		However, the Administration may not require the shelter if, due to special arrangements or dimensions of machinery space, a safe escape route from the lower part of this space will be provided. This shelter shall be of steel , insulated, where necessary, to the satisfaction of the Administration and be provided with a self-closing steel door at the lower end;	
A.327(IX) / Annex / Reg. 12(c)		Resolution A.327(IX) adopted on 12 November 1975 "Recommendation concerning fire safety requirements for cargo ships" Regulation 12 Means of escape (c) From machinery spaces other than those of Category A, escape routes shall be provided to the satisfaction of the Administration having regard to the nature and location of the space and whether persons are normally employed in that space.	**Technical**
A.327(IX) / Annex / Reg. 14		Resolution A.327(IX) adopted on 12 November 1975 "Recommendation concerning fire safety requirements for cargo ships" Regulation 14 Automatic Sprinkler and Fire Alarm and Fire Detection System Where an automatic sprinkler and fire alarm and fire detection system is provided in compliance with the provisions of Regulation 13 of these Requirements, it shall be to the satisfaction of the Administration and shall comply with the following requirements: ...	**Technical**
A.327(IX) / Annex / Reg. 14(a)(i)		Resolution A.327(IX) adopted on 12 November 1975 "Recommendation concerning fire safety requirements for cargo ships" Regulation 14 Automatic Sprinkler and Fire Alarm and Fire Detection System Where an automatic sprinkler and fire alarm and fire detection system is provided in compliance with the provisions of Regulation 13 of these Requirements, it shall be to the satisfaction of the Administration and shall comply with the following requirements: (a) (i) Any required automatic sprinkler and fire alarm and fire detection system shall be capable of immediate operation at all times and no action by the crew shall be necessary to set it in operation. It shall be of the wet pipe type but small exposed sections may be of the dry pipe type where in the opinion of the Administration this is a necessary precaution. Any parts of the system which may be subjected to freezing temperatures in service shall be suitably protected against freezing. It shall be	**Technical**

		kept charged at the necessary pressure and shall have provision for a continuous supply of water as required in this Regulation	
A.327(IX) / Annex / Reg. 14(c)		Resolution A.327(IX) adopted on 12 November 1975 "Recommendation concerning fire safety requirements for cargo ships" Regulation 14 Automatic Sprinkler and Fire Alarm and Fire Detection System Where an automatic sprinkler and fire alarm and fire detection system is provided in compliance with the provisions of Regulation 13 of these Requirements, it shall be to the satisfaction of the Administration and shall comply with the following requirements: ... (c) Sprinklers shall be placed in an overhead position and spaced in a suitable pattern to maintain an average application rate of not less than 5 litres per square metre per minute over the nominal area covered by the sprinklers. However, the Administration may permit the use of sprinklers providing such an alternative amount of water suitably distributed as has been shown to the satisfaction of the Administration to be not less effective.	**Technical**
A.327(IX) / Annex / Reg. 14(j)		Resolution A.327(IX) adopted on 12 November 1975 "Recommendation concerning fire safety requirements for cargo ships" Regulation 14 Automatic Sprinkler and Fire Alarm and Fire Detection System Where an automatic sprinkler and fire alarm and fire detection system is provided in compliance with the provisions of Regulation 13 of these Requirements, it shall be to the satisfaction of the Administration and shall comply with the following requirements: ... (j) Spare sprinkler heads shall be provided for each section of sprinklers to the satisfaction of the Administration.	**Technical**
A.327(IX) / Annex / Reg. 16		Resolution A.327(IX) adopted on 12 November 1975 "Recommendation concerning fire safety requirements for cargo ships" Regulation 16 Automatic Fire Alarm and Fire Detection System Where an automatic fire alarm and fire detection system is provided in compliance with the provisions of Regulation 15 of these Requirements, it shall be to the satisfaction of the Administration and shall comply with the following requirements: ...	**Technical**

A.327(IX) / Annex / Reg. 16(c)		Resolution A.327(IX) adopted on 12 November 1975 "Recommendation concerning fire safety requirements for cargo ships" Regulation 16 Automatic Fire Alarm and Fire Detection System (c) The system shall be operated by an abnormal air temperature, by an abnormal concentration of smoke or by other factors indicative of incipient fire in any one of the spaces to be protected. Systems which are sensitive to air temperature shall not operate at less than 57°C and shall operate at a temperature not greater than 74°C when the temperature increase to those levels is not more than 1°C per minute. At the discretion of the Administration the permissible temperature of operation may be increased to 30°C above the maximum deckhead temperature in drying rooms and similar places of a normally high ambient temperature. Systems which are sensitive to smoke concentration shall operate on the reduction of the intensity of a transmitted light beam by an amount to be determined by the Administration Other equally effective methods of operation may be accepted at the discretion of the Administration. The detection system shall not be used for any purpose other than fire detection.	**Technical**
A.327(IX) / Annex / Reg. 16(h)		Resolution A.327(IX) adopted on 12 November 1975 "Recommendation concerning fire safety requirements for cargo ships" Regulation 16 Automatic Fire Alarm and Fire Detection System Where an automatic fire alarm and fire detection system is provided in compliance with the provisions of Regulation 15 of these Requirements, it shall be to the satisfaction of the Administration and shall comply with the following requirements: ... (h) Spare detector heads shall be provided for each section of detectors to the satisfaction of the Administration.	**Technical**
A.327(IX) / Annex / Reg. 17(b)		Resolution A.327(IX) adopted on 12 November 1975 "Recommendation concerning fire safety requirements for cargo ships" Regulation 17 Fixed Fire-Extinguishing Arrangements in Cargo Spaces (b) The Administration may exempt from the requirements of paragraph (a) of this Regulation the cargo spaces of any ship if it is constructed and solely intended for carrying ore, coal, grain, unseasoned timber and non-combustible cargoes or cargoes which, in the opinion of the Administration constitute a low fire	**Specific** Case by case assessment

		risk. Such exemptions may be granted only if the ships are fitted with steel hatch covers and effective means of closing all ventilators and other openings leading to the cargo spaces.	
A.327(IX) / Annex / Reg. 17(c)		Resolution A.327(IX) adopted on 12 November 1975 "Recommendation concerning fire safety requirements for cargo ships" Regulation 17 Fixed Fire-Extinguishing Arrangements in Cargo Spaces (c) Ships engaged in the carriage of dangerous goods as classified in Regulation 2 of Chapter VII of the Convention shall be provided in any cargo spaces with a fixed gas fire extinguishing system complying with the provisions of Regulation 8 of Chapter II-2 of the Convention or by a fire-extinguishing system which in the opinion of the Administration gives equivalent protection for the cargoes carried.	**Technical**
A.327(IX) / Annex / Reg. 19(a)		Resolution A.327(IX) adopted on 12 November 1975 "Recommendation concerning fire safety requirements for cargo ships" Regulation 19 Provision for Fire-Extinguishing Equipment (a) Application Where ships have a lower gross tonnage than those quoted in this Regulation, the arrangements for the items covered in this Regulation shall be to the satisfaction of the Administration	**Technical**
A.327(IX) / Annex / Reg. 19(b)(ii)		Resolution A.327(IX) adopted on 12 November 1975 "Recommendation concerning fire safety requirements for cargo ships" Regulation 19 Provision for Fire-Extinguishing Equipment (b) Fire Pumps and Fire Main System The ship shall be provided with fire pumps, fire main system, hydrants and hoses complying with Regulation 5 of Chapter II-2 of the Convention and with the following requirements: (ii) If a fire in any one compartment of any ship could put all the pumps out of action, there must be an alternative means of providing water for fire fighting. In a ship of 2,000 tons gross tonnage and upwards this alternative means shall be a fixed emergency pump independently driven. This emergency pump shall be capable of supplying two jets of water to the satisfaction of the Administration.	**Technical**
A.327(IX) / Annex / Reg. 19(e)(ii)		Resolution A.327(IX) adopted on 12 November 1975 "Recommendation concerning fire safety requirements for cargo ships"	**Technical**

		Regulation 19 Provision for Fire-Extinguishing Equipment (e) Portable Fire Extinguishers in Accommodation and Service Spaces (ii) Spare charges shall be provided to the satisfaction of the Administration.	
A.327(IX) / Annex / Reg. 19(i)		Resolution A.327(IX) adopted on 12 November 1975 "Recommendation concerning fire safety requirements for cargo ships" Regulation 19 Provision for Fire-Extinguishing Equipment (i) Fire-Extinguishing Appliances in other Machinery Spaces Where, in the opinion of the Administration, a fire hazard exists in any machinery space for which no specific provisions for fire-extinguishing appliances are prescribed in paragraphs (f), (g) and (h) of this Regulation 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**
A.327(IX) / Annex / Reg. 19(j)		Resolution A.327(IX) adopted on 12 November 1975 "Recommendation concerning fire safety requirements for cargo ships" Regulation 19 Provision for Fire-Extinguishing Equipment (j) Fixed Fire-Extinguishing Systems not required by these Requirements Where a fixed fire-extinguishing system not required by these Requirements is installed, such a system shall be to the satisfaction of the Administration.	**Technical**
A.372(X) / Annex / 1(b)(i)		Resolution A.372(X) adopted on 14 November 1977 "Recommendation concerning fire safety requirements for passenger ships carrying not more than 36 passengers" Regulation 1 Structure (b) Provided that in cases where any part of the structure is of aluminium alloy. the following requirements shall apply: (i) 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 Celsius above the ambient temperature at any time during the applicable fire exposure to the standard fire test.	**Technical**
A.372(X) / Annex / 3(b)(i)		Resolution A.372(X) adopted on 14 November 1977 "Recommendation concerning fire safety requirements for passenger ships carrying not more than 36 passengers"	**Technical**

		Regulation 3 Internal bulkheads (b) All corridor bulkheads where not required to be "A" Class shall be "B" Class divisions which shall extend from deck to deck except: (i) when continuous "B" Class ceilings and/or linings are fitted on both sides of the bulkhead, the portion of the bulkhead behind the 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;	
A.372(X) / Annex / 3(b)(ii)		Resolution A.372(X) adopted on 14 November 1977 "Recommendation concerning fire safety requirements for passenger ships carrying not more than 36 passengers" Regulation 3 Internal bulkheads (b) All corridor bulkheads where not required to be "A" Class shall be "B" Class divisions which shall extend from deck to deck except: (ii) in the case of a ship protected by an automatic sprinkler system complying with the provisions of Regulation 12 of Chapter II-2 of the Convention. the corridor bulkheads of "B" Class materials may terminate at a ceiling in the corridor provided such a ceiling is of material which, in thickness and composition, is acceptable in the construction of "B" Class divisions. Notwithstanding the requirements of Regulation 4 of these Requirements, such bulkheads and ceilings shall be required to meet "B" Class integrity standards only in so far as is reasonable and practicable in the opinion of the Administration. All doors and frames in such bulkheads shall be of noncombustible materials and shall be constructed and erected so as to provide substantial fire resistance to the satisfaction of the Administration.	**Technical**
A.372(X) / Annex / 4(d)		Resolution A.372(X) adopted on 14 November 1977 "Recommendation concerning fire safety requirements for passenger ships carrying not more than 36 passengers" Regulation 4 Fire integrity of bulkheads and decks (d) External boundaries which are required in paragraph (a) of Regulation 1 of these Requirements to be of steel or equivalent material may be pierced for the fitting of windows and sidescuttles provided that there is no requirement for such boundaries to have "A" Class integrity elsewhere in these Requirements. Similarly, in such boundaries which are not required to have "A" Class	**Technical**

		integrity, doors may be of materials to the satisfaction of the Administration.	
A.372(X) / Annex / 5(a)(iii)		Resolution A.372(X) adopted on 14 November 1977 "Recommendation concerning fire safety requirements for passenger ships carrying not more than 36 passengers" Regulation 5 Means of escape (a) In and from all passenger and crew spaces and in spaces in which the crew is normally employed, other than machinery spaces, stairways and ladders shall be arranged to provide ready means of escape to the lifeboat and liferaft embarkation deck. In particular, the following provisions shall be complied with: (iii) 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**
A.372(X) / Annex / 5(a)(v)		Resolution A.372(X) adopted on 14 November 1977 "Recommendation concerning fire safety requirements for passenger ships carrying not more than 36 passengers" Regulation 5 Means of escape (a) In and from all passenger and crew spaces and in spaces in which the crew is normally employed, other than machinery spaces, stairways and ladders shall be arranged to provide ready means of escape to the lifeboat and liferaft embarkation deck. In particular, the following provisions shall be complied with: (v) At least one of the means of escape required by sub-paragraphs (i) and (ii) of this paragraph shall be by means of a readily accessible enclosed stairway, which shall provide continuous fire shelter from the level of its origin to the appropriate lifeboat and liferaft embarkation decks or the highest level served by the stairway, whichever level is the highest. However, where the Administration has granted dispensation under the provisions of sub-paragraph (i) of this paragraph, the sole means of escape shall provide safe escape to the satisfaction of the Administration. The width, number and continuity of the stairways shall be to the satisfaction of the Administration.	**Technical**
A.372(X) / Annex / 5(a)(vi)		Resolution A.372(X) adopted on 14 November 1977 "Recommendation concerning fire safety requirements for passenger ships carrying not more than 36 passengers" Regulation 5 Means of escape (a) In and from all passenger and crew spaces and in spaces in which the crew is normally employed, other than machinery	**Technical**

		spaces, stairways and ladders shall be arranged to provide ready means of escape to the lifeboat and liferaft embarkation deck. In particular, the following provisions shall be complied with: (vi) Protection of access from the stairway enclosures to the lifeboat and liferaft embarkation areas shall be to the satisfaction of the Administration.	
A.372(X) / Annex / 5(b)(i)		Resolution A.372(X) adopted on 14 November 1977 "Recommendation concerning fire safety requirements for passenger ships carrying not more than 36 passengers" Regulation 5 Means of escape (b) (i) In special category spaces the number and disposition of the means of escape both below and above the bulkhead deck shall be to the satisfaction of the Administration, and in general the safety of access to the embarkation deck shall be at least equivalent to that provided for under sub-paragraphs (a)(i), (ii), (v), (vi) and (vii) of this Regulation.	**Technical**
A.372(X) / Annex / 7(g)		Resolution A.372(X) adopted on 14 November 1977 "Recommendation concerning fire safety requirements for passenger ships carrying not more than 36 passengers" Regulation 7 Openings in 'A" and "B" Class Divisions (g) Where a space is protected by an automatic sprinkler system complying with the provisions of Regulation 12 of Chapter II-2 of the Convention 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**
A.372(X) / Annex / 7(l)(i)		Resolution A.372(X) adopted on 14 November 1977 "Recommendation concerning fire safety requirements for passenger ships carrying not more than 36 passengers" Regulation 7 Openings in 'A" and "B" Class Divisions (l) Where an automatic sprinkler system complying with the provisions of Regulation 12 of Chapter II-2 of the Convention is fitted: (i) openings in decks not forming steps in main vertical zones nor bounding horizontal zones shall be closed reasonably tight and such decks shall meet the "B" Class integrity requirements in so far as is reasonable and practicable in the opinion of the Administration;	**Technical**

A.372(X) / Annex / 8(a)(i)(1)		Resolution A.372(X) adopted on 14 November 1977 "Recommendation concerning fire safety requirements for passenger ships carrying not more than 36 passengers" Regulation 8 Ventilation systems (i) Ventilation ducts shall be of non-combustible material, Short ducts. however, not generally exceeding 2 metres in length and with a cross-section not exceeding 0.02 square metre need not be non-combustible, subject to the following conditions: (1) These ducts shall be of a material which, in the opinion of the Administration, has a low fire risk.	**Technical**
A.372(X) / Annex / 8(a)(ii)(1)		Resolution A.372(X) adopted on 14 November 1977 "Recommendation concerning fire safety requirements for passenger ships carrying not more than 36 passengers" Regulation 8 Ventilation systems (a) (ii) Where the ventilation ducts with a free-sectional area exceeding 0.02 square metre pass through Class "A" bulkheads or decks, the opening should 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 comply in this part with the following specification: (1) For ducts with a free cross-sectional area exceeding 0.02 square metre, the sleeves shall have a thickness of at least 3 millimetres and a length of 900 millimetres. When passing through bulkheads, this length shall be divided preferably into 450 millimetres on each side of the bulkhead. Ducts with a free cross-sectional area exceeding 0.02 square metre or sleeves lining ducts with a free cross sectional area exceeding 0.02 square metre 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**
A.372(X) / Annex / 8(a)(v)		Resolution A.372(X) adopted on 14 November 1977 "Recommendation concerning fire safety requirements for passenger ships carrying not more than 36 passengers" Regulation 8 Ventilation systems (a) (v) 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	**Technical**

		shall be provided; air inlets of the two sources of supply shall be so disposed that the risk of both inlets drawing in smoke simultaneously is minimized. At the discretion of the Administration, such requirements need not apply to control stations situated on, and opening on to, an open deck, or where local closing arrangements would be equally effective.	
A.372(X) / Annex / 10(b)		Resolution A.372(X) adopted on 14 November 1977 "Recommendation concerning fire safety requirements for passenger ships carrying not more than 36 passengers" Regulation 10 Miscellaneous items Restriction of Combustible Materials (b) Vapour barriers and adhesives used in conjunction with insulation, as well as insulation of pipe fittings, for cold service systems need not be non-combustible, but they shall be kept to the minimum quantity practicable and their exposed surfaces shall have qualities of resistance to the propagation of flame to the satisfaction of the Administration.	**Technical**
A.372(X) / Annex / 10(l)		Resolution A.372(X) adopted on 14 November 1977 "Recommendation concerning fire safety requirements for passenger ships carrying not more than 36 passengers" Regulation 10 Miscellaneous items Requirements Applicable to Accommodation and Service Spaces, Control Stations, Corridors and Stairways (l) The construction of ceiling and bulkheading shall be such that it will be possible, without impairing the efficiency of the fire protection, for the fire patrols to detect any smoke originating in concealed and inaccessible places, except where, in the opinion of the Administration, there is no risk of fire originating in such places.	**Technical**
A.372(X) / Annex / 14(a)(ii)		Resolution A.372(X) adopted on 14 November 1977 "Recommendation concerning fire safety requirements for passenger ships carrying not more than 36 passengers" Regulation 14 Provision for fire alarm and public address systems and for fire-fighting equipment (a) Fire Detection, Alarms and Public Address Systems (ii) An approved fire alarm or fire-detecting system shall be provided which will automatically indicate at one or more suitable points or stations the presence or indication of fire and its location in any cargo space which, in the opinion of the Administration, is not accessible except where it is shown to the satisfaction of the	**Technical**

		Administration that the ship is engaged on voyages of such short duration that it would be unreasonable to apply this requirement.	
A.372(X) / Annex / 14(b)(iii)		Resolution A.372(X) adopted on 14 November 1977 "Recommendation concerning fire safety requirements for passenger ships carrying not more than 36 passengers" Regulation 14 Provision for fire alarm and public address systems and for fire-fighting equipment (b) Fire Pumps and Fire Main System (iii) In a ship of less than 1,000 tons gross tonnage the arrangements shall be to the satisfaction of the Administration.	**Technical**
A.372(X) / Annex / 14(c)(i)		Resolution A.372(X) adopted on 14 November 1977 "Recommendation concerning fire safety requirements for passenger ships carrying not more than 36 passengers" Regulation 14 Provision for fire alarm and public address systems and for fire-fighting equipment (c) Fire Hydrants, Hoses and Nozzles (i) The ship shall be provided with fire hoses the number and diameter of which shall be to the satisfaction of the Administration. There shall be at least one fire hose for each of the hydrants required by paragraph (d) of Regulation 5 of Chapter II-2 of the Convention and these hoses shall be used only for the purposes of extinguishing fires or testing the fire-extinguishing apparatus at fire drills and surveys.	**Technical**
A.372(X) / Annex / 14(f)(ii)		Resolution A.372(X) adopted on 14 November 1977 "Recommendation concerning fire safety requirements for passenger ships carrying not more than 36 passengers" Regulation 14 Provision for fire alarm and public address systems and for fire-fighting equipment (f) Fixed Fire-Extinguishing Arrangements in Cargo Spaces (ii) Where it is shown to the satisfaction of the Administration that a ship is engaged on voyages of such short duration that it would be unreasonable to apply the requirements of sub-paragraph (i) of this paragraph and also in ships of less than 1,000 tons gross tonnage, the arrangements in cargo spaces shall be to the satisfaction of the Administration.	**Technical**
A.372(X) / Annex / 14(j)		Resolution A.372(X) adopted on 14 November 1977 "Recommendation concerning fire safety requirements for passenger ships carrying not more than 36 passengers" Regulation 14 Provision for fire alarm and public address systems and for fire-fighting equipment (j) Fire-Extinguishing Appliances in other Machinery Spaces	**Technical**

		Where, in the opinion of the Administration, a fire hazard exists in any machinery space for which no specific provisions for fire-extinguishing appliances are prescribed in paragraphs (g), (h) and (i) of this Regulation there shall be provided in, or adjacent to, that space such number of approved portable fire extinguishers or other means of fire extinction as the Administration may deem sufficient.	
A.372(X) / Annex / 14(k)		Resolution A.372(X) adopted on 14 November 1977 "Recommendation concerning fire safety requirements for passenger ships carrying not more than 36 passengers" Regulation 14 Provision for fire alarm and public address systems and for fire-fighting equipment (k) Fixed Fire-Extinguishing Appliances not Required by these Requirements Where a fixed fire-extinguishing system not required by these Requirements is installed such a system shall be to the satisfaction of the Administration.	**Technical**
A.372(X) / Annex / 15(a)(vii)		Resolution A.372(X) adopted on 14 November 1977 "Recommendation concerning fire safety requirements for passenger ships carrying not more than 36 passengers" Regulation 15 Arrangements for oil fuel, lubricating oil and other flammable oils (a) Oil Fuel Arrangements (vii) Provision shall be made to prevent over- pressure in any oil tan k or in any part of the oil fuel system, including the filling pipes. Any relief valves and air or overflow pipes shall discharge to a position which, in the opinion of the Administration, is safe.	**Technical**
A.372(X) / Annex / 15(a)(viii)		Resolution A.372(X) adopted on 14 November 1977 "Recommendation concerning fire safety requirements for passenger ships carrying not more than 36 passengers" Regulation 15 Arrangements for oil fuel, lubricating oil and other flammable oils (a) Oil Fuel Arrangements (viii) Oil fuel pipes shall be of steel or other approved material, provided that restricted use of flexible pipes shall be permissible in positions where the Administration is satisfied that they are necessary. Such flexible pipes and end attachments shall be of approved fire-resisting materials of adequate strength and shall be constructed to the satisfaction of the Administration.	**Technical**

A.373(X) / Annex / Chapter I / 1.7.4		Resolution A.373(X) adopted on 14 November 1977 "Code of safety for dynamically supported craft" Chapter I – General 1.7.4 An Administration may allow the transit of a craft without passengers or cargo between areas of operation without a Dynamically Supported Craft Permit to Operate provided that it complies with safety requirements which are adequate in the opinion of the Administration for the voyage which is to be undertaken, keeping in mind the design parameters.	**Specific** Case by case assessment
A.373(X) / Annex / Chapter VII / 7.2.2		Resolution A.373(X) adopted on 14 November 1977 "Code of safety for dynamically supported craft" Chapter VII – Fire safety 7.2 Structural Fire Protection 7.2.2 Fire hazard areas should be enclosed by fire-resisting divisions complying with the requirements of 7.2.5 except where, in the opinion of the Administration, the omission of any such division would not affect the safety of the craft. These requirements need not apply to those parts of the structure in contact with water at the lightweight condition, but due regard should be given to the effect of heat transfer from any uninsulated structure in contact with water to insulated structure above the water.	**Technical**
A.373(X) / Annex / Chapter VIII / 8.2.6		Resolution A.373(X) adopted on 14 November 1977 "Code of safety for dynamically supported craft" Chapter VIII – Life-saving appliances 8.2 Survival Craft 8.2.6 At the discretion of the Administration, inflatable survival craft may be stowed with a hydrostatic device, so arranged as to release and inflate the survival craft from its container in the event of the dynamically supported craft sinking.	**Technical**
A.373(X) / Annex / Chapter X / 10.1.5		Resolution A.373(X) adopted on 14 November 1977 "Code of safety for dynamically supported craft" Chapter X – Auxiliary systems 10.1 General 10.1.5 Materials used in piping systems should be compatible with the fluid conveyed and due regard given to the risk of fire. Non-metallic piping material may be permitted in certain systems at the discretion of the Administration provided precautions are taken to maintain the integrity of the hull and watertight decks and bulkheads where necessary. Concerning materials and the	**Technical**

		use of flexible hoses in flammable fluid systems, reference is made to the fire safety requirements in 7.3.4 and 7.3.5.	
A.373(X) / Annex / Chapter XII / 12.2.5		Resolution A.373(X) adopted on 14 November 1977 "Code of safety for dynamically supported craft" Chapter XII – Electrical equipment 12.2.5 In the event of failure of any one of the sources, the remaining ones should be capable of feeding all those services that are, in the opinion of the Administration, necessary for propulsion, steering, draining and fire-fighting, essential internal communications and signalling and safe navigation of the craft, including starting the main propelling engines from a dead ship condition.	**Technical**
A.373(X) / Annex / Chapter XII / 12.2.6		Resolution A.373(X) adopted on 14 November 1977 "Code of safety for dynamically supported craft" Chapter XII – Electrical equipment 12.2.6 Where only accumulator batteries are used as main sources of power or in case of any combination thereof with generators, the capacity of each such accumulator battery should be sufficient to supply all services listed in 12.2.5 for a period to be specified by the Administration and having regard to the craft's area of navigation.	**Technical**
A.373(X) / Annex / Chapter XVII / 17.2.4		Resolution A.373(X) adopted on 14 November 1977 "Code of safety for dynamically supported craft" Chapter XVII – Special requirements 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**
A.382(X) / Annex I / 1(c)		Resolution A.382(X) adopted on 14 November 1977 "Magnetic compasses carriage and performance standards" 1. All ships are fitted with: (c) adequate means of communication between the standard compass position and the normal navigation control position to the satisfaction of the Administration.	**Specific** Cabinet Regulation No. 30 adopted 12 January 2016 "Regulations Regarding the Use and Maintenance of Ship's Radio and Navigation Equipment", para 8. The control of very high frequency radiotelephone channels which is necessary for maritime safety shall be readily available in the navigation bridge at the ship's conning position

			and the possibility of radiocommunications from the navigation bridge wings shall be ensured.
A.382(X) / Annex II / 7.5		Resolution A.382(X) adopted on 14 November 1977 "Magnetic compasses carriage and performance standards" 7. Construction 7.5 The compass, binnacle and azimuth reading device should be marked 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.
A.382(X) / Annex II / 7.7		Resolution A.382(X) adopted on 14 November 1977 "Magnetic compasses carriage and performance standards" 7. Construction 7.7 Material used for the manufacture of magnetic compasses should be of sufficient strength and be to the satisfaction of the Administration.	**Technical**
A.382(X) / Annex II / 8.3		Resolution A.382(X) adopted on 14 November 1977 "Magnetic compasses carriage and performance standards" 8. Positioning 8.3 The magnetic compasses should be installed as far as possible from magnetic material. The minimum distances of the standard compass from any magnetic material which is part of the ship's structure should be to the satisfaction of the Administration. The following diagram gives general guidelines to indicate the minimum desirable distances from the standard compass. The minimum desirable distances for the steering compass may be reduced to 65 per cent of the values given by the diagram provided that no distance is less than 1m. If there is only a steering compass the minimum distances for the standard compass should be applied as far as practicable.	**Technical**
A.382(X) / Annex II / 8.4		Resolution A.382(X) adopted on 14 November 1977 "Magnetic compasses carriage and performance standards" 8. Positioning 8.4 The distance of the magnetic compass from electrical or magnetic equipment should be at least equal to the safe distance specified for the equipment and be to the satisfaction of the Administration.	**Technical**
A.385(X) / Annex / 6.1		Resolution A.385(X) adopted on 14 November 1977 "Operational standards for VHF radiotelephone installations" 6. Safety precautions	**Technical**

		6.1 Means should be provided, as appropriate, for earthing exposed metallic parts of the installation, but this should not cause any terminal of the source of electrical energy to be earthed, unless special precautions are taken, to the satisfaction of the Administration.	
A.418(XI) / Annex / 62(a)		Resolution A.418(XI) adopted on 15 November 1979 "Revised Regulation 62 of Chapter II-2 of SOLAS 74" Inert gas systems (a) The inert gas system referred to in Regulation 60 of this Chapter, as amended by the 1978 SOLAS Protocol, shall be designed, constructed and tested to the satisfaction of the Administration. It shall be designed and operated so as to render and maintain the atmosphere of the cargo tank* non-flammable at all times, except when such tanks are required to be gas free.	**Technical**
A.418(XI) / Annex / 62(m)		Resolution A.418(XI) adopted on 15 November 1979 "Revised Regulation 62 of Chapter II-2 of SOLAS 74" Inert gas systems (m) The arrangements for inerting, purging or gas freeing of empty tanks as required in para graph (b) of this Regulation shall be to the satisfaction of the Administration and shall be such that the accumulation of hydrocarbon vapours in pockets formed by the internal structural members in a tank is minimized and that:	**Technical**
A.421(XI) / Annex / 6.1		Resolution A.421(XI) adopted on 15 November 1979 "Operational standards for radiotelephone alarm signal generators" 6. Safety precautions 6.1 Means should be provided, as appropriate, for earthing exposed metallic parts of the device but this should not cause any terminal of the source of electrical energy to be earthed, unless special precautions, to the satisfaction of the Administration, are taken.	**Technical**
A.426(XI) / Annex / 10		Resolution A.426(XI) adopted on 15 November 1979 "Arrangements for embarking and disembarking pilots in very large ships" 10. Accommodation ladders, together with any suspension arrangements or attachments, fitted and intended for use in accordance with this recommendation should be to the satisfaction of the Administration.	**Technical** Revoked by Res.A.667(16)
A.444(XI) / Annex / 3.4.4.1		Resolution A.444(XI) adopted on 15 November 1979 "Recommendation concerning the installation of oily-water separating equipment under MARPOL 73 as modified by the protocol of 1978 relating thereto"	**Technical**

		3 Existing equipment on board ships of 400 tons gross tonnage and above but less than 10000 tons gross tonnage 3.4 Existing equipment approved under the terms of resolution A.233(7) or equivalent national standards Such equipment may continue to be used until it must be replaced with new equipment due to age or failure, provided that any one of the following conditions is complied with: ... .4 it complies with all of the following conditions: .4.1 the physical condition and the arrangement of the equipment continue to be to the satisfaction of the Administration;	
A.444(XI) / Annex / 3.4.4.4		Resolution A.444(XI) adopted on 15 November 1979 "Recommendation concerning the installation of oily-water separating equipment under MARPOL 73 as modified by the protocol of 1978 relating thereto" 3 Existing equipment on board ships of 400 tons gross tonnage and above but less than 10000 tons gross tonnage 3.4 Existing equipment approved under the terms of resolution A.233(7) or equivalent national standards Such equipment may continue to be used until it must be replaced with new equipment due to age or failure, provided that any one of the following conditions is complied with: ... .4 it complies with all of the following conditions: .4.4 the arrangements on each ship for minimizing the entry of oil in the bilges are to the satisfaction of the Administration;	**Technical**
A.444(XI) / Appendix 2 / II(a)		Resolution A.444(XI) adopted on 15 November 1979 "Recommendation concerning the installation of oily-water separating equipment under MARPOL 73 as modified by the protocol of 1978 relating thereto" II. Existing nationally approved oily water separating equipment It is recommended that existing oily-water separating equipment that has been approved to an existing national standard for an effluent of less than 100 parts per million be accepted, provided that: (a) the physical condition and the arrangement of the system continue to be to the satisfaction of the Administration;	**Technical**
A.444(XI) / Appendix 2 / II(c)		Resolution A.444(XI) adopted on 15 November 1979 "Recommendation concerning the installation of oily-water separating equipment under MARPOL 73 as modified by the protocol of 1978 relating thereto"	**Technical**

		II. Existing nationally approved oily water separating equipment It is recommended that existing oily-water separating equipment that has been approved to an existing national standard for an effluent of less than 100 parts per million be accepted, provided that: (c) the arrangements on each ship for minimizing the entry of oil to the bilges are to the satisfaction of the Administration;	
A.444(XI) / Appendix 2 / III		Resolution A.444(XI) adopted on 15 November 1979 "Recommendation concerning the installation of oily-water separating equipment under MARPOL 73 as modified by the protocol of 1978 relating thereto" III. Existing oily-water separating equipment approved under resolution A.233(7) It is recommended that such equipment be accepted provided trial the physical condition and the arrangement of the system is to the satisfaction of the Administration.	**Technical**
A.446(XI) / Annex / 4.1.3		Resolution A.446(XI) adopted on 15 November 1979 "Revised specifications for the design, operation and control of crude oil washing systems" 4. Design criteria 4.1 Piping 4.1.3 Provision shall be made to prevent overpressure in the tank washing supply piping. Any relief device fitted to prevent overpressure shall discharge into the suction side of the supply pump. Alternative methods to the satisfaction of the Administration may be accepted provided an equivalent degree of safety and environmental protection is provided.	**Technical**
A.446(XI) / Annex / 4.2.3		Resolution A.446(XI) adopted on 15 November 1979 "Revised specifications for the design, operation and control of crude oil washing systems" 4. Design criteria 4.2 Tank washing machines 4.2.3 Tank washing machines shall be mounted in each cargo tank and the method of support shall be to the satisfaction of the Administration. Where the tank washing machines are positioned well below the deck level to cater for protuberances in the tank, consideration may need to be given to additional support for the machine and its supply piping.	**Technical**
A.446(XI) / Annex / 4.2.6		Resolution A.446(XI) adopted on 15 November 1979 "Revised specifications for the design, operation and control of crude oil washing systems"	**Technical**

		4. Design criteria 4.2 Tank washing machines 4.2.6 The number and location of the tank washing machines shall be to the satisfaction of the Administration.	
A.446(XI) / Annex / 4.2.12		Resolution A.446(XI) adopted on 15 November 1979 "Revised specifications for the design, operation and control of crude oil washing systems" 4. Design criteria 4.2 Tank washing machines 4.2.12 The design of the deck mounted tank washing machines shall be such that means are provided, external to the cargo tanks, which, when crude oil washing is in progress, would indicate the rotation and arc of the movement of the machine. Where the deck mounted machine is of then non-programmable, dual nozzle type, alternative methods to the satisfaction of the Administration may be accepted provided an equivalent degree of verification is attained.	**Technical**
A.446(XI) / Annex / 4.2.12		Resolution A.446(XI) adopted on 15 November 1979 "Revised specifications for the design, operation and control of crude oil washing systems" 4. Design criteria 4.4 Stripping system 4.4.1 The design of the system for stripping crude oil from the bottom of every cargo tank shall be to the satisfaction of the Administration.	**Technical**
A.446(XI) / Annex / 4.2.12		Resolution A.446(XI) adopted on 15 November 1979 "Revised specifications for the design, operation and control of crude oil washing systems" 4. Design criteria 4.4 Stripping system 4.4.6 The means for stripping oil from the cargo tanks shall be by positive displacement pump, self-priming centrifugal pump or eductor or other methods to the satisfaction of the Administration. Where a stripping line is connected to a number of tanks, means shall be provided for isolating each tank not being stripped at that particular time.	**Technical**
A.446(XI) / Annex / 5.1		Resolution A.446(XI) adopted on 15 November 1979 "Revised specifications for the design, operation and control of crude oil washing systems" 5. Qualification of personnel	**Technical**

		5.1 The training requirements of ships' personnel engaged in the crude oil washing of tankers shall be to the satisfaction of the Administration.	
A.446(XI) / Annex / 6.8		Resolution A.446(XI) adopted on 15 November 1979 "Revised specifications for the design, operation and control of crude oil washing systems" 6. Operation 6.8 Vapour emission Alternative methods to the satisfaction of the Administrations may be accepted provided an equivalent degree of environmental protection is provided.	**Technical**
A.446(XI) / Annex / 7		Resolution A.446(XI) adopted on 15 November 1979 "Revised specifications for the design, operation and control of crude oil washing systems" 7. Operations and equipment manual The Operations and Equipment Manual must be to the satisfaction of the Administration and shall contain the following information and operational instructions:	**Technical**
A.467(XII) / Annex / 2.4.1		Resolution A.467(XII) adopted on 19 November 1981 "Guidelines for acceptance of non-duplicated rudder actuators for tankers, chemical tankers and gas carriers of 10,000 tons gross tonnage and above but less than 100,000 tonnes deadweight" 2 Design Burst test 2.4.1 Pressure retaining parts not requiring fatigue analysis and fracture mechanics analysis may be accepted on the basis of a certified burst test at the discretion of the Administration and the detailed stress analysis required by 2.2.2 need not be provided.	**Technical**
A.467(XII) / Annex / 3.3.2		Resolution A.467(XII) adopted on 19 November 1981 "Guidelines for acceptance of non-duplicated rudder actuators for tankers, chemical tankers and gas carriers of 10,000 tons gross tonnage and above but less than 100,000 tonnes deadweight" 3 Construction details Oil seals 3.3.2 Oil seals between moving parts, forming part of the external pressure boundary, should be duplicated, so that the failure of one seal does not render the actuator inoperative. Alternative arrangements providing equivalent protection against leakage may be accepted at the discretion of the Administration.	**Technical**

A.468(XII) / Annex / Chapter 1 / 1.3.2		Resolution A.468(XII) adopted on 19 November 1981 "Code on noise levels on board ships" 1.3 Application 1.3.2 The provisions relating to potentially hazardous noise levels contained in the Code should also apply to existing ships of 1,600 tons gross tonnage and over, as far as reasonable and practicable, to the satisfaction of the Administration.	**Technical**
A.468(XII) / Annex / Chapter 1 / 1.3.3		Resolution A.468(XII) adopted on 19 November 1981 "Code on noise levels on board ships" 1.3 Application 1.3.3 The Code should apply to new ships of less than 1,600 tons gross tonnage, as far as reasonable and practicable, to the satisfaction of the Administration.	**Indefinite**
A.468(XII) / Annex / Chapter 5 / 5.5.1.1		Resolution A.468(XII) adopted on 19 November 1981 "Code on noise levels on board ships" 5.5 Hearing conservation programme .1 Initial and periodic audiometric tests administered by a trained and appropriately qualified person, to the satisfaction of the Administration.	**Technical**
A.468(XII) / Annex / Chapter 6 / 6.2.2		Resolution A.468(XII) adopted on 19 November 1981 "Code on noise levels on board ships" 6.2 Sound insulation index 6.2.2 The airborne sound insulation properties should be determined by laboratory tests in accordance with ISO Standard R140 Pt III, to the satisfaction of the Administration.	**Technical**
A.469(XII) / Annex / Chapter 1 / 1.1.1		Resolution A.469(XII) adopted on 19 November 1981 "Guidelines for the design and construction of offshore supply vessel" 1.1 Application 1.1.1 Every new decked offshore supply vessel of 24 meters and over but not more than 100 meters in length should comply with the provisions of Parts 2 and 3 of these Guidelines. The intact and damage stability of a vessel of more than 100 meters in length should be to the satisfaction of the Administration.	**Technical**
A.469(XII) / Annex / Chapter 1 / 1.1.5		Resolution A.469(XII) adopted on 19 November 1981 "Guidelines for the design and construction of offshore supply vessel" 1.1 Application 1.1.5 Unless expressly provided otherwise, and existing offshore supply vessel should be required to comply with these Guidelines as far as is practicable in the opinion of the Administration.	**Technical**
A.482(XII) / Annex 1 / 1.1		Resolution A.482(XII) adopted on 19 November 1981 "Training in the use of automatic radar plotting aids (ARPA)"	**Specific**

		1 General 5.3 In addition to the minimum knowledge of radar equipment required by paragraph 4 of the Appendix to Regulation II/2 and paragraph 3 of the Appendix to Regulation II/4 of the 1978 STCW Convention, masters, chief mates and officers in charge of a navigational watch on ships. Carrying ARPA should be capable of demonstrating, to the satisfaction of the Administration, a knowledge of the fundamentals and operation of ARPA equipment and the interpretation and analysis of information obtained from this equipment.	Cabinet Regulation No. 895 adopted 22 November 2005 "Regulations Regarding Certification of Seafarers"
A.491(XII) / Annex / Chapter 2 / 2.2.8.1.1.10		Resolution A.491(XII) adopted on 19 November 1981 "Code of safety for nuclear merchant ships" Chapter 2 Design criteria and conditions 2.2 Safety classes and design classes 2.2.8 Design class 1 (DC-1) requires application of the highest standards of design and quality assurance. And includes the following provisions: .1 For pressure retaining components, design requirements should be based upon the following considerations: .1.1.10 continued operation when the ship is experiencing a static list of up to 30 °or rolling angles of up to 45° or is inclined up to 10° either in the fore or aft direction, or is in any combination of angles within those limits. These angles may be reduced if it can be proven to the satisfaction of the Administration that the ship does not experience such attitudes, in which case the allowed reduction should be shown in the Safety Assessment;	**Indefinite**
A.491(XII) / Annex / Chapter 2 / 2.2.8.1.4		Resolution A.491(XII) adopted on 19 November 1981 "Code of safety for nuclear merchant ships" Chapter 2 Design criteria and conditions 2.2 Safety classes and design classes 2.2.8 Design class 1 (DC-1) requires application of the highest standards of design and quality assurance. And includes the following provisions: .1 For pressure retaining components, design requirements should be based upon the following considerations: .1.4 for application of .1.3 above, relatively low damping factors should be assumed and where it can be proven to the satisfaction of the Administration that no significant resonance effects are possible, response analysis for ship vibrations may be waived;	**Indefinite**

A.491(XII) / Annex / Chapter 2 / 2.2.8.4		Resolution A.491(XII) adopted on 19 November 1981 "Code of safety for nuclear merchant ships" Chapter 2 Design criteria and conditions 2.2 Safety classes and design classes 2.2.8 Design class 1 (DC-1) requires application of the highest standards of design and quality assurance. And includes the following provisions: .4 DC-1 components, other than pressure-retaining components, should be designed and constructed to the satisfaction of the Administration if not otherwise defined and should be of a quality commensurate with their importance to safety.	**Indefinite**
A.491(XII) / Annex / Chapter 2 / 2.3.10		Resolution A.491(XII) adopted on 19 November 1981 "Code of safety for nuclear merchant ships" Chapter 2 Design criteria and conditions 2.3 Environmental conditions 2.3.10 Reactor safety systems as well as their energy supplies should be designed to operate without malfunction when the ship is experiencing a static list of up to 30°or rolling angles of up to 45°or is inclined to 10° either in the fore or aft direction, or is in any combination of angles within those limits. A single motion, not exceeding 45° to one side, should not cause a malfunction or overstressing even if it occurs during a fast shutdown operation or reactor excursion. These angles may be reduced if it can be proven to the satisfaction of the Administration that the ship does not experience such attitudes, in which case at the lowed reduction should be shown in the Safety Assessment.	**Indefinite**
A.491(XII) / Annex / Chapter 2 / 2.7.2		Resolution A.491(XII) adopted on 19 November 1981 "Code of safety for nuclear merchant ships" Chapter 2 Design criteria and conditions 2.7 Evaluation of ship accident situations 2.7.2 Capsizing should be considered a design basis accident, except where it can be proven to the satisfaction of the Administration that the likelihood of such an occurrence is less than extremely remote, as defined in 1.4.3, for the ship in intact, damaged, or cargo loading condition . The method of transmitting heat from the reactor core to the sea, in a capsized state, should be analyzed and the results presented in the Safety Assessment.	**Indefinite**
A.491(XII) / Annex / Chapter 2 / 2.7.3.3		Resolution A.491(XII) adopted on 19 November 1981 "Code of safety for nuclear merchant ships" Chapter 2 Design criteria and conditions 2.7 Evaluation of ship accident situations	**Indefinite**

		2.7.3 Stranding of the ship should be analyzed, and the analysis should address: ... .3 determination of stranded ship inclinations to the satisfaction of the Administration.	
A.491(XII) / Annex / Chapter 2 / 2.8.4.2		Resolution A.491(XII) adopted on 19 November 1981 "Code of safety for nuclear merchant ships" Chapter 2 Design criteria and conditions 2.8.4 Loss of coolant accidents (LOCA) should be analyzed in accordance with the following conditions: ... .2 The rate of loss of coolant from an assumed pipe break should be consistent with a double-ended instantaneous rupture of the pipe, except where it can be shown to the satisfaction of the Administration that sufficient physical restraint exists to restrict the movement of the broken ends , or other means are provided to prevent double-ended flow.	**Indefinite**
A.491(XII) / Annex / Chapter 3 / 3.5.2		Resolution A.491(XII) adopted on 19 November 1981 "Code of safety for nuclear merchant ships" Chapter 3 Ship design, construction and equipment 3.5 Collision protection 3.5.2 Collision protective structure should be provided against a design basis collision to the satisfaction of the Administration, such that protection is provided to prevent penetration of the longitudinal watertight, gastight boundaries of the safety enclosure by the striking ship or struck object. Protective structure in way of reactor compartment including an additional reasonable area forward and aft of reactor compartment transverse bulkheads, is to be determined on an individual ship basis. A sufficient transition to ship's longitudinal structure must be provided (see 3.3.2).	**Indefinite**
A.491(XII) / Annex / Chapter 3 / 3.6.4		Resolution A.491(XII) adopted on 19 November 1981 "Code of safety for nuclear merchant ships" Chapter 3 Ship design, construction and equipment 3.6 Grounding and stranding 3.6.4 An analysis of the ship's longitudinal strength to the satisfaction of the Administration should be made, assuming the ship is stranded.	**Indefinite**
A.491(XII) / Annex / Chapter 4 / 4.2.1		Resolution A.491(XII) adopted on 19 November 1981 "Code of safety for nuclear merchant ships" Chapter 4 Nuclear steam supply system (NSSS)	**Indefinite**

		4.2 Reactor core 4.2.1 Critical conditions, which may cause the fuel to be damaged, should not occur under any normal service condition, nor under any predictable transient condition Calculation of thermal conditions should allow for uncertainties in calculations and should take into consideration the effects on thermal performance of ship motions. Thermal margins including a minimum departure from nucleate boiling ratio should be established, to the satisfaction of the Administration, as operational limits. Calculations should be supported by experimental heat transfer correlations that consider the most extreme transient and ship motion conditions. Calculations should be made available to the host Administration as required.	
A.491(XII) / Annex / Chapter 4 / 4.6.4.1.6		Resolution A.491(XII) adopted on 19 November 1981 "Code of safety for nuclear merchant ships" Chapter 4 Nuclear steam supply system (NSSS) 4.6 Primary pressure boundary 4.6.4 Overpressure Protection of the primary coolant circuit should comply with the following requirements: .1 At least two safety valves should be provided, that vent into a relief tank within the containment structure. The relief tank should be provided with automatic arrangements for safe release or older equivalent means. Safety valves may be replaced by other equivalent means only if: ... .1.6 such means are to the satisfaction of the Administration;	**Indefinite**
A.491(XII) / Annex / Chapter 4 / 4.7.1		Resolution A.491(XII) adopted on 19 November 1981 "Code of safety for nuclear merchant ships" Chapter 4 Nuclear steam supply system (NSSS) 4.7 Secondary coolant system 4.7.1 Except where otherwise provided in this Code, the secondary coolant system should have safety arrangements and a quality level that comply with resolution A.325(9) and be to the satisfaction of the Administration.	**Indefinite**
A.491(XII) / Annex / Chapter 4 / 4.11.2.1		Resolution A.491(XII) adopted on 19 November 1981 "Code of safety for nuclear merchant ships" Chapter 4 Nuclear steam supply system (NSSS) 4.11 Engineered safety features 4.11.2 The following provisions apply to the emergency core cooling system (ECCS):	**Indefinite**

		.1 The number of ECCSs installed should satisfy the conditions of 2.8.4 and should be to the satisfaction of the Administration. Systems should be adequately segregated and redundancy provisions should ma he allowance for failure and repair;	
A.491(XII) / Annex / Chapter 4 / 4.11.2.3		Resolution A.491(XII) adopted on 19 November 1981 "Code of safety for nuclear merchant ships" Chapter 4 Nuclear steam supply system (NSSS) 4.11 Engineered safety features 4.11.2 The following provisions apply to the emergency core cooling system (ECCS): .3 If used, pressurized water accumulators should be equipped with safety valves, pressure gauges and water level indicators to the satisfaction of the Administration. Dedicated supply sources should be available for maintaining the gas cushion in the accumulators;	**Indefinite**
A.491(XII) / Annex / Chapter 7 / 7.1.1.7		Resolution A.491(XII) adopted on 19 November 1981 "Code of safety for nuclear merchant ships" Chapter 7 Operation 7.1 General operating principles and competent bodies 7.1.1 The following basic requirements apply to a nuclear merchant ship: .7 Manning levels and the training, qualifications and certification of officers and crew should be to the satisfaction of the Administration and be such that the ship may be safely operated.	**Indefinite**
A.491(XII) / Annex / Chapter 7 / 7.1.4		Resolution A.491(XII) adopted on 19 November 1981 "Code of safety for nuclear merchant ships" Chapter 7 Operation 7.1 General operating principles and competent bodies 7.1.4 The master, officers and crew members should have proper qualifications and have undergone training appropriate to their responsibilities and duties and in accordance with the requirements of the Administration. Certain crew members should be qualified in radiological protection matters and have the responsibility for ensuring that all necessary radiation protection measures are carried out. The lines of responsibility for radiological health and protection matters should be documented. The minimum number of such personnel on constant standby should be to the satisfaction of the Administration.	**Indefinite**
A.491(XII) / Annex / Chapter 7 / 7.5.1		Resolution A.491(XII) adopted on 19 November 1981 "Code of safety for nuclear merchant ships" Chapter 7 Operation	**Indefinite**

		7.5 Maintenance and repair 7.5.1 Maintenance and repair of systems and components of SC-1 to 4, should be planned and executed to the satisfaction of the Administration.	
A.491(XII) / Annex / Chapter 7 / 7.6.2.2		Resolution A.491(XII) adopted on 19 November 1981 "Code of safety for nuclear merchant ships" Chapter 7 Operation 7.6 Manning, training, qualification, updating of knowledge, drills and musters 7.6.2 The requirements below apply to the master and appropriate deck officers as follows: .2 The completion of such a course and an appropriate examination to the satisfaction of the Administration should be reflected in the certificates of qualification;	**Indefinite**
A.491(XII) / Annex / Chapter 7 / 7.6.8		Resolution A.491(XII) adopted on 19 November 1981 "Code of safety for nuclear merchant ships" Chapter 7 Operation 7.6 Manning, training, qualification, updating of knowledge, drills and musters 7.6.8 Other crew members involved in the operation of the NPP should be given theoretical courses and practical training commensurate with their official duties in the operation of the NPP and their muster list. Duties, as well as instructions on the use of personal health protection equipment. This training may be given in a training center or on board ship by qualified engineer officers. The qualifications of the crew members referred to in this subsection should be to the satisfaction of the Administration.	**Indefinite**
A.491(XII) / Annex / Chapter 7 / 7.6.11		Resolution A.491(XII) adopted on 19 November 1981 "Code of safety for nuclear merchant ships" Chapter 7 Operation 7.6 Manning, training, qualification, updating of knowledge, drills and musters 7.6.11 The practical training in NSSS control, referred to in 7.6.3.1.5, should be carried oui on special simulators, or on ship- or land-based facilities having NPP installations of the type the trainee will operate. Trainees should, without assistance, perform a sufficient number of reactor startups and shutdowns to demonstrate to the satisfaction of the Administration their competence to suitably control reactor operation under all PPCs.	**Indefinite**

A.491(XII) / Annex / Chapter 7 / 7.6.11		Resolution A.491(XII) adopted on 19 November 1981 "Code of safety for nuclear merchant ships" Chapter 7 Operation 7.6 Manning, training, qualification, updating of knowledge, drills and musters 7.6.12 Appropriate officers and NSSS operators should be regularly retrained, to update their qualifications in theory and in the safe operation of the NPP The frequency and level of re-qualification training should be to the satisfaction of the Administration.	**Indefinite**
A.491(XII) / Annex / Chapter 7 / 7.6.13		Resolution A.491(XII) adopted on 19 November 1981 "Code of safety for nuclear merchant ships" Chapter 7 Operation 7.6 Manning, training, qualification, updating of knowledge, drills and musters 7.6.13 The qualifications and skills of crew members, in performing their assigned duties, should be exercised and improved by carrying out ship emergency and radiation alarm drills to the satisfaction of the Administration. The radiation alarm drills should simulate the probable damage and consequences of postulated accidents involving the NPP.	**Indefinite**
A.491(XII) / Annex / Chapter 8 / 8.1.6		Resolution A.491(XII) adopted on 19 November 1981 "Code of safety for nuclear merchant ships" Chapter 8 Surveys 8.1 General 8.1.6 Survey periods and methods to be used should be specified in detail and be to the satisfaction of the Administration. These surveys should be described in the Safety Assessment and in the Operating Manual, as appropriate.	**Indefinite**
A.491(XII) / Annex / Chapter 8 / 8.4.6.5		Resolution A.491(XII) adopted on 19 November 1981 "Code of safety for nuclear merchant ships" Chapter 8 Surveys 8.4 Survey during operational phase 8.4.6 Each four-year survey of the NSSS should include, in addition to the annual survey requirements of 8.4.5, the following provisions: .5 The reactor pressure vessel should be examined by ultrasonic methods for flaws and cracks, to compare with preceding measurements and basis measurements carried out in accordance with 8.2.5.5. These examinations should, as far as practicable, encompass the total surface area and body volume of the reactor	**Indefinite**

		pressure vessel in regions of maximum integral irradiation and high stresses and their extent, procedures and frequency should be to the satisfaction of the Administration bearing in mind that the whole reactor pressure vessel should be examined completely during the 12-year period of reactor operation. In considering reactor 403efueling, the four-year period may be extended by a maximum of one year;	
A.491(XII) / Annex / Chapter 8 / 8.4.6.6		Resolution A.491(XII) adopted on 19 November 1981 "Code of safety for nuclear merchant ships" Chapter 8 Surveys 8.4 Survey during operational phase 8.4.6 Each four-year survey of the NSSS should include, in addition to the annual survey requirements of 8.4.5, the following provisions: .6 The steam generators, pump casings and valve bodies, pressurizer pressure vessel and pressure vessels of the primary pressure boundary other than the reactor pressure vessel, should be tested by approved methods. The extent, frequency and procedures for these tests should be to the satisfaction of the Administration;	**Indefinite**
A.491(XII) / Annex / Chapter 8 / 8.4.7.1		Resolution A.491(XII) adopted on 19 November 1981 "Code of safety for nuclear merchant ships" Chapter 8 Surveys 8.4 Survey during operational phase 8.4.7 The second and subsequent four-year surveys should , in addition to the requirements of 8.4.4,8.4.5 and 8.4.6, include the following provisions: .1 All pressure vessels and piping, except the containment structure, should be inspected for defects following pressure testing to a pressure suitably in excess of their design pressures so as to conform to the approved rules under which the pressure vessels and piping were constructed . Where extensive non-destructive examinations of the reactor pressure vessel are carried out to the satisfaction of the Administration, in accordance with the provisions of 8.4.6.4 and 8.4.6.5, and prove that the integrity of the boundary is unimpaired , periodic pressure testing of the reactor pressure vessel may be waived;	**Indefinite**
A.491(XII) / Annex / Chapter 8 / 8.4.7.3		Resolution A.491(XII) adopted on 19 November 1981 "Code of safety for nuclear merchant ships" Chapter 8 Surveys 8.4 Survey during operational phase	**Indefinite**

		8.4.7 The second and subsequent four-year surveys should , in addition to the requirements of 8.4.4,8.4.5 and 8.4.6, include the following provisions: .3 Components of DC-2 to 4 that are fabricated from material having a 0.2 per cent proof stress exceeding 450 N/mm2 at ambient temperature, should be non-destructively tested to the satisfaction of the Administration, at welds, openings, branch pipes , mountings and fittings.	
A.491(XII) / Appendix 5 / 1.1		Resolution A.491(XII) adopted on 19 November 1981 "Code of safety for nuclear merchant ships" Quality assurance programme (QAP) 1 General 1.1 As a precondition to Administration approval for the construction of a nuclear ship, a quality assurance programme (QAP) to cover the entire lifetime of the ship should be developed, documented and implemented to the satisfaction of the Administration to ensure its compliance with the provisions of the Code and other applicable regulations and conventions.	**Indefinite**
A.495(XII) / Annex 1 / 4.1.2		Resolution A.495(XII) adopted on 19 November 1981 "Revised specifications for oil tankers with dedicated clean ballast tanks" 4 On board arrangements 4.1 Dedicated clean ballast tanks 4.1.2 The selection of the dedicated clean ballast tanks must be such that the hull stresses in the ballast and loaded conditions are to the satisfaction of the Administration.	**Technical**
A.495(XII) / Annex 1 / 5.3		Resolution A.495(XII) adopted on 19 November 1981 "Revised specifications for oil tankers with dedicated clean ballast tanks" 5 Operational procedure 5.3 If sections of the piping system for CBT ballast are so arranged that they must be flushed with water from the dedicated clean ballast tanks then the minimum quantity of flushing water to be provided in such tanks at all times shall be the greater of either 10 times the volume of the piping to be flushed or sufficient to provide that level in the tank which would allow the piping to run full of water during the flushing before vortexing stars to admit air into the piping. Alternative methods for the retention of clean ballast required by this paragraph shall be to the satisfaction of the Administration.	**Technical**
A.496(XII) / Annex / 6.1.1		Resolution A.496(XII) adopted on 19 November 1981 "Guidelines and specifications for oil discharge monitoring and control systems for oil tankers"	**Technical**

		6 TECHNICAL SPECIFICATIONS 6.1 Oil discharge monitoring and control system 6.1.1 The oil discharge monitoring and control system shall be so fitted that it can effectively monitor and control the discharge of any effluent into the sea through those overboard discharge outlets permitted by Regulation 18(2) which in the opinion of the Administration are necessary to fulfil the operational requirements of the tanker. The system should additionally cover: .1 the gravitational discharge of ballast water from cargo tanks; and .2 the midship cargo manifold arrangement when used to meet the requirements of Regulation 18.	
A.473(XII) / Annex / 1		Resolution A.473(XII) adopted on 19 November 1981 "Interim regulation for inert gas systems on chemical tankers carrying petroleum products" Interim regulation 1 Inert gas generator systems shall be designed, constructed and tested to the satisfaction of the Administration. They shall be designed and operated so as to render and maintain the atmosphere of cargo tanks non-flammable at all times when such tanks are used for the carriage of petroleum products as defined above.	**Technical**
A.473(XII) / Annex / 12.1		Resolution A.473(XII) adopted on 19 November 1981 "Interim regulation for inert gas systems on chemical tankers carrying petroleum products" Interim regulation 12.1 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 flammable vapours in pockets formed by the internal structural members in a tank is minimized.	**Technical**
A.515(13) / Annex 1 / Reg. 11.9		Resolution A.515(13) adopted on 17 November 1983 "Future amendments to the SOLAS 74" 9 Stern tubes shall be enclosed in a watertight space (or spaces) of moderate volume Other measures to minimize the danger of water penetrating into the ship in case of damage to stern tube arrangements may be taken at the discretion of the Administration."	**Technical** Included in SOLAS 1989/1990 Amend / Chapter II-1 / Reg. 11.9
A.515(13) / Annex 2 / Reg. 13-1.1.2		Resolution A.515(13) adopted on 17 November 1983 "Future amendments to the SOLAS 74" Regulation 13-1 - Sample extraction smoke detection systems	**Technical**

		1 General requirements 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.	Included in SOLAS 1989/1990 Amend / Chapter II-2 / Reg. 13-1.1.2
A.515(13) / Annex 2 / Reg. 13-1.1.10		Resolution A.515(13) adopted on 17 November 1983 "Future amendments to the SOLAS 74" Regulation 13-1 - Sample extraction smoke detection systems 1 General requirements 1.10 The functioning of the system shall be periodically tested to the satisfaction of the Administration. The system shall be of a type that can be tested for correct operation and restored to normal surveillance without the renewal of any component.	**Technical** Included in SOLAS 1989/1990 Amend / Chapter II-2 / Reg. 13-1.1.10
A.515(13) / Annex 2 / Reg. 13-1.2.1		Resolution A.515(13) adopted on 17 November 1983 "Future amendments to the SOLAS 74" Regulation 13-1 - Sample extraction smoke detection systems 2 Installation requirements 2.1 At least one smoke accumulator shall be located in every enclosed space for which smoke detection is required. However, where a space is designed to carry oil or refrigerated cargo alternatively with cargoes for which a smoke sampling system is required , means may be provided to isolate the smoke accumulators in such compartments for the system. Such means shall be to the satisfaction of the Administration.	**Technical** Included in SOLAS 1989/1990 Amend / Chapter II-2 / Reg. 13-1.2.1
A.515(13) / Annex 2 / Reg. 13-1.3.3		Resolution A.515(13) adopted on 17 November 1983 "Future amendments to the SOLAS 74" Regulation 13-1 - Sample extraction smoke detection systems 3 Design requirements 3.3 Duplicate sample extraction fans shall be provided. The fans shall be of sufficient capacity to operate with the normal conditions of ventilation in the protected area and shall give an overall response time to the satisfaction of the Administration.	**Technical** Included in SOLAS 1989/1990 Amend / Chapter II-2 / Reg. 13-1.3.3
A.515(13) / Annex 2 / Reg. 40.2		Resolution A.515(13) adopted on 17 November 1983 "Future amendments to the SOLAS 74" Regulation 40 - Fire patrols, detection, alarms and public address systems 2 A fixed fire detection and fire alarm system complying with the requirements of regulation 13 or a sample extraction smoke detection system complying with the requirements of regulation 13-1 shall be provided in any cargo space which, in the opinion of	**Technical** Included in SOLAS 1989/1990 Amend / Chapter II-2 / Reg. 40.2

		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.	
A.515(13) / Annex 2 / Reg. 53.2.1		Resolution A.515(13) adopted on 17 November 1983 "Future amendments to the SOLAS 74" Regulation 53 - Fire protection arrangements in cargo spaces 2.1 There shall be provided a fixed fire detection and fire alarm system complying with the requirements of regulation 13. The fixed fire detection system shall be capable of rapidly detecting the onset of fire. The type of detectors and their spacing and location shall be to the satisfaction of the Administration taking into account the effects of ventilation and other relevant factors. After being installed, the system shall be tested under normal ventilation conditions and shall give an overall response time to the satisfaction of the Administration.	**Technical** Included in SOLAS 1989/1990 Amend / Chapter II-2 / Reg. 53.2.1
A.518(13) / Annex / 6.1		Resolution A.518(13) adopted on 17 November 1983 "Guidelines for marine portable fire extinguishers" 6 Test specifications 6.1 Construction, performance and fire extinguishing test specifications should be to the satisfaction of the Administration.	**Technical** Revoked by Res.A.602(15) adopted on 19 November 1987
A.521(13) / Annex / Introduction		Resolution A.521(13) adopted on 17 November 1983 "Recommendation on testing of life-saving appliances" Introduction Tests for requirements referred to in chapter III, as amended, which are not included in this recommendation, should be to the satisfaction of the Administration.	**Technical** Revoked by Res.A.689(17) adopted on 6 November 1991
A.521(13) / Annex / 2.5		Resolution A.521(13) adopted on 17 November 1983 "Recommendation on testing of life-saving appliances" 2 Lifejackets 2.5 Tests of materials for cover, tapes and seams The materials used for the cover, tapes, seams and additional equipment should be tested to the satisfaction of the Administration to establish that they are rot-proof, colour fast, resistant to deterioration from exposure to sunlight and that they are not unduly affected by seawater, oil or fungal attack.	**Technical** Revoked by Res.A.689(17) adopted on 6 November 1991
A.521(13) / Annex / 6.2		Resolution A.521(13) adopted on 17 November 1983 "Recommendation on testing of life-saving appliances" 6 Lifeboats 6.2 Material test	**Technical** Revoked by Res.A.689(17) adopted on 6 November 1991

		The material should be tested to determine its fire-retarding characteristics by placing a test specimen in a flame. After removal from the flame the burning time and burning distance should be determined and should be to the satisfaction of the Administration.	
A.521(13) / Annex / 6.17.1.4		Resolution A.521(13) adopted on 17 November 1983 "Recommendation on testing of life-saving appliances" 6 Lifeboats 6.17 Fire-protected lifeboats 6.17.1.4 The temperature should be recorded at not less than 10 positions on the inside surfacer and internally away from the inside surface at not less than five positions that would be taken by the occupants. The positions of such temperature recorders should be to the satisfaction of the Administration. The method of temperature measurement should allow the maximum temperature to be recorded.	**Technical** Revoked by Res.A.689(17) adopted on 6 November 1991
A.521(13) / Annex / 6.17.2.3		Resolution A.521(13) adopted on 17 November 1983 "Recommendation on testing of life-saving appliances" 6 Lifeboats 6.17 Fire-protected lifeboats 6.17.2 Water spray tests 6.17.2.3 Measurement of the thickness of the sprayed water film With the lifeboat upright and on an even keel run the pump at the rated speed. Measure the delivery of water and the thickness of the sprayed water film at the external surface of the lifeboat. The delivery of water and the film thickness over the whole external surface of the lifeboat, upright and on an even keel and in the light condition, should be to the satisfaction of the Administration.	**Technical** Revoked by Res.A.689(17) adopted on 6 November 1991
A.535(13) / Annex / 2.4		Resolution A.535(13) adopted on 17 November 1983 "Recommendation on emergency towing requirements for tankers" 2.4 Strongpoint The towing connection should be a stopper or bracket or other fitting of equivalent strength and ease of connection to the satisfaction of the Administration.	**Technical**
A.539(13) / Annex 2 / 2.3		Resolution A.539(13) adopted on 17 November 1983 "Certification of shippers and officers in charge of a navigational watch on fishing vessels of 24 metres in length and over" 2 Every candidate for certification should: .3 have passed an appropriate examination or examinations to the satisfaction of the Administration. Such examination or	**Specific** Cabinet Regulation No. 895 adopted 22 November 2005 "Regulations Regarding Certification of Seafarers"

		examinations should include the material set out in the appendix to this recommendation. A candidate for examination who holds a valid certificate of competency issued in accordance with the provisions of the International Convention on Standards of Training, Certification and Watchkeeping for Seafarers, 1978, need not be re-examined in those subjects listed in the appendix which were passed at a higher or equivalent level for issue of the Convention certificate.	
A.539(13) / Annex 2 / 2.4		Resolution A.539(13) adopted on 17 November 1983 "Certification of shippers and officers in charge of a navigational watch on fishing vessels of 24 metres in length and over" 2 Every candidate for certification should: .4 have passed an appropriate examination or examinations to the satisfaction of the Administration. Such examination or examinations should include the material set out in the appendix to this Recommendation. A candidate for examination who holds a valid certificate of competency issued in accordance with the provisions of the International Convention on Standards of Training, Certification and Watchkeeping for Seafarers, 1978 need not be re-examined in those subjects listed in the appendix which were passed at a higher or equivalent level for issue of the Convention certificate.	**Specific** Cabinet Regulation No. 895 adopted 22 November 2005 "Regulations Regarding Certification of Seafarers"
A.539(13) / Annex 2 / Appendix / 2.2.3		Resolution A.539(13) adopted on 17 November 1983 "Certification of shippers and officers in charge of a navigational watch on fishing vessels of 24 metres in length and over" 2 Navigation and position determination 2.2 Position determination: .3 using. to the satisfaction of the Administration, modern ship electronic navigational aids as provided in fishing vessels, with specific reference to knowledge of their operating principles, 1imitations, sources of error, detection of misrepresentation of information and methods of correction to obtain accurate position fixing.	**Specific** Cabinet Regulation No. 895 adopted 22 November 2005 "Regulations Regarding Certification of Seafarers"
A.539(13) / Annex 2 / Appendix / 6.3		Resolution A.539(13) adopted on 17 November 1983 "Certification of shippers and officers in charge of a navigational watch on fishing vessels of 24 metres in length and over" 6 Meteorology and oceanography 6.3 Knowledge of characteristics of various weather systems, including, at the discretion of the Administration, tropical revolving storms and avoidance of storm centres and the dangerous quadrants.	**Specific** Cabinet Regulation No. 895 adopted 22 November 2005 "Regulations Regarding Certification of Seafarers"

A.539(13) / Annex 2 / Appendix / 6.4		Resolution A.539(13) adopted on 17 November 1983 "Certification of shippers and officers in charge of a navigational watch on fishing vessels of 24 metres in length and over" 6 Meteorology and oceanography 6.4 knowledge of weather conditions liable to endanger the vessel including, at the discretion of the Administration, fog, icebergs, ice accretion.	**Specific** Cabinet Regulation No. 895 adopted 22 November 2005 "Regulations Regarding Certification of Seafarers"
A.539(13) / Annex 3 / 2.4		Resolution A.539(13) adopted on 17 November 1983 "Certification of shippers and officers in charge of a navigational watch on fishing vessels of 24 metres in length and over" 2 Every candidate for certification should: .4 have passed an appropriate examination or examinations to the satisfaction of the Administration. Such examination or examinations should include the material set out in the appendix to this Recommendation. A candidate for examination who holds a valid certificate of competency issued in accordance with the provisions of the International Convention on Standards of Training, Certification and Watchkeeping for Seafarers, 1978 need not be re-examined in those subjects listed in the appendix which were passed at a higher or equivalent level for issue of the Convention certificate.	**Specific** Cabinet Regulation No. 895 adopted 22 November 2005 "Regulations Regarding Certification of Seafarers"
A.539(13) / Annex 3 / Appendix / 2.4		Resolution A.539(13) adopted on 17 November 1983 "Certification of shippers and officers in charge of a navigational watch on fishing vessels of 24 metres in length and over" 6 Electronic systems of position fixing and navigation 6.1 Ability to determine the ship's position by the use of electronic navigational aids to the satisfaction of the Administration.	**Specific** Cabinet Regulation No. 895 adopted 22 November 2005 "Regulations Regarding Certification of Seafarers"
A.539(13) / Annex 4 / 2.3		Resolution A.539(13) adopted on 17 November 1983 "Certification of shippers and officers in charge of a navigational watch on fishing vessels of 24 metres in length and over" 2 Every candidate for certification should: .3 have passed an appropriate examination or examinations to the satisfaction of the Administration. Such examination or examinations should include the material set out in the appendix to this Recommendation.	**Specific** Cabinet Regulation No. 895 adopted 22 November 2005 "Regulations Regarding Certification of Seafarers"
A.539(13) / Annex 4 / Appendix / 2.2.2		Resolution A.539(13) adopted on 17 November 1983 "Certification of shippers and officers in charge of a navigational watch on fishing vessels of 24 metres in length and over" 2 Navigation and position determination 2.2 Position determination:	**Specific** Cabinet Regulation No. 895 adopted 22 November 2005 "Regulations Regarding Certification of Seafarers"

		.2 using, to the satisfaction of the Administration, modern ship electronic navigational aids as provided in the fishing vessels concerned.	
A.539(13) / Annex 4 / Appendix / 6.3		Resolution A.539(13) adopted on 17 November 1983 "Certification of shippers and officers in charge of a navigational watch on fishing vessels of 24 metres in length and over" 6 Meteorology and oceanography 6.3 Knowledge of characteristics of various weather systems affecting the limited waters concerned, at the discretion of the Administration.	**Specific** Cabinet Regulation No. 895 adopted 22 November 2005 "Regulations Regarding Certification of Seafarers"
A.539(13) / Annex 4 / Appendix / 6.4		Resolution A.539(13) adopted on 17 November 1983 "Certification of shippers and officers in charge of a navigational watch on fishing vessels of 24 metres in length and over" 6 Meteorology and oceanography 6.4 Knowledge of weather conditions affecting the limited waters concerned liable to endanger the vessel, at the discretion of the Administration.	**Specific** Cabinet Regulation No. 895 adopted 22 November 2005 "Regulations Regarding Certification of Seafarers"
A.539(13) / Annex 5 / 2.4		Resolution A.539(13) adopted on 17 November 1983 "Certification of shippers and officers in charge of a navigational watch on fishing vessels of 24 metres in length and over" 2 Every candidate for certification should: .4 have passed an appropriate examination or examinations to the satisfaction of the Administration. Such examination or examinations should include the material set out in the appendix to this Recommendation A candidate for examination who holds a valid certificate of competency issued in accordance with the provisions of the International Convention on Standards of Training, Certification and Watchkeeping for Seafarers, 1978 need not be re-examined in those subjects listed in the appendix which were passed at a higher or equivalent level for issue of the Convention certificate.	**Specific** Cabinet Regulation No. 895 adopted 22 November 2005 "Regulations Regarding Certification of Seafarers"
A.539(13) / Annex 5 / Appendix / 5.1		Resolution A.539(13) adopted on 17 November 1983 "Certification of shippers and officers in charge of a navigational watch on fishing vessels of 24 metres in length and over" 5 Electronic systems of position fixing and navigation 5.1 Ability to determine the ship's position by the electronic navigational aids, where applicable, to the satisfaction of the Administration.	**Specific** Cabinet Regulation No. 895 adopted 22 November 2005 "Regulations Regarding Certification of Seafarers"
A.562(14) / Annex / 1.3		Resolution A.562(14) adopted on 20 November 1985 "Recommendation on a severe wind and rolling criterion (weather	**Technical**

		criterion) for the intact stability of passenger and cargo ships of 24 metres in length and above" 1 Scope 1.3 The minimum stability of passenger and cargo ships of 100 m in length and over should comply with the weather criterion of the present Recommendation in addition to other appropriate stability criteria to the satisfaction of the Administration.	
A.562(14) / Annex / 2.1.2		Resolution A.562(14) adopted on 20 November 1985 "Recommendation on a severe wind and rolling criterion (weather criterion) for the intact stability of passenger and cargo ships of 24 metres in length and above" 2 Recommended criterion 2.1 The ability of a ship to withstand the combined effects of beam wind and rolling should be demonstrated for each standard condition of loading, with reference to the figure as follows: ... 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**
A.567(14) / Annex / 1		Resolution A.567(14) adopted on 20 November 1985 "Regulation for inert gas systems on chemical tankers" 1 Inert gas generator systems shall be designed, constructed and tested to the satisfaction of the Administration. They shall be designed and operated so as to render and maintain the atmosphere of cargo tanks non-flammable at all times except when such tanks are required to be maintained empty and gas-free. Inert gas systems supplied by one or more oil-fired inert gas generators may be accepted. An Administration may accept systems using inert gas from other sources provided that an equivalent standard of safety is achieved.	**Technical**
A.567(14) / Annex / 12		Resolution A.567(14) adopted on 20 November 1985 "Regulation for inert gas systems on chemical tankers" 12 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	**Technical**

		hydrocarbon vapours in pockets formed by the internal structural members in a tank is minimized and that:	
A.582(14) / Annex / Chapter 2 / 2.1		Resolution A.582(14) adopted on 20 November 1985 "Guidelines for the construction and equipment of ships carrying hazardous liquid wastes in bulk for the purpose of dumping at sea" Chapter 2 Stability and freeboard 2.1 Stability 2.1.2 Where sequential discharging of cargo tanks and/or ballasting is necessary to meet the stability standards set by the Administration it should be shown to the satisfaction of the Administration that such a sequence is practicable taking into account the necessity of maintaining full directional control, preventing structural damage and ensuring the safety of the crew.	**Technical**
A.582(14) / Annex / Chapter 3 / 3.2.2		Resolution A.582(14) adopted on 20 November 1985 "Guidelines for the construction and equipment of ships carrying hazardous liquid wastes in bulk for the purpose of dumping at sea" Chapter 3 Ship arrangements 3.2 Accommodation, service and machinery spaces and control stations. 3.2.2 In order to guard against the danger of hazardous vapours, due consideration should be given to the location of air intakes and openings into accommodation, service and machinery spaces and control stations in relation to cargo piping and cargo vent systems. The distance between openings into the accommodation or machinery spaces and outlets from cargo vent systems and cargo pump-rooms should be to the satisfaction of the Administration.	**Technical**
A.582(14) / Annex / Chapter 6 / 6.1.1		Resolution A.582(14) adopted on 20 November 1985 "Guidelines for the construction and equipment of ships carrying hazardous liquid wastes in bulk for the purpose of dumping at sea" Chapter 6 Material of construction 6.1 General 6.1.1 Materials used for tank construction, together with associated piping, pumps, valves, vents and their jointing materials should be suitable at the carriage temperature and pressure for the cargo to be carried to the satisfaction of the Administration. Coated, lined or unprotected steel is assumed to be the normal material of construction, depending on the nature of the cargo.	**Technical**

A.582(14) / Annex / Chapter 9 / 9.1.4		Resolution A.582(14) adopted on 20 November 1985 "Guidelines for the construction and equipment of ships carrying hazardous liquid wastes in bulk for the purpose of dumping at sea" Chapter 9 Electrical installations 9.1 General 9.1.4 Where electrical equipment is installed in the 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 flammable atmospheres. Such certification and operation should take into account that wastes may be corrosive to metals and that the flammable atmosphere may be a hydrogen/air mixture.	**Technical**
A.582(14) / Annex / Chapter 9 / 9.2.2.4.2		Resolution A.582(14) adopted on 20 November 1985 "Guidelines for the construction and equipment of ships carrying hazardous liquid wastes in bulk for the purpose of dumping at sea" Chapter 9 Electrical installations 9.2 Hazardous locations and types of equipment and wiring. 9.2.2 All enclosed spaces within the cargo area are to be considered as hazardous spaces. In addition to intrinsically safe systems and circuits the only hazardous locations where electrical installations are permitted are: .4 Cargo pump-rooms: .4.2 Electrical motors for driving cargo pumps and any associated auxiliary pumps should be separated from these spaces by a gastight bulkhead or deck. Flexible couplings or other means of maintaining alignment should be fitted to the shafts between the driven equipment and its motors and, in addition, glands should be provided to the satisfaction of the Administration where the shafts pass through the bulkhead or deck. Such electrical motors should be located in a compartment having positive pressure ventilation.	**Technical**
A.586(14) / Annex / Annex /		Resolution A.586(14) adopted on 20 November 1985 "Revised guidelines and specifications for oil discharge monitoring and control systems for oil tankers" 5. TECHNICAL SPECIFICATIONS 5.1 Oil discharge monitoring and control system 5.1.1 The monitoring system should be capable of effectively monitoring and controlling the discharge of any effluent into the sea through those overboard discharge outlets permitted by regulation 18 which in the opinion of the Administration are necessary to fulfil the operational requirements of the oil tanker.	**Technical**

A.602(15) / Annex / 6.1		Resolution A.602(15) adopted on 19 November 1987 "Revised guidelines for marine portable fire extinguishers" 6 Test specifications 6.1 Construction, performance and fire extinguishing test specifications should be to the satisfaction of the Administration.	**Technical** Revoked by Res.A.951(23)
A.602(15) / Annex / 3.2		Resolution A.615(15) adopted on 19 November 1987 "Radar beacons and transponders" 3 Operational use 3.2 Radar beacons used at locations where clutter from land, sea, ice or weather could mask their response may, at the discretion of the Administration concerned, incorporate a user-selectable mode.	**Technical**
A.623(15) / Annex / 2.6		Resolution A.623(15) adopted on 19 November 1987 "Minimum requirements for certification of chief engineer officers and second engineer officers of fishing vessels powered by main propulsion machinery of 750 kW propulsion power or more" 2 Every candidate for certification should: .6 have passed an appropriate examination to the satisfaction of the Administration. Such examination should include the material set out in the appendix to this Recommendation, except that the Administration may vary the requirements for examination and seagoing service for officers of fishing vessels engaged in voyage in limited waters bearing in mind the power of the propulsion machinery and the effect on the safety of all fishing vessels which may be operating in the same waters.	**Specific** Cabinet Regulation No. 895 adopted 22 November 2005 "Regulations Regarding Certification of Seafarers"
A.623(15) / Annex / Appendix / 2		Resolution A.623(15) adopted on 19 November 1987 "Minimum requirements for certification of chief engineer officers and second engineer officers of fishing vessels powered by main propulsion machinery of 750 kW propulsion power or more" 2 With respect to paragraphs 3.4 and 4.1 below, the Administration may omit knowledge requirements for types of propulsion machinery other than machinery installations for which the certificate to be awarded is to be valid. A certificate awarded on such a basis should not be valid for any category of machinery installation which has been omitted until the engineer officer proves to be competent in these items to the satisfaction of the Administration. Any such limitation should be stated in the certificate.	**Specific** Cabinet Regulation No. 895 adopted 22 November 2005 "Regulations Regarding Certification of Seafarers"
A.656(16) / Annex / 1.3		Resolution A.656(16) adopted on 19 October 1989 "Fast rescue boat" 1 General requirements	**Technical**

		1.3 Fast rescue boats which are a combination of rigid and inflated construction should comply with the appropriate requirements of these guidelines to the satisfaction of the Administration.	
A.656(16) / Annex / 3.8		Resolution A.656(16) adopted on 19 October 1989 "Fast rescue boat" 3 Additional requirements for rigid, inflated and rigid/inflated fast rescue boats 3.8 Underneath the bottom and on vulnerable places on the outside of the rigid, inflated and rigid/inflated fast rescue boat, rubbing strips should be provided to the satisfaction of the Administration.	**Technical**
A.657(16) / Annex 1 / Part B / Note 2		Resolution A.657(16) adopted on 19 October 1989 "Instructions for action in survival craft" Part B Instructions on how to survive a liferaft Notes: 2 The above instructions can stand alone or can be amplified as appropriate to the satisfaction of the Administration.	**Technical**
A.657(16) / Annex 2 / Part B / Note		Resolution A.657(16) adopted on 19 October 1989 "Instructions for action in survival craft" Annex 2 List of contents for the lifeboat survival instructions or manual Note: The above list of contents should be used to compile a lifeboat survival manual to the satisfaction of the Administration.	**Technical**
A.665(16) / Annex / 10.5		Resolution A.665(16) adopted on 19 October 1989 "Performance standards for radio direction-finder systems" 10 Miscellaneous and installation recommendations 10.5 All direction-finders should be calibrated to the satisfaction of the Administration on first installation. The calibration should be verified by check bearings or by a further calibration whenever any changes are made in the position of any antennas or of any structures on deck which might affect appreciably the accuracy of the direction-finder. The calibration particulars should be checked at yearly intervals, or as near thereto as possible. A record should be kept of the calibrations and of any checks made of their accuracy.	Not actual requirement
A.667(16) / Annex / 2.1.1.3		Resolution A.667(16) adopted on 19 October 1989 "Pilot transfer arrangements" 2 Pilot ladders 2.1 Position and construction 2.1.1 Every pilot ladder should be so positioned and secured that:	**Technical** Revoked by Res.A.889(21)

		... .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 should, to the satisfaction of the Administration, be made to ensure that persons are able to embark and disembark safely.	
A.667(16) / Annex / 2.1.4.2		Resolution A.667(16) adopted on 19 October 1989 "Pilot transfer arrangements" 2 Pilot ladders 2.1 Position and construction 2.1.4 The steps of the pilot ladders should comply with the following requirements: ... .2 if made of material other than hardwood, they should be of equivalent strength, stiffness and durability to the satisfaction of the Administration;	**Technical** Revoked by Res.A.889(21)
A.667(16) / Annex / 2.1.4.3		Resolution A.667(16) adopted on 19 October 1989 "Pilot transfer arrangements" 2 Pilot ladders 2.1 Position and construction 2.1.4 The steps of the pilot ladders should comply with the following requirements: ... .3 the four lowest steps may be of rubber of sufficient strength and stiffness or other material to the satisfaction of the Administration;	**Technical** Revoked by Res.A.889(21)
A.667(16) / Annex / 3.9		Resolution A.667(16) adopted on 19 October 1989 "Pilot transfer arrangements" 3 Accommodation ladders used in conjunction with pilot ladders 3.9 Accommodation ladders, together with any suspension arrangements or attachments fitted and intended for use in accordance with this recommendation, should be to the satisfaction of the Administration.	**Technical** Revoked by Res.A.889(21)
A.667(16) / Annex / 4.8.2		Resolution A.667(16) adopted on 19 October 1989 "Pilot transfer arrangements" 4 Mechanical pilot hoists 4.8 Testing 4.8.2 An operating test of 10% overload should be carried out after installation on board the ship to the satisfaction of the Administration.	**Technical** Revoked by Res.A.889(21)

A.673(16) / Annex / Chapter 3 / 3.1.8		Resolution A.673(16) adopted on 19 October 1989 "Guidelines for the transport and handling of limited amounts of hazardous and noxious liquid substances in bulk on offshore support vessels" Chapter 3 Ship design 3.1 Cargo segregation Segregation requirements for integral tanks 3.1.8 Cargo tanks may extend to the deck plating, provided dry cargo is not handled in that area. Where dry cargo is handled on the deck area above a cargo tank, the cargo tank may not extend to the deck plating unless a continuous, permanent deck sheathing of wood or other suitable material of appropriate thickness and construction is fitted to the satisfaction of the Administration.	**Technical** Superseded by Res A.1122(30)
A.673(16) / Annex / Chapter 3 / 3.6.3		Resolution A.673(16) adopted on 19 October 1989 "Guidelines for the transport and handling of limited amounts of hazardous and noxious liquid substances in bulk on offshore support vessels" 3.6 Cargo tank vent systems 3.6.3 The location of cargo tank vent outlets for independent pressure tanks and for cargo tanks used to carry pollution hazard only substances with a flashpoint exceeding 60 degrees C (closed cup test) should be to the satisfaction of the Administration.	**Technical** Superseded by Res A.1122(30)
A.673(16) / Annex / Chapter 3 / 3.6.4		Resolution A.673(16) adopted on 19 October 1989 "Guidelines for the transport and handling of limited amounts of hazardous and noxious liquid substances in bulk on offshore support vessels" 3.6 Cargo tank vent systems 3.6.4 Cargo tank vent systems of portable tanks allowed under 3.4.2 should be to the satisfaction of the Administration, taking into account the requirements of 3.6.	**Technical** Superseded by Res A.1122(30)
A.673(16) / Annex / Chapter 3 / 3.9.1.2		Resolution A.673(16) adopted on 19 October 1989 "Guidelines for the transport and handling of limited amounts of hazardous and noxious liquid substances in bulk on offshore support vessels" 3.9 Fire-fighting requirements 3.9.1 For the carriage of flammable liquids identified in appendix 1, the requirements for tankers in chapter II-2 of the 1974 SOLAS Convention, as amended, should apply to vessels covered by the Guidelines, irrespective of tonnage, including vessels of less than 500 tons gross tonnage, except that: ... .2 regulation 56.1 (i.e., positioning of machinery spaces aft of cargo tanks, slop tanks, cargo pump-rooms and cofferdams), regulation 56.2 (i.e, the requirements for location of the main	**Technical** Superseded by Res A.1122(30)

		cargo control station), regulations 56.4 and 56.8 need not be applied. Additionally, regulation 56.7 need not be applied provided that the exterior boundaries of superstructures and deckhouses enclosing accommodation and including any overhanging decks which support such accommodation are spaced at least 7 m away from the cargo area. The insulation of such boundaries should however be to the satisfaction of the Administration;	
A.673(16) / Annex / Chapter 3 / 3.9.3		Resolution A.673(16) adopted on 19 October 1989 "Guidelines for the transport and handling of limited amounts of hazardous and noxious liquid substances in bulk on offshore support vessels" 3.9 Fire-fighting requirements 3.9.3 For vessels which carry only liquids identified as non-flammable in appendix 1, the fire-fighting requirements should be to the satisfaction of the Administration.	**Technical** Superseded by Res A.1122(30)
A.673(16) / Annex / Chapter 3 / 3.14.4		Resolution A.673(16) adopted on 19 October 1989 "Guidelines for the transport and handling of limited amounts of hazardous and noxious liquid substances in bulk on offshore support vessels" 3.14 Special requirements for the carriage of liquefied gases 3.14.4 The construction of cargo tanks and cargo piping systems for liquefied nitrogen and liquid carbon dioxide should be to the satisfaction of the Administration.	**Technical** Superseded by Res A.1122(30)
A.673(16) / Annex / Chapter 3 / 3.15		Resolution A.673(16) adopted on 19 October 1989 "Guidelines for the transport and handling of limited amounts of hazardous and noxious liquid substances in bulk on offshore support vessels" 3.15 Gauging and level detection Each cargo tank should have a level gauging system acceptable to the Administration. As a minimum the system should meet relevant requirements of the International Bulk Chemical Code and the International Gas Carrier Code. The systems for process tanks on board well-stimulation vessels should be to the satisfaction of the Administration.	**Technical** Superseded by Res A.1122(30)
A.685(17) / Annex / 2.1 / Note		Resolution A.685(17) adopted on 6 November 1991 "Weather criterion for fishing vessels of 24 meters in length and over" 2 Recommended criterion 2.1 The ability of a ship to withstand the combined effects of beam wind and rolling should be demonstrated as follows for each standard condition of loading, with reference to figure 1: ... .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	**Technical**

		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 angel of deck edge immersion, whichever is less, is suggested.	
A.687(17) / Annex 1		**Resolution A.687(17) adopted on 6 November 1991 "Fire test procedures for ignitability of primary deck coverings"** 1 Scope In accordance with the provisions of the International Convention for the Safety of Life at Sea,1974, and subsequent amendments thereto, primary deck coverings, if applied within accommodation and service spaces and control stations, should be of approved materials which will not readily ignite or give rise to toxic or explosive hazards at elevated temperatures. This Recommendation specifies a procedure for evaluating the ignitability of the primary deck coverings. Toxic and explosive hazards of the primary deck coverings should be verified to the satisfaction of the Administration.	**Technical**
A.689(17) / Annex / Introduction		Resolution A.689(17) adopted on 6 November 1991 "Testing of life-saving appliances" Introduction Tests for requirements referred to in chapter III, as amended, which are not included in this Recommendation, should be to the satisfaction of the Administration. It should be verified that life-saving appliances not covered by tests referred to in this Recommendation meet the applicable requirements of regulations 30 to 50 of chapter III of the 1974 SOLAS Convention, as amended.	**Technical** Revised by Res.MSC.54(66)
A.689(17) / Annex / Part 1 / 2.5		Resolution A.689(17) adopted on 6 November 1991 "Testing of life-saving appliances" 2 Lifejackets 2.5 Tests of materials for covers, tapes and seams The materials used for the cover, tapes, seams and additional equipment should be tested to the satisfaction of the Administration to establish that they are rot-proof, colour-fast and resistant to deterioration from exposure to sunlight and that they are not unduly affected by seawater, oil or fungal attack.	**Technical** Revised by Res.MSC.54(66)
A.689(17) / Annex / Part 1 / 5.17.13		Resolution A.689(17) adopted on 6 November 1991 "Testing of life-saving appliances" 5 Liferafts – rigid and inflatable	**Technical** Revised by Res.MSC.54(66)

		Material tests 5.17.13 The materials used in the construction of inflatable liferafts should be tested for the following characteristics to the satisfaction of the Administration: ...	
A.689(17) / Annex / Part 1 / 6.2.1		Resolution A.689(17) adopted on 6 November 1991 "Testing of life-saving appliances" 6 Lifeboats 6.2 Lifeboat material tests Material fire-retardancy test .2.1 The hull and canopy material should be flame tested to determine its fire-retarding characteristics by placing a test specimen in a flame. After removal from the flame the burning time and burning distance should be measured and should be to the satisfaction of the Administration.	**Technical** Revised by Res.MSC.54(66)
A.689(17) / Annex / Part 1 / 6.4.9		Resolution A.689(17) adopted on 6 November 1991 "Testing of life-saving appliances" 6 Lifeboats 6.4 lifeboat overload test Free-fall lifeboats 6.4.9 This test should be considered successful if the lifeboat passes the operational test to the satisfaction of the Administration and there is no significant damage to it.	**Technical** Revised by Res.MSC.54(66)
A.689(17) / Annex / Part 1 / 6.17.4		Resolution A.689(17) adopted on 6 November 1991 "Testing of life-saving appliances" 6 Lifeboats 6.17 Additional tests for fire-protected lifeboats Fire test 6.17.4 During the fire test, the temperature should be measured and recorded as a minimum at the following locations: ... The positions of such temperature recorders should be to the satisfaction of the Administration.	**Technical** Revised by Res.MSC.54(66)
A.689(17) / Annex / Part 1 / 6.18.5		Resolution A.689(17) adopted on 6 November 1991 "Testing of life-saving appliances" 6 Lifeboats 6.18 Measuring and evaluating acceleration forces Selection, placement and mounting of accelerometers 6.18.5 The selection, placement, and mounting of the accelerometers should be to the satisfaction of the Administration.	**Technical** Revised by Res.MSC.54(66)

A.689(17) / Annex / Part 1 / 7.2.17		Resolution A.689(17) adopted on 6 November 1991 "Testing of life-saving appliances" 7 Rescue boats 7.2 Inflated rescue boats Material tests 7.2.17 The material used in the construction of inflated rescue boats should be tested for the following characteristics to the satisfaction of the Administration: ...	**Technical** Revised by Res.MSC.54(66)
A.689(17) / Annex / Part 1 / 7.3.9		Resolution A.689(17) adopted on 6 November 1991 "Testing of life-saving appliances" 7 Rescue boats 7.3 Outboard motors for rescue boats 7.3.9 Where, in the opinion of the Administration, having regard to the particular voyages in which the ship carrying the boat is constantly engaged, a lower temperature is appropriate, that lower temperature should be substituted for -15°C in 7.3.8 for the cold start test.	**Technical** Revised by Res.MSC.54(66)
A.689(17) / Annex / Part 1 / 8.2.10.4		Resolution A.689(17) adopted on 6 November 1991 "Testing of life-saving appliances" 8 Launching and embarkation appliances 8.2 Davit-launched liferaft automatic release hook test 8.2.10 The manual release force should be determined as follows: ... .4 the manual release force for a mass of 150 kg on the hook should be at least 600 N for lanyard-operated designs. Alternative designs should be demonstrated to the satisfaction of the Administration to provide adequate protection from inadvertent release under load.	**Technical** Revised by Res.MSC.54(66)
A.746(18) / Annex / 8a.2.11		Resolution A.746(18) adopted on 4 November 1993 "Survey guidelines under the harmonized system of survey and certification" (R) 8a GMDSS SHIPS (RP) 8a.2 Periodical surveys (RP).11 confirming that a record has been kept in the period since the last survey to the satisfaction of the Administration and as required by the Radio Regulations (SOLAS 74/88 reg. IV/17);	Revoked by Res.A.948(23) **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.
A.746(18) / Annex / 8b.2.11		Resolution A.746(18) adopted on 4 November 1993 "Survey guidelines under the harmonized system of survey and certification" (R) 8b NON-GMDSS SHIPS (RP) 8b.2 Periodical surveys (RP) (RP).11 confirming that a log has been kept in the period since the last survey to the satisfaction of the Administration and as required by the Radio Regulations (SOLAS 74/88 text in force prior to 1 February 1992 reg. IV/19);	Revoked by Res.A.948(23) **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.
A.746(18) / Annex / 14.2.29		Resolution A.746(18) adopted on 4 November 1993 "Survey guidelines under the harmonized system of survey and certification" (P) 14 GUIDELINES FOR SURVEYS FOR THE PASSENGER SHIP SAFETY CERTIFICATE (PR) 14.2 Renewal surveys (PR) .29 confirming that a record has been kept in the period since the last survey to the satisfaction of the Administration and as required by the Radio Regulations (SOLAS 74/88 reg. IV/17);	Revoked by Res.A.948(23) **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.
A.746(18) / Annex / 14.2.32		Resolution A.746(18) adopted on 4 November 1993 "Survey guidelines under the harmonized system of survey and certification" (P) 14 GUIDELINES FOR SURVEYS FOR THE PASSENGER SHIP SAFETY CERTIFICATE (PR) 14.2 Renewal surveys	Revoked by Res.A.948(23) **Specific** Maritime Administration and Marine Safety Law / Division C / Section 21.

		(PR) .32 confirming that a log has been kept in the period since the last survey to the satisfaction of the Administration and as required by the Convention (SOLAS 74/88 text in force prior to 1 February 1992 reg. IV/19)	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.
A.748(18) / Annex / 7		Resolution A.748(18) adopted on 4 November 1993 "Code for the safe carriage of irradiated nuclear fuel, plutonium and high level radioactive wastes in flasks on board ships" DAMAGE STABILITY 7 To the satisfaction of the Administration concerned.	**Indefinite**
A.748(18) / Annex / 11		Resolution A.748(18) adopted on 4 November 1993 "Code for the safe carriage of irradiated nuclear fuel, plutonium and high level radioactive wastes in flasks on board ships" FIRE PROTECTION 11 To the satisfaction of the Administration concerned.	**Indefinite**
A.748(18) / Annex / 16		Resolution A.748(18) adopted on 4 November 1993 "Code for the safe carriage of irradiated nuclear fuel, plutonium and high level radioactive wastes in flasks on board ships" TEMPERATURE CONTROL OF CARGO SPACES 11 16 Those items essential to operation, e.g., fans, compressors, heat exchangers, cooling water supply, etc., should be provided in duplicate for each cargo space and spare parts should be available, to the satisfaction of the Administration concerned.	**Indefinite**
A.748(18) / Annex / 20		Resolution A.748(18) adopted on 4 November 1993 "Code for the safe carriage of irradiated nuclear fuel, plutonium and high level radioactive wastes in flasks on board ships" ELECTRICAL SUPPLIES 20 To the satisfaction of the Administration concerned.	**Indefinite**
A.748(18) / Annex / 24		Resolution A.748(18) adopted on 4 November 1993 "Code for the safe carriage of irradiated nuclear fuel, plutonium and high level radioactive wastes in flasks on board ships" RADIOLOGICAL PROTECTION EQUIPMENT 24 Depending upon the degree of activity of the materials covered by this Code which are being carried, the ship's design may need to provide for additional arrangements or equipment for	**Indefinite**

		radiological protection to the satisfaction of the Administration concerned.	
A.748(18) / Annex / 25		Resolution A.748(18) adopted on 4 November 1993 "Code for the safe carriage of irradiated nuclear fuel, plutonium and high level radioactive wastes in flasks on board ships" MANAGEMENT AND TRAINING AND SHIPBOARD EMERGENCY PLAN 25 The management and training for a ship should take account of developments within the Organization to the satisfaction of the Administration concerned.	**Indefinite**
A.751(18) / Annex / 2.2		Resolution A.751(18) adopted on 4 November 1993 "Interim standards for ship maneuverability" 2 Application 2.2 In case ships referred to in paragraph 2.1 undergo repairs, alterations and modifications which in the opinion of the Administration may influence their manoeuvrability characteristics the continued compliance with the standards should be verified.	**Technical**
A.751(18) / Annex / 2.3		Resolution A.751(18) adopted on 4 November 1993 "Interim standards for ship maneuverability" 2 Application 2.3 Whenever other ships, originally not subject to the standards, undergo repairs, alterations and modifications, which in the opinion of the Administration are of such an extent that the ship may be considered to be a new ship, then that ship should comply with these standards. Otherwise, if the repairs, alterations and modifications in the opinion of the Administration may influence the manoeuvrability characteristics, it should be demonstrated that these characteristics do not lead to any deterioration of the manoeuvrability of the ship.	**Technical**
A.753(18) / Annex / 2.1.2.2		Resolution A.753(18) adopted on 4 November 1993 "Guidelines for the application of plastic pipes on ships" 2 MATERIAL DESIGN PROPERTIES AND PERFORMANCE CRITERIA 2.1.2 Internal pressure 2.1.2.2 The nominal internal pressure for a pipe should be determined by dividing the short-term hydrostatic test failure pressure by a safety factor of 4 or the long-term (>100,000 h) hydrostatic test failure pressure by a safety factor of 2.5, whichever is the lesser. The hydrostatic test failure pressure should be verified experimentally or by a combination of testing and calculation methods to the satisfaction of the Administration.	**Technical**

A.753(18) / Annex / 2.1.3.2		Resolution A.753(18) adopted on 4 November 1993 "Guidelines for the application of plastic pipes on ships" 2 MATERIAL DESIGN PROPERTIES AND PERFORMANCE CRITERIA 2.1.3 External pressure 2.1.3.2 Piping should be designed for an external pressure not less than the sum of the maximum potential head of liquid outside the pipe, plus full vacuum (1 bar). The nominal external pressure for a pipe should be determined by dividing the collapse test pressure by a safety factor of 3. The collapse test pressure should be verified experimentally or by a combination of testing and calculation methods to the satisfaction of the Administration.	**Technical**
A.753(18) / Annex / 2.1.4.2		Resolution A.753(18) adopted on 4 November 1993 "Guidelines for the application of plastic pipes on ships" 2 MATERIAL DESIGN PROPERTIES AND PERFORMANCE CRITERIA 2.1.4 Axial strength 2.1.4.2 In the case of fibre-reinforced plastic pipes, the sum of the longitudinal stresses should not exceed half of the nominal circumferential stress derived from the nominal internal pressure determined according to paragraph 2.1.2.2, unless the minimum allowable longitudinal stress is verified experimentally or by a combination of testing and calculation methods to the satisfaction of the Administration.	**Technical**
A.753(18) / Annex / 2.1.6.1		Resolution A.753(18) adopted on 4 November 1993 "Guidelines for the application of plastic pipes on ships" 2 MATERIAL DESIGN PROPERTIES AND PERFORMANCE CRITERIA 2.1.6 Impact resistance 2.1.6.1 Piping should have a minimum resistance to impact to the satisfaction of the Administration.	**Technical**
A.753(18) / Annex / 2.1.11		Resolution A.753(18) adopted on 4 November 1993 "Guidelines for the application of plastic pipes on ships" 2 MATERIAL DESIGN PROPERTIES AND PERFORMANCE CRITERIA 2.1.11 Material compatibility 2.1.11.1 The piping material should be compatible with the fluid being carried or in which it is immersed such that its design strength does not degenerate below that recognized by these guidelines. Where the reaction between the pipe material and the fluid is unknown, the compatibility should be demonstrated to the satisfaction of the Administration.	**Technical**
A.753(18) / Annex / 2.2.6.1.3		Resolution A.753(18) adopted on 4 November 1993 "Guidelines for the application of plastic pipes on ships" 2 MATERIAL DESIGN PROPERTIES AND PERFORMANCE CRITERIA	**Technical**

		2.2 Requirements applicable to piping systems depending on service and/or locations 2.2.6 Fire-protection coatings 2.2.6.1 Where a fire protective coating of pipes and fittings is necessary for achieving the fire endurance standards required, the following requirements apply: ... .3 Fire-protection coatings should not degrade due to environmental effects over time, such as ultraviolet rays, saltwater exposure, temperature and humidity. Other areas to consider are thermal expansion, resistance against vibrations, and elasticity. Ageing of the fire protection coatings should be demonstrated to the satisfaction of the Administration in a manner consistent with the ageing test specified above.	
A.753(18) / Annex / 2.2.6.1.5		Resolution A.753(18) adopted on 4 November 1993 "Guidelines for the application of plastic pipes on ships" 2 MATERIAL DESIGN PROPERTIES AND PERFORMANCE CRITERIA 2.2 Requirements applicable to piping systems depending on service and/or locations 2.2.6 Fire-protection coatings 2.2.6.1 Where a fire protective coating of pipes and fittings is necessary for achieving the fire endurance standards required, the following requirements apply: ... .5 The fire protection coating should have a minimum resistance to impact to the satisfaction of the Administration.	**Technical**
A.753(18) / Annex / 3.2		Resolution A.753(18) adopted on 4 November 1993 "Guidelines for the application of plastic pipes on ships" 3 MATERIAL APPROVAL AND QUALITY CONTROL DURING MANUFACTURE 3.2 The manufacturer should have a quality system that meets ISO 9001, "Quality systems - Model for quality assurance in design/development, production, installation and servicing", or equivalent. The quality system should consist of elements necessary to ensure that pipe and fittings are produced with consistent and uniform mechanical and physical properties in accordance with recognized standards. Control during manufacture should be certified by the manufacturer to the satisfaction of the Administration.	**Technical**
A.753(18) / Annex / 3.6		Resolution A.753(18) adopted on 4 November 1993 "Guidelines for the application of plastic pipes on ships"	**Technical**

		3 MATERIAL APPROVAL AND QUALITY CONTROL DURING MANUFACTURE 3.6 Samples of pipe should be tested to determine the short-term and/or long-term hydrostatic design strength. These samples should be selected randomly from the production facilities at a frequency to the satisfaction of the Administration.	
A.753(18) / Annex / 4.4.1		Resolution A.753(18) adopted on 4 November 1993 "Guidelines for the application of plastic pipes on ships" 4 INSTALLATION 4.4 Control during installation 4.4.1 Joining techniques should be in accordance with MSC/Circ.449. This circular requires the fabrication to be in accordance with the manufacturer's installation guidelines, that personnel performing these tasks be qualified to the satisfaction of the Administration, and that each bonding procedure be qualified before shipboard piping installation commences.	**Technical**
A.753(18) / Annex / 4.8.2		Resolution A.753(18) adopted on 4 November 1993 "Guidelines for the application of plastic pipes on ships" 4 INSTALLATION 4.8 Methods of repair 4.8.2 Permanent repairs to the piping material should be capable of exhibiting the same mechanical and physical properties as the original base material. Repairs carried out and tested to the satisfaction of the Administration may be considered permanent provided the strength is adequate for the intended service.	**Technical**
A.755(18) / Annex / 3.4		Resolution A.755(18) adopted on 4 November 1993 "Guidelines for the approval of sprinkler systems equivalent to that referred to in SOLAS regulation II-2/12" 3 PRINCIPAL REQUIREMENTS FOR THE SYSTEM 3.4 The system should be of the wet pipe type but small exposed sections may be of the dry pipe, preaction, deluge, antifreeze or other type to the satisfaction of the Administration where this is necessary.	**Technical** Revoked by Res.A.800(19)
A.755(18) / Annex / 3.7		Resolution A.755(18) adopted on 4 November 1993 "Guidelines for the approval of sprinkler systems equivalent to that referred to in SOLAS regulation II-2/12" 3 PRINCIPAL REQUIREMENTS FOR THE SYSTEM 3.7 The system and its components should be designed to withstand ambient temperature changes, standards acceptable to the Organization, and manufactured and tested to the satisfaction of the Administration.	**Technical** Revoked by Res.A.800(19)

A.770(18) / Annex / 1.2		Resolution A.770(18) adopted on 4 November 1993 "Minimum training requirements for personnel nominated to assist passengers in emergency situations on passenger ships" 1 General 1.2 Where training is given in a shore-based training course, it should be supplemented by shipboard training before assuming the duties referred to in 1.1. The training should be to the satisfaction of the Administration. Administrations should establish some means of ensuring that crew members maintain continued proficiency through periodic refresher training, drills or re1ated work experience.	Revoked by Res.A.865(20) **Specific** Cabinet Regulation No. 895 adopted 22 November 2005 "Regulations Regarding Certification of Seafarers"
A.800(19) / Annex / 3.4		Resolution A. 800(19) adopted on 23 November 1995 "Revised guidelines for the approval of sprinkler systems equivalent to that referred to in SOLAS regulation II-2/12" 3 PRINCIPAL REQUIREMENTS FOR THE SYSTEM 3.4 The system should be of the wet pipe type but small exposed sections may be of the dry pipe, preaction, deluge, antifreeze or other type to the satisfaction of the Administration where this is necessary.	**Technical**
A.800(19) / Annex / 3.7		Resolution A. 800(19) adopted on 23 November 1995 "Revised guidelines for the approval of sprinkler systems equivalent to that referred to in SOLAS regulation II-2/12" 3 PRINCIPAL REQUIREMENTS FOR THE SYSTEM 3.7 The system and its components should be designed and installed in accordance with international standards acceptable to the Organization, and manufactured and tested to the satisfaction of the Administration in accordance with the requirements given in appendices 1 and 2 to these guidelines.	**Technical**
A.853(20) / Annex / 25		Resolution A. 853(20) adopted on 27 November 1997 "Amendments to the Code for the safe carriage of irradiated nuclear fuel, plutonium and high level radioactive wastes in flasks on board ships" MANAGEMENT AND TRAINING 25 The management and training for a ship should take account of developments within the Organization to the satisfaction of the Administration concerned.	**Indefinite**
A.865(20) / Annex / 1.2		Resolution A. 865(20) adopted on 26 November 1997 "Minimum training requirements for personnel nominated to assist passengers in emergency situations on passenger ships" 1 General	**Specific** Cabinet Regulation No. 895 adopted 22 November 2005 "Regulations Regarding Certification of Seafarers"

		1.2 Where training is given in a shore-based training course, it should be supplemented by shipboard training before assuming the duties referred to in 1.1. The training should be to the satisfaction of the Administration. Administrations should establish some means of ensuring that crew members maintain continued proficiency through periodic refresher training, drills or related work experience.	
A.889(21) / Annex / 2.1.2.2		Resolution A. 889(21) adopted on 25 November 1999 "Pilot transfer arrangements" 2 Pilot ladders 2.1 Position and construction 2.1.2 The steps of the pilot ladders should comply with the following requirements: ... .2 if made of material other than hardwood, they should be of equivalent strength, stiffness and durability to the satisfaction of the Administration;	**Technical** Revoked by Res.A.1045(27)
A.889(21) / Annex / 2.1.2.3		Resolution A. 889(21) adopted on 25 November 1999 "Pilot transfer arrangements" 2 Pilot ladders 2.1 Position and construction 2.1.2 The steps of the pilot ladders should comply with the following requirements: ... .3 the four lowest steps may be of rubber of sufficient strength and stiffness or other material to the satisfaction of the Administration;	**Technical** Revoked by Res.A.1045(27)
A.889(21) / Annex / 3.8		Resolution A. 889(21) adopted on 25 November 1999 "Pilot transfer arrangements" 3 Accommodation ladders used in conjunction with pilot ladders 3.8 Accommodation ladders, together with any suspension arrangements or attachments fitted and intended for use in accordance with this recommendation, should be to the satisfaction of the Administration.	**Technical** Revoked by Res.A.1045(27)
A.889(21) / Annex / 4.8.2		Resolution A. 889(21) adopted on 25 November 1999 "Pilot transfer arrangements" 4 Mechanical pilot hoists 4.8 Testing 4.8.2 An operating test of 10 % overload should be carried out after installation on board the ship to the satisfaction of the Administration.	**Technical** Revoked by Res.A.1045(27)

A.897(21) / Annex / 4.2.10		Resolution A. 897(21) adopted on 24 November 1999 "Amendments to the revised specifications for the design, operation and control of crude oil washing systems" 4. Design criteria 4.2 Tank washing machines 4.2.10 To confirm the effectiveness of the crude oil washing system and stripping system, the crude oil washing operation should be witnessed to the satisfaction of the Administration.	**Technical**
A.948(23) / Annex / Annex I / 4.2.13		Resolution A. 948(21) adopted on 05 December 2003 "Revised survey guidelines under the harmonized system of survey and certification" (R) 4 GUIDELINES FOR SURVEYS FOR THE CARGO SHIP SAFETY RADIO CERTIFICATE (RP) 4.2 Periodical surveys (RP) .13 confirming that a record has been kept in the period since the last survey to the satisfaction of the Administration and as required by the Radio Regulations (SOLAS 74/88 reg.IV/17);	Revoked by Res.A.997(25) **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.
A.948(23) / Annex / Annex I / 5.2.34		Resolution A. 948(21) adopted on 05 December 2003 "Revised survey guidelines under the harmonized system of survey and certification" (P) 5 GUIDELINES FOR SURVEYS FOR THE PASSENGER SHIP CERTIFICATE (PR) 5.2 Renewal surveys (PR) .34 confirming that a record has been kept in the period since the last survey to the satisfaction of the Administration and as required by the Radio Regulations (SOLAS 74/88 reg.IV/17);	Revoked by Res.A.997(25) **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.
Res.A.950(23) / Annex 2		Resolution A.950(23) adopted on 5 December 2003 "Maritime assistance services (MAS)"	n/a

		1 Establishment of MASs 1.1 The establishment of a MAS should not necessarily entail the setting up of a new organization. In so far as the present guidelines are observed, the functions of the MAS could, at the discretion of the Administration, be discharged by an existing organization, preferably an MRCC, or alternatively a harbour master's office, a coast guard operations centre (if one exists) or another body.	
A.951(23) / Annex / 6.1		Resolution A.951(23) adopted on 5 December 2003 "Improved guidelines for marine portable fire extinguishers" 6 Test specifications 6.1 Construction, performance and fire-extinguishing test specifications should be to the satisfaction of the Administration, having due regard to an established international standard.	**Technical**
A.997(25) / Annex / Annex I / 4.2.15		Resolution A.997(25) adopted on 29 November 2007 "Survey guidelines under the harmonized system of survey and certification, 2007" (R) 4 GUIDELINES FOR SURVEYS FOR THE CARGO SHIP SAFETY RADIO CERTIFICATE (RP) 4.2 Periodical surveys (RP) 4.2.1.15 confirming that a record has been kept in the period since the last survey to the satisfaction of the Administration and as required by the Radio Regulations (SOLAS 74/88 reg.IV/17);	Revoked by Res.A.1053(27) **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.
A.997(25) / Annex / Annex I / 5.2.1.36		Resolution A.997(25) adopted on 29 November 2007 "Survey guidelines under the harmonized system of survey and certification, 2007" (P) 5 GUIDELINES FOR SURVEYS FOR THE PASSENGER SHIP CERTIFICATE (PR) 5.2 Renewal surveys (PR) 5.2.1.36 confirming that a record has been kept in the period since the last survey to the satisfaction of the Administration and as required by the Radio Regulations (SOLAS 74/88 reg.IV/17);	Revoked by Res.A.1053(27) **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.
A.1045(27) / Annex / 2.1.2.2		Resolution A.1045(27) adopted on 30 November 2011 "Pilot transfer arrangements" 2 Pilot ladders 2.1 Position and construction 2.1.2 The steps of the pilot ladders should comply with the following requirements: ... .2 if made of material other than hardwood, they should be of equivalent strength, stiffness and durability to the satisfaction of the Administration;	**Technical**
A.1045(27) / Annex / 2.1.2.3		Resolution A.1045(27) adopted on 30 November 2011 "Pilot transfer arrangements" 2 Pilot ladders 2.1 Position and construction 2.1.2 The steps of the pilot ladders should comply with the following requirements: ... .3 the four lowest steps may be of rubber of sufficient strength and stiffness or other material to the satisfaction of the Administration;	**Technical**
A.1045(27) / Annex / 3.8		Resolution A.1045(27) adopted on 30 November 2011 "Pilot transfer arrangements" 3 Accommodation ladders used in conjunction with pilot ladders 3.8 Accommodation ladders, together with any suspension arrangements or attachments fitted and intended for use in accordance with this recommendation, should be to the satisfaction of the Administration[3].	**Technical**
A.1053(27) / Annex / Annex I / 4.2.1.16		Resolution A.1053(27) adopted on 30 November 2011 "Survey guidelines under the harmonized system of survey and certification (HSSC), 2011" (R) 4 GUIDELINES FOR SURVEYS FOR THE CARGO SHIP SAFETY RADIO CERTIFICATE (RP) 4.2 Periodical surveys (RP) 4.2.1.16 confirming that a record has been kept in the period since the last survey to the satisfaction of the Administration and as required by the Radio Regulations (SOLAS 74/88 reg.IV/17);	Revoked by Res.A.1104(29) **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.
A.1053(27) / Annex / Annex I / 5.2.1.39		Resolution A.1053(27) adopted on 30 November 2011 "Survey guidelines under the harmonized system of survey and certification (HSSC), 2011" (P) 5 GUIDELINES FOR SURVEYS FOR THE PASSENGER SHIP CERTIFICATE (PR) 5.2 Renewal surveys (PR) 5.2.1.39 confirming that a record has been kept in the period since the last survey to the satisfaction of the Administration and as required by the Radio Regulations (SOLAS 74/88 reg.IV/17);	Revoked by Res.A.1104(29) **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.
A.1053(27) / Annex / Annex I / 5.2.1.44		Resolution A.1104(29) adopted on 2 December 2015 "Survey guidelines under the harmonized system of survey and certification (HSSC), 2015" (P) 5 GUIDELINES FOR SURVEYS FOR THE PASSENGER SHIP CERTIFICATE (PR) 5.2 Renewal surveys (PR) 5.2.1.44 confirming that a record has been kept in the period since the last survey to the satisfaction of the Administration and as required by the Radio Regulations (SOLAS 74/88 reg.IV/17);	Revoked by Res.A.1104(29) **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.
A.1104(29) / Annex / Annex I / 4.2.1.17		Resolution A.1104(29) adopted on 2 December 2015 "Survey guidelines under the harmonized system of survey and certification (HSSC), 2015"	Revoked by Res.A.1120(30) **Specific** Maritime Administration and Marine Safety Law / Division C / Section 21.

		(R) 4 GUIDELINES FOR SURVEYS FOR THE CARGO SHIP SAFETY RADIO CERTIFICATE (RP) 4.2 Periodical surveys (RP) 4.2.1.17 confirming that a record has been kept in the period since the last survey to the satisfaction of the Administration and as required by the Radio Regulations (SOLAS 74/88 reg.IV/17);	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.
A.1120(30) / Annex / Annex I / 4.2.1.19		Resolution A.1120(30) adopted on 6 December 2017 "Survey guidelines under the harmonized system of survey and certification (HSSC), 2017" (R) 4 GUIDELINES FOR SURVEYS FOR THE CARGO SHIP SAFETY RADIO CERTIFICATE (RP) 4.2 Periodical surveys (RP) 4.2.1.19 confirming that a record has been kept in the period since the last survey to the satisfaction of the Administration and as required by the Radio Regulations (SOLAS 74/88 reg.IV/17);	Revoked by Res. A.1140(31) **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.
A.1120(30) / Annex / Annex I / 5.2.1.46		Resolution A.1120(30) adopted on 6 December 2017 "Survey guidelines under the harmonized system of survey and certification (HSSC), 2017" (P) 5 GUIDELINES FOR SURVEYS FOR THE PASSENGER SHIP CERTIFICATE (PR) 5.2 Renewal surveys (PR) 5.2.1.46 confirming that a record has been kept in the period since the last survey to the satisfaction of the Administration and as required by the Radio Regulations (SOLAS 74/88 reg.IV/17);	Revoked by Res. A.1140(31) **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.
A.1122(30) / Annex / Chapter 1 / 1.1.4		Resolution A.1122(30) adopted on 6 December 2017 "Code for the transport and handling of hazardous and noxious liquid substances in bulk on offshore supply support vessels (OSV chemical code)" 1.1 Application 1.1.4 Existing OSVs the keel of which were laid or which were at a similar stage of construction on or after 19 April 1990 and before the date specified in 1.1.3 may be permitted to carry products as assigned for carriage on a type 2 ship in the IBC Code, provided that those OSVs comply with the present Code, except for the stability provisions in chapter 2 of the present Code, and subject to the satisfaction of the Administration.	**Technical**
A.1122(30) / Annex / Chapter 6 / 6.1.5.4		Resolution A.1122(30) adopted on 6 December 2017 "Code for the transport and handling of hazardous and noxious liquid substances in bulk on offshore supply support vessels (OSV chemical code)" 6.1 Piping scantlings 6.1.5.4 For flanges not complying with a standard, the dimensions for flanges and associated bolts should be to the satisfaction of the Administration.	**Technical**
A.1122(30) / Annex / Chapter 17 / 17.3.4		Resolution A.1122(30) adopted on 6 December 2017 "Code for the transport and handling of hazardous and noxious liquid substances in bulk on offshore supply support vessels (OSV chemical code)" 17.3 Arrangement of deck spread 17.3.4 Cargo tank vent systems of portable tanks allowed under 5.2.2 should be to the satisfaction of the Administration, taking into account the requirements of chapter 6 of the IMDG Code.	**Technical**
A.1140(31) / Annex / Annex I / 4.2.1.21		Resolution A.1140(31) adopted on 4 December 2019 "Survey guidelines under the harmonized system of survey and certification (HSSC), 2019" (R) 4 GUIDELINES FOR SURVEYS FOR THE CARGO SHIP SAFETY RADIO CERTIFICATE (RP) 4.2 Periodical surveys (RP) 4.2.1.21 confirming that a record has been kept in the period since the last survey to the satisfaction of the Administration and as required by the Radio Regulations (SOLAS 74/88 reg.IV/17);	Revoked by Res. A.1156(32) **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.
A.1140(31) / Annex / Annex I / 5.2.1.48		Resolution A.1140(31) adopted on 4 December 2019 "Survey guidelines under the harmonized system of survey and certification (HSSC), 2019" (P) 5 GUIDELINES FOR SURVEYS FOR THE PASSENGER SHIP CERTIFICATE (PR) 5.2 Renewal surveys (PR) 5.2.1.48 confirming that a record has been kept in the period since the last survey to the satisfaction of the Administration and as required by the Radio Regulations (SOLAS 74/88 reg.IV/17);	Revoked by Res. A.1156(32) **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.
A.1156(32) / Annex / Annex I / 4.2.1.21		Resolution A.1156(32) adopted on 15 December 2021 "Survey guidelines under the harmonized system of survey and certification (HSSC), 2021" (R) 4 GUIDELINES FOR SURVEYS FOR THE CARGO SHIP SAFETY RADIO CERTIFICATE (RP) 4.2 Periodical surveys (RP) 4.2.1.21 confirming that a record has been kept in the period since the last survey to the satisfaction of the Administration and as required by the Radio Regulations (SOLAS 74/88 reg.IV/17);	Revoked by Res. A.1186(33) **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.
A.1156(32) / Annex / Annex I / 5.2.1.48		Resolution A.1156(32) adopted on 15 December 2021 "Survey guidelines under the harmonized system of survey and certification (HSSC), 2021" (P) 5 GUIDELINES FOR SURVEYS FOR THE PASSENGER SHIP CERTIFICATE (PR) 5.2 Renewal surveys	Revoked by Res. A.1186(33) **Specific** Maritime Administration and Marine Safety Law / Division C / Section 21.

		(PR) 5.2.1.48 confirming that a record has been kept in the period since the last survey to the satisfaction of the Administration and as required by the Radio Regulations (SOLAS 74/88 reg.IV/17);	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.
A.1185(33) / Annex / Appendix 1 / 1		Resolution A.1185 (33) adopted on 06 December 2023 "Procedures for Port State Control, 2023" 1 Sampling methodologies It is at the discretion of the port State to choose the sampling methodology. The Guidelines for brief sampling of anti-fouling systems on ships adopted by resolution MEPC.356(78)allow that any other scientifically recognized method of sampling and analysis of AFS controlled under the Convention than those described in the appendix to the Guidelines may be used (subject to the satisfaction of the Administration or the port State). The sampling methodology will depend, inter alia, on the surface hardness of the paint, which may vary considerably. The amount of paint mass removed may vary correspondingly.	**Specific** Paris MoU PSC Committee Instruction 47/2014/13, as amended
A.1186(33) / Annex / Annex I / 4.2.1.21		Resolution A.1186(33) adopted on 06 December 2023 "Survey guidelines under the harmonized system of survey and certification (HSSC), 2023" (R) 4 GUIDELINES FOR SURVEYS FOR THE CARGO SHIP SAFETY RADIO CERTIFICATE (RP) 4.2 Periodical surveys (RP) 4.2.1.21 confirming that a record has been kept in the period since the last survey to the satisfaction of the Administration and as required by the Radio Regulations (SOLAS 74/88 reg.IV/17);	**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.
A.1186(32) / Annex / Annex I / 5.2.1.47		Resolution A.1186(33) adopted on 06 December 2023 "Survey guidelines under the harmonized system of survey and certification (HSSC), 2023"	**Specific**

		(P) 5 GUIDELINES FOR SURVEYS FOR THE PASSENGER SHIP CERTIFICATE (PR) 5.2 Renewal surveys (PR) 5.2.1.47 confirming that a record has been kept in the period since the last survey to the satisfaction of the Administration and as required by the Radio Regulations (SOLAS 74/88 reg.IV/17);	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.
MSC.35(63) / Annex / 2.10		Resolution MSC.35(63) adopted on 20 May 1994 "Adoption of guidelines for emergency towing arrangements on tankers" 2.10 Prototype test Designs of emergency towing arrangements in accordance with these Guidelines should be prototype tested to the satisfaction of the Administration.	**Technical** Refer to the IACS UI SC113
MSC.49(66) / Annex / 8 (Annex A / Reg.5.1.6)		Resolution MSC.49 (66) adopted on 4 June 1996 "Adoption of amendments to the guidelines on the enhanced programme of inspections during surveys of bulk carriers and oil tankers (Resolution A.744(18))" 5.1.6 Use may also be made of the Guidelines for technical assessment in conjunction with the planning of enhanced surveys for bulk carriers, contained in annex 9. These guidelines are a recommended tool which may be invoked at the discretion of the Administration, when considered necessary and appropriate, in conjunction with the preparation of the required survey programme.	**Technical**
MSC.49(66) / Annex / 19 (Annex B / Reg.5.1.6)		Resolution MSC.49 (66) adopted on 4 June 1996 "Adoption of amendments to the guidelines on the enhanced programme of inspections during surveys of bulk carriers and oil tankers (Resolution A.744(18))" 5.1.6 Use may also be made of the Guidelines for technical assessment in conjunction with the planning of enhanced surveys for bulk carriers, contained in annex 9. These guidelines are a recommended tool which may be invoked at the discretion of the Administration, when considered necessary and appropriate, in conjunction with the preparation of the required survey programme.	**Technical**

MSC.81(70) / Annex / Introduction		Resolution MSC.81 (70) adopted on 11 December 1998 "Revised recommendation on testing of life-saving appliances" Introduction Tests for requirements referred to in the LSA Code, which are not included in this Recommendation, should be to the satisfaction of the Administration.	**Technical**
MSC.81(70) / Annex / 2.5		Resolution MSC.81 (70) adopted on 11 December 1998 "Revised recommendation on testing of life-saving appliances" 2 LIFEJACKETS 2.5 Tests of materials for cover, tapes and seams The materials used for the cover, tapes, seams and additional equipment should be tested to the satisfaction of the Administration to establish that they are rot-proof, colour-fast and resistant to deterioration from exposure to sunlight and that they are not unduly affected by seawater, oil or fungal attack.	**Technical**
MSC.81(70) / Annex / 6.2.1		Resolution MSC.81 (70) adopted on 11 December 1998 "Revised recommendation on testing of life-saving appliances" 6 LIFEBOATS 6.2 Lifeboat material tests Material fire-retardancy test 6.2.1 The hull and canopy material should be flame tested to determine its fire-retarding characteristics by placing a test specimen in a flame. After removal from the flame the burning time and burning distance should be measured and should be to the satisfaction of the Administration.	**Technical**
MSC.81(70) / Annex / 6.3.9		Resolution MSC.81 (70) adopted on 11 December 1998 "Revised recommendation on testing of life-saving appliances" 6 LIFEBOATS 6.3 Lifeboat overload test Free-fall lifeboats 6.3.9 This test should be considered successful if the lifeboat passes the operational test to the satisfaction of the Administration and there is no significant damage to it.	**Technical**
MSC.81(70) / Annex / 6.16.4		Resolution MSC.81 (70) adopted on 11 December 1998 "Revised recommendation on testing of life-saving appliances" 6 LIFEBOATS 6.16 Additional tests for fire-protected lifeboats Fire test 6.16.4 During the fire test, the temperature should be measured and recorded as a minimum at the following locations: ...	**Technical**

		The positions of such temperature recorders should be to the satisfaction of the Administration. The method of temperature measurement should allow the maximum temperature to be recorded.	
MSC.81(70) / Annex / 6.16.4		Resolution MSC.81 (70) adopted on 11 December 1998 "Revised recommendation on testing of life-saving appliances" 6 LIFEBOATS 6.16 Additional tests for fire-protected lifeboats Water spray tests 6.16.9 With the lifeboat in an upright position, on an even keel and in the light condition, run the pump at the rated speed. Measure the delivery rate of water or the thickness of the sprayed water film at the external surface of the lifeboat. The delivery rate of water or the sprayed water film thickness over the lifeboat should be to the satisfaction of the Administration.	**Technical**
MSC.81(70) / Annex / 6.17.5		Resolution MSC.81 (70) adopted on 11 December 1998 "Revised recommendation on testing of life-saving appliances" 6 LIFEBOATS 6.17 Measuring and evaluating acceleration forces Selection, placement and mounting of accelerometers 6.17.5 The selection, placement, and mounting of the accelerometers should be to the satisfaction of the Administration.	**Technical**
MSC.81(70) / Annex / 7.2.14		Resolution MSC.81 (70) adopted on 11 December 1998 "Revised recommendation on testing of life-saving appliances" 7 RESCUE BOATS AND FAST RESCUE BOATS 7.2 Inflated rescue boats Material tests 7.2.14 The material used in the construction of inflated rescue boats should be tested for the following characteristics to the satisfaction of the Administration: ...	**Technical**
MSC.81(70) / Annex / 7.7.9		Resolution MSC.81 (70) adopted on 11 December 1998 "Revised recommendation on testing of life-saving appliances" 7 RESCUE BOATS AND FAST RESCUE BOATS 7.7 Outboard motors for rescue boats 7.7.9 Where, in the opinion of the Administration, having regard to the particular voyages in which the ship carrying the boat is constantly engaged, a lower temperature is appropriate, that lower temperature should be substituted for -15°C in 7.7.8 for the cold start test.	**Technical**

MSC.81(70) / Annex / 8.2.13.4		Resolution MSC.81 (70) adopted on 11 December 1998 "Revised recommendation on testing of life-saving appliances" 8 LAUNCHING AND EMBARKATION APPLIANCES 8.2 Davit-launched liferaft automatic release hook test 8.2.13 The manual release force should be determined as follows: ... .4 the manual release force for a mass of 150 kg on the hook should be at least 600 N for lanyard-operated designs. Alternative designs should be demonstrated to the satisfaction of the Administration to provide adequate protection from inadvertent release under load.	**Technical**
MSC. 125(75) / Annex A / 1.3.1		Resolution MSC. 125(75) adopted on 24 May 2002 "Adoption of amendments to the guidelines on the enhanced programme of inspections during surveys of bulk carriers and oil tankers (Resolution A.744(18))" 1.3 Repairs 1.3.1 Any damage in association with wastage over the allowable limits (including buckling, grooving, detachment or fracture), or extensive areas of wastage over the allowable limits, which affects or, in the opinion of the Administration, will affect the ship's structural, watertight or weathertight integrity, should be promptly and thoroughly repaired. Areas to be considered include:	**Technical**
MSC. 125(75) / Annex A / 1.3.2		Resolution MSC. 125(75) adopted on 24 May 2002 "Adoption of amendments to the guidelines on the enhanced programme of inspections during surveys of bulk carriers and oil tankers (Resolution A.744(18))" 1.3 Repairs 1.3.2 Additionally, when a survey results in the identification of significant corrosion or structural defects, either of which, in the opinion of the Administration, will impair the ship's fitness for continued service, remedial measures should be implemented before the ship continues in service.	**Technical**
MSC. 125(75) / Annex B / 1.3.1		Resolution MSC. 125(75) adopted on 24 May 2002 "Adoption of amendments to the guidelines on the enhanced programme of inspections during surveys of bulk carriers and oil tankers (Resolution A.744(18))" 1.3 Repairs 1 .3.1 Any damage in association with wastage over the allowable limits (including buckling, grooving, detachment or fracture), or extensive areas of wastage over the allowable limits, which affects or, in the opinion of the Administration, will affect the ship's	**Technical**

		structural, watertight or weathertight integrity, should be promptly and thoroughly repaired. Areas to be considered include:	
MSC. 125(75) / Annex B / 1.3.2		Resolution MSC. 125(75) adopted on 24 May 2002 "Adoption of amendments to the guidelines on the enhanced programme of inspections during surveys of bulk carriers and oil tankers (Resolution A.744(18))" 1.3 Repairs 1.3.2 Additionally, when a survey results in the identification of significant corrosion or structural defects, either of which, in the opinion of the Administration, will impair the ship's fitness for continued service, remedial measures should be implemented before the ship continues in service.	**Technical**
MSC.137(76) / Annex / 3.2		MSC.137(76) adopted on 4 December 2002 "Standards for ship manoeuvrability" 3 APPLICATION 3.2 In the event that the ships referred to in paragraph 3.1 above undergo repairs, alterations or modifications, which, in the opinion of the Administration, may influence their manoeuvrability characteristics, the continued compliance with the Standards should be verified.	**Technical**
MSC.137(76) / Annex / 3.3		MSC.137(76) adopted on 4 December 2002 "Standards for ship manoeuvrability" 3 APPLICATION 3.3 Whenever other ships, originally not subject to the Standards, undergo repairs, alterations or modifications, which, in the opinion of the Administration, are of such an extent that the ship may be considered to be a new ship, then that ship should comply with these Standards. Otherwise, if the repairs, alterations and modifications, in the opinion of the Administration, may influence the manoeuvrability characteristics, it should be demonstrated that these characteristics do not lead to any deterioration of the manoeuvrability of the ship.	**Technical**
MSC.158(78) / Annex / 3.12		Resolution MSC. 158(78) adopted on 20 May 2004 "Adoption of amendments to the technical provisions for means of access for inspections" 3 Technical provisions 3.12 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 3.10 and 3.11, if the ability to traverse such openings or to remove an	**Technical**

		injured person can be proved to the satisfaction of the Administration.	
MSC.168(79) / Annex 1 / 4.5		Resolution MSC. 168(79) adopted on 9 December 2004 "Standards and criteria for side structures of bulk carriers of single-side skin construction" 4 Lower and upper brackets 4.5 The section moduli of the side longitudinals and sloping bulkhead longitudinals which support the connecting brackets shall be determined with the span taken between transverses according to the requirements of a classification society which is recognized by the Administration in accordance with the provisions of SOLAS regulation XI-1/1, or with applicable national standards of the Administration which provide an equivalent level of safety. Where other arrangements are adopted at the discretion of the Administration or a recognized classification society, the section moduli of the side longitudinals and sloping bulkhead longitudinals shall be determined according to the applicable criteria for the purpose of effectively supporting the brackets.	**Technical**
MSC.197(80) / Annex / Annex A / Part A / 1.3.1		Resolution MSC. 197(80) adopted on 20 May 2005 "Adoption of amendments to the guidelines on the enhanced programme of inspections during surveys of bulk carriers and oil tankers" 1.3 Repairs 1.3.1 Any damage in association with wastage over the allowable limits (including buckling, grooving, detachment or fracture), or extensive areas of wastage over the allowable limits, which affects or, in the opinion of the Administration, will affect the ship's structural, watertight or weathertight integrity, should be promptly and thoroughly (see 1.2.14) repaired. Areas to be considered include:	**Technical**
MSC.197(80) / Annex / Annex A / Part A / 1.3.2		Resolution MSC. 197(80) adopted on 20 May 2005 "Adoption of amendments to the guidelines on the enhanced programme of inspections during surveys of bulk carriers and oil tankers" 1.3 Repairs 1.3.2 Additionally, when a survey results in the identification of corrosion or structural defects, either of which, in the opinion of the Administration, will impair the ship's fitness for continued service, remedial measures should be implemented before the ship continues in service.	**Technical**
MSC.197(80) / Annex / 43 (Part A / 5.1.5)		Resolution MSC. 197(80) adopted on 20 May 2005 "Adoption of amendments to the guidelines on the enhanced programme of inspections during surveys of bulk carriers and oil tankers"	**Technical**

		5 Preparations for survey 5.1 Survey programme 5.1.5 Use may also be made of the Guidelines for technical assessment in conjunction with the planning of enhanced surveys for tankers, contained in annex 11. These Guidelines are a recommended tool which may be invoked at the discretion of the Administration, when considered necessary and appropriate, in conjunction with the preparation of the required survey programme.	
MSC.197(80) / Annex / Annex A / Annex 13 / 3		Resolution MSC. 197(80) adopted on 20 May 2005 "Adoption of amendments to the guidelines on the enhanced programme of inspections during surveys of bulk carriers and oil tankers" Annex 13 Strength of cargo hatch cover securing arrangements for bulk carriers 3 Materials and welding Where stoppers or securing devices are fitted to comply with this annex, they should be manufactured of materials, including welding electrodes, to the satisfaction of the Administration.	**Technical**
MSC. 235(82) / Annex / 1.1.1		Resolution MSC. 235(82) adopted on 01 December 2006 "Adoption of the guidelines for the design and construction of offshore supply vessels, 2006" 1 General 1.1 Application 1.1.1 Every new decked offshore supply vessel of 24 m and over but not more than 100 m in length should comply with the provisions of Parts 2 and 3 of these Guidelines. The intact and damage stability of a vessel of more than 100 m in length should be to the satisfaction of the Administration.	**Technical**
MSC. 235(82) / Annex / 1.1.5		Resolution MSC. 235(82) adopted on 01 December 2006 "Adoption of the guidelines for the design and construction of offshore supply vessels, 2006" 1 General 1.1 Application 1.1.5 For a vessel engaged in near-coastal voyages, the principles in 1.3 of these Guidelines should guide the Administration in the development of its national standards. Relaxations from the requirements of these Guidelines may be permitted by an Administration for vessels engaged in near-coastal voyages off its own coasts provided the operating conditions are, in the opinion of that Administration, such as to render compliance with the Guidelines unreasonable or unnecessary.	**Technical**

MSC. 235(82) / Annex / 1.1.6		Resolution MSC. 235(82) adopted on 01 December 2006 "Adoption of the guidelines for the design and construction of offshore supply vessels, 2006" 1 General 1.1 Application 1.1.6 Unless expressly provided otherwise, an existing offshore supply vessel should be required to comply with these Guidelines as far as is practicable in the opinion of the Administration.	**Technical**
MSC. 261(84) / Annex / Part B / 1.3.1		Resolution MSC. 261(84) adopted on 16 May 2008 "Adoption of amendments to the guidelines on the Enhanced Programme of inspections during surveys of bulk carriers and oil tankers" Part B 1.3 Repairs 1.3.1 Any damage in association with wastage over the allowable limits (including buckling, grooving, detachment or fracture), or extensive areas of wastage over the allowable limits, which affects or, in the opinion of the Administration, will affect the ship's structural, watertight or weathertight integrity, should be promptly and thoroughly repaired. Areas which should be considered include:	**Technical**
MSC. 261(84) / Annex / Part B / 1.3.2		Resolution MSC. 261(84) adopted on 16 May 2008 "Adoption of amendments to the guidelines on the Enhanced Programme of inspections during surveys of bulk carriers and oil tankers" Part B 1.3 Repairs 1.3.2 Additionally, when a survey results in the identification of corrosion or structural defects, either of which, in the opinion of the Administration, will impair the ship's fitness for continued service, remedial measures should be implemented before the ship continues in service.	**Technical**
MSC. 261(84) / Annex / Part B / 5.1.6		Resolution MSC. 261(84) adopted on 16 May 2008 "Adoption of amendments to the guidelines on the Enhanced Programme of inspections during surveys of bulk carriers and oil tankers" Part B 5 Preparations for survey 5.1.6 Use may also be made of the Guidelines for technical assessment in conjunction with the planning of enhanced surveys for bulk carriers, contained in annex 9. These Guidelines are a recommended tool which may be invoked at the discretion of the Administration, when considered necessary and appropriate, in	**Technical**

		conjunction with the preparation of the required survey programme.	
MSC. 261(84) / Annex / Part B / Annex 9 / 1		Resolution MSC. 261(84) adopted on 16 May 2008 "Adoption of amendments to the guidelines on the Enhanced Programme of inspections during surveys of bulk carriers and oil tankers" Part B Annex 11 Guidelines for technical assessment in conjunction with planning for enhanced surveys of bulk carriers 1 Introduction These guidelines contain information and suggestions concerning technical assessments, which may be of use in conjunction with the planning of enhanced surveys of double skin bulk carriers. As indicated in 5.1.6, the guidelines are a recommended tool which may be invoked at the discretion of the Administration, when considered necessary and appropriate, in conjunction with the preparation of the required survey programme.	**Technical**
MSC. 261(84) / Annex / Part B / Annex 11 / 3		Resolution MSC. 261(84) adopted on 16 May 2008 "Adoption of amendments to the guidelines on the Enhanced Programme of inspections during surveys of bulk carriers and oil tankers" Part B Annex 11 Strength of cargo hatch cover securing arrangements for bulk carriers 3. Materials and welding Where stoppers or securing devices are fitted to comply with this annex, they should be manufactured of materials, including welding electrodes, to the satisfaction of the Administration.	**Technical**
MSC. 274(85) / Annex / Part 1 / 6.3.9		Resolution MSC. 274(85) adopted on 04 December 2008 "Adoption of amendments to the revised recommendation on testing of life-saving appliances" Part 1 6.3 Lifeboat overload test 6.3.9 This test should be considered successful if the lifeboat passes the operational test to the satisfaction of the Administration; no damage has been sustained that would affect the lifeboat's efficient functioning; and any deflections of the hull or canopy as measured during the test would not cause injury to lifeboat occupants.	**Technical**
MSC.281(85) / 6.2.4		Resolution MSC. 281(85) adopted on 04 December 2008 "Explanatory notes to the SOLAS Chapter II-1 Subdivision and damage stability regulations" Regulation 6 - Required subdivision index R	**Technical**

		Regulation 6.2.4 Regarding the term "reduced degree of hazard", the following interpretation should be applied: A lesser value of N, but in no case less than N = N1 + N2, may be allowed at the discretion of the Administration for passenger ships, which, in the course of their voyages, do not proceed more than 20 miles from the nearest land.	
MSC.285(86) / Annex / Chapter 2 / 2.8.1.2		Resolution MSC. 285(86) adopted on 01 June 2009 "Interim guidelines on safety for natural gas-fueled engine installations in ships" Chapter 2 Ship arrangements and system design 2.8 Gas fuel storage 2.8.1 Liquefied gas storage tanks 2.8.1.2 Pipe connections to the tank should normally be mounted above the highest liquid level in the tanks. However, connections below the highest liquid level may be accepted after special consideration by the Administration.	**Technical**
MSC.285(86) / Annex / Chapter 3 / 3.2.3		Resolution MSC. 285(86) adopted on 01 June 2009 "Interim guidelines on safety for natural gas-fueled engine installations in ships" Chapter 3 Fire Safety 3.2 Fire protection 3.2.3 The fire and mechanical protection of gas pipes lead through ro-ro spaces on open deck should be subject to special consideration by the Administration depending on the use and expected pressure in the pipes. Gas pipes lead through ro-ro spaces on open deck should be provided with guards or bollards to prevent vehicle collision damage.	**Technical**
MSC.285(86) / Annex / Chapter 3 / 3.3.2.8		Resolution MSC. 285(86) adopted on 01 June 2009 "Interim guidelines on safety for natural gas-fueled engine installations in ships" Chapter 3 Fire Safety 3.3.2 Water spray systems 3.3.2.8 An equivalent system to the water spray system may be fitted provided it has been tested for its on-deck cooling capability to the satisfaction of the Administration.	**Technical**
MSC.285(86) / Annex / Chapter 7 / 7.3.4.3		Resolution MSC. 285(86) adopted on 01 June 2009 "Interim guidelines on safety for natural gas-fueled engine installations in ships" Chapter 7 Manufacture, workmanship and testing	**Technical**

		7.3.4 In addition to normal controls before and during the welding and to the visual inspection of the finished welds, the following tests should be required: ... .3 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.	
MSC.420(97) / Annex / 2.3 / Table 2 / No.19		Resolution MSC. 420(97) adopted on 25 November 2016 "Interim recommendations for carriage of liquefied hydrogen in bulk" Table 2: Special Requirements for carriage of liquefied hydrogen in bulk No.19 Fire detectors for detecting hydrogen fire should be selected after due deliberation, taking into account the features of hydrogen fire, to the satisfaction of the Administration.	**Indefinite**
Res.MSC.454(100) / Annex / 26.2		Resolution MSC. 454(100) adopted on 07 December 2018 "Revised guidelines for verification of conformity with goal-based ship construction standards for bulk carriers and oil tankers" Maintenance of verification 26 The addition of new rules or changes to rules already verified as conforming to the Standards may be introduced as a result of: ... .2 a continuous improvement process, which may take into account the experience gained and the due consideration by the Administration or the recognized organization the rules of which have been verified as conforming to the Standards, which also includes the addressing of observations stemming from previous verification audits.	**Technical**
MEPC. 18(22) / Annex / 2.7		Resolution MEPC. 18(22) adopted on 05 December 1985 "Adoption of the standards for procedures and arrangements for the discharge noxious liquid substances adopted on 05 December 1985" Chapter 2 - Preparation of the Procedures and Arrangements Manual 2.7 For a ship referred to in regulation 5A(6) or 5A(7), the format and the content of the Manual should be to the satisfaction of the Administration.	**Technical**
MEPC. 18(22) / Annex / 2.8		Resolution MEPC. 18(22) adopted on 05 December 1985 "Adoption of the standards for procedures and arrangements for	**Technical**

		the discharge noxious liquid substances adopted on 05 December 1985" Chapter 2 - Preparation of the Procedures and Arrangements Manual 2.8 For a ship carrying only category D substances, the format and the content of the Manual should be to the satisfaction of the Administration.	
MEPC. 18(22) / Annex / Appendix A / 2.1		Resolution MEPC. 18(22) adopted on 05 December 1985 "Adoption of the standards for procedures and arrangements for the discharge noxious liquid substances adopted on 05 December 1985" 2 Design criteria and performance test 2.1 The cargo pumping systems should be designed to meet the required 0.1$m^3$and 0.3m^3or 0.3$m^3$and 0.9m^3respectively for category B or C substances as specified by regulation 5A to the satisfaction of the Administration.	**Technical**
MEPC. 59(33) / Annex / Appendix 2 / 3.2		Resolution MEPC. 59(33) adopted on 30 October 1992 "Revised guidelines for the implementation of Annex V of MARPOL 73/78" 3 Materials and manufacture: 3.2 Piping for fuel and sludge oil should be seamless steel of adequate strength and to the satisfaction of the Administration. Short lengths of steel, or annealed copper nickle, nickle, nickle copper, or copper pipe and tubing may be used at the burners. The use of nonmetallic materials for fuel lines is prohibited. Valves and fittings may be threaded in sizes up to and including 60 mm O.D. (outside diameter), but threaded unions are not to be used on pressure lines in sizes 33 mm O.D. (outside diameter) and over.	**Technical**
MEPC. 62(35) / Annex / Revised Appendix B		Resolution MEPC. 62(35) adopted on 11 March 1994 "Amendments to the standards for procedures and arrangements for the discharge noxious liquid substances" REVISED APPENDIX B - PREWASH PROCEDURE FOR NEW SHIPS In several sections of the Standards a prewash procedure is required in order to meet certain Annex II requirements. This appendix explains how these prewash procedures should be performed and how the minimum volumes of washing media to be used should be determined. Smaller volumes of washing media may be used based on actual verification testing to the satisfaction of the Administration. Where reduced volumes are approved an entry to that effect must be recorded in the Procedures and Arrangements Manual.	**Technical**

MEPC. 62(35) / Annex / Revised Appendix B / 21		Resolution MEPC. 62(35) adopted on 11 March 1994 "Amendments to the standards for procedures and arrangements for the discharge noxious liquid substances" REVISED APPENDIX B - PREWASH PROCEDURE FOR NEW SHIPS 21. Verification testing for approval of prewash volumes lower than those give in paragraph 20 may be carried out to the satisfaction of the Administration to prove that the requirements of regulation 5 are met, taking into account the substances the tanker is certified to carry.	**Technical**
MEPC. 76(40) / Annex / 3.2		Resolution MEPC. 76(40) adopted on 25 September 1997 "Standard specification for shipboard incinerators" 3 Materials and manufacture 3.2. Piping for fuel and sludge oil should be seamless steel of adequate strength and to the satisfaction of the Administration. Short lengths of steel, or annealed copper nickel, nickel copper, or copper pipe and tubing may be used at the burners. The use of nonmetallic materials for fuel lines is prohibited. Valves and fittings may be threaded in sizes up to and including 60 mm O.D. (outside diameter), but threaded unions are not to be used on pressure lines in sizes 33 mm O.D. and over.	**Technical**
MEPC. 94(46) / Annex / 11.4.1		Resolution MEPC. 94(46) adopted on 27 April 2001 "Condition assessment scheme" 11 VERIFICATION OF THE CAS BY THE ADMINISTRATION 11.4 The Administration shall ensure that any persons assigned to monitor the execution of the CAS or to review a CAS Final Report: .1 are adequately qualified and experienced to the satisfaction of the Administration; ...	**Technical** ROs are responsible to ensure that persons are adequately qualified and experienced
MEPC. 94(46) / Annex / 12.1		Resolution MEPC. 94(46) adopted on 27 April 2001 "Condition assessment scheme" 12 RE-ASSESSMENT OF SHIPS FOLLOWING FAILURE TO MEET THE REQUIREMENTS OF THE CAS 12.1 A ship which, in the opinion of the Administration, has failed to meet the requirements of the CAS, may be submitted for the CAS re-assessment. In such a case the grounds on which Administration declined the issue of a Statement of Compliance to the ship shall be addressed and dealt with and the remedial actions shall, thereafter, be reviewed for the purpose of ascertaining whether the requirements of the CAS have been complied with.	**Specific** Case by case assessment

MEPC. 94(46) / Annex / 13.1		Resolution MEPC. 94(46) adopted on 27 April 2001 "Condition assessment scheme" 13 STATEMENT OF COMPLIANCE 13.1 The Administration shall, in accordance with its procedures, issue to each ship which completes the CAS to the satisfaction of the Administration, a Statement of Compliance.	**Technical**
MEPC. 104(49) / Annex / 1.6.2		Resolution MEPC. 104(49) adopted on 18 July 2003 "Guidelines for brief sampling of anti-fouling systems on ships" 1.6 These Guidelines contain: ... .2 appendices describing the unique procedures associated with the sampling and analysis of anti-fouling systems controlled by the Convention. These appendices only serve as examples of sampling and analytical methods and other sampling methods not described in an appendix may be used subject to the satisfaction of the Administration or the port State, as appropriate.	**Specific** Cabinet Regulations No. 57 adopted 19 January 2010 "Regulations Regarding the Use of Anti-Fouling Systems on Ships", Chapter IV
MEPC. 104(49) / Annex / 4.10		Resolution MEPC. 104(49) adopted on 18 July 2003 "Guidelines for brief sampling of anti-fouling systems on ships" Analysis 4.10 The analysis should be conducted by a recognized laboratory meeting the ISO 17025 standard or another appropriate facility at the discretion of the Administration or the port State.	**Specific** Cabinet Regulations No. 57 adopted 19 January 2010 "Regulations Regarding the Use of Anti-Fouling Systems on Ships", Paragraph 19
MEPC. 108(49) / Annex / 6.1.1		Resolution MEPC. 108(49) adopted on 18 July 2003 "Revised guidelines and specifications for oil discharge monitoring and control systems for oil tankers" 6 TECHNICAL SPECIFICATIONS 6.1 Oil discharge monitoring and control system 6.1.1 The monitoring system should be capable of effectively monitoring and controlling the discharge of any effluent into the sea through those overboard discharge outlets permitted by regulation 18 which, in the opinion of the Administration, are necessary to fulfil the operational requirements of the oil tanker.	**Technical**
MEPC. 112(50) / Annex / 13.1		Resolution MEPC. 112(50) adopted on 04 December 2003 "Amendments to the condition assessment scheme" 13 STATEMENT OF COMPLIANCE 13.1 The Administration shall, in accordance with its procedures, issue to each ship which completes the CAS to the satisfaction of the Administration, the Statement of Compliance.	**Technical**
MEPC. 122(52) / Annex / Part A / 1.10		Resolution MEPC. 122(52) adopted on 15 October 2004 "Explanatory notes on matters related to the accidental oil outflow performance under Regulation 23 of the revised MARPOL Annex I"	**Technical**

		1 Introduction 1.10 Combination carriers are ships designed and built for carrying both dry and liquid cargo (i.e. bulk cargo and oil cargo). Traditionally these ships are built without any centreline bulkhead. The new probabilistic method is suitable also for the combination carriers, but due to the nature of the design they may not be able to comply with the outflow performance index (mean outflow parameter) of a standard oil tanker. For combination carriers, separate mean oil outflow parameter may be applied provided it is demonstrated by calculations that the increased structural strength of the hull is providing for improved environmental protection compared to a standard double hull oil tanker of the same size. The calculations are to be to the satisfaction of the Administration.	
MEPC. 122(52) / Annex / Part B / 2.1		Resolution MEPC. 122(52) adopted on 15 October 2004 "Explanatory notes on matters related to the accidental oil outflow performance under Regulation 23 of the revised MARPOL Annex I" 2 Regulation 23.3.1 2.1 For combination carriers, a separate criterion for the mean oil outflow parameter may be applied provided it is demonstrated by calculations that the increased structural strength of the design is providing for environmental protection at least equivalent to a standard double hull oil tanker of the same size. The calculations are to be to the satisfaction of the Administration.	**Technical**
MEPC. 125(53) / Annex / Annex / Part 2 / 2.2.2		Resolution MEPC. 125(53) adopted on 22 July 2005 "Guidelines for approval of ballast water management systems (G8)" 2.2 Shipboard tests Success criteria for shipboard testing 2.2.2 In evaluating the performance of BWMS installation(s) on a ship or ships, the following information and results should be supplied to the satisfaction of the Administration: ...	**Technical**
MEPC. 130(53) / Annex / 2.2.7		Resolution MEPC. 130(53) adopted on 22 July 2005 "Guidelines for on-board exhaust gas-SO_x cleaning systems" 2 Survey and certification 2.2.7 EGCS-SOx units which treat only part of the exhaust gas flow of the uptake in which they are fitted should be subject to special consideration by the Administration to ensure that under all defined operating conditions that the overall emission value of the exhaust gas down stream of the system is no more than 6.0 g SOx /kWh.	**Technical** Revoked by Res.MEPC.170(57)

MEPC. 130(53) / Annex / 4.3.2		Resolution MEPC. 130(53) adopted on 22 July 2005 "Guidelines for on-board exhaust gas-SO_x cleaning systems" 4.3 Product range approval 4.3.2 Where there are significant differences in the design of EGCS-SOx units of different capacities, this procedure should not be applied unless it can be shown, to the satisfaction of the Administration, that in practice those differences do not materially alter the performance between the various EGCS-SOx unit types.	**Technical** Revoked by Res.MEPC.170(57)
MEPC. 130(53) / Annex / 6.6		Resolution MEPC. 130(53) adopted on 22 July 2005 "Guidelines for on-board exhaust gas-SO_x cleaning systems" 6 Procedures for demonstrating compliance with emission limit on board 6.6 At the discretion of the Administration, the Surveyor should have the option of checking one or all of the identified components, operating values or settings. Where there is more than one EGCS-SOx unit, the Administration may, at its discretion, abbreviate or reduce the extent of the survey on board however the entire survey should be completed for at least one of each type of EGCS-SOx unit on board provided that it is expected that the other EGCS-SOx units perform in the same manner.	**Technical** Revoked by Res.MEPC.170(57)
MEPC. 130(53) / Annex / 15.7		Resolution MEPC. 130(53) adopted on 22 July 2005 "Guidelines for on-board exhaust gas-SO_x cleaning systems" 15 Ship compliance 15.7 Recognizing that the limit given in regulation 14(4)(b) is for the ship, not each individual item of combustion equipment, the shipowner should have the opportunity to balance performance which considerably exceeds the requirement of 6.0 g SOx/kWh or SO2 (ppm) / CO2 (%) ratio of 65 or below against that of equipment, potentially not fitted with EGCS-SOx units, which does not meet that requirement. These cases should be subject to special consideration by the administration. In particular the SCP should detail how the actual emissions from each fuel oil combustion unit are to be aggregated together to obtain an overall, real time, emission value for the ship which does not exceed 6.0 g SOx/ kWh or SO2 (ppm) / CO2 (%) ratio of 65 or below.	**Technical** Revoked by Res.MEPC.170(57)
Res.MEPC.140(54) / Annex / 3.9		Resolution MEPC.140(54) "Guidelines for approval and oversight of prototype ballast water treatment technology programmes (G10)" Participants	**Technical**

		3.9 The construction, operation and maintenance of the technology should be adequately described to allow for consideration by the Administration and this should include:	
MEPC. 170(57) / Annex / 4.1.4.2		Resolution MEPC. 170(57) adopted on 04 April 2008 "Guidelines for exhaust gas cleaning systems" 4 Scheme A 4.1.4 Product range approval 4.1.4.2 Where there are significant differences in the design of EGC units of different capacities, this procedure should not be applied unless it can be shown, to the satisfaction of the Administration, that in practice those differences do not materially alter the performance between the various EGC unit types.	**Technical** Revoked by Res.MEPC.184(59)
MEPC. 170(57) / Annex / 4.2.1.7		Resolution MEPC. 170(57) adopted on 04 April 2008 "Guidelines for exhaust gas cleaning systems" 4 Survey and certification 4.2.1.7 EGC units which treat only part of the exhaust gas flow of the uptake in which they are fitted should be subject to special consideration by the Administration to ensure that under all defined operating conditions that the overall emission value of the exhaust gas down stream of the system is no more than the certified value.	**Technical** Revoked by Res.MEPC.184(59)
MEPC. 170(57) / Annex / 4.4.6		Resolution MEPC. 170(57) adopted on 04 April 2008 "Guidelines for exhaust gas cleaning systems" 4.4 Onboard procedures for demonstrating compliance with emission limit 4.4.6 At the discretion of the Administration, the Surveyor should have the option of checking one or all of the identified components, operating values or settings. Where there is more than one EGC unit, the Administration may, at its discretion, abbreviate or reduce the extent of the survey on board, however, the entire survey should be completed for at least one of each type of EGC unit on board provided that it is expected that the other EGC units perform in the same manner.	**Technical** Revoked by Res.MEPC.184(59)
MEPC. 170(57) / Annex / 9.1.8.1		Resolution MEPC. 170(57) adopted on 04 April 2008 "Guidelines for exhaust gas cleaning systems" 9 Ship compliance 9.1.8.1 Recognizing that the limit given in regulation 14(4)(b) is for the ship, not each individual item of combustion equipment, the shipowner should have the opportunity to balance performance which considerably exceeds the requirement of 6.0 g SOx/kWh or SO2 (ppm) / CO2 (%) ratio of 65 or below against	**Technical** Revoked by Res.MEPC.184(59)

		that of equipment, potentially not fitted with EGCS-SOx units, which does not meet that requirement. These cases should be subject to special consideration by the administration. In particular the SCP should detail how the actual emissions from each fuel oil combustion unit are to be aggregated together to obtain an overall, real time, emission value for the ship which does not exceed 6.0 g SOx/ kWh or SO2 (ppm) / CO2 (%) ratio of 65 or below.	
MEPC. 170(57) / Annex / Appendix II		Resolution MEPC. 170(57) adopted on 04 April 2008 "Guidelines for exhaust gas cleaning systems" Appendix II – Washwater data collection It is recommended that the ship that has provided this information to the satisfaction of the Administration should be granted a waiver for compliance of the existing installation(s) to possible future stricter washwater discharge standards. The Administration should forward information submitted on this issue to the Organization for dissemination by the appropriate mechanisms.	**Indefinite** Revoked by Res.MEPC.184(59)
MEPC. 174(58) / Annex / Annex / Part 2 / 2.2.2		Resolution MEPC. 174(58) adopted on 10 October 2008 "Guidelines for approval of ballast water management systems (G8)" 2.2 Shipboard tests Success criteria for shipboard testing 2.2.2 In evaluating the performance of BWMS installation(s) on a ship or ships, the following information and results should be supplied to the satisfaction of the Administration: ...	**Technical**
MEPC. 184(59) / Annex / 4.1.4.2		Resolution MEPC. 184(59) adopted on 17 July 2009 "2009 Guidelines for exhaust gas cleaning systems" 4 Scheme A 4.1.4 Product range approval 4.1.4.2 Where there are significant differences in the design of EGC units of different capacities, this procedure should not be applied unless it can be shown, to the satisfaction of the Administration, that in practice those differences do not materially alter the performance between the various EGC unit types.	**Technical** Revoked by Res.MEPC.259(68)
MEPC. 184(59) / Annex / 4.2.1.7		Resolution MEPC. 184(59) adopted on 17 July 2009 "2009 Guidelines for exhaust gas cleaning systems" 4 Survey and certification 4.2.1.7 EGC units which treat only part of the exhaust gas flow of the uptake in which they are fitted should be subject to special	**Technical** Revoked by Res.MEPC.259(68)

		consideration by the Administration to ensure that under all defined operating conditions that the overall emission value of the exhaust gas down stream of the system is no more than the Certified Value.	
MEPC. 184(59) / Annex / 4.4.1		Resolution MEPC. 184(59) adopted on 17 July 2009 "2009 Guidelines for exhaust gas cleaning systems" 4 Scheme A 4.4 Onboard procedures for demonstrating compliance 4.4.1 For each EGC unit, the ETM-A should contain a verification procedure for use at surveys as required. This procedure should not require specialized equipment or an in-depth knowledge of the system. Where particular devices are required they should be provided and maintained as part of the system. The EGC unit should be designed in such a way as to facilitate inspection as required. The basis of this verification procedure is that if all relevant components and operating values or settings are within those as approved, then the performance of the EGC system is within that required without the need for actual exhaust emission measurements. It is also necessary to ensure that the EGC unit is fitted to a fuel oil combustion unit for which it is rated- this forms part of the SECP. A Technical File related to an EIAPP certificate, if available, or an Exhaust Gas Declaration issued by the engine maker or designer or another competent party or a Flue Gas Declaration issued by the boiler maker or designer or another competent party serves this purpose to the satisfaction of the Administration.	**Technical** Revoked by Res.MEPC.259(68)
MEPC. 184(59) / Annex / 4.4.6		Resolution MEPC. 184(59) adopted on 17 July 2009 "2009 Guidelines for exhaust gas cleaning systems" 4.4 Onboard procedures for demonstrating compliance 4.4.6 At the discretion of the Administration, the Surveyor should have the option of checking one or all of the identified components, operating values or settings. Where there is more than one EGC unit, the Administration may, at its discretion, abbreviate or reduce the extent of the survey on board, however, the entire survey should be completed for at least one of each type of EGC unit on board provided that it is expected that the other EGC units perform in the same manner.	**Technical** Revoked by Res.MEPC.259(68)
MEPC. 184(59) / Annex / Appendix III		Resolution MEPC. 184(59) adopted on 17 July 2009 "2009 Guidelines for exhaust gas cleaning systems" Appendix III – Washwater data collection	**Indefinite** Revoked by Res.MEPC.259(68)

		It is recommended that the ship that has provided this information to the satisfaction of the Administration should be granted a waiver for compliance of the existing installation(s) to possible future stricter washwater discharge standards. The Administration should forward information submitted on this issue to the Organization for dissemination by the appropriate mechanisms.	
MEPC. 198(62) / Annex / 6.3.1.1		Resolution MEPC. 198(62) adopted on 15 July 2011 "2011 Guidelines addressing additional aspects to the NO_x technical code 2008 with regard to particular requirements related to marine diesel engines fitted with selective catalytic reduction (SCR) systems" 6 TEST PROCEDURES FOR SCHEME B 6.3 Test procedures for SCR chambers 6.3.1 General 6.3.1.1 The SCR chamber for validation testing may be either a full scale SCR chamber or a scaled version. A SCR chamber should demonstrate the reduction in NOx concentrations (ppm) expected in exhaust gas measured in section 6.2 of these guidelines. Therefore, NOx reduction rate of the SCR chamber should be determined for each individual mode point. Where undertaken on a scaled version of the SCR chamber the scaling process should be validated to the satisfaction of the Administration.	**Technical**
MEPC. 198(62) / Annex / 6.3.4.2		Resolution MEPC. 198(62) adopted on 15 July 2011 "2011 Guidelines addressing additional aspects to the NO_x technical code 2008 with regard to particular requirements related to marine diesel engines fitted with selective catalytic reduction (SCR) systems" 6 TEST PROCEDURES FOR SCHEME B 6.3 Test procedures for SCR chambers 6.3.4 List of data to be derived from the model 6.3.4.2 Exhaust gas analysers should be in accordance with appendix III and appendix IV of the NTC 2008 or otherwise to the satisfaction of the Administration.	**Technical**
MEPC. 208(62) / Annex / Appendix 1 / 1		Resolution MEPC. 208(62) adopted on 15 July 2011 "2011 Guidelines for inspection of anti-fouling systems on ships" 1 Sampling methodologies It is to the discretion of the port State to choose the sampling methodology. The Guidelines for brief sampling of anti-fouling systems on ships adopted by resolution MEPC.104(49) allow that any other scientifically recognized method of sampling and	**Specific** Cabinet Regulations No. 57 adopted 19 January 2010 "Regulations Regarding the Use of Anti-Fouling Systems on Ships", Chapter IV

		analysis of AFS controlled by the Convention than those described in the appendix to the Guidelines may be used (subject to the satisfaction of the Administration or the port State). The sampling methodology will depend, inter alia, on the surface hardness of the paint, which may vary considerably. The amount of paint mass removed may vary correspondingly.	
MEPC. 244(66) / Annex / 3.2		Resolution MEPC. 244(66) adopted on 04 April 2014 "2014 Standard specification for shipboard incinerators" 3 Materials and manufacture 3.2 Piping for fuel and oil residue (sludge) should be seamless steel of adequate strength and to the satisfaction of the Administration. Short lengths of steel, or annealed copper nickel, nickel copper, or copper pipe and tubing may be used at the burners. The use of non-metallic materials for fuel lines is prohibited. Valves and fittings may be threaded in sizes up to and including 60 mm O.D. (outside diameter), but threaded unions are not to be used on pressure lines in sizes 33 mm O.D. and over.	**Technical**
MEPC. 259(68) / Annex / 4.1.4.2		Resolution MEPC. 259(68) adopted on 15 May 2015 "2015 Guidelines for exhaust gas cleaning systems" 4 Scheme A 4.1.4 Product range approval 4.1.4.2 Where there are significant differences in the design of EGC units of different capacities, this procedure should not be applied unless it can be shown, to the satisfaction of the Administration, that in practice those differences do not materially alter the performance between the various EGC unit types.	**Technical**
MEPC. 259(68) / Annex / 4.2.1.7		Resolution MEPC. 259(68) adopted on 15 May 2015 "2015 Guidelines for exhaust gas cleaning systems" 4.2.1 Procedures for the certification of an EGC unit 4.2.1.7 EGC units which treat only part of the exhaust gas flow of the uptake in which they are fitted should be subject to special consideration by the Administration to ensure that under all defined operating conditions that the overall emission value of the exhaust gas downstream of the system is no more than the Certified Value.	**Technical**
MEPC. 259(68) / Annex / 4.4.1		Resolution MEPC. 259(68) adopted on 15 May 2015 "2015 Guidelines for exhaust gas cleaning systems" 4 Scheme A 4.4 Onboard procedures for demonstrating compliance 4.4.1 For each EGC unit, the ETM-A should contain a verification procedure for use at surveys as required. This procedure should	**Technical**

		not require specialized equipment or an in-depth knowledge of the system. Where particular devices are required they should be provided and maintained as part of the system. The EGC unit should be designed in such a way as to facilitate inspection as required. The basis of this verification procedure is that if all relevant components and operating values or settings are within those as approved, then the performance of the EGC system is within that required without the need for actual exhaust emission measurements. It is also necessary to ensure that the EGC unit is fitted to a fuel oil combustion unit for which it is rated – this forms part of the SECP. A Technical File related to an EIAPP certificate, if available, or an Exhaust Gas Declaration issued by the engine maker or designer or another competent party or a Flue Gas Declaration issued by the boiler maker or designer or another competent party serves this purpose to the satisfaction of the Administration.	
MEPC. 259(68) / Annex / 4.4.6		Resolution MEPC. 259(68) adopted on 15 May 2015 "2015 Guidelines for exhaust gas cleaning systems" 4.4 Onboard procedures for demonstrating compliance 4.4.6 At the discretion of the Administration, the surveyor should have the option of checking one or all of the identified components, operating values or settings. Where there is more than one EGC unit, the Administration may, at its discretion, abbreviate or reduce the extent of the survey on board, however, the entire survey should be completed for at least one of each type of EGC unit on board provided that it is expected that the other EGC units perform in the same manner.	**Technical**
MEPC. 259(68) / Annex / Appendix 3 / 6		Resolution MEPC. 259(68) adopted on 15 May 2015 "2015 Guidelines for exhaust gas cleaning systems" Appendix 3. Washwater data collection 6 It is recommended that the ship that has provided this information to the satisfaction of the Administration should be granted a waiver for compliance of the existing installation(s) to possible future stricter washwater discharge standards. The Administration should forward information submitted on this issue to the Organization for dissemination by the appropriate mechanisms.	**Indefinite**
MEPC. 279(70) / Annex / Annex / Part 2 / 2.1.1		Resolution MEPC. 279(70) adopted on 28 October 2016 "2016 Guidelines for approval of ballast water management systems (G8)" 2.1 Quality Assurance and Quality Control Procedures	**Technical**

		2.1.1 The testing facility should demonstrate its competency in conducting valid type approval tests in two ways: (1) have implemented a rigorous quality control/quality assurance program, approved, certified and audited by an independent accreditation body, or to the satisfaction of the Administration, and (2) be able to demonstrate its ability to conduct valid test cycles with appropriate challenge water, sample collection, sample analysis, and method detection limits. It is the responsibility of the Administration, or its authorized delegate, to determine the acceptability of the test facility.	
MEPC. 279(70) / Annex / Annex / Part 2 / 2.2		Resolution MEPC. 279(70) adopted on 28 October 2016 "2016 Guidelines for approval of ballast water management systems (G8)" 2.2 Avoiding sampling bias The sampling protocol must ensure organism mortality is minimized, e.g. by using appropriate valves and flow rates for flow control in the sampling facility, submerging nets during sampling collection, using appropriate sampling duration and handling times, and appropriate concentrating methodology. All methods should be validated to the satisfaction of the Administration.	**Indefinite** ROs are authorized to approve ballast water management systems according to their regulations.
MEPC. 279(70) / Annex / Annex / Part 2 / 2.3.3		Resolution MEPC. 279(70) adopted on 28 October 2016 "2016 Guidelines for approval of ballast water management systems (G8)" 2.3 Shipboard tests Success criteria for shipboard testing 2.3.3 In evaluating the performance of BWMS installation(s) on a ship or ships, the following information and results should be supplied to the satisfaction of the Administration: ...	**Technical**
MEPC. 279(70) / Annex / Annex / Part 2 / 2.3.3.7.3.3		Resolution MEPC. 279(70) adopted on 28 October 2016 "2016 Guidelines for approval of ballast water management systems (G8)" 2.3 Shipboard tests Success criteria for shipboard testing 2.3.3 In evaluating the performance of BWMS installation(s) on a ship or ships, the following information and results should be supplied to the satisfaction of the Administration: ... .7 sampling regime and volumes for analysis: ...	**Technical**

		.3 for the evaluation of bacteria: ... .3 the toxicogenic test requirements should be conducted in an appropriately approved laboratory. If no approved laboratory is available, the analysis method may be validated to the satisfaction of the Administration.	
MEPC. 279(70) / Annex / Annex / Part 2 / 2.4.34.3.3		Resolution MEPC. 279(70) adopted on 28 October 2016 "2016 Guidelines for approval of ballast water management systems (G8)" 2.4 Land-based testing Land-based monitoring and sampling 2.4.34 Samples described in paragraphs 2.4.31 and 2.4.32 should be collected with the following sampling regime and volumes for analysis: ... .3 for the evaluation of bacteria: ... .3 the toxicogenic test requirements should be conducted in an appropriately approved laboratory. If no approved laboratory is available, the analysis method may be validated to the satisfaction of the Administration.	**Technical**
MEPC. 279(70) / Annex / Annex / Part 2 / 2.6.1		Resolution MEPC. 279(70) adopted on 28 October 2016 "2016 Guidelines for approval of ballast water management systems (G8)" 2.6 Evaluation of regrowth 2.6.1 The evaluation of the regrowth of organisms should be undertaken to the satisfaction of the Administration in land-based and/or shipboard testing in at least two test cycles in each salinity.	**Technical**
MEPC. 279(70) / Annex / Annex / Part 6 / 6.2		Resolution MEPC. 279(70) adopted on 28 October 2016 "2016 Guidelines for approval of ballast water management systems (G8)" 6.2 The low and/or high parameter values for each system design limitation should be validated to the satisfaction of the Administration as follows: ...	**Technical**
MEPC. 291(71) / Annex / 6.3.1.1		Resolution MEPC. 291(71) adopted on 07 July 2017 "2017 Guidelines addressing additional aspects to the NO_x technical code 2008 with regard to particular requirements related to marine diesel engines fitted with selective catalytic reduction (SCR) systems"	**Technical**

		6 TEST PROCEDURES FOR SCHEME B 6.3 Test procedures for SCR chambers 6.3.1 General 6.3.1.1 The SCR chamber for validation testing may be either a full scale SCR chamber or a scaled version. A SCR chamber should demonstrate the reduction in NO_x concentrations (ppm) expected in exhaust gas measured in section 6.2 of these Guidelines. Therefore, NO_x reduction rate of the SCR chamber should be determined for each individual mode point. Where undertaken on a scaled version of the SCR chamber the scaling process should be validated to the satisfaction of the Administration.	
MEPC. 291(71) / Annex / 6.3.4.2		Resolution MEPC. 291(71) adopted on 07 July 2017 "2017 Guidelines addressing additional aspects to the NO_x technical code 2008 with regard to particular requirements related to marine diesel engines fitted with selective catalytic reduction (SCR) systems" 6 TEST PROCEDURES FOR SCHEME B 6.3 Test procedures for SCR chambers 6.3.4 List of data to be derived from the model 6.3.4.2 Exhaust gas analysers should be in accordance with appendix III and appendix IV of the NTC 2008 or otherwise to the satisfaction of the Administration.	**Technical**
Res.MEPC.312(74) / Annex / 2.5		Resolution MEPC. 312(74) adopted on 17 May 2019 "Guidelines for the use of electronic record books under MARPOL" 2 Application 2.5 If a shipowner decides to use an electronic record book to record operational logs, instead of a hard copy record book, the following guidance should be taken into consideration by the Administration when approving the electronic record book for use.	**Technical**
Res.MEPC.312(74) / Annex / 5.2		Resolution MEPC. 312(74) adopted on 17 May 2019 "Guidelines for the use of electronic record books under MARPOL" 5 Declaration 5.2 Delegating the assessment of the electronic record book against these Guidelines and the issuing of a declaration on behalf of the Administration by recognized organizations (ROs) is at the discretion of the Administration.	**Technical** Delegated to ROs
Res.MEPC.340(77) / Annex / 1.3		Resolution MEPC. 340(77) adopted on 26 November 2021 "2021 Guidelines for exhaust gas cleaning systems" 1 Introduction 1.3 Equivalency with the relevant requirements of regulation 14 of MARPOL Annex VI should be demonstrated by using these	**Technical**

		Guidelines as a basis of compliance with the relevant Emission Ratio limit value as given in table 1. Where the design or operation of an EGCS requires controls in addition to those given in these Guidelines in order to meet the requirements of regulation 4.4 of the above-mentioned Annex, they should be subject to special consideration by the Administration and should be communicated to the Organization when submitting the notification required by regulation 4.2 of MARPOL Annex VI.	
Res.MEPC.340(77) / Annex / 4.2.1.7		Resolution MEPC. 340(77) adopted on 26 November 2021 "2021 Guidelines for exhaust gas cleaning systems" 4.2 Survey and certification 4.2.1.7 EGCSs which treat only part of the exhaust gas flow of the uptake in which they are fitted should be subject to special consideration by the Administration to ensure that under all defined operating conditions the overall Emission Ratio value of the exhaust gas downstream of the system is no more than the Certified Value.	**Technical**
Res.MEPC.340(77) / Annex / 4.4.6		Resolution MEPC. 340(77) adopted on 26 November 2021 "2021 Guidelines for exhaust gas cleaning systems" 4.4 Onboard verification procedures for demonstrating compliance 4.4.6 At the discretion of the Administration, the surveyor should have the option of checking one or all of the identified components, operating values or settings. Where there is more than one EGC unit within the EGCS, the Administration may, at its discretion, abbreviate or reduce the extent of the survey on board; however, the entire survey should be completed for at least one of each type of EGC unit on board provided that it is expected that the other EGC units perform in the same manner.	**Technical**
Res.MEPC.355(78) / Annex / Appendix 1 / 1.1		Resolution MEPC. 355(78) adopted on 10 June 2022 "2022 Interim guidelines on correction factors and voyage adjustments for CII calculations (CII Guidelines, G5)" 1 Refrigerated containers .1 For ships that have the ability to monitor reefer electrical consumption, the ship may calculate reefer container kWh consumption as follows: ... • SFOC represents the specific fuel consumption in g/kWh as a weighted average of the engines used to provide the electrical power, as per the EEDI/EEXI Technical File or the NOx Technical File. In the case of ships without a Technical File, a default value of 175 g/kWh for 2 stroke engines and 200 g/kWh for 4 stroke	**Technical**

		engines may be applied. In the case of waste heat recovery systems as defined under Category C1 in MEPC.1/Circ.896 the SFOC to be used will be at the discretion of the Administration.	
Res.MEPC.355(78) / Annex / Appendix 1 / 1.1		Resolution MEPC. 355(78) adopted on 10 June 2022 "2022 Interim guidelines on correction factors and voyage adjustments for CII calculations (CII Guidelines, G5)" 1 Refrigerated containers For ships carrying refrigerated containers, the correction factor FCElectrical may be applied as follows: .2 For ships that do not have the ability to monitor reefer electrical consumption, the ship may calculate reefer kWh consumption as follows: ... • $SFOC_{avg}$ represents the specific fuel consumption in g/kWh as a weighted average of the engines used to provide the electrical power, as per the EEDI/EEXI Technical File or NO_x Technical File. In the case of ships without a Technical File, a default value of 175 g/kWh for 2 stroke engines and 200 g/kWh for 4 stroke engines may be applied. In the case of waste heat recovery systems as defined under Category C1 in MEPC.1/Circ.896 the SFOC to be used will be at the discretion of the Administration.	**Technical**
Res.MEPC.355(78) / Annex / Appendix 1 / 2.1		Resolution MEPC. 355(78) adopted on 10 June 2022 "2022 Interim guidelines on correction factors and voyage adjustments for CII calculations (CII Guidelines, G5)" For ships carrying refrigerated containers, the correction factor FCElectrical may be applied as follows: 2 Cargo cooling systems on gas carriers and LNG carriers For gas carriers and LNG carriers with electrical cargo cooling systems or reliquefaction plants, the correction factor $FC_{electrical}$ may be applied as follows: .1 Gas carriers and LNG carriers may calculate cargo cooling kWh consumption as follows: ... • SFOC represents the specific fuel consumption in g/kWh associated with the relevant source of electrical power as per the EEDI/EEXI Technical File or NO_x Technical File. In the case of ships without a Technical File, a default value of 175 g/kWh for 2 stroke engines and 200 g/kWh for 4 stroke engines may be applied. In the case of waste heat recovery systems as defined under Category C1 in MEPC.1/Circ.896 the SFOC to be used will be at the discretion of the Administration.	**Technical**

Res.MEPC.355(78) / Annex / Appendix 1 / 3.1		Resolution MEPC. 355(78) adopted on 10 June 2022 "2022 Interim guidelines on correction factors and voyage adjustments for CII calculations (CII Guidelines, G5)" 3 Electric cargo discharge pumps on tankers For tankers with directly or indirectly electrically powered discharge pumps, the correction factor $FC_{electrical}$ may be applied as follows: .1 Tankers may calculate cargo discharge kWh consumption as follows: ... • SFOC represents the specific fuel oil consumption in g/kWh associated with the relevant source of electrical power as per the EEDI/EEXI Technical File or NO_x Technical File. In the case of ships without a Technical File, a default value of 175 g/kWh for 2 stroke engines and 200 g/kWh for 4 stroke engines may be applied. In the case of waste heat recovery systems as defined under Category C1 in MEPC.1/Circ.896the SFOC to be used will be at the discretion of the Administration.	**Technical**
Res.MEPC.356(78) / Annex / 4.13		Resolution MEPC. 356(78) adopted on 10 June 2022 "2022 Guidelines for brief sampling of anti-fouling systems on ships" Analysis 4.13 The analysis should be conducted by a recognized laboratory meeting the ISO 17025 standard or another appropriate facility at the discretion of the Administration or the port State.	**Specific** Cabinet Regulations No. 57 adopted 19 January 2010 "Regulations Regarding the Use of Anti-Fouling Systems on Ships", Paragraph 19
Res.MEPC.357(78) / Annex / Appendix 1 / 1		Resolution MEPC. 357(78) adopted on 10 June 2022 "2022 Guidelines for inspection of anti-fouling systems on ships" 1 Sampling methodologies It is at the discretion of the port State to choose the sampling methodology. The Guidelines for brief sampling of anti-fouling systems on ships adopted by resolution MEPC.356(78)allow that any other scientifically recognized method of sampling and analysis of AFS controlled under the Convention than those described in the appendix to the Guidelines may be used (subject to the satisfaction of the Administration or the port State). The sampling methodology will depend, inter alia, on the surface hardness of the paint, which may vary considerably. The amount of paint mass removed may vary correspondingly.	**Specific** Paris MoU PSC Committee Instruction 47/2014/13, as amended
Res.MEPC.372(80) / Annex / Appendix 1 / 5.2		Resolution MEPC. 372(80) adopted on 07 July 2023 "Guidelines for the use of electronic record books under the BWM convention" 5.2 Delegating the assessment of the electronic record book against these Guidelines and the issuing of a declaration on behalf	**Technical**

		of the Administration by recognized organizations (ROs) is at the discretion of the Administration.	
Res.MEPC.388(81) / Annex / 7.4.2		Resolution MEPC. 388(81) adopted on 22 March 2024 "Amendments to the 2022 guidelines for the development of a ship energy efficiency management plan (EEMP) (Resolution MEPC.346(78))" 7.4 If there is a consumer type whose fuel oil consumption cannot be determined directly according to one of the methods indicated in paragraphs 7.3.1 and 7.3.2, the annual fuel oil consumption of that consumer type should be determined according to one of the following methods. The method used to determine the annual fuel oil consumption of each consumer type should be described in detail in the Data Collection Plan. Note that each consumer type may use a different method to measure fuel oil consumption. ... .2 method using estimated fuel oil consumption: In cases where none of the above methods in paragraphs 7.3.1, 7.3.2 and 7.4.1 can be applied, an alternative method that is to the satisfaction of the Administration or any organization recognized by it may be used to estimate the annual fuel oil consumption of the consumer type, based for example on manufacturer data or actual historic fuel consumption for a specified period.	**Technical**
1997 SOLAS Conference / Res. 4 / Annex 2 / 3.1		Resolution 4 "Standards for the evaluation of scantlings of the transverse watertight vertically corrugated bulkhead between the two foremost cargo holds and for the evaluation of allowable hold loading of the foremost cargo hold" 3.1 Floor shear strength ... n_2 may be reduced, at the discretion of the Administration, down to 1.10 where appropriate reinforcements are fitted to the satisfaction of the Administration.	**Technical**
1997 SOLAS Conference / Res. 4 / Annex 2 / 3.2		Resolution 4 "Standards for the evaluation of scantlings of the transverse watertight vertically corrugated bulkhead between the two foremost cargo holds and for the evaluation of allowable hold loading of the foremost cargo hold" 3.2 Girder shear strength ... n_2 may be reduced, at the discretion of the Administration, down to 1.10 where appropriate reinforcements are fitted to the satisfaction of the Administration.	**Technical**

Circulars			
MSC/Circ.353 / 1.1		MSC/Circ.353 "Revised guidelines for inert gas systems" 1 INTRODUCTION. 1.1 Purpose. The International Conference on Tanker Safety and Pollution Prevention held in February 1978 passed resolution 5 recommending that the Inter-Governmental Maritime Consultative Organization develop Guidelines to supplement the requirements of amended Reg. 62 of Chapter II-2 of the 1974 SOLAS Convention by taking into account the arduous operating conditions of inert gas systems and the need to maintain them to a satisfactory standard. In addition Reg. 62.1 requires that an inert gas system shall be designed, constructed and tested to the satisfaction of the Administration. These Guidelines have accordingly been developed to supplement and complement the Convention requirements for inert gas systems. They are offered to Administrations to assist them in determining appropriate design and constructional parameters and in formulating suitable operational procedures when inert gas systems are installed in ships flying the flag of their State.	**Technical**
MSC/Circ.373 / 3.2.1		MSC/Circ.373 "Revised standards for the design, testing and locating of devices to prevent the passage of flame into cargo tanks in oil tankers" 3 TYPE TEST PROCEDURES 3.2 Test procedures for flame arresters located at openings to the atmosphere 3.2.1 The test ring shall consist of an apparatus producing an explosive mixture, a small tank with a diaphragm, a flanged prototype of the flame arrester, a plastic bag 1) and a firing source in three positions. 2) Other test rigs may be used, provided the tests referred to in this section are achieved to the satisfaction of the Administration.	**Technical**
MSC/Circ.373 / 3.3.1		MSC/Circ.373 "Revised standards for the design, testing and locating of devices to prevent the passage of flame into cargo tanks in oil tankers" 3 TYPE TEST PROCEDURES 3.3 Test procedures for high velocity vents 3.3.1 The test rig shall be capable of producing the required volume flow rate. In appendices 3 and 4 drawings of suitable test rigs are shown. Other test rigs may be used provided the tests are achieved to the satisfaction of the Administration.	**Technical**

MSC/Circ.373 / 3.4.3		MSC/Circ.373 "Revised standards for the design, testing and locating of devices to prevent the passage of flame into cargo tanks in oil tankers" 3 TYPE TEST PROCEDURES 3.4 Test rig and test procedures for detonation flame arresters located in-line 3.4.3 Other test rigs may be used provided the tests are achieved to the satisfaction of the Administration. A drawing of the test rig is shown in Appendix 5.	**Technical**
MSC/Circ.373 / 3.5.1		MSC/Circ.373 "Revised standards for the design, testing and locating of devices to prevent the passage of flame into cargo tanks in oil tankers" 3 TYPE TEST PROCEDURES 3.5 Operational test procedures 3.5.1 A corrosion test shall be carried out. In this test a complete device including a section of the pipe to which it is fitted shall be exposed to a 20 per cent sodium chloride solution spray at a temperature of 25 degrees C for a period of 240 hours, and allowed to dry for 48 hours. An equivalent test may be used to the satisfaction of the Administration. Following this test all movable parts shall operate properly and there shall be no corrosion deposits which cannot be washed off.	**Technical**
MSC/Circ.406/Rev.1 / Annex / Interpretation of provisions in the IBC Code		MSC/Circ.406/Rev.1 "Guidelines on interpretation of the IBC Code and IGC Code and guidelines for the uniform application of the survival requirements of the IBC and IGC Codes" Escape from double bottom tanks and similar spaces (Paragraph 3.4.1): The provision of only one access may be approved in special circumstances if the ability to readily traverse the space or to remove an injured person can be proved to the satisfaction of the Administration.	**Technical**
MSC/Circ.408 / Annex / 1 / note		MSC/Circ.408 "Protection of the crew of fishing vessels from water shipped on deck" 1 The minimum vertical distance from the deepest operating waterline to the lowest point of the bulwark or to the edge of the working deck if guard rails are fitted referred to in regulation 108(2)* of the Torremolinos International Convention for the Safety of Fishing Vessels. 1977 should be determined for each vessel, taking into account the probability of shipping water on the deck when the vessel is in moderate beam seas when fishing. This probability should not be greater than 5%. The calculations	**Technical**

		should take account of the damping coefficient associated with the presence of bilge keels or any other roll damping arrangements. * Regulation 108(2): "The minimum vertical distance from the deepest operating waterline to the lowest point of the top of the bulwark, or to the edge of the working deck if guard rails are fitted shall ensure adequate protection of the crew from water shipped on deck taking into account the sea states and the weather conditions in which the vessel may operate, the areas of operation, type of vessel and its method of fishing and shall be to the satisfaction of the Administration."	
MSC/Circ.446 / 8.4.2.2		MSC/Circ.446 "Amendments to the code of safety for special-purpose ships in respect of survival craft on sail training ships" 8.4 Sail training ships, irrespective of their gross tonnage, carrying more than 50 special personnel (trainees), may be accepted by the Administration if they: .2.2 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
MSC/Circ.451 / Annex /		MSC/Circ.451 "Guidance concerning the location of fire control plans for the assistance of shoreside fire-fighting personnel" 2 Location 2.3 If the enclosure is not adjacent to the gangway, there should be guide signs to help the shoreside fire-fighting personnel to find the enclosure containing the fire control plans. The guide sign should be the location sign defined in paragraph 2.2 with the addition of a red arrow (figures 2.1 or 2.2, at the discretion of the Administration) showing the direction where the fire control plan enclosure can be found.	**Technical**
MSC/Circ.456 / Annex / 4.7		MSC/Circ.456 "Guidelines for the preparation of intact stability information" 4.7 Hydrostatic particulars Hydrostatic particulars of the ship at the designed trim drawn in curves or tabulated to a base of mean draught measured to the bottom of the keel over a range covering the lightship and maximum draughts. When tabulated, these should correspond to evenly-spaced rounded units of draught at intervals appropriate to the size and type of ship. If the hydrostatic particulars are presented in the form of curves their scales and accuracy should be to the satisfaction of the Administration or government recognized organization. The particulars should include: ...	**Technical**

MSC/Circ.456 / Annex / 2.3		MSC/Circ.456 "Guidelines for the preparation of intact stability information" 2 CATEGORIES OF INFORMATION 2.3 Category 2 Information which provides the master with ready means of ensuring that the ship's stability parameters for a given service and condition of loading lie within the limits dictated by the Administration. Included also in this category is information which will enable the master by using data provided under category 1 to obtain further information as may be required by the Administration or by himself for the proper working of the ship. Information within this category may be simplified if in the opinion of the Administration, or government recognized organization, the ship is not critical in terms of the required stability criteria within the range and type of loading conditions and for the service intended.	**Technical**
MSC/Circ.456 / Annex / 4.9		MSC/Circ.456 "Guidelines for the preparation of intact stability information" 4.9 Form stability particulars Form stability data at the designed trim showing the relationship between righting lever, angle of heel and displacement drawn in curves or tabulated. The data should cover the full range of displacement extending from light to maximum draughts with a range of inclination appropriate to the type of ship and stability criteria adopted. If the data is given in the form of curves, the scale and accuracy should be to the satisfaction of the Administration or government recognized organization. Intervals of displacement and righting lever when tabulated and angles of inclination should be sufficient to meet the accuracy demanded by the stability criteria. Below 500 the intervals of inclination should not exceed 100, however, closer spacing may be required according to the ship form and proportions, also to the stability criteria adopted. A statement should be appended to the data indicating the erections and/or timber deck loads which are included. Where the operating trim or the form and arrangement of the ship are such that change in trim has an appreciable effect on righting arms, additional form stability data should be included for a suitable range of trim.	**Technical**
MSC/Circ.456 / Annex / 5.3		MSC/Circ.456 "Guidelines for the preparation of intact stability information" 5.3 Critical stability data	**Technical**

		A pre-calculated table and/or diagram from which the master can determine if the stability of the ship is acceptable for a given loading condition under the governing stability criteria. This information should show, for example, the maximum allowable height of the loaded ship's centre of gravity or the maximum allowable static (displacement or deadweight) moment about the bottom of keel as a function of draught or displacement. The form of the data and the parameters used should be to the satisfaction of the Administration taking into account the stability criteria adopted, the ship type and the service intended. The data should extend from the lightest anticipated sea-going draught to the minimum freeboard assigned. If two or more independent governing stability parameters or conditions of service are included in the stability criteria the information should provide for any combination. Where the operating trim or the form and arrangement of the ship are such that a change in trim has an appreciable effect on righting arms additional pre-calculated tables/diagrams should be included for a suitable range of trim.	
MSC/Circ.474 / Corr.1 / Annex / 1.6		MSC/Circ.474/Corr.1 "Guidelines for bow and stern loading and unloading arrangements on oil tankers" 1 General 1.6 Arrangements should be provided for draining of cargo piping to the satisfaction of the Administration.	**Technical**
MSC/Circ.474 / Corr.1 / Annex / 1.11		MSC/Circ.474/Corr.1 "Guidelines for bow and stern loading and unloading arrangements on oil tankers" 1 General 1.11 A fixed foam fire-extinguishing system covering the loading and unloading areas should be provided. The system should be to the satisfaction of the Administration.	**Technical**
MSC/Circ.474 / Corr.1 / Annex / 1.13		MSC/Circ.474/Corr.1 "Guidelines for bow and stern loading and unloading arrangements on oil tankers" 1 General 1.13 Bow and stern loading and unloading arrangements should not interfere with the safe launching of survival craft, and provisions should be made to the satisfaction of the Administration to protect launching stations from sprays in case of hose and pipe bursting.	**Technical**
MSC/Circ.474 / Corr.1 / Annex / 2.4		MSC/Circ.474/Corr.1 "Guidelines for bow and stern loading and unloading arrangements on oil tankers" 2 Special requirements for tankers equipped for single point offshore mooring and bow loading arrangement.	**Technical**

		2.4 Where a forward bridge control position is arranged on the forecastle or fore deck, provisions should be made to the satisfaction of the Administration for emergency escape from the bridge control position in the event of fire.	
MSC/Circ.474 / Corr.1 / Annex / 2.5		MSC/Circ.474/Corr.1 "Guidelines for bow and stern loading and unloading arrangements on oil tankers" 2 Special requirements for tankers equipped for single point offshore mooring and bow loading arrangement. 2.5 An emergency quick-release system should be provided for the cargo hose and mooring systems. The design, location and operation of such a system should be to the satisfaction of the Administration.	**Technical**
MSC/Circ.474 / Corr.1 / Annex / 2.6		MSC/Circ.474/Corr.1 "Guidelines for bow and stern loading and unloading arrangements on oil tankers" 2 Special requirements for tankers equipped for single point offshore mooring and bow loading arrangement. 2.6 The mooring system should be provided with a tension meter continuously indicating the tension in the mooring system during the bow loading operation. This recommendation may be waived if the tanker has in operation a dynamic positioning system to the satisfaction of the Administration.	**Technical**
MSC/Circ.478 / 2		MSC/Circ.478 "Amendments to the code of safety for special purpose ships" 2. "1.3.4 Except as provided in 8.3, "special purpose ship" means a mechanically self-propelled ship which, by reason of its function, carries on board more than 12 special personnel including passengers. Special purpose ships to which this Code applies include the following types: ... .5 other ships with design features and modes of operation similar to ships referred to in .1 to .4 which in the opinion of the Administration may be referred to this group."	**Technical**
MSC/Circ.478 / 3		MSC/Circ.478 "Amendments to the code of safety for special purpose ships" 3. "8.3 Notwithstanding the provisions of 8.2, sail training ships, whether mechanically self-propelled or not and irrespective of their gross tonnage, carrying more than 50 special personnel (trainees), may in lieu of meeting the requirements of regulations	**Specific** Case by case assessment

		20.1.1, 20.1.2 or 20.1.3 of chapter III of the 1974 SOLAS Convention: ... .2 in addition, carry one immersion suit complying with regulation 33 of chapter III of the 1974 SOLAS Convention for each person on board, unless: ... .2.2 the ship is constantly engaged on voyages in warm climates where, in the opinion of the Administration, immersion suits are unnecessary."	
MSC/Circ.492 / 2		MSC/Circ.492 "Clarifications of certain provisions of chapter III of the 1983 SOLAS amendments and Resolution A.521(13)" 2 Regulation III/30.2.4 and resolution A.521(13), sections 1/5.18 and 1/7.2 In addition to the tests prescribed in section 1/5.18 and 1/7.2 of resolution A.521(13), the material used in the construction of inflatable liferafts and inflated rescue boats should be submitted to the following tests to the satisfaction of the Administration: ...	**Technical**
MSC/Circ.492 / 11.9		MSC/Circ.492 "Clarifications of certain provisions of chapter III of the 1983 SOLAS amendments and Resolution A.521(13)" 11 Regulation III/47.1.7 and resolution A.521(13), section 7 - Outboard motors for rescue boats 11.9 Where, in the opinion of the Administration, having regard to the particular voyages in which the ship carrying the boat is constantly engaged, a lower temperature is appropriate, that lower temperature should be substituted for -15 degrees C in paragraph 11.8 for the cold starting test.	**Technical**
MSC/Circ.580 / Annex / II / 1.0 / 2.2		MSC/Circ.580 "Guidelines for the application of plastic pipes in ships" II MATERIAL DESIGN PROPERTIES AND PERFORMANCE CRITERIA 1.0 REQUIREMENTS APPLICABLE TO ALL PIPING SYSTEMS 2 Internal pressure 2.2 The nominal internal pressure for a pope should be determined by dividing the short-term hydrostatic test failure pressure by a safety factor of 4 or the long-term hydrostatic (> 100,000 hours) test failure pressure by a safety factor of 2.5, whichever is the lesser. The hydrostatic test failure pressure should be verified experimentally or by a combination of testing and calculation methods to the satisfaction of the Administration.	**Technical**

MSC/Circ.580 / Annex / II / 1.0 / 3.2		MSC/Circ.580 "Guidelines for the application of plastic pipes in ships" II MATERIAL DESIGN PROPERTIES AND PERFORMANCE CRITERIA 1.0 REQUIREMENTS APPLICABLE TO ALL PIPING SYSTEMS 3 External pressure 3.2 Piping should be designed for an external pressure not less than the sum of the maximum potential head of liquid outside the pipe, plus full vacuum (1 bar). The nominal external pressure for a pipe should be determined by dividing the collapse test pressure by a safety factor of 3. The collapse test pressure should be verified experimentally or by a combination of testing and calculation methods to the satisfaction of the Administration.	**Technical**
MSC/Circ.580 / Annex / II / 1.0 / 4.2		MSC/Circ.580 "Guidelines for the application of plastic pipes in ships" II MATERIAL DESIGN PROPERTIES AND PERFORMANCE CRITERIA 1.0 REQUIREMENTS APPLICABLE TO ALL PIPING SYSTEMS 4 Axial strength 4.2 In the case of fibre reinforced plastic pipes, the sum of the longitudinal stresses should not exceed half of the nominal circumferential stress derived from the nominal internal pressure determined according to chapter II, section 1, paragraph 2.2, unless the minimum allowable longitudinal stress is verified experimentally or by a combination of testing and calculation methods to the satisfaction of the Administration.	**Technical**
MSC/Circ.580 / Annex / II / 1.0 / 6.1		MSC/Circ.580 "Guidelines for the application of plastic pipes in ships" II MATERIAL DESIGN PROPERTIES AND PERFORMANCE CRITERIA 1.0 REQUIREMENTS APPLICABLE TO ALL PIPING SYSTEMS 6 Impact resistance 6.1 Piping should have a minimum resistance to impact to the satisfaction of the Administration.	**Technical**
MSC/Circ.580 / Annex / II / 1.0 / 11.1		MSC/Circ.580 "Guidelines for the application of plastic pipes in ships" II MATERIAL DESIGN PROPERTIES AND PERFORMANCE CRITERIA 1.0 REQUIREMENTS APPLICABLE TO ALL PIPING SYSTEMS 11 Material compatibility 11.1 The piping material should be compatible with the fluid being carried or in which it is immersed such that its design strength does not degenerate below that recognized by these guidelines. Where the reaction between the pipe material and the fluid is	**Technical**

		unknown, the compatibility should be demonstrated to the satisfaction of the Administration.	
MSC/Circ.580 / Annex / II / 2.0 / 6.1.3		MSC/Circ.580 "Guidelines for the application of plastic pipes in ships" II MATERIAL DESIGN PROPERTIES AND PERFORMANCE CRITERIA 2.0 REQUIREMENTS APPLICABLE TO PIPING SYSTEMS DEPENDING ON SERVICE AND/OR LOCATIONS 6 Fire protection coatings 6.1.3 Fire protection coatings should not degrade due to environmental effects over time. such as ultraviolet rays, saltwater exposure, temperature and humidity. Other areas to consider are thermal expansion. Resistance against vibrations, and elasticity. Ageing of the fire protection coatings should be demonstrated to the satisfaction of the Administration in a manner consistent with the ageing test specified above.	**Technical**
MSC/Circ.580 / Annex / II / 2.0 / 6.1.5		MSC/Circ.580 "Guidelines for the application of plastic pipes in ships" II MATERIAL DESIGN PROPERTIES AND PERFORMANCE CRITERIA 2.0 REQUIREMENTS APPLICABLE TO PIPING SYSTEMS DEPENDING ON SERVICE AND/OR LOCATIONS 6 Fire protection coatings 6.1.5 The fire protection coating should have a minimum resistance to impact to the satisfaction of the Administration.	**Technical**
MSC/Circ.580 / Annex / II / 2.0 / 6.1.5		MSC/Circ.580 "Guidelines for the application of plastic pipes in ships" II MATERIAL DESIGN PROPERTIES AND PERFORMANCE CRITERIA 2.0 REQUIREMENTS APPLICABLE TO PIPING SYSTEMS DEPENDING ON SERVICE AND/OR LOCATIONS 6 Fire protection coatings 6.1.5 The fire protection coating should have a minimum resistance to impact to the satisfaction of the Administration.	**Technical**
MSC/Circ.580 / Annex / III / 6		MSC/Circ.580 "Guidelines for the application of plastic pipes in ships" III MATERIAL APPROVAL AND QUALITY CONTROL DURING MANUFACTURE. 6 Samples of pipe should be tested to determine the short-term and/or long-term hydrostatic design strength. These samples should be selected randomly from the production facilities at a frequency to the satisfaction of the Administration.	**Technical**
MSC/Circ.580 / Annex / IV / 4.1		MSC/Circ.580 "Guidelines for the application of plastic pipes in ships"	**Technical**

		IV INSTALLATION 4 Control during installation 4.1 Joining techniques should be in accordance with MSC/Circ.449. This circular requires the fabrication to be in accordance with the manufacturer's installation guidelines, that personnel performing these tasks to qualified to the satisfaction of the Administration, and that each bonding procedure be qualified before shipboard piping installation commences.	
MSC/Circ.580 / Annex / IV / 8.2		MSC/Circ.580 "Guidelines for the application of plastic pipes in ships" IV INSTALLATION 8 Methods of repair 8.2 Permanent repairs to the piping material should be capable of exhibiting the same mechanical and physical properties as the original base material. Repairs carried out and tested to the satisfaction of the Administration may be considered permanent provided the strength is adequate for the intended service.	**Technical**
MSC/Circ.582 / Annex / 3.3.2(b) Note		MSC/Circ.582 "Guidelines for the performance and testing criteria, and surveys of low-expansion foam concentrates for fixed fire-extinguishing systems" 3.3 - Sedimentation 3.3.2 - The test should be carried out as follows: (b) Procedure: Centrifuge each sample for 10 min. Determine the volume of the sediment and determine the percentage of this volume with respect to the centrifuged sample volume. Wash the contents of the centrifuge tube onto the sieve and check that the sediment can or cannot be dispersed through the sieve by the jet from the plastic wash bottle. NOTE: It is possible that the test method is not suitable for some non-Newtonian foam concentrates. In this case an alternative method, to the satisfaction of the Administration, should be used so that compliance with this requirement can be verified.	**Technical**
MSC/Circ.582 / Annex / 3.4.2		MSC/Circ.582 "Guidelines for the performance and testing criteria, and surveys of low-expansion foam concentrates for fixed fire-extinguishing systems" 3.4 - Kinematic viscosity 3.4.2 - The method for determining viscosity of non-Newtonian foam concentrates should be to the satisfaction of the Administration.	**Technical**

MSC/Circ.585 / 1.1		MSC/Circ.585 "Standards for vapour emission control systems" 1 GENERAL 1.1 These standards have been developed for the design, construction, and operation of vapour collection systems on tankers and vapour emission control systems at terminals. The standards are intended to apply to vapour emission control systems which collect vapours of flammable cargoes from tanker cargo tanks during cargo loading or ballasting operations. Vapour emission control systems which collect vapour of cargoes having characteristics which may pose hazards in addition to or other than flammability should be subject to special consideration by the Administration. These standards are not intended to require the use of vapour emission control systems but rather to recommend safety standards when such systems are utilized. The requirement to collect vapours will stem from a port Administration or terminal regulation. These standards are intended to promote the safety of terminals, tankers, and their personnel, recognizing the unique design features and characteristics of these systems.	**Technical**
MSC/Circ.585 / 2.1.1		MSC/Circ.585 "Standards for vapour emission control systems" 2 TANKERS 2.1 Tanker vapour processing unit 2.1.1 In addition to the requirements of this section, each tanker which has a vapour processing unit located onboard should, to the satisfaction of the Administration, meet the vapour collection and processing design requirements for a shoreside terminal contained in section 3.	**Technical**
MSC/Circ.593 / Annex / 1 / Certificates for masters, officers or ratings (MEPC/Circ.257)		MSC/Circ.593 "Listing of certificates and documents required to be carried on board ships" 1 All ships Certificates for masters, officers or ratings Certificates for masters, officers or ratings shall be issued to those candidates who, to the satisfaction of the Administration, meet the requirements for service, age, medical fitness, training, qualifications and examinations in accordance with the provisions of the Annex to the Convention on Standards of Training, Certification and Watchkeeping for Seafarers, 1978. Certificates for masters and officers, issued in compliance with this article, shall be endorsed by the issuing Administration in the form prescribed in regulation I/2 of the Annex. (Ref. STCW 1978, article VI)	Superseded by MSC/Circ.946 **Specific** Cabinet Regulation No. 895 adopted 22 November 2005 "Regulations Regarding Certification of Seafarers"

MSC/Circ.593 / Annex / 1 / Document of authorization for the carriage of grain / .5 (MEPC/Circ.257)		MSC/Circ.593 "Listing of certificates and documents required to be carried on board ships" 1 All ships Document of authorization for the carriage of grain .5 A ship without such a document of authorization shall not load grain until the master demonstrates, to the satisfaction of the Administration or the Contracting Government of the port of loading on behalf of the Administration, that the ship will, in its proposed loaded condition, comply with the requirements of chapter VI. (Ref. SOLAS 74/78 regulation VI/10)	**Technical**
MSC/Circ.615 / Annex / Introduction		MSC/Circ.615 "Amendments to the recommendation on testing of Life-saving Appliances (A.689(17))" Introduction Tests for requirements referred to in chapter III, as amended, which are not included in this Recommendation, should be to the satisfaction of the Administration.	**Technical**
MSC/Circ.615 / Annex / Part 1 / 2.5		MSC/Circ.615 "Amendments to the recommendation on testing of Life-saving Appliances (A.689(17))" Part 1 - Prototype test for life-saving appliances 2 LIFEJACKETS 2.5 Tests of materials for covers, tapes and seams The materials used for the cover, tapes, seams and additional equipment should be tested to the satisfaction of the Administration to establish that they are rot-proof, colour-fast and resistant to deterioration from exposure to sunlight and that they are not unduly affected by seawater, oil or fungal attack.	**Technical**
MSC/Circ.615 / Annex / Part 1 / 5.17.13		MSC/Circ.615 "Amendments to the recommendation on testing of Life-saving Appliances (A.689(17))" Part 1 - Prototype test for life-saving appliances 5 LIFERAFTS - RIGID AND INFLATABLE Material tests 5.17.13 The materials used in the construction of inflatable liferafts should be tested for the following characteristics to the satisfaction of the Administration: ...	**Technical**
MSC/Circ.615 / Annex / Part 1 / 6.2.1		MSC/Circ.615 "Amendments to the recommendation on testing of Life-saving Appliances (A.689(17))" Part 1 - Prototype test for life-saving appliances 6 LIFEBOATS 6.2 Lifeboat material tests Material fire-retardancy test	**Technical**

		6.2.1 The hull and canopy material should be flame tested to determine its fire-retarding characteristics by placing a test specimen in a flame. After removal from the flame the burning time and burning distance should be measured and should be to the satisfaction of the Administration.	
MSC/Circ.615 / Annex / Part 1 / 6.4.9		MSC/Circ.615 "Amendments to the recommendation on testing of Life-saving Appliances (A.689(17))" Part 1 - Prototype test for life-saving appliances 6 LIFEBOATS Free-fall lifeboats 6.4.9 This test should be considered successful if the lifeboat passes the operational test to the satisfaction of the Administration and there is no significant damage to it.	**Technical**
MSC/Circ.615 / Annex / Part 1 / 6.17.4.3		MSC/Circ.615 "Amendments to the recommendation on testing of Life-saving Appliances (A.689(17))" Part 1 - Prototype test for life-saving appliances 6 LIFEBOATS 6.17 Additional tests for fire-protected lifeboats Fire test 6.17.4 During the fire test, the temperature should be measured and recorded as a minimum at the following locations: .1 at not less than 10 positions on the inside surface of the lifeboat; .2 at not less than five positions inside the lifeboat at locations normally taken by occupants and away from the inside surface; and .3 on the external surface of the lifeboat. The positions of such temperature recorders should be to the satisfaction of the Administration. The method of temperature measurement should allow the maximum temperature to be recorded	**Technical**
MSC/Circ.615 / Annex / Part 1 / 6.18.5		MSC/Circ.615 "Amendments to the recommendation on testing of Life-saving Appliances (A.689(17))" Part 1 - Prototype test for life-saving appliances 6 LIFEBOATS 6.18 Measuring and evaluating acceleration forces Selection, placement and mounting of accelerometers 6.18.5 The selection, placement, and mounting of the accelerometers should be to the satisfaction of the Administration.	**Technical**

MSC/Circ.615 / Annex / Part 1 / 7.2.17		MSC/Circ.615 "Amendments to the recommendation on testing of Life-saving Appliances (A.689(17))" Part 1 - Prototype test for life-saving appliances 7 RESCUE BOATS 7.2 Inflated rescue boats Material tests 7.2.17 The material used in the construction of inflated rescue boats should be tested for the following characteristics to the satisfaction of the Administration: ...	**Technical**
MSC/Circ.615 / Annex / Part 1 / 7.3.9		MSC/Circ.615 "Amendments to the recommendation on testing of Life-saving Appliances (A.689(17))" Part 1 - Prototype test for life-saving appliances 7 RESCUE BOATS ... Cold start test 7.3.9 Where, in the opinion of the Administration, having regard to the particular voyages in which the ship carrying the boat is constantly engaged, a lower temperature is appropriate, that lower temperature should be substituted for -15°C in 7.3.8 for the cold start test.	**Technical**
MSC/Circ.615 / Annex / Part 1 / 8.2.10.4		MSC/Circ.615 "Amendments to the recommendation on testing of Life-saving Appliances (A.689(17))" Part 1 - Prototype test for life-saving appliances 8 LAUNCHING AND EMBARKATION APPLIANCES 8.2 Davit-launched liferaft automatic release hook test 8.2.10 The manual release force should be determined as follows: ... .4 the manual release force for a mass of 150 kg on the hook should be at least 600 N for lanyard-operated designs. Alternative designs should be demonstrated to the satisfaction of the Administration to provide adequate protection from inadvertent release under load.	**Technical**
MSC/Circ.644 / Annex / Appendix 3		MSC/Circ.644 "Explanatory notes to the interim standards for ship manoeuvrability" Appendix 3 –Stopping ability of very large ships It is stated in the Interim standards for ship manoeuvrability that the track reach in the full astern stopping test may be modified from 15 ship lengths, at the discretion of the Administration, where ship size and form make the criterion impracticable. The following example and information given in tables A3-1, 2 and 3	**Technical**

		indicate that the discretion of the Administration is only likely to be required in the case of large tankers.	
MSC/Circ.645 / Annex / 1.4		MSC/Circ.645 "Guidelines for vessels with dynamic positioning systems" 1.4 Exemptions An Administration may exempt any vessel which embodies features of a novel kind from any provisions of the guidelines the application of which might impede research into the development of such features. Any such vessels should, however, comply with safety requirements which, in the opinion of the Administration, are adequate for the service intended and are such as to ensure the overall safety of the vessel.	**Specific** Case by case assessment
MSC/Circ.645 / Annex / 2.2.2		MSC/Circ.645 "Guidelines for vessels with dynamic positioning systems" 2 EQUIPMENT CLASSES 2.2 The equipment classes are defined by their worst case failure modes as follows: .2 For equipment class 2, a loss of position is not to occur in the event of a single fault in any active component or system. Normally static components will not be considered to fail where adequate protection from damage is demonstrated, and reliability is to the satisfaction of the Administration. Single failure criteria include: ...	**Indefinite**
MSC/Circ.645 / Annex / 3.1.3		MSC/Circ.645 "Guidelines for vessels with dynamic positioning systems" 3 FUNCTIONAL REQUIREMENTS 3.1 General 3.1.3 For equipment class 3, full redundancy may not always be possible (e.g., there may be a need for a single change-over system from the main computer system to the back-up computer system). Non-redundant connections between otherwise redundant and separated systems may be accepted provided that it is documented to give clear safety advantages, and that their reliability can be demonstrated and documented to the satisfaction of the Administration. Such connections should be kept to the absolute minimum and made to fail to the safest condition. Failure in one system should in no case be transferred to the other redundant system.	**Indefinite**
MSC/Circ.645 / Annex / 3.2.6		MSC/Circ.645 "Guidelines for vessels with dynamic positioning systems"	**Indefinite**

		3 FUNCTIONAL REQUIREMENTS 3.2 Power system 3.2.6 If a power management system is installed, adequate redundancy or reliability to the satisfaction of the Administration should be demonstrated.	
MSC/Circ.653 / Annex / 4		MSC/Circ.653 "Simplified tonnage calculation for existing ships which do not have their gross tonnage determined in accordance with the 1969 Tonnage Convention" 4 As the above simplified formula shows good results only for normal cargo ships, special types of ships (e.g. car carriers, passenger ships, etc.) that have large superstructures/erections should be considered individually at the discretion of the Administration.	**Specific** Case by case assessment
MSC/Circ.668 / Annex / 10		MSC/Circ.668 "Alternative arrangements for Halon fire-extinguishing systems in machinery spaces and pump-rooms" Definitions 10 he system should be capable of fire extinction, and tested to the satisfaction of the Administration in accordance with Appendix B to these guidelines.	**Technical**
MSC/Circ.668 / Annex / 13		MSC/Circ.668 "Alternative arrangements for Halon fire-extinguishing systems in machinery spaces and pump-rooms" Definitions 13 The system and its components should be designed and installed in accordance with international standards acceptable to the Organization and manufactured and tested to the satisfaction of the Administration in accordance with appropriate elements of Appendices A and B to these guidelines.	**Technical**
MSC/Circ.670 / Annex / 3.3.2(b) Note		MSC/Circ.670 "Guidelines for the performance and testing criteria and surveys of high-expansion foam concentrates for fixed fire-extinguishing systems" 3.3 Sedimentation 3.3.2 The test should be carried out as follows: (b) Procedure: Centrifuge each sample for 10 min. Determine the volume of the sediment and determine the percentage of this volume with respect to the centrifuged sample volume. Wash the contents of the centrifuge tube onto the sieve and check that the sediment can or cannot be dispersed through the sieve by the jet from the plastic wash bottle. NOTE: It is possible that the test method is not suitable for some non-Newtonian foam concentrates. In this case an alternative	**Technical**

		method, to the satisfaction of the Administration, should be used so that compliance with this requirement can be verified.	
MSC/Circ.670 / Annex / 3.4.2		MSC/Circ.670 "Guidelines for the performance and testing criteria and surveys of high-expansion foam concentrates for fixed fire-extinguishing systems" 3.4 Kinematic viscosity 3.4.2 The method for determining viscosity of non-Newtonian foam concentrates should be to the satisfaction of the Administration.	**Technical**
MSC/Circ.677 / 3.2.1		MSC/Circ.677 "Revised standards for the design, testing and locating of devices to prevent the passage of flame into cargo tanks in tankers" 3.2 Test procedures for flame arresters located at openings to the atmosphere 3.2.1 The test rig should consist of an apparatus producing an explosive mixture, a small tank with a diaphragm, a flanged prototype of the flame arrester, a plastic bag and a firing source in three positions. Other test rigs may be used, provided the tests referred to in this section are achieved to the satisfaction of the Administration.	**Technical**
MSC/Circ.677 / 3.3.1		MSC/Circ.677 "Revised standards for the design, testing and locating of devices to prevent the passage of flame into cargo tanks in tankers" 3.3 Test procedures for high velocity vents 3.3.1 The test rig should be capable of producing the required volume flow rate. In appendices 2 and 3, drawings of suitable test rigs are shown. Other test rigs may be used, provided the tests are achieved to the satisfaction of the Administration.	**Technical**
MSC/Circ.677 / 3.4.3		MSC/Circ.677 "Revised standards for the design, testing and locating of devices to prevent the passage of flame into cargo tanks in tankers" 3.4 Test rig and test procedures for detonation flame arresters located in-line 3.4.3 A drawing of the test rig is shown in appendix 4. Other test rigs may be used provided the tests are achieved to the satisfaction of the Administration.	**Technical**
MSC/Circ.677 / 3.5.1		MSC/Circ.677 "Revised standards for the design, testing and locating of devices to prevent the passage of flame into cargo tanks in tankers" 3.5 Operational test procedures	**Technical**

		3.5.1 A corrosion test should be carried out. In this test a complete device, including a section of the pipe to which it is fitted, should be exposed to a 5% sodium chloride solution spray at a temperature of 25 degrees C for a period of 240 hours, and allowed to dry for 48 hours. An equivalent test may be used to the satisfaction of the Administration. Following this test, all movable parts should operate properly and there should be no corrosion deposits which cannot be washed off.	
MSC/Circ.710 / 5		MSC/Circ.710 "Model agreement for the authorization of recognized organizations acting on behalf of the Administration" 5 The model agreement together with its appendices is considered to meet the minimum standard for a formal written agreement as set forth in A.739(18). This minimum standard, at the discretion of the Administration, may be supplemented by additional matters and/or may be formulated in more detail. As guidance for Administrations wishing to avail themselves of this option, additional and/or alternative provisions are set out in the attachment to this Circular. It contains guidance for alternative and/or more detailed provisions in areas such as information and liaison, supervision, and other conditions, and as such provides additional guidance to the Administration when developing the contents of appendix 1 on applicable instruments and the degree of delegation and appendix 2 on reporting to the Administration.	Superseded by MSC-MEPC.5/Circ.16 **Specific** Case by case assessment
MSC/Circ.732 / Annex / 3.2		MSC/Circ.732 "Interim guidelines on the test procedure for demonstrating the equivalence of composite materials to steel under the provisions of the 1974 SOLAS Convention" 3 The following definitions apply for the purpose of these guidelines: .2 "Composite strength" means the tension, compression, bending, shear and torsion ultimate strength at each temperature multiplied by a safety factor assigned to the satisfaction of the Administration (e.g. 0.8) (see figure 1).	**Technical**
MSC/Circ.748 / Annex / 8		MSC/Circ.748 "Implementation of the global maritime distress and safety system (GMDSS)" Phased installation of the GMDSS 8 Shipowners and ship operators are reminded that in accordance with SOLAS regulation IV/16 - Every ship shall carry personnel qualified for distress and safety radiocommunication purposes to the satisfaction of the Administration. These personnel shall be holders of certificates specified in the Radio Regulations as appropriate, any one of whom shall be designated to have	**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

		primary responsibility for radiocommunications during distress incidents.	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.
MSC/Circ.776 / Annex / 8		MSC/Circ.776 "Guidelines for the approval of equivalent fixed gas fire-extinguishing systems, as referred to in SOLAS 74, for machinery spaces and cargo pump-rooms" Principal requirements 8 The system and its components should be designed and installed in accordance with international standards acceptable to the Organization and manufactured and tested to the satisfaction of the Administration. As a minimum, the design and installation standards should cover the following elements: ...	**Technical**
MSC/Circ.776 / Annex / 11		MSC/Circ.776 "Guidelines for the approval of equivalent fixed gas fire-extinguishing systems, as referred to in SOLAS 74, for machinery spaces and cargo pump-rooms" Principal requirements 11 Agent containers may be stored within a protected machinery space if the containers are distributed throughout the space and the provisions of SOLAS regulation II-2/5.3.3 are met. The arrangement of containers and electrical circuits and piping essential for the release of any system should be such that in the event of damage to any one power release line through fire or explosion in the protected space, i.e. a single fault concept, at least five-sixths of the fire- extinguishing charge as required by paragraph 5 of this annex can still be discharged having regard to the requirement for uniform distribution of medium throughout the space. The arrangements in respect of systems for spaces	**Technical**

		requiring less than 6 containers should be to the satisfaction of the Administration.	
MSC/Circ.798 / Annex / 3.3.2 Note		MSC/Circ.798 "Guidelines for performance and testing criteria and surveys of medium-expansion concentrates for fire-extinguishing systems" 3.3 Sedimentation .2 Procedure: Centrifuge each sample for 10 minutes. Determine the volume of the sediment and determine the percentage of this volume with respect to the centrifuged sample volume. Wash the contents of the centrifuge tube onto the sieve and check that the sediment can or cannot be dispersed through the sieve by the jet from the plastic wash bottle. NOTE: It is possible that the test method is not suitable for some non-Newtonian foam concentrates. In this case an alternative method, to the satisfaction of the Administration, should be used so that compliance with this requirement can be verified.	**Technical**
MSC/Circ.798 / Annex / 3.4.2		MSC/Circ.798 "Guidelines for performance and testing criteria and surveys of medium-expansion concentrates for fire-extinguishing systems" 3.4 Kinematic viscosity 3.4.2 The method for determining viscosity of non-Newtonian foam concentrates should be to the satisfaction of the Administration.	**Technical**
MSC/Circ.848 / Annex / 8.		MSC/Circ.848 "Revised guidelines for the approval of equivalent fixed gas fire-extinguishing systems, as referred to in SOLAS 74, for machinery spaces and cargo pump-rooms" 8. The system and its components should be designed and installed in accordance with international standards acceptable to the Organization and manufactured and tested to the satisfaction of the Administration. As a minimum, the design and installation standards should cover the following elements:	**Technical**
MSC/Circ.848 / Annex / 11.		MSC/Circ.848 "Revised guidelines for the approval of equivalent fixed gas fire-extinguishing systems, as referred to in SOLAS 74, for machinery spaces and cargo pump-rooms" 11. Agent containers may be stored within a protected machinery space if the containers are distributed throughout the space and the provisions of SOLAS regulation II-2/5.3.3 are met. The arrangement of containers and electrical circuits and piping essential for the release of any system should be such that in single fault concept, at least five-sixths of the fire-extinguishing	**Technical**

		charge as required by paragraph 5 of this annex can still be discharged having regard to the requirement for uniform distribution of medium throughout the space. The arrangements in respect of systems for spaces requiring less than 6 containers should be to the satisfaction of the Administration.	
MSC/Circ.891 / Annex / 7.1		MSC/Circ.891 "Guidelines for the on-board use and application of computers" 7 Testing 7.1 Evidence should be furnished to the satisfaction of the Administration that the installed computer-based systems have been designed, manufactured and tested in accordance with these Guidelines. In the case of any integrated systems such evidence should be furnished by a single party responsible for the integration.	**Technical**
MSC/Circ.920 / Annex / 4.1		MSC/Circ.920 "Model loading and stability manual" Section 4 - Reference information (Category 3) 4.1 Inclining experiment report The inclining test report presented in this subsection should be detailed to the satisfaction of the Administration.	**Technical**
MSC/Circ.946 / Annex / 1 (MEPC/Circ.368)		MSC/Circ.946 "Revised list of certificates and documents required to be carried on board ships" 1 All ships Certificates for masters, officers or ratings Certificates for masters, officers or ratings shall be issued to those candidates who, to the satisfaction of the Administration, meet the requirements for service, age, medical fitness, training, qualifications and examinations in accordance with the provisions of the STCW Code annexed to the Convention on Standards of Training, Certification and Watchkeeping for Seafarers, 1978. Formats of certificates are given in section A-I/2 of the STCW Code. Certificates must be kept available in their original form on board the ships on which the holder is serving.	Superseded by MSC/Circ.1151-FAL.2/Circ.87-MEPC/Circ.426 **Specific** Cabinet Regulation No. 895 adopted 22 November 2005 "Regulations Regarding Certification of Seafarers"
MSC/Circ.981 / Annex / 1.5.1.3		MSC/Circ.981 "Guidelines for the design, construction and operation of passenger submersible craft" Chapter 1 – General 1.5 Surveys 1.5.1 Each passenger submersible craft should be subject to the surveys specified below: ...	**Indefinite**

		1.5.1.3 A dry-docking survey at intervals specified by the Administration, but not exceeding three years, which should be a complete and thorough examination of the passenger submersible craft, equipment, fittings, arrangements and materials and should ensure full compliance with the applicable provisions of the Guidelines. Additional dry-docking(s) may be required at the discretion of the Administration subject to accessibility of underwater components during annual surveys.	
MSC/Circ.981 / Annex / 1.6.2.4		MSC/Circ.981 "Guidelines for the design, construction and operation of passenger submersible craft" Chapter 1 – General 1.6.2 Safety Compliance Certificate 1.6.2.4 The Safety Compliance Certificate should be issued for a period not exceeding one year. An extension of the validity of the Certificate may be granted for a maximum period of three months at the discretion of the Administration.	**Indefinite**
MSC/Circ.981 / Annex / 2.2.1		MSC/Circ.981 "Guidelines for the design, construction and operation of passenger submersible craft" Chapter 2 – Design and construction 2.2 Pressure boundary 2.2.1 Pressure hull structural requirements All materials used in the pressure hull, all welding materials and procedures, the design criteria, permissible stresses and all test procedures should comply with the requirements of a recognized organization to the satisfaction of the Administration.	**Indefinite**
MSC/Circ.981 / Annex / 2.2.3.1		MSC/Circ.981 "Guidelines for the design, construction and operation of passenger submersible craft" Chapter 2 – Design and construction 2.2 Pressure boundary 2.2.3 Viewports 2.2.3.1 Viewports should be of acrylic material and in accordance with the requirements of a recognized organization to the satisfaction of the Administration. Viewports may be of other material, as appropriate, provided viewports of such material are at least as effective and in accordance with the requirements of a recognized organization to the satisfaction of the Administration.	**Indefinite**
MSC/Circ.981 / Annex / 2.2.4.1		MSC/Circ.981 "Guidelines for the design, construction and operation of passenger submersible craft" Chapter 2 – Design and construction 2.2 Pressure boundary 2.2.4 Pressure containers	**Indefinite**

		2.2.4.1 The material of pressure containers should comply with the standards of a recognized organization to the satisfaction of the Administration.	
MSC/Circ.981 / Annex / 2.4		MSC/Circ.981 "Guidelines for the design, construction and operation of passenger submersible craft" Chapter 2 – Design and construction 2.4 Systems Systems should be designed, installed and tested in accordance with the requirements of a recognized organization to the satisfaction of the Administration.	**Indefinite**
MSC/Circ.981 / Annex / 2.6.1		MSC/Circ.981 "Guidelines for the design, construction and operation of passenger submersible craft" Chapter 2 – Design and construction 2.6 Buoyancy, stability and emergency ascent 2.6.1 Passenger submersible craft should be able to ascend/descend in a safe and controlled manner throughout the craft's rated depth of operations to the satisfaction of the Administration.	**Indefinite**
MSC/Circ.1006 / Annex / 3.1		MSC/Circ.1006 "Guidelines on fire test procedures for acceptance of fire-retardant materials for the construction of lifeboats" Fire-retardant test 3.1 Conditioning of specimens Before the test, the specimens should be conditioned in sunlight to 300 MJ/m² (below 385 nm) of natural UV radiation exposure of outdoor weathering or acceptable equivalent accelerated artificial weathering exposure to the satisfaction of the Administration. Both natural and artificial exposures should include elevated temperatures of at least 30°C for substantial periods of the exposure and 20 % wet time.	**Technical**
MSC/Circ.1120 / Annex / Part C / Reg.10.7.2		MSC/Circ.1120 "Unified interpretations of SOLAS Chapter II-2, the FSS code, the FTP code and related fire test procedures" SOLAS Chapter II-2 Regulation 10.7.2 Ships carrying dangerous goods on deck only Any cargo space in a ship engaged in the carriage of dangerous goods on deck or in cargo spaces should be provided with a fixed gas fire-extinguishing system complying with the provisions of the FSS Code or with a fire-extinguishing system which, in the opinion of the Administration, gives equivalent protection for the cargoes carried.	**Technical**

MSC/Circ.1053 / Annex / Appendix 3 / 1		MSC/Circ.1053 "Explanatory notes to the standards for ship manoeuvrability" Appendix 3 Stopping ability of very large ships 1 It is stated in the Standards for ship manoeuvrability that the track reach in the full astern stopping test may be modified from 15 ship lengths, at the discretion of the Administration, where ship size and form make the criterion impracticable. The following example and information given in tables A3-1, 2 and 3 indicate that the discretion of the Administration is only likely to be required in the case of large tankers.	**Technical**
MSC/Circ.1054 / Annex / 6.1.4.2.6		MSC/Circ.1054 "Interim guidelines for wing-in-ground (WIG) craft" Chapter 6 – Fire safety 6.1.4.2 Fuel system 6.1.4.2.6 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 should 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 should comply, in addition to the provisions of 6.1.4.2.1 to 6.1.4.2.5, with the following provisions: .1 any part of the fuel system should be located outside the main body of the craft or arranged in such a way that fuel vapour cannot accumulate in enclosed spaces; .2 arrangements should be made to prevent overpressure in any fuel tank or in any part of the oil fuel system, including the filling pipes. Any relief valves and air or overflow pipes should discharge to a position which, in the opinion of the Administration, is safe;	Revoked by MSC.1/Circ.1592 **Indefinite**
MSC/Circ.1054 / Annex / 6.1.5.2.3.2		MSC/Circ.1054 "Interim guidelines for wing-in-ground (WIG) craft" Chapter 6 – Fire safety 6.1.5.2.3 Design provisions ... .2 Smoke detectors, referred to in paragraph 6.1.5.2.2.2 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.	Revoked by MSC.1/Circ.1592 **Indefinite**

MSC/Circ.1054 / Annex / 6.1.5.2.3.4		MSC/Circ.1054 "Interim guidelines for wing-in-ground (WIG) craft" Chapter 6 – Fire safety 6.1.5.2.3 Design provisions ... .4 At the discretion of the Administration, the permissible temperature of operation of heat detectors may be increased to 30°C above the maximum deckhead temperature in drying rooms and similar spaces of a normal high ambient temperature.	Revoked by MSC.1/Circ.1592 **Indefinite**
MSC/Circ.1054 / Annex / 6.1.6.3.1.1		MSC/Circ.1054 "Interim guidelines for wing-in-ground (WIG) craft" Chapter 6 – Fire safety 6.1.6.3 Gas fire-extinguishing systems 6.1.6.3.1 General provisions The fixed fire-extinguishing systems should comply with the following provisions: ... .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. ...	Revoked by MSC.1/Circ.1592 **Indefinite**
MSC/Circ.1054 / Annex / 6.1.6.3.1.12		MSC/Circ.1054 "Interim guidelines for wing-in-ground (WIG) craft" Chapter 6 – Fire safety 6.1.6.3 Gas fire-extinguishing systems 6.1.6.3.1 General provisions The fixed fire-extinguishing systems should comply with the following provisions: ... .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. ...	Revoked by MSC.1/Circ.1592 **Indefinite**
MSC/Circ.1054 / Annex / 7.1.3.2		MSC/Circ.1054 "Interim guidelines for wing-in-ground (WIG) craft" Chapter 7 – Life-saving appliances and arrangements 7.1 General and definitions	Revoked by MSC.1/Circ.1592 **Indefinite**

		7.1.3 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.	
MSC/Circ.1054 / Annex / 7.1.4.2		MSC/Circ.1054 "Interim guidelines for wing-in-ground (WIG) craft" Chapter 7 – Life-saving appliances and arrangements 7.1 General and definitions 7.1.4 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.	Revoked by MSC.1/Circ.1592 **Technical**
MSC/Circ.1054 / Annex / 7.1.6		MSC/Circ.1054 "Interim guidelines for wing-in-ground (WIG) craft" Chapter 7 – Life-saving appliances and arrangements 7.1 General and definitions 7.1.6 Except where otherwise provided in these Interim Guidelines, life-saving appliances required by this chapter for which detailed specifications are not included in the LSA Code should be to the satisfaction of the Administration.	Revoked by MSC.1/Circ.1592 **Indefinite**
MSC/Circ.1054 / Annex / 7.3.5		MSC/Circ.1054 "Interim guidelines for wing-in-ground (WIG) craft" Chapter 7 – Life-saving appliances and arrangements 7.3 Personal life-saving appliances 7.3.5 An immersion suit or anti-exposure suit should be provided for each member of the crew assigned, in the muster list, to 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.	Revoked by MSC.1/Circ.1592 **Specific** Case by case assessment
MSC/Circ.1054 / Annex / 9.2.4.9		MSC/Circ.1054 "Interim guidelines for wing-in-ground (WIG) craft" Chapter 9 – Auxiliary systems	Revoked by MSC.1/Circ.1592 **Indefinite**

		9.2 Arrangement of oil fuel, lubricating oil and other flammable oil 9.2.4.9 Subject to 9.2.4.10, 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.	
MSC/Circ.1054 / Annex / 11.2.8		MSC/Circ.1054 "Interim guidelines for wing-in-ground (WIG) craft" Chapter 11 – Electrical installations 11.2 Main source of electrical power 11.2.8 The connection of generating sets and any other duplicated equipment should be equally divided between the two switchboards. The generators should operate in single operation. Equivalent arrangements may be permitted to the satisfaction of the Administration.	Revoked by MSC.1/Circ.1592 **Indefinite**
MSC/Circ.1054 / Annex / 11.6.2		MSC/Circ.1054 "Interim guidelines for wing-in-ground (WIG) craft" Chapter 11 – Electrical installations 11.6 Precautions against shock, fire and other hazards of electrical origin 11.6.2 Main and emergency switchboards should 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 should be suitably guarded. Exposed live parts having voltages to earth exceeding a voltage to be specified by the Administration should not be installed on the front of such switchboards. Where necessary, non-conducting mats or gratings should be provided at the front and rear of the switchboard.	Revoked by MSC.1/Circ.1592 **Indefinite**
MSC/Circ.1054 / Annex / 11.6.4.4		MSC/Circ.1054 "Interim guidelines for wing-in-ground (WIG) craft" Chapter 11 – Electrical installations 11.6 Precautions against shock, fire and other hazards of electrical origin 11.6.4 Cables and wiring 11.6.4.4 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 should be taken to the satisfaction of the Administration.	Revoked by MSC.1/Circ.1592 **Indefinite**

MSC/Circ.1054 / Annex / 12.1.2		MSC/Circ.1054 "Interim guidelines for wing-in-ground (WIG) craft" Chapter 12 – Navigational equipment 12.1 Navigation (general) 12.1.2 The navigational equipment and its installation should be to the satisfaction of the Administration.	Revoked by MSC.1/Circ.1592 **Indefinite**
MSC/Circ.1054 / Annex / 17.3.1		MSC/Circ.1054 "Interim guidelines for wing-in-ground (WIG) craft" Chapter 17 – Operational provisions 17.3 Training and qualifications 17.3.1 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.	Revoked by MSC.1/Circ.1592 **Indefinite** Cabinet Regulation No. 895 adopted 22 November 2005 "Regulations Regarding Certification of Seafarers"
MSC/Circ.1054 / Annex / 18.1		MSC/Circ.1054 "Interim guidelines for wing-in-ground (WIG) craft" Chapter 18 – Inspection and maintenance provisions 18.1 The inspection and maintenance measures implemented on a craft should be to the satisfaction of the Administration. These measures may be carried out directly by the operator's organization or by any organization on which the operator may call in the maintenance of the craft and should specify the scope of the duties which any part of the organization may carry out, having regard to the number and competence of its staff, facilities available, arrangements for calling on specialist assistance should it be necessary, record-keeping, communication and allocation of responsibilities.	Revoked by MSC.1/Circ.1592 **Indefinite**
MSC/Circ.1054 / Annex / 18.2		MSC/Circ.1054 "Interim guidelines for wing-in-ground (WIG) craft" Chapter 18 – Inspection and maintenance provisions 18.2 The craft and equipment should be maintained to the satisfaction of the Administration, in particular: ...	Revoked by MSC.1/Circ.1592 **Indefinite**
MSC/Circ.1054 / Annex / 18.2.3		MSC/Circ.1054 "Interim guidelines for wing-in-ground (WIG) craft" Chapter 18 – Inspection and maintenance provisions	Revoked by MSC.1/Circ.1592 **Indefinite**

		18.2 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. If appropriate, the effect of a modification should be assessed in accordance with part C and the Administration may require that its safety be demonstrated through trials; ...	
MSC/Circ.1057 / Annex / 8.9.1.2		MSC/Circ.1057 "Proposed amendments to update the DSC Code and the 1994 HSC Code" Chapter 8 8.9.1 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**
MSC/Circ.1057 / Annex / 13.4.2		MSC/Circ.1057 "Proposed amendments to update the DSC Code and the 1994 HSC Code" Chapter 13 13.4.2 The navigational equipment and its installation should be to the satisfaction of the Administration. The Administration should determine to what extent the navigational equipment provisions of this chapter do not apply to craft below 150 gross tonnage.	**Technical**
MSC/Circ.1097 / Annex / 10.2		MSC/Circ.1097 "Guidance relating to the implementation of SOLAS Chapter XI-2 and the ISPS Code" Issue of the International Ship Security Certificate 10 The Committee concluded that a Certificate should only be issued: .1 when the ship has an approved ship security plan (SSSP); and .2 there was objective evidence to the satisfaction of the Administration that the ship is operating in accordance with the provisions of the approved plan.	**Specific** European Parliament and Council Regulation No. 725/2004 on enhancing ship and port facility security
MSC/Circ.1151 / Annex / 1 All ships /		MSC/Circ.1151 "Revised list of certificates and documents required to be carried on board ships" Certificates for masters, officers or ratings	Superseded by FAL.2/Circ.123-MEPC/Circ.769-MSC/Circ.1409 **Specific**

Certificates for masters, officers or ratings		Certificates for masters, officers or ratings shall be issued to those candidates who, to the satisfaction of the Administration, meet the requirements for service, age, medical fitness, training, qualifications and examinations in accordance with the provisions of the STCW Code annexed to the International Convention on Standards of Training, Certification and Watchkeeping for Seafarers, 1978. Formats of certificates are given in section A-I/2 of the STCW Code. Certificates must be kept available in their original form on board the ships on which the holder is serving.	Cabinet Regulation No. 895 adopted 22 November 2005 "Regulations Regarding Certification of Seafarers"
MSC/Circ.1151 / Annex / 1 All ships / Fire Control plan/booklet		MSC/Circ.1151 "Revised list of certificates and documents required to be carried on board ships" Fire Control plan/booklet 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 together with particulars of the fire detection and fire alarm systems and the fire-extinguishing appliances etc. 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 shall be recorded as soon as practicable. A duplicate set of fire control plans or a booklet containing such plans shall be permanently stored in a prominently marked weathertight enclosure outside the deckhouse for the assistance of shore-side fire-fighting personnel.	Superseded by FAL.2/Circ.123-MEPC/Circ.769-MSC/Circ.1409 **Technical**
MSC/Circ.1151 / Annex / 3 Caro ships / Dedicated Clean Ballast Tank Operation Manual		MSC/Circ.1151 "Revised list of certificates and documents required to be carried on board ships" Dedicated Clean Ballast Tank Operation Manual Every oil tanker operating with dedicated clean ballast tanks in accordance with the provisions of regulation 13(10) of Annex I of MARPOL 73/78 shall be provided with a Dedicated Clean Ballast Tank Operation Manual detailing the system and specifying operational procedures. Such a Manual shall be to the satisfaction of the Administration and shall contain all the information set out in the Specifications referred to in paragraph 2 of regulation 13A of Annex I of MARPOL 73/78.	Superseded by FAL.2/Circ.123-MEPC/Circ.769-MSC/Circ.1409 **Technical**
MSC/Circ.1151 / Annex / 3 Cargo ships / COW Manual		MSC/Circ.1151 "Revised list of certificates and documents required to be carried on board ships" Crude Oil Washing Operation and Equipment Manual (COW Manual)	Superseded by FAL.2/Circ.123-MEPC/Circ.769-MSC/Circ.1409 **Technical**

		Every oil tanker operating with crude oil washing systems shall be provided with an Operations and Equipment Manual detailing the system and equipment and specifying operational procedures. Such a Manual shall be to the satisfaction of the Administration and shall contain all the information set out in the specifications referred to in paragraph 2 of regulation 13B of Annex I of MARPOL 73/78.	
MSC/Circ.1160 / Annex / 6.3.6		MSC/Circ.1160 "Manual on loading and unloading of solid bulk cargoes for terminal representatives" Section 6 - Unloading cargo and handling of ballast 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.	**Technical**
MSC/Circ.1162 / Annex / 2.2		MSC/Circ.1162 "General principles and recommendations for knowledge, skills and training for officers on wing-in-ground (WIG) craft operating in both displacement and ground effect modes" 2 General principles, recommendations and requirements for qualification of officers on Wing-In-Ground (WIG) craft ... .2 In addition to the base qualification, officers on a WIG craft should undertake training and have demonstrated appropriate knowledge and skills in accordance with these Recommendations, to the satisfaction of the Administration or a body authorized to act on behalf of the Administration. ...	**Indefinite** Cabinet Regulation No. 895 adopted 22 November 2005 "Regulations Regarding Certification of Seafarers"
MSC/Circ.1165 / Annex / 11		MSC/Circ.1165 "Revised guidelines for the approval of equivalent water-based fire-extinguishing systems for machinery spaces and cargo pump-rooms"	**Technical**

		11 The system should be capable of fire extinction, and tested to the satisfaction of the Administration in accordance with appendix B to these Guidelines.	
MSC/Circ.1165 / Annex / 14		MSC/Circ.1165 "Revised guidelines for the approval of equivalent water-based fire-extinguishing systems for machinery spaces and cargo pump-rooms" 14 The system and its components should be designed and installed in accordance with international standards acceptable to the Organization and manufactured and tested to the satisfaction of the Administration in accordance with appropriate elements of appendices A and B to these guidelines.	**Technical**
MSC.1/Circ.1200 / Annex / 2.3		MSC.1/Circ.1165 "Interim guidelines for alternative assessment of the weather criterion" 2 Application 2.3 The 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 paragraph 3.2.2.2 of the Code. When such alternative tests are carried out, reference should be made to the relevant part of the Guidelines. The wind speed used in the tests should be 26 m/s in full scale with uniform velocity profile. The value of wind speed used for ships in restricted services may be reduced to the satisfaction of the Administration.	**Technical**
MSC.1/Circ.1200 / Annex / 3.3.2.2		MSC.1/Circ.1165 "Interim guidelines for alternative assessment of the weather criterion" 3.3 Wind tests 3.3.2 Complete test procedure The lateral horizontal force F_{wind} (and corresponding drag coefficient C_D) and the heeling moment due to wind M_{wind} with respect to O are obtained by a wind tunnel test or in wind from a blower. In calculating C_D according to equation (3.1.4), the actual value of air density during tests should be used. An example of model test arrangement is shown in figure 3.3.1. Model tests should be carried out in compliance with the following: ... .2 Tests should be carried out in upright condition and at some heeling angles with appropriate increment to lee and wind side covering a sufficient range of heeling angles to the satisfaction of the Administration.	**Technical**
MSC.1/Circ.1200 / Annex / 3.4.1.4		MSC.1/Circ.1165 "Interim guidelines for alternative assessment of the weather criterion" 3.4 Drifting tests	**Technical**

		The heeling moment M_{water} due to drift with respect to O is obtained by means of towing tank tests. An example of experimental set-up is shown in figure 3.4.1. Model tests should be carried out in compliance with the following: ... .4 tests should be carried out in upright condition, and at some heeling angles with appropriate increment to lee and wind side covering a sufficient range of heeling angles to the satisfaction of the Administration.	
MSC.1/Circ.1200 / Annex / 3.6		MSC.1/Circ.1165 "Interim guidelines for alternative assessment of the weather criterion" 3.6 Additional considerations The steady wind heeling lever, l_{w1}, is evaluated by means of equation (3.1.3). When extrapolation is needed outside the tested range of heeling angles, such extrapolation should be carried out to the satisfaction of the Administration.	**Technical**
MSC.1/Circ.1200 / Annex / 3.6		MSC.1/Circ.1165 "Interim guidelines for alternative assessment of the weather criterion" 4.2 Model basin The facilities of the model basin should be such as to avoid wave reflections and shallow water effects. The breadth of the basin should be larger than the over all length of the model plus 2 m. The quality of the basin should be subject to the satisfaction of the Administration.	**Technical**
MSC.1/Circ.1200 / Annex / 4.6.1.2.1		MSC.1/Circ.1165 "Interim guidelines for alternative assessment of the weather criterion" 4.6 Alternative procedures 4.6.1.2 Determination of Φ_{1r} 4.6.1.2.1 First step ... Alternatively a numerical calculation with unsteady boundary layer can be used to the satisfaction of the Administration. ... The former requires measurement of roll angles and the latter does that of roll moment. The experimental procedure and the subsequent analysis of data should be subject to the satisfaction of the Administration. In order to decide on the suitability of experimental and analysis procedure, as a guide, a reasonable agreement between results from forced roll tests and $N(\phi)$ from roll decay tests, can be considered a good indication.	**Technical**