MINISTRY OF TRANSPORT AND COMMUNICATIONS
DEPARTMENT OF MARINE ADMINISTRATION
No-363/421, Corner of Merchant & Theinbyu Road,
Botataung Township, Yangon, Myanmar

E-mail: dgdma.mm@gmail.com; dma.myan@gmail.com Tel: 095 -1- 397640

P.O.Box: 194 Fax: 095 -1- 397641

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Directive (5/2016)

Guidance for "National Standard of Satisfaction" relating to the Items Concerned with SOLAS, Chapter II-1 and II-2

Applicable to: Ship owners, Recognized Organizations, Shipping Companies, Flag State Surveyors

1. The Department of Marine Administration circulated this directive in the exercise of the power of Section 294(B), paragraph (b) of Myanmar Merchant Shipping Act.

2. Pursuant to the provision of Section 213(A) of Myanmar Merchant Shipping Act, the Department of Marine Administration provided this national guidance for "National Standard of Satisfaction" relating to the items concerned with SOLAS, chapter II-1 and II-2 for the safety of Myanmar ships engaged on international voyages.

3. The purpose of this directive is the Department of Marine Administration shall employ this prepared Guidance as to be national standard, whilst the construction rules of Myanmar ships is being in legislation process.

Maung Maung Oo
Director General
Department of Marine Administration

The Republic of The Union of Myanmar
Ministry of Transport and Communications
Department of Marine Administration

Guidance for "National Standard of Satisfaction" relating to the Items Concern with SOLAS, Chapter II-1

Chapter II-1 **Construction – Structure, subdivision and stability, machinery and electrical installations**	
Part A **General**	
Part A-1 **Structure of ships**	
Reg. 3-2	**Protective coatings of dedicated seawater ballast tanks in all types of ships and double-side skin spaces of bulk carriers** Department of Marine Administration accepts corrosion prevention systems approved by a recognized organization.
Reg. 3-3	**Safe access to tanker bows**
2	In accordance with guidelines for safe access to tanker bows, adopted by the Maritime Safety Committee by resolution MSC.62(67).
Reg. 3-4	**Emergency towing arrangements on tankers** Department of Marine Administration accepts emergency towing arrangements approved by a recognized organization, which is complied with guidelines developed by IMO.MSC.35(63) and MSC.1/Circ.1255.
Reg. 3-5	**New installation of materials containing asbestos** New installation is not accepted.
Reg. 3-6	**Access to and within spaces in, and forward of, the cargo area of oil tankers and bulk carriers**
2.3	**Means of access to cargo and other spaces** Department of Marine Administration accepts construction and materials of all means of access approved by a recognized organization which is complied with the requirements as set in IMO Resolutions MSC. 134(76), MSC.158(78), MSC.151(78).
4.1	**Ship Structure Access Manual** Department of Marine Administration accepts Ship Structure Access Manual approved by a recognized organization.
5.3	**Opening to remove an injured person** Means of access and openings on the oil tankers of more than 500 gross tones and on the bulk carriers of more than 20000 gross tones should comply with requirements as set in IMO Resolutions MSC. 134(76), MSC. 158(78), MSC.151(78).

Reg. 3-8	**Towing and mooring equipment**
3	Department of Marine Administration accepts towing and mooring equipment approved by a recognized organization which is complied with the requirements MSC/Circ.1175.
Reg. 3-9	**Means of embarkation on and disembarkation from ships**
1	In accordance with the circumstances mentioned in MSC.1/Circ.1331.
Reg.3-10	**Goal-based ship construction standards for bulk carriers and oil tankers**
3	Department of Marine Administration accepts structural requirements of a recognized organization which is complied with MSC/Circ.296(87).
Reg.3-12	**Protection against noise**
2	Department of Marine Administration accepts the view of a recognized organization if it is not in conflict with the National Standard for Noise Level onboard ships.
Part B Subdivision and stability	
Reg. 5	**Intact stability information**
2	Department of Marine Administration may allow the inclining test of an individual cargo ship to be dispensed with, provided basic stability data are available from the inclining test based on at least two inclined sister ships. On condition that reliable stability information for the exempted ship can be obtained from such basic data, as required by regulation 5-1. The sister ships shall all be built at the same shipyard.
3	1. To be inclined are: .1 series-built ships as per para 2; .2 every ship of non-series construction: .3 every ship after reconstruction: .4 ships after major repair, alteration or modification; .5 ships after installation of permanent solid ballast; .6 ships whose stability is unknown or gives rise to doubts; .7 passenger ships in service at intervals not exceeding five years; .8 fishing vessels in service (of 30 metres length and less) at intervals not exceeding fifteen years; .2 Out of the series of ships under construction at each shipyard the following ships shall be inclined: the first ship, then every fifth ship of the series. For

	other ships of the series the inclining test may be substituted by the light-weight. However, a series-built ship is to be inclined if structural alterations therein exist compared with the first ship of the series, and these alterations exceed those allowable limits as set in Para 2 of Reg. II-1/5 SOLAS-74 amended by IMO Res. MSC.216(82)
Reg. 5-1.1	**Stability information to be supplied to the master** Stability Information is developed on basis of the following IMO requirements as National Standard of Intact Stability, and MSC/Circ.456, MSC/Circ.706, MSC.1/Circ.1228.
Reg. 7	**Attained subdivision index A**
	When considering the progressive flooding due to submergence of the openings, which lead to undamaged spaces, for the purpose of determination of the probability *s,* the components of ship's damage trim and stability at additional flooding of the appropriate undamaged spaces shall be taken into account.
Reg. 7-2	**Calculation of the factor S_i**
5	Department of Marine Administration accepts the equalization devices and their controls approved by a recognized organization .
Reg. 13	**Openings in watertight bulkheads below the bulkhead deck in passenger ships**
7.1.3	**Power operated sliding watertight door** The power gear of the doors shall have either: a centralized hydraulic system with two independent power sources each consisting of a motor and pump capable of simultaneously closing all doors. In addition, there shall be for the whole installation hydraulic accumulators of sufficient capacity to operate all the doors at least three times, i.e. closed - open - closed; or an independent hydraulic system for each door with each power source consisting of a motor and pump capable of opening and closing the door. In addition, there shall be a hydraulic accumulator of sufficient capacity to operate the door at least three times, i.e. closed - open - closed; or an independent electrical system and motor for each door with each power source consisting of a motor capable of opening and closing the door. The power source shall be capable of being automatically supplied by a transitional emergency source of electrical power, as required by item 3.1 (see below) in the event of failure of either the main or emergency source of electrical power and with sufficient capacity to operate the door at least three times, i.e. closed - open - closed.

	3.1) The capacity of the battery serving as transitional source of electrical power shall be sufficient for supplying the services listed below during 30 min: .1 lighting and necessary navigation lights; .2 internal communication and announcing systems required in an emergency: .3 general alarm system, fire detection and alarm systems, control devices of fire doors and indicators showing the position of fire; .4 daylight signaling lamps, sound signal means (whistles, gongs, etc.) and other types of signals required under emergency conditions: .5 arrangements for closing watertight doors, their position indicators and signals warning of their closing. Sequential closing is permitted. .6 ship's security alarm system and AIS installation. Consumers listed in items 3.1.2-3.1.6 may be supplied from their own batteries with capacity sufficient for service during required time.
9 .2	**Number and arrangements2 of doors and their controls** Department of Marine Administration accepts arrangements approved by a recognized organization.
11.2	**Special considerations for tunnels piercing watertight bulkheads** Department of Marine Administration accepts the construction approved by a recognized organization.
Reg. 15	**Openings in the shell plating below the bulkhead deck of passenger ships and the freeboard deck of cargo ships**
2	For the treatment of steps in the bulkhead deck of passenger ships see Explanatory Notes for regulation II-1/13-1. For the treatment of steps in the freeboard deck of cargo ships see Explanatory Notes for regulation II-1/13-1(Openings in watertight bulkheads and internal decks in cargo ships): 1. If the transverse watertight bulkheads in a region of the ship are carried to a higher deck than in the remainder of the ship, openings located in the bulkhead at the step may be considered as being located above the freeboard deck. All openings in the shell plating below the upper deck throughout that region of the ship should be treated as being below the freeboard deck, similar to the bulkhead deck for passenger ships (see relevant figure under regulation II-1/13 (Openings in watertight bulkheads below the bulkhead deck in

	passenger ships) above), and the provisions of regulation II-1/15(Openings in the shell plating below the bulkhead deck of passenger ships and the freeboard deck of cargo ships) should be applied.
8.5	Department of Marine Administration accepts pipes of steel or other equivalent material approved by a recognized organization.
Reg. 16	**Construction and initial tests of watertight doors, sides cuttles, etc.**
1.1	Department of Marine Administration accepts design, materials and construction of all watertight doors, sides cuttles, gangway and cargo ports, valves, pipes, ash-chutes and rubbish-chutes approved by a recognized organization.
Reg.16-1	**Construction and initial tests of watertight decks, trunks, etc.**
1	Department of Marine Administration accepts construction and initial tests of watertight decks, trunks, etc. approved by a recognized organization.
Reg. 22	**Prevention and control of water ingress, etc.**
4	Through individual decision, Department of Marine Administration may accept a watertight door on passenger ships to remain open during navigation following the requirements in MSC.1/Circ.1380. For Department of Marine Administration to permit a door to remain open during navigation on a cargo ship, the ships survivability after damage with the door open must be demonstrated through a floatability assessment. No specific damage stability criteria need to be complied with, but the ship must remain floating in the final equilibrium. Further no electrical equipment or electrical components necessarily for the operation of the watertight door is allowed to be submerged, unless the enclosure of such electrical components full fills the requirements in SOLAS, chapter II-1, regulation 13.7.6. Application is to be sent to Department of Marine Administration by the RO. Application shall include the floatability assessment referred to above, in addition to the opinion of the RO on the issue.
Part C **Machinery general**	
Important! *Department of Marine Administration require that classification society do not verify or certify any unconventional arrangements which is not covered by the regulation or standards, consultation shall be done with the Department of Marine Administration.*	
Reg. 26	**General**
2, 3 and 6	Recognized Organization complied with the Requirements of MSC.1/ Circ.1467.
4	Recognized Organization complied with the Requirements of MSC/Circ.1176.

11	Recognized Organization complied with the Requirements of MSC/Circ.1176 and MSC.1/Circ.1197.
Reg. 27	**Machinery**
5	Department of Marine Administration permits provisions for overriding automatic shutoff devices if the device prevents unintentional use and there is a visual indication.
Reg. 28	**Means of going astern**
2, 3	Department of Marine Administration requires every single vessel to demonstrate the maneuverability during the sea trial and Recognized Organization complied with the Requirements MSC.1/Circ.1416.
Reg. 29	**Steering gear**
1	For a ship fitted with multiple steering systems, such as but not limited to azimuthing propulsors or water jet propulsion systems, the requirement in SOLAS regulation II-1/29.1 is considered satisfied if each of the steering systems is equipped with its own dedicated steering gear; and Recognized Organization complied with the Requirements of MSC.1/Circ.1416.
2.1	All steering gear components and rudder stock shall be of sound and reliable construction and Associated bearings shall be permanently lubricated or means for lubrication shall be arranged; and Recognized Organization complied with the Requirements of MSC.1/Circ.1416.
2.2	Fatigue criteria shall be applied for design of piping and components, taking into account pulsating pressures due to dynamic loads.
3, 3.2,3.3	The main steering arrangements for ship directional control should be: 1. of adequate strength and capable of steering the ship at maximum ahead service speed which should be demonstrated; 2. capable of changing direction of the ship's directional control system from one side to the other at declared steering angle limits at an average rotational speed of not less than 2.3°/s with the ship running ahead at maximum ahead service speed; 3. for all ships, operated by power; and so designed that they will not be damaged at maximum astern speed; Recognized Organization complied with the Requirements of MSC.1/Circ.1416 and MSC.1/Circ.1425.
4.3	The auxiliary steering arrangements for ship directional control should be: 1. of adequate strength and capable of steering the ship at navigable speed and of being brought speedily into action in an emergency;

	2. capable of changing direction of the ship's directional control system from one side to the other at declared steering angle limits at an average rotational speed, of not less than 0.5°/s; with the ship running ahead at one half of the maximum ahead service speed or 7 knots, whichever is the greater; and 3. for all ships, operated by power where necessary to meet the requirements of 29.4.2 and in any ship having power of more than 2,500 kW propulsion power per thruster unit. The definition of "declared steering angle limits", given under the interpretation of paragraph 3 above, applies.
6.1	Department of Marine Administration accepts decision and applicable rules from a recognized classification society and which is complied with the requirements of MSC.1/Circ.1416 MSC.1/Circ.1398
6.2	Department of Marine Administration accepts decision and applicable rules from a recognized classification society.
6.3	Steering gears, other than of the hydraulic type is accepted by Department of Marine Administration under condition that the regulations 29.1-29.2.1- 29.3 - 29.4 - 29.5 and 29.6.1 is fulfilled. Any equivalent arrangements must be approved by the Department of Marine Administration.
7.2 , 7.3	Recognized Organization complied with the Requirements of MSC.1/Circ.1398
14	Recognized Organization complied with the Requirements of MSC.1/Circ.1416
15 ,16	Recognized Organization complied with the Requirements of MSC.1/Circ.1398
17.2	For tankers of 10 000 gross tonnage and above but less than 100 000 tonnes deadweight the steering gear shall at least fulfill the requirements which is complied with resolution A.467(XII). Any equivalent arrangements must be approved by the Department of Marine Administration. An application form shall be sent to the Department of Marine Administration for approval.
18	Department of Marine Administration accepts decision and applicable rules from a recognized classification society.
Reg. 30	**Additional requirements for electric and electro hydraulic steering gear**
4	Department of Marine Administration may permit reduction from requirements in paragraph 3 if enough protective measure has been done, and the requirements in regulation 29. 5 and 29.7.3 are fulfilled.

Reg. 31	**Machinery controls**
2.7	Department of Marine Administration accepts decision and applicable rules from a recognized classification society.
Reg. 32	**Steam boilers and boiler feed systems**
1	Department of Marine Administration may permit one safety valve fitted only, if it can ensure that the equipment provides a adequate protection against overpressure with regard to steam bilers and gas boilers output or other characteristics, and if which is complied with the requirements of MSC.1/Circ.1286
Reg. 35-1	**Bilge pumping arrangements**
2.6	Department of Marine Administration may permit means of drainage to be dispensed only in particular cases and only if the size and partition of the compartments does not endanger the safety of the ship.
3.7.2	Department of Marine Administration accepts decision and applicable rules from a recognized classification society.
3.9	Department of Marine Administration accepts decision and applicable rules from a recognized classification society.
4	Department of Marine Administration may permit if enough protective measure has been done and the safety of the ship is ensured.
Reg. 36	**Protection against noise** In order to comply with the regulation for protection against noise, Code on Noise Levels on Board Ships shall to be fulfilled and complied with National Standard of Noise.
Part D **Electrical installation**	
Reg. 40.2	**General** Recognized Organizations should consider instructions of Maritime Administration, national standards in relevant field and IEC 60092 standards when developing normative documents aimed to supervise fulfillment of the SOLAS Convention requirements. Appropriate steps shall be taken to ensure uniformity in the implementation and application of the provisions of this part in respect of electrical installations.
Reg. 41	**Main source of electrical power and lighting system**
4	Equivalent solution can be accepted by Department of Marine Administration if enough protective measures have been done and the safety of the ship and the personnel are ensured. Furthermore any equivalent arrangements must be

	approved by the Department of Marine Administraion. An application form shall be sent to the STA for approval.
Reg. 42	**Emergency source of electrical power in passenger ships**
1.3	Department of Marine Administration recommends that the emergency source of power and the associated equipment shall not be located in the same vertical zone as main source of power or main switchboard. The location of the emergency source of electrical power and associated transforming equipment, if any, and the main switchboard shall be such as to ensure that a fire or other casualty in spaces containing the main source of electrical power, associated transforming equipment, if any, and the main switchboard or in any machinery space of category A will not interfere with the supply, control and distribution of emergency electrical power. As far as practicable, the space containing the emergency source of electrical power, associated transforming equipment, if any, the transitional source of emergency power and the emergency switchboard shall not be contiguous to the boundaries of machinery spaces of category A or those spaces containing the main source of electrical power, associated transforming equipment, if any, or the main switchboard.
2.7	Department of Marine Administration may permit deviation from this paragraph.
Reg. 43	**Emergency source of electrical power in cargo ships**
1.2-3	Department of Marine Administration recommends that the emergency source of power and the associated equipment shall not be located in the same vertical zone as main source of power or main switchboard. Furthermore the emergency source of power and the associated equipment shall be placed, as far as practicable, to the ships centreline, if possible within the B/5, easy access to the emergency equipment is essential.
1.3	The location of the emergency source of electrical power and associated transforming equipment, if any, and the main switchboard shall be such as to ensure that a fire or other casualty in spaces containing the main source of electrical power, associated transforming equipment, if any, and the main switchboard or in any machinery space of category A will not interfere with the supply, control and distribution of emergency electrical power. As far as practicable, the space containing the emergency source of electrical power, associated transforming equipment, if any, the transitional source of emergency power and the emergency switchboard shall not be contiguous to the boundaries of machinery spaces of category A or those spaces containing the main source of electrical power, associated transforming equipment, if any, or the main switchboard.
2.6.2	Department of Marine Administration may permit deviation from this paragraph.

Reg. 44	**Starting arrangements for emergency generating sets**
1	Vessels operating in cold areas shall be equipped with the heating equipment to ensure the quick start of the emergency generator.
2	Starting functions within the mentioned time must be demonstrated and documented.
Reg. 45	**Precautions against shock, fire and other hazards of electrical origin** Precautions against shock, fire and other hazards of electrical origin should be based on IEC 60092 standards.
1.2	For portable electrical equipment used in confined or wet areas with particularly high risk of conductivity, apply the following: 1- The equipment must be supplied via SELV circuit or 2- The equipment is supplied via isolating transformer and only one equipment is connected to each secondary circuit.
2	Exposed live parts having voltages to earth exceeding 50 V AC/DC is not allowed. Department of Marine Administration recommends that installations less than 50 V AC/DC are at least IP2X, as far as practicable.
3.3	The system shall be approved by Department of Marine Administration. (or) 1. All final sub-circuits should consist of two insulated wires, the hull return being achieved by connecting to the hull one of the bus bars of the distribution board from which they originate. 2. Earth wires should be in accessible locations to permit their ready examination and to enable their disconnection for testing of insulation.
4.1	Any other arrangements shall be approved by Department of Marine Administration.
4.3.2	Any other arrangements shall be approved by Department of Marine Administration.
5.1	Department of Marine Administration accepts decision and applicable rules from a recognised classification society
5.2	Department of Marine Administration recommends that all cables are of approved type according to IEC 60331 and IEC 60332. The use of other type of cables shall be approved by Department of Marine Administration.
5.3	Department of Marine Administration will follow the Recommendations of MSC/ Circ. 808 in ro-ro passenger ships.
5.4	Department of Marine Administration recommend IEC 60331 and IEC 60332
6.1	Any equivalent arrangements must be approved by Department of Marine Administration.

9.3	Accumulator batteries with charging power under 0,2 kW and which do not release flammable or otherwise dangerous vapors when charging and discharging may be placed in accommodation and service spaces if they are protected from spread of flame, water, mechanical damage, and falling objects.
10	Department of Marine Administration requires that the installations fulfils the standard IEC 60079
11	In case that the installation in hazardous locations is not covered by the standard IEC 60092-502, a risk assessment shall be sent to Department of Marine Administration for approval.
Reg 46 2	**Important!** Number of crew members in engine room can be directly affected by the UMS documents, for that reason the periodically unattended machinery spaces whit associated equipments shall be inspected and related documents must be verified, furthermore a new certificate shall be issued by the class to ensure that the vessel fulfill the SOLAS regulation 46 to 53. Any equivalent arrangements must be approved by the Department of Marine Administration. An application form shall be sent to the Department of Marine Administration for approval. Recognized Organization should consider instructions of Maritime Administration, national standards in relevant field and IEC 60092 standards when developing normative documents aimed to supervise fulfillment of the SOLAS Convention requirements.
3	Every ship with periodically unattended machinery spaces shall be provided with the UMS documents. The mentioned documentation shall ensure that safety of the ship in all condition is equivalent to having the machinery spaced manned; in addition the certificate shall not be issued without physically inspection of those equipments.
PART E **Additional requirements for periodically unattended machinery spaces**	
Reg. 48	Recognized Organization complied with the Requirements of MSC.1/Circ.1424
Reg. 49	**Control of propulsion machinery from the navigation bridge**
5	Department of Marine Administration considers it impracticable if proven.
Reg. 51	**Alarm Systems**
2	Any equivalent arrangements must be approved by the Department of Marine Administration. An application form shall be sent to Department of Marine Administration for approval.

Reg. 53	**Special requirements for machinery, boiler and electrical installations**
1	RO class notation satisfactory.
2	Department of Marine Administration may waive the requirements for SOLAS ship with a gross tonnage below 1600 if the requirement is proved impracticable.
PART F **Alternative design and arrangements**	
Reg. 55	**Alternative design and arrangements**
	Recognized Organization complied with the Requirements of MSC.1/Circ.1212 and MSC.1/Circ.1455

The Republic of The Union of Myanmar
Ministry of Transport and Communications
Department of Marine Administration

National Guidance and Standard for the " to the Satisfaction of Administration", for the Items Concern with SOLAS, Chapter II-2

Chapter II-2 **Construction – Fire protection, fire detection and fire extinction**	
Part A **General**	
Reg. 1	**Application**
3.2	To meet the requirements for ships constructed on or after 01.07.2012 substantial alteration of the dimensions of a ship should: Lengthening by adding a new midbody; the new midbody should comply with SOLAS chapter II-2, as amended. Substantial alteration of the passenger accommodation spaces: A vehicle deck converted to passenger accommodation spaces; new accommodation spaces should comply with SOLAS chapter II-2, as amended. Substantial increase of a ship's service life: Renewal of passenger accommodation spaces on one entire deck; renewed accommodation spaces should comply with SOLAS chapter II-2, as amended. However, in this case, means of escapes in the areas not subject to renewal are not required to be reviewed in the light of new requirements.
6.2.1.2	**Application of requirements for tankers** Foam concentrates shall be according to MSC/ Circ.1312 and Corr1.
6.2.2	In pursuance of SOLAS Reg. II-2/1.6.2.2 Department of Marine Administration sets that the type of foam concentrates for use in chemical tankers shall satisfy the requirements of the Guidelines for performance and testing criteria and surveys of expansion foam concentrates for fire-extinguishing systems for chemical tankers (MSC/Circ.799).
6.6	Chemical tankers and gas carriers complying with the provisions of the International Bulk Chemical Code and the International Gas Carrier Code are considered as complying with the requirements for tankers carrying crude oil or petroleum products having a flashpoint not exceeding 60°C
Reg.2	**Fire safety objectives and functional requirements**
4.2.2.5	In pursuance of SOLAS Reg. II-2/2.4.2.2.5 Department of Marine Administration is a short length of metallic or non-metallic hose normally with prefabricated end fittings ready for installation. Flexible hose is intended for permanent connection between a fixed piping system and items of machinery.

	Flexible hoses in high- pressure fuel oil injection systems shall not be accepted. Flexible hoses should be designed and constructed in accordance with the approved standards. Within prototype testing the following test shall be applied: - Test pressure equal to 1,5 the design pressure; - Burst pressure equal to four times the design pressure; - Fire resistance is considered satisfactory if tested flexible hose subjected to water proof pressure (0,5 MPa) and fire effect (850^0C) during 30 min. remains tight; Pressure impulse test.
Part B **Prevention of fire and explosion**	
Reg. 4	**Probability of ignition**
2.1.4	**Laminations in the use of oils as fuel** Department of Marine Administration recommends that an approved installation according to 4.2.1.4 should fulfill the requirements in 4.2.1.3.3.2-4.1.3.3.4. Reference is made to Res.A565(144).
2.2.3.2	**Oil fuel tanks** The location of oil fuel tanks should follow the guidelines in MSC/Circ.1322.
2.2.3.4	Department of Marine Administration recommends that the controls for remote operation of the valve for the emergency generator fuel tank and controls for remote operation of the valve for fuel tanks placed in machinery spaces do not need to be placed in separate spaces.
2.2.3.5.1	Termination of sounding pipes in machinery spaces is permitted if the requirements stated in 4.2.2.3.5.1.1-3 are met.
2.2.3.5.2	Flat glasses are permitted.
2.2.5.1	**Oil fuel piping** Flexible pipes shall fulfill the requirements in ISO standard 15540:1999 and ISO 15541:1999.
2.2.5.6	Department of Marine Administration may permit the conveying of oil and combustible liquids through accommodation and service spaces if it not practical to route the pipes in different ways. The pipes shall be of steel or equivalent material.
3	General advice from Department of Marine Administration: Positioning of pressure vessels on open deck should complied with MSC/Circ.1276
5.1.1	Pump-rooms intended solely for ballast transfer need not comply with the requirements of regulation II-2/4.5.10. The requirements of regulation II-2/4.5.10 are only applicable to the pump-rooms where pumps for cargo, such as cargo pumps, stripping pumps, pumps for slop tanks, pumps for COW or

	similar pumps are provided. Pump-rooms intended solely for ballast transfer need not comply with the requirements of regulation II-2/4.5.10. The requirements of regulation II-2/4.5.10 are only applicable to the pump-rooms, regardless of their location, where pumps for cargo, such as cargo pumps, stripping pumps, pumps for slop tanks, pumps for COW or similar pumps are provided. 1. A void space or ballast water tank protecting a fuel oil tank, in accordance with MARPOL, need not be considered as a "cargo area" as defined in SOLAS regulation II-2/3.6 even though they have a cruciform contact with the cargo oil tank or slop tank. *As defined by MARPOL 73/78. 2. The void space protecting a fuel oil tank, in accordance with MARPOL, is not considered as a cofferdam as specified in SOLAS regulation II-2/4.5.1.1. Therefore, location of the void space shown in figure 1 should be considered acceptable even though they have a cruciform contact with the slop tank.
5.1.3	Paint lockers, regardless of their use, cannot be located above the tanks and spaces defined in SOLAS II-2/4.5.1.2 for oil tankers and the cargo area for chemical tankers.
5.1.4.4	**Separation of cargo oil tanks** Cargo oil lines placed in special ducts are permitted only if these can be cleaned and ventilated in a sufficient way. Department of Marine Administration recommends that special duct spaces should be cleaned and ventilated as specified in section 5.3 and *On combination carriers cargo oil lines below deck shall be placed in special ducts equipped with draining and ventilation arrangements.*
5.1.6	Guidelines for stern loading and unloading arrangements can be found in IBC code Chapter 3.
5.2.2	Department of Marine Administration may permit access doors in boundary bulkheads facing the cargo area or within the 5 m limits specified in paragraph 5.2.1, to main cargo control stations and to such service spaces used as provision rooms, store-rooms and lockers, provided they do not give access directly or indirectly to any other space containing or providing for accommodation, control stations or service spaces such as galleys, pantries or workshops, or similar spaces containing sources of vapour ignition.
5.3.3	**Safety devices in venting systems** The design, testing and locating of these devices shall comply with the requirements in MSC.Circ.677, MSC/Circ.731, MSC/Circ.1009 and MSC/Circ.1324. In pursuance of SOLAS Reg.II-2/5.3.3 The design, testing and locating of devices to prevent passage of the flame to the cargo tanks flame arresters shall comply with the requirements IMO Circulars MSC/Circ.677 and MSC/

	Circ.450./Rev.1.
5.5.1	Alternative fixed installations as mentioned in paragraph 5.5.1 may be accepted if relevant tests confirm that they afford protection equivalent to the requirements of the Fire Safety Systems Code and satisfy the following requirements: *1.* be capable of preventing dangerous accumulations of explosive mixture in intact cargo tanks during normal service throughout the ballast voyage and necessary in-tank operations; and *.2.* be so designed as to minimize the risk of ignition from the generation of static electricity by the system itself.
5.5.2	Inert gas systems contained in the Fire Safety Systems Code need not be applied to: *1.* chemical tankers and gas carriers when carrying carrying crude oil or petroleum products having a flashpoint not exceeding 60°C, provided that they are equipped with inert gas systems satisfying Rules in accordance with Regulation on Inert Gas System on Chemical Tankers, as adopted by IMO Res. A.567(14) Corr.1. *.2.* chemical tankers and gas carriers when carrying flammable cargoes other than crude oil or petroleum products such as cargoes listed in chapters 17 and 18 of the International Bulk Chemical Code, provided that the capacity of tank used for their carriage does not exceed 3,000 m^3 and the individual nozzle capacities of tank washing machines do not exceed 17.5 m^3/h and the total combined throughput from the number of machines in use in a cargo tank at any one time does not exceed 110 m^3/h.
5.5.2.1	**Inert gas systems of chemical tankers and gas carriers** Can be arranged according to the FSS code or Res. A.567(14).
5.6.3	1. The outlets mentioned in Reg. II-2/4.5.6.3 are to be located in compliance with Reg. II-2/4.5.3.4.1.3 as far as the horizontal distance is concerned. 2. Reference is made to MSC/Circ.677 - Revised standards for the design, testing and locating of devices to prevent the passage of flame into cargo tanks in oil tankers, and MSC/Circ.450/Rev.1 - Revised factors to be taken into consideration when designing cargo tank venting and gas-freeing arrangements. *(MSC/Circ.1120)*
5.7.3.3	**Arrangements for fixed hydrocarbon gas detection systems in double-hull and double-bottom spaces of oil tankers** Department of Marine Administration recommends that fixed gas detection system fulfills the guidelines in MSC/Circ.1370
Reg. 5	**Fire growth potential**
2.2.5	In pursuance of SOLAS Reg.II-2/5.2.2.5 State Maritime Administration of the

	Republic of Azerbaijan requires that in passenger ships the controls for any required fire-extinguishing system for machinery spaces shall be situated at one control position or grouped in as few positions as possible. Such positions shall have a safe access from the open deck.
2.3.1	**Additional requirements for means of control in periodically unattended machinery spaces.** For periodically unattended machinery spaces, special consideration shall be given, approved by STA, to maintaining the fire integrity equal to the fire integrity in manned machinery spaces and that it can be activated equally fast: - the fire integrity of the machinery pace - the location and centralization of the fire extinguishing system controls - the required shutdown arrangements e.g. ventilation, fuel pumps, etc. - the fire extinguishing appliances and other firefighting equipment the number of breathing apparatus.
Part C **Suppression of fire**	
Reg.7	**Detection and alarm**
3	**Initial and periodical tests**
3.2	In pursuance of SOLAS Reg.II-2/7.3.2 State Maritime Administration of the Republic of Azerbaijan requires that ability of detector testing shall be assured. Testing shall be carried out by means of equipment producing hot air at the appropriate temperature, or smoke or aerosol particles having the appropriate range of density or particle size, or other phenomena associated with incipient fires to which the detector is designed to respond; and Department of Marine Administration recommends that the periodical tests for these systems and which is complied with the requirements of MSC/Circ. 850.
5.3	In pursuance of SOLAS Reg.II-2/7.3.2 State Maritime Administration of the Republic of Azerbaijan requires that on passenger ships carrying not more than 36 passengers in throughout each separate zone, whether vertical or horizontal, in all accommodation and service spaces and, where it is considered necessary by the Administration, in control stations, except spaces which afford no substantial fire risk such as void spaces, sanitary spaces, etc., there shall be installed either: a fixed fire detection and fire alarm system so installed and arranged as to detect the presence of fire in such spaces and providing smoke detection in corridors, stairways and escape routes within accommodation spaces; or an automatic sprinkler, fire detection and fire alarm system of an approved type complying with the relevant requirements of the Fire Safety Systems Code and so installed and arranged as to protect such spaces and, in addition, a fixed fire detection and fire alarm system and so installed and arranged as to provide smoke detection in corridors, stairways and escape routes within

	accommodation spaces.
6	In pursuance of SOLAS Reg.II-2/7.3.2 State Maritime Administration of the Republic of Azerbaijan requires that a fixed fire detection and fire alarm system or a sample extraction smoke detection system shall be provided in any cargo space which is not accessible, except where it is shown that the ship is engaged on voyages of such short duration that it would be unreasonable to apply this requirement.
Reg. 8	**Control of smoke spread**
2	**Protection of control station outside machinery spaces** Separate means of air supply need not apply to control stations on, and opening onto, an open deck.
3.4	**Release of smoke from machinery spaces** In passenger ships, the controls required by paragraph 3.3 shall be situated at one control position or grouped in as few positions as possible, and opening onto, an open deck.
Reg. 9	**Containment of fire**
2.1	**Thermal and structural subdivision** Department of Marine Administration recommends that an area which is divided by a bulkhead or deck which have different insulation standard, the most efficient insulation shall continue on that bulkhead or deck with the less effective insulation to a distance of at least 450 mm. The fire insulation shall be arranged on that side where the insulation is tested in accordance with National Standard of Fire Test Procedure.
2.2.1.5.1	**Thermal and structural subdivision** According to regulation 20.2.2.1
2.2.2.2.1	**Construction of extended bulkhead behind continuous ceilings or linings** The extension of the bulkhead should be made of non-combustible material and the construction of the extension should correspond to the fire class of extended bulkhead. If the extended bulkhead is of B-0, then the extension may be made of thin steel plates of 1 mm thickness and tightened (e.g., with mineral wool). Alternatively, B-0 class extensions may be constructed of a suitably supported mineral wool (density at least 100 kg/m^3, thickness at least 50 mm).
2.2.3	In pursuance of SOLAS Reg.II-2/9.2.2.3 State Maritime Administration of the Republic of Azerbaijan requires on passenger ships carrying not more than 36 passengers the minimum fire integrity of all bulkheads and decks shall be complying with the requirements set in other regulations of SOLAS Part II-2, but shall satisfy specific provisions be as prescribed in tables 9.1 and 9.2. of the Reg. 9/II-2. Where, due to any particular structural arrangements in the ship, difficulty is experienced in determining from the tables the minimum fire integrity value of any divisions, such values shall be agreed with the

	Administration in every particular case.
2.2.3.2.5	In pursuance of SOLAS Reg.II-2/9.2.2.3.2.5 State Maritime Administration of the Republic of Azerbaijan determines that in respect of category (5) spaces the insulation values in table 9.1 shall apply to ends of deckhouses and superstructures. The insulation values in table 9.2 shall apply to weather decks. The requirements of category (5) of tables 9.1 or 9.2 do not necessitate enclosure of spaces if this proven to the Administration and agreed.
2.3.1.1.3	**Methods of protection in accommodation area on cargo ships** In public spaces this area may be extended to maximum 75 m^2.
2.3.2.4	In public spaces this area may be extended to maximum 75 m^2
2.3.3.4	In pursuance of SOLAS Reg.II-2/9.2.3.3.4 State Maritime Administration of the Republic of Azerbaijan determines that external boundaries to be of steel or other equivalent material may be pierced for the fitting of windows and side scuttles provided that there is no requirement for such boundaries of cargo ships to have "A" class integrity. Similarly, in such boundaries which are not required to have "A" class integrity, doors shall be constructed of other materials agreed by the Administration; and Department of Marine Administration advises that an example of material with acceptable safety standard in doors in accordance with 9.2.3.3.4 is solid wood.
2.4.2.4	**Fire integrity of bulkheads and decks on tankers** In pursuance of SOLAS Reg.II-2/9.2.4.2.4 State Maritime Administration of the Republic of Azerbaijan determines that external boundaries on tankers which are required to be of steel or other equivalent material may be pierced for the fitting of windows and side scuttles provided that there is no requirement for such boundaries of tankers to have "A" class integrity. Similarly, in such boundaries which may not be required to have "A" class integrity, doors may be constructed of materials which are to be agreed by the Administration; and Department of Marine Administration advises that an example of material with acceptable safety standard in doors in accordance with 9.2.3.3.4 is solid wood.
4.2.1	**Doors in fire-resisting divisions in cargo ships** Department of Marine Administration do not accept combustible materials in doors separating cabins from the individual interior sanitary spaces such as showers.
5.1.1	**Protection of openings in machinery spaces boundaries** The requirements in 9.5.1.1 are applicable on all types of machinery spaces.
5.2.4	**Protection of openings in machinery spaces boundaries** In passenger ships, the controls required in 5.2.3 shall be situated at one control position or grouped in as few positions as possible, and opening onto, an open deck.
7.3.2	**Details of duct penetrations**

	Department of Marine Administration recommends that the steel sheet sleeves should cover 450 mm on each side of the bulkhead unless the duct is of steel.
7.5.1.1.3 , 7.5.2.1.4	**STA:** A fixed fire extinguishing system for fires within the duct shall fulfill and complied with the requirements of (National Standard of Fire Safety System).
Reg. 10	**Fire fighting**
2.1.2.1.3	In pursuance of SOLAS Reg.II-2/10.2.1.2.1.3 State Maritime Administration of the Republic of Azerbaijan determines that in all passenger ships fitted with periodically unattended machinery spaces fixed water fire-extinguishing arrangement shall be installed which is at least complying with requirements to those for normally attended machinery spaces; and Paragraph 1.1 and 1.2 shall be fulfilled and (complied with the requirements of National Standard of Fire Safety System).
2.1.2.2.1	**Ready availability of water supply** Devices for remote start of the fire pumps shall be arranged on the navigation bridge, at one fire control station and in the engine control room.
2.1.3	**Diameter of fire mains** General advice: Fire main should have a diameter in accordance with the following table: Ships length (m) Diameter (mm) Less than 50m: 75mm Up to 50m but not 100m: 100mm Up to 100m but not 200m: 125mm Up to 200m but not 300m: 150mm Up to 300m or more: >150mm Branch pipes should have a diameter of at least 60 mm. Short branch pipes for only one fire hydrant should have a diameter of at least 50 mm.
2.2.1	**Pumps accepted as fire pumps** General advice: Pumps which occasionally are used for transfer or pumping of oil fuel or other oil should not be used as fire pump.
2.2.3.2.2	**Access to the emergency fire pump** General advice: An example on a reasonable gastight door is a steel door whit gasket which can be closed tight.
2.3.1.2	**Fire hoses and nozzles** General advice: All fire hose connections should be so designed that they can be connected to all hydrants, nozzles or other hoses.

2.3.2.1	**Number and diameter of fire hoses** In pursuance of SOLAS Reg.II-2/10.2.3.2.1 State Maritime Administration of the Republic of Azerbaijan determines that:

	In passenger ships, there shall be provided at least one fir hose for each of the hydrants. On cargo ships of 1000 and more gross tonnage, the number of fire hoses is determined one fire hose per each 30 m of length and one spare fire hose, but not less than five hoses per ship. This number doesn't include any hoses required for machinery or boiler spaces. A ship carrying dangerous goods shall be equipped with three additional hoses and nozzles in excess of those required above. On cargo ships of less than 1000 gross tonnage, the number of fire hoses shall be not less than three and is calculated in accordance with item 2 above. Internal diameter of fire hoses shall be about 64 mm. New fire hoses shall be wheel marked according to the MED directive.
2.3.2.3	**Number and diameter of fire hoses** In cargo ship there shall be one fire hose to each fire hydrant.
2.3.3.4	**Size and types of nozzles** The nozzles on new ships shall be wheel marked. The nozzles on ships constructed before 1 July 2002 shall be in accordance with the national Swedish Standard SS 3500.
3.2.1	**Arrangement of fire extinguishers** In Pursuance of SOLAS Reg.II-2/10.3.2.1 State Maritime Administration of the Republic of Azerbaijan determines that the minimum number of fire extinguishers at control stations, accommodation and service spaces shall be determined on the basis of 2 fire extinguishers for every 30 m or part thereof, of the deck length on which such spaces are situated, but not less than the number required in accordance with the following provisions: 1. Control station: 1 foam fire extinguisher for each space. 1 fire extinguisher being permitted to be filled in the corridor for a group of small spaces with a total area of up to 50 sq. m, provided that the entrances to the spaces are adjacent and situated in the same corridor. 1 carbon dioxide fire extinguisher for each space or group of spaces as specified in item 1 containing electrical or radio equipment, as also for chart houses and chart compartments. 1 foam fire extinguisher for each space containing an emergency diesel-generator or a fire diesel-driven pump. 2. Accommodation and service spaces: 1 foam lire extinguisher for every 30 m, or part thereof, of the length of the corridors communicating with accommodation and service spaces. 1 foam fire extinguisher for every 100 m, or part thereof, of area of public spaces. For spaces less than 15 m –in area fire extinguishers fitted near them may be used. 1 foam fire extinguisher in galleys and bakeries with oil-fired equipment. In

	galleys and bakeries with electrical, steam, coal-or gas-fired equipment. Having the area of more than 50 sq.m.-1 foam or carbon dioxide fire extinguisher. 1 foam fire extinguisher in other domestic service space (where fire extinguishers are available in the corridor, at the entrance to the space, provision of fire extinguishers within the space is not compulsory); and Accommodation spaces, service spaces and control stations shall be provided with portable fire extinguishers for every $250m^2$ of the area concerned. Portable fire extinguishers in accommodation spaces shall be AB extinguishers of at least class 21 A 183B. In galleys, radio stations and steering gear room, the fire extinguishers shall be a carbon dioxide extinguisher of class 55B. General advice: Resolution A.951(23) and Unified Interpretation of SOLAS II-2. The number and type of fire extinguishers should follow the guidelines in MSC/Circ.1275
4.1.1.3	**Types of fixed fire-extinguishing systems** For ships constructed before 1 July 2002 STA did not allow fixed water-spraying fire- extinguishing system in machinery spaces. Fixed water-spraying fire-extinguishing system is only allowed as fixed local application fire-extinguishing system. General advice: For ships constructed between 1 July 2002 and 1 September 2008, the fixed fire extinguishing system in 4.1.1.3 should be tested according to the requirements for equivalent sprinkler systems in the FSS code. For ships constructed after 1 September 2008 Fixed pressure water-spraying fire-extinguishing systems and water-mist fire-extinguishing system should fulfill MSC/Circ.1165, 1237 and 1269.
4.1.3	Requirements regarding Halon 1211, 1301 and 2402 shall be follow Notification --------
5.1.2.2	**Additional fire-extinguishing arrangements** There shall be at least two portable foam extinguishers, or of type 233 BC, in each firing space in each boiler room and in each space in which a part of the oil fuel installation is situated. General advice: Equivalent fire extinguishers in accordance with 5.1.2.2 are powder extinguisher with not less than 50 kilo powder.
5.1.2.3	In each firing space there shall be - a receptacle containing at least 0.1m3 sand, impregnated with soda or - a portable fire extinguisher of type 233 B/BC.
5.2.2.2	General advice: Equivalent fire extinguishers in accordance with 5.2.2.2 could be 5 portable fire extinguishers of type 233 B/BC.
5.3.2.1	General advice: Equivalent fire extinguishers in accordance with 5.3.2.1 could be portable fire extinguishers of type 233 B/BC.
5.3.2.2	General advice: Equivalent fire extinguishers in accordance with 5.3.2.2 could

	be portable fire extinguishers of type 233 B/BC.
5.4	**Other Machinery Space** In pursuance of SOLAS Reg.II-2/10.5.4 State Maritime Administration of the Republic of Azerbaijan determines that in other machinery spaces as they determined in abovementioned Regulation the following portable fire extinguishers shall be provided: 1 carbon dioxide fire extinguisher, for spaces containing main internal combustion or steam machinery, if the total power of the main machinery is less than 740 kW. 2 carbon dioxide fire extinguishers, for spaces containing main internal combustion or steam machinery, if the total power of the main machinery is equal to, or more than, 740 kW. carbon dioxide fire extinguishers per space containing switchboards (in space having an area of 15 sq.m. - 1 carbon dioxide fire extinguisher, near the entrance to the space); and The Swedish Transport Agency(STA) requires, according to SOLAS II-2/10.5.4, that all SOLAS ships constructed 1 September 2008 or later shall be fitted with a fixed fire extinguishing system in other machinery spaces, except spaces according to category (10)in chapter 9.2.2.3.2.2. Exemption can be made for spaces where the risk of fire spread to adjacent spaces is low, e.g. bow thruster room. In main and emergency switchboard rooms there shall be provided in, or adjacent to, that space such a number of approved portable fire extinguishers of type 55 B as the Administration may deem sufficient. In order engine spaces that are not mentioned in SOLAS II-2/10.5.1-5.3, there shall be such a number of fire extinguishers as required in the guidelines of MSC/circular 1275.
5.5	**Additional Requirements for passenger ships** A water fog applicator might consist of a metal L-shaped pipe, the long limb being about 2 m in length, capable of being fitted to a fire hose, and the short limb being about 250 mm in length, fitted with a fixed water fog nozzle or capable of being fitted with a water spray nozzle.
5.6.2	Department of Marine recommends that in continuously manned machinery spces, an automatic release of the extinguishing system should be arranged; and The system shall be designed according to MSC/Circ. 913. Ships constructed after 1 January 2010 shall fulfill the guidelines in MSC/Circ.1276. Ships constructed after 1 January 2012 shall fulfill the guidelines in MSC/Circ.1387.
6.3.2	Flammable liquid lockers shall be protected by an appropriate fire extinguisher arrangement in accordance with 6.3.1
6.4	**Deep-fat cooking equipment** Fire extinguishing system shall be designed according to ISO 15371:2000 and (complied with the National Standard of Fire Test Procedure.)
7.1.2	**Fixed gas fire-extinguishing systems for general cargo**

	In pursuance of SOLAS Reg.II-2/10.7.1.2 State Maritime Administration of the Republic of Azerbaijan determines that spaces for general cargoes except dangerous goods may not be fitted with fixed fire extinguishing systems in the following cases: in passenger ships engaged in short voyages; in passenger ships of less than 1000 gross tonnage, provided the ship is fitted with portable fire- fighting equipment for cargo spaces, as well as with steel hatch covers and effective closing appliances of all ventilating and other openings leading to cargo spaces.
7.1.4	Reference is made to IMSBC Code and complied with the requirements of MSC.1/Circ.1395/Rev.1 and MSC/Circ.671 superseded by MSC/ Circ.1446. (and which is complied with the National Standard of Fire Safety System).
7.2	**Fixed gas fire-extinguishing systems for dangerous goods** Regulations for transporting dangerous goods see Reg.19. Interpretation can be found in MSC/Circ 1120 (and which is complied with the National Standard of Fire Safety System.)
10.2.4	**Number of fire-fighter's outfits** Cargo ships shall have the following number of fire fighters outfit and personal equipment: Cargo ship: <4 000 BRT total number of fire fighters outfit- 2pcs, additional number of personal equipment 1pcs. >4 000 total -number of fire fighters outfit 4pcs, additional number of personal equipment 2pcs Tanker ship: <30 000 BRT total number of fire fighters outfit- 4pcs, additional number of personal equipment 2pcs >30 000 total number of fire fighters outfit- 6pcs, additional number of personal equipment 3pcs

10.3.1	General advice: A fire station should have direct access from open deck or from a control station. The boundaries between the fire station and spaces where a fire could occur should be insulated to "A-60" class standard. It should be fitted with a heater. The fire station should also be large enough to enable for the crew to fit on their personal equipment and breathing apparatus in the room.
Reg. 11	**Structural integrity**
3.1	**Structure of aluminum alloy** Load bearing structures follows the interpretation in MSC/Circ.1120.
4.1	**Crowns and casings**

	Crowns and casings of machinery spaces of category A shall be of steel construction and shall be insulated as required by tables 9.5, 9.6, 9.7 and 9.8.
4.2	**Floor plating** Normal passageways meaning; main passageways and escape routes.
Part D **Escape**	
Reg.12	**Notification of crew and passenger**
1	**Purpose** Guidance for general design of alarms and indicators can be found in esolution A.1021(26)
Reg. 13	**Means of escape**
3.1.3	**Means of escape from control stations, accommodation spaces and service spaces** Department of Marine Administration could approve other equivalent frame constructions on condition that material equivalent to steel is used.
3.1.4	**Means of escape from control stations, accommodation spaces and service spaces** Department of Marine Administration recommends that if one of the escape ways is a porthole or a window this should have a free opening of at least 400X600 mm.
3.2.6.2	**Quick release mechanism** According to the requirements in the current regulation.
3.4	Republic of Azerbaijan determines below minimum requirements to EEBD to be available aboard on Azerbaijan flagged ships: Within accommodation spaces Within accommodation spaces of ships of any type, at least 2 pcs. In passenger ships, 2 pcs. in each main vertical zone. In passenger ships carrying more than 36 passengers, in addition to those required in 1.2, two additional EEBD shall be provided in each main vertical zone. Requirements in 1.2 and 1.3 are not applied to stairway enclosures comprising separate main vertical zones and to main vertical zones at both ends of a ship which do not have spaces of categories 6, 7, 8 or 12 as specified in Reg.II-2/9.2.2.3 of SOLAS-74; Machinery spaces: In machinery spaces of ships of all types such number of EEBD shall be available, which shall be not less than the number of ship personnel of persons usually manning the space. Spare EEBD: Provision shall be made for at least two spare EEBD for passenger ships and at least one spare EEBD for cargo ships.

	EEBD for training purpose: At least one EEBD exclusively for training purpose shall be available in ship of any type. EEBD for training purpose should be provided with relevant marking. EEBD complying with the requirements of the Fire Safety Systems Code and approved by the State Maritime Administration of the Republic of Azerbaijan may be applied in Azerbaijan flagged ships. Number and location of the EEBD onboard shall be agreed by the State Maritime Administration of the Republic of Azerbaijan and shall be indicated on Fire Control Plan.
3.4.1	**Emergency escape breathing devices** Department of Marine Administration recommends that the amount and positioning of the emergency escape breathing devices should follow the guidelines in MSC/Circ.1081.
4.3.1	**Emergency escape breathing devices** Recognized Organization complied with MSC/Circ.849.
5.1	**Special category spaces** According to paragraphs 3.2.1.1, 3.2.2, 3.2.4.1 and 3.2.4.2.
Part E **Operational requirements**	
Reg.14	**Operational readiness and maintenance**
2.2.1	**Maintenance, testing and inspection** Maintenance, testing and inspection shall be carried out based on the guidelines in MSC.1/Circ.1432 and which is complied with
2.2.3	Service and maintenance of portable fire extinguishers shall be performed according to SS 3656 or equivalent standard.
Reg.15	**Instructions, on-board training and drills**
2.3.4	General advice: The training manual should be designed as a separate manual. The manual can also be a part of the ISM manual on condition that the requirements for availability are fulfilled.
2.4.1	In pursuance of SOLAS Reg.II-2/15.2.4.1 State Maritime Administration of the Republic of Azerbaijan determines that general arrangement plans shall be permanently exhibited for the guidance of the ship's officers, as required by above Regulation, however details of general arrangement plans 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 in the Azerbaijan language and shall be translated into English; and The text in plans and booklets shall be written in the working language of the ship. New plans shall be approved and stamped. Even changes to the plans shall be

	examined and approved. Fire control plans should be according to ISO 17631:2002 or Resolution A. 952(23).
2.4.2	The fire control plans shall be stored as defined in MSC/ Circ. 451
Part G Special requirements	
Reg.19	**Carriage of dangerous goods**
2	In pursuance of SOLAS Reg.II-2/19.2 regarding carriage of substances in class 4.3 in bulk State Maritime Administration of the Republic of Azerbaijan determines that in addition to requirements set in Reg. II-2/19.2 the following should be considered. Class 4.3 substances possess the common property, when in contact with water, of evolving flammable gases. In some cases these gases are liable to spontaneous ignition. In view of this Booklet "Safety Measures during Carriage of Class 4.3 Substances in Bulk" which shall advise special operating practices and list managerial procedures. Above booklet shall be developed by a recognized organization or design institute and shall be approved by the Administration or on behalf of the Administration.
2.1	For "open top" container ships special regulations about fire fighting and dangerous goods can be found in MSC/Circ. 608/ Rev 1.
3.1.2	**Water supplies** The number and position of hydrants should be such that at least two of the required four jets of water, when supplied by single lengths of hose, may reach any part of the cargo space when empty; and all four jets of water, each supplied by single lengths of hose, may reach any part of ro-ro cargo spaces.
3.1.3	Hoses may be used for this purpose in small cargo spaces and in small areas of larger cargo spaces. This area should not be greater than it is possible to cool down the whole area with one fire hose. Fixed fire extinguishing systems for special category spaces that fulfill the requirements in 3.1.3 should be designed according to Resolution A.123(V).
3.2	**Sources of ignition** Electrical equipment and wiring shall not be fitted in enclosed cargo spaces unless it is essential for operational purposes in the opinion of the Administration. However, if electrical equipment is fitted in such spaces, it shall be of a certified safe type for use in the dangerous environments to which it may be exposed unless it is possible to completely isolate the electrical system. Cable penetrations of the decks and bulkheads shall be sealed against the passage of gas or vapour. Through runs of cables and cables within the cargo spaces shall be protected against damage from impact/ Any other equipment which may constitute a source of idnition of flammable vapour shall not be permitted; and Electrical equipment fitted in such spaces shall be designed according to IEC

	60092-506 or if it's possible to completely isolate the electrical system, e.g. by removal of links in the system or by a lockable protective switch located outside the space where the dangerous goods are kept. There should be a sign with the text: "The switch shall be in off position when the ship is carrying dangerous goods of an explosive or flammable character" located outside the space where the dangerous goods are kept.
3.3	**Detection system** General advice: The fire detection system should use smoke detectors or a combination of smoke– and flame detectors or, for open ro-ro cargo spaces where it is not suitable to install smoke detectors, other types of detection can be installed. The detection sections in these spaces may be fitted with a device e.g. a time relay for disconnecting the detector sections during loading/unloading on condition that the manually operated call points are not disconnected with the same device. It shall be indicated on the control panel when detector sections are disconnected and the disconnection time shall be suitable to the loading/unloading.
3.4.1	**Ventilation** To comply with the requirements in 3.4.1 and the requirements for hygienic limit values in ro-ro cargo spaces regulated in AFS 2005:17 the ventilation system should be designed according to MSC/Circ.729
3.4.2	Wire mesh guards in 3.4.2 should be maximum 13 x 13 mm. The fans should be designed according to IACS UR F29, Non-sparking fans.
3.9	**Water-spray system** Fixed fire extinguishing systems that fulfills the requirements in 3.9 should be designed according to Resolution A.123(V).
Reg. 20	**Protection of vehicle, special category and ro-ro spaces**
3.1.1	**Capacity of ventilation systems** Department of Marine Administration advises that the design guidelines and operational recommendations for ventilation systems in ro-ro cargo spaces can be found in MSC/ Circ. 729. The number of air changes shall increase when vehicles are being loaded and unloaded.
3.1.3	**Indication of ventilation system** Department of Marine Administration advises that this arrangement can be replaced by an alarm which activates in the event of a cut out or fault of the starting relay for the fan motor.
3.2.1	**Electrical equipment and wiring** Department of Marine Administration recommends that the electrical equipment and cables in enclosed ro-ro cargo spaces, vehicle spaces and special category spaces should fulfill the requirements in SS-IEC 60079. Electrical equipment and cables should be approved for use in zone 1 and be of

	at least explosion group IIA and temperature class T3.
3.2.2	In case of other than special category spaces below the bulkhead deck, notwithstanding the provisions in section 20.3.2.1, above a height of 450 mm from the deck and from each platform for vehicles, if fitted, except platforms with openings of sufficient size permitting penetration of petrol gases downwards, electrical equipment of a type so enclosed and protected as to prevent the escape of sparks should be of a type approved for use in zone 2 (at least IP 55 and temperature class T3) on condition that the ventilation system is so designed and operated as to provide continuous ventilation of the cargo spaces at the rate of at least ten air changes per hour whenever vehicles are on board.
3.3	**Electrical equipment and wiring in exhaust ventilation ducts** Department of Marine Administration recommends that the electrical equipment in section 20.3.3 should be type approved according to SS-IEC 60079 in the zone where the intake is placed. When positioned at ventilations ducts inlet, guidance can be found in IEC 60092-506.
4.1	**Fixed fire detection and fire alarm systems** In pursuance of SOLAS Reg.II-2/20.4.1 State Maritime Administration of the Republic of Azerbaijan determines that the type of automatic detectors their spacing and location shall satisfy the following requirements, taking into account the effects of ventilation and other relevant factors: Maximum floor area for detector, maximum distance apart between centres and maximum distance away from bulkheads for installation of automatic heat and smoke detectors shall satisfy the requirements set in Ch. 9 of the Fire Safety Systems Code (IMO Res. MSC.98(73)). After installation system shall be tested in operation within usual conditions of ventilation and shall be checked to verify availability for immediate action; and The system shall be capable of rapidly detecting the onset of fire by smoke detectors or a combination of smoke and flame detectors. FSS Code The system shall be capable of rapidly detecting the onset of fire by smoke detectors or a combination of smoke and flame detectors. GA: In the system required in 4.1 the smoke detector sections in vehicle, special category, and ro-ro spaces may be provided with an arrangement, (e.g a timer) for disconnecting detector sections during loading and unloading of vehicles to avoid “false” alarms. The time of disconnection should be adapted to the time of loading/ unloading. The central unit should indicate whether the detector sections are disconnected or not. However, manual call points should not be capable of being disconnected by the arrangements referred to above.
6.1.2	**Fixed fire-extinguishing systems** General advice: Fixed pressure water spraying systems should fulfill the requirements in Resolution A.123(V)
6.1.3	Full scale test in 6.1.3 should be according to guidelines stated in MSC.1/ Circ.1272 and MSC.1/Circ.1430

6.1.4.2	MSC.1/Circ.1234 and Res A.123(V).