		Administration taking into account the effects of ventilation and other relevant factors.	
SOLAS 1994/1995 Amend / Chapter II-2 / Reg. 37.1.6.5	On or after 7/1/1997 Before 7/1/1998	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 1994/1995 Amend / Chapter IV / Reg. 16.1	On or after 7/1/1997 Retroactive	1 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 1994/1995 Amend / Chapter V / Reg. 22(c)	On or after 7/1/1998 Before 7/1/2002 Retroactive	(c) With ships of unconventional design which, in the opinion of the Administration cannot comply with this regulation, arrangements shall be provided to achieve a leave of visibility that is as near as practical to those prescribed in this regulation.	**Specific** Case by case assessment
SOLAS 1996/1998 Amend			Adopted by Res.MSC.47(66); MSC.57(67)
SOLAS 1996/1998	On or after 7/1/2002	1 Each watertight subdivision bulkhead, whether transverse or longitudinal, shall be constructed in such a manner that it shall be	**Technical**

Amend / Chapter II-1 / Reg. 14.1	Before 1/1/2009	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.	
SOLAS 1996/1998 Amend / Chapter II-1 / Reg. 41.4	On or after 7/1/1998 Before 7/1/2010	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. Equivalent arrangements may be permitted to the satisfaction of the Administration.	**Technical**
SOLAS 1996/1998 Amend / Chapter II-1 / Reg. 42.1.3	On or after 7/1/1998 Before 7/1/2010 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 1996/1998 Amend / Chapter II-1 / Reg. 43.1.3	On or after 7/1/1998 Before 7/1/2002 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	**Technical**

		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.	
SOLAS 1996/1998 Amend / Chapter II-1 / Reg. 45.2	On or after 7/1/1998 Before 1/1/2007	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 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, nonconducting mats or gratings shall be provided at the front and rear of the switchboard.	**Technical** IACS UI SC7
SOLAS 1996/1998 Amend / Chapter II-1 / Reg. 45.3.3	On or after 7/1/1998 Before 1/1/2007	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** IACS UI SC8
SOLAS 1996/1998 Amend / Chapter II-1 / Reg. 45.5.4	On or after 7/1/1998 Before 1/1/2007	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** IACS UI SC12
SOLAS 1996/1998 Amend / Chapter II-1 / Reg. 45.9.3	On or after 7/1/1998 Before 1/1/2007	9.3 Accumulator batteries shall not be located in sleeping quarters except where hermetically sealed to the satisfaction of the Administration.	**Technical**
SOLAS 1996/1998 Amend / Chapter II-2 / Reg. 3.15	On or after 7/1/1998 Before 7/1/2002	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 1996/1998	On or after 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 operation. It	**Technical**

Amend / Chapter II-2 / Reg. 12.3	Before 7/1/2002	shall be of the wet pipe type 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.	
SOLAS 1996/1998 Amend / Chapter II-2 / Reg. 12.1.1	On or after 7/1/1998 Before 7/1/2002	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/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 1996/1998 Amend / Chapter II-2 / Reg. 12.10	On or after 7/1/1998 Before 7/1/2002	10 Spare sprinkler heads shall be provided for each section of sprinklers to the satisfaction of the Administration.	**Technical**
SOLAS 1996/1998 Amend / Chapter II-2 / Reg. 16.2.1	On or after 7/1/1998 Before 7/1/2002 Passenger ships carrying more than 36 passengers	2 Where the ventilation ducts with a free-sectional area exceeding 0.02 m²pass through class "A" bulkheads or decks, the opening 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 3 mm and a length of at least 900 mm. 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.	**Technical**
SOLAS 1996/1998 Amend / Chapter II-2 / Reg. 16.6	On or after 7/1/1998 Before 7/1/2002 Passenger ships carrying more than	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	**Technical**

	36 passengers	not apply to control stations situated on, and opening on to, an open deck, or where local closing arrangements would be equally effective.	
SOLAS 1996/1998 Amend / Chapter II-2 / Reg. 17.1.1.5	On or after 7/1/1998 Before 7/1/2002 Retroactive	.5 An axe to the satisfaction of the Administration.	**Technical**
SOLAS 1996/1998 Amend / Chapter II-2 / Reg. 17.1.2.2	On or after 7/1/1998 Before 7/1/2002 Retroactive	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 1996/1998 Amend / Chapter II-2 / Reg. 26.1	On or after 7/1/1998 Before 7/1/2002 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 and 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 1996/1998 Amend / Chapter II-2 / Reg. 26.2.5	On or after 7/1/1998 Before 7/1/2002 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 shall apply to ends of deckhouses and superstructures, and whether the insulation values in table 26.2 shall apply to weather decks. In no case shall the requirements of category (5) of table 26.1 or 26.2 necessitate enclosure of spaces which in the opinion of the Administration need not be enclosed.	**Technical**

SOLAS 1996/1998 Amend / Chapter II-2 / Reg. 28.1.3	On or after 7/1/1998 Before 7/1/2002 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 1996/1998 Amend / Chapter II-2 / Reg. 28.1.6	On or after 7/1/1998 Before 7/1/2002 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 1996/1998 Amend / Chapter II-2 / Reg. 28.2.1	On or after 7/1/1998 Before 7/1/2002 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 paragraph 1.1, 1.2, 1.5 and 1.6.	**Technical**
SOLAS 1996/1998 Amend / Chapter II-2 / Reg. 37.1.4.1	On or after 7/1/1998 Before 7/1/2002 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 1996/1998 Amend / Chapter II-2 / Reg. 37.1.6.5	On or after 7/1/1998 Before 7/1/2002 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 1996/1998 Amend / Chapter II-2 / Reg. 38.3.5	On or after 7/1/1998 Before 7/1/2002 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 1996/1998 Amend / Chapter II-2 / Reg. 53.1.2	On or after 7/1/1998 Before 7/1/2002 Cargo ships	1.2 Notwithstanding the provisions of paragraph 1.1, any cargo space in a ship engaged in the carriage of dangerous goods on deck or in cargo spaces shall be provided 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 1996/1998 Amend / Chapter II-2 / Reg. 53.1.3	On or after 7/1/1998 Before 7/1/2002 Cargo ships	1.3 The Administration may exempt from the requirements of paragraphs 1.1 and 1.2 cargo spaces of any ship if constructed and solely intended for the carriage of ore, coal, grain, unseasoned timber, non-combustible cargoes or cargoes which in the opinion of the Administration, constitute a low fire risk**.3) 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***.4) When such exemptions are granted, the Administration shall issue an Exemption Certificate, irrespective of the date of construction of the ship concerned, in accordance with regulation I/12(a)(vii), and shall ensure that the list of cargoes the ship is permitted to carry is attached to the Exemption Certificate.	**Specific** Case by case assessment
SOLAS 1996/1998 Amend / Chapter II-2 / Reg. 53.2.1	On or after 7/1/1998 Before 7/1/2002 Cargo ships	.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 1996/1998 Amend / Chapter II-2 / Reg. 53.2.3.5	On or after 7/1/1998 Before 7/1/2002 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 1996/1998 Amend / Chapter II-2 / Reg. 54.2.1.2	On or after 7/1/1998 Before 7/1/2002 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 1996/1998 Amend / Chapter II-2 / Reg. 54.2.1.3	On or after 7/1/1998 Before 7/1/2002 Retroactive Cargo ships	Water supplies 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 1996/1998 Amend / Chapter II-2 / Reg. 54 / Table 54.1 / Note 4	On or after 7/1/1998 Before 7/1/2002 Retroactive Cargo ships	Notes 4 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 1996/1998 Amend / Chapter II-2 / Reg. 54.2.2	On or after 7/1/1998 Before 7/1/2002 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*1for 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 1996/1998 Amend / Chapter II-2 / Reg. 54.2.5	On or after 7/1/1998 Before 7/1/2002 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 1996/1998 Amend / Chapter II-2 / Reg. 56.3	On or after 2/1/1992 Before 7/1/2002 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 bulker 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 375kW to be located forward of the cargo area provided the arrangements are in accordance with the provisions of this paragraph.	**Indefinite**
SOLAS 1996/1998 Amend / Chapter II-2 / Reg. 56.4.4	On or after 2/1/1992 Before 7/1/2002 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 1996/1998 Amend / Chapter II-2 / Reg. 62.1	On or after 7/1/1998 Before 7/1/2002 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 1996/1998 Amend / Chapter II-2 / Reg. 62.13	On or after 7/1/1998 Before 7/1/2002 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 1996/1998 Amend / Chapter III / Reg. 4.2.2	On or after 7/1/1998 Before 7/1/2010	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.	**Specific** Cabinet Regulation No. 34 adopted 17 January 2017 "Regulations Regarding the Marine Equipment" Life-saving appliances shall comply with MED directive.
SOLAS 1996/1998 Amend / Chapter III / Reg. 4.3.2	On or after 7/1/1998 Before 7/1/2010	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 and tests which are substantially equivalent to those recommendations.	**Technical**
SOLAS 1996/1998 Amend / Chapter III / Reg. 4.6	On or after 7/1/1998 Before 7/1/2010	6 Life-saving appliances required by this chapter for which detailed specifications are not included in the Code shall be to the satisfaction of the Administration.	**Specific** Cabinet Regulation No. 34 adopted 17 January 2017 "Regulations Regarding the Marine Equipment" Life-saving appliances shall comply with MED directive.
SOLAS 1996/1998 Amend / Chapter III / Reg. 7.2.2	On or after 7/1/1998 Before 7/1/2010	2.2 Lifejackets shall be so placed as to be readily accessible and their position shall be plainly indicated. Where, due to the particular arrangements of the ship, the lifejackets 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 Lifejackets to be carried.	**Technical**
SOLAS 1996/1998 Amend / Chapter III / Reg. 7.3	On or after 7/1/1998 Before 7/1/2010	3 Immersion suits and anti-exposure suits An immersion suit, complying with the requirements of section 2.3 of the Code or an anti-exposure suit complying with section 2.4 of the Code, of an appropriate size, shall be provided for every person assigned to crew the rescue boat or assigned to the marine evacuation system party. If the ship is constantly engaged in warm climates where, in the opinion of the Administration thermal protection is unnecessary, this protective clothing need not be carried.	**Specific** Case by case assessment

SOLAS 1996-1998 Amend / Chapter III / Reg. 22.4.1.1	On or after 7/1/1998 Passenger ships Retroactive	4 Immersion suits and thermal protective aids 4.1 All passenger ships shall carry for each lifeboat on the ship at least three immersion suits complying with the requirements of section 2.3 of the Code and, in addition, a thermal protective aid complying with the requirements of section 2.5 of the Code 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: .1 for persons to be accommodated in totally or partially enclosed lifeboats;or .2 if the ship is constantly engaged on voyages in warm climates where, in the opinion of the Administration, they are unnecessary.	**Specific** Case by case assessment
SOLAS 1996-1998 Amend / Chapter III / Reg. 32.3.2.3	On or after 7/1/1998 Before 7/1/2006 Cargo ships Retroactive	3.2 Cargo ships shall carry for each lifeboat on the ship at least three immersion suits complying with the requirements of section 2.3 of the Code or, if the Administration considers it necessary and practicable, one immersion suit complying with the requirements of section 2.3 of the Code for every person on board the ship;however, the ship shall carry in addition to the thermal protective aids required by paragraphs 4.1.5.1.24, 4.4.8.31 and 5.1.2.2.13 of the Code, thermal protective aids complying with the requirements of section 2.5 of the Code 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.	**Specific** Case by case assessment
SOLAS 1996-1998 Amend / Chapter III / Reg. 32.3.3.3	On or after 7/1/1998 Before 7/1/2006 Cargo ships Retroactive	3.3 Cargo ships complying with the requirements of regulation 31.1.3 shall carry immersion suits complying with the requirements of section 2.3 of the Code 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 1999/2000 Amend			
SOLAS 1999/2000	On or after 7/1/2002 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	**Technical**

Amend / Chapter II-1 / Reg. 43		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.	
SOLAS 1999/2000 Amend / Chapter II-2 / Reg. 1.6.2.1.2	On or after 7/1/2002 Tankers	6.2.1 A liquid cargo with a flashpoint of less than 60 degrees C for which a regular foam fire-fighting system complying with the Fire Safety Systems Code is not effective, is considered to be a cargo introducing additional fire hazards in this context. The following additional measures are required: .2 the type of foam concentrates for use in chemical tankers shall be to the satisfaction of the Administration taking into account the guidelines developed by the Organization;	**Technical**
SOLAS 1999/2000 Amend / Chapter II-2 / Reg. 1.6.6	On or after 7/1/2002 Tankers	6.6 Chemical tankers and gas carriers shall comply with the requirements for tankers, 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 and the International Gas Carrier Code, as appropriate.	**Indefinite**
SOLAS 1999/2000 Amend / Chapter II-2 / Reg. 4.2.2.5.1	On or after 7/1/2002 Before 1/1/2017	2.2.5.1 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. For valves, fitted to oil fuel tanks and which are under static pressure, steel or spheroidal-graphite cast iron may be accepted. However, ordinary cast iron valves may be used in piping systems where the design pressure is lower than 7 bar and the design temperature is below 60 degrees C.	**Technical**

SOLAS 1999/2000 Amend / Chapter II-2 / Reg. 4.5.1.4.4	On or after 7/1/2002 Tankers	5.1.4 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 provided there are capable of being adequately cleaned and ventilated 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 1999/2000 Amend / Chapter II-2 / Reg. 4.5.6.3	On or after 7/1/2002 Tankers	5.6 Inerting, purging and gas freeing: 5.6.3 The arrangements for inerting, purging or gas-freeing of empty tanks as required in paragraph 5.5.3.1 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** IACS UI SC 58
SOLAS 1999/2000 Amend / Chapter II-2 / Reg. 5.2.2.5	On or after 7/1/2002 Passenger ships	2.2.5 In passenger ships, the controls required in paragraphs 2.2.1 to 2.2.4 and in regulations 8.3.3 and 9.5.2.3 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 1999/2000 Amend / Chapter II-2 / Reg. 7.3	On or after 7/1/2002	3 Initial and periodical tests: 3.2 The function of fixed fire detection and fire alarm systems 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.	**Technical**
SOLAS 1999/2000 Amend / Chapter II-2 / Reg. 7.6	On or after 7/1/2002 Passenger ships	A fixed fire detection and fire alarm system or a sample extraction smoke detection system 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 1999/2000 Amend / Chapter II-2 / Reg. 7.8.2	On or after 7/1/2002 Passenger ships	8.2 Inspection hatches The construction of ceiling and bulkheads 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 1999/2000 Amend / Chapter II-2 / Reg. 8.2	On or after 7/1/2002 Passenger ships	2 Protection of control stations outside machinery spaces Practicable measures shall be taken for 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 and 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** IACS UI / SC39
SOLAS 1999/2000 Amend / Chapter II-2 / Reg. 8.3.4	On or after 7/1/2002 Passenger ships	3.4 In passenger ships, the controls required by paragraph 3.3 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 1999/2000 Amend / Chapter II-2 / Reg. 9.2.2.2.2.1	On or after 7/1/2002 Before 7/1/2010 Passenger ships carrying not more than 36 passengers	2.2.2.2 For ships carrying not more than 36 passengers, bulkheads within accommodation and service spaces which are not required to be "A" class divisions shall be at least "B" class or "C" class divisions as prescribed in the tables in paragraph 2.2.4. In addition, 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; and	**Technical**
SOLAS 1999/2000 Amend / Chapter II-2 / Reg. 9.2.2.3.1	On or after 7/1/2002 Before 7/1/2010 Passenger ships carrying more than 36 passengers	2.2.3.1 In addition to complying with the specific provisions for fire integrity of bulkheads and decks of passenger ships, the minimum fire integrity of all bulkheads and decks shall be as prescribed in tables 9.1 and 9.2. 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 1999/2000 Amend / Chapter II-2 / Reg. 9.2.2.3.2.5	On or after 7/1/2002 Before 7/1/2010 Passenger ships carrying more than 36 passengers	2.2.3.2 The following requirements shall govern application of the tables: .5 The Administration shall determine in respect of category (5) spaces whether the insulation values in table 9.1 shall apply to ends of deckhouses and superstructures, and whether the insulation values in table 9.2 shall apply to weather decks. In no case shall the requirements of category (5) of tables 9.1 or 9.2 necessitate enclosure of spaces which in the opinion of the Administration need not be enclosed.	**Technical**
SOLAS 1999/2000 Amend / Chapter II-2 / Reg. 9.2.2.4.4	On or after 7/1/2002 Before 7/1/2010 Passenger ships carrying not more than 36 passengers	2.2.4.4 External boundaries which are required in regulation 11.2 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 of passenger ships to have "A" class integrity. Similarly, in such boundaries which are not required to have "A" class integrity, doors may be constructed of materials which are to the satisfaction of the Administration.	**Technical**
SOLAS 1999/2000 Amend / Chapter II-2 / Reg. 9.2.2.4.4 / Tables 9.3 and 9.4 / Notes / f	On or after 7/1/2002 Before 7/1/2010 Passenger ships carrying not more than 36 passengers	f 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 1999/2000 Amend / Chapter II-2 / Reg. 9.2.3.2 / Tables 9.5 and 9.6 / h	On or after 7/1/2002 Before 7/1/2014 Cargo ships except tankers	h Bulkheads and decks separating ro-ro spaces shall be capable of being closed reasonably gastight and such divisions shall have "A" class integrity in so far as reasonable and practicable, if in the opinion of the Administration it has little or no fire risk.	**Technical**
SOLAS 1999/2000 Amend / Chapter II-2 / Reg.	On or after 7/1/2002 Before 7/1/2014	i Fire insulation need not be fitted if the machinery in category (7) if, in the opinion of the Administration, it has little or no fire risk.	**Technical**

9.2.3.2 / Tables 9.5 and 9.6 / i	Cargo ships except tankers		
SOLAS 1999/2000 Amend / Chapter II-2 / Reg. 9.2.3.3.4	On or after 7/1/2002 Before 7/1/2014 Cargo ships except tankers	2.3.3.4 External boundaries which are required in regulation 11.2 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 of cargo ships to have "A" class integrity. Similarly, in such boundaries which are not required to have "A" class integrity, doors may be constructed of materials which are to the satisfaction of the Administration.	**Technical**
SOLAS 1999/2000 Amend / Chapter II-2 / Reg. 9.2.4.2.4	On or after 7/1/2002 Tankers	2.4.2.4 External boundaries which are required in regulation 11.2 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 of tankers to have "A" class integrity. Similarly, in such boundaries which are not required to have "A" class integrity, doors may be constructed of materials which are to the satisfaction of the Administration.	**Technical**
SOLAS 1999/2000 Amend / Chapter II-2 / Reg. 9.2.4 / Tables 9.7 and 9.8 / e	On or after 7/1/2002 Tankers	e Fire insulation need not be fitted if the machinery space in category (7) if, in the opinion of the Administration, it has little or no fire risk.	**Technical**
Title SOLAS 1999/2000 Amend / Chapter II-2 / Reg. 9.4.1.1.5	On or after 7/1/2002 Before 7/1/2010 Passenger ships	4.1.1.5 In ships carrying not more than 36 passengers, where a space is protected by an automatic sprinkler fire detection and alarm system complying with the provisions the Fire Safety Systems Code 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 1999/2000 Amend / Chapter II-2 / Reg. 9.4.1.2.4	On or after 7/1/2002 Before 7/1/2010 Passenger ships	4.1.2.4 In ships carrying not more than 36 passengers, where an automatic sprinkler system complying with the provisions of the Fire Safety Systems Code 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 1999/2000 Amend / Chapter II-2 / Reg. 9.5.2.4	On or after 7/1/2002 Passenger ships	5.2.4 In passenger ships, the means of control required in paragraph 5.2.3 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 safe access from the open deck.	**Technical**
SOLAS 1999/2000 Amend / Chapter II-2 / Reg. 10.2.1.2	On or after 7/1/2002 Cargo ships	The arrangements for the ready availability of water supply shall be: .2 in cargo ships: .2.1 to the satisfaction of the Administration;	**Technical**
SOLAS 1999/2000 Amend / Chapter II-2 / Reg. 10.2.3.2.1	On or after 7/1/2002	2.3.2.1 Ships shall be provided with fire hoses the number and diameter of which shall be to the satisfaction of the Administration.	**Technical**
SOLAS 1999/2000 Amend / Chapter II-2 / Reg. 10.2.3.3.1	On or after 7/1/2002	2.3.3 Size and types of nozzles 2.3.3.1 For the purposes of this chapter, standard nozzle sizes shall be 12 mm, 16 mm and 19 mm or as near thereto as possible. Larger diameter nozzles may be permitted at the discretion of the Administration.	**Technical**
SOLAS 1999/2000 Amend / Chapter II-2 / Reg. 10.3.2.1	On or after 7/1/2002	3.2.1 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 gross tonnage and upwards shall carry at least five portable fire extinguishers.	**Technical**
SOLAS 1999/2000 Amend / Chapter II-2 / Reg. 10.5.4	On or after 7/1/2002	5.4 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 5.1, 5.2 and 5.3, 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 1999/2000 Amend / Chapter II-2 / Reg. 10.7.1.2	On or after 7/1/2002	7.1.2 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 paragraph 7.1.1 and also in ships of less than 1,000 gross tonnage, the arrangements in cargo spaces shall be to the satisfaction of the Administration, provided that the ship is fitted with steel hatch covers and effective means of closing all ventilators and other openings leading to the cargo spaces.	**Technical**

SOLAS 1999/2000 Amend / Chapter II-2 / Reg. 10.7.1.4	On or after 7/1/2002	7.1.4 The Administration may exempt from the requirements of paragraphs 7.1.3 and 7.2, cargo spaces of any cargo ship if constructed, and solely intended for, the carriage of 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 ventilators and other openings leading to the cargo spaces. When such exemptions are granted, the Administration shall issue an Exemption Certificate, irrespective of the date of construction of the ship concerned, in accordance with regulation I/12(a)(vii), and shall ensure that the list of cargoes the ship is permitted to carry is attached to the Exemption Certificate.	**Specific** Case by case assessment
SOLAS 1999/2000 Amend / Chapter II-2 / Reg. 10.7.2	On or after 7/1/2002	7.2 Fixed gas fire-extinguishing systems for dangerous goods A ship engaged in the carriage of dangerous goods in any cargo spaces shall be provided with a fixed carbon dioxide or inert gas fire-extinguishing system complying with the provisions of the Fire Safety Systems Code or with a fire-extinguishing system which, in the opinion of the Administration, gives equivalent protection for the cargoes carried.	**Technical**
SOLAS 1999/2000 Amend / Chapter II-2 / Reg. 11.3.1	On or after 7/1/2002	3 Structure of aluminium alloy Unless otherwise specified in paragraph 2, 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 degrees C above the ambient temperature at any time during the applicable fire exposure to the standard fire test	**Technical**
SOLAS 1999/2000 Amend / Chapter II-2 / Reg. 13.3.1.4	On or after 7/1/2002	3.1.4 If a radiotelegraph station has no direct access to the open deck, two means of escape from or access to, the 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.	**Technical**
SOLAS 1999/2000 Amend / Chapter II-2 / Reg. 13.3.2.6.2	On or after 7/1/2002 Before 7/1/2010 Passenger ships	3.2.6.2 Escape doors from public spaces that are normally latched shall be fitted with a means of quick release. Such means shall consist of a door-latching mechanism incorporating a device that releases the latch upon the application of a force in the direction of escape flow. Quick release mechanisms shall be designed and	**Technical**

		installed to the satisfaction of the Administration and, in particular:	
SOLAS 1999/2000 Amend / Chapter II-2 / Reg. 13.5.1	On or after 7/1/2002 Passenger ships	5.1 In special category and open ro-ro spaces to which any passengers carried can have access, the number and locations 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 3.2.1.1, 3.2.2, 3.2.4.1 and 3.2.4.2. Such spaces shall be provided with designated walkways to the means of escape with a breadth of at least 600 mm. The parking arrangements for the vehicles shall maintain the walkways clear at all times.	**Technical**
SOLAS 1999/2000 Amend / Chapter II-2 / Reg. 15.2.4.1	On or after 7/1/2002 Before 7/1/2014 Retroactive	2.4 Fire control plans 2.4.1 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 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 thereto shall be recorded as soon as practicable. Description in such plans and booklets shall be in the language or languages required by the Administration. If the language is neither English nor French, a translation into one of those languages shall be included.	**Technical**
SOLAS 1999/2000 Amend / Chapter II-2 / Reg. 19.3.1.2	On or after 7/1/2002 Before 7/1/2004 Retroactive	3.1.2 The quantity of water delivered shall be capable of supplying four nozzles of a size and at pressures as specified in regulation 10.2, 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** IACS UI SC168
SOLAS 1999/2000 Amend / Chapter	On or after 7/1/2002 Before	3.1.3 Means shall be provided for effectively cooling the designated underdeck cargo space by at least 5litres/min per square metre of the horizontal area of cargo spaces, either by a fixed arrangement of spraying nozzles or flooding the cargo space	**Technical**

II-2 / Reg. 19.3.1.3	7/1/2004 Retroactive	with water. 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. However, the drainage and pumping arrangements shall be such as to prevent the build-up of free surfaces. The drainage system shall be sized to remove no less than 125% of the combined capacity of both the water spraying system pumps and the required number of fire hose nozzles. The drainage system valves shall be operable from outside the protected space at a position in the vicinity of the extinguishing system controls. Bilge wells shall be of sufficient holding capacity and shall be arranged at the side shell of the ship at a distance from each other of not more than 40 m in each watertight compartment. 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.	
SOLAS 1999/2000 Amend / Chapter II-2 / Reg. 19 / Table 19.1 / Note 4	On or after 7/1/2002 Before 7/1/2004 Retroactive	Notes: 4 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 1999/2000 Amend / Chapter II-2 / Reg. 19.3.2	On or after 7/1/2002 Before 7/1/2004 Retroactive	3.2 Sources of ignition Electrical equipment and wiring shall not be fitted in enclosed cargo spaces or vehicle 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 (e.g. 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 1999/2000 Amend / Chapter	On or after 7/1/2002	4.1 Fixed fire detection and fire alarm systems: Except as provided in paragraph 4.3.1, there shall be provided a fixed fire detection and fire alarm system complying with the requirements of the Fire Safety Systems Code. The fixed fire	**Technical**

II-2 / Reg. 20.4.1		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.	
SOLAS 1999/2000 Amend / Chapter V / Reg. 18.4	On or after 7/1/2002 Before 7/1/2012	4 Systems and equipment installed prior to the adoption of performance standards by the Organization may subsequently be exempted from full compliance with such standards at the discretion of the Administration, having due regard to the recommended criteria adopted by the Organization. However, for an electronic chart display and information system (ECDIS) to be accepted as satisfying the chart carriage requirement of regulation 19.2.1.4, that system shall conform to the relevant performance standards not inferior to those adopted by the Organization in effect on the date of installation, or, for systems installed before 1 January 1999, not inferior to the performance standards adopted by the Organization on 23 November 1995	**Specific** Case by case assessment
SOLAS 1999/2000 Amend / Chapter V / Reg. 21	On or after 7/1/2002 Before 1/1/2004 Retroactive	All ships which, in accordance with the present Convention, are required to carry a radio installation shall carry the International Code of Signals as may be amended by the Organization. The Code 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 1999/2000 Amend / Chapter V / Reg. 22.3	On or after 7/1/2002 Before 7/1/2006	3 On ships of unconventional design which, in the opinion of the Administration, cannot comply with this regulation, arrangements shall be provided to achieve a level of visibility that is as near as practical to that prescribed in this regulation.	**Technical**
SOLAS 1999/2000 Amend / Chapter V / Reg. 23.3.3.1.3	On or after 7/1/2002 Before 7/1/2012	3.3 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 1.5 m and not more than 9 m above the surface of the water so positioned and secured that: .1.3 each step rests firmly against the ship's side; where constructional features, such as rubbing bands, would prevent the 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;	**Technical**

SOLAS 2001/2003 Amend			Adopted by Res.MSC.134(76)
SOLAS 2001-2003 Amend / Chapter II-1 / Reg. 3-6.2.3	On or after 1/1/2005 Before 1/1/2006 Tankers GT>500 Bulk carriers GT>20000	2.3 The construction and materials of all means of access and their attachment to the ship's structure shall be to the satisfaction of the Administration. The means of access shall be subject to survey prior to, or in conjunction with, its use in carrying out surveys in accordance with regulation I/10.	**Technical**
SOLAS 2001-2003 Amend / Chapter II-1 / Reg. 3-6.5.3	On or after 1/1/2005 Before 1/1/2006 Tankers	5.3 For oil tankers of less than 5,000 tonnes deadweight, the Administration may approve, in special circumstances, smaller dimensions for the openings referred to in paragraphs 5.1 and 5.2, if the ability to traverse such openings or to remove an injured person can be proved to the satisfaction of the Administration.	**Technical**
SOLAS 2001-2003 Amend / Chapter II-2 / Reg. 19.3.1.2	On or after 7/1/2004 Before 1/1/2010 Retroactive	3.1.2 The quantity of water delivered shall be capable of supplying four nozzles of a size and at pressures as specified in regulation 10.2, 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** IACS UI SC 168 Hydrants for dangerous goods
SOLAS 2001-2003 Amend / Chapter II-2 / Reg. 19.3.1.3	On or after 7/1/2004 Before 1/1/2010 Retroactive	3.1.3 Means shall be provided for effectively cooling the designated underdeck cargo space by at least 5 litres/min per square metre of the horizontal area of cargo spaces, either by a fixed arrangement of spraying nozzles or flooding the cargo space with water. 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. However, the drainage and pumping arrangements shall be such as to prevent the build-up of free surfaces. The drainage system shall be sized to remove no less than 125% of the combined capacity of both the water spraying system pumps and the required number of fire hose nozzles. The drainage system valves shall be operable from outside the protected space at a position in the vicinity of the extinguishing system controls. Bilge wells shall be of sufficient holding capacity and shall be arranged at the side shell of the ship at a distance from each other of not more than 40 m in each watertight compartment. If this is not possible, the adverse effect upon stability of the added weight and free surface of water shall be	**Technical**

		taken into account to the extent deemed necessary by the Administration in its approval of the stability information	
SOLAS 2001-2003 Amend / Chapter II-2 / Reg. 19.3.2	On or after 7/1/2004 Before 1/1/2010 Retroactive	3.2 Sources of ignition Electrical equipment and wiring shall not be fitted in enclosed cargo spaces or vehicle 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 (e.g. 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 2001-2003 Amend / Chapter II-2 / Reg. 19 / Table 19.1 / Note 4	On or after 7/1/2004 Before 1/1/2010 Retroactive	Notes: 4 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 2001-2003 Amend / Chapter VI / Reg. 6.1	On or after 1/1/2004 Before 1/1/2011 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 2001-2003 Amend / Chapter VI / Reg. 6.2	On or after 1/1/2004 Before 1/1/2011 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 2001-2003 Amend / Chapter V / Reg. 21.1	On or after 1/1/2004 Retroactive	1 All ships which, in accordance with the present Convention, are required to carry a radio installation shall carry the International Code of Signals as may be amended by the Organization. The	**Specific** Cabinet Regulation No. 30 adopted 12 January 2016 "Regulations Regarding the Use and

		Code shall also be carried by any other ship which in the opinion of the Administration has a need to use it.	Maintenance of Ship's Radio and Navigation Equipment", Chapter 6.2
Title SOLAS 2001-2003 Amend / Chapter V / Reg. 22.3	On or after 7/1/2006 Before 7/1/2010 Retroactive	3 On ships of unconventional design which, in the opinion of the Administration, cannot comply with this regulation, arrangements shall be provided to achieve a level of visibility that is as near as practical to that prescribed in this regulation.	**Technical**
SOLAS 2004 Amend			**Adopted by Res.MSC.151(78), Res.MSC.152(78), Res.MSC.153(78), Res.MSC.154(78), Res.MSC.170(79) and Res.MSC.171(79)**
SOLAS 2004 Amend / Chapter II-1 / Reg. 3-6.2.3	On or after 1/1/2006 Before 1/1/2007 Tankers GT>500 Bulk carriers GT>20000	2.3 The construction and materials of all means of access and their attachment to the ship's structure shall be to the satisfaction of the Administration. The means of access shall be subject to survey prior to, or in conjunction with, its use in carrying out surveys in accordance with regulation I/10.	**Technical**
SOLAS 2004 Amend / Chapter II-1 / Reg. 3-6.5.3	On or after 1/1/2006 Before 1/1/2007 Tankers GT>500 Bulk carriers GT>20000	5.3 For oil tankers of less than 5,000 tonnes deadweight, the Administration may approve, in special circumstances, smaller dimensions for the openings referred to in paragraphs 5.1 and 5.2, if the ability to traverse such openings or to remove an injured person can be proved to the satisfaction of the Administration.	**Technical**
SOLAS 2004 Amend / Chapter II-1 / Reg. 18.1.1	On or after 7/1/2006 Before 1/1/2009 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 2004 Amend / Chapter II-1 / Reg. 45.2	On or after 1/1/2007	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	**Technical** IACS UI SC 7

		necessary, the front of 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, nonconducting mats or gratings shall be provided at the front and rear of the switchboard.	
SOLAS 2004 Amend / Chapter II-1 / Reg. 45.3.3	On or after 1/1/2007	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** IACS UI SC 8
SOLAS 2004 Amend / Chapter II-1 / Reg. 45.5.4	On or after 1/1/2007	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** IACS UI SC 12
SOLAS 2004 Amend / Chapter II-1 / Reg. 45.9.3	On or after 1/1/2007	9.3 Accumulator batteries shall not be located in sleeping quarters except where hermetically sealed to the satisfaction of the Administration.	**Technical**
SOLAS 2004 Amend / Chapter II-1 / Reg. 45.11	On or after 1/1/2007 Tankers	11 In tankers, electrical equipment, cables and wiring shall not be installed in hazardous locations unless it conforms with standards not inferior to those acceptable to the Organization. However, for locations not covered by such standards, electrical equipment, cables and wiring which do not conform to the standards may be installed in hazardous locations based on a risk assessment to the satisfaction of the Administration, to ensure that an equivalent level of safety is assured.	**Technical**
SOLAS 2004 Amend / Chapter III / Reg. 32.3.2	On or after 7/1/2006 Before 7/1/2008 Retroactive	3.2 An immersion suit complying with the requirements of section 2.3 of the Code shall be provided for every person on board the ship. However, for ships other than bulk carriers, as defined in regulation IX/1, these immersion suits need not be required if the ship 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 2005 Amend			Adopted by Res.MSC.194(80)
SOLAS 2005 Amend / Chapter II-1 / Reg. 3-6.2.3	On or after 1/1/2006 Tankers GT>500 Bulk	2.3 The construction and materials of all means of access and their attachment to the ship's structure shall be to the satisfaction of the Administration. The means of access shall be subject to survey prior to, or in conjunction with, its use in carrying out surveys in accordance with regulation I/10.	**Technical**

	carriers GT>20000		
SOLAS 2005 Amend / Chapter II-1 / Reg. 3-6.5.3	On or after 1/1/2006 Tankers GT>500 **Bulk** carriers GT>20000	5.3 For oil tankers of less than 5,000 tonnes deadweight, the Administration may approve, in special circumstances, smaller dimensions for the openings referred to in paragraphs 5.1 and 5.2, if the ability to traverse such openings or to remove an injured person can be proved to the satisfaction of the Administration.	**Technical**
SOLAS 2005 Amend / Chapter II-1 / Reg. 12.10	On or after 1/1/2009 Before 1/1/2011	10 In all cases stern tubes shall be enclosed in watertight spaces of moderate volume. In passenger ships the stern gland shall be situated in a watertight shaft tunnel or other watertight space separate from the stern tube compartment and of such volume that, if flooded by leakage through the stern gland, the bulkhead deck will not be immersed. In cargo ships 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 2005 Amend / Chapter II-1 / Reg. 35-1.3.7.2	On or after 1/1/2009 Before 1/1/2011 Passenger ships	3.7.2 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 2006 Amend			Adopted by Res.216(82); Res.MSC.216(82)
SOLAS 2006 Amend / Chapter II-1 / Reg. 5.2	On or after 1/1/2009 Before 7/1/2010	2 The Administration may allow the inclining test of an individual cargo 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, as required by regulation 5-1. A weight survey shall be carried out upon completion and the ship shall be inclined whenever in comparison with the data derived from the sister ship, a deviation from the lightship displacement exceeding 1% for ships of 160 m or more in length and 2% for ships of 50 m or less in length and as determined by linear interpolation for intermediate lengths or a deviation from the lightship longitudinal centre of gravity exceeding 0.5% of Ls is found.	**Technical**

SOLAS 2006 Amend / Chapter II-1 / Reg. 12.10	On or after 1/1/2009 Before 7/1/2020	10 In all cases stern tubes shall be enclosed in watertight spaces of moderate volume. In passenger ships the stern gland shall be situated in a watertight shaft tunnel or other watertight space separate from the stern tube compartment and of such volume that, if flooded by leakage through the stern gland, the bulkhead deck will not be immersed. In cargo ships 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 2006 Amend / Chapter II-1 / Reg. 15.2	On or after 1/1/2009 Before 7/1/2020	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 2006 Amend / Chapter II-1 / Reg. 15.8.5	On or after 1/1/2009 Before 7/1/2020	8.5 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 regulation refers shall be of steel or other equivalent material to the satisfaction of the Administration.	**Technical**
SOLAS 2006 Amend / Chapter II-1 / Reg. 16.1.1	On or after 1/1/2009 Before 7/1/2020	1 In all ships: .1 the design, materials and construction of all watertight doors, sidescuttles, gangway and cargo ports, valves, pipes, ash-chutes and rubbish-chutes referred to in these regulations shall be to the satisfaction of the Administration;	**Technical**
SOLAS 2006 Amend / Chapter II-1 / Reg. 16-1.1	On or after 1/1/2009 Before 7/1/2020	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 2006 Amend / Chapter II-1 / Reg. 17-1.2	On or after 1/1/2009 RO-RO passenger ships	2 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 space. The indicator system shall be designed on the fail-safe principle and shall show by visual alarms if the door is not 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	**Technical** Adopted by Res.MSC194(80)

		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.	
SOLAS 2006 Amend / Chapter II-1 / Reg. 20.2	On or after 1/1/2009 Before 7/1/2020 Passenger ships	2 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 2006 Amend / Chapter II-1 / Reg. 23.2	On or after 1/1/2009 Before 7/1/2020 RO-RO passenger ships	2 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 or ro-ro space, shall be kept on board and posted at an appropriate place.	**Technical** Adopted by Res.MSC194(80)
SOLAS 2006 Amend / Chapter II-1 / Reg. 41.4	On or after 7/1/2010 Before 7/1/2012	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. Equivalent arrangements may be permitted to the satisfaction of the Administration.	**Technical**
SOLAS 2006 Amend / Chapter II-1 / Reg. 42.1.3	On or after 7/1/2010 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	**Technical**

		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.	
SOLAS 2006 Amend / Chapter II-2 / Reg. 8.2	On or after 7/1/2010 Passenger ships carrying more than 36 passengers	2 Protection of control stations outside machinery spaces Practicable measures shall be taken for 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 and 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 2006 Amend / Chapter II-2 / Reg. 9.2.2.3.1	On or after 7/1/2010 Passenger ships carrying more than 36 passengers	2.2.3.1 In addition to complying with the specific provisions for fire integrity of bulkheads and decks of passenger ships, the minimum fire integrity of all bulkheads and decks shall be as prescribed in tables 9.1 and 9.2. 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 2006 Amend / Chapter II-2 / Reg. 9.2.2.3.2.5	On or after 7/1/2010 Passenger ships carrying more than 36 passengers	.5 The Administration shall determine in respect of category (5) spaces whether the insulation values in table 9.1 shall apply to ends of deckhouses and superstructures, and whether the insulation values in table 9.2 shall apply to weather decks. In no case shall the requirements of category (5) of tables 9.1 or 9.2 necessitate enclosure of spaces which in the opinion of the Administration need not be enclosed.	**Technical**
SOLAS 2006 Amend / Chapter II-2 / Reg. 9.2.2.4.4	On or after 7/1/2010 Before 7/1/2014 Passenger ships	2.2.4.4 External boundaries which are required in regulation 11.2 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 of passenger ships to have "A" class integrity. Similarly, in such boundaries which are not	**Technical**

	carrying not more than 36 passengers	required to have "A" class integrity, doors may be constructed of materials which are to the satisfaction of the Administration.	
SOLAS 2006 Amend / Chapter II-2 / Reg. 9.2.2.4.2 / Tables 9.3 and 9.4 / Notes / f	On or after 7/1/2010 Before 7/1/2014 Passenger ships carrying not more than 36 passengers	f 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 2006 Amend / Chapter II-2 / Reg. 9.4.1.1.5	On or after 7/1/2010 Passenger ships carrying not more than 36 passengers	4.1.1.5 In ships carrying not more than 36 passengers, where a space is protected by an automatic sprinkler fire detection and alarm system complying with the provisions the Fire Safety Systems Code 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 2006 Amend / Chapter II-2 / Reg. 9.4.1.2.4	On or after 7/1/2010 Passenger ships carrying not more than 36 passengers	4.1.2.4 In ships carrying not more than 36 passengers, where an automatic sprinkler system complying with the provisions of the Fire Safety Systems Code 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 2006 Amend / Chapter II-2 / Reg. 13.3.2.6.2	On or after 7/1/2010 Before 1/1/2020 Passenger ships	3.2.6.2 Escape doors from public spaces that are normally latched shall be fitted with a means of quick release. Such means shall consist of a door-latching mechanism incorporating a device that releases the latch upon the application of a force in the direction of escape flow. Quick release mechanisms shall be designed and installed to the satisfaction of the Administration and, in particular:	**Technical**
SOLAS 2006 Amend / Chapter III / Reg. 4.2.2	On or after 7/1/2010	2 Before giving approval to life-saving appliances and arrangements, the Administration shall ensure that such life-saving appliances and arrangements:	**Specific**

		.2 have successfully undergone, to the satisfaction of the Administration, tests which are substantially equivalent to those specified in those recommendations.	Cabinet Regulation No. 34 adopted 17 January 2017 "Regulations Regarding the Marine Equipment" Life-saving appliances shall comply with MED directive.
SOLAS 2006 Amend / Chapter III / Reg. 4.3.2	On or after 7/1/2010	3 Before giving approval to novel life-saving appliances or arrangements, the Administration shall ensure that such: .2 arrangements have successfully undergone, to the satisfaction of the Administration, evaluation and tests which are substantially equivalent to those recommendations.	**Specific** Cabinet Regulation No. 34 adopted 17 January 2017 "Regulations Regarding the Marine Equipment" Life-saving appliances shall comply with MED directive.
SOLAS 2006 Amend / Chapter III / Reg. 4.6	On or after 7/1/2010	6 Life-saving appliances required by this chapter for which detailed specifications are not included in the Code shall be to the satisfaction of the Administration.	**Specific** Cabinet Regulation No. 34 adopted 17 January 2017 "Regulations Regarding the Marine Equipment" Life-saving appliances shall comply with MED directive.
SOLAS 2006 Amend / Chapter III / Reg. 7.2.2	On or after 7/1/2010	2.2 Lifejackets shall be so placed as to be readily accessible and their position shall be plainly indicated. Where, due to the particular arrangements of the ship, the lifejackets 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 Lifejackets to be carried.	**Technical**
SOLAS 2006 Amend / Chapter III / Reg. 7.3	On or after 7/1/2010	An immersion suit, complying with the requirements of section 2.3 of the Code or an anti-exposure suit complying with section 2.4 of the Code, of an appropriate size, shall be provided for every person assigned to crew the rescue boat or assigned to the marine evacuation system party. If the ship is constantly engaged in warm climates where, in the opinion of the Administration thermal protection is unnecessary, this protective clothing need not be carried.	**Specific** Case by case assessment
SOLAS 2006 Amend / Chapter III / Reg. 32.3.2	On or after 7/1/2008 Retroactive	3.2 An immersion suit of an appropriate size, complying with the requirements of section 2.3 of the Code shall be provided for every person on board the ship. However, for ships other than bulk carriers, as defined in regulation IX/1, these immersion suits need not be required if the ship 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 2006 Amend / Chapter V / Reg. 22.3	On or after 7/1/2010	3 On ships of unconventional design which, in the opinion of the Administration, cannot comply with this regulation, arrangements shall be provided to achieve a level of visibility that is as near as practical to that prescribed in this regulation.	**Technical**
SOLAS 2008 Amend			
SOLAS 2008 Amend / Chapter II-1 / Reg. 5.2	On or after 7/1/2010 Before 7/1/2020	2 The Administration may allow the inclining test of an individual cargo 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, as required by regulation 5-1. A weight survey shall be carried out upon completion and the ship shall be inclined whenever in comparison with the data derived from the sister ship, a deviation from the lightship displacement exceeding 1% for ships of 160 m or more in length and 2% for ships of 50 m or less in length and as determined by linear interpolation for intermediate lengths or a deviation from the lightship longitudinal centre of gravity exceeding 0.5% of Ls is found.	**Technical**
SOLAS 2008 Amend / Chapter II-2 / Reg. 9.4.1.1.6	On or after 7/1/2010 Before 1/1/2020 Passenger ships carrying not more than 36 passengers	4.1.1.6 In ships carrying not more than 36 passengers, where a space is protected by an automatic sprinkler fire detection and alarm system complying with the provisions the Fire Safety Systems Code 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 2008 Amend / Chapter II-2 / Reg. 9.4.1.2.4	On or after 7/1/2010 Before 1/1/2020 Passenger ships carrying not more than 36 passengers	4.1.2.4 In ships carrying not more than 36 passengers, where an automatic sprinkler system complying with the provisions of the Fire Safety Systems Code 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 2008 Amend / Chapter	On or after 1/1/2010	3.1.2 The quantity of water delivered shall be capable of supplying four nozzles of a size and at pressures as specified in regulation	**Technical**

II-2 / Reg. 19.3.1.2 (Res.MSC.256(84))	Before 1/1/2011 Retroactive	10.2, 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.	IACS UI SC 168 Hydrants for dangerous goods
SOLAS 2008 Amend / Chapter II-2 / Reg. 19.3.1.3 (Res.MSC.256(84))	On or after 1/1/2010 Before 1/1/2011 Retroactive	3.1.3 Means shall be provided for effectively cooling the designated underdeck cargo space by at least 5 litres/min per square metre of the horizontal area of cargo spaces, either by a fixed arrangement of spraying nozzles or flooding the cargo space with water. 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. However, the drainage and pumping arrangements shall be such as to prevent the build-up of free surfaces. The drainage system shall be sized to remove no less than 125% of the combined capacity of both the water spraying system pumps and the required number of fire hose nozzles. The drainage system valves shall be operable from outside the protected space at a position in the vicinity of the extinguishing system controls. Bilge wells shall be of sufficient holding capacity and shall be arranged at the side shell of the ship at a distance from each other of not more than 40 m in each watertight compartment. 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 2008 Amend / Chapter II-2 / Reg. 19.3.1.3 (Res.MSC.269(85))	On or after 1/1/2011	3.1.3 Means shall be provided for effectively cooling the designated underdeck cargo space by at least 5 litres/min per square metre of the horizontal area of cargo spaces, either by a fixed arrangement of spraying nozzles or flooding the cargo space with water. 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. However, the drainage and pumping arrangements shall be such as to prevent the build-up of free surfaces. The drainage system shall be sized to remove no less than 125% of the combined capacity of both the water spraying system pumps and the required number of fire hose nozzles. The drainage system valves shall be operable from outside the protected space at a position in the vicinity of the extinguishing system controls. Bilge wells shall be of sufficient holding capacity and shall be arranged at the side shell of the ship at a distance from each other of not more than 40 m in each watertight compartment. If this is not possible, the adverse effect upon	**Technical**

		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.	
SOLAS 2008 Amend / Chapter II-2 / Reg. 19.3.2 (Res.MSC.256(84))	On or after 1/1/2010 Before 1/1/2011 Retroactive	3.2 Sources of ignition Electrical equipment and wiring shall not be fitted in enclosed cargo spaces or vehicle 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 (e.g. 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 2008 Amend / Chapter II-2 / Reg. 19 / Table 19.1 / Note 4 (Res.MSC.256(84))	On or after 1/1/2010 Before 1/1/2011 Retroactive	Notes: 4 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 2008 Amend / Chapter II-2 / Reg. 19.3.1.2 (Res.MSC.269(85))	On or after 1/1/2011 Retroactive	3.1.2 The quantity of water delivered shall be capable of supplying four nozzles of a size and at pressures as specified in regulation 10.2, 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** IACS UI SC 168 Hydrants for dangerous goods
SOLAS 2008 Amend / Chapter II-2 / Reg. 19.3.2 (Res.MSC.269(85))	On or after 1/1/2011 Retroactive	3.2 Sources of ignition Electrical equipment and wiring shall not be fitted in enclosed cargo spaces or vehicle 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 (e.g. 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	**Technical** IACS UI SC79 MSC.1/Circ.1555 UNIFIED INTERPRETATIONS OF SOLAS CHAPTER II-2

		against damage from impact. Any other equipment which may constitute a source of ignition of flammable vapour shall not be permitted.	
SOLAS 2008 Amend / Chapter II-2 / Reg. 19 / Table 19.1 / Note 4 (Res.MSC.269(85))	On or after 1/1/2010 Before 1/1/2011 Retroactive	Notes: 4 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 2008 Amend / Chapter VI / Reg. 3.1	On or after 1/1/2011 Retroactive	1 When transporting a solid 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 2008 Amend / Chapter VI / Reg. 6.1	On or after 1/1/2011 Retroactive	1 Prior to loading a solid 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 2009 Amend			Adopted by Res.MSC.282(86)
SOLAS 2009 Amend / Chapter II-1 / Reg. 35-1.3.7.2	On or after 1/1/2009 Before 1/1/2020 Passenger ships	3.7.2 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 2009 Amend / Chapter V / Reg. 19.2.2.4	On or after 7/1/2002 Retroactive	.4 a bridge navigational watch alarm system (BNWAS) installed prior to 1 July 2011 may subsequently be exempted from full compliance with the standards adopted by the Organization, at the discretion of the Administration.	**Specific** Case by case assessment
SOLAS 2010 Amend			Adopted by Res.MSC.308(88)
SOLAS 2010 Amend / Chapter II-1 / Reg. 41.4	On or after 7/1/2010	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,	**Technical**

		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.	
SOLAS 2010 Amend / Chapter V / Reg. 18.4	On or after 7/1/2012	4 Systems and equipment installed prior to the adoption of performance standards by the Organization may subsequently be exempted from full compliance with such standards at the discretion of the Administration, having due regard to the recommended criteria adopted by the Organization. However, for an electronic chart display and information system (ECDIS) to be accepted as satisfying the chart carriage requirement of regulation 19.2.1.4, that system shall conform to the relevant performance standards not inferior to those adopted by the Organization in effect on the date of installation, or, for systems installed before 1 January 1999, not inferior to the performance standards adopted by the Organization on 23 November 1995	**Specific** Case by case assessment
SOLAS 2010 Amend / Chapter V / Reg. 23.3.3.1.3	On or after 7/1/2012	3.3 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 1.5 m and not more than 9 m above the surface of the water so positioned and secured that: .3 each step rests firmly against the ship's side; where constructional features, such as rubbing bands, would prevent the 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;	**Technical**
SOLAS 2012 Amend			Adopted by Res.MSC.338(91)
SOLAS 2012 Amend / Chapter II-2 / Reg. 9.2.2.4.4	On or after 7/1/2014 Passenger ships carrying not more than 36 passengers	2.2.4.4 External boundaries which are required in regulation 11.2 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 of passenger ships to have "A" class integrity. Similarly, in such boundaries which are not required to have "A" class integrity, doors may be constructed of materials which are to the satisfaction of the Administration.	**Technical**
SOLAS 2012 Amend / Chapter II-2 / Reg. 9.2.2.4 / Tables	On or after 7/1/2014 Passenger ships carrying	f 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**

9.3 and 9.4 / Notes / f	not more than 36 passengers		
SOLAS 2012 Amend / Chapter II-2 / Reg. 9.2.3 / Table 9.5 and 9.6 / Notes / i	On or after 7/1/2014 Cargo ships except tankers	i Fire insulation need not be fitted if the machinery in category (7) if, in the opinion of the Administration, it has little or no fire risk.	**Technical**
SOLAS 2012 Amend / Chapter II-2 / Reg. 9.2.3.3.4	On or after 7/1/2014 Cargo ships except tankers	2.3.3.4 External boundaries which are required in regulation 11.2 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 of cargo ships to have "A" class integrity. Similarly, in such boundaries which are not required to have "A" class integrity, doors may be constructed of materials which are to the satisfaction of the Administration.	**Technical**
SOLAS 2012 Amend / Chapter II-2 / Reg. 15.2.4.1	On or after 7/1/2014 Retroactive	2.4 Fire control plans .2.4.1 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 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 thereto shall be recorded as soon as practicable. Description in such plans and booklets shall be in the language or languages required by the Administration. If the language is neither English nor French, a translation into one of those languages shall be included.	**Technical**
SOLAS 2014 Amend			Adopted by Res.MSC.365(93)
SOLAS 2014 Amend / Chapter II-1 / Reg. 29.1	On or after 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	**Technical**

		and the auxiliary steering gear shall be so arranged that the failure of one of them will not render the other one inoperative.	
SOLAS 2014 Amend / Chapter II-1 / Reg. 29.2.1	On or after 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 2014 Amend / Chapter II-1 / Reg. 29.2.2	On or after 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 2014 Amend / Chapter II-1 / Reg. 29.6.3	On or after 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 2014 Amend / Chapter II-2 / Reg. 10.7.3	On or after 1/1/2016	7.3.2.4 The operational performance of each mobile water monitor shall be tested during initial survey on board the ship to the satisfaction of the Administration. The test shall verify that: .1 the mobile water monitor can be securely fixed to the ship structure ensuring safe and effective operation; and .2 the mobile water monitor jet reaches the top tier of containers with all required monitors and water jets from fire hoses operated simultaneously.	**Technical**
SOLAS 2015 Amend			Adopted by Res.MSC.365(93)
SOLAS 2015 Amend / Chapter II-2 / Reg. 4.2.2.5.1	On or after 1/1/2017	2.2.5.1 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. For valves, fitted to oil fuel tanks and which are under static pressure, steel or spheroidal-graphite cast iron	**Technical**

		may be accepted. However, ordinary cast iron valves may be used in piping systems where the design pressure is lower than 7 bar and the design temperature is below 60 degrees C.	
SOLAS 2016 Amend			Adopted by Res.MSC.404(96)
SOLAS 2016 Amend / Chapter II-2 / Reg. 13.3.2	On or after 1/1/2020	3.2.6.2 Escape doors from public spaces that are normally latched shall be fitted with a means of quick release. Such means shall consist of a door-latching mechanism incorporating a device that releases the latch upon the application of a force in the direction of escape flow. Quick release mechanisms shall be designed and installed to the satisfaction of the Administration and, in particular:	**Technical**
SOLAS 2017 Amend			Adopted by Res.MSC.421(98)
SOLAS 2017 Amend / Chapter II-1 / Reg. 5.2	On or after 7/1/2020	2 The Administration may allow the inclining test of an individual cargo 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, as required by regulation 5-1. A lightweight survey shall be carried out upon completion and the ship shall be inclined whenever in comparison with the data derived from the sister ship, a deviation from the lightship displacement exceeding 1% for ships of 160 m or more in length and 2% for ships of 50 m or less in length and as determined by linear interpolation for intermediate lengths or a deviation from the lightship longitudinal centre of gravity exceeding 0.5% of L is found.	**Technical**
SOLAS 2017 Amend / Chapter II-1 / Reg. 5-1.1	On or after 7/1/2020	1 The master shall be supplied with such information to the satisfaction of the Administration as is necessary to enable him by rapid and simple processes to obtain accurate guidance as to the stability of the ship under varying conditions of service. A copy of the stability information shall be furnished to the Administration.	**Technical** IACS UI SC161Timber deck cargo in the context of damage stability requirements
SOLAS 2017 Amend / Chapter II-1 / Reg. 9.3.2.1	On or after 7/1/2020	3.2 Other wells (e.g. for lubricating oil under main engines) may be permitted by the Administration if satisfied that the arrangements give protection equivalent to that afforded by a double bottom complying with this regulation. 3.2.2 For cargo ships of less than 80 m in length the arrangements shall provide a level of safety to the satisfaction of the Administration.	**Technical**

SOLAS 2017 Amend / Chapter II-1 / Reg. 9.6	On or after 7/1/2020	6 Any part of a cargo ship of 80 m in length and upwards or of a passenger ship that is not fitted with a double bottom in accordance with paragraphs 1, 4 or 5, as specified in paragraph 2, shall be capable of withstanding bottom damages, as specified in paragraph 8, in that part of the ship. For cargo ships of less than 80 m in length the alternative arrangements shall provide a level of safety to the satisfaction of the Administration.	**Technical**
SOLAS 2017 Amend / Chapter II-1 / Reg. 9.7	On or after 7/1/2020	7 In the case of unusual bottom arrangements in a cargo ship of 80 m in length and upwards or a passenger ship, it shall be demonstrated that the ship is capable of withstanding bottom damages as specified in paragraph 8. For cargo ships of less than 80 m in length the alternative arrangements shall provide a level of safety to the satisfaction of the Administration.	**Technical**
SOLAS 2017 Amend / Chapter II-1 / Reg. 12.11	On or after 7/1/2020	11 In all cases stern tubes shall be enclosed in watertight spaces of moderate volume. In passenger ships the stern gland shall be situated in a watertight shaft tunnel or other watertight space separate from the stern tube compartment and of such volume that, if flooded by leakage through the stern gland, the bulkhead deck will not be immersed. In cargo ships 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 2017 Amend / Chapter II-1 / Reg. 15.2	On or after 7/1/2020	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 2017 Amend / Chapter II-1 / Reg. 15.8.5	On or after 7/1/2020	8.5 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 regulation refers shall be of steel or other equivalent material to the satisfaction of the Administration.	**Technical**
SOLAS 2017 Amend / Chapter II-1 / Reg. 16.1	On or after 7/1/2020	1 In all ships: 1.1 The design, materials and construction of all watertight closures such as doors, hatches, sidescuttles, gangway and cargo ports, valves, pipes, ash-chutes and rubbish-chutes referred to in these regulations shall be to the satisfaction of the Administration.	**Technical**
SOLAS 2017 Amend / Chapter II-1 / Reg. 16-1.1	On or after 7/1/2020	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	**Technical**

		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.	
SOLAS 2017 Amend / Chapter II-1 / Reg. 20.2	On or after 7/1/2020	2 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 2017 Amendment / Chapter II-1 / Reg. 23.2	On or after 7/1/2020 Before 7/1/2024 Retroactive	2 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 or ro-ro space, shall be kept on board and posted at an appropriate place.	**Technical**
SOLAS 2017 Amendment (98th) / Chapter II-1 / Reg. 35-1.3.7.2	On or after 1/1/2020 Passenger ships	3.7.2 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 2017 Amendment (98th) / Chapter II-2 / Reg. 9.4.1.1.6	On or after 1/1/2020 Passenger ships carrying not more than 36 passengers	4.1.1.6 In ships carrying not more than 36 passengers, where a space is protected by an automatic sprinkler fire detection and alarm system complying with the provisions the Fire Safety Systems Code 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 2017 Amendment (98th) / Chapter II-2 / Reg. 9.4.1.2.4	On or after 1/1/2020 Passenger ships carrying not more than 36 passengers	4.1.2.4 In ships carrying not more than 36 passengers, where an automatic sprinkler system complying with the provisions of the Fire Safety Systems Code 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 2020 Amend			Adopted by Res.MSC.474(102)
SOLAS 2020 Amend / Reg. 12.11	On or after 7/1/2024	11 In all cases stern tubes shall be enclosed in watertight spaces of moderate volume. In passenger ships the stern gland shall be situated in a watertight shaft tunnel or other watertight space separate from the stern tube compartment and of such volume that, if flooded by leakage through the stern gland, the bulkhead deck will not be immersed. In cargo ships 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 2020 Amend / Chapter II-1 / Reg. 15.2	On or after 7/1/2024	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 2020 Amend / Chapter II-1 / Reg. 15.8.5	On or after 7/1/2024	8.5 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 regulation refers shall be of steel or other equivalent material to the satisfaction of the Administration.	**Technical**
SOLAS 2020 Amend / Chapter II-1 / Reg. 16.1	On or after 7/1/2020	1 In all ships: 1.1 The design, materials and construction of all watertight closures such as doors, hatches, sidescuttles, gangway and cargo ports, valves, pipes referred to in these regulations shall be to the satisfaction of the Administration.	**Technical**
SOLAS 2020 Amend / Chapter II-1 / Reg. 17-1.2	On or after 7/1/2024 RO-RO passenger ships	2 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 space. The indicator system shall be designed on the fail-safe principle and shall show by visual alarms if the door is not 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	**Technical**

		indicator system shall be independent of the power supply for operating and securing the doors.	
SOLAS / SOLAS 2020 Amendment / Reg. 23.2	On or after 7/1/2024 Retroactive RO-RO passenger ships	2 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 or ro-ro space, shall be kept on board and posted at an appropriate place.	**Technical**
SOLAS 2020 Amend / Chapter II-1 / Reg. 42.1.3	On or after 7/1/2024 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 2022 Amend			Adopted by Res.MSC.496(105)
SOLAS 2022 Amend / Chapter II-1 / Reg. 42.1.3	On or after 7/1/2024 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	**Technical**

		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.	
SOLAS 2022 Amend / Chapter II-1 / Reg. 43	On or after 7/1/2024 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 2022 Amend / Chapter II-2 / Reg. 4.2.2.5.1	On or after 1/1/2026	2.2.5.1 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. For valves, fitted to oil fuel tanks and which are under static pressure, steel or spheroidal-graphite cast iron may be accepted. However, ordinary cast iron valves may be used in piping systems where the design pressure is lower than 7 bar and the design temperature is below 60 degrees C.	**Technical**
SOLAS 2022 Amend / Chapter IV / Reg. 16.1	On or after 1/1/2024 Retroactive	1 Every ship shall carry personnel qualified for distress and safety communications 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 communications 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 2022 Amend / Chapter IV / Reg. 17	On or after 1/1/2024 Retroactive	A record shall be kept on board, to the satisfaction of the Administration and as required by the Radio Regulations, of all incidents connected with the radiocommunication services 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 2023 Amend			Adopted by Res.MSC.532(107)
SOLAS 2023 Amend / Chapter II-1 / Reg. 3-13.2	On or after 1/1/2026	2 Design, construction and installation 2.2 Anchor handling winches installed on or after 1 January 2026 shall be designed, constructed, installed and tested to the satisfaction of the Administration, based on the Guidelines developed by the Organization.	**Technical**

SOLAS 2023 Amend / Chapter V / Reg. 18.4	On or after 1/1/2026	4 Systems and equipment installed prior to the adoption of performance standards by the Organization may subsequently be exempted from full compliance with such standards at the discretion of the Administration, having due regard to the recommended criteria adopted by the Organization. However, for an electronic chart display and information system (ECDIS) to be accepted as satisfying the chart carriage requirement of regulation 19.2.1.4, that system shall conform to the relevant performance standards not inferior to those adopted by the Organization in effect on the date of installation, or, for systems installed before 1 January 1999, not inferior to the performance standards adopted by the Organization on 23 November 1995	**Specific** Case by case assessment
SOLAS Related Codes			
IS Code			Adopted by A.749(18)
IS Code / Chapter 1 / 1.3.5		1.3 Definitions 1.3.5 "A special purpose ship" means a mechanically self-propelled ship which, by reason of its function, carries on board more than 12 special personnel as defined in paragraph 1.3.3 of the IMO Code of Safety for Special Purpose Ships (resolution A.534(13)), including passengers (ships engaged in research, expeditions and survey; ships for training of marine personnel; whale and fish factory ships not engaged in catching; ships processing other living resources of the sea, not engaged in catching or other ships with design features and modes of operation similar to ships mentioned above which, in the opinion of the Administration may be referred to this group).	**Technical**
IS Code / Chapter 3 / 3.2.2.1.2		3.2.2 Recommended weather criterion .2 from the resultant angle of equilibrium (θ_0), the ship is assumed to roll owing to wave action to an angle of roll (θ_1) to windward. Attention should be paid to the effect of steady wind so that excessive resultant angles of heel are avoided *; * The angle of heel under action of steady wind (θ_0) should be limited to a certain angle to the satisfaction of the Administration. As a guide, 16° or 80% of the angle of deck edge immersion, whichever is less, is suggested.	**Technical**
IS Code / Chapter 4 / 4.2.3.1		4.2 Fishing vessels 4.2.3.1 The general intact stability criteria given in section 3.1.2 (paragraphs 3.1.2.1 to 3.1.2.3) should apply to fishing vessels having a length of 24 m and over, with the exception of requirements on the initial metacentric height GMo (paragraph	**Technical**

		3.1.2.4) which, for fishing vessels, should not be less than 0.35 m for single deck vessels. In vessels with complete superstructure or vessels of 70 m in length and over the metacentric height may be reduced to the satisfaction of the Administration but in no case it should be less than 0.15 m.	
IS Code / Chapter 4 / 4.8.4.2		4.8 Dynamically supported craft (DSC) 4.8.4 Intact buoyancy 4.8.4.2 Means should be provided for checking the watertight integrity of buoyancy compartments. The inspection procedures adopted and the frequency at which they are carried out should be to the satisfaction of the Administration.	**Technical**
IS Code / Chapter 4 / 4.8.4.3		4.8 Dynamically supported craft (DSC) 4.8.4 Intact buoyancy 4.8.4.3 Where entry of water into structures above the datum as defined in 4.8.4.1.3 would significantly influence the stability and buoyancy of the craft, such structures should be of adequate strength to maintain the weathertight integrity or be provided with adequate drainage arrangements. A combination of both measures may be adopted to the satisfaction of the Administration. The means of closing of all openings in such structures should be such as to maintain the weathertight integrity.	**Technical**
IS Code / Chapter 4 / 4.8.8.1		4.8 Dynamically supported craft (DSC) 4.8.8 Passenger loading 4.8.8.1 A mass of 75 kg should be assumed per passenger except that this value may be reduced to not less than 60 kg where this can be justified. In addition, the mass and distribution of the luggage should be to the satisfaction of the Administration.	**Technical**
IS Code / Chapter 6 / 6.8.2.4		6.8 Freeing ports 6.8.2 In ships to which the International Convention on Load Lines, 1966, applies freeing ports should comply with regulation 24 of this Convention, which is as follows: .4 In ships having superstructures which are open at either or both ends, adequate provision for freeing the space within such superstructures should be provided to the satisfaction of the Administration.	**Technical**
IS Code / Chapter 7 / 7.1.4		7.1.4 The Administration may allow the inclining test of an individual ship as required by paragraph 7.1.1 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	**Technical**

		Administration that reliable stability information for the exempted ship can be obtained from such basic data.	
IS Code 1998 Amend			Adopted by Res.MSC.75(69)
1998 IS Code / Chapter 1 / 1.3.5		1.3.5 "A special purpose ship" means a mechanically self-propelled ship which, by reason of its function, carries on board more than 12 special personnel as defined in paragraph 1.3.3 of the IMO Code of Safety for Special Purpose Ships (resolution A.534(13)), including passengers (ships engaged in research, expeditions and survey; ships for training of marine personnel; whale and fish factory ships not engaged in catching; ships processing other living resources of the sea, not engaged in catching or other ships with design features and modes of operation similar to ships mentioned above which, in the opinion of the Administration may be referred to this group).	**Specific** Case by case assessment
1998 IS Code / Chapter 2 / 2.1.4		2.1 Stability booklet 2.1.4 As an alternative to the stability booklet mentioned in 2.1.2, a simplified booklet in an approved form containing sufficient information to enable the master to operate the ship in compliance with the applicable provisions of the Code as may be provided at the discretion of the Administration concerned.	**Technical**
1998 IS Code / Chapter 3 / 3.2.2.1.2		3.2.2 Recommended weather criterion .2 from the resultant angle of equilibrium (θ_0), the ship is assumed to roll owing to wave action to an angle of roll (θ_1) to windward. Attention should be paid to the effect of steady wind so that excessive resultant angles of heel are avoided *; * The angle of heel under action of steady wind (θ_0) should be limited to a certain angle to the satisfaction of the Administration. As a guide, 16° or 80% of the angle of deck edge immersion, whichever is less, is suggested.	**Technical**
1998 IS Code / Chapter 4 / 4.2.3.1		4.2 Fishing vessels 4.2.3.1 The general intact stability criteria given in section 3.1.2 (paragraphs 3.1.2.1 to 3.1.2.3) should apply to fishing vessels having a length of 24 m and over, with the exception of requirements on the initial metacentric height GMo (paragraph 3.1.2.4) which, for fishing vessels, should not be less than 0.35 m for single deck vessels. In vessels with complete superstructure or vessels of 70 m in length and over the metacentric height may be reduced to the satisfaction of the Administration but in no case it should be less than 0.15 m.	**Technical**

1998 IS Code / Chapter 4 / 4.8.4.2		4.8.4 Intact buoyancy 4.8.4.2 Means should be provided for checking the watertight integrity of buoyancy compartments. The inspection procedures adopted and the frequency at which they are carried out should be to the satisfaction of the Administration.	**Technical**
1998 IS Code / Chapter 4 / 4.8.4.3		4.8.4.3 Where entry of water into structures above the datum as defined in 4.8.4.1.3 would significantly influence the stability and buoyancy of the craft, such structures should be of adequate strength to maintain the weathertight integrity or be provided with adequate drainage arrangements. A combination of both measures may be adopted to the satisfaction of the Administration. The means of closing of all openings in such structures should be such as to maintain the weathertight integrity.	**Technical**
1998 IS Code / Chapter 4 / 4.8.8.1		4.8.8 Passenger loading 4.8.8.1 A mass of 75 kg should be assumed per passenger except that this value may be reduced to not less than 60 kg where this can be justified. In addition, the mass and distribution of the luggage should be to the satisfaction of the Administration.	**Technical**
1998 IS Code / Chapter 6 / 6.8.2.4		6.8 Freeing ports 6.8.2 In ships to which the International Convention on Load Lines, 1966, applies freeing ports should comply with regulation 24 of this Convention, which is as follows: .4 In ships having superstructures which are open at either or both ends, adequate provision for freeing the space within such superstructures should be provided to the satisfaction of the Administration.	**Technical**
1998 IS Code / Chapter 7 / 7.1.4		7.1.4 The Administration may allow the inclining test of an individual ship as required by paragraph 7.1.1 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**
1998 IS Code / Chapter 7 / 7.3.2.9		7.3 Preparations for the inclining test 7.3.2.9 The use of three pendulums is recommended but a minimum of two should be used to allow identification of bad readings at any one pendulum station. They should each be located in an area protected from the wind. The pendulums should be long enough to give a measured deflection, to each side of upright, of at least 15 cm. To ensure recordings from individual instruments are kept separate, it is	**Technical**

		suggested that the pendulums be physically located as far apart as practical. One or more pendulums may be substituted by other measuring devices (U-tubes or inclinometers) at the discretion of the Administration. Alternative measuring devices should not be used to reduce the minimum inclining angles recommended in 7.3.2.8.	
1998 IS Code / Annex 1 / 2.3.4.1		2.3 Test weights 2.3.4 Where the use of solid weights to produce the inclining moment is demonstrated to be impracticable, the movement of ballast water may be permitted as an alternative method. This acceptance would be granted for a specific test only, and approval of the test procedure by the Administration is required. As a minimal prerequisite for acceptability, the following condition should be required: .1 inclining tanks should be wall-sided and free of large stringers or other internal members that create air pockets. Other tank geometries may be accepted at the discretion of the Administration; ...	**Technical**
1998 IS Code / Annex 1 / 2.6.7		2.6 Inclinometers The use of inclinometers should be subject to at least the following recommendations: .7 it should be possible to demonstrate the required performance to the satisfaction of the Administration during the inclining test:	**Technical**
2008 IS Code			Adopted by Res.MSC.267(85)
2008 IS CODE 2018 Consolidate Edition / Annex 1 / 2.6.7		2.6 Inclinometers The use of inclinometers should be subject to at least the following recommendations: .7 it should be possible to demonstrate the required performance to the satisfaction of the Administration during the inclining test:	**Technical**
2008 IS CODE 2008 Edition / PART A / Chapter 2 / Reg. 2.3.3	On or after 7/1/2010 Before 1/1/2020	2.3 Severe wind and rolling criterion (weather criterion) 2.3.3 Alternative means for determining the wind heeling lever (l_{w1}) may be accepted, to the satisfaction of the Administration, as an equivalent to calculation in 2.3.2. When such alternative tests are carried out, reference shall be made based on the Guidelines developed by the Organization. The wind velocity used in the tests shall be 26 m/s in full scale with uniform velocity profile. The value of wind velocity used for ships in restricted services may be reduced to the satisfaction of the Administration.	**Technical**
2008 IS CODE 2008 Edition /	On or after 7/1/2010	2.1 Fishing vessels 2.1.3 Recommended general criteria	**Technical**

PART B / Chapter 2 / Reg. 2.1.3	Before 5/20/2011	2.1.3.1 The general intact stability criteria given in part A, 2.2.1 to 2.2.3 should apply to fishing vessels having a length of 24 m and over, with the exception of requirements on the initial metacentric height GM_0 (part A, 2.2.4), which, for fishing vessels, should not be less than 0.35 m for single-deck vessels. In vessels with complete superstructure or vessels of 70 m in length and over the metacentric height may be reduced to the satisfaction of the Administration but in no case should be less than 0.15 m.	
2008 IS CODE 2008 Edition / PART B / Chapter 3 / Reg. 3.6.5	On or after 7/1/2010 Before 1/1/2020	3.6 Stability booklet 3.6.5 As an alternative to the stability booklet mentioned in 3.6.1, a simplified booklet in an approved form containing sufficient information to enable the master to operate the ship in compliance with the applicable provisions of the Code as may be provided at the discretion of the Administration concerned.	**Technical**
2008 IS CODE 2008 Edition / PART B / Chapter 4 / Reg. 4.1.6.2.1	On or after 7/1/2010 Before 1/1/2020	4.1.6 Approval procedure 4.1.6.2 Specific approval 4.1.6.2.1 The accuracy of the computational results and actual ship data used by the calculation program for the particular ship on which the program will be installed should be to the satisfaction of the Administration.	**Technical**
2008 IS CODE 2008 Edition / PART B / Chapter 8 / Reg. 8.1.2	On or after 7/1/2010	8.1 Application 8.1.2 The Administration may allow the inclining test of an individual ship as required by paragraph 8.1.1 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**
2008 IS CODE 2008 Edition / PART B / Chapter 8 / Reg. 8.2.2.9	On or after 7/1/2010	8.2.2 General condition of the ship 8.2.2.9 The use of three pendulums is recommended but a minimum of two should be used to allow identification of bad readings at any one pendulum station. They should each be located in an area protected from the wind. One or more pendulums may be substituted by other measuring devices (U-tubes or inclinometers) at the discretion of the Administration. Alternative measuring devices should not be used to reduce the minimum inclining angles recommended in 8.2.2.8.	**Technical**
2008 IS CODE 2018 / Annex 1 / 2.3.4.1		2.3 Test weights 2.3.4 Where the use of solid weights to produce the inclining moment is demonstrated to be impracticable, the movement of ballast water may be permitted as an alternative method. This acceptance would be granted for a specific test only, and approval	**Technical**

		of the test procedure by the Administration is required. As a minimal prerequisite for acceptability, the following condition should be required: .1 inclining tanks should be wall-sided and free of large stringers or other internal members that create air pockets. Other tank geometries may be accepted at the discretion of the Administration; ...	
2008 IS CODE 2011 Amend			
2008 IS CODE 2011 Amend / PART B / Chapter 2 / Reg. 2.1.3.1	On or after 5/20/2011 Before 1/1/2020	2.1 Fishing vessels 2.1.3 Recommended general criteria 2.1.3.1 The general intact stability criteria given in part A, 2.2.1 to 2.2.3 should apply to fishing vessels having a length of 24 m and over, with the exception of requirements on the initial metacentric height GM_0 (part A, 2.2.4), which, for fishing vessels, should not be less than 0.35 m for single-deck vessels. In vessels with complete superstructure or vessels of 70 m in length and over the metacentric height may be reduced to the satisfaction of the Administration but in no case should be less than 0.15 m.	**Technical**
2008 IS CODE 2016 Amend			Adopted by Res.MSC.415(97)
2008 IS CODE 2016 Amend / PART A / Chapter 2 / Reg. 2.3.3	On or after 7/1/2010	2.3 Severe wind and rolling criterion (weather criterion) 2.3.3 Alternative means for determining the wind heeling lever (l_{w1}) may be accepted, to the satisfaction of the Administration, as an equivalent to calculation in 2.3.2. When such alternative tests are carried out, reference shall be made based on the Guidelines developed by the Organization. The wind velocity used in the tests shall be 26 m/s in full scale with uniform velocity profile. The value of wind velocity used for ships in restricted services may be reduced to the satisfaction of the Administration.	**Technical**
2008 IS CODE 2016 Amend / PART B / Chapter 2 / Reg. 2.1.3.1	On or after 7/1/2010	2.1 Fishing vessels 2.1.3 Recommended general criteria 2.1.3.1 The general intact stability criteria given in part A, 2.2.1 to 2.2.3 should apply to fishing vessels having a length of 24 m and over, with the exception of requirements on the initial metacentric height GM_0 (part A, 2.2.4), which, for fishing vessels, should not be less than 0.35 m for single-deck vessels. In vessels with complete superstructure or vessels of 70 m in length and over the metacentric height may be reduced to the satisfaction of the Administration but in no case should be less than 0.15 m.	**Technical**

2008 IS CODE 2016 Amend / PART B / Chapter 2 / Reg. 2.8.2.1	On or after 7/1/2010	2.8.2 Heeling lever for towing operations 2.8.2.1 The self-tripping heeling lever is calculated as provided below: For tugs with other propulsion and/or towing arrangements, the value of CT is to be established on a case by case basis to the satisfaction of the Administration.	**Technical**
2008 IS CODE 2016 Amend / PART B / Chapter 3 / Reg. 3.6.8	On or after 7/1/2010	3.6 Stability booklet 3.6.8 As an alternative to the stability booklet mentioned in 3.6.1, a simplified booklet in an approved form containing sufficient information to enable the master to operate the ship in compliance with the applicable provisions of the Code as may be provided at the discretion of the Administration concerned.	**Technical**
2008 IS CODE 2016 Amend / PART B / Chapter 4	On or after 7/1/2010	4.1.6 Approval procedure 4.1.6.2 Specific approval 4.1.6.2.1 The accuracy of the computational results and actual ship data used by the calculation program for the particular ship on which the program will be installed should be to the satisfaction of the Administration.	**Technical**
2008 IS CODE 2018 Amend			
2008 IS CODE 2018 Amend / PART A / Chapter 2	On or after 7/1/2010	2.3 Severe wind and rolling criterion (weather criterion) 2.3.3 Alternative means for determining the wind heeling lever (l_{w1}) may be accepted, to the satisfaction of the Administration, as an equivalent to calculation in 2.3.2. When such alternative tests are carried out, reference shall be made based on the Guidelines developed by the Organization. The wind velocity used in the tests shall be 26 m/s in full scale with uniform velocity profile. The value of wind velocity used for ships in restricted services may be reduced to the satisfaction of the Administration.	**Technical**
Alarm & Indicator Code			
Alarms Code, 1991			
91Alarm&Indicator / Chapter 4 / 4.5		4.5 Facilities for adjusting the frequency of audible alarms within the prescribed limits may be provided to optimize their performance in the ambient conditions. The adjustment devices should be sealed, to the satisfaction of the Administration, after setting has been completed.	**Technical**
91Alarm&Indicator / Chapter 6 / 6.1		6.1 The emergency and primary alarms and call signals listed should have the audible and visual characteristics shown in the tables of this section. All other alarms, indicators and call signals	**Technical**

		should be clearly distinct from those listed in this section to the satisfaction of the Administration. These tables are not all-inclusive and other alarms may be added by the Administration in a manner consistent with this Code.	
Alarms Code, 1995			Adopted by Res.A.830(19)
95Alarm&Indicator / Chapter 4 / 4.5		4.5 Facilities for adjusting the frequency of audible alarms within the prescribed limits may be provided to optimize their performance in the ambient conditions. The adjustment devices should be sealed, to the satisfaction of the Administration, after setting has been completed.	**Technical**
95Alarm&Indicator / Chapter 6 / 6.1		6.1 The emergency and primary alarms and call signals listed should have the audible and visual characteristics shown in the tables of this section. All other alarms, indicators and call signals should be clearly distinct from those listed in this section to the satisfaction of the Administration. These tables are not all-inclusive and other alarms may be added by the Administration in a manner consistent with this Code.	**Technical**
Code on alerts and indicators, 2009			Adopted by Res.A.1021(26)
Alarm & Indicator / CODE ON ALERTS AND INDICATORS, 2009 / 5.5		5.5 Facilities for adjusting the frequency of audible signal within the prescribed limits may be provided to optimize their performance in the ambient conditions. The adjustment devices should be sealed, to the satisfaction of the Administration, after setting has been completed.	**Technical**
Alarm & Indicator / CODE ON ALERTS AND INDICATORS, 2009 / 7		The emergency alarms, alarms and call signals listed should have the audible and visual characteristics shown in the tables of this section. All other alerts, indicators and call signals should be clearly distinct from those listed in this section to the satisfaction of the Administration. These tables are not all-inclusive and other alerts may be added by the Administration in a manner consistent with this Code.	**Technical**
Noise Code			Adopted by Res.MSC.337(91)
Noise Code / Chapter 1 / 1.3.2	On or after 1/1/2015	.3.2 The specific provisions relating to potentially hazardous noise levels, mitigation and personal protective gear contained in the Code may be applied to existing ships of a gross tonnage of 1,600 and above, as far as reasonable and practical, to the satisfaction of the Administration.	**Technical**

Noise Code / Chapter 1 / 1.3.3	On or after 1/1/2015	1.3.3 The Code may be applied to new ships of a gross tonnage of less than 1,600 as far as reasonable and practical, to the satisfaction of the Administration.	**Technical**
Noise Code / Chapter 1 / 1.3.7	On or after 1/1/2015	1.3.7 For ships designed for and employed on voyages of short duration, or on other services involving short periods of operation of the ship, to the satisfaction of the Administration, paragraphs 4.2.3 and 4.2.4 may be applied only with the ship in the port condition, provided that the periods under such conditions are adequate for seafarers' rest and recreation.	**Technical**
Noise Code / Chapter 3 / 3.13.3	On or after 1/1/2015	3.13.3 For ships with a large number of crew cabins, such as passenger/cruise ships, it will be acceptable to reduce the number of measurement positions. The selection of cabins to be tested shall be representative for the group of cabins being tested by selecting those cabins in closer proximity to noise sources, to the satisfaction of the Administration.	**Technical**
Noise Code / Chapter 5 / 5.5.1	On or after 1/1/2015	5.5.1 A hearing conservation programme may be provided for seafarers working in spaces with L_{Aeq}>85 dB(A) in order to train them in the hazards of noise and use of hearing protection, and to monitor hearing acuity. Some elements of a hearing conservation programme are as follows: .1 Initial and periodic audiometric tests administered by a trained and appropriately qualified person, to the satisfaction of the Administration.	**Technical**
Noise Code / Chapter 6 / 6.2.2	On or after 1/1/2015	6.2.2 The airborne sound insulation properties shall be determined by laboratory tests in accordance with ISO 10140-2:2010, to the satisfaction of the Administration.	**Technical**
Noise Code / Chapter 6 / 6.3.1	On or after 1/1/2015	6.3.1 Care should be taken in the erection of materials and in the construction of accommodation spaces. During sea trial testing, if the erection of materials is in doubt then measurements should be taken on board ships for a representative selection of each type of partition, floors, doors as requested in paragraph 6.2.1 and to the satisfaction of the Administration.	**Technical**
FSS Code 2002			Adopted by Res.MSC.98(73)
Title FSS Code 2002 / CHAPTER 1 / 4	On or after 7/1/2002	4 Use of toxic extinguishing media 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, liquids and other substances in such quantities as to endanger persons shall not be permitted.	**Technical**
FSS Code 2002 / CHAPTER 5 / 2.1.1.4	On or after 7/1/2002	2 Engineering specifications 2.1.1 Fire-extinguishing medium	**Technical**

	Before 7/1/2010	2.1.1.4 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.	
FSS Code 2002 / CHAPTER 5 / 2.1.2.3	On or after 7/1/2002 Before 7/1/2010	2 Engineering specifications 2.1.2 Installation requirements 2.1.2.3 Spare parts for the system shall be stored on board and be to the satisfaction of the Administration.	**Technical**
FSS Code 2002 / CHAPTER 6 / 2.2.2.1	On or after 7/1/2002 Before 1/1/2014	2.2 Fixed high-expansion foam fire-extinguishing systems 2.2.2 Installation requirements 2.2.2.1 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**
FSS Code 2002 / CHAPTER 7 / 2.1	On or after 7/1/2002 Before 7/1/2008	2 Engineering specifications 2.1.1 Nozzles and pumps 2.1.1.2 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 5 ℓ/m²/min in the spaces to be protected. Where increased application rates are considered necessary, these shall be to the satisfaction of the Administration.	**Technical**
FSS Code 2002 / CHAPTER 8 / 2.1.1	On or after 7/1/2002 Before 1/1/2014	2.1.1 Type of sprinkler systems The automatic sprinkler systems 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. Saunas shall be fitted with a dry pipe system, with sprinkler heads having an operating temperature up to 140°C.	**Technical**
FSS Code 2002 / CHAPTER 8 / 2.5.2.3	On or after 7/1/2002 Before 7/1/2014	2.5 System control requirements 2.5.2 Alarm and indication 2.5.2.3 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/min 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** Refer to IACS UI SC 34
FSS Code 2002 / CHAPTER 9 / 2.3.1.2	On or after 7/1/2002	2.3 Component requirements 2.3.1 Detectors	**Technical**

	Before 7/1/2012	2.3.1.2 Smoke detectors required in all stairways, corridors and escape routes within accommodation spaces shall be certified to operate before the smoke density exceeds 12.5% obscuration per metre, but not until the smoke density exceeds 2% 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.	
FSS Code 2002 / CHAPTER 9 / 2.3.1.3	On or after 7/1/2002 Before 7/1/2012	2.3 Component requirements 2.3.1 Detectors 2.3.1.3 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 oversensitivity.	**Technical**
FSS Code 2002 / CHAPTER 10 / 2.1.2	On or after 7/1/2002 Before 1/1/2012	2 Engineering specifications 2.1 General requirements 2.1.2 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**
FSS Code 2002 / CHAPTER 10 / 2.2.2	On or after 7/1/2002 Before 1/1/2012	2.2 Component requirements 2.2.2 Duplicate sample extraction fans shall be provided. The fans shall be of sufficient capacity to operate under normal ventilation conditions in the protected area and shall give an overall response time to the satisfaction of the Administration.	**Technical**
FSS Code 2002 / CHAPTER 10 / 2.3.1.1	On or after 7/1/2002 Before 1/1/2012	2.3 Installation requirements 2.3.1 Smoke accumulators 2.3.1.1 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**
FSS Code 2002 / CHAPTER 14 / 2.2.1.2	On or after 7/1/2002	2.2 Component requirements 2.2.1 Foam solution and foam concentrate	**Technical**

	Before 7/1/2014	2.2.1.2 Sufficient foam concentrate shall be supplied to ensure at least 20 min of foam generation in tankers fitted with an inert gas installation or 30 min of foam generation in tankers not fitted with an inert gas installation when using solution rates stipulated in paragraph 2.2.1, as appropriate, 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 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.	
FSS Code 2002 / CHAPTER 15 / 2.1.2	On or after 7/1/2002 Before 1/1/2016	2 Engineering specifications 2.1 General 2.1.2 The inert gas system referred to in chapter II-2 of the Convention 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 impracticable 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**
FSS 2006 Amend			Adopted by Res.MSC.206(81)
FSS 06 Amend / CHAPTER 5 / 2.1.1.4	On or after 7/1/2010 Before 7/1/2014	2 Engineering specifications 2.1 General 2.1.1 Fire-extinguishing medium 2.1.1.4 Containers for the storage of fire-extinguishing medium, piping 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**
FSS 06 Amend / CHAPTER 5 / 2.1.2.3	On or after 7/1/2010 Before 7/1/2014	2.1.2 Installation requirements 2.1.2.3 Spare parts for the system shall be stored on board and be to the satisfaction of the Administration.	**Technical**

FSS 2010 Amend			Adopted by Res.MSC.292(87); Res.MSC.311(88)
FSS 10 Amend / CHAPTER 10 / 2.3.1.1	On or after 1/1/2012	2.3 Installation requirements 2.3.1 Smoke accumulators 2.3.1.1 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**
FSS 10 Amend / CHAPTER 16 / 2.1.1	On or after 1/1/2012	2 Engineering specifications 2.1 General 2.1.1 The fixed hydrocarbon gas detection system referred to in chapter II-2 of the Convention shall be designed, constructed and tested to the satisfaction of the Administration based on performance standards developed by the Organization.	**Technical**
FSS 10 Amend / CHAPTER 9 / 2.3.1.2	On or after 7/1/2012 Before 7/1/2014	2.3 Component requirements 2.3.1 Detectors 2.3.1.2 Smoke detectors required in all stairways, corridors and escape routes within accommodation spaces shall be certified to operate before the smoke density exceeds 12.5% obscuration per metre, but not until the smoke density exceeds 2% obscuration per metre, when tested according to standards EN 54:2001 and IEC 60092-505:2001. Alternative testing standards may be used as determined by the Administration. 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.	**Technical**
FSS 10 Amend / CHAPTER 9 / 2.3.1.3	On or after 7/1/2012 Before 7/1/2014	2.3 Component requirements 2.3.1 Detectors 2.3.1.3 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 min, when tested according to standards EN 54:2001 and IEC 60092-505:2001. Alternative testing standards may be used as determined by the Administration. 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 oversensitivity.	**Technical**

FSS 2012 Amend			Adopted by Res.MSC.327(90); Res.MSC.339(91)
FSS 12 Amend / CHAPTER 6 / 3.1.3	On or after 1/1/2014	3 Fixed high-expansion foam fire-extinguishing systems 3.1 Principal performance 3.1.3 The system shall be capable of fire extinction and manufactured and tested to the satisfaction of the Administration **based on the guidelines developed by the Organization.**	**Technical**
FSS 12 Amend / CHAPTER 6 / 3.4.1	On or after 1/1/2014	3.4 Installation testing requirements 3.4.1 After installation, the pipes, valves, fittings and assembled systems shall be tested to the satisfaction of the Administration, including functional testing of the power and control systems, water pumps, foam pumps, valves, remote and local release stations and alarms. Flow at the required pressure shall be verified for the system using orifices fitted to the test line. In addition, all distribution piping shall be flushed with freshwater and blown through with air to ensure that the piping is free of obstructions.	**Technical**
FSS 12 Amend / CHAPTER 8 / 2.1.1	On or after 1/1/2014	2.1.1 Type of sprinkler systems The automatic sprinkler systems 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. Control stations, where water may cause damage to essential equipment, may be fitted with a dry pipe system or a pre-action system as permitted by regulation II-2/10.6.1.1 of the Convention. Saunas shall be fitted with a dry pipe system, with sprinkler heads having an operating temperature up to 140°C.	**Technical**
FSS 12 Amend / CHAPTER 8 / 2.5.2.3	On or after 7/1/2014	2.5 System control requirements 2.5.2 Alarm and indication 2.5.2.3 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/min over the nominal area covered by the sprinklers. For this purpose, nominal area shall be taken as the gross horizontal projection of the area to be covered. 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** Refer to IACS UI SC 34
FSS 12 Amend / CHAPTER 5 / 2.1.1.4	On or after 7/1/2014	2 Engineering specifications 2.1 General 2.1.1.4 Containers for the storage of fire-extinguishing medium, piping and associated pressure components shall be designed to	**Technical**

		pressure codes of practice to the satisfaction of the Administration having regard to their locations and maximum ambient temperatures expected in service.	
FSS 12 Amend / CHAPTER 5 / 2.1.2.3	On or after 7/1/2014	2 Engineering specifications 2.1.2 Installation requirements 2.1.2.3 Spare parts for the system shall be stored on board and be to the satisfaction of the Administration.	**Technical**
FSS 12 Amend / CHAPTER 9 / 2.3.1.2	On or after 7/1/2014	2.3 Component requirements 2.3.1 Detectors 2.3.1.2 Smoke detectors required in all stairways, corridors and escape routes within accommodation spaces shall be certified to operate before the smoke density exceeds 12.5% obscuration per meter, but not until the smoke density exceeds 2% obscuration per meter, when tested according to standards EN 54:2001 and IEC 60092-504. Alternative testing standards may be used as determined by the Administration. 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.	**Technical**
FSS 12 Amend / CHAPTER 9 / 2.3.1.3	On or after 7/1/2014	2.3 Component requirements 2.3.1 Detectors 2.3.1.3 Heat detectors shall be certified to operate before the temperature exceeds 78ºC but not until the temperature exceeds 54ºC, when the temperature is raised to those limits at a rate less than 1ºC per min, when tested according to standards EN 54:2001 and IEC 60092-504. Alternative testing standards may be used as determined by the Administration. 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 oversensitivity.	**Technical**
FSS 12 Amend / CHAPTER 12 / 2.2.2.1	On or after 7/1/2014	2.2.2 Diesel engines and fuel tank 2.2.2.1 Starting of diesel engine Any diesel-driven power source for the pump shall be capable of being readily started in its cold condition down to the temperature of 0°C by hand (manual) cranking. Where ready starting cannot be assured, if this is impracticable, or if lower temperatures are likely to be encountered, and if the room for the diesel driven power source is not heated, electric heating of the diesel engine cooling water or lubricating oil system shall be fitted, to the satisfaction of the Administration. If hand (manual) starting is impracticable, the Administration may permit compressed air,	**Technical**

		electricity, or other sources of stored energy, including hydraulic power or starting cartridges to be used as a means of starting. These means shall be such as to enable the diesel-driven power source to be started at least six times within a period of 30 min and at least twice within the first 10 min.	
FSS 12 Amend / CHAPTER 14 / 2.2.1.4	On or after 7/1/2014	2.2 Component requirements 2.2.1 Foam solution and foam concentrate 2.2.1.4 The foam concentrate supplied on board shall be approved by the Administration for the cargoes intended to be carried. Type B foam concentrates shall be supplied for the protection of crude oil, petroleum products and non-polar solvent cargoes. Type A foam concentrates shall be supplied for polar solvent cargoes, as listed in the table of chapter 17 of the IBC Code. Only one type of foam concentrate shall be supplied, and it shall be effective for the maximum possible number of cargoes intended to be carried. For cargoes for which foam is not effective or is incompatible, additional arrangements to the satisfaction of the Administration shall be provided.	**Technical**
FSS 12 Amend / CHAPTER 14 / 2.2.2.1	On or after 7/1/2014	2.2 Component requirements 2.2.2 Monitors and foam applicators 2.2.2.1 Foam from the fixed foam system shall be supplied by means of monitors and foam applicators. Prototype tests of the monitors and foam applicators shall be performed to ensure the foam expansion and drainage time of the foam produced does not differ more than ± 10 per cent of that determined in paragraph 2.2.1.4. When medium expansion ratio foam (between 21 to 1 and 200 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. At least 50 per cent of the foam solution supply rate required shall be delivered from each monitor. On tankers of less than 4,000 tonnes deadweight the Administration may not require installation of monitors but only applicators. However, in such a case the capacity of each applicator shall be at least 25 per cent of the foam solution supply rate required.	**Technical**
FSS 2014 Amend			Adopted by Res.MSC.367(93)
FSS 14 Amend / CHAPTER 15 / 2.2.1.1	On or after 1/1/2016	2.2 Requirements for all systems 2.2.1 General 2.2.1.1 The inert gas system referred to in chapter II-2 of the Convention shall be designed, constructed and tested to the satisfaction of the Administration. It shall be designed to be	**Technical**

		capable of rendering and maintaining the atmosphere of the relevant cargo tanks non-flammable.	
FSS 14 Amend / CHAPTER 15 / 2.2.3.2.3.3	On or after 1/1/2016	2.2.3.2 Inert gas lines 2.2.3.2.3 Each cargo tank not being inerted shall be capable of being separated from the inert gas main by: .3 equivalent arrangements to the satisfaction of the Administration, providing at least the same level of protection.	**Technical**
FSS 2016 Amend			Adopted by Res.MSC.403(96)
FSS 16 Amend (96th) / CHAPTER 17 / 3.7	On or after 1/1/2020	3 Engineering specifications for helidecks and helicopter landing areas 3.7 The system and its components shall be designed to withstand ambient temperature changes, vibration, humidity, shock impact and corrosion normally encountered on the open deck, and shall be manufactured and tested to the satisfaction of the Administration.	**Technical**
FSS 16 Amend (96th) / CHAPTER 17 / 3.8	On or after 1/1/2020	3 Engineering specifications for helidecks and helicopter landing areas 3.8 A minimum nozzle throw of at least 15 m shall be provided with all hose reels and monitors discharging foam simultaneously. The discharge pressure, flow rate and discharge pattern of deck integrated foam nozzles shall be to the satisfaction of the Administration, based on tests that demonstrate the nozzle's capability to extinguish fires involving the largest size helicopter for which the helideck is designed.	**Technical**
FSS 2019 Amend			Adopted by Res.MSC.457(101)
FSS 2019 Amend / CHAPTER 15 / 2.2.3.2.3.3	On or after 1/1/2024	2.2.3.2 Inert gas lines 2.2.3.2.3 Each cargo tank not being inerted shall be capable of being separated from the inert gas main by: .3 equivalent arrangements to the satisfaction of the Administration, providing at least the same level of protection.	**Technical**
FTP Code 2010			Adopted by Res.MSC.307(88)
FTP Code 2010 / Annex 1 / Part 11 / Appendix / 1.1	On or after 7/1/2012	1.1 Under the provisions of the 1994 HSC Code or 2000 HSC Code, constructions for use in high-speed craft shall have fire-resisting properties to the satisfaction of, and be approved by, the Administration. In this context "fire-resisting property" is the ability of the construction to insulate/protect an area from the influence of a fire in an adjoining area by having separating performance during a fire. Such constructions are fire-resisting bulkheads, decks, ceilings, linings and doors.	**Technical**
FTP Code 2010 / Annex 1 / Part 3	On or after 7/1/2012	3 Instrumentation 3.1 Positioning of thermocouples on the specimen	**Technical**

/ Appendix 2 /3.1.1.3		3.1.1 For each uninsulated cable transit, thermocouples shall be fixed on the unexposed face at each of the following locations: ... .3 on the surface of each type of cable included in the cable transit, at a distance of 25 mm from the face of the sealant system or material. In case of a group or bunch of cables, the group shall be treated as a single cable. In case of horizontal cables, the thermocouples shall be mounted on the uppermost surface of the cables. These thermocouples may be excluded if the diameters of the cables are too small to effectively affix the thermocouples to the cables. This shall be at the discretion of the Administration.	
LSA Code 1996			Adopted by Res.MSC.48(66)
LSA 1996 / CHAPTER I / 1.2.2	On or after 7/1/1998 Before 7/1/2008	1.2.2 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: ...	**Technical**
LSA 1996 / CHAPTER IV / 4.1.5.3	On or after 7/1/1998 Before 7/1/2008	4.1.5 Equipment 4.1.5.3 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 4.1.5.1 are necessary, the Administration may allow the liferafts carried on any such ships to be provided with the equipment specified in paragraphs 4.1.5.1.1 to 4.1.5.1.6 inclusive, 4.1.5.1.8, 4.1.5.1.9, 4.1.5.1.13 to 4.1.5.1.16 inclusive and 4.1.5.1.21 to 4.1.5.1.24 inclusive and one half of the equipment specified in paragraphs 4.1.5.1.10 to 4.1.5.1.12 inclusive. The marking required by paragraphs 4.2.6.3.5 and 4.3.6.7 on such liferafts shall be "SOLAS B PACK" in block capitals of the Roman alphabet.	**Technical**
LSA 1996 / CHAPTER IV / 4.4.6.2	On or after 7/1/1998 Before 7/1/2008	4.4.6 Lifeboat propulsion 4.4.6.2 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	**Technical**

		different temperature is appropriate. The starting systems shall not be impeded by the engine casing, seating or other obstructions.	
LSA 1996 / CHAPTER IV / 4.4.8.32	On or after 7/1/1998 Before 7/1/2008	4.4.8 Lifeboat equipment All items of lifeboat equipment, whether required by this paragraph or elsewhere in section 4.4, shall be secured within the lifeboat by lashings, storage in lockers or compartments, storage in brackets or similar mounting arrangements or other suitable means. However, in the case of a lifeboat to be launched by falls the boat-hooks shall be kept free for fending off purposes. The equipment shall be secured in such a manner as not to interfere with any abandonment procedures. All items of lifeboat equipment shall be as small and of as little mass as possible and shall be packed in a suitable and compact form. 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 4.4.8.12 and 4.4.8.26 are unnecessary, the Administration may allow these items to be dispensed with.	**Specific** Case by case assessment
LSA 1996 / CHAPTER IV / 4.5.4	On or after 7/1/1998 Before 7/1/2008	4.5 Partially enclosed lifeboats 4.5.4 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**
LSA 1996 / CHAPTER V / 5.1.1.4	On or after 7/1/1998 Before 7/1/2008	5.1 Rescue boats 5.1.1 General requirements 5.1.1.4 Rescue boats which are a combination of rigid and inflated construction shall comply with the appropriate requirements of this section to the satisfaction of the Administration.	**Technical**
LSA 1996 / CHAPTER V / 5.1.3.8	On or after 7/1/1998 Before 7/1/2008	5.1 Rescue boats 5.1.3 Additional requirements for inflated rescue boats 5.1.3.8 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**
LSA 1996 / CHAPTER VI / 6.1.2.9	On or after 7/1/1998 Before 7/1/2008	6.1 Launching and embarkation appliances 6.1.2 Launching appliances using falls and a winch 6.1.2.9 The lowering speed of a fully equipped liferaft without persons onboard shall be to the satisfaction of the Administration.	**Technical**

		The lowering speed of other survival craft, fully equipped but without persons on board, shall be at least 70% of that required by paragraph 6.1.2.8.	
LSA 1996 / CHAPTER VI / 6.2.1.2	On or after 7/1/1998	6.2 Marine evacuation systems 6.2.1 Construction of the marine evacuation systems 6.2.1.2 Strength and construction of the passage and platform shall be to the satisfaction of the Administration.	**Technical**
LSA 1996 / CHAPTER VI / 6.2.1.3.6	On or after 7/1/1998	6.2 Marine evacuation systems 6.2.1 Construction of the marine evacuation systems 6.2.1.3 The platform if fitted shall be: .6 fitted with a stabilizing system to the satisfaction of the Administration;	**Technical**
LSA 2006 Amend			Adopted by Res.MSC.218(82)
LSA 2006 Amend / CHAPTER I / 1.2.2	On or after 7/1/2008	1.2.2 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: ...	**Technical**
LSA 2006 Amend / CHAPTER IV / 4.1.5.3	On or after 7/1/2008	4.1.5 Equipment 4.1.5.3 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 4.1.5.1 are necessary, the Administration may allow the liferafts carried on any such ships to be provided with the equipment specified in paragraphs 4.1.5.1.1 to 4.1.5.1.6 inclusive, 4.1.5.1.8, 4.1.5.1.9, 4.1.5.1.13 to 4.1.5.1.16 inclusive and 4.1.5.1.21 to 4.1.5.1.24 inclusive and one half of the equipment specified in paragraphs 4.1.5.1.10 to 4.1.5.1.12 inclusive. The marking required by paragraphs 4.2.6.3.5 and 4.3.6.7 on such liferafts shall be "SOLAS B PACK" in block capitals of the Roman alphabet.	**Technical**
LSA 2006 Amend / CHAPTER IV / 4.4.6.2	On or after 7/1/2008 Before 7/1/2010	4.4.6 Lifeboat propulsion 4.4.6.2 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	**Technical**

		different temperature is appropriate. The starting systems shall not be impeded by the engine casing, seating or other obstructions.	
LSA 2006 Amend / CHAPTER IV / 4.4.8.32	On or after 7/1/2008 Before 7/1/2010	4.4.8 Lifeboat equipment All items of lifeboat equipment, whether required by this paragraph or elsewhere in section 4.4, shall be secured within the lifeboat by lashings, storage in lockers or compartments, storage in brackets or similar mounting arrangements or other suitable means. However, in the case of a lifeboat to be launched by falls the boat-hooks shall be kept free for fending off purposes. The equipment shall be secured in such a manner as not to interfere with any abandonment procedures. All items of lifeboat equipment shall be as small and of as little mass as possible and shall be packed in a suitable and compact form. 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 4.4.8.12 and 4.4.8.26 are unnecessary, the Administration may allow these items to be dispensed with.	**Specific** Case by case assessment
LSA 2006 Amend / CHAPTER IV / 4.5.4	On or after 7/1/2008	4.5 Partially enclosed lifeboats 4.5.4 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**
LSA 2006 Amend / CHAPTER V / 5.1.1.4	On or after 7/1/2008 Before 7/1/2010	5.1 Rescue boats 5.1.1 General requirements 5.1.1.4 Rescue boats which are a combination of rigid and inflated construction shall comply with the appropriate requirements of this section to the satisfaction of the Administration.	**Technical**
LSA 2006 Amend / CHAPTER V / 5.1.3.8	On or after 7/1/2008 Before 7/1/2010	5.1 Rescue boats 5.1.3 Additional requirements for inflated rescue boats 5.1.3.8 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**
LSA 2006 Amend / CHAPTER VI / 6.1.2.9	On or after 7/1/2008 Before 1/1/2020	6.1 Launching and embarkation appliances 6.1.2 Launching appliances using falls and a winch 6.1.2.9 The lowering speed of a fully equipped liferaft without persons onboard shall be to the satisfaction of the Administration.	**Technical**

		The lowering speed of other survival craft, fully equipped but without persons on board, shall be at least 70% of that required by paragraph 6.1.2.8.	
LSA 2008 Amend			Adopted by Res.MSC.272(85)
LSA 2008 Amend / CHAPTER IV / 4.4.6.2	On or after 7/1/2010 Before 1/1/2013	4.4.6 Lifeboat propulsion 4.4.6.2 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, seating or other obstructions.	**Technical**
LSA 2008 Amend / CHAPTER IV / 4.4.8.32	On or after 7/1/2010 Before 1/1/2013	4.4.8 Lifeboat equipment All items of lifeboat equipment, whether required by this paragraph or elsewhere in section 4.4, shall be secured within the lifeboat by lashings, storage in lockers or compartments, storage in brackets or similar mounting arrangements or other suitable means. However, in the case of a lifeboat to be launched by falls the boat-hooks shall be kept free for fending off purposes. The equipment shall be secured in such a manner as not to interfere with any abandonment procedures. All items of lifeboat equipment shall be as small and of as little mass as possible and shall be packed in a suitable and compact form. 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 4.4.8.12 and 4.4.8.26 are unnecessary, the Administration may allow these items to be dispensed with.	**Specific** Case by case assessment
LSA 2008 Amend / CHAPTER V / 5.1.1.4	On or after 7/1/2010	5.1 Rescue boats 5.1.1 General requirements 5.1.1.4 Rescue boats which are a combination of rigid and inflated construction shall comply with the appropriate requirements of this section to the satisfaction of the Administration.	**Technical**
LSA 2008 Amend / CHAPTER V / 5.1.3.8	On or after 7/1/2010	5.1 Rescue boats 5.1.3 Additional requirements for inflated rescue boats	**Technical**

		5.1.3.8 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.	
LSA 2011 Amend			Adopted by Res.MSC.293(87)
LSA 2011 Amend / CHAPTER IV / 4.4.6.2	On or after 1/1/2013 Before 1/1/2024	4.4.6 Lifeboat propulsion 4.4.6.2 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, seating or other obstructions.	**Technical**
LSA 2011 Amend / CHAPTER IV / 4.4.8.32	On or after 1/1/2013 Before 1/1/2024	4.4.8 Lifeboat equipment All items of lifeboat equipment, whether required by this paragraph or elsewhere in section 4.4, shall be secured within the lifeboat by lashings, storage in lockers or compartments, storage in brackets or similar mounting arrangements or other suitable means. However, in the case of a lifeboat to be launched by falls the boat-hooks shall be kept free for fending off purposes. The equipment shall be secured in such a manner as not to interfere with any abandonment procedures. All items of lifeboat equipment shall be as small and of as little mass as possible and shall be packed in a suitable and compact form. 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 4.4.8.12 and 4.4.8.26 are unnecessary, the Administration may allow these items to be dispensed with.	**Specific** Case by case assessment
LSA 2017 Amend			Adopted by Res.MSC.425(98)
LSA 2017 Amend / CHAPTER VI / 6.1.2.9	On or after 1/1/2020	6.1 Launching and embarkation appliances 6.1.2 Launching appliances using falls and a winch 6.1.2.9 The lowering speed of a fully equipped liferaft without persons onboard shall be to the satisfaction of the Administration. The lowering speed of other survival craft, fully equipped but without persons on board, shall be at least 70% of that required by paragraph 6.1.2.8.	**Technical**

LSA 2019 Amend			Adopted by Res.MSC.459(101)
LSA 2019 Amend / CHAPTER IV / 4.4.6.2	On or after 1/1/2024	4.4.6 Lifeboat propulsion 4.4.6.2 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, seating or other obstructions.	**Technical**
LSA 2019 Amend / CHAPTER IV / 4.4.8.32	On or after 1/1/2024	4.4.8 Lifeboat equipment All items of lifeboat equipment, whether required by this paragraph or elsewhere in section 4.4, shall be secured within the lifeboat by lashings, storage in lockers or compartments, storage in brackets or similar mounting arrangements or other suitable means. However, in the case of a lifeboat to be launched by falls the boat-hooks shall be kept free for fending off purposes. The equipment shall be secured in such a manner as not to interfere with any abandonment procedures. All items of lifeboat equipment shall be as small and of as little mass as possible and shall be packed in a suitable and compact form. 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 4.4.8.12 and 4.4.8.26 are unnecessary, the Administration may allow these items to be dispensed with.	**Specific** Case by case assessment
LSA 2019 Amend / CHAPTER VI / 6.1.2.9	On or after 1/1/2024	6.1 Launching and embarkation appliances 6.1.2 Launching appliances using falls and a winch 6.1.2.9 The lowering speed of a fully equipped liferaft without persons onboard shall be to the satisfaction of the Administration. The lowering speed of other survival craft, fully equipped but without persons on board, shall be at least 70% of that required by paragraph 6.1.2.8.	**Technical**
LSA 2021 Amend			Adopted by Res.MSC.485(103)
LSA 2021 Amend / CHAPTER IV / 4.4.6.2	On or after 1/1/2024	4.4.6 Lifeboat propulsion 4.4.6.2 The engine shall be provided with either a manual starting system, or a power starting system with two independent	**Technical**

		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, seating or other obstructions.	
LSA 2021 Amend / CHAPTER IV / 4.4.8.32	On or after 1/1/2024	4.4.8 Lifeboat equipment All items of lifeboat equipment, whether required by this paragraph or elsewhere in section 4.4, shall be secured within the lifeboat by lashings, storage in lockers or compartments, storage in brackets or similar mounting arrangements or other suitable means. However, in the case of a lifeboat to be launched by falls the boat-hooks shall be kept free for fending off purposes. The equipment shall be secured in such a manner as not to interfere with any abandonment procedures. All items of lifeboat equipment shall be as small and of as little mass as possible and shall be packed in a suitable and compact form. 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 4.4.8.12 and 4.4.8.26 are unnecessary, the Administration may allow these items to be dispensed with.	**Specific** Case by case assessment
Grain Code			Adopted by Res.MSC.23(59)
GRAIN Code / Annex / Part A / 3.5		3 Document of authorization 3.5 A ship without such a document of authorization shall not load grain until the master demonstrates to the satisfaction of the Administration, or of the Contracting Government of the port of loading acting on behalf of the Administration, that, in its loaded condition for the intended voyage, the ship complies with the requirements of this Code. See also A 8.3 and A 9.	**Specific** Not allowed.
GRAIN Code / Annex / Part A / 9.1.6		9 Optional stability requirements for ships without documents of authorization carrying partial cargoes of bulk grain 9.1 A ship not having on board a document of authorization issued in accordance with A 3 of this Code may be permitted to load bulk grain provided that: .6 the master demonstrates to the satisfaction of the Administration or the Contracting Government of the port of	**Specific** Not allowed.

		loading on behalf of the Administration that the ship in its proposed loaded condition will comply with the requirements of this section.	
Timber Code 2011			Adopted by Res.A.1048(27)
Timber Code 2011 / PART B / CHAPTER 7 / 7.2		7.2 Uprights should be designed for the forces they have to take up according to the formulas in this section. The connection of uprights to the deck or hatch is to be to the satisfaction of the Administration. The design of high uprights especially should be such that the deflection is limited. Uprights may be complemented by different lashing arrangements.	**Technical**
BLU Code			Adopted by Res.A.862(20) on 27 November 1997
BLU Code / Section 6 / 6.3.6		6. Unloading cargo and handling of ballast 6.3 Terminal duties 6.3.6 The terminal should make every effort to avoid damage to the ship when using unloading or hold cleaning equipment. If damage does occur, it should be reported to the master and, if necessary, repaired. If the damage could impair the structural capability or watertight integrity of the hull, or the ship's essential engineering systems, the Administration or an organization recognized by it and the appropriate authority of the port State should be informed, so that they can decide whether immediate repair is necessary or whether it can be deferred. In either case, the action taken, whether to carry out the repair or defer it, should be to the satisfaction of the Administration or an organization recognized by it and the appropriate authority of the port State. Where immediate repair is considered necessary, it should be carried out to the satisfaction of the master before the ship leaves the port.	**Specific** Cabinet Regulation No. 143 adopted 14 February 2006 "Regulations for the Safe Loading and Unloading of Bulk Carriers" / Chapter VI "Repair of Damage Incurred During Loading or Unloading"
BLU Manual / Section 6 / 6.3.6	For terminals	6.3.6 The terminal should make every effort to avoid damage to the ship when using unloading or hold cleaning equipment. If damage does occur, it should be reported to the masterand, if necessary, repaired. If the damage could impair the structural capability or watertight integrity of the hull, or the ship's essential engineering systems, the Administration or an organization recognized by it and the appropriate authority of the port State should be informed, so that they can decide whether immediate repair is necessary or whether it can be deferred. In either case, the action taken, whether to carry out the repair or defer it, should be to the satisfaction of the Administration or an	**Specific** Cabinet Regulation No. 143 adopted 14 February 2006 "Regulations for the Safe Loading and Unloading of Bulk Carriers" / Chapter VI "Repair of Damage Incurred During Loading or Unloading"

		organization recognized by it and the appropriate authority of the port State. Where immediate repair is considered necessary, it should be carried out to the satisfaction of the master before the ship leaves the port.	
IMSBC Code			Adopted by Res.MSC.268(85)
IMSBC Code 2008 / Section 1 / Chapter VI / Part A / 3.1	On or after 1/1/2011 Before 1/1/2015	Regulation 3 Oxygen analysis and gas detection equipment .1 When transporting a solid 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**
IMSBC Code 2008 / Section 1 / Chapter VI / Part B / 6.1	On or after 1/1/2011 Before 1/1/2015	Regulation 6 Acceptability for shipment 1 Prior to loading a solid 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**
IMSBC 2013 Amendment			
IMSBC 2013 Amendment / Section 1/ Chapter VI / Part A / 3.1	On or after 1/1/2015 Before 1/1/2017 Retroactive	Regulation 3 Oxygen analysis and gas detection equipment .1 When transporting a solid 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**
IMSBC 2013 Amendment / Section 1/ Chapter VI / Part B / 6.1	On or after 1/1/2015 Before 1/1/2017 Retroactive	Regulation 6 Acceptability for shipment 1 Prior to loading a solid 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**

IMSBC 2015 Amendment			
IMSBC 2015 Amendment / Section 1/ Chapter VI / Part A / 3.1	On or after 1/1/2017 Retroactive	Regulation 3 Oxygen analysis and gas detection equipment .1 When transporting a solid 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**
IMSBC 2015 Amendment / Section 1/ Chapter VI / Part B / 6.1	On or after 1/1/2017 Retroactive	Regulation 6 Acceptability for shipment 1 Prior to loading a solid 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**
IMSBC 2017 Amendment			
IMSBC 2017 Amendment / Section 1/ Chapter VI / Part A / 3.1	On or after 1/1/2019 Retroactive	Regulation 3 Oxygen analysis and gas detection equipment .1 When transporting a solid 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**
IMSBC 2017 Amendment / Section 1/ Chapter VI / Part B / 6.1	On or after 1/1/2019 Retroactive	Regulation 6 Acceptability for shipment 1 Prior to loading a solid 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**
IMSBC 2019 Amendment			
IMSBC 2019 Amendment / Section 1/ Chapter VI / Part A / 3.1	On or after 1/1/2021 Retroactive	Regulation 3 Oxygen analysis and gas detection equipment .1 When transporting a solid 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	**Technical**

		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.	
IMSBC 2019 Amendment / Section 1/ Chapter VI / Part B / 6.1	On or after 1/1/2021 Retroactive	Regulation 6 Acceptability for shipment 1 Prior to loading a solid 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**
MSBC 2022 Amendment			
IMSBC 2022 Amendment / Section 1/ Chapter VI / Part A / 3.1	On or after 12/1/2023 Retroactive	Regulation 3 Oxygen analysis and gas detection equipment .1 When transporting a solid 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**
IMSBC 2022 Amendment / Section 1/ Chapter VI / Part B / 6.1	On or after 12/1/2023 Retroactive	Regulation 6 Acceptability for shipment 1 Prior to loading a solid 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**
MSBC 2023 Amendment			
IMSBC 2023 Amendment / Section 1/ Chapter VI / Part A / 3.1	On or after 1/1/2025 Retroactive	Regulation 3 Oxygen analysis and gas detection equipment .1 When transporting a solid 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**
IMSBC 2023 Amendment / Section 1/	On or after 1/1/2025 Retroactive	Regulation 6 Acceptability for shipment 1 Prior to loading a solid bulk cargo, the master shall be in possession of comprehensive information on the ship's stability	**Technical**

Chapter VI / Part B / 6.1		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.	
BCH Code			Adopted by Res.A.212(VII)
BCH 1971 / CHAPTER II / 2.15.1		2.15.1 When provided, cargo heating or cooling systems should be constructed, fitted and tested to the satisfaction of the Administration. Materials used in the construction of temperature control systems should be suitable for use with the cargo to be carried.	**Technical**
BCH 1971 / CHAPTER II / 2.17		2.17 Structural materials used for tank construction, together with associated piping, pumps, valves, vents and their adjoining materials, should be suitable at the carriage temperature and pressure, for the cargo to be carried to the satisfaction of the Administration. Steel is assumed to be the normal material of construction. Where applicable the following should be taken into account in selecting the material of construction:	**Technical**
BCH 1971 / CHAPTER IV / 4.13.3		4. 13 Pump rooms 4.13.3 Pumps should be located in the cargo tank or the pump room should be located on the deck level. Special consideration by the Administration should be required for below deck pump room.	**Technical**
BCH Code 2018 Amend			Adopted by Res.MEPC.249(66)
BCH 2018 Consolidated Edition / 2.2.1.2.1	Before 7/1/1986	2.2.1.2 All ships subject to the Code, shall be fitted with a stability instrument, capable of verifying compliance with intact and damage stability requirements approved by the Administration, at the first scheduled renewal survey of the ship on or after 1 January 2016, but not later than 1 January 2021, having regard to the performance standards recommended by the Organization: ... .1 notwithstanding the above, a stability instrument fitted on a ship before 1 January 2016 need not be replaced provided it is capable of verifying compliance with intact and damage stability, to the satisfaction of the Administration;	**Technical**
BCH 2018 Consolidated Edition / 2.15.1	Before 7/1/1986	Cargo temperature control 2.15.1 When provided, cargo heating or cooling systems should be constructed, fitted and tested to the satisfaction of the Administration. Materials used in the construction of temperature-control systems should be suitable for use with the cargo to be carried.	**Technical**

BCH 2018 Consolidated Edition / 3.14.1	On or after 5/20/1981 Before 7/1/1986	3.14 Fire-extinguishing arrangements for cargo-tank areas 3.14.1 All ships, irrespective of size, should be fitted with a fixed deck foam fire-extinguishing system in accordance with the following requirements. However, ships which are dedicated to the carriage of specific cargoes should be protected by alternative provisions to the satisfaction of the Administration when they are equally effective for the products concerned as the deck foam system required for the generality of flammable cargoes.	**Technical**
BCH 2018 Consolidated Edition / 3.14.2	On or after 5/20/1981 Before 7/1/1986	3.14 Fire-extinguishing arrangements for cargo-tank areas 3.14.2 Only one type of foam concentrate should be supplied, and it should be effective for the maximum possible number of cargoes intended to be carried. For other cargoes for which foam is not effective or is incompatible, additional arrangements to the satisfaction of the Administration should be provided. Regular protein forms should not be used.	**Technical**
BCH 2018 Consolidated Edition / 3.14.5(c)	On or after 5/20/1981 Before 7/1/1986	3.14 Fire-extinguishing arrangements for cargo-tank areas 3.14.5 The rate of supply of foam solution should be not less than the greater of the following: (c) 10 ℓ/min per square metre of the area protected by the largest monitor, such area being entirely forward of the monitor, but not less than 1,250 ℓ/min. For ships of less than 4,000 tons deadweight, the minimum capacity of the monitor should be to the satisfaction of the Administration.	**Technical**
BCH 2018 Consolidated Edition / 3.14.7	On or after 5/20/1981 Before 7/1/1986	3.14 Fire-extinguishing arrangements for cargo-tank areas 3.14.7 Foam from the fixed foam system should be supplied by means of monitors and foam applicators. At least 50% of the foam rate required in 3.14.5 (a) or (b) should be delivered from each monitor The capacity of any monitor should be at least 10 ℓ/min of foam solution per square metre of deck area protected by that monitor, such area being entirely forward of the monitor. Such capacity should be not less than 1,250 ℓ/min. For ships of less than 4,000 tons deadweight, the minimum capacity of the monitor should be to the satisfaction of the Administration.	**Technical**
BCH 2018 Consolidated Edition / 4.13.2	Before 7/1/1986	4.13 Cargo pump-rooms 4.13.2 Cargo pumps should be located in the cargo tank or the cargo pump-room should be located on the deck level. Special consideration by the Administration should be required for below-deck largo pump-rooms.	**Technical**
BCH 2018 Consolidated Edition / 4.19.3	Before 7/1/1986	4.19 Ammonium nitrate solution, 93% or less 4.19.3 Except where expressly approved by the Administration, ammonium nitrate solutions should not be transported in tanks	**Technical**

		which have previously contained other cargoes. Tanks and associated equipment should be recleaned to the satisfaction of the Administration.	
IBC Code			
IBC 1983 / Annex (Chapters) / 2.9.2.3	On or after 7/1/1986 Before 10/30/1988	Survival requirements 2.9.2 In any stage of flooding: .3 The residual stability during intermediate stages of flooding should be to the satisfaction of the Administration. However, it should never be significantly less than that required by 2.9.3.	**Technical**
IBC 1983 / Annex (Chapters) / 3.4.4	On or after 7/1/1986 Before 1/1/2007	Access to spaces in the cargo area 3.4.4 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**
IBC 1983 / Annex (Chapters) / 5.1	On or after 7/1/1986 Before 7/1/1998	Piping scantlings 5.1.6.4 For flanges not complying with a standard the dimensions of flanges and relative bolts should be to the satisfaction of the Administration.	**Technical**
IBC 1983 / Annex (Chapters) / 7.1.1	On or after 7/1/1986 Before 1/1/2007	Cargo temperature control 7.1.1 When provided, any cargo heating or cooling systems should be constructed, fitted and tested to the satisfaction of the Administration. Materials used in the construction of temperature control systems should be suitable for use with the product intended to be carried.	**Technical**
IBC 1983 / Annex (Chapters) / 10.1.5	On or after 7/1/1986 Before 1/1/2007	Electrical installation 10.1.5 Where electrical equipment is installed in hazardous locations, as permitted in this chapter, it should be to the satisfaction of the Administration and certified by the relevant authorities recognized by the Administration for operation in the flammable atmosphere concerned, as indicated in column "g" in the table of chapter 17.	**Technical**
IBC 1983 / Annex (Chapters) / 11.3.2	On or after 7/1/1986 Before 10/19/1990	Cargo area 11.3.2 Only one type of foam concentrate should be supplied, and it should be effective for the maximum possible number of cargoes intended to be carried. For other cargoes for which foam is not effective or is incompatible, additional arrangements to the satisfaction of the Administration should be provided. Basic protein foam should not be used.	**Technical**
IBC 1983 / Annex	On or after 7/1/1986	Cargo area 11.3.5 The rate of supply of foam solution should be not less than the greatest of the following:	**Technical**

(Chapters) / 11.3.5.3	Before 10/19/1990	... .3 10 ℓ/m²/min per square metre of the area protected by the largest monitor, such area being entirely forward of the monitor, but not less than 1,250ℓ/min. For ships of less than 4,000 tonnes deadweight, the minimum capacity of the monitor should be to the satisfaction of the Administration.	
IBC 1983 / Annex (Chapters) / 11.3.7	On or after 7/1/1986 Before 10/19/1990	Cargo area 11.3.7 Foam from the fixed foam system should be supplied by means of monitors and foam applicators. At least 50 per cent of the foam rate required in 11.3.5.1 or 11.3.5.2 should be delivered from each monitor. The capacity of any monitor should be at least 10 ℓ/min of foam solution per square metre of deck area protected by that monitor, such area being entirely forward of the monitor. Such capacity should be not less than 1,250ℓ /min. For ships of less than 4,000 tonnes deadweight, the minimum capacity of the monitor should be to the satisfaction of the Administration.	**Technical**
IBC 1983 / Annex (Chapters) / 11.3.13	On or after 7/1/1986 Before 10/19/1990	Cargo area 11.3.13 Ships which are dedicated to the carriage of a restricted number of cargoes should be protected by alternative provisions to the satisfaction of the Administration when they are just as effective for the products concerned as the deck foam system required for the generality of flammable cargoes.	**Technical**
IBC 1983 / Annex (Chapters) / 15.2.3	On or after 7/1/1986 Before 1/1/2007	Ammonium nitrite solution (93% or less) 15.2.3 Except where expressly approved by the Administration, ammonium nitrate solutions should not be transported in tanks which have previously contained other cargoes unless tanks and associated equipment have been cleaned to the satisfaction of the Administration.	**Technical**
IBC 1983 / Annex (Chapters) / 19.3.5	On or after 7/1/1986 Before 1/1/2007	Ship arrangements 19.3.5 Where necessary, compliance with 3.2.1 need not be required in so far as accommodation spaces, service spaces, control stations and machinery spaces other than those of category A may be permitted forward of the cargo area, subject to an equivalent standard of safety and appropriate fire-extinguishing arrangements being provided to the satisfaction of the Administration.	**Technical**
IBC 87/89/90 Amend			
IBC 87/89/90 Amend / Annex	On or after 7/1/1986	Survival requirements 2.9.2 In any stage of flooding:	**Technical**

(Chapters) / 2.9.2.3	Before 1/1/2007	.3 the residual stability during intermediate stages of flooding should be to the satisfaction of the Administration. However, it should never be significantly less than that required by 2.9.3.	
IBC 87/89/90 Amend / Annex (Chapters) / 11.3.2	On or after 7/1/1986 Before 1/1/2007	Cargo area 11.3.2 Only one type of foam concentrate should be supplied, and it should be effective for the maximum possible number of cargoes intended to be carried. For other cargoes for which foam is not effective or is incompatible, additional arrangements to the satisfaction of the Administration should be provided. Regular protein foam should not be used.	**Technical**
IBC 87/89/90 Amend / Annex (Chapters) / 11.3.5	On or after 7/1/1986 Before 1/1/2007	Cargo area 11.3.5 The rate of supply of foam solution should be not less than the greatest of the following: ... .3 10ℓ/min per square metre of the area protected by the largest monitor, such area being entirely forward of the monitor, but not less than 1,250ℓ/min. For ships of less than 4,000 tonnes deadweight, the minimum capacity of the monitor should be to the satisfaction of the Administration.	**Technical**
IBC 87/89/90 Amend / Annex (Chapters) / 11.3.7		Cargo area 11.3.7 Foam from the fixed foam system should be supplied by means of monitors and foam applicators. At least 50 % of the foam rate required in 11.3.5.1 or 11.3.5.2 should be delivered from each monitor. The capacity of any monitor should be at least 10ℓ/min of foam solution per square metre of deck area protected by that monitor, such area being entirely forward of the monitor. Such capacity should be not less than 1,250ℓ/min. For ships of less than 4,000 tonnes deadweight, the minimum capacity of the monitor should be to the satisfaction of the Administration.	**Technical**
IBC 87/89/90 Amend / Annex (Chapters) / 11.3.13		Cargo area 11.3.13 Ships which are dedicated to the carriage of a restricted number of cargoes should be protected by alternative provisions to the satisfaction of the Administration when they are just as effective for the products concerned as the deck foam system required for the generality of flammable cargoes.	**Technical**
IBC 92/96/97 Amend			
IBC 92/96/97 Amend / Annex (Chapters) / 5.1.6.4	On or after 7/1/1986 Before 1/1/2007	Piping scantlings 5.1.6.4 For flanges not complying with a standard the dimensions of flanges and associated bolts should be to the satisfaction of the Administration.	**Technical**

IBC 2004 Amend			Adopted by Res.MEPC.119(52); Res.MSC.176(79)
IBC 2004 Amend / Annex (Chapters) / 2.9.2.3	After 1/1/2007	Survival requirements 2.9.2 In any stage of flooding: .3 the residual stability during intermediate stages of flooding shall be to the satisfaction of the Administration. However, it shall never be significantly less than that required by 2.9.3.	**Technical**
IBC 2004 Amend / Annex (Chapters) / 3.4.4	After 1/1/2007	Access to spaces in the cargo area 3.4.4 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**
IBC 2004 Amend / Annex (Chapters) / 5.1.6.4	After 1/1/2007	Piping scantlings 5.1.6.4 For flanges not complying with a standard, the dimensions for flanges and associated bolts shall be to the satisfaction of the Administration.	**Technical**
IBC 2004 Amend / Annex (Chapters) / 7.1.1	After 1/1/2007	Cargo temperature control 7.1.1 When provided, any cargo heating or cooling systems shall be constructed, fitted and tested to the satisfaction of the Administration. Materials used in the construction of temperature-control systems shall be suitable for use with the product intended to be carried.	**Technical**
IBC 2004 Amend / Annex (Chapters) / 10.1.4	After 1/1/2007	Electrical installation 10.1.4 Electrical equipment, cables and wiring shall not be installed in the hazardous locations unless it conforms with the standards not inferior to those acceptable to the Organization*. However, for locations not covered by such standards, electrical equipment, cables and wiring which do not conform to the standards may be installed in hazardous locations based on a risk assessment to the satisfaction of the Administration, to ensure that an equivalent level of safety is assured.	**Technical**
IBC 2004 Amend / Annex (Chapters) / 10.1.5	After 1/1/2007	Electrical installation 10.1.5 Where electrical equipment is installed in hazardous locations, as permitted in this chapter, it shall be to the satisfaction of the Administration and certified by the relevant authorities recognized by the Administration for operation in the flammable atmosphere concerned, as indicated in column "i" in the table of chapter 17.	**Technical**
IBC 2004 Amend / Annex	After 1/1/2007	Cargo area 11.3.2 Only one type of foam concentrate shall be supplied, and it shall be effective for the maximum possible number of cargoes	**Technical**

(Chapters) / 11.3.2		intended to be carried. For other cargoes for which foam is not effective or is incompatible, additional arrangements to the satisfaction of the Administration shall be provided. Regular protein foam shall not be used.	
IBC 2004 Amend / Annex (Chapters) / 11.3.5.3	After 1/1/2007	Cargo area 11.3.5 The rate of supply of foam solution shall be not less than the greatest of the following: ... .3 10 ℓ/min per square metre of the area protected by the largest monitor, such area being entirely forward of the monitor, but not less than 1,250 ℓ/min. For ships less than 4,000 tonnes deadweight, the minimum capacity of the monitor shall be to the satisfaction of the Administration.	**Technical**
IBC 2004 Amend / Annex (Chapters) / 11.3.7	After 1/1/2007	Cargo area 11.3.7 Foam from the fixed foam system shall be supplied by means of monitors and foam applicators. At least 50% of the foam rate required in 11.3.5.1 or 11.3.5.2 shall be delivered from each monitor. The capacity of any monitor shall be at least 10 ℓ/min of foam solution per square metre of deck area protected by that monitor, such area being entirely forward of the monitor. Such capacity shall be not less than 1,250 ℓ/min. For ships less than 4,000 tonnes deadweight, the minimum capacity of the monitor shall be to the satisfaction of the Administration.	**Technical**
IBC 2004 Amend / Annex (Chapters) / 11.3.13	After 1/1/2007	Cargo area 11.3.13 Ships which are dedicated to the carriage of a restricted number of cargoes shall be protected by alternative provisions to the satisfaction of the Administration when they are just as effective for the products concerned as the deck foam system required for the generality of flammable cargoes.	**Technical**
IBC 2004 Amend / Annex (Chapters) / 15.2.3	After 1/1/2007	Ammonium nitrite solution (93% or less) 15.2.3 Except where expressly approved by the Administration, ammonium nitrate solutions shall not be transported in tanks which have previously contained other cargoes unless tanks and associated equipment have been cleaned to the satisfaction of the Administration.	**Technical**
IBC 2014 Amend			Adopted by Res.MSC.369(93); Res.MEPC.250(66)
IBC 2014 Amend / 2.2.6.2	On or after 7/1/1986	Freeboard and stability 2.2.6 All ships, subject to the Code, shall be fitted with a stability instrument, capable of verifying compliance with intact and damage stability requirements, approved by the Administration	**Technical**

		having regard to the performance standards recommended by the Organization*: ... .2 notwithstanding the requirements of 2.2.6.1, a stability instrument fitted on a ship constructed before 1 January 2016 need not be replaced provided it is capable of verifying compliance with intact and damage stability, to the satisfaction of the Administration;	
IBC 2022 Amend			Adopted by Res.MSC.526 (106); Res.MEPC.345(78)
IBC 2022 Amend / Annex (Chapters) / 2.9.2.3	On or after 7/1/1986	Survival requirements 2.9.2 In any stage of flooding: .3 the residual stability during intermediate stages of flooding shall be to the satisfaction of the Administration. However, it shall never be significantly less than that required by 2.9.3.	**Technical**
Existing GC Code			Adopted by Res.A.329(IX)
Existing GC / 1.2.3	Before 1/1/1977	1.2 Application 1.2.3 The requirements of the Code for the Construction and Equipment of Ships Carrying Liquefied Gases in Bulk, (Resolution A.328(IX)), should be applied to ships specified in 1 2.2(b) of the Code as far as reasonable and practicable to the satisfaction of the Administration. Such ships should be issued a Certificate of Fitness provided for in the Code for the Construction and Equipment of Ships Carrying Liquefied Gases in Bulk (Resolution A.328(IX)), which should be endorsed to indicate: (a) that the certificate is issued under Resolution A.329(IX), and (b) specifically the aspects of the vessel which do not comply with the Code for the Construction and Equipment of Ships Carrying Liquefied Gases in Bulk (Resolution A.328(IX)).	**Technical**
Existing GC / 3.6.1	Before 1/1/1977	3.6 Air-locks 3.6.1 An air-lock is permitted only between a gas-dangerous zone on the open weather deck and a gas-safe space and should consist of two steel doors. The door facing the open deck is to be substantially gas-tight and the tightness of the inner door should be to the satisfaction of the Administration.	**Technical**
Existing GC / 4.1	Before 1/1/1977	Cargo containment arrangements should be to the satisfaction of the Administration having regard to the applicable provisions given in Chapter IV of the New Ships Code.	**Technical**
Existing GC / 4.1.2(c)	Before 1/1/1977	4.1.2 Membrane tanks	**Technical**

		(c) The definition of membrane tanks does not exclude designs such as those in which non-metallic membranes are used or in which membranes are included or incorporated in insulation. Such designs require, however, special consideration by the Administration.	
Existing GC / 4.1.5(c)	Before 1/1/1977	4.1.5 Design vapour pressure Po is the maximum gauge pressure at the top of the tank which has been used in the design of the tank. (c) Subject to special consideration by the Administration and to the limitations given in 4.1.1 to 4.1.4 for the various tank types, a vapour pressure higher than P o may be accepted in harbour conditions, where dynamic loads are reduced.	**Technical**
Existing GC / 4.1.6	Before 1/1/1977	4.1.6 Design temperature is the minimum temperature at which cargo may be loaded and/or transported in the cargo tanks, due to their materials of construction. Provisions to the satisfaction of the Administration should be made so that the tank or cargo temperature cannot be lowered below the design temperature.	**Technical**
Existing GC / 4.4.4(b)	Before 1/1/1977	4.4 Insulation 4.4.4 To ensure that the temperature of the hull material does not fall below the minimum allowable values at ambient temperature conditions of +5°C for air and 0°C for sea-water, approved means of heating may be used for the transverse hull structural material in all crises referred to in 4.4.1 and 4.4.2 and for the longitudinal hull structural material in all cases referred to in 4.4.2. If lower ambient temperatures are specified, approved means of healing may also be used for longitudinal structural material in the case referred to in 4.4.1, provided the material remains suitable for the ambient temperature condition of +5"C for air and 0°C for sea-water without heating. Such means of heating should comply with the following requirements: ... (b) the beating system should be arranged so that, in the event of a failure In any part of the system, stand-by-heating should be adequate to the satisfaction of the Administration;	**Technical**
Existing GC / 4.4.4(d)	Before 1/1/1977	4.4 Insulation 4.4.4 To ensure that the temperature of the hull material does not fall below the minimum allowable values at ambient temperature conditions of +5°C for air and 0°C for sea-water, approved means of heating may be used for the transverse hull structural material in all crises referred to in 4.4.1 and 4.4.2 and for the longitudinal hull structural material in all cases referred to in 4.4.2. If lower	**Technical**

		ambient temperatures are specified, approved means of healing may also be used for longitudinal structural material in the case referred to in 4.4.1, provided the material remains suitable for the ambient temperature condition of +5"C for air and 0°C for sea-water without heating. Such means of heating should comply with the following requirements: ... (d) the design and construction of the heating system should be to the satisfaction of the Administration.	
Existing GC / 5.1	Before 1/1/1977	Vapour and pressure piping systems Process pressure vessels and liquid, vapour and pressure piping systems should be to the satisfaction of the Administration having regard to the applicable provisions of Chapter V of the New Ships Code.	**Technical**
Existing GC / 6.2 / Table 6.4 / Notes / 2)	Before 1/1/1977	6.2 Material requirements Table 6.4 Notes 2) The requirements for forgings and castings may be subject to special consideration by the Administration.	**Technical**
Existing GC / 7.1.2	Before 1/1/1977	7.1 Cargo pressure / Temperature Control 7.1.2 The systems required by 7.1.1 should be to the satisfaction of the Administration. Materials used in their construction should be suitable for use with the cargoes to be carried. For normal service, the upper ambient design temperatures should be: Sea 32°C Air 45°C	**Technical**
Existing GC / 7.2.1	Before 1/1/1977	7.2 Refrigeration systems 7.2.1 A refrigeration system should consist of one or more units capable of maintaining the required cargo pressure/temperature under conditions of the upper ambient design temperatures. Unless an alternative means of controlling the cargo pressure/temperature is provided to the satisfaction of the Administration, a stand-by unit (or units) affording spare capacity at least equal to the largest required single unit should be provided. A "stand-by unit" should consist of a compressor with its driving motor, control system and any necessary fittings to permit operation independently of the normal service units. Separate piping systems are not required.	**Technical**
Existing GC / 8.2.2	Before 1/1/1977	8.2 Pressure relief systems 8.2.2 Interbarrier spaces should be provided with pressure relief devices to the satisfaction of the Administration.	**Technical**

Existing GC / 10.1.5	Before 1/1/1977	10 Electrical arrangements 10.1.5 Where electrical equipment is installed in gas-dangerous spaces or zones as provided in 10.1.4, it should be to the satisfaction of the Administration and approved by the relevant authorities recognized by the Administration for operation in the flammable atmosphere concerned.	**Technical**
Existing GC / 10.2.5(d)	Before 1/1/1977	10.2 Types of equipment 10.2.5 Spaces separated by a single steel gas-tight boundary from a hold space where the cargo containment system requires a secondary barrier, except those spaces (e.g. motor rooms) an the weather deck and spaces forward of the cargo area if accepted by the Administration which would otherwise be gas-safe ... (d) Other items of flame-proof equipment subject to special consideration by the Administration.	**Technical**
Existing GC / 11.4.6	Before 1/1/1977	11.4.6 A sufficient quantity of dry chemical powder should be stored in each container to provide a minimum 45 seconds discharge time for all monitors and hand hose lines attached to each powder unit. Coverage given by hand hose lines should be demonstrated to the satisfaction of the Administration. Special consideration should be given where areas to be protected are substantially elevated above the monitor or hand hose reel locations. In determining the quantity of powder required for existing systems the Administration may take account of the use of dry chemical powders more effective than those based on sodium compounds.	**Technical**
Existing GC / 11.5.1(b)	Before 1/1/1977	11.5 Gas-dangerous enclosed spaces 11.5.1 (b) Existing fixed fire-extinguishing systems may be accepted if they are to the satisfaction of the Administration. If the spaces are not already equipped with such a fixed fire-extinguishing system they should within two years be provided with a fixed inerting and fire-smothering system, which can be discharged safety into the space. A single system may provide both capabilities.	**Technical**
Existing GC / 12.1.1	Before 1/1/1977	12.1 Spaces required to be entered, during normal cargo handling operations 12.1.1 Electric motor rooms, cargo compressor and pump rooms, older enclosed spaces which contain cargo handling equipment, and similar spaces in which cargo handling operations are performed should be fitted with fixed mechanical ventilation systems, within two years, capable of being controlled from	**Technical**

		outside such spaces. The ventilation systems should be to the satisfaction of the Administration. Provision should be made to ventilate such spaces prior to entering the compartment and operating the equipment and a warning notice requiring the use of such ventilation should be placed outside the compartment.	
Existing GC / 13.5.3	Before 1/1/1977	13.5 Temperature indicating devices 13.5.3 The number and position of temperature indicating devices should be to the satisfaction of the Administration.	**Technical**
Existing GC / 16.12	Before 1/1/1977	16.12 The provisions of this chapter do not preclude the use of gas fuel for other services In other locations, such as cargo reliquefaction and inert gas generation, provided that such other services and locations should be subject to special consideration by the Administration.	**Technical**
Existing GC / 17.9.1(c)	Before 1/1/1977	17.9 Special requirements for individual gases 17.9.1 Methyl acetylene-propadiene mixture (c) Other compositions may be accepted provided the stability of the mixture is demonstrated to the satisfaction of the Administration	**Technical**
GC Code			Adopted by Res.A.328(9)
GC Code / 2.2.4.1	On or after 1/1/1977 Before 7/1/1986	2.2 Freeboard and stability 2.2.4 All ships, subject to the Code, should be fitted with a stability instrument, capable of verifying compliance with intact and damage stability requirements, approved by the Administration, at the first scheduled periodical survey of the ship on or after 1 January 2016, but not later than 1 January 2021, having regard to the performance standards recommended by the Organization: .1 notwithstanding the requirements above, a stability instrument fitted on a ship before 1 January 2016 need not be replaced provided it is capable of verifying compliance with intact and damage stability, to the satisfaction of the Administration;	**Technical**
GC Code / 3.5.3(b)	On or after 1/1/1977 Before 7/1/1986	3.5 Access to spaces in the cargo area 3.5.3 Arrangements for hold spaces, void spaces and other spaces that could be considered gas-dangerous and cargo tanks should be such as to allow entry and inspection of any such space by personnel wearing protective clothing and breathing apparatus and in the event of injury to allow unconscious personnel to be removed from the space and should comply with the following: ... (b) The dimensions referred to in sub-paragraphs (a)(iii) and (a)(iii) of this paragraph may be decreased if the ability to	**Technical**

		traverse such openings or to remove an injured person can be proved to the satisfaction of the Administration.	
GC Code / 4.2.2(c)	On or after 1/1/1977 Before 7/1/1986	4.2.2 Membrane tanks (c) The definition of membrane tanks does not exclude designs such as those in which non-metallic membranes are used or in which membranes are included or incorporated in insulation. Such designs require, however, special consideration by the Administration.	**Technical**
GC Code / 4.2.6(c)	On or after 1/1/1977 Before 7/1/1986	4.2.6 Design vapour pressure Po is the maximum gauge pressure at the top of the tank which has been used in the design of the tank. (c) Subject to special consideration by the Administration and to the limitations given in 4.2.1 to 4.2.4 for the various tank types, a vapour pressure higher than Po may be accepted in harbour conditions, where dynamic loads are reduced.	**Technical**
GC Code / 4.2.7	On or after 1/1/1977 Before 7/1/1986	4.2.7 Design temperature for selection of materials is the minimum temperature at which cargo may be loaded and/or transported in the cargo tanks. Provisions to the satisfaction of the Administration should be made so that the tank or cargo temperature cannot be lowered below the design temperature.	**Technical**
GC Code / 4.4.2(e)	On or after 1/1/1977 Before 7/1/1986	4.4.2 Membrane tanks (e) A structural analysis of the hull should be to the satisfaction of the Administration, taking into account the internal pressure as indicated in 4.3.2. Special attention, however, should be paid to deflections of the hull and their compatibility with the membrane and associated insulation. Inner hull plating thickness should meet at least the requirements of Recognized Standards for deep tanks taking into account the internal pressure as indicated in 4.3.2. The allowable stress for the membrane, membrane supporting material and insulation should be determined in each particular case.	**Technical**
GC Code / 4.4.4(a)	On or after 1/1/1977 Before 7/1/1986	4.4.4 Independent tanks type A (a) A structural analysis should be performed to the satisfaction of the Administration taking into account the internal pressure as indicated in 4.3.2. The cargo tank plating thickness should meet at least the requirements of Recognized Standards for deep tanks taking into account the internal pressure as indicated in 4.3.2 and any corrosion allowance required by 4.5.2(a).	**Technical**
GC Code / 4.4.7(b)(i)	On or after 1/1/1977	4.4.7 Internal insulation tanks (b)	**Technical**

	Before 7/1/1986	(i) Special attention should be given to crack resistance and to deflections of the inner hull or independent tank structure and their compatibility with the insulation materials. A three dimensional structural analysis should be carried out to the satisfaction of the Administration. This analysis is to evaluate the stress levels and deformations contributed either by the inner hull or by the independent tank structure or both and should also take into account the internal pressure as indicated in 4.3.2. Where water ballast spaces are adjacent to the inner hull forming the supporting structure of the internal insulation tank, the analysis should take account of the dynamic loads caused by water ballast under the influence of ship motions.	
GC Code / 4.4.7(c)	On or after 1/1/1977 Before 7/1/1986	4.4.7 Internal insulation tanks (c) A complete analysis of the response of ship, cargo and any ballast to accelerations and motions in irregular waves of the particular ship should be performed to the satisfaction of the Administration unless such analysis is available for a similar ship.	**Technical**
GC Code / 4.5.1(f)(i)	On or after 1/1/1977 Before 7/1/1986	4.5 Allowable stresses and corrosion allowance 4.5.1 Allowable stresses (f) For the purpose of sub-paragraphs (c), (d) and (e) of this paragraph the following apply: (i) σy =specified minimum yield stress at room temperature. If the stress-strain curve does not show a defined yield stress, the 0.2 percent proof stress applies σB=specified minimum tensile strength at room temperature. For welded connexions in aluminium alloys, the tensile strength in annealed conditions should be used. The above properties should correspond to the minimum specified mechanical properties of the material, including the weld metal in the as fabricated condition. Subject to special consideration by the Administration account may be taken of enhanced yield stress and tensile strength at low temperature. The temperature on which the material properties are based should be shown on the Certificate 81 Fitness provided for in 1.6.	**Technical**
GC Code / 4.8.4(d)	On or after 1/1/1977 Before 7/1/1986	4.8 Insulation 4.8.4 In all cases referred to in 4.8.1 and 4.8.2 and for ambient temperature conditions of 5°C for air and 0°C for sea-water, approved means of heating transverse hull structural material may be used to ensure that the temperatures of this material do not fall below the minimum allowable values. If lower ambient temperatures are specified, approved means of heating may also	**Technical**

		be used for longitudinal hull structural material, provided this material remains suitable for the temperature conditions of 5°C for air and 0°C for sea-water without heating. Such means of heating should comply with the following requirements: ... (d) the design and construction of the heating system should be to the satisfaction of the Administration.	
GC Code / 4.9.8	On or after 1/1/1977 Before 7/1/1986	4.9 Materials 4.9.8 The procedure for fabrication, storage, handling, erection, quality control and control against harmful exposure to sunlight of insulation materials should be to the satisfaction of the Administration.	**Technical**
GC Code / 4.10.2	On or after 1/1/1977 Before 7/1/1986	4.10 Construction and testing 4.10.2 Workmanship should be to the satisfaction of the Administration Inspection and non-destructive testing of welds for tanks other than independent tanks type C should be in accordance with the requirements of 6.3.7.	**Technical**
GC Code / 4.10.5(b)	On or after 1/1/1977 Before 7/1/1986	4.10 Construction and testing 4.10.5(b) A quality control specification including maximum size of constructional defects, tests and inspections during the fabrication, installation and also sampling tests at each of these stages should be to the satisfaction of the Administration.	**Technical**
GC Code / 4.10.6	On or after 1/1/1977 Before 7/1/1986	4.10 Construction and testing 4.10.6 Integral tanks should be hydrostatically or hydropneumatically tested to the satisfaction of the Administration. The test in general should be performed so that the stresses approximate, as far as practicable, the design stresses and so that the pressure at the top of the tank corresponds at least to the MARVS.	**Technical**
GC Code / 4.10.8(c)	On or after 1/1/1977 Before 7/1/1986	4.10 Construction and testing 4.10.8(c) For internal insulation tanks where the inner hull structure or an independent tank structure acts as a secondary barrier, a tightness test of these structures should be carried out using techniques to the satisfaction of the Administration.	**Technical**
GC Code / 4.11(a)	On or after 1/1/1977 Before 7/1/1986	4.11 Stress relieving for independent tanks type C (a) For independent tanks type C of carbon and carbon-manganese steel, post-weld heat treatment should be performed after welding if the design temperature is below -10°C. Post-weld heat treatment in all other crises and for materials other than those mentioned above should be to the satisfaction of the	**Technical**

		Administration. The soaking temperature and holding time should be to the satisfaction of the Administration.	
GC Code / 5.2.6(e)(ii)	On or after 1/1/1977 Before 7/1/1986	5.2 Cargo and process piping 5.2.6 Scantlings based on internal pressure (e) Flanges, valves and other fittings (ii) For flanges not complying with a standard, the dimensions of flanges and relative bolts should be to the satisfaction of the Administration.	**Technical**
GC Code / 5.2.10(f)(iii)(2)	On or after 1/1/1977 Before 7/1/1986	5.2 Cargo and process piping 5.2.10 Piping fabrication and joining details (f) Welding, post-weld heat treatments and-nondestructive testing (iii) In addition to normal controls before and during the welding and to the visual inspection of the finished welds, as necessary for proving that the welding has been carried out correctly and according to the requirements of this paragraph, the following tests should be required: (2) For other butt welded joints of pipes, spot radiographic rests or other non-destructive tests should be carried out at the discretion of the Administration depending upon service, position and materials. In general at least 10 per cent of butt welded joints of pipes should be radiographed.	**Technical**
GC Code / 6.1.4(b)	On or after 1/1/1977 Before 7/1/1986	Materials and construction (b) In all cases, the largest size Chirpy specimens possible for the material thickness should be machined with the specimens located as near as practicable to a point midway between the surface and the centre of the thickness and the length of the notch perpendicular to the surface.(see fig. 6.1)If the average value of the three initial Chirpy V-notch specimens fails to meet the stated requirements, or the value for more than one specimen is below the required average value, or when the value for one specimen is below the minimum value permitted for a single specimen, three additional specimens from the same material may be tested and the results combined with those previously obtained to form a new average. This new average of six specimens should not be less than the specified minimum average. At the discretion of the Administration other types of toughness tests, such as a drop weight lest, may be used. These may be either in addition to or in lieu of the Charpy V-notch test.	**Technical**
GC Code / 6.1.5	On or after 1/1/1977	Materials and construction 6.1.5 Tensile strength, yield stress and elongation should be to the satisfaction of the Administration. For carbon-manganese	**Technical**

	Before 7/1/1986	steel and other materials with definitive yield points consideration should be given to the limitation of the yield to tensile ratio.	
GC Code / 6.1.8	On or after 1/1/1977 Before 7/1/1986	Materials and construction 6.1.8 Where post-weld heat treatment is specified or required, the properties of the base material should be determined in the heat treated condition in accordance with the applicable table of this chapter and the weld properties should be determined in the heat treated condition in accordance with 6.3. In cases where a post-weld heat treatment is applied, the test requirements may be modified at the discretion of the Administration.	**Technical**
GC Code / 6.2 / Table 6.3 / Notes / 1)	On or after 1/1/1977 Before 7/1/1986	6.2 Material requirements Table 6.3 NOTES 1) The impact test required for forgings used in critical applications should be subject to special consideration by the Administration.	**Technical**
GC Code / 6.2 / Table 6.4 / Notes / 2)	On or after 1/1/1977 Before 7/1/1986	6.2 Material requirements Table 6.4 NOTES 2) The requirements for forgings and castings may be subject to special consideration by the Administration.	**Technical**
GC Code / 6.2 / Table 6.4 / Notes / 3)	On or after 1/1/1977 Before 7/1/1986	6.2 Material requirements Table 6.4 NOTES 3) For materials 1.5% Ni, 2.25% Ni, 3.5% Ni and 5% Ni, with thicknesses greater than 25 mm, the impact tests should be conducted as follows: Material thickness (mm) Test temperature (°C) 25 > t ≤30 30 > t ≤35 35 > t ≤40 10° below design temperature 15° below design temperature 20° below design temperature In no case should the test temperature be above that indicated in the table. The energy value should be in accordance with the table for the applicable type of test specimen. For material thickness of more than 40 mm, the Charpy V-notch values should be specially considered.	**Technical**

		For 9% Ni, austenitic stainless steels and aluminium alloys, thicknesses greater than 25 mm may be used at the discretion of the Administration.	
GC Code / 6.3.1	On or after 1/1/1977 Before 7/1/1986	6.3 Welding and non-destructive testing 6.3.1 General - The requirements of this section are those generally employed for carbon, carbon-manganese, nickel alloy and stainless steels, and may form the basis for acceptance testing of other material. At the discretion of the Administration, impact testing of stainless steel and aluminium alloy weldments may be omitted and other tests may be specially required for any material.	**Technical**
GC Code / 6.3.3(b)(ii)	On or after 1/1/1977 Before 7/1/1986	6.3 Welding and non-destructive testing 6.3.3 Welding Procedure tests for cargo tanks and Process Pressure vessels (b) The following tests should be required from each tests assembly: ... (ii) Transverse bend tests: These bend tests may be face, root or side bends at the discretion of the Administration. However, longitudinal bend tests may be required in lieu of transverse bend tests in cases where the base material and weld metal have different strength levels.	**Technical**
GC Code / 6.3.6(a)	On or after 1/1/1977 Before 7/1/1986	6.3 Welding and non-destructive testing 6.3.6 Productionweld tests (a) For all cargo tanks and process pressure vessels except integral and membrane tanks, production tests should generally be performed for approximately each 50 m of butt weld joints and should be representative of each welding position. For secondary barriers, the same type production tests as required for primary tanks should be performed except that the number of testis may be reduced subject to agreement with the Administration. Tests, other than those specified in sub-paragraphs (b), (c) and (d) of this paragraph, may be required for cargo tanks or secondary barriers at the discretion of the Administration.	**Technical**
GC Code / 6.3.6(b)(ii)	On or after 1/1/1977 Before 7/1/1986	6.3 Welding and non-destructive testing 6.3.6 Productionweld tests (b) The production tests for independent tanks types A and B and semi-membrane tanks should include the following tests. (ii) The test requirements are the same as the applicable test requirements listed in 6.3.4 except that impact tests that do not meet the prescribed energy requirements may still be accepted,	**Technical**

		upon special consideration by the Administration, by passing a drop weight test. In such cases, two drop weight specimens should be tested for each set of Charpy specimens that failed and both must show "no break" performance at the temperature at which the Charpy tests were conducted.	
GC Code / 6.3.6(c)	On or after 1/1/1977 Before 7/1/1986	6.3 Welding and non-destructive testing 6.3.6 Productionweld tests (c) In addition to those testis listed in sub-paragraph (a) of this paragraph for independent tank type C and process pressure vessels, transverse weld tensile tests are required. The test requirements are listed in 6.3.4 except that impact tests that do not meets the prescribed energy requirements may still be accepted upon special consideration by the Administration, by passing a drop weight test. In such cases, two drop weight specimens should be tested for each set of Charpy specimens that failed, and both must show "no break" performance at the temperature at which the Chirpy tests were conducted.	**Technical**
GC Code / 6.3.7(d)	On or after 1/1/1977 Before 7/1/1986	6.3 Welding and non-destructive testing 6.3.7 Non -destructive testing (d) The inspection and non-destructive testing of the inner hull or the independent tank structures supporting internal insulation tanks should take into account the design criteria as given in 4.4.7. The schedule for inspection and non-destructive testing should be to the satisfaction of the Administration.	**Technical**
GC Code / 7.1.2	On or after 1/1/1977 Before 7/1/1986	Cargo pressure / temperature control 7.1 2 The systems required by 7.1.1 should be constructed, fitted and tested to the satisfaction of the Administration. Materials used in their construction should be suitable for use with the cargoes to be carried. For normal service, the upper ambient design temperatures should be: Sea 32° C Air 45°C	**Technical**
GC Code / 7.2.1	On or after 1/1/1977 Before 7/1/1986	7.2 Refrigeration systems 7.2.1 A refrigeration system should consist of one or more units capable of maintaining the required cargo pressure/temperature under conditions of the upper ambient design temperatures. Unless an alternative means of controlling the cargo pressure/temperature is provided to the satisfaction of the Administration, a stand-by unit (or units) affording spare capacity at least equal to the largest required single unit should be provided. A "stand-by unit" should consist of a compressor with	**Technical**

		its driving motor, control system and any necessary fittings to permit operation independently of the normal service units. A stand-by heat exchanger should be provided unless the normal heat exchanger for the unit has an excess capacity of at least 25 percent of the largest required capacity. Separate piping systems are not required.	
GC Code / 8.2.2	On or after 1/1/1977 Before 7/1/1986	8.2 Pressure relief systems 8.2.2 Interbarrier spaces should be provided with pressure relief devices to the satisfaction of the Administration.	**Technical**
GC Code / 10.1.5	On or after 1/1/1977 Before 7/1/1986	Electrical arrangements 10.1.5 Where electrical equipment is installed in gas-dangerous spaces or zones as provided in 10.1.4, it should be to the satisfaction of the Administration and approved by the relevant authorities recognized by the Administration for operation in the flammable atmosphere concerned.	**Technical**
GC Code / 13.5.4	On or after 1/1/1977 Before 7/1/1986	13.5 Temperature indicating devices 13.5.4 The number and position of temperature indicating devices should be to the satisfaction of the Administration.	**Technical**
GC Code / Chapter 16.12	On or after 1/1/1977 Before 7/1/1986	16.12 The provisions of this chapter do not preclude the use of gas fuel for other services in other locations, such as cargo reliquefaction and inert gas generation, provided that such other services and locations should be subject to special consideration by the Administration.	**Technical**
GC Code / 17.2.4	On or after 1/1/1977 Before 7/1/1986	17.2 Personnel protection 17.2.4 Personnel should be protected against the effects of a major cargo release by the provision of a space within the accommodation area designed and equipped to the satisfaction of the Administration.	**Technical**
GC Code / 17.12.2(c)	On or after 1/1/1977 Before 7/1/1986	17.12 Special requirements for individual gases 17.12.2 Methyl acetylene-propadiene mixture (c) Other compositions may be accepted provided the stability of the mixture is demonstrated to the satisfaction of the Administration.	**Technical**
IGC Code			Adopted by Res.MSC.5(48)
IGC 90 Amend			Adopted by Res.MSC.17(58)
IGC 83/90 Amend / Chapter	On or after 7/1/1986	3.5 Access to spaces in the cargo area 3.5.3 Arrangements for hold spaces, void spaces and other spaces that could be considered gas-dangerous and cargo tanks should	**Technical**

3 (3.1~3.8) / 3.5.3		be such as to allow entry and inspection of any such space by personnel wearing protective clothing and breathing apparatus and in the event of injury to allow unconscious personnel to be removed from the space and should comply with the following: .2 the dimensions referred to in 3.5.3.1.2 and .1.3 may be decreased if the ability to traverse such openings or to remove an injured person can be proved to the satisfaction of the Administration.	
IGC 83/90 Amend / Chapter 4 (4.1~4.13) / 4.4.2.5	On or after 7/1/1986 Before 7/1/1994	4.4 Structural analyses 4.4.2 Membrane tanks. 4.4.2.5 A structural analysis of the hull should be to the satisfaction of the Administration, taking into account the internal pressure as indicated in 4.3.2. Special attention, however, should be paid to deflections of the hull and their compatibility with the membrane and associated insulation. Inner hull plating thickness should meet at least the requirements of Recognized Standards for deep tanks taking into account the internal pressure as indicated in 4.3.2. The allowable stress for the membrane, membrane-supporting material and insulation should be determined in each particular case.	**Technical**
IGC 83/90 Amend / Chapter 4 (4.1~4.13) / 4.8.4.4	On or after 7/1/1986 Before 7/1/1994	4.8 Insulation 4.8.4 In all cases referred to in 4.8.1 and 4.8.2and for ambient temperature conditions of 5°C for air and 0°C for seawater, approved means of heating transverse hull structural material may be used to ensure that the temperatures of this material do not fall below the minimum allowable values. If lower ambient temperatures are specified, approved means of heating may also be used for longitudinal hull structural material, provided this material remains suitable for the temperature conditions of 5°C for air and 0°C for seawater without heating. Such means of heating should comply with the following requirements: ... .4 the design and construction of the heating system should be to the satisfaction of the Administration.	**Technical**
IGC 83/90 Amend / Chapter 4 (4.1~4.13) / 4.9.8	On or after 7/1/1986 Before 7/1/1994	4.9 Materials 4.9.8 The procedure for fabrication, storage, handling, erection, quality control and control against harmful exposure to sunlight of insulation materials should be to the satisfaction of the Administration.	**Technical**
IGC 83/90 Amend / Chapter	On or after 7/1/1986	4.10 Construction and testing	**Technical**

4 (4.1~4.13) / 4.10.2	Before 7/1/1994	4.10.2 Workmanship should be to the satisfaction of the Administration. Inspection and non-destructive testing of welds for tanks other than type C independent tanks should be in accordance with the requirements of 6.3.7.	
IGC 83/90 Amend / Chapter 4 (4.1~4.13) / 4.10.5.2	On or after 7/1/1986 Before 7/1/1994	4.10 Construction and testing 4.10.5.2 A quality control specification including maximum permissible size of constructional defects, tests and inspections during the fabrication, installation and also sampling tests at each of these stages should be to the satisfaction of the Administration.	**Technical**
IGC 83/90 Amend / Chapter 4 (4.1~4.13) / 4.10.6	On or after 7/1/1986 Before 7/1/1994	4.10 Construction and testing 4.10.6 Integral tanks should be hydrostatically or hydropneumatically tested to the satisfaction of the Administration. The test in general should be so performed that the stresses approximate, as fas as practicable, to the design stresses and that the pressure at the top of the tank corresponds at least to the MARVS.	**Technical**
IGC 83/90 Amend / Chapter 4 (4.1~4.13) / 4.10.8.3	On or after 7/1/1986 Before 7/1/1994	4.10 Construction and testing 4.10.8.3 For internal insulation tanks where the inner hull structure oran independent tank structure acts as a secondary barrier, a tightness test of those structures should be carried out using techniques to the satisfaction of the Administration.	**Technical**
IGC 83/90 Amend / Chapter 4 (4.1~4.13) / 4.11.1	On or after 7/1/1986 Before 7/1/1994	4.11 Stress relieving for type C independent tanks .11.1 For type C independent tanks of carbon and carbon-manganese steel, post-weld heat treatment should be performed after welding if the design temperature is below -10°C. Post-weld heat treatment in all other cases and for materials other than those mentioned above should be to the satisfaction of the Society. The soaking temperature and holding time should be to the satisfaction of the Administration.	**Technical**
IGC 83/90 Amend / Chapter 5 (5.1~5.9) / 5.2.4.5	On or after 7/1/1986 Before 7/1/1994	5.2 Cargo and process piping 5.2.4 Permissible stresses 5.2.4.5 For flanges not complying with a standard, the dimensions of flanges and related bolts should be to the satisfaction of the Administration.	**Technical**
IGC 83/90 Amend / Chapter 5 (5.1~5.9) / 5.4.6.3.2	On or after 7/1/1986 Before 7/1/1994	5.4 Piping fabrication and joining details 5.4.6 Welding, post-weld heat treatments and non-destructive testing. .3 In addition to normal controls before and during the welding and to the visual inspection of the finished welds, as necessary for proving that the welding has been carried out correctly and	**Technical**

		according to the requirements of this paragraph, the following tests should be required: ... .3.2 For other butt-welded joints of pipes, spot radiographic tests or other non-destructive tests should be carried out at the discretion of the Administration depending upon service, position and materials. In general, at least 10% of butt-welded joints of pipes should be radiographed.	
IGC 83/90 Amend / Chapter 6 (6.1~6.3) / 6.1.8	On or after 7/1/1986 Before 7/1/1994	6.1.8 Where post-weld heat treatment is specified or required, the properties of the base material should be determined in the heat treated condition in accordance with the applicable table of this Section and the weld properties should be determined in the heat treated condition in accordance with 6.3. In cases where a post-weld heat treatment is applied, the test requirements may be modified at the discretion of the Administration.	**Technical**
IGC 83/90 Amend / Chapter 6 (6.1~6.3) / 6.2 / Table 6.3 / Notes / 1)	On or after 7/1/1986 Before 7/1/1994	6.2 Material requirements Table 6.3 NOTES 1) The impact test required for forgings used in critical applications should be subject to special consideration by the Administration.	**Technical**
IGC 83/90 Amend / Chapter 6 (6.1~6.3) / 6.2 / Table 6.3 / Notes / 3)	On or after 7/1/1986 Before 7/1/1994	6.2 Material requirements Table 6.3 NOTES 3) For materials 1.5% Ni, 2.25% Ni, 3.5% Ni and 5% Ni, with thicknesses greater than 25 mm, the impact tests should be conducted as follows: Material thickness (mm) Test temperature (°C) 25 > t ≤30 10° below design temperature 30 > t ≤35 15° below design temperature 35 > t ≤40 20° below design temperature In no case should the test temperature be above that indicated in the table. The energy value should be in accordance with the table for the applicable type of test specimen. For material thickness of more than 40 mm, the Charpy V-notch values should be specially considered. For 9% Ni, austenitic stainless steels and aluminium alloys, thicknesses greater than 25 mm may be used at the discretion of the Administration.	**Technical**
IGC 83/90 Amend / Chapter 6 (6.1~6.3) / 6.2	On or after 7/1/1986	6.2 Material requirements Table 6.4 NOTES	**Technical**

/ Table 6.4 / Notes / 2)	Before 7/1/1994	2) The requirements for forgings and castings may be subject to special consideration by the Administration.	
IGC 83/90 Amend / Chapter 6 (6.1~6.3) / 6.3.1	On or after 7/1/1986 Before 7/1/1994	6.3 Welding and non-destructive testing 6.3.1 General The requirements of this Section are those generally employed for carbon, carbon manganese, nickel alloy and stainless steels, and may form the basis for acceptance testing of other material. At the discretion of the Administration, impact testing of stainless steel and aluminium alloy weldments may be omitted and other tests may be specially required for any material	**Technical**
IGC 83/90 Amend / Chapter 6 (6.1~6.3) / 6.3.6.2.2	On or after 7/1/1986 Before 7/1/1994	6.3 Welding and non-destructive testing 6.3.6.2 The production tests for types A and B independent tanks and semi-membrane tanks should include the following tests: ... .2 The test requirements are the same as the applicable test requirements listed in 6.3.4, except that impact tests that do not meet the prescribed energy requirements may still be accepted, upon special consideration by the Administration, by passing a drop weight test. In such cases, two drop weight specimens should be tested for each set of Charpy specimens that failed and both must show "no break" performance at the temperature at which the Charpy tests were conducted.	**Technical**
IGC 83/90 Amend / Chapter 6 (6.1~6.3) / 6.3.6.3	On or after 7/1/1986 Before 7/1/1994	6.3 Welding and non-destructive testing 6.3.6.3 In addition to those tests listed in 6.3.6.1 for type C independent tanks and process pressure vessels transverse weld tensile tests are required. The test requirements are listed in 6.3.4 except that impact tests that do not meet the prescribed energy requirements may still be accepted upon special consideration by the Administration, by passing a drop weight test. In such cases, two drop weight specimens should be tested for each set of Charpy specimens that failed, and both must show "no break" performance at the temperature at which the Charpy tests were conducted.	**Technical**
IGC 83/90 Amend / Chapter 6 (6.1~6.3) / 6.3.7.4	On or after 7/1/1986 Before 7/1/1994	6.3 Welding and non-destructive testing 6.3.7.4 The inspection and non-destructive testing of the inner hull or the independent tank structures supporting internal insulation tanks should take into account the design criteria given in 4.4.7. The schedule for inspection and non-destructive testing should be to the satisfaction of the Administration.	**Technical**
IGC 83/90 Amend / Chapter	On or after 7/1/1986	Cargo pressure / temperature control	**Technical**

7 (7.1~7.2) / 7.1.2		7.1.2 The systems required by 7.1.1 should be constructed, fitted and tested to the satisfaction of the Administration. Materials used in their construction should be suitable for use with the cargoes to be carried. For normal service, the upper ambient design temperature should be: sea : 32°C air : 45°C	
IGC 83/90 Amend / Chapter 7 (7.1~7.2) / 7.2.1	On or after 7/1/1986	7.2 Refrigeration systems 7.2.1 A refrigeration system should consist of one or more units capable of maintaining the required cargo pressure/temperature under conditions of the upper ambient design temperatures. Unless an alternative means of controlling the cargo pressure/temperature is provided to the satisfaction of the Administration, a stand-by unit (or units) affording spare capacity at least equal to the largest required single unit should be provided. A stand-by unit should consist of a compressor with its driving motor, control system and any necessary fittings to permit operation independently of the normal service units. A stand-by heat exchanger should be provided unless the normal heat exchanger for the unit has an excess capacity of at least 25% of the largest required capacity. Separate piping systems are not required.	**Technical**
IGC 83/90 Amend / Chapter 8 (8.1~8.5) / 8.2.2	On or after 7/1/1986 Before 7/1/1994	8.2 Pressure relief systems 8.2.2 Interbarrier spaces should be provided with pressure relief devices to the satisfaction of the Administration.	**Technical**
IGC 83/90 Amend / Chapter 10 (10.1~10.2) / 10.1.5	On or after 7/1/1986 Before 1/1/2007	Electrical installations 10.1.5 Where electrical equipment is installed in gas-dangerous spaces or zones as provided in 10.1.4, it should be to the satisfaction of the Administration and approved by the relevant authorities recognized by the Administration for operation in the flammable atmosphere concerned.	**Technical**
IGC 83/90 Amend / Chapter 13 (13.1~13.6) / 13.5.4	On or after 7/1/1986	13.5 Temperature indicating devices 13.5.4 The number and position of temperature indicating devices should be to the satisfaction of the Administration.	**Technical**
IGC 83/90 Amend / Chapter 14 (14.1~14.4) / 14.4.5	On or after 7/1/1986 Before 7/1/1994	14.4 Personal protection requirements for individual products 14.4.5 Personnel should be protected against the effects of a major cargo release by the provision of a space within the accommodation area designed and equipped to the satisfaction of the Administration.	**Technical**

IGC 83/90 Amend / Chapter 17 (17.1~17.21) / 17.18.3	On or after 7/1/1986	17.18 Methyl acetylene-propadiene mixtures 17.18.3 Other compositions may be accepted provided the stability of the mixture is demonstrated to the satisfaction of the Administration.	**Technical**
IGC 92 Amend			Adopted by Res.MSC.30(61)
IGC 92 Amend / Chapter 4 (4.1~4.13) / 4.4.2.5	On or after 7/1/1994	4.4 Structural analyses 4.4.2 Membrane tanks. 4.4.2.5 A structural analysis of the hull should be to the satisfaction of the Administration, taking into account the internal pressure as indicated in 4.3.2. Special attention, however, should be paid to deflections of the hull and their compatibility with the membrane and associated insulation. Inner hull plating thickness should meet at least the requirements of Recognized Standards for deep tanks taking into account the internal pressure as indicated in 4.3.2. The allowable stress for the membrane, membrane-supporting material and insulation should be determined in each particular case.	**Technical**
IGC 92 Amend / Chapter 4 (4.1~4.13) / 4.8.4.4	On or after 7/1/1994 Before 7/1/2002	4.8 Insulation 4.8.4 In all cases referred to in 4.8.1 and 4.8.2and for ambient temperature conditions of 5°C for air and 0°C for seawater, approved means of heating transverse hull structural material may be used to ensure that the temperatures of this material do not fall below the minimum allowable values. If lower ambient temperatures are specified, approved means of heating may also be used for longitudinal hull structural material, provided this material remains suitable for the temperature conditions of 5°C for air and 0°C for seawater without heating. Such means of heating should comply with the following requirements: ... .4 the design and construction of the heating system should be to the satisfaction of the Administration.	**Technical**
IGC 92 Amend / Chapter 4 (4.1~4.13) / 4.9.8	On or after 7/1/1994	4.9 Materials 4.9.8 The procedure for fabrication, storage, handling, erection, quality control and control against harmful exposure to sunlight of insulation materials should be to the satisfaction of the Administration.	**Technical**
IGC 92 Amend / Chapter 4 (4.1~4.13) / 4.10.2	On or after 7/1/1994 Before 7/1/2002	4.10 Construction and testing 4.10.2 Workmanship should be to the satisfaction of the Administration. Inspection and non-destructive testing of welds for tanks other than type C independent tanks should be in accordance with the requirements of 6.3.7.	**Technical**

IGC 92 Amend / Chapter 4 (4.1~4.13) / 4.10.5.2	On or after 7/1/1994 Before 7/1/2002	4.10 Construction and testing 4.10.5.2 A quality control specification including maximum permissible size of constructional defects, tests and inspections during the fabrication, installation and also sampling tests at each of these stages should be to the satisfaction of the Administration.	**Technical**
IGC 92 Amend / Chapter 4 (4.1~4.13) / 4.10.6	On or after 7/1/1994 Before 7/1/2002	4.10 Construction and testing 4.10.6 Integral tanks should be hydrostatically or hydropneumatically tested to the satisfaction of the Administration. The test in general should be so performed that the stresses approximate, as far as practicable, to the design stresses and that the pressure at the top of the tank corresponds at least to the MARVS.	**Technical**
IGC 92 Amend / Chapter 4 (4.1~4.13) / 4.10.8.3	On or after 7/1/1994 Before 7/1/2002	4.10 Construction and testing 4.10.8.3 For internal insulation tanks where the inner hull structure or an independent tank structure acts as a secondary barrier, a tightness test of those structures should be carried out using techniques to the satisfaction of the Administration.	**Technical**
IGC 92 Amend / Chapter 4 (4.1~4.13) / 4.11.1	On or after 7/1/1994 Before 7/1/1998	4.11 Stress relieving for type C independent tanks 4.11.1 For type C independent tanks of carbon and carbon-manganese steel, post-weld heat treatment should be performed after welding if the design temperature is below -10°C. Post-weld heat treatment in all other cases and for materials other than those mentioned above should be to the satisfaction of the Society. The soaking temperature and holding time should be to the satisfaction of the Administration.	**Technical**
IGC 92 Amend / Chapter 5 (5.1~5.9) / 5.2.4.5	On or after 7/1/1994 Before 7/1/1998	5.2 Cargo and process piping 5.2.4 Permissible stresses 5.2.4.5 For flanges not complying with a standard, the dimensions of flanges and related bolts should be to the satisfaction of the Administration.	**Technical**
IGC 92 Amend / Chapter 5 (5.1~5.9) / 5.4.6.3.2	On or after 7/1/1994 Before 7/1/1998	5.4 Piping fabrication and joining details 5.4.6 Welding, post-weld heat treatment and non-destructive testing. .3 In addition to normal controls before and during the welding and to the visual inspection of the finished welds, as necessary for proving that the welding has been carried out correctly and according to the requirements of this paragraph, the following tests should be required: ... .3.2 For other butt-welded joints of pipes, not covered by 5.4.6.3.1 spot radiographic tests or other non-destructive tests	**Technical**

		should be carried out at the discretion of the Administration depending upon service, position and materials. In general, at least 10% of butt-welded joints of pipes should be radiographed.	
IGC 92 Amend / Chapter 6 (6.1~6.3) / 6.2 / Table 6.3 / Notes / 1)	On or after 7/1/1994 Before 7/1/1998	6.2 Material requirements Table 6.3 NOTES 1) The impact test required for forgings used in critical applications should be subject to special consideration by the Administration.	**Technical**
IGC 92 Amend / Chapter 6 (6.1~6.3) / 6.2 / Table 6.3 / Notes / 3)	On or after 7/1/1994 Before 7/1/1998	6.2 Material requirements Table 6.3 NOTES 3) For materials 1.5% Ni, 2.25% Ni, 3.5% Ni and 5% Ni, with thicknesses greater than 25 mm, the impact tests should be conducted as follows: Material thickness (mm) Test temperature (°C) 25 > t ≤30 10° below design temperature 30 > t ≤35 15° below design temperature 35 > t ≤40 20° below design temperature In no case should the test temperature be above that indicated in the table. The energy value should be in accordance with the table for the applicable type of test specimen. For material thickness of more than 40 mm, the Charpy V-notch values should be specially considered. For 9% Ni, austenitic stainless steels and aluminium alloys, thicknesses greater than 25 mm may be used at the discretion of the Administration.	**Technical**
IGC 92 Amend / Chapter 6 (6.1~6.3) / 6.2 / Table 6.4 / Notes / 2)	On or after 7/1/1994 Before 7/1/1998	6.2 Material requirements Table 6.4 NOTES 2) The requirements for forgings and castings may be subject to special consideration by the Administration.	**Technical**
IGC 92 Amend / Chapter 6 (6.1~6.3) / 6.3.1	On or after 7/1/1994	6.3 Welding and non-destructive testing 6.3.1 General The requirements of this section are those generally employed for carbon, carbon-managanese, nickel alloy and stainless steels, and may form the basis for acceptance testing of other material. At the discretion of the Administration, impact testing of stainless steel and aluminium alloy weldments may be omitted and other tests may be specially required for any material.	**Technical**

IGC 92 Amend / Chapter 6 (6.1~6.3) / 6.3.3.2.2	On or after 7/1/1994	6.3 Welding and non-destructive testing 6.3.2 Welding consumables 6.3.3.2 The following welding procedure tests for cargo tanks and process pressure vessels should be made from each test assembly: ... .2 Transverse bend tests which may be face, root or side bends at the discretion of the Administration. However, longitudinal bend test may be required in lieu of transverse bend tests in cases where the base material and weld metal have different strength levels.	**Technical**
IGC 92 Amend / Chapter 6 (6.1~6.3) / 6.3.6.1	On or after 7/1/1994	6.3 Welding and non-destructive testing 6.3.6 Production weld tests 6.3.6.1 For all cargo tanks and process pressure vessels except integral and membrane tanks, production weld tests should generally be performed for approximately each 50 m of butt weld joints and should be representative of each welding position. For secondary barriers, the same type production tests as required for primary tanks should be performed except that the number of tests may be reduced subject to agreement with the Administration. Tests, other than those specified in 6.3.6.2, .3 and .4, may be required for cargo tanks or secondary barriers at the discretion of the Administration.	**Technical**
IGC 92 Amend / Chapter 6 (6.1~6.3) / 6.3.6.2.2	On or after 7/1/1994	6.3 Welding and non-destructive testing 6.3.6.2 The production tests for types A and B independent tanks and semi-membrane tanks should include the following tests: ... .2 The test requirements are the same as the applicable test requirements listed in 6.3.4, except that impact tests that do not meet the prescribed energy requirements may still be accepted, upon special consideration by the Administration, by passing a drop weight test. In such cases, two drop weight specimens should be tested for each set of Charpy specimens that failed and both must show "no break" performance at the temperature at which the Charpy tests were conducted.	**Technical**
IGC 92 Amend / Chapter 6 (6.1~6.3) / 6.3.6.3	On or after 7/1/1994	6.3 Welding and non-destructive testing 6.3.6.3 In addition to those tests listed in 6.3.6.1 for type C independent tanks and process pressure vessels transverse weld tensile tests are required. The test requirements are listed in 6.3.4 except that impact tests that do not meet the prescribed energy requirements may still be accepted upon special	**Technical**

		consideration by the Administration, by passing a drop weight test. In such cases, two drop weight specimens should be tested for each set of Charpy specimens that failed, and both must show "no break" performance at the temperature at which the Charpy tests were conducted.	
IGC 92 Amend / Chapter 6 (6.1~6.3) / 6.3.7.4	On or after 7/1/1994	6.3 Welding and non-destructive testing 6.3.7 Non-destructive testing 6.3.7.4 The inspection and non-destructive testing of the inner hull or the independent tank structures supporting internal insulation tanks should take into account the design criteria given in 4.4.7. The schedule for inspection and non-destructive testing should be to the satisfaction of the Administration.	**Technical**
IGC 92 Amend / Chapter 8 (8.1~8.5) / 8.2.2	On or after 7/1/1994 Before 7/1/1998	8.2 Pressure relief systems 8.2.2 Interbarrier spaces should be provided with pressure relief devices to the satisfaction of the Administration.	**Technical**
IGC 92 Amend / Chapter 14 (14.1~14.4) / 14.4.5	On or after 7/1/1994 Before 7/1/1998	14.4 Personal protection requirements for individual products 14.4.5 Personnel should be protected against the effects of a major cargo release by the provision of a space within the accommodation area designed and equipped to the satisfaction of the Administration.	**Technical**
IGC 92 Amend / Chapter 16 (16.1~16.6) / 16.1.2	On or after 7/1/1994	Chapter 16 - Use of cargo as fuel 16.1.2 The provisions do not preclude the use of gas fuel for auxiliary services in other locations, provided that such other services and locations should be subject to special consideration by the Administration.	**Technical**
IGC 92 Amend / Chapter 16 (16.1~16.6) / 16.5.2	On or after 7/1/1994 Before 7/1/1998	16.5 Special requirements for main boilers 16.5.2 A system suitable to ensure the forced draught in the boilers should be provided. The particulars of such a system should be to the satisfaction of the Administration.	**Technical**
IGC 92 Amend / Chapter 16 (16.1~16.6) / 16.5.6	On or after 7/1/1994 Before 7/1/1998	16.5 Special requirements for main boilers 16.5.6 Arrangements should be made that, in case of flame failure of all operating burners for gas or oil or for a combination thereof, the combustion chambers of the boilers are automatically purged before relighting. Arrangements should also be made to enable the boilers to be manually purged and these arrangements should be to the satisfaction of the Administration.	**Technical**

IGC 94/96 Amend			Adopted by Res.MSC.32(63) and Res.MSC.59(67)
IGC 94/96 Amend / Chapter 4 (4.1~4.13) / 4.11.1	On or after 7/1/1998	4.11 Stress relieving for type C independent tanks 4.11.1 For type C independent tanks of carbon and carbon-manganese steel, post-weld heat treatment should be performed after welding if the design temperature is below -10°C. Post-weld heat treatment in all other cases and for materials other than those mentioned above should be to the satisfaction of the Society. The soaking temperature and holding time should be to the satisfaction of the Administration.	**Technical**
IGC 94/96 Amend / Chapter 5 (5.1~5.9) / 5.2.4.5	On or after 7/1/1998	5.2 Cargo and process piping 5.2.4 Permissible stresses 5.2.4.5 For flanges not complying with a standard, the dimensions of flanges and related bolts should be to the satisfaction of the Administration.	**Technical**
IGC 94/96 Amend / Chapter 5 (5.1~5.9) / 5.4.6.3.2	On or after 7/1/1998	5.4 Piping fabrication and joining details 5.4.6 Welding, post-weld heat treatment and non-destructive testing. .3 In addition to normal controls before and during the welding and to the visual inspection of the finished welds, as necessary for proving that the welding has been carried out correctly and according to the requirements of this paragraph, the following tests should be required: ... .3.2 For other butt-welded joints of pipes, not covered by 5.4.6.3.1 spot radiographic tests or other non-destructive tests should be carried out at the discretion of the Administration depending upon service, position and materials. In general, at least 10% of butt-welded joints of pipes should be radiographed.	**Technical**
IGC 94/96 Amend / Chapter 14 (14.1~14.4) / 14.4.5	On or after 7/1/1986	14.4 Personal protection requirements for individual products 14.4.5 Personnel should be protected against the effects of a major cargo release by the provision of a space within the accommodation area designed and equipped to the satisfaction of the Administration.	**Technical**
IGC 94/96 Amend / Chapter 16 (16.1~16.6) / 16.5.2	On or after 7/1/1998	16.5 Special requirements for main boilers 16.5.2 A system suitable to ensure the forced draught in the boilers should be provided. The particulars of such a system should be to the satisfaction of the Administration.	**Technical**

IGC 2000 Amend			Adopted by Res.MSC.103(73)
IGC 2000 Amend / Chapter 4 (4.1~4.13) / 4.8.4.4	On or after 7/1/2002	4.8 Insulation 4.8.4 In all cases referred to in 4.8.1 and 4.8.2and for ambient temperature conditions of 5 °Cfor air and 0 °Cfor seawater, approved means of heating transverse hull structural material may be used to ensure that the temperatures of this material do not fall below the minimum allowable values. If lower ambient temperatures are specified, approved means of heating may also be used for longitudinal hull structural material, provided this material remains suitable for the temperature conditions of 5 °Cfor air and 0 °Cfor seawater without heating. Such means of heating should comply with the following requirements: ... .4 the design and construction of the heating system should be to the satisfaction of the Administration.	**Technical**
IGC 2000 Amend / Chapter 4 (4.1~4.13) / 4.10.2	On or after 7/1/2002	4.10 Construction and testing 4.10.2 Workmanship should be to the satisfaction of the Administration. Inspection and non-destructive testing of welds for tanks other than type C independent tanks should be in accordance with the requirements of 6.3.7.	**Technical**
IGC 2000 Amend / Chapter 4 (4.1~4.13) / 4.10.5.2	On or after 7/1/2002	4.10 Construction and testing 4.10.5.2 A quality control specification including maximum permissible size of constructional defects, tests and inspections during the fabrication, installation and also sampling tests at each of these stages should be to the satisfaction of the Administration.	**Technical**
IGC 2000 Amend / Chapter 4 (4.1~4.13) / 4.10.6	On or after 7/1/2002	4.10 Construction and testing 4.10.6 Integral tanks should be hydrostatically or hydropneumatically tested to the satisfaction of the Administration. The test in general should be so performed that the stresses approximate, as far as practicable, to the design stresses and that the pressure at the top of the tank corresponds at least to the MARVS.	**Technical**
IGC 2000 Amend / Chapter 4 (4.1~4.13) / 4.10.8.3	On or after 7/1/2002	4.10 Construction and testing 4.10.8.3 For internal insulation tanks where the inner hull structure or an independent tank structure acts as a secondary barrier, a tightness test of those structures should be carried out using techniques to the satisfaction of the Administration.	**Technical**
IGC 2004 Amend			Adopted by Res.MSC.177(79)
IGC 2004 Amend / Chapter 10	On or after 1/1/2007	Electrical installations	**Technical**

(10.1~10.2) / 10.1.4		10.1.4 Electrical equipment or wiring should not be installed in gas-dangerous spaces or zones unless essential for operational purposes. Electrical equipment, cables and wiring should not be installed in hazardous locations unless it conforms with the standards not inferior to those acceptable to the Organization. However, for locations not covered by such standards, electrical equipment, cables and wiring which do not conform to the standards may be installed in hazardous locations based on a risk assessment to the satisfaction of the Administration, to ensure that an equivalent level of safety is assured.	
IGC 2004 Amend / Chapter 10 (10.1~10.2) / 10.1.5	On or after 1/1/2007	Electrical installations 10.1.5 Where electrical equipment is installed in gas-dangerous spaces or zones as provided in 10.1.4, it should be to the satisfaction of the Administration and approved by the relevant authorities recognized by the Administration for operation in the flammable atmosphere concerned.	**Technical**
IGC 2014 Amend			Adopted by Res.MSC.370(93)
IGC 2014 Amend / Chapter 2 / 2.2.6.2	On or after 7/1/2016	Freeboard and stability 2.2.6 All ships, subject to the Code shall be fitted with a stability instrument, capable of verifying compliance with intact and damage stability requirements, approved by the Administration having regard to the performance standards recommended by the Organization. .2 notwithstanding the requirements of paragraph 2.2.6.1 a stability instrument installed on a ship constructed before 1 July 2016 need not be replaced provided it is capable of verifying compliance with intact and damage stability, to the satisfaction of the Administration;	**Technical**
IGC 2014 Amend / Chapter 3 / 3.5.3.2	On or after 7/1/2016	3.5 Access to spaces in the cargo area 3.5.3 Arrangements for hold spaces, void spaces, cargo tanks and other spaces classified as hazardous areas, shall be such as to allow entry and inspection of any such space by personnel wearing protective clothing and breathing apparatus and shall also allow for the evacuation of injured and/or unconscious personnel. Such arrangements shall comply with the following: .2 The dimensions referred to in 3.5.3.1.2 and 3.5.3.1.3 may be decreased, if the requirements of 3.5.3 can be met to the satisfaction of the Administration.	**Technical**

IGC 2014 Amend / Chapter 4 / 4.13.2.3	On or after 7/1/2016	4.13 Functional loads 4.13.2 Internal pressure .3 Subject to special consideration by the Administration and to the limitations given in 4.21 to 4.26, for the various tank types, a vapour pressure Ph higher than Po may be accepted for site specific conditions (harbour or other locations), where dynamic loads are reduced. Any relief valve setting resulting from this paragraph shall be recorded in the International Certificate of Fitness for the Carriage of Liquefied Gases in Bulk.	**Technical**
IGC 2014 Amend / Chapter 4 / 4.18.1.3.2	On or after 7/1/2016	4.18 Design conditions 4.18.1 Ultimate design condition 4.18.1.3 For the purpose of ultimate strength assessment, the following material parameters apply: .2 The above properties shall correspond to the minimum specified mechanical properties of the material, including the weld metal in the as-fabricated condition. Subject to special consideration by the Administration or recognized organization acting on its behalf, account may be taken of the enhanced yield stress and tensile strength at low temperature. The temperature on which the material properties are based shall be shown on the International Certificate of Fitness for the Carriage of Liquefied Gases in Bulk required in 1.4.	**Technical**
IGC 2014 Amend / Chapter 5 / 5.11.6.2	On or after 7/1/2016	5.11 Piping system component requirements 5.11.6 Flanges, valves and other fittings 5.11.6.2 For flanges not complying with a recognized standard, the dimensions of flanges and related bolts shall be to the satisfaction of the Administration or recognized organization acting on its behalf.	**Technical**
IGC 2014 Amend / Chapter 6 / 6.2.3	On or after 7/1/2016	6.2 Scope and general requirements 6.2.3 Where post-weld heat treatment is specified or required, the properties of the base material shall be determined in the heat-treated condition, in accordance with the applicable table of this chapter, and the weld properties shall be determined in the heat treated condition in accordance with 6.5. In cases where a post-weld heat treatment is applied, the test requirements may be modified at the discretion of the Administration.	**Technical**
IGC 2014 Amend / Chapter 6 / 6.3.1.2	On or after 7/1/2016	6.3 General test requirements and specifications 6.3.1 Tensile test 6.3.1.2 Tensile strength, yield stress and elongation shall be to the satisfaction of the Administration. For carbon-manganese	**Technical**

		steel and other materials with definitive yield points, consideration shall be given to the limitation of the yield to tensile ratio.	
IGC 2014 Amend / Chapter 6 / 6.3.3.2	On or after 7/1/2016	6.3 General test requirements and specifications 6.3.3 Bend test 6.3.3.2 The bend tests shall be transverse bend tests, which may be face, root or side bends at the discretion of the Administration. However, longitudinal bend tests may be required in lieu of transverse bend tests in cases where the base material and weld metal have different strength levels.	**Technical**
IGC 2014 Amend / Chapter 6 / 6.4.1 / Table 6.3 / Note 1	On or after 7/1/2016	6.4 Requirements for metallic materials 6.4.1 General requirements for metallic materials Table 6.3 Notes 1 The impact test required for forgings used in critical applications shall be subject to special consideration by the Administration.	**Technical**
IGC 2014 Amend / Chapter 6 / 6.4.1 / Table 6.4 / Note 2	On or after 7/1/2016	6.4 Requirements for metallic materials 6.4.1 General requirements for metallic materials Table 6.4 Notes 2 The requirements for forgings and castings may be subject to special consideration by the Administration.	**Technical**
IGC 2014 Amend / Chapter 6 / 6.5.1	On or after 7/1/2016	6.5 Welding of metallic materials and non-destructive testing 6.5.1 General 6.5.1.1 This section shall apply to primary and secondary barriers only, including the inner hull where this forms the secondary barrier. Acceptance testing is specified for carbon, carbon-manganese, nickel alloy and stainless steels, but these tests may be adapted for other materials. At the discretion of the Administration, impact testing of stainless steel and aluminium alloy weldments may be omitted and other tests may be specially required for any material.	**Technical**
IGC 2014 Amend / Chapter 7 / 7.2	On or after 7/1/2016	7.2 Design of systems For service in particularly hot or cold zones, these design temperatures shall be increased or decreased, to the satisfaction of the Administration. The overall capacity of the system shall be such that it can control the pressure within the design conditions without venting to atmosphere.	**Technical**
IGC 2014 Amend / Chapter 17 / 17.5.5	On or after 7/1/2016	17.5 Cargoes requiring type 1G ship 17.5.5 Personnel shall be protected against the effects of a major cargo release by the provision of a space within the	**Technical**

		accommodation area that is designed and equipped to the satisfaction of the Administration.	
IGC 2014 Amend / Chapter 17 / 17.16.3	On or after 7/1/2016	17.16 Methyl acetylene-propadiene mixtures 17.16.3 Other compositions may be accepted, provided the stability of the mixture is demonstrated to the satisfaction of the Administration.	**Technical**
IGC 2014 Amend / Appendices / APPENDIX 4 / 4.2.2.2	On or after 7/1/2016	Non-metallic materials 4.2 Material testing 4.2.2 Mechanical tests 4.2.2.2 If the chosen function for a material relies on particular properties such as tensile, compressive and shear strength, yield stress, modulus or elongation, these properties should be tested to a recognized standard. If the properties required are assessed by numerical simulation according to a high order behaviour law, the testing should be performed to the satisfaction of the Administration.	**Technical**
IGC 2020 Amend			Adopted by Res.MSC.476(102)
IGC 2020 Amend / Chapter 6 / 6.5.1	On or after 7/1/2016	6.5 Welding of metallic materials and non-destructive testing 6.5.1 General 6.5.1.1 This section shall apply to primary and secondary barriers only, including the inner hull where this forms the secondary barrier. Acceptance testing is specified for carbon, carbon-manganese, nickel alloy and stainless steels, but these tests may be adapted for other materials. At the discretion of the Administration, impact testing of stainless steel and aluminium alloy weldments may be omitted and other tests may be specially required for any material.	**Technical**
IGC 2022 Amend			Adopted by Res.MSC.523(106)
IGC 2022 Amend / Chapter 6 / 6.4.1 / Table 6.3 / Note 1	On or after 7/1/2016	6.4 Requirements for metallic materials 6.4.1 General requirements for metallic materials Table 6.3 Notes 1 The impact test required for forgings used in critical applications shall be subject to special consideration by the Administration.	**Technical**
IGC 2022 Amend / Chapter 6 / 6.4.1 / Table 6.4 / Note 2	On or after 7/1/2016	6.4 Requirements for metallic materials 6.4.1 General requirements for metallic materials Table 6.4 Notes 2 The requirements for forgings and castings may be subject to special consideration by the Administration.	**Technical**

IGF Code 2015			Adopted by Res.MSC.391(95)
IGF Code 2015 / PART A / 4.2.3	On or after 7/1/2017	4.2 Risk assessment 4.2.3 The risks shall be analysed using acceptable and recognized risk analysis techniques, and loss of function, component damage, fire, explosion and electric shock shall as a minimum be considered. The analysis shall ensure that risks are eliminated wherever possible. Risks which cannot be eliminated shall be mitigated as necessary. Details of risks, and the means by which they are mitigated, shall be documented to the satisfaction of the Administration.	**Technical**
IGF Code 2015 / PART A-1 / 6.3.5	On or after 7/1/2017	6.3 Regulations – General 6.3.5 Pipe connections to the fuel storage tank shall be mounted above the highest liquid level in the tanks, except for fuel storage tanks of type C. Connections below the highest liquid level may however also be accepted for other tank types after special consideration by the Administration.	**Technical**
IGF Code 2015 / PART A-1 / 6.4.9.3.3.1.3	On or after 7/1/2017	6.4.9.3.3.1 Internal pressure .3 Subject to special consideration by the Administration and to the limitations given in 6.4.15 for the various tank types, a vapour pressure Ph higher than P0 may be accepted for site specific conditions (harbour or other locations), where dynamic loads are reduced.	**Technical**
IGF Code 2015 / PART A-1 / 6.4.12.1.1.3	On or after 7/1/2017	6.4.12 Design conditions 6.4.12.1.1 Structural capacity may be determined by testing, or by analysis, taking into account both the elastic and plastic material properties, by simplified linear elastic analysis or by the provisions of this Code: .3 For the purpose of ultimate strength assessment the following material parameters apply: ... The above properties shall correspond to the minimum specified mechanical properties of the material, including the weld metal in the as fabricated condition. Subject to special consideration by the Administration, account may be taken of the enhanced yield stress and tensile strength at low temperature.	**Technical**
IGF Code 2015 / PART A-1 / 6.7.2.7.3	On or after 7/1/2017	6.7 Regulations for pressure relief system 6.7.2.7 Each pressure relief valve installed on a liquefied gas fuel tank shall be connected to a venting system, which shall be: ... .3 arranged such that the height of vent exits shall normally not be less than B/3 or 6 m, whichever is the greater, above the	**Technical**

		weather deck and 6 m above working areas and walkways. However, vent mast height could be limited to lower value according to special consideration by the Administration.	
IGF Code 2015 / PART A-1 / 6.9.2.1	On or after 7/1/2017	6.9.2 Design of systems 6.9.2.1 For worldwide service, the upper ambient design temperature shall be sea 32°C and air 45°C. For service in particularly hot or cold zones, these design temperatures shall be increased or decreased, to the satisfaction of the Administration.	**Technical**
IGF Code 2015 / PART A-1 / 11.3.5	On or after 7/1/2017	11.3 Regulations for fire protection 11.3.5 The fire protection of fuel pipes led through ro-ro spaces shall be subject to special consideration by the Administration depending on the use and expected pressure in the pipes.	**Technical**
IGF Code 2015 / PART B-1 / 16.1.2	On or after 7/1/2017	16.1.2 Where post-weld heat treatment is specified or required, the properties of the base material shall be determined in the heat treated condition, in accordance with the applicable tables of chapter 7, and the weld properties shall be determined in the heat treated condition in accordance with 16.3. In cases where a post-weld heat treatment is applied, the test regulations may be modified at the discretion of the Administration.	**Technical**
IGF Code 2015 / PART B-1 / 16.2.1.2	On or after 7/1/2017	16.2.1 Tensile test 16.2.1.2 Tensile strength, yield stress and elongation shall be to the satisfaction of the Administration. For carbon-manganese steel and other materials with definitive yield points, consideration shall be given to the limitation of the yield to tensile ratio.	**Technical**
IGF Code 2015 / PART B-1 / 16.2.3.2	On or after 7/1/2017	16.2.3 Bend test 16.2.3.2 The bend tests shall be transverse bend tests, which may be face, root or side bends at the discretion of the Administration. However, longitudinal bend tests may be required in lieu of transverse bend tests in cases where the base material and weld metal have different strength levels.	**Technical**
IGF Code 2015 / PART B-1 / 16.3.1	On or after 7/1/2017	16.3.1 General This section shall apply to primary and secondary barriers only, including the inner hull where this forms the secondary barrier. Acceptance testing is specified for carbon, carbon-manganese, nickel alloy and stainless steels, but these tests may be adapted for other materials. At the discretion of the Administration, impact testing of stainless steel and aluminium alloy weldments may be **omitted and other tests may be specially required for any** material.	**Technical**
IGF 2019 Amend			Adopted by Res.MSC.458(101)

IGF 2019 Amend / PART A-1 / 11.3.5		11.3 Regulations for fire protection 11.3.5 The fire protection of fuel pipes led through ro-ro spaces shall be subject to special consideration by the Administration depending on the use and expected pressure in the pipes.	**Technical**
IGF 2020 Amend			Adopted by Res.MSC.475(102)
IGF 2020 Amend / PART A-1 / 6.7.2.7.3	On or after 7/1/2017 Retroactive	6.7 Regulations for pressure relief system 6.7.2.7 Each pressure relief valve installed on a liquefied gas fuel tank shall be connected to a venting system, which shall be: ... .3 arranged such that the height of vent exits shall normally not be less than B/3 or 6 m, whichever is the greater, above the weather deck and 6 m above working areas and walkways. However, vent mast height could be limited to lower value according to special consideration by the Administration.	**Technical**
IGF 2020 Amend / PART B-1 / 16.3.1	On or after 7/1/2017	16.3.1 General This section shall apply to primary and secondary barriers only, including the inner hull where this forms the secondary barrier. Acceptance testing is specified for carbon, carbon-manganese, nickel alloy and stainless steels, but these tests may be adapted for other materials. At the discretion of the Administration, impact testing of stainless steel and aluminium alloy weldments may be omitted and other tests may be specially required for any material.	**Technical**
IGF 2022 Amend			Adopted by Res.MSC.524(106)
IGF 2022 Amendment / 7.4 / Table 7.3 / Notes / 1.	On or after 7/1/2017	7.4 Regulations for materials Table 7.3 Notes 1. The impact test required for forgings used in critical applications shall be subject to special consideration by the Administration.	**Technical**
IGF 2022 Amendment / 7.4 / Table 7.4 / Notes / 2.	On or after 7/1/2017	7.4 Regulations for materials Table 7.4 Notes 2. The requirements for forgings and castings may be subject to special consideration by the Administration.	**Technical**
IMDG Code			
IMDG CODE / PART 1 / 1.2.1		1.2.1 Definitions *Open ro-ro cargo space* means a ro-ro cargo space either open at both ends, or open at one end and provided with adequate natural	**Technical**

		ventilation effective over its entire length through permanent openings in the side plating or deckhead to the satisfaction of the Administration.	
IMDG Code 2012 Amend			
IMDG Code 2012 (36-12) / PART 1 / 1.2.1		1.2.1 Definitions Open ro-ro cargo space means a ro-ro cargo space either open at both ends, or open at one end and provided with adequate natural ventilation effective over its entire length through permanent openings in the side plating or deckhead to the satisfaction of the Administration.	**Technical**
IMDG Code 2012 (36-12) / PART 7 / 7.4.2.4.2		Stowage requirements 7.4.2.4.2 The capacity of the mechanical ventilation (number of air changes per hour) shall be to the satisfaction of the Administration.	**Technical**
IMDG Code 2012 (36-12) / PART 7 / 7.5.2.11		Stowage provisions 7.5.2.11 In ships the keel of which was laid before 1 September 1984 and for which regulation II 2/20 of SOLAS 74, as amended, or regulations II 2/37 and 38 of SOLAS 74, as amended by the resolutions indicated in II 2/1.2.1, are not applicable to a closed ro-ro cargo space, mechanical ventilation shall be provided to the satisfaction of the Administration. The ventilation fans shall be operating at all times when vehicles are in such spaces.	**Technical**
IMDG Code 2012 (36-12) / PART 7 / 7.6.2.3.2		Stowage and handling provisions 7.6.2.3.2 The capacity of the mechanical ventilation (number of air changes per hour) shall be to the satisfaction of the Administration.	**Technical**
IMDG Code 2014 Amend			
IMDG Code 2014 (37-14) / PART 1 / 1.2.1		1.2.1 Definitions Open ro-ro cargo space means a ro-ro cargo space either open at both ends, or open at one end and provided with adequate natural ventilation effective over its entire length through permanent openings in the side plating or deckhead to the satisfaction of the Administration.	**Technical**
IMDG Code 2014 (37-14) / PART 7 / 7.4.2.4.2		Stowage requirements 7.4.2.4.2 The capacity of the mechanical ventilation (number of air changes per hour) shall be to the satisfaction of the Administration.	**Technical**

IMDG Code 2014 (37-14) / PART 7 / 7.5.2.2.11		Stowage provisions 7.5.2.11 In ships the keel of which was laid before 1 September 1984 and for which regulation II 2/20 of SOLAS 74, as amended, or regulations II 2/37 and 38 of SOLAS 74, as amended by the resolutions indicated in II 2/1.2.1, are not applicable to a closed ro-ro cargo space, mechanical ventilation shall be provided to the satisfaction of the Administration. The ventilation fans shall be operating at all times when vehicles are in such spaces.	**Technical**
IMDG Code 2014 (37-14) / PART 7 / 7.6.2.3.2		Stowage and handling provisions 7.6.2.3.2 The capacity of the mechanical ventilation (number of air changes per hour) shall be to the satisfaction of the Administration.	**Technical**
IMDG Code 2016 Amend			
IMDG Code 2016 (38-16) / PART 1 / 1.2.1		1.2.1 Definitions *Open ro-ro cargo space* means a ro-ro cargo space either open at both ends, or open at one end and provided with adequate natural ventilation effective over its entire length through permanent openings in the side plating or deckhead to the satisfaction of the Administration.	**Technical**
IMDG Code 2016 (38-16) / PART 7 / 7.4.2.4.2		Stowage requirements 7.4.2.4.2 The capacity of the mechanical ventilation (number of air changes per hour) shall be to the satisfaction of the Administration.	**Technical**
IMDG Code 2016 (38-16) / PART 7 / 7.5.2.11		Stowage provisions 7.5.2.11 In ships the keel of which was laid before 1 September 1984 and for which regulation II-2/20 of SOLAS, as amended, or regulations II 2/37 and 38 of SOLAS, as amended by the resolutions indicated in II-2/1.2.1, are not applicable to a closed ro-ro cargo space, mechanical ventilation shall be provided to the satisfaction of the Administration. The ventilation fans shall be operating at all times when vehicles are in such spaces.	**Technical**
IMDG Code 2016 (38-16) / PART 7 / 7.6.2.3.2		Stowage and handling provisions 7.6.2.3.2 The capacity of the mechanical ventilation (number of air changes per hour) shall be to the satisfaction of the Administration.	**Technical**
IMDG Code 2016 / SUPPLEMENT / INF Code / Chapter 2 / 2.1		The damage stability of a Class INF 1 ship shall be to the satisfaction of the Administration.	**Indefinite**

IMDG Code 2016 / SUPPLEMENT / INF Code / Chapter 3 / 3.1		Fire safety measures of a Class INF 1 ship shall be to the satisfaction of the Administration.	**Indefinite**
IMDG Code 2016 / SUPPLEMENT / INF Code / Chapter 4 / 4.1.3		In Class INF 1, 2 and 3 ships: .3 those items essential to operation, such as fans, compressors, heat exchangers, cooling water supply, shall be provided in duplicate for each cargo space and spare parts shall be available, to the satisfaction of the Administration.	**Indefinite**
IMDG Code 2016 / SUPPLEMENT / INF Code / Chapter 7 / 7.1		The electrical power supplies in a Class INF 1 ship shall be to the satisfaction of the Administration.	**Indefinite**
IMDG Code 2016 / SUPPLEMENT / INF Code / Chapter 8		Radiological protection Depending upon the characteristics of the INF cargo to be carried and upon the design of the ship, additional arrangements or equipment for radiological protection shall, if necessary, be provided to the satisfaction of the Administration.	**Indefinite**
IMDG Code 2016 / SUPPLEMENT / INF Code / Chapter 9		Management and training Management and training for a ship carrying INF cargo shall be to the satisfaction of the Administration, taking into account developments in the Organization.	**Indefinite**
IMDG Code 2018 Amend			
IMDG Code 2018 (39-18) / PART 1 / 1.2.1		1.2.1 Definitions *Open ro-ro cargo space* means a ro-ro cargo space either open at both ends, or open at one end and provided with adequate natural ventilation effective over its entire length through permanent openings in the side plating or deckhead to the satisfaction of the Administration.	**Technical**
IMDG Code 2018 (39-18) / PART 7 / 7.4.2.4.2		Stowage requirements 7.4.2.4.2 The capacity of the mechanical ventilation (number of air changes per hour) shall be to the satisfaction of the Administration.	**Technical**
IMDG Code 2018 (39-18) / PART 7 / 7.5.2.11		Stowage provisions 7.5.2.11 In ships the keel of which was laid before 1 September 1984 and for which regulation II-2/20 of SOLAS, as amended, or regulations II 2/37 and 38 of SOLAS, as amended by the resolutions indicated in II-2/1.2.1, are not applicable to a closed ro-ro cargo space, mechanical ventilation shall be provided to the	**Technical**

		satisfaction of the Administration. The ventilation fans shall be operating at all times when vehicles are in such spaces.	
IMDG Code 2018 (39-18) / PART 7 / 7.6.2.3.2		Stowage and handling provisions 7.6.2.3.2 The capacity of the mechanical ventilation (number of air changes per hour) shall be to the satisfaction of the Administration.	**Technical**
IMDG Code 2020 Amend			
IMDG Code 2020 (40-20) / PART 1 / 1.2.1		1.2.1 Definitions *Open ro-ro cargo space* means a ro-ro cargo space either open at both ends, or open at one end and provided with adequate natural ventilation effective over its entire length through permanent openings in the side plating or deckhead to the satisfaction of the Administration.	**Technical**
IMDG Code 2020 (40-20) / PART 7 / 7.4.2.4.2		Stowage requirements 7.4.2.4.2 The capacity of the mechanical ventilation (number of air changes per hour) shall be to the satisfaction of the Administration.	**Technical**
IMDG Code 2020 (40-20) / PART 7 / 7.5.2.11		Stowage provisions 7.5.2.11 In ships the keel of which was laid before 1 September 1984 and for which regulation II-2/20 of SOLAS, as amended, or regulations II 2/37 and 38 of SOLAS, as amended by the resolutions indicated in II-2/1.2.1, are not applicable to a closed ro-ro cargo space, mechanical ventilation shall be provided to the satisfaction of the Administration. The ventilation fans shall be operating at all times when vehicles are in such spaces.	**Technical**
IMDG Code 2020 (40-20) / PART 7 / 7.6.2.3.2		Stowage and handling provisions 7.6.2.3.2 The capacity of the mechanical ventilation (number of air changes per hour) shall be to the satisfaction of the Administration.	**Technical**
IMDG Code 2022 Amend			
IMDG Code 2022 (41-22) / PART 1 / 1.2.1		1.2.1 Definitions *Open ro-ro cargo space* means a ro-ro cargo space either open at both ends, or open at one end and provided with adequate natural ventilation effective over its entire length through permanent openings in the side plating or deckhead to the satisfaction of the Administration.	**Technical**
IMDG Code 2022 (41-22) / PART 7 / 7.4.2.4.2		Stowage requirements	**Technical**

		7.4.2.4.2 The capacity of the mechanical ventilation (number of air changes per hour) shall be to the satisfaction of the Administration.	
IMDG Code 2022 (41-22) / PART 7 / 7.5.2.11		Stowage provisions 7.5.2.11 In ships the keel of which was laid before 1 September 1984 and for which regulation II-2/20 of SOLAS, as amended, or regulations II 2/37 and 38 of SOLAS, as amended by the resolutions indicated in II-2/1.2.1, are not applicable to a closed ro-ro cargo space, mechanical ventilation shall be provided to the satisfaction of the Administration. The ventilation fans shall be operating at all times when vehicles are in such spaces.	**Technical**
IMDG Code 2022 (41-22) / PART 7 / 7.6.2.3.2		Stowage and handling provisions 7.6.2.3.2 The capacity of the mechanical ventilation (number of air changes per hour) shall be to the satisfaction of the Administration.	**Technical**
IMDG Code 2024 Amend			
IMDG Code 2024 (42-24) / PART 1 / 1.2.1		1.2.1 Definitions *Open ro-ro cargo space* means a ro-ro cargo space either open at both ends, or open at one end and provided with adequate natural ventilation effective over its entire length through permanent openings in the side plating or deckhead to the satisfaction of the Administration.	**Technical**
IMDG Code 2024 (42-24) / PART 7 / 7.4.2.4.2		Stowage requirements 7.4.2.4.2 The capacity of the mechanical ventilation (number of air changes per hour) shall be to the satisfaction of the Administration.	**Technical**
IMDG Code 2024 (42-24) / PART 7 / 7.5.2.11		Stowage provisions 7.5.2.11 In ships the keel of which was laid before 1 September 1984 and for which regulation II-2/20 of SOLAS, as amended, or regulations II 2/37 and 38 of SOLAS, as amended by the resolutions indicated in II-2/1.2.1, are not applicable to a closed ro-ro cargo space, mechanical ventilation shall be provided to the satisfaction of the Administration. The ventilation fans shall be operating at all times when vehicles are in such spaces.	**Technical**
IMDG Code 2024 (42-24) / PART 7 / 7.6.2.3.2		Stowage and handling provisions 7.6.2.3.2 The capacity of the mechanical ventilation (number of air changes per hour) shall be to the satisfaction of the Administration.	**Technical**

INF Code			Adopted by Res.MSC.88(71)
INF Code / Chapter 2 / 2.1		Chapter 2 - Damage stability 2.1 The damage stability of a Class INF I ship shall be to the satisfaction of the Administration.	**Indefinite**
INF Code / Chapter 3 / 3.1		Chapter 3 - Fire safety measures 3.1 Fire safety measures of a Class INF I ship shall be to the satisfaction of the Administration.	**Indefinite**
INF Code / Chapter 4 / 4.1.3		Chapter 4 - Temperature control of cargo spaces 4.1 In Class INF I, 2 and 3 ships: ... .3 those items essential to operation, such as fans, compressors, heat exchangers, cooling water supply, shall be provided in duplicate for each cargo space and spare parts shall be available, to the satisfaction of the Administration.	**Indefinite**
INF Code / Chapter 7 / 7.1		Chapter 7 - Electrical power supplies 7.1 The electrical power supplies in a Class INF I ship shall be to the satisfaction of the Administration.	**Indefinite**
INF Code / Chapter 8		Chapter 8 - Radiological protection Depending upon the characteristics of the INF cargo to be carried and upon the design of the ship, additional arrangements or equipment for radiological protection shall, if necessary, be provided to the satisfaction of the Administration.	**Indefinite**
INF Code / Chapter 9		Chapter 9 - Management and training Management and training for a ship carrying INF cargo shall be to the satisfaction of the Administration taking into account developments in the Organization.	**Indefinite**
HSC Code			
HSC 1994			Adopted by Res.MSC.119(74)
HSC 1994 / Chapter 7 / 7.5.6.2	On or after 1/1/1996 Before 7/1/2002	7.5 Fuel and other flammable fluid tanks and systems 7.5.6 Fuel with a flash point below 35 °C shall not be used. In every craft in which fuel with a flashpoint below 43 °C is used, the arrangements for the storage, distribution and utilization of the fuel shall be such that, having regard to the hazard of fire and explosion which the use of such fuel may entail, the safety of the craft and of persons on board is preserved. The arrangements shall comply, in addition to the requirements of 7.5.1 to 7.5.5, with the following provisions: ... .2 arrangements shall be made to prevent overpressure in any fuel tank or in any part of the oil fuel system, including the filling	**Technical**

		pipes. Any relief valves and air or overflow pipes shall discharge to a position which, in the opinion of the Administration, is safe;	
HSC 1994 / Chapter 7 / 7.5.6.3	On or after 1/1/1996 Before 7/1/2002	7.5 Fuel and other flammable fluid tanks and systems 7.5.6 Fuel with a flash point below 35 °C shall not be used. In every craft in which fuel with a flashpoint below 43 °C is used, the arrangements for the storage, distribution and utilization of the fuel shall be such that, having regard to the hazard of fire and explosion which the use of such fuel may entail, the safety of the craft and of persons on board is preserved. The arrangements shall comply, in addition to the requirements of 7.5.1 to 7.5.5, with the following provisions: ... .3 the spaces in which fuel tanks are located shall be mechanically ventilated, using exhaust fans providing not less than six air changes per hour. The fans shall be such as to avoid the possibility of ignition of flammable gas-air mixtures. Suitable wire mesh guards shall be fitted over inlet and outlet ventilation openings. The outlets for such exhausts shall be discharged to a position which, in the opinion of the Administration is safe. 'No Smoking' signs shall be posted at the entrance to such spaces;	**Technical**
HSC 1994 / Chapter 7 / 7.2.4	On or after 1/1/1996 Before 7/1/2002	7.2 Definitions 7.2.4 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**
HSC 1994 / Chapter 7 / 7.7.2.3.2	On or after 1/1/1996 Before 7/1/2002	7.7.2 The fixed fire-detection and fire alarm systems should comply with the following requirements. 7.7.2.3 Design requirements: .2 Smoke detectors required by paragraph 7.7.2.2.2 should be certified to operate before the smoke density exceeds 12.5% obscuration per metre, but not until the smoke density exceeds 2% obscuration per metre. Smoke detectors to be installed in other spaces should operate within sensitivity limits to the satisfaction of the Administration having regard to the avoidance of detector insensitivity or over-sensitivity.	**Technical**
HSC 1994 / Chapter 7 / 7.7.2.3.4	On or after 1/1/1996 Before 7/1/2002	7.7.2 The fixed fire-detection and fire alarm systems should comply with the following requirements. 7.7.2.3 Design requirements: ...	**Technical**

		.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 abnormal high ambient temperature.	
HSC 1994 / Chapter 7 / 7.7.6.1.1	On or after 1/1/1996 Before 7/1/2002	7.7.6.1 The fixed fire-extinguishing systems should comply with the following requirements: .1 The use of a fire-extinguishing medium which, in the opinion of the Administration, either by itself or under expected conditions of use will adversely affect the earth's ozone layer and/or gives off toxic gases in such quantities as to endanger persons should not be permitted.	**Technical**
HSC 1994 / Chapter 7 / 7.7.6.1.12	On or after 1/1/1996 Before 7/1/2002	7.7.6.1 The fixed fire-extinguishing systems should comply with the following requirements: ... .12 Containers for the storage of fire-extinguishing medium and associated pressure components should 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**
HSC 1994 / Chapter 8 / 8.1.3.2	On or after 1/1/1996 Before 7/1/2002	8.1 General and definitions 8.1.3 Before giving approval to life-saving appliances and arrangements, the Administration should 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**
HSC 1994 / Chapter 8 / 8.1.4.2	On or after 1/1/1996 Before 7/1/2002	8.1 General and definitions 8.1.4 Before giving approval to novel life-saving appliances or arrangements, the Administration should ensure that such appliances or arrangements: .2 have successfully undergone, to the satisfaction of the Administration, evaluation and tests which are substantially equivalent to those recommendations.	**Technical**
HSC 1994 / Chapter 8 / 8.1.6	On or after 1/1/1996 Before 7/1/2002	8.1 General and definitions 8.1.6 Except where otherwise provided in this Code, life-saving appliances required by this chapter for which detailed specifications are not included in part C of chapter III of the Convention should be to the satisfaction of the Administration.	**Technical**
HSC 1994 / Chapter 8 / 8.3.8	On or after 1/1/1996	8.3 Personal lifesaving appliances 8.3.8 An immersion suit or anti-exposure suit should be provided for each member of the crew assigned, in the muster list, to	**Specific** Case by case assessment

	Before 7/1/2002	duties in an MES party for embarking passengers into survival craft. These immersion suits or anti-exposure suits need not be required if the craft is constantly engaged on voyages in warm climates where, in the opinion of the Administration, such suits are unnecessary.	
HSC 1994 / Chapter 8 / 8.9.1.2.2	On or after 1/1/1996 Before 7/1/2002	8.9 Operational readiness, maintenance and inspections 8.9.1.2 Before giving approval to novel life-saving appliances or arrangements, the Administration should ensure that such appliances or arrangements: .2 have successfully undergone, to the satisfaction of the Administration, evaluation and tests which are substantially equivalent to those recommendations.	**Technical**
HSC 1994 / Chapter 10 / 10.2.4.9	On or after 1/1/1996 Before 7/1/2002	10.2 Arrangement of oil fuel, lubricating oil and other flammable oil 10.2.4.9 oil fuel pipes and their valves and fittings should be of steel or other approved material, except that restricted use of flexible pipes should be permissible in positions where the Administration is satisfied that they are necessary. Such flexible pipes and end attachments should be of approved fire-resisting materials of adequate strength and should be constructed to the satisfaction of the Administration.	**Technical**
HSC 1994 / Chapter 12 / 12.2.9	On or after 1/1/1996 Before 7/1/2002	12.2 Main source of electrical power 12.2.9 The main busbars should normally be subdivided into at least two parts which should be connected by a circuit-breaker or other approved means. So far as is practicable, the connection of generating sets and any other duplicated equipment should be equally divided between the parts. Equivalent arrangements may be permitted to the satisfaction of the Administration.	**Technical**
HSC 1994 / Chapter 12 / 12.6.2	On or after 1/1/1996 Before 7/1/2002	12.6.2 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 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, nonconducting mats or gratings shall be provided at the front and rear of the switchboard.	**Technical**
HSC 1994 / Chapter 12 / 12.6.4.4	On or after 1/1/1996 Before 7/1/2002	12.6 Precautions against shock, fire and other hazards of electrical origin 12.6.4.4 Where cables which are installed in hazardous areas introduce the risk of fire or explosion in the event of an electrical	**Technical**

		fault in such areas, special precautions against such risks should be taken to the satisfaction of the Administration.	
HSC 1994 / Chapter 13 (13.1~13.16) / 13.1.2	On or after 1/1/1996 Before 7/1/2002	Shipborne navigational system and equipment and voyage data recorder 13.1.2 The equipment and its installation should be to the satisfaction of the Administration.	**Specific** Cabinet Regulation No. 34 adopted 17 January 2017 "Regulations Regarding the Marine Equipment" Shipborne navigational system and equipment and voyage data recorder shall comply with MED directive.
HSC 1994 / Chapter 14 (14.1~14.16) / 14.15	On or after 1/1/1996 Before 7/1/2002	14.15 Radio personnel Every craft should carry personnel qualified for distress and safety radiocommunication purposes to the satisfaction of the Administration. The personnel should be holders of certificates specified in the Radio Regulations as appropriate, any one of whom should 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.
HSC 1994 / Chapter 14 (14.1~14.16) / 14.16	On or after 1/1/1996 Before 7/1/2002	14.16 Radio records A record should be kept, to the satisfaction of the Administration and as required by the Radio Regulations, of all incidents connected with the radiocommunication 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.
HSC 1994 / Chapter 15 (15.1~15.11) / 15.3.1	On or after 1/1/1996 Before 7/1/2002	15.3 Field of vision from the operating compartment 15.3.1 The operating station should be placed above all other super-structures so that the operating crew are able to gain a view all round the horizon from the navigating workstation. Where it is impractical to meet the requirements of this paragraph from a single navigating workstation, the operating station should be designed so that an all-round view of the horizon is obtained using two navigating workstations combined or any other means to the satisfaction of the Administration.	**Technical**
HSC 1994 / Chapter 18 / 18.3.1	On or after 1/1/1996 Before 7/1/2002	HSC 1994 / Chapter 18 / 18.3 18.3.1 The level of competence and the training considered necessary in respect of the master and each crew member should be laid down and demonstrated in the light of the following guidelines to the satisfaction of the Administration in respect of the particular type and model of craft concerned and the service intended. More than one crew member should be trained to perform all essential operational tasks in both normal and emergency situations.	**Specific** Cabinet Regulation No. 895 adopted 22 November 2005 "Regulations Regarding Certification of Seafarers"
HSC 1994 / Chapter 19 / 9.2	On or after 1/1/1996 Before 7/1/2002	Inspection and maintenance requirements 19.2 The craft and equipment should be maintained to the satisfaction of the Administration,	**Technical**
HSC 1994 / Chapter 19 / 9.2.3	On or after 1/1/1996 Before 7/1/2002	Inspection and maintenance requirements 19.2 The craft and equipment should be maintained to the satisfaction of the Administration, in particular: ... .3 all modifications should be recorded and their safety aspects investigated. Where it could have any effect on safety, the modification, together with its installation, should be to the satisfaction of the Administration;	**Technical**
HSC 2000			