage to be specified by the Administration shall not be installed on the front of such switchboards. Where necessary, non-conducting mats or gratings shall be provided at the front and rear of the switchboard.	**Technical**
SOLAS 1994/1995 Amend / Chapter II-1 / Reg. 45.3.3	On or after 7/1/1997 Before 7/1/1998	3.3 Where the hull return system is used, all final subcircuits, i.e. all circuits fitted after the last protective device, shall be two-wire and special precautions shall be taken to the satisfaction of the Administration.	**Technical**
SOLAS 1994/1995 Amend / Chapter II-1 / Reg. 45.5.4	On or after 7/1/1997 Before 7/1/1998	5.4 Where cables which are installed in hazardous areas introduce the risk of fire or explosion in the event of an electrical fault in such areas, special precautions against such risks shall be taken to the satisfaction of the Administration.	**Technical**
SOLAS 1994/1995 Amend / Chapter	On or after 7/1/1997	9.3 Accumulator batteries shall not be located in sleeping quarters except where hermetically sealed to the satisfaction of the Administration.	**Technical**

II-1 / Reg. 45.9.3	Before 7/1/1998		
SOLAS 1994/1995 Amend / Chapter II-2 / Reg. 3.1	On or after 7/1/1997 Before 7/1/1998	1 "Non-combustible material" is a material which neither burns nor gives off flammable vapours in sufficient quantity for self-ignition when heated to approximately 750°C , this being determined to the satisfaction of the Administration by an established test procedure. Any other material is a combustible material.	**Technical**
SOLAS 1994/1995 Amend / Chapter II-2 / Reg. 3.8	On or after 7/1/1997 Before 7/1/1998	8 "Low flame spread" means that the surface thus described will adequately restrict the spread of flame, this being determined to the satisfaction of the Administration by an established test procedure.	**Technical**
SOLAS 1994/1995 Amend / Chapter II-2 / Reg. 3.15	On or after 7/1/1997 Before 7/1/1998	15 "Open ro-ro cargo spaces" are ro-ro cargo spaces either open at both ends, or open at one end and provided with adequate natural ventilation effective over their entire length through permanent openings in the side plating or deckhead to the satisfaction of the Administration.	**Technical**
SOLAS 1994/1995 Amend / Chapter II-2 / Reg. 3.23.3	On or after 7/1/1997 Before 7/1/1998	.3 all draperies, curtains and other suspended textile materials have, to the satisfaction of the Administration, qualities of resistance to the propagation of flame not inferior to those of wool of mass 0.8 kg/m²;	**Technical**
SOLAS 1994/1995 Amend / Chapter II-2 / Reg. 3.23.4	On or after 7/1/1997 Before 7/1/1998	.4 all floor coverings have, to the satisfaction of the Administration, qualities of resistance to the propagation of flame not inferior to those of an equivalent woollen material used for the same purpose;	**Technical**
SOLAS 1994/1995 Amend / Chapter II-2 / Reg. 3.23.6	On or after 7/1/1997 Before 7/1/1998	.6 all upholstered furniture has qualities of resistance to the ignition and propagation of flame to the satisfaction of the Administration.	**Technical**
SOLAS 1994/1995 Amend / Chapter II-2 / Reg. 37.1.4.1	On or after 7/1/1997 Before 7/1/1998	1.4.1 An efficient patrol system shall be maintained in special category spaces. In any such space in which the patrol is not maintained by a continuous fire watch at all times during the voyage there shall be provided a fixed fire detection and fire alarm system of an approved type complying with the requirements of regulation 13. The fixed fire detection system shall be capable of rapidly detecting the onset of fire. The spacing and location of detectors shall be tested to the satisfaction of the	**Technical**