Subject: Amendments to SOLAS, Chapter II-1, Part B by MSC421.(98) EIF on 1st January 2020

Amendments to The IMO has introduced some new regulations to SOLAS part B according to MSC.421(98) was entered into force on 01.01.2020, and all applicable ships should be complied with revised requirement prior to date of EIF.

Compliance Dates:

Enter Into Force date for amendment is 1 January 2020.

Application:

- Unless expressly provided otherwise, **parts B, B-1, B-2 and B-4 of Chapter II-1 as amended by MSC.421(98), shall only apply to ships**:
  1. For which the **building contract is placed on or after 1 January 2020**; or
  2. In the absence of a building contract, the keel of which is laid or which are at a similar stage of construction **on or after 1 July 2020**; or
  3. The delivery of which is **on or after 1 January 2024**.

- Unless expressly provided otherwise, for ships not subject to the provisions of above subparagraph, **but constructed on or after 1 January 2009**, the Administration shall:

  1. ensure that the requirements in parts B, B-1, B-2 and B-4 which are applicable under chapter II-1 of the International Convention for the Safety of Life at Sea, 1974, as amended by resolutions MSC.216(82), MSC.269(85) and MSC.325(90) are complied with; and
  2. ensure that the requirements of regulation 19-1 are complied with."

- Unless expressly provided otherwise, **for ships constructed before 1 January 2009**, the Administration shall:
  3. ensure that the requirements which are applicable under chapter II-1 of the International Convention for the Safety of Life at Sea, 1974, as amended by resolutions MSC.1(XLV), MSC.6(48), MSC.11(55), MSC.12(56), MSC.13(57), MSC.19(58), MSC.26(60), MSC.27(61), Resolution 1 of the 1995 SOLAS Conference, MSC.47(66), MSC.57(67), MSC.65(68), MSC.69(69), MSC.99(73), MSC.134(76), MSC.151(78) and MSC.170(79) are complied with; and
  4. ensure that the requirements of regulation 19-1 are complied with."

Descriptions & revised requirements for ships:

A summary of the decisions taken at MSC.421(98) concerning the chapter II-1 of the International Convention for the Safety of Life at Sea, (SOLAS) rule part B is provided as below for your information.

Note: For more information on the topics, please see attachment 1

PART B-1 (STABILITY)

❖ Regulation 5 – Intact stability, shall apply to cargo ships

The existing paragraph 1 is replaced with the following:

- 1. Every passenger ship, regardless of size, and every cargo ship having a length (L) of 24 m and upwards, shall be inclined upon its completion. **The lightship displacement and the longitudinal, transverse and vertical position of its center of gravity shall be determined.** In addition to any other applicable requirements of the present regulations, ships having a length of 24 m and upwards shall as a minimum comply with the requirements of part A of the 2008 IS Code.

❖ Regulation 5-1 – Stability information to be supplied to the master, shall apply to cargo ships other than tankers, as defined in regulation I/2(h)

The existing paragraphs 1 and 2 are replaced with the following:

- 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."
- 2. Curves or tables of minimum operational metacentric height (GM) **and maximum permissible trim versus** draught which assures compliance with the intact and damage stability requirements where applicable, alternatively corresponding curves or tables of the maximum allowable vertical center of gravity (KG) **and maximum permissible trim** versus draught, or with the equivalents of either of these curves or tables;"

The existing paragraphs 3 and 4 are replaced and paragraph 5 is added with the following:

- 3. The intact and damage stability information required by regulation 5-1.2 shall be presented as consolidated data and encompass the full operating range of draught and trim. Applied trim values shall coincide in all stability information intended for use on board. Information not required for determination of stability and trim limits should be excluded from this information.
- 4. If the damage stability is calculated in accordance with regulation 6 to regulation 7-3 and, if applicable, with regulations 8 and 9.8, a stability limit curve is to be determined using linear interpolation between the minimum required *GM* assumed for each of the three

draughts d_s, d_p and d_l. When additional subdivision indices are calculated for different trims, a single envelope curve based on the minimum values from these calculations shall be presented. When it is intended to develop curves of maximum permissible *KG* it shall be ensured that the resulting maximum *KG* curves correspond with a linear variation of *GM*.

- 5. As an alternative to a single envelope curve, the calculations for additional trims may be carried out with one common *GM* for all of the trims assumed at each subdivision draught. The lowest values of each partial index *As*, *Ap* and *Al* across these trims shall then be used in the summation of the attained subdivision index *A* according to regulation 7.1. This will result in one *GM* limit curve based on the *GM* used at each draught. A trim limit diagram showing the assumed trim range shall be developed.

❖ Regulation 6 – Required subdivision index R

- For ships to which the damage stability requirements of this part apply, the degree of subdivision to be provided shall be determined by the required subdivision index R, as follows:

- In the case of cargo ships greater than 100 m in length

$$R = 1 - \frac{128}{L_s + 152}$$

- In the case of cargo ships not less than 80 m in length (L) and not greater than 100 m in length (Ls):

$$R = 1 - [1/(1 + \frac{Ls}{100} \times \frac{R_0}{1 - R_0})]$$

- In the case of passenger ships:

Persons on board	R
N < 400	R = 0.722
400 ≤ N ≤ 1,350	R = N / 7,580 + 0.66923
1,350 < N ≤ 6,000	R = 0.0369 × Ln (N + 89.048) + 0.579
N > 6,000	R = 1 - (852.5 + 0.03875 × N) / (N + 5,000)

N = total number of persons on board."

❖ Regulation7 - Attained subdivision index A

The existing paragraphs 2 and 3 are replaced with the following:

- 2. As a minimum, the calculation of A shall be carried out at the level trim for the deepest subdivision draught ds and the partial subdivision draught d_p. The estimated service trim may be used for the light service draught dl. If, in any anticipated service condition within the draught range from ds to dl, the trim variation in comparison with the calculated trims is greater than 0.5% of L, one or more additional calculations of A are to be performed for

the same draughts but including sufficient trims to ensure that, for all intended service conditions, the difference in trim in comparison with the reference trim used for one calculation will be not more than 0.5% of L. Each additional calculation of A shall comply with regulation 6.1.

- 3. When determining the positive righting lever (GZ) of the residual stability curve in the intermediate and final equilibrium stages of flooding, the displacement used should be that of the intact loading condition. All calculations should be done with the ship freely trimming."

❖ Regulation 7-2 – Calculation of the factor S_i:

The existing paragraphs 2 to 4.1.2 of regulation 7-2 are changed, for more information on the topics (Calculation of the factor S_i), please see attachment 1.

The existing paragraph 5 and 5.3 are replaced with the following:

1- 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.

- 5.3 The factor S_i is to be taken as zero if, taking into account sinkage, heel and trim, any of the following occur in any intermediate stage or in the final stage of flooding:

2- immersion of any vertical escape hatch in the bulkhead deck of passenger ships and the freeboard deck of cargo ships intended for compliance with chapter II-2;

3- any controls intended for the operation of watertight doors, equalization devices, valves on piping or on ventilation ducts intended to maintain the integrity of watertight bulkheads from above the bulkhead deck of passenger ships and the freeboard deck of cargo ships become inaccessible or inoperable; and

4- immersion of any part of piping or ventilation ducts located within the assumed extent of damage and carried through a watertight boundary if this can lead to the progressive flooding of compartments not assumed as flooded.

❖ Regulation 8 – Special requirements concerning passenger ship stability

The existing paragraphs 1 and 2, and the chapeau of paragraph 3 is replaced with the following:

- 1. A passenger ship intended to carry 400 or more persons shall have watertight subdivision abaft the collision bulkhead so that $S_i = 1$ for a damage involving all the compartments within 0.08L measured from the forward perpendicular for the three loading conditions used to calculate the attained subdivision index A. If the attained subdivision

index A is calculated for different trims, this requirement shall also be satisfied for those loading conditions.

- 2. A passenger ship intended to carry 36 or more persons is to be capable of withstanding damage along the side shell to an extent specified in paragraph 3. Compliance with this regulation is to be achieved by demonstrating that S_i, as defined in regulation 7-2, is not less than 0.9 for the three loading conditions used to calculate the attained subdivision index A. If the attained subdivision index A is calculated for different trims, this requirement shall also be satisfied for those loading conditions.
- 3. The damage extent to be assumed when demonstrating compliance with paragraph 2, is to be dependent on the total number of persons carried, and L, such that

❖ Regulation 8-1 – System capabilities and operational information after a flooding casualty on passenger ships:

The existing text of regulation 8-1 is amended to read as follows:

1. Application

Passenger ships having length, as defined in regulation II-1/2.5, of 120 m or more or having three or more main vertical zones shall comply with the provisions of this regulation.

2. Availability of essential systems in case of flooding damage

A passenger ship shall be designed so that the systems specified in regulation II-2/21.4 remain operational when the ship is subject to flooding of any single watertight compartment.

3. Operational information after a flooding casualty

3.1 For the purpose of providing operational information to the master for safe return to port after a flooding casualty, passenger ships, as specified in paragraph 1, shall have:

1.an onboard stability computer; or

2.shore-based support,

based on the guidelines developed by the Organization. **

** Refer to the Guidelines on operational information for Masters of passenger ships for safe return to port by own power or under tow (MSC.1/Circ.1400) for ships constructed on or after 1 January 2014 but before 13 May 2016, or the Revised Guidelines on operational information for masters of passenger ships for safe return to port (MSC.1/Circ.1532/Rev.1) for ships constructed on or after 13 May 2016, or the Guidelines on operational information for masters in case of flooding for passenger ships constructed before 1 January 2014 (MSC.1/Circ.1589)."

3.2 Passenger ships constructed before 1 January 2014 shall comply with the provisions in paragraph 3.1 not later than the first renewal survey after 1 January 2025.

PART B-2 (SUBDIVISION, WATERTIGHT AND WEATHERTIGHT INTEGRITY)

❖ Regulation 9 – Double bottoms in passenger ships and cargo ships other than tankers

The existing paragraphs 3 and 6 to 8 are replaced with the following:

- 3.1. Small wells constructed in the double bottom in connection with drainage arrangements shall not extend downward more than necessary. The vertical distance from the bottom of such a well to a plane coinciding with the keel line shall not be less than h/2 or 500 mm, whichever is greater, or compliance with paragraph 8 of this regulation shall be shown for that part of the ship.
- 3.2. Other wells (e.g. for lubricating oil under main engines) may be permitted by the Administration if satisfied that the arrangements give protection equivalent to that afforded by a double bottom complying with this regulation.
  - 3.2.1. For a cargo ship of 80 m in length and upwards or for a passenger ship, proof of equivalent protection is to be shown by demonstrating that the ship is capable of withstanding bottom damages as specified in paragraph 8. Alternatively, wells for lubricating oil below main engines may protrude into the double bottom below the boundary line defined by the distance h provided that the vertical distance between the well bottom and a plane coinciding with the keel line is not less than h/2 or 500 mm, whichever is greater.
  - 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."
- 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.
- 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.
- 8. Compliance with paragraphs 3.1, 3.2.1, 6 or 7 is to be achieved by demonstrating that S_i, when calculated in accordance with regulation 7-2, is not less than 1 for all service conditions when subject to bottom damage with an extent specified in subparagraph .2 below for any position in the affected part of the ship:
  - 1. Flooding of such spaces shall not render emergency power and lighting, internal communication, signals or other emergency devices inoperable in other parts of the ship.
  - 2. Assumed extent of damage shall be as follows:

	For 0.3 L from the forward perpendicular of the ship	Any other part of the ship
Longitudinal extent	1/3 L2/3 or 14.5 m, Whichever is less	1/3 L2/3 or 14.5 m, whichever
Transverse extent	B/6 or 10 m, whichever is less	B/6 or 5 m, whichever is less
Vertical extent, measured from the keel line	B/20, to be taken not less than 0.76 m and not more than 2 m	B/20, to be taken not less than 0.76 m and not more than 2 m

- 3. If any damage of a lesser extent than the maximum damage specified in .2 would result in a more severe condition, such damage should be considered.

❖ Regulation 10 – Construction of watertight bulkheads

The existing paragraphs 1 is replaced with the following:

- 1. Each watertight subdivision bulkhead, whether transverse or longitudinal, shall be constructed having scantlings as specified in regulation 2.17. In all cases, watertight subdivision bulkheads shall be capable of supporting at least the pressure due to a head of water up to the bulkhead deck of passenger ships and the freeboard deck of cargo ships.

❖ Regulation 12 – Peak and machinery space bulkheads, shaft tunnels, etc.

The paragraph 2 added to regulation 12 according to following:

- 1. The ship shall be so designed that S_i calculated in accordance with regulation 7-2 will not be less than 1 at the deepest subdivision draught loading condition, level trim or any forward trim loading conditions, if any part of the ship forward of the collision bulkhead is flooded without vertical limits.

- Due to the addition of paragraph 2, the remaining paragraphs of regulation 12 will be changed to 3 to 10

❖ Regulation 13 – Openings in watertight bulkheads below the bulkhead deck in passenger ships

The paragraph 11.1 is replaced with the following:

- 11.1 Where trunk ways or tunnels for access from crew accommodation to the machinery spaces, for piping, or for any other purpose are carried through watertight bulkheads, they shall be watertight and in accordance with the requirements of regulation 16-1. The access to at least one end of each such tunnel or trunk way, if used as a passage at sea, shall be through a trunk extending watertight to a height sufficient to permit access above the bulkhead deck. The access to the other end of the trunk way or tunnel may be through a

watertight door of the type required by its location in the ship. Such trunk ways or tunnels shall not extend through the first subdivision bulkhead abaft the collision bulkhead.

❖ Regulation 15 – Openings in the shell plating below the bulkhead deck of passenger ships and the freeboard deck of cargo ships

The paragraph 4 is replaced with the following:

- 4. Efficient hinged inside deadlights so arranged that they can be easily and effectively closed and secured watertight, shall be fitted to all side scuttles except that abaft one eighth of the ship's length from the forward perpendicular and above a line drawn parallel to the bulkhead deck at side and having its lowest point at a height of 3.7 m plus 2.5% of the breadth of the ship above the deepest subdivision draught, the deadlights may be portable in passenger accommodation, unless the deadlights are required by the International Convention on Load Lines in force to be permanently attached in their proper positions. Such portable deadlights shall be stowed adjacent to the side scuttles they serve.

❖ Regulation 16 – Construction and initial tests of watertight doors, side scuttles, etc.

The title of regulation 16 is replaced with following:

<u>Regulation 16 – Construction and initial tests of watertight closures</u>

the paragraphs 1 and 2 are replaced with the following:

- 1.1. The design, materials and construction of all watertight closures such as doors, hatches, side scuttles, gangway and cargo ports, valves, pipes, ash-chutes and rubbish-chutes referred to in these regulations shall be to the satisfaction of the Administration.
- 1.2. Such valves, doors, hatches and mechanisms shall be suitably marked to ensure that they may be properly used to provide maximum safety.
- 1.3. The frames of vertical watertight doors shall have no groove at the bottom in which dirt might lodge and prevent the door closing properly.
- 2. Watertight doors and hatches shall be tested by water pressure to the maximum head of water they might sustain in a final or intermediate stage of flooding. For cargo ships not covered by damage stability requirements, watertight doors and hatches shall be tested by water pressure to a head of water measured from the lower edge of the opening to one meter above the freeboard deck. Where testing of individual doors and hatches is not carried out because of possible damage to insulation or outfitting items, testing of individual doors and hatches may be replaced by a prototype pressure test of each type and size of door or hatch with a test pressure corresponding at least to the head required for the individual location. The prototype test shall be carried out before the door or hatch is fitted. The installation method and procedure for fitting the door or hatch on board shall correspond to that of the prototype test. When fitted on board, each door or hatch shall be checked for proper seating between the bulkhead, the frame and the door or between deck, the coaming and the hatch.

❖ Regulation 16-1 – Construction and initial tests of watertight decks, trunks, etc.

The paragraphs 2 and 3 are replaced with following:

- 2. In passenger ships, where a ventilation trunk passing through a structure penetrates a watertight area of the bulkhead deck, the trunk shall be capable of withstanding the water pressure that may be present within the trunk, after having taken into account the maximum heel angle during flooding, in accordance with regulation 7-2.
- 3. In ro-ro passenger ships, where all or part of the penetration of the bulkhead deck is on the main ro-ro deck, the trunk shall be capable of withstanding impact pressure due to internal water motions (sloshing) of water trapped on the ro-ro deck.

❖ Regulation 17 – Internal watertight integrity of passenger ships above the bulkhead deck.

The paragraph 3 is replaced with following:

- 2. Air pipes terminating within a superstructure which are not fitted with watertight means of closure shall be considered as unprotected openings when applying regulation 7-2.6.1.1.

PART B-4 (STABILITY MANAGEMENT)

In the regulation 19 (Damage control information) paragraph 2 is deleted and remaining paragraphs are renumbered.

❖ Regulation 19-1 – Damage control drills for passenger ships:

- 1. This regulation applies to passenger ships constructed before, on or after 1 January 2020.
- 2. A damage control drill shall take place at least every three months. The entire crew need not participate in every drill, but only those crew members with damage control responsibilities.
- 3. The damage control drill scenarios shall vary each drill so that emergency conditions are simulated for different damage conditions and shall, as far as practicable, be conducted as if there were an actual emergency.
- 4. Each damage control drill shall include:
  - 1. for crew members with damage control responsibilities, reporting to stations and preparing for the duties described in the muster list required by regulation III/8;
  - 2. use of the damage control information and the on board damage stability computer, if fitted, to conduct stability assessments for the simulated damage conditions;
  - 3. establishment of the communications link between the ship and shore-based support, if provided;
  - 4. operation of watertight doors and other watertight closures;
  - 5. demonstrating proficiency in the use of the flooding detection system, if fitted, in accordance with muster list duties;
  - 6. demonstrating proficiency in the use of cross-flooding and equalization systems, if fitted, in accordance with muster list duties;
  - 7. operation of bilge pumps and checking of bilge alarms and automatic bilge pump starting systems; and
  - 8. instruction in damage survey and use of the ship's damage control systems.
- 5. At least one damage control drill each year shall include activation of the shore-based support, if provided in compliance with regulation II-1/8-1.3, to conduct stability assessments for the simulated damage conditions.
- 6. Every crew member with assigned damage control responsibilities shall be familiarized with their duties and about the damage control information before the voyage begins.
- 7. A record of each damage control drill shall be maintained in the same manner as prescribed for the other drills in regulation III/19.5.

❖ "Regulation 20 – Loading of ships

The title of regulation 20 replaced with following:

Regulation 20 – Loading of ships

- 1. On completion of loading of the ship and prior to its departure, the master shall determine the ship's trim and stability and also ascertain and record that the ship is upright and in compliance with stability criteria in relevant regulations. The determination of the ship's stability shall always be made by calculation or by ensuring that the ship is loaded according to one of the pre-calculated loading conditions within the approved stability information. The Administration may accept the use of an electronic loading and stability computer or equivalent means for this purpose.

❖ Regulation 21 – Periodical operation and inspection of watertight doors, etc. in passenger ships.

The paragraphs 1 and 4 are replaced with the following:

- 1. Operational tests of watertight doors, side scuttles, valves and closing mechanisms of scuppers, ash-chutes and rubbish-chutes shall take place weekly. In ships in which the voyage exceeds one week in duration a complete set of operational tests shall be held before the voyage commences, and others thereafter at least once a week during the voyage."
- 4. Record of all operational tests and inspections required by this regulation shall be recorded in the logbook with an explicit record of any defect which may be disclosed.

❖ Regulation 22 – Prevention and control of water ingress, etc.

In the existing paragraph 1, at the end of the first sentence, the words "paragraphs 3 and 4" are replaced with "paragraph 3".

The existing paragraph 3 is replaced with the following:

- 3. A watertight door may be opened during navigation to permit the passage of passengers or crew, or when work in the immediate vicinity of the door necessitates it being opened. The door must be immediately closed when transit through the door is complete or when the task which necessitated it being open is finished. The Administration shall authorize that such a watertight door may be opened during navigation only after careful consideration of the impact on ship operations and survivability taking into account guidance issued by the Organization. A watertight door permitted to be opened during navigation shall be clearly indicated in the ship's stability information and shall always be ready to be immediately closed.

The paragraphs 4 to 8 replaced with following below, and paragraph 9 is renumbered as paragraph 8, and the existing paragraphs 10 to 16 are replaced accordingly:

- 4. Portable plates on bulkheads shall always be in place before the voyage commences, and shall not be removed during navigation except in case of urgent necessity at the discretion of the master. The necessary precautions shall be taken in replacing them to ensure that the joints are watertight. Power-operated sliding watertight doors permitted in machinery spaces in accordance with regulation 13.10 shall be closed before the voyage commences and shall remain closed during navigation except in case of urgent necessity at the discretion of the master.
- 5. Watertight doors fitted in watertight bulkheads dividing cargo between deck spaces in accordance with regulation 13.9.1 shall be closed before the voyage commences and shall be kept closed during navigation. The time at which such doors are opened or closed shall be recorded in such log-book as may be prescribed by the Administration.
- 6. Gangway, cargo and fueling ports fitted below the bulkhead deck of passenger ships and the freeboard deck of cargo ships shall be effectively closed and secured watertight before voyage commences, and shall be kept closed during navigation.
- 7. The following doors, located above the bulkhead deck of passenger ships and the freeboard deck of cargo ships, shall be closed and locked before the voyage commences and shall remain closed and locked until the ship is at its next berth:
  - 1. cargo loading doors in the shell or the boundaries of enclosed superstructures;
  - 2. bow visors fitted in positions as indicated in paragraph 7.1;
  - 3. cargo loading doors in the collision bulkhead; and
  - 4. ramps forming an alternative closure to those defined in paragraphs 7.1 to 7.3 inclusive."
- 11. The master shall ensure, before any voyage commences, that an entry in such log-book as may be prescribed by the Administration is made of the time the doors specified in paragraph 12 are closed and the time at which particular doors are opened in accordance with paragraph 13.
- 12. Hinged doors, portable plates, side scuttles, gangway, cargo and bunkering ports and other openings, which are required by these regulations to be kept closed during navigation, shall be closed before the voyage commences. The time at which such doors are opened and closed (if permissible under these regulations) shall be recorded in such log-book as may be prescribed by the Administration.
- 13. Where in a between-deck, the sills of any of the side scuttles referred to in regulation 15.3.2 are below a line drawn parallel to the bulkhead deck at side of passenger ships and the freeboard deck at side of cargo ships, and having its lowest point 1.4 m plus 2.5% of the

breadth of the ship above the water when the voyage commences, all the side scuttles in that between-deck shall be closed watertight and locked before the voyage commences, and they shall not be opened before the ship arrives at the next port. In the application of this paragraph the appropriate allowance for fresh water may be made when applicable.

- 1. The time at which such side scuttles are opened in port and closed and locked before the voyage commences shall be recorded in such log-book as may be prescribed by the Administration.
- 2. For any ship that has one or more side scuttles so placed that the requirements of paragraph 13 would apply when it was floating at its deepest subdivision draught, the administration may indicate the limiting mean draught at which these side scuttles will have their sills above the line drawn parallel to the bulkhead deck at side of passenger ships and the freeboard deck at side of cargo ships, and having its lowest point 1.4 m plus 2.5% of the breadth of the ship above the waterline corresponding to the limiting mean draught, and at which it will therefore be permissible for the voyage to commence without them being closed and locked and to be opened during navigation on the responsibility of the master during navigation. In tropical zones as defined in the International Convention on Load Lines in force, this limiting draught may be increased by 0.3 m.

- 14. Side scuttles and their deadlights which will not be accessible during navigation shall be closed and secured before the voyage commences.
- 15. If cargo is carried in spaces referred to in regulation 15.5.2, the side scuttles and their deadlights shall be closed watertight and locked before the cargo is shipped and the time at which such scuttles and deadlights are closed and locked shall be recorded in such log-book as may be prescribed by the Administration."

The paragraph 17 is renumbered as paragraph 16

❖ Regulation 22-1 – Flooding detection systems for passenger ships carrying 36 or more persons ~~constructed on or after 1 July 2010~~

In regulation 22-1, the words "constructed on or after 1 July 2010" are removed from the end of the existing title.

❖ Regulation 23 – Special requirements for ro-ro passenger ships

The word “before Ship leaves the port” is replaced by “before the voyage commences”

❖ Regulation 24 – Additional requirements for prevention and control of water ingress, etc. in cargo ships

The paragraphs 1 and 3 replaced with following:

- 1. Openings in the shell plating below the deck limiting the vertical extent of damage shall be kept permanently closed during navigation.
- 3. Watertight doors or ramps fitted to internally subdivide large cargo spaces shall be closed before the voyage commences and shall be kept closed during navigation. The time at which such doors are opened or closed shall be recorded in such log-book as may be prescribed by the Administration.

Attachment:

RESOLUTION MSC.421(98)

For any questions about this Technical Information, please contact:

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