

Draft Merchant Shipping Notice No. xx of 2023

[Guidance on “To the Satisfaction of Administration” in IMO Conventions]

[For stakeholder comments to Vikrant.raai@gov.in by 3rd October, 2023]

1. Paragraph 16.5 of IMO III Code [Resolution A 1070 (28): IMO Instruments Implementation Code] state that a Flag State while administering a safety and environmental protection programme provide guidance concerning those requirements found in the relevant international instruments that are to the satisfaction of the Administration.
2. The Directorate has addressed the stated requirement of guidance on “to the satisfaction of the Administration” in the Agreement with Recognized Organization, through addition of the following paragraph:
 - While interpretations of the applicable instruments, as well as the determination of Equivalents or the acceptance of substitutes to the requirements of the applicable Instruments or to determine "the satisfaction of the Administration" as required under applicable instruments are the prerogative of the Administration. The RO shall cooperate with the Administration in their establishment as necessary and may apply the IMO interpretations and Circulars, as well as the available IACS Unified Interpretations as the case may be unless provided with written instruction to apply a different interpretation by the Administration. The interpretation of the Administration, however, shall be final and binding.
3. Whilst the purpose of this MSN is to further provide Regulation wise guidance on the arrangements that are to be ‘to the satisfaction of the Administration’ it is recognized that this is not appropriate to provide prescriptive guidance or instruction for all requirements due to the number of factors that have to be taken into consideration. In such cases the technical justification for acceptance will be considered by Competent Authority in the Directorate on a ‘case by case’ basis; for delegated items these should be supported by the Recognized Organization in the first instance.
4. The following annexures to this MSN details the guidance on implementation of requirements that contain references “to the satisfaction of the Administration” or “to be specified by the Administration:
 - i. SOLAS 1974, as amended
 - ii. International Convention on Load Lines, 1966, as amended
 - iii. MARPOL 1973/78, as amended

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**Annexure 1 to MSN XXX OF 2023
SOLAS 1974, as amended**

[Guidance on implementation of requirements that contain references “to the satisfaction of the Administration” or “to be specified by the Administration”]

Sr. no.	Regulation reference	Requirement	Guidance by the Administration
Chapter II-1 Construction – Structure, subdivision and stability, machinery and electrical installations			
1	II-1/3-6.2.3	The construction and materials of all means of access and their attachment to the ship's structure shall be to the satisfaction of the Administration. The means of access shall be subject to survey prior to, or in conjunction with, its use in carrying out surveys in accordance with regulation I/10.	The relevant Class societies Rules who are RO to the Administration shall be followed. Additionally, following interpretation provided in IACS UI shall also be followed: <ul style="list-style-type: none"> • IACS Unified Interpretation SC190 • IACS Unified Interpretation SC191
2	II-1/3-6.5.3	For oil tankers of less than 5,000 tonnes deadweight, the Administration may approve, in special circumstances, smaller dimensions for the openings referred to in paragraphs 5.1 and 5.2 above, if the ability to traverse such openings or to remove an injured person can be proved to the satisfaction of the Administration.	The proposal substantiating the ability to traverse or to remove an injured person shall be reviewed by RO to the Administration followed by practically demonstrating the compliance shall be considered.
3	II-1/4.5	Where it is proposed to fit decks, inner skins or longitudinal bulkheads of sufficient tightness to seriously restrict the flow of water, the Administration shall be satisfied that proper consideration is given to beneficial or adverse effects of such structures in the calculations.	The arrangement shall be considered on case-by-case basis taking into consideration of beneficial or adverse effects such structures in the stability calculations.
4	II-1/5.2.2	The Administration may allow the inclining test of an individual cargo ship to be dispensed with provided basic stability data are available from the inclining test of a sister ship and it is shown to the satisfaction of the Administration that reliable stability information for the exempted ship can be obtained from such basic data, as required by regulation 5-1. A lightweight survey shall be	The guidance contained in the explanatory notes(RESOLUTION MSC.429(98)) to Reg. 5 shall be followed.

		carried out upon completion and the ship shall be inclined whenever in comparison with the data derived from the sister ship, a deviation from the lightship displacement exceeding 1% for ships of 160 m or more in length and 2% for ships of 50 m or less in length and as determined by linear interpolation for intermediate lengths or a deviation from the lightship longitudinal centre of gravity exceeding 0.5% of L is found.	
5	II-1/5-1.1	The master shall be supplied with such information to the satisfaction of the Administration as is necessary to enable him by rapid and simple processes to obtain accurate guidance as to the stability of the ship under varying conditions of service. A copy of the stability information shall be furnished to the Administration.	The stability Information shall be developed on basis of the following IMO requirements: MCS 267(85) -ADOPTION OF THE INTERNATIONAL CODE ON INTACT STABILITY, 2008 MSC/Circ.920 - Model Loading and Stability Manual MSC/Circ.456 – Guidelines for the preparation of intact stability information; MSC/Circ.706 – Guidance on intact stability of existing tankers during transfer operations; MSC.1/Circ.1228 – Revised guidance to the master for avoiding dangerous situations in following and quartering seas.
6	II-1/7-2.5	Unsymmetrical flooding is to be kept to a minimum consistent with the efficient arrangements. Where it is necessary to correct large angles of heel, the means adopted shall, where practicable, be self-acting, but in any case, where controls to equalization devices are provided, they shall be operable from above the bulkhead deck of passenger ships and the freeboard deck of cargo ships. These fittings together with their controls shall be acceptable to the Administration. Suitable information concerning the use of equalization devices shall be supplied to the master of the ship.	The relevant Class societies Rules who are RO to the Administration shall be followed.
7	II-1/9.3.2	Other wells (e.g. for lubricating oil under main engines) may be permitted by the Administration if satisfied that the arrangements give protection equivalent to that afforded by a double bottom complying with this regulation.	For cargo ships of less than 80 m in length refer guidance contained in the explanatory notes (RESOLUTION MSC.429(98)) to Regulations 9.3.2.2, 9.6 and 9.7.

		3.2.2 For cargo ships of less than 80 m in length the arrangements shall provide a level of safety to the satisfaction of the Administration.	
8	II-1/9.5	In the case of passenger ships to which the provisions of regulation 1.5 apply and which are engaged on regular service within the limits of a short international voyage as defined in regulation III/3.22, the Administration may permit a double bottom to be dispensed with if satisfied that the fitting of a double bottom in that part would not be compatible with the design and proper working of the ship.	Proposals for non-fitment of a double bottom shall be considered on a case-by-case basis in the context of the overall safety of the ship and taking into account the area of operation.
9	II-1/9.6	Any part of a cargo ship of 80 m in length and upwards or of a passenger ship that is not fitted with a double bottom in accordance with paragraphs 1, 4 or 5, as specified in paragraph 2, shall be capable of withstanding bottom damages, as specified in paragraph 8, in that part of the ship. For cargo ships of less than 80 m in length the alternative arrangements shall provide a level of safety to the satisfaction of the Administration.	For cargo ships of less than 80 m in length refer guidance contained in the explanatory notes (RESOLUTION MSC.429(98)) to Regulations 9.3.2.2, 9.6 and 9.7.
10	II-1/10.7	In the case of unusual bottom arrangements in a cargo ship of 80 m in length and upwards or a passenger ship, it shall be demonstrated that the ship is capable of withstanding bottom damages as specified in paragraph 8. For cargo ships of less than 80 m in length the alternative arrangements shall provide a level of safety to the satisfaction of the Administration.	For cargo ships of less than 80 m in length refer guidance contained in the explanatory notes (RESOLUTION MSC.429(98)) to Regulations 9.3.2.2, 9.6 and 9.7.
11	II-1/12.6.3	If the forepeak is divided to hold two different kinds of liquids the Administration may allow the collision bulkhead to be pierced below the bulkhead deck of passenger ships and the freeboard deck of cargo ships by two pipes, each of which is fitted as required by paragraph 6.1, provided the Administration is satisfied that there is no practical alternative to the fitting of such a second pipe and that, having regard to the additional subdivision provided in the forepeak, the safety of the ship is maintained.	The arrangement shall be considered on case-by-case basis taking into account proposal demonstrating that there is no practical alternative to the fitting of such a second pipe and ensuring that the safety of the ship is maintained.
12	II-1/13.6.1	Each power-operated sliding watertight door: 3. shall be fitted with the necessary equipment to open and close the door using electric power, hydraulic power or any other form of power that is	The use of power other than electric and hydraulic shall be considered on case-by-case basis.

		acceptable to the Administration.	
13	II-1/13-1.4	Watertight doors or ramps of satisfactory construction may be fitted to internally subdivide large cargo spaces, provided that the Administration is satisfied that such doors or ramps are essential. These doors or ramps may be hinged, rolling or sliding doors or ramps, but shall not be remotely controlled. Should any of the doors or ramps be accessible during the voyage, they shall be fitted with a device which prevents unauthorized opening.	The arrangement shall be considered on case-by-case basis
14	II-1/15.2	The arrangement and efficiency of the means for closing any opening in the shell plating shall be consistent with its intended purpose and the position in which it is fitted and generally to the satisfaction of the Administration.	The interpretation provided in IACS UR S8 & S9 for Side shell door, bow door and stern door shall be followed.
15	II-1/15.8.4	Moving parts penetrating the shell plating below the deepest subdivision draught shall be fitted with a watertight sealing arrangement acceptable to the Administration. The inboard gland shall be located within a watertight space of such volume that, if flooded, the bulkhead deck of passenger ships and the freeboard deck of cargo ships will not be submerged. The Administration may require that if such compartment is flooded, essential or emergency power and lighting, internal communication, signals or other emergency devices must remain available in other parts of the ship.	The watertight sealing arrangements acceptable to Administration or RO to Administration. Ensuring that the bulkhead/freeboard deck is not submerged as a result of flooding the watertight space surrounding the inboard gland during approval process.
16	II-1/15.8.5	All shell fittings and valves required by this regulation shall be of steel, bronze or other approved ductile material. Valves of ordinary cast iron or similar material are not acceptable. All pipes to which this regulation refers shall be of steel or other equivalent material to the satisfaction of the Administration.	The requirement provided in IACS UR P2 shall be followed.
17	II-1/16.1.1	The design, materials and construction of all watertight closures such as doors, hatches, side scuttles, gangway and cargo ports, valves and pipes referred to in these regulations shall be to the satisfaction of the Administration.	<ul style="list-style-type: none"> • Pipes and valves shall compliance with requirement IACS UR P2 and recognized national / international standard • Gangway and cargo ports shall comply with relent rules classification society who are RO to Administration • Watertight doors, side scuttles, ash-chutes and rubbish chutes shall comply with recognized national /

			international standard
18	II-1/16-1	Watertight decks, trunks, tunnels, duct keels and ventilators shall be of the same strength as watertight bulkheads at corresponding levels. The means used for making them watertight, and the arrangements adopted for closing openings in them, shall be to the satisfaction of the Administration. Watertight ventilators and trunks shall be carried at least up to the bulkhead deck in passenger ships and up to the freeboard deck in cargo ships.	The arrangement shall be in compliance to relevant classification society rules who are RO to the Administration.
19	II-1/20	Water ballast should not in general be carried in tanks intended for oil fuel. In ships in which it is not practicable to avoid putting water in oil fuel tanks, oily-water separating equipment to the satisfaction of the Administration shall be fitted, or other alternative means, such as discharge to shore facilities, acceptable to the Administration shall be provided for disposing of the oily-water ballast.	The provisions of MARPOL Annex I/Reg.16.2 shall be complied
20	II-1/26.2	The Administration shall give special consideration to the reliability of single essential propulsion components and may require a separate source of propulsion power sufficient to give the ship a navigable speed, especially in the case of unconventional arrangements.	The arrangement shall be in compliance to relevant classification society rules who are RO to the Administration. In case of unconventional arrangements proposal shall be considered on case-by-case basis.
21	II-1/26.6	Main propulsion machinery and all auxiliary machinery essential to the propulsion and the safety of the ship shall, as fitted in the ship, be designed to operate when the ship is upright and when inclined at any angle of list up to and including 15°either way under static conditions and 22.5°under dynamic conditions (rolling) either way and simultaneously inclined dynamically(pitching) 7.5°by bow or stern. The Administration may permit deviation from these angles, taking into consideration the type, size and service conditions of the ship	The proposal substantiating angles other than specified in this regulation taking into consideration the type, size and service condition of the ship shall be submitted for the consideration.
22	II-1/27.5	Main turbine propulsion machinery and, where applicable, main internal combustion propulsion machinery and auxiliary machinery shall be provided with automatic shutoff arrangements in the case of failures such as lubricating oil supply failure which could lead rapidly to complete breakdown,	The following interpretation provided in MSC.1/Circ.1345 shall be followed: The consequences of overriding automatic shut-off

		serious damage or explosion. The Administration may permit provisions for overriding automatic shutoff devices.	arrangements should be established and documented.
23	II-1/29.1	Unless expressly provided otherwise, every ship shall be provided with a main steering gear and an auxiliary steering gear to the satisfaction of the Administration. The main steering gear and the auxiliary steering gear shall be so arranged that the failure of one of them will not render the other one inoperative.	<p>The main steering gear and axillary steering gear shall comply with requirements of SOLAS Ch. II-1/Reg.29.3 and 29.4, respectively. For steering system other than traditional arrangement the following interpretation provided in MSC.1/Circ.1416 & IACS UI SC.242 shall be followed.</p> <p>For a ship fitted with multiple steering-propulsion units, such as, but not limited to, azimuthing propulsors or water jet propulsion systems, each of the steering-propulsion units should be provided with a main steering gear and an auxiliary steering gear or with two or more identical steering actuating systems in compliance with interpretation of SOLAS regulation II-1/29.6.1. The main steering gear and the auxiliary steering gear should be so arranged that the failure of one of them will not render the other one inoperative.</p> <p>For a ship fitted with a single steering-propulsion unit, the requirement in SOLAS regulation II-1/29.1 is considered satisfied if the steering gear is provided with two or more steering actuating systems and is in compliance with interpretation of SOLAS regulation II-1/29.6.1. A detailed risk assessment should be submitted in order to demonstrate that in the case of any single failure.</p>
24	II-1/29.2.1	All the steering gear components and the rudder stock shall be of sound and reliable construction to the satisfaction of the Administration. Special consideration shall be given to the suitability of any essential component	The following interpretation provided in MSC.1/Circ.1416 & IACS UI SC.242 shall be followed

		<p>which is not duplicated. Any such essential component shall, where appropriate, utilize antifriction bearings such as ball-bearings, roller bearings or sleeve-bearings which shall be permanently lubricated or provided with lubrication fittings.</p>	<p>All components used in steering arrangements for ship directional control should be of sound reliable construction to the satisfaction of the Administration or recognized organizations acting on its behalf. Special consideration should be given to the suitability of any essential component which is not duplicated. Any such essential component should, where appropriate, utilize anti-friction bearings such as ball bearings, roller bearings or sleeve bearings which should be permanently lubricated or provided with lubrication fittings.</p>
25	II-1/29.2.2	<p>The design pressure for calculations to determine the scantlings of piping and other steering gear components subjected to internal hydraulic pressure shall be at least 1.25 times the maximum working pressure to be expected under the operational conditions specified in paragraph 3.2, taking into account any pressure which may exist in the low-pressure side of the system. At the discretion of the Administration, fatigue criteria shall be applied for the design of piping and components, taking into account pulsating pressures due to dynamic loads.</p>	<p>The requirements specified in IACS UR M42 shall be followed</p>
26	II-1/29.6.3	<p>Steering gears, other than of the hydraulic type, shall achieve standards equivalent to the requirements of this paragraph to the satisfaction of the Administration.</p>	<p>The proposal shall be considered on case-by-case basis taking into account interpretation provided in MSC.1/Circ.1416 and IACS UI SC.242</p>
27	II-1/32.1	<p>Every steam boiler and every unfired steam generator shall be provided with not less than two safety valves of adequate capacity. However, having regard to the output or any other features of any boiler or unfired steam generator, the Administration may permit only one safety valve to be fitted if it is satisfied that adequate protection against overpressure is thereby provided.</p>	<p>The following interpretation provided in MSC.1/Circ.1286 shall be followed With respect to the application of SOLAS regulation II-1/32.1, for redundant requirement of safety valves for steam boilers and unfired steam generators, the satisfaction of the Administration that adequate protection against overpressure is provided should be confirmed by carrying out a satisfactory technical risk assessment.</p>

28	II-1/35-1.3.1	The bilge pumping system required by paragraph 2.1 shall be capable of operation under all practicable conditions after a casualty whether the ship is upright or listed. For this purpose wing suction shall generally be fitted except in narrow compartments at the end of the ship where one suction may be sufficient. In compartments of unusual form, additional suction may be required. Arrangements shall be made whereby water in the compartment may find its way to the suction pipes. Where, for particular compartments, the Administration is satisfied that the provision of drainage may be undesirable, it may allow such provision to be dispensed with if calculations made in accordance with the conditions laid down in regulations 7 and 8 show that the survival capability of the ship will not be impaired	The arrangement shall be considered on case-by-case basis taking into account damage stability calculations to ensure that the survival capability of the ship is not impaired.
29	II-1/35-1/3.6	Each power bilge pump shall be capable of pumping water through the required main bilge pipe at a speed of not less than 2 m/s. Independent power bilge pumps situated in machinery spaces shall have direct suction from these spaces, except that not more than two such suction shall be required in any one space. Where two or more such suction are provided, there shall be at least one on each side of the ship. The Administration may require independent power bilge pumps situated in other spaces to have separate direct suction. Direct suction shall be suitably arranged and those in a machinery space shall be of a diameter not less than that required for the bilge main.	Every power bilge pump shall have a direct suction from the space in which it is situated provided that not more than two direct suction shall be required in any one space ,where two or more direct suction are provided there shall be at least one on the port side and one on the starboard side.
30	II-1/35-1.3.7.2	Where in the opinion of the Administration the main circulating pump is not suitable for this purpose, a direct emergency bilge suction shall be led from the largest available independent power-driven pump to the drainage level of the machinery space; the suction shall be of the same diameter as the main inlet of the pump used. The capacity of the pump so connected shall exceed that of a required bilge pump by an amount deemed satisfactory by the Administration.	The capacity of the pump shall be at least equal to bilge pump.
31	II-1/35-1.4	At least two power pumps connected to the main bilge system shall be	The dispensation from the need to fit bilge pumping

		provided, one of which may be driven by the propulsion machinery. If the Administration is satisfied that the safety of the ship is not impaired, bilge pumping arrangements may be dispensed with in particular compartments.	arrangement for particular compartment will be considered on case-by-case basis taking into account damage stability calculations to ensure that the survival capability of the ship is not impaired
32	II-1/41.4	Where the total installed electrical power of the main generating sets is in excess of 3 MW, the main busbars shall be subdivided into at least two parts which shall normally be connected by removable links or other approved means; so far as is practicable, the connection of generating sets and any other duplicated equipment shall be equally divided between the parts. Equivalent arrangements may be permitted to the satisfaction of the Administration.	<p>The interpretation provided in IACS UI SC 136 shall be followed. The other approved means can be achieved by:</p> <ul style="list-style-type: none"> • .1 circuit breaker without tripping mechanism; or • .2 disconnecting link or switch by which bus bars can be split easily and safely. <p>Bolted links, for example bolted busbar sections, shall not be acceptable.</p>
33	II-1/42.1.3	The location of the emergency source of electrical power and associated transforming equipment, if any, the transitional source of emergency power, the emergency switchboard and the emergency electric lighting switchboards in relation to the main source of electrical power, associated transforming equipment, if any, and the main switchboard shall be such as to ensure to the satisfaction of the Administration that a fire or other casualty in spaces containing the main source of electrical power, associated transforming equipment, if any, and the main switchboard or in any machinery space of category A will not interfere with the supply, control and distribution of emergency electrical power. As far as practicable, the space containing the emergency source of electrical power, associated transforming equipment, if any, the transitional source of emergency electrical power and the emergency switchboard shall not be contiguous to the boundaries of machinery spaces of category A or those spaces containing the main source of electrical power, associated transforming equipment, if any, or the main switchboard.	<p>a) Ensuring that emergency generator room and/or emergency battery and switchboard room shall not be contiguous to the boundaries of machinery spaces of category A or spaces containing the main source of electrical power, main switchboard and associated equipment.</p> <p>b) Attention shall also to be paid to location and operation of any control equipment which is necessary for supply, distribution of emergency power</p> <p>c). Cables for emergency services shall be laid clear of galleys, laundries, machinery spaces of category A and other high fire risk areas Where they pass through such areas then such cables arrangement and type is to meet UR E 15.</p>
34	II-1/43.1.3	The location of the emergency source of electrical power, associated transforming equipment, if any, the transitional source of emergency power, the emergency switchboard and the emergency lighting switchboard in	a) Ensuring that emergency generator room and/or emergency battery and switchboard room shall not be contiguous to the boundaries of machinery spaces of category

		<p>relation to the main source of electrical power, associated transforming equipment, if any, and the main switchboard shall be such as to ensure to the satisfaction of the Administration that a fire or other casualty in the space containing the main source of electrical power, associated transforming equipment, if any, and the main switchboard, or in any machinery space of category A will not interfere with the supply, control and distribution of emergency electrical power. As far as practicable the space containing the emergency source of electrical power, associated transforming equipment, if any, the transitional source of emergency electrical power and the emergency switchboard shall not be contiguous to the boundaries of machinery spaces of category A or those spaces containing the main source of electrical power, associated transforming equipment, if any, and the main switchboard.</p>	<p>A or spaces containing the main source of electrical power, main switchboard and associated equipment.</p> <p>b) Attention shall also to be paid to location and operation of any control equipment which is necessary for supply, distribution of emergency power</p> <p>c). Cables for emergency services shall be laid clear of galleys, laundries, machinery spaces of category A and other high fire risk areas Where they pass through such areas then such cables arrangement and type is to meet UR E 15.</p>
35	II-1/44.1	<p>Emergency generating sets shall be capable of being readily started in their cold condition at a temperature of 0° C. If this is impracticable, or if lower temperatures are likely to be encountered, provision acceptable to the Administration shall be made for the maintenance of heating arrangements, to ensure ready starting of the generating sets.</p>	<p>The provision for the maintenance of heating arrangements, to ensure ready starting of the generating sets shall be considered on case-by-case basis</p>
36	II-1/45.3.3	<p>Where the hull return system is used, all final subcircuits, i.e. all circuits fitted after the last protective device, shall be two-wire and special precautions shall be taken to the satisfaction of the Administration.</p>	<p>All final sub-circuits shall consist of two insulated wires, the hull return being achieved by connecting to the hull one of the busbars of the distribution board from which they originate.</p> <p>Earth wires shall be in accessible locations to permit their ready examination and to enable their disconnection for testing of insulation (Refer IACS UI SC 8).</p>
37	II-1/45.5.4	<p>Where cables which are installed in hazardous areas introduce the risk of fire or explosion in the event of an electrical fault in such areas, special precautions against such risks shall be taken to the satisfaction of the Administration.</p>	<p>The interpretation provided by IACS UI SC 12 shall be followed .</p> <p>Special precautions shall be as follows:</p> <p>1. Cables to be appropriately sheathed according to intended environment.</p>

			<p>2. Cables to be suitably protected against mechanical damage.</p> <p>3. Electrical and mechanical segregation of intrinsically safe circuits from other circuits.</p> <p>4. Effective earthing of metal coverings of cables.</p>
38	II-1/45.9.3	Accumulator batteries shall not be located in sleeping quarters except where hermetically sealed to the satisfaction of the Administration.	<p>Accumulator batteries shall not be installed in sleeping accommodation spaces.</p> <p>An exception could be battery systems using gastight cells, where charging does not result in the development of harmful gases.</p> <p>Examples : hermetically sealed batteries/ .Self-contained battery operated lights</p>
39	II-1/45.11	In tankers, electrical equipment, cables and wiring shall not be installed in hazardous locations unless it conforms with standards not inferior to those acceptable to the Organization. However, for locations not covered by such standards, electrical equipment, cables and wiring which do not conform to the standards may be installed in hazardous locations based on a risk assessment to the satisfaction of the Administration, to ensure that an equivalent level of safety is assured.	<p>The compliance with Classification rules, who are RO to the Administration and any relevant IEC standards (i.e. IEC 60092-502:1999: Electrical installations in ships – Tankers) (<i>Reference: UI SC274 IACS Int. 2015/Rev.1 2021</i>)</p> <p>Further, following interpretation provided by IACS UI SC 274 shall be followed :</p> <p>Where the prescriptive requirements within SOLAS and related Codes (IBC, IGC) and the standards published by the International Electro technical Commission, such as but not limited to IEC 60092-502:1999, are not aligned, the prescriptive requirements in SOLAS and Codes take precedence and are to be applied. The differences revealed between the abovementioned documents are listed in Annex of SC 274</p>
39	II-1/46.2	Measures shall be taken to the satisfaction of the Administration to ensure that the equipment is functioning in a reliable manner and that satisfactory arrangements are made for regular inspections and routine tests to ensure	<p>The following measures shall be considered:</p> <ul style="list-style-type: none"> • Survey by classification society who is RO to the administration

		continuous reliable operation.	<ul style="list-style-type: none"> Follow regular engine watch keeping checks and routines. Frequency of inspection and test shall be guided by OEM or standard vessel practice. Elements relating to UMS operation (including stand-by systems) shall be specifically part of PMS / ISM.
40	II-1/46.3	Every ship shall be provided with documentary evidence, to the satisfaction of the Administration, of its fitness to operate with periodically unattended machinery spaces.	The vessel shall be in possession class certificate indicating specific notations to operate with periodically unattended machinery spaces.
41	II-2/53	The special requirements for the machinery, boiler and electrical installations shall be to the satisfaction of the Administration and shall include at least the requirements of this Regulation.	<p>The requirement contained in Regulation II-1/53 shall be followed as minimum. Further, IACS UI SC 14 shall be referred for guidance on applicability, which states that this regulation is applicable to stand-by machines required by the Rules of the individual Societies for:</p> <ol style="list-style-type: none"> oil engines for propulsion purposes, steam turbines for propulsion purposes, gas turbines for propulsion purposes, Controllable pitch propellers.
Chapter II-2 Construction – Fire Protection, Fire Detection and Fire Extinction			
42	II-2/1.6.2.1	A liquid cargo with a flashpoint of less than 60°C for which a regular foam fire fighting system complying with the Fire Safety Systems Code is not effective, is considered to be a cargo introducing additional fire hazards in this context. The following additional measures are required: .2 the type of foam concentrates for use in chemical tankers shall be to the satisfaction of the Administration taking into account the guidelines developed by the Organization	The guidelines provided in MSC.1/Circ.1312 and Corr.1 shall be followed.
43	II-2/1.6.6	Chemical tankers and gas carriers shall comply with the requirements for tankers, except where alternative and supplementary arrangements are provided to the satisfaction of the Administration, having due regard	Alternative and supplementary requirements specified in IBC Code and IGC Code shall be considered for Chemical tankers and gas carriers, respectively. Any other alternative arrangement shall be

		to the provisions of the International Bulk Chemical Code and the International Gas Carrier Code, as appropriate.	considered case-by-case basis.
44	II-2/4.2.2.5.1	Oil fuel pipes and their valves and fittings shall be of steel or other approved material, except that restricted use of flexible pipes shall be permissible in positions where the Administration is satisfied that they are necessary. Such flexible pipes and end attachments shall be of approved fire-resisting materials of adequate strength and shall be constructed to the satisfaction of the Administration. For valves, fitted to oil fuel tanks and under static pressure, steel or spheroidal-graphite cast iron may be accepted. However, ordinary cast iron valves may be used in piping systems where the design pressure is lower than 7 bar and the design temperature is below 60°C.	<p>The use flexible hose shall be permitted where it is necessary to accommodate relative movement between the machinery and the fixed piping.</p> <p>Flexible pipes and end attachments shall be of approved fire-resisting materials in accordance with ISO15540:1999, Fire resistance of hose assemblies - test methods and ISO15541:1999, Fire resistance of hose assemblies.</p>
45	II-2/4.5.1.4	<p>In combination carriers only:</p> <p>4. Where cargo wing tanks are provided, cargo oil lines below deck shall be installed inside these tanks. However, the Administration may permit cargo oil lines to be placed in special ducts provided these are capable of being adequately cleaned and ventilated to the satisfaction of the Administration. Where cargo wing tanks are not provided, cargo oil lines below deck shall be placed in special ducts.</p>	<p>The arrangement shall be considered on case-by-case basis taking in to account following requirements of IACS UR F26</p> <p>Pipe ducts in the double bottom shall comply with the following requirements:</p> <p>(i) They should not communicate with the engine room.</p> <p>(ii) Provision shall be made for at least two exits to the open deck arranged at a maximum distance from each other. One of these exits fitted with a watertight closure may lead to the cargo pumproom.</p> <p>(iii) In the duct, provision shall be made for adequate mechanical ventilation.</p>
46	II-2/4.5.3.3	The venting system shall be provided with devices to prevent the passage of flame into the cargo tanks. The design, testing and locating of these devices shall comply with the requirements established by the Administration based on the guidelines developed by the Organization. Ullage openings shall not be used for pressure equalization. They shall be provided with self-closing and tightly sealing covers. Flame arresters	The Revised standards for the design, testing and locating of devices to prevent the passage of flame into cargo tanks in tankers (MSC/Circ.677), as amended by MSC/Circ. 1009, and to the Revised factors to be taken into consideration when designing cargo tank venting and gas-freeing arrangements (MSC/Circ.731) shall be referred

		and screens are not permitted in these openings.	
47	II-2/4.5.5.2.1	<p>The requirements for inert gas systems contained in the Fire Safety Systems Code need not be applied to chemical tankers constructed before 1 January 2016, including those constructed before 1 July 2012, and all gas carriers:</p> <p>.1 when carrying cargoes described in regulation 1.6.1, provided that they comply with the requirements for inert gas systems on chemical tankers established by the Administration, based on the guidelines developed by the Organization.</p>	<p>The regulation for inert gas system on chemical tankers adopted by IMO by resolution A.567(14) and Corr.1 shall be followed.</p>
48	II-2/4.5.6.3	<p>The arrangements for inerting, purging or gas-freeing of empty tanks as required in paragraph 5.5.3.1 shall be to the satisfaction of the Administration and shall be such that the accumulation of hydrocarbon vapours in pockets formed by the internal structural members in a tank is minimized and that:</p> <p>.1 on individual cargo tanks, the gas outlet pipe, if fitted, shall be positioned as far as practicable from the inert gas/air inlet and in accordance with paragraph 5.3 and regulation 11.6. The inlet of such outlet pipes may be located either at deck level or at not more than 1 m above the bottom of the tank;</p> <p>.2 the cross-sectional area of such gas outlet pipe referred to in paragraph 5.6.3.1 shall be such that an exit velocity of at least 20 m/s can be maintained when any three tanks are being simultaneously supplied with inert gas. Their outlets shall extend not less than 2 m above deck level; and</p> <p>.3 each gas outlet referred to in paragraph 5.6.3.2 shall be fitted with suitable blanking arrangements.</p>	<p>The following interpretation provided in MSC/Circ.1120 shall be followed</p> <ol style="list-style-type: none"> 1. The outlets mentioned in regulation 4.5.6.1 should be located in compliance with regulation 4.5.3.4.1.3 as far as the horizontal distance is concerned. 2. Refer to MSC/Circ.677, as amended by MSC/Circ.1009 - Revised standards for the design, testing and locating of devices to prevent the passage of flame into cargo tanks in oil tankers, and to MSC/Circ.731 - Revised factors to be taken into consideration when designing cargo tank venting and gas-freeing arrangements.
49	II-2/5.2.2.5	<p>In passenger ships, the controls required in paragraphs 2.2.1 to 2.2.4 and in regulations 8.3.3 and 9.5.2.3 and the controls for any required fire-extinguishing system shall be situated at one control position or</p>	<p>The proposal shall be considered on case-by-case basis taking into consideration of safe access from the open deck.</p>

		grouped in as few positions as possible to the satisfaction of the Administration. Such positions shall have a safe access from the open deck.	
50	II-2/7.3.2	The function of fixed fire detection and fire alarm systems shall be periodically tested to the satisfaction of the Administration by means of equipment producing hot air at the appropriate temperature, or smoke or aerosol particles having the appropriate range of density or particle size, or other phenomena associated with incipient fires to which the detector is designed to respond.	Testing equipment shall be in accordance with the manufacturer's recommendations / instructions. The function of fixed fire detection and fire alarm systems required by the relevant regulations of this chapter shall be tested under varying conditions of ventilation after installation.
51	II-2/7.6	A fixed fire detection and fire alarm system or a sample extraction smoke detection system shall be provided in any cargo space which, in the opinion of the Administration, is not accessible, except where it is shown to the satisfaction of the Administration that the ship is engaged on voyages of such short duration that it would be unreasonable to apply this requirement.	The proposal shall be considered on case-by-case basis taking into account size and service condition of the ship.
52	II-2/8.3.4	3.4 In passenger ships, the controls required by paragraph 3.3 shall be situated at one control position or grouped in as few positions as possible to the satisfaction of the Administration. Such positions shall have a safe access from the open deck.	The proposal shall be considered on case-by-case basis taking into consideration of safe access from the open deck.
53	II-2/9.2..2.3.1	In addition to complying with the specific provisions for fire integrity of bulkheads and decks of passenger ships, the minimum fire integrity of all bulkheads and decks shall be as prescribed in tables 9.1 and 9.2. Where, due to any particular structural arrangements in the ship, difficulty is experienced in determining from the tables the minimum fire integrity value of any divisions, such values shall be determined to the satisfaction of the Administration.	The proposal shall be considered on case-by-case basis
54	II-2/9.2.2.4.4	External boundaries which are required in regulation 11.2 to be of steel or other equivalent material may be pierced for the fitting of windows and sidescuttles provided that there is no requirement for such	Doors shall be constructed with Steel or other equivalent material. The other equivalent material means any non-combustible material, which, by itself or due to insulation provided, has

		boundaries of passenger ships to have "A" class integrity. Similarly, in such boundaries which are not required to have "A" class integrity, doors may be constructed of materials which are to the satisfaction of the Administration.	structural and integrity properties equivalent to steel at the end of the applicable fire exposure to the standard fire test.
55	II-2/9. 2.3.3.4	External boundaries which are required in regulation 11.2 to be of steel or other equivalent material may be pierced for the fitting of windows and sidescuttles provided that there is no requirement for such boundaries of cargo ships to have "A" class integrity. Similarly, in such boundaries which are not required to have "A" class integrity, doors may be constructed of materials which are to the satisfaction of the Administration.	Doors shall be constructed with Steel or other equivalent material. The other equivalent material means any non-combustible material, which, by itself or due to insulation provided, has structural and integrity properties equivalent to steel at the end of the applicable fire exposure to the standard fire test.
56	II-2/9. 2.4.2.4	External boundaries which are required in regulation 11.2 to be of steel or other equivalent material may be pierced for the fitting of windows and sidescuttles provided that there is no requirement for such boundaries of tankers to have "A" class integrity. Similarly, in such boundaries which are not required to have "A" class integrity, doors may be constructed of materials which are to the satisfaction of the Administration.	Doors shall be constructed with Steel or other equivalent material. The other equivalent material means any non-combustible material, which, by itself or due to insulation provided, has structural and integrity properties equivalent to steel at the end of the applicable fire exposure to the standard fire test.
57	II-2/9. 5.2.4	In passenger ships, the means of control required in paragraph 5.2.3 shall be situated at one control position or grouped in as few positions as possible to the satisfaction of the Administration. Such positions shall have safe access from the open deck.	The arrangement shall be considered on case-by-case basis taking into consideration of safe access from the open deck.
58	II-2/10. 2.1.2	Ready availability of water supply The arrangements for the ready availability of water supply shall be: .2 in cargo ships: .2.1 to the satisfaction of the Administration; and	The arrangement of fire pump is to be such that the at least one of the fire pumps shall be readily available for fire duty.
59	II-2/10. 2.3.2.1	Ships shall be provided with fire hoses the number and diameter of which shall be to the satisfaction of the Administration.	The hose diameter shall be maximum of 64 mm and minimum of 38 mm and they shall be lined.
60	II-2/10.	Accommodation spaces, service spaces and control stations shall be	The interpretation provided in IMO MSC.1Circ.1275 shall be

	3.2.1	provided with portable fire extinguishers of appropriate types and in sufficient number to the satisfaction of the Administration. Ships of 1,000 gross tonnage and upwards shall carry at least five portable fire extinguishers.	followed.
61	II-2/10. 7.1.2	Where it is shown to the satisfaction of the Administration that a passenger ship is engaged on voyages of such short duration that it would be unreasonable to apply the requirements of paragraph 7.1.1 and also in ships of less than 1,000 gross tonnage, the arrangements in cargo spaces shall be to the satisfaction of the Administration, provided that the ship is fitted with steel hatch covers and effective means of closing all ventilators and other openings leading to the cargo spaces	The proposal may be considered on case-by-case basis taking into account size and service condition of the vessel.
62	II-2/10. 7.3.2.4	The operational performance of each mobile water monitor shall be tested during initial survey on board the ship to the satisfaction of the Administration.	The test shall verify that: .1 the mobile water monitor can be securely fixed to the ship structure ensuring safe and effective operation; and .2 the mobile water monitor jet reaches the top tier of containers with all required monitors and water jets from fire hoses operated simultaneously.
63	II-2/13. 3.1.4	If a radiotelegraph station has no direct access to the open deck, two means of escape from or access to, the station shall be provided, one of which may be a porthole or window of sufficient size or other means to the satisfaction of the Administration.	The clear opening size shall be of 600mm X 600 mm
64	II-2/13. 3.2.6.2	Escape doors from public spaces that are normally latched shall be fitted with a means of quick release. Such means shall consist of a door-latching mechanism incorporating a device that releases the latch upon the application of a force in the direction of escape flow. Quick release mechanisms shall be designed and installed to the satisfaction of the Administration.	The design and installation shall in compliance with classification society rules who is RO to the Administration and shall take in account following requirement of SOLAS II-2/13.3.2.6.2: Quick release mechanisms shall be designed and installed to the satisfaction of the Administration and, in particular: .1 consist of bars or panels, the actuating portion of which extends across at least one half of the width of the door leaf, at least 760 mm and not more than 1120 mm above the deck;

			<p>.2 cause the latch to release when a force not exceeding 67 N is applied; and</p> <p>.3 not be equipped with any locking device, set screw or other arrangement that prevents the release of the latch when pressure is applied to the releasing device</p>
65	II-2/13. 5.1	In special category and open ro-ro spaces to which any passengers carried can have access, the number and locations of the means of escape both below and above the bulkhead deck shall be to the satisfaction of the Administration and, in general, the safety of access to the embarkation deck shall be at least equivalent to that provided for under paragraphs 3.2.1.1, 3.2.2, 3.2.4.1 and 3.2.4.2. Such spaces shall be provided with designated walkways to the means of escape with a breadth of at least 600 mm. The parking arrangements for the vehicles shall maintain the walkways clear at all times.	The arrangement shall be considered on case-by-case basis taking into account requirements under paragraphs 3.2.1.1, 3.2.2, 3.2.4.1 and 3.2.4.2 of SOLAS II-2/13.
66	II-2/19. 3.1.2	The quantity of water delivered shall be capable of supplying four nozzles of a size and at pressures as specified in regulation 10.2, capable of being trained on any part of the cargo space when empty. This amount of water may be applied by equivalent means to the satisfaction of the Administration.	<p>The following interpretation provided in IMO MSC/Circ.1120 shall be followed:</p> <p>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.</p>
67	II-2/20. 4.1	Except as provided in paragraph 4.3.1, there shall be provided a fixed fire detection and fire alarm system complying with the requirements of the Fire Safety Systems Code. The fixed fire 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	A fixed fire detection and fire alarm system shall comply with the requirements of the Fire Safety Systems Code. Additionally, the requirements contained in para.2 of MSC.1/Circ.1615 shall be referred.

the satisfaction of the Administration.

Chapter III – Life Saving Appliances and Equipments

68	III/4.3	Before giving approval to life-saving appliances and arrangements, the Administration shall ensure that such life-saving appliances and arrangements: 1.2 have successfully undergone, to the satisfaction of the Administration, tests which are substantially equivalent to those specified in those recommendations.	The proposal for testing standard equivalent to “Recommendation on Testing of Life-Saving Appliances adopted by the Organization by resolution A.689(17). For life-saving appliances installed on board on or after 1 July 1999, refer to the Revised Recommendations on testing of life-saving appliances adopted by the Maritime Safety Committee of the Organization by resolution MSC. 81(70)” shall be considered on case-by-case basis.
69	III/4.6	Life-saving appliances required by this chapter for which detailed specifications are not included in the Code shall be to the satisfaction of the Administration.	Life-saving appliances meeting specifications of national or international standard shall be followed.
70	III/7. 2.2	Lifejackets shall be so placed as to be readily accessible and their position shall be plainly indicated. Where, due to the particular arrangements of the ship, the lifejackets provided in compliance with the requirements of paragraph 2.1 may become inaccessible, alternative provisions shall be made to the satisfaction of the Administration which may include an increase in the number of Lifejackets to be carried.	The proposal shall be considered on case-by-case basis.

Chapter IV – Radio Communication

71	IV/16.1	Every ship shall carry personnel qualified for distress, urgency and safety communications purposes to the satisfaction of the Administration. The personnel shall be holders of the appropriate certificates specified in the Radio Regulations; one of the personnel shall be designated as having primary responsibility for communications during distress incidents.	Personnel qualified for distress, urgency and safety communications purposes to hold valid GMDSS G.O.C with STCW endorsement.
72	IV/17	A record shall be kept on board, to the satisfaction of the Administration and as required by the Radio Regulations, of all incidents connected with the radio communication services which appear to be of importance to safety of life at sea	The GMDSS log book shall be maintained and entries could include following: a) records of communications relating to distress, urgency and safety traffic, records of important incidents connected with

- the radio service, regular positions of the ship,
- b) results of tests (daily, weekly and monthly) carried out on the radio equipment
- c) Retention period of such GMDSS log book can be of 3 years

Chapter V – Safety of Navigation

73	V/23.3.3	<p>Safe and convenient access to, and egress from, the ship shall be provided by either:</p> <p>.1 a pilot ladder requiring a climb of not less than 1.5 m and not more than 9 m above the surface of the water so positioned and secured that:</p> <p>.1.3 each step rests firmly against the ship's side; where constructional features, such as rubbing bands, would prevent the implementation of this provision, special arrangements shall, to the satisfaction of the Administration, be made to ensure that persons are able to embark and disembark safely.</p>	<p>The requirement specified in para.6 of IMO Resolution A.1045(27) shall be followed</p> <p>“Where rubbing bands or other constructional features might prevent the safe approach of a pilot boat, these should be cut back to provide at least 6 metres of unobstructed ship's side. Specialized offshore ships less than 90 m or other similar ships less than 90 m for which a 6 m gap in the rubbing bands would not be practicable, as determined by the Administration, do not have to comply with this requirement. In this case, other appropriate measures should be taken to ensure that persons are able to embark and disembark safely.”</p>
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Chapter VI – Safety of Cargoes

74	VI/3.1	<p>When transporting a solid bulk cargo which is liable to emit a toxic or flammable gas, or cause oxygen depletion in the cargo space, an appropriate instrument for measuring the concentration of gas or oxygen in the air shall be provided together with detailed instructions for its use. Such an instrument shall be to the satisfaction of the Administration.</p>	<p>The instrument for measuring the concentration of gas or oxygen in the air shall be in compliance with recognized national / international standard (e.g., ISO 19891-1:2017, IEC 62990-1:2019)</p>
75	VI/6.1	<p>Prior to loading a solid bulk cargo, the master shall be in possession of comprehensive information on the ship's stability and on the distribution of cargo for the standard loading conditions. The method of providing such information shall be to the satisfaction of the Administration.</p>	<p>The requirement of SOLAS - II-1/5-1 shall be referred. Further, the following provisions of regulation 7 of IMSBC Code Part B -Special provisions for solid bulk cargoes (Loading, unloading and stowage of solid bulk cargoes) shall be followed</p> <p>2. To enable the master to prevent excessive stresses in the</p>

			<p>ship's structure, the ship shall be provided with a booklet, which shall be written in a language with which the ship's officers responsible for cargo operations are familiar. If this language is not English, the ship shall be provided with a booklet written also in the English language. The booklet shall, as a minimum, include:</p> <ul style="list-style-type: none"> .1 stability data, as required by solas regulation II-1/5-1; .2 ballasting and de-ballasting rates and capacities; .3 maximum allowable load per unit surface area of the tank top plating; .4 maximum allowable load per hold; .5 ship's structure including any limitations on the most adverse operating conditions during loading, unloading, ballasting operations and the voyage; .6 any special restrictions such as limitations on the most adverse operating conditions imposed by the Administration or organization recognized by it, if applicable; and .7 Where strength calculations are required, maximum permissible forces and moments on the ship's hull during loading, unloading and the voyage. <p>Additionally, the Code of Practice for the Safe Loading and Unloading of Bulk Carriers (BLU Code) adopted by the Organization by resolution A.862(20), as amended shall be referred.</p>
76	VI/9.2	<p>A ship without such a document shall not load grain until the master satisfies the Administration, or the Contracting Government of the port of loading on behalf of the Administration, that the ship will comply with the requirements of the International Grain Code in its proposed loaded condition.</p>	<p>The International Grain Code shall be followed.</p>