19-501

RULES FOR THE SURVEY AND CONSTRUCTION OF PASSENGER SHIPS

GUIDANCE FOR THE SURVEY AND CONSTRUCTION OF PASSENGER SHIPS

Rules for the Survey and Construction of Passenger Ships

2019 AMENDMENT NO.2

Guidance for the Survey and Construction of Passenger Ships

2019 AMENDMENT NO.2

Rule No.119 / Notice No.84 27 December 2019

Resolved by Technical Committee on 22 July 2019

ClassNK

NIPPON KAIJI KYOKAI

An asterisk (*) after the title of a requirement indicates that there is also relevant information in the corresponding Guidance.

RULES FOR THE SURVEY AND CONSTRUCTION OF PASSENGER SHIPS

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Rule No.119 27 December 2019
AMENDMENT TO THE RULES FOR THE SURVEY AND CONSTRUCTION OF PASSENGER SHIPS

“Rules for the survey and construction of passenger ships” has been partly amended as follows:

Amendment 2-1

Part 2 CLASS SURVEY

Chapter 2 CLASSIFICATION SURVEYS

2.1 Classification Survey during Construction

2.1.7 Documents to be Maintained On Board*

Sub-paragraph -1(2) has been amended as follows.

1 At the completion of a classification survey, the Surveyor confirms that the following drawings, plans, manuals, lists, etc., as applicable, of finished version are on board.
((1) is omitted.)
(2) Other manuals, etc.
((a) to (m) are omitted.)
(n) Manuals for flooding detection systems (**2.4.1, Part 5**)

Part 5 MACHINERY INSTALLATIONS

Chapter 2 SCUPPERS, SANITARY DISCHRGES, ETC., BILGE AND BALLAST PIPING SYSTEMS

2.4 Flooding Detection Systems

Paragraph 2.4.1 has been amended as follows.

2.4.1 General (*SOLAS* Reg. II-1/22-1)*

For ships carrying 36 or more persons, a flooding detection system is to be fitted in all watertight spaces below the bulkhead deck that have a volume more than the following **(1)** or **(2)**, whichever is greater. ~~However, any watertight spaces that are separately equipped with a liquid level monitoring system (such as fresh water, ballast water, fuel, etc.), with an indicator panel or other means of monitoring at the navigation bridge (and the safety centre if located in a separate space from the navigation bridge), are excluded.~~

(1) Ship's moulded displacement per centimeter immersion, (m^3), at deepest subdivision draught
(2) $30m^3$

EFFECTIVE DATE AND APPLICATION (Amendment 2-1)

1. The effective date of the amendments is 27 December 2019.
2. Notwithstanding the amendments to the Rules, the current requirements apply to ships for which the date of contract for construction is before 1 July 2019.

Amendment 2-2

Part 1 GENERAL

Chapter 2 DEFINITIONS

2.1 General

Paragraph 2.1.10 has been amended as follows.

2.1.10 Deepest Subdivision Draught (*SOLAS* Reg. II-1/2.10)

Deepest subdivision draught is ~~the draught which corresponds to~~ the summer load line draught of the ship.

Paragraph 2.1.14 has been amended as follows.

2.1.14 ~~Mid-length~~ Amidships (*SOLAS* Reg. II-1/2.2)

~~Mid-length is the midpoint of L_s.~~ Amidships is at the middle of the length for freeboard (L_f).

Paragraph 2.1.16 has been amended as follows.

2.1.16 Trim (*SOLAS* Reg. II-1/2.13)

Trim is the difference between the draught forward and the draught aft, where the draughts are measured at the perpendiculars for the forward and aft ~~terminals respectively~~ ends of the length for freeboard (L_f), disregarding any rake of keel.

Paragraph 2.1.21 has been amended as follows.

2.1.21 Bulkhead Deck (*SOLAS* Reg. II-1/2.19)

Bulkhead deck in a passenger ship means the uppermost deck ~~at any point in the subdivision length (L_s) to which the main bulkheads and the ship's shell are carried watertight and the lowermost deck from which passenger and crew evacuation will not be impeded by water in any stage of flooding for damage cases~~ to which the main bulkheads and the ship's shell are carried watertight. The bulkhead deck may be a stepped deck.

Part 2 CLASS SURVEY

Chapter 4 SPECIAL SURVEYS

4.2 Hull, Equipment and Fire Extinguishing Systems

Paragraph 4.2.1 has been amended as follows.

4.2.1 Hull*

At Special Surveys for hull and its equipment, the following requirements are to be complied with.

(1) Tests and inspections are to be carried out in accordance with the requirements of **3.2.1**

(2) The light weight of the ship is to be checked. Where the lightweight is different by 2% or more from the previous record, or where the longitudinal center of gravity is different by 1% or more of ~~the subdivision length of the ship (L_s) specified in **2.1.6**, **Part 1**~~ $\underline{L_f}$ from the previous records, the inclining experiments are to be carried out and the stability information is to be corrected in accordance with the result of the experiments.

Part 3 HULL CONSTRUCTION AND EQUIPMENT

Chapter 4 DOUBLE BOTTOM CONSTRUCTION

4.2 Arrangement

4.2.1 Arrangement (*SOLAS* Chap.II-1 Reg.9) *

Sub-paragraph -4 has been amended as follows.

1 A watertight double bottom is to be fitted extending from the fore peak bulkhead to the after peak bulkhead.

2 A double bottom need not be fitted in way of watertight tanks, including dry tanks of moderate size, provided the safety of the ship is not impaired in the event of bottom or side damage.

3 Where a double bottom is required to be fitted, the inner bottom plating is to be continued out to the ship's sides in such a manner as to protect the bottom to the turn of the bilge. Such protection will be deemed satisfactory if the inner bottom is not lower at any part than a plane parallel with the keel line and which is located not less than a vertical distance h measured from the keel line specified in **2.1.22**, **Part 1**, as calculated by the formula.

$h = B'/20$

However, in no case is the value of h to be less than 0.76*m*, and need not be taken as more than 2.0*m*.

4 Small wells constructed in the double bottom in connection with drainage arrangements ~~of holds, etc~~., is not to extend downwards more than necessary. ~~A well extending to the outer bottom is, however, permitted at the after end of the shaft tunnel.~~ The vertical distance from the bottom of such a well to a plane coinciding with the keel line is not to be less than 0.5*h* (*h* is specified in **-3** above) or 500 *mm*, whichever is greater, or as deemed appropriate by the Society. Outer wells (e.g., for lubricating oil under main engines) may be permitted by Society if satisfied that the arrangements give protection equivalent to that afforded by a double bottom complying with this regulation. ~~In no case is to the vertical distance from the bottom of such a well to a plane coinciding with the keel line be less than 0.5*m*.~~

5 In case of large lower holds in passenger ships, the Society may require an increased double bottom height of not more than $B'/10$ or 3*m*, whichever is less, measured from the keel line specified in **2.1.22**, **Part 1**.

Chapter 6 WATERTIGHT BULKHEAD AND THE OPENING

6.2 Watertight Bulkhead and Tunnel

Paragraph 6.2.1 has been amended as follows.

6.2.1 Collision Bulkhead (*SOLAS* Chap.II-1 Reg.12.1, 12.2, 12.3, 12.~~6~~4, 12.7 ~~and~~, 12.8 and 12.9)*

1 A collision bulkhead is to be fitted and is to be watertight up to the bulkhead deck. This collision bulkhead is to be located at a distance from the forward perpendicular of not less than 5% of the length for freeboard of the ship or 10*m*, whichever is the less and not more than 8% of the length for freeboard of the ship or 3*m* plus 5% of the length for freeboard of the ship, whichever is the greater.

2 The factor s_i calculated in accordance with **2.3.6, Part 4** 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.

~~2~~**3** Where any part of the ship below the water-line extends forward of the forward perpendicular, e.g. a bulbous bow, the distances specified in **-1** are to be measured from a point either:

(1) at the mid-length of such extension; or

(2) at a distance 1.5% of the length for freeboard of the ship forward of the forward perpendicular; or

(3) at a distance 3*m* forward of the forward perpendicular;

whichever gives the smallest measurement.

~~3~~**4** Where a long forward superstructure is fitted, the collision bulkhead is to be extended weathertight to the next full deck above the bulkhead deck. The extension need not be fitted directly above the bulkhead below provided that all parts of the extension, including any part of the ramp attached to it are located within the limits specified in **-1** or ~~-2~~**3** and that the part of the deck which forms the step is made effectively weathertight. The extension is to be so arranged as to preclude any possibility of the bow door or ramp, where fitted, causing any damage to it in the case of damage to, or detachment of, a bow door or any part of the ramp.

~~4~~**5** Where bow doors are fitted and a sloping loading ramp forms part of the extension of the collision bulkhead above the bulkhead deck, the ramp is to be weathertight over its complete length. Ramps not meeting the above requirement are to be disregarded as an extension of the collision bulkhead.

~~5~~**6** The bulkhead may have steps or recesses provided they are within the limits specified in **-1** or ~~-2~~**3**.

~~6~~**7** The number of openings in the extension of the collision bulkhead above the freeboard deck is to be restricted to the minimum compatible with the design and normal operation of the ship. All such openings are to be capable of being closed weathertight.

6.4 Watertight Door

Paragraph 6.4.5 has been amended as follows.

6.4.5 Opening and Closing of Watertight Doors (*SOLAS* Chap.II-1 Reg.~~19.2,~~ 22.1~~,~~and 22.3 ~~and 22.4~~)

1 All watertight doors are to be kept closed during navigation except that they may be opened during navigation as specified in the following paragraph~~s~~ **-2** ~~and -3~~. Watertight doors of width of

more than 1.2*m* in machinery spaces as permitted by paragraph **6.5.2** may only be opened in the circumstances detailed in that paragraph. Any door which is opened in accordance with this paragraph is to be ready to be immediately closed.

2 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. Such a watertight door may be opened during navigation subject to authorized by the Administration with careful consideration of the impact on ship operations and survivability. A watertight door permitted to be opened during navigation is to be clearly indicated in the ship's stability information and is always to be ready to be immediately closed.

~~**3** Certain watertight doors may be permitted to remain open during navigation only if considered absolutely necessary; that is, being open is determined essential to the safe and effective operation of the ship's machinery or to permit passengers normally unrestricted access throughout the passenger area. Such determination is to be made by the Society only after careful consideration of the impact on ship operations and survivability. A watertight door permitted to remain thus open is to be clearly indicated in the ship's stability information and is always to be ready to be immediately closed.~~

6.5 Trunk and Miscellaneous

6.5.1 Trunk (*SOLAS* Chap.II-1 Reg.13.11 and 16-1)*

Sub-paragraphs -4 and -5 have been amended as follows.

4 Where a ventilation trunk passing through a structure penetrates for the bulkhead deck, the trunk is to be capable of withstanding the water pressure that may be present within the trunk, after having taken into account the maximum heel angle ~~allowable~~ during ~~intermediate stages of~~ flooding, in accordance with the requirements in **2.3.6**, **Part 4**.

5 ~~W~~In ro-ro passenger ships, where the all or part of the penetration of the bulkhead deck is on the main Ro-Ro deck, the trunk is to be capable of withstanding impact pressure due to internal water motion of water trapped on the Ro-Ro deck.

Paragraph 6.5.2 has been amended as follows.

6.5.2 Portable Plates on Bulkhead (*SOLAS* Chap.II-1 Reg.13.10 and 22.~~5~~4)*

Portable plates on bulkheads are not to be permitted except in machinery spaces. Such plates always are to be in place before the ~~ship leaves port~~ voyage commences, and are not to be removed during navigation except in case of urgent necessity at the discretion of the master. When any such portable plates are removed and replaced, the necessary precautions are to be taken in replacing them to ensure that the joints are watertight. The Society may permit not more than one power-operated sliding watertight door in each main transverse bulkhead larger than those specified in paragraph **6.4.2(2)** to be substituted for these portable plates, provided these doors are closed before the ~~ship leaves port~~ voyage commences and remain closed during navigation except in case of urgent necessity at the discretion of the master. These doors need not meet the requirements of paragraph **6.4.2(4)** regarding complete closure by hand-operated gear in 90 *seconds*. Power-operated sliding watertight doors permitted in machinery spaces in accordance with the provisions under this paragraph is to be closed before the ~~ship leaves port~~ voyage commences and is to remain closed during navigation except in case of urgent necessity at the discretion of the master.

Chapter 7 OPENINGS IN THE SHELL PLATING AND THE WATERTIGHT INTEGRITY

7.2 Openings below the Bulkhead Deck

Title of Paragraph 7.2.2 has been amended as follows.

7.2.2 Side Scuttle (*SOLAS* Chap.II-1 Reg.15.3 to 15.6, 15.9, 22.7 and 22.14 to 22.16)*

Sub-paragraphs -3 to -6 have been amended as follows.

3 Where in a between decks, the sills of any of the side scuttles referred to in paragraph **-2** are below a line drawn parallel to the bulkhead deck at side and having its lowest point 1.4*m* plus 2.5% of the breadth of the ship above the water when the ~~ship departs from any port~~ voyage commences, all the side scuttles in that between decks are to be closed watertight and locked before the ~~ship leaves port~~ voyage commences, and they are not to be opened before the ship arrives at the next port.

4 For any ship that has one or more side scuttles so placed that the requirements of paragraph **-3** would apply when it was floating at its deepest subdivision ~~load line~~ draught, the Society 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, and having its lowest point 1.4*m* plus 2.5% of the breadth of the ship above the water-line corresponding to the limiting mean draught, and at which it will therefore be permissible ~~to depart from port~~ for the voyage to commence without ~~previously closing and locking~~ them being closed and locked and to ~~open them at sea~~ be opened during navigation on the responsibility of the master during ~~the voyage to the next port~~ 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*.

5 Efficient hinged inside dead lights so arranged that they can be easily and effectively closed and secured watertight, are to be fitted to all side scuttles except that abaft one-eighth of ~~the subdivision length (L_s) specified in **2.1.6, Part 1**~~ 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 dead lights may be portable in passenger accommodation ~~deemed appropriate by the Society~~, unless the dead lights are required by the International Convention on Load Lines in force to be permanently attached in their proper positions. Such portable dead lights are to be stowed adjacent to the side scuttles they serve.

6 Side scuttles and their dead lights which will not be accessible during navigation are to be closed and secured before the ~~ship leaves port~~ voyage commences.

Title of Paragraph 7.2.3 has been amended as follows.

7.2.3 Gangway and Cargo Ports, etc. (*SOLAS* Chap.II-1 Reg.15.9 and 22.~~7~~6)

Sub-paragraph -1 has been amended as follows.

1 Gangway and cargo ports fitted below the bulkhead deck are to be effectively closed and secured watertight before the ~~ship leaves port~~ voyage commences, and are to be kept closed during navigation.

7.3 Watertight Integrity and Openings above Bulkhead Deck

7.3.1 Watertight Integrity above Bulkhead Deck (*SOLAS* Chap.II-1 Reg.17.1 to 17.3)

Sub-paragraph -3 has been amended as follows.

3 ~~The open end of a~~Air pipes terminating within a superstructure ~~is to be at least 1*m* above the waterline when the ship heels to an angle of 15 degrees, or the maximum angle of heel during intermediate stages of flooding, as determined by direct calculation, whichever is the greater. Alternatively, air pipes from tanks other than oil tanks may discharge through the side of the superstructure.~~ which are not fitted with watertight means of closure are to be considered as unprotected openings when applying **2.3.4-6, Part 4**.

Title of Paragraph 7.3.2 has been amended as follows.

7.3.2 Openings above Bulkhead Deck (*SOLAS* Chap.II-1 Reg.17.4, 17.5, 22.~~8~~7 and 22.~~9~~8)

Sub-paragraph -3 has been amended as follows.

3 The following doors, located above the draught, are to be closed and locked before the ~~ship proceeds on any~~ voyage commences and are to remain closed and locked until the ship is at its next berth. Provided that where a door cannot be opened or closed while the ship is at the berth such a door may be opened or left open while the ship approaches or draws away from the berth, but only so far as may be necessary to enable the door to be immediately operated. In any case, the inner bow door must be kept closed;

(1) cargo loading doors in the shell or the boundaries of enclosed superstructures;
(2) bow visors fitted in positions as indicated in paragraph **(1)**;
(3) cargo loading doors in the collision bulkhead;
(4) ramps forming an alternative closure to those defined in paragraphs **(1)** to **(3)** inclusive.

7.4 Watertight Integrity of Ro-ro Passenger Ships

7.4.1 Watertight Integrity from the Ro-ro Deck (Bulkhead Deck) to Spaces below (*SOLAS* Chap.II-1 Reg.17-1.1 and 23.3)

Sub-paragraph -2 has been amended as follows.

2 All accesses from the Ro-Ro deck and vehicle ramps that lead to spaces below the bulkhead deck are to be closed before the ~~ship leaves the berth on any~~ voyage commences and is to remain closed until the ship is at its next berth.

Paragraph 7.4.2 has been amended as follows.

7.4.2 Closure of the Ro-ro Deck (*SOLAS* Chap.II-1 Reg.23.1 and 23.7)

1 Special category spaces and Ro-Ro cargo spaces are to be continuously patrolled or monitored by effective means, such as television surveillance, so that movement of vehicles in adverse weather and unauthorized access by passengers can be observed ~~whilst the ship is underway~~ during navigation.

2 All transverse or longitudinal bulkheads which are taken into account as effective to confine the seawater accumulated on the Ro-Ro deck are to be in place and secured before the ~~ship leaves the berth~~ voyage commences and remain in place and secured until the ship is at its next berth.

Part 4 SUBDIVISION AND STABILITY

Chapter 2 SUBDIVISION

2.3 Damage Stability

Paragraph 2.3.4 has been amended as follows.

2.3.4 Subdivision Index (*SOLAS* Chap.II-1 Reg.6 and 7)*

1 For passenger ships to which the damage stability requirements of this chapter apply, the value of the Required Subdivision Index (R) is to be given by ~~the following formula~~ **Table 4.2.2**:

~~$R = 1 - \frac{5000}{L_s + 2.5N + 15225}$~~

~~N : As given by the following formula:~~

~~$N = N_1 + 2N_2$~~

~~N_1: Number of persons for whom lifeboats are provided~~

~~N_2: Number of persons (including officers and crew) the ship is permitted to carry in excess of N_1.~~

Table 4.2.2 Value of R

Persons on board	R
$N < 400$	$R = 0.722$
$400 \le N \le 1{,}350$	$R = \frac{N}{7580} + 0.66923$
$1{,}350 < N \le 6{,}000$	$R = 0.0369 ln(N + 89.048) + 0.579$
$6{,}000 < N$	$R = 1 - \frac{852.5 + 0.03875N}{N + 5000}$

Where:

N = total number of persons on board

~~**2** Notwithstanding the requirements given in **-1** above, for the conditions of service such that compliance with **-1** above on the basis of $N = N_1 + 2N_2$ is impracticable, where it is deemed appropriate by the Society, a lesser value of N may be taken but in no case less than $N = N_1 + N_2$.~~

~~**3**~~**2** The Attained Subdivision Index (A) for ship is to be not less than the Required Subdivision Index (R), calculated in accordance with **-1** above. A is obtained by the summation of the partial indices A_s, A_p and A_l, (weighted as shown) calculated for the draughts d_s, d_p and d_l specified in **2.1.10** to **2.1.12**, **Part 1** in accordance with the following formula:

$A = 0.4A_s + 0.4A_p + 0.2A_l$

Each partial index is a summation of contributions from all damage cases taken in consideration, using the following formula:

$A_x = \Sigma\, p_i \cdot s_i$

Where, each partial index is not less than $0.9R$.

A_x: Each partial index correspond to draughts, d_s, d_p and d_l specified in **2.1.10** to **2.1.12**, **Part 1**.

p_i : Probability that only a compartment or a group of compartments in question may be flooded (hereinafter referred to as "compartment flooding probability"), which is to be in accordance with the requirements in **2.3.5**.

s_i : Probability of survival after flooding a compartment or a group of compartments in question (hereinafter referred to as "survival probability"), which is to be in accordance with the requirements in **2.3.6**.

i : Indication of each compartment or group of compartments in question.

Σ : Summation of all cases of loading in which a compartment or a group of compartments is involved.

~~4~~**3** Partial index (A_x) is to be calculated under the following conditions:

(1) ~~Level trim~~ As a minimum, the calculation of A is to be ~~used~~ carried out at level trim for the deepest subdivision draught and the partial subdivision draught. The ~~actual~~ estimated service trim ~~is to~~ may be used for the light service draught. Where any anticipated service condition within the draught range from d_s to d_l,the trim variation in comparison with the calculated trim is greater than 0.005~~L_s~~ L_f, one or more additional calculations of A are to be ~~submitted~~ performed for the same draughts but ~~different~~ including sufficient trims ~~so~~ to ensure that, for all intended service conditions, the difference in trim in comparison with the reference trim used for one calculation will be ~~less~~ not more than 0.005~~L_s~~ L_f. Each additional calculation of A is to comply with **-2** above.

(2) All flooding cases for a compartment and a group of compartments over the ship's subdivision length are to be taken into account.

(3) Assumed extent of hull damage is the following:

(a) Vertical extent is to extend upwards d' + 12.5 (m) from baseline. However, if a lesser extent will give a more severe result, such extent is to be assumed.

(b) Horizontal extent of damage is measured inboard from Ship's side, at a right angle to the centreline at the level of the deepest subdivision draught and damage of the transverse extent greater than half breadth (B'/2) of the ship may be exempted. In case that the ship has a compartment formed by longitudinal watertight bulkheads which are not in the ship's centreline, all damages which extend from the outmost compartment (hereinafter referred to as "wing compartment") to the ship's centreline are to be assumed.

(4) In the flooding calculations carried, only one breach of the hull damage need to be assumed and only one free surface need to be considered.

(5) In the case of unsymmetrical arrangements, the calculated A value is to the mean value obtained from calculations involving both sides. Alternatively, it is to be taken as that corresponding to the side which evidently gives the least favourable result.

(6) When determining the positive righting lever (GZ) of the residual stability curve in the intermediate and final equilibrium stages of flooding, the displacement for the intact loading condition is to be used. All calculations are to be done with the ship freely trimming.

~~5~~**4** If pipes, ducts or tunnels are situated within the assumed extent of damage, arrangements are to be made to ensure that progressive flooding cannot thereby extend to compartments other than those than assumed flooded. However, the Society may permit minor progressive flooding if it is demonstrated that its effects can be easily controlled and the safety of the ship is not impaired.

2.3.5 Compartment Flooding Probability (p_i) (*SOLAS* Chap.II-1 Reg.7-1)*

Sub-paragraph -1 has been amended as follows.

1 The Compartment Flooding Probability (p_i) for a compartment or group of compartments is to be determined by the following **(1)**, **(2)** or **(3)** according to the number of damaged compartment.

(1) Where the damage involves a single zone only:

$$p_i = p(x1_j, x2_j) \cdot [r(x1_j, x2_j, b_k) - r(x1_j, x2_j, b_{k-1})]$$

Where:

x1: The distance (*m*) from the aft terminal of L_s to the aft end of the zone in question

x2: The distance (*m*) from the aft terminal of L_s to the forward end of the zone in question

b: The mean transverse distance (*m*) measured at right angles to the centreline at the deepest subdivision ~~loadline~~ draught between the shell and an assumed vertical plane extended between the longitudinal limits used in calculating the factor p_i and which is a tangent to, or common with, all or part of the outermost portion of the longitudinal bulkhead under consideration. This vertical plane is to be so orientated that the mean transverse distance to the shell is a maximum, but not more than twice the least distance between the plane and the shell. If the upper part of a longitudinal bulkhead is below the deepest subdivision ~~loadline~~ draught the vertical plane used for determination of *b* is assumed to extend upwards to the deepest subdivision waterline. In any case, *b* is not to be taken greater than *B*'/2.

j: The aftmost damage zone number involved in the damage starting with no.1 at the stern

k: The number of a particular longitudinal bulkhead as barrier for transverse penetration in a damage zone counted from shell towards the centreline. However, value of *k* according to side shell is to be taken as zero.

p(*x1*, *x2*): It is specified in **-2**.

r(*x1*, *x2*, *b*): It is specified in **-3**. However, *r*(*x1*, *x2*, b_0) is to be taken as zero.

（(2) and (3) are omitted.）

2.3.6 Probability of Survival (s_i) (*SOLAS* Chap.II-1 Reg.7-2)*

Sub-paragraphs -3 to -5 have been amended as follows.

3 The factor $s_{\text{final,i}}$ is to be obtained from the following formula.

~~$s_{\text{final,i}} = K \left[\frac{GZ_{\max}}{0.12} \frac{Range}{16} \right]^{\frac{1}{4}}$~~ $s_{\text{final,i}} = K \cdot \left[\frac{GZ_{\max}}{TGZ_{\max}} \times \frac{Range}{TRange} \right]^{\frac{1}{4}}$

K: Coefficient given by the following:

$K = 1.0$ if $\theta_e \le \theta_{\min}$

$K = 0$ if $\theta_e \ge \theta_{\max}$

$K = \sqrt{\frac{\theta_{\max} - \theta_e}{\theta_{\max} - \theta_{\min}}}$ otherwise

where, $\theta_{\min}$ is 7° and $\theta_{\max}$ is 15° for passenger ships.

θ_v and θ_e are specified in **-2** above.

$GZ_{\max}$: As specified in **-2** above. However, in the calculations of $s_{\text{final,i}}$, it is not to be taken as more than ~~0.12 (*m*)~~ $TGZ_{\max}$.

Range: As specified in **-2** above. However, in calculations of $s_{\text{final,i}}$, it is not to be taken as more than ~~16°~~*TRange*.

$TGZ_{\max}$: 0.20 (*m*), for ro-ro passenger ships each damage case that involves a ro-ro space 0.12 (*m*), otherwise

TRange: 20°, for ro-ro passenger ships each damage case that involves a ro-ro space 16°, otherwise

4 The factor $s_{\text{mom,i}}$ is to be obtained from the following formula.

$$s_{\text{mom,i}} = \frac{(GZ_{\max} - 0.04) \cdot V}{M_{heel}}$$

$GZ_{\max}$: As specified in **-2** above.

V: Intact displacement at the ~~subdivision~~ respective draught (d_s, d_p or d_l).

M_{heel}: Maximum assumed heeling moment as calculated in accordance with **-5**.

5 The heeling moment (M_{heel}) is to be obtained from the following formula. $M_{passenger}$, M_{wind} and $M_{Survivalcraft}$, are to be determined by the following **(1)**, **(2)** or **(3)** respectively.

$$M_{heel} = \text{maximum}\{M_{passenger} \text{ or } M_{wind} \text{or} M_{Survivalcraft}\}$$

(1) $M_{passenger}$ is the maximum assumed heeling moment resulting from movement of passengers, and is to be obtained from any of following items.

(a) $M_{passenger} = (0.075 \cdot N_p) \cdot (0.45 \cdot B') \quad (t \cdot m)$

N_p: Maximum number of passengers permitted to be on board in the service condition corresponding to the deepest subdivision draught under consideration.

B': As specified in **2.1.5-1**, **Part 1**.

(b) Heeling moments assume that passengers are distributed in accordance with the following **i)** to **iii)** on those decks where master stations are located

i) Passengers are distributed on available deck areas towards one side of the ship in such a way that they produce the most adverse heeling moment.

ii) Passengers are distributed with 4 persons per $1m^2$.

iii) The estimated weight per passenger is $75kg$.

(2) M_{wind} is the maximum assumed wind ~~force~~ moment acting in a damage situation.

$$M_{wind} = (P \cdot A \cdot Z)/9.806 \quad (t \cdot m)$$

P: $120\ N/mm^2$

A: Projected lateral area (m^2) above waterline

Z: Distance (m) from centre of lateral projected area above waterline to $T/2$

T: ~~ship's~~ Respective draught ~~for initial loading conditions~~ (d_s, d_p or d_l)

(3) $M_{Survivalcraft}$ is the maximum assumed heeling moment due to the launching of all fully loaded davit-launched survival craft on one side of the ship. It is to be calculated using the following assumptions.

(a) All lifeboats and rescue boats fitted on the side to which the ship has heeled after having sustained damage is to be assumed to be swung out fully loaded and ready for lowering.

(b) For lifeboats which are arranged to be launched fully loaded from the stowed position, the maximum heeling moment during launching is to be taken.

(c) A fully loaded davit-launched liferaft attached to each davit on the side to which the ship has heeled after having sustained damage is to be assumed to be swung out ready for lowering.

(d) Persons not in the life-saving appliances which are swung out is not to provide either additional heeling or righting moment.

(e) Life-saving appliances on the side of the ship opposite to the side to which the ship has heeled is to be assumed to be in a stowed position.

Sub-paragraphs -10 and -11 have been amended as follows.

10 ~~In all cases, p~~Probability of survival (s_i) is to be taken as 0 in those cases where, taking into account sinkage, heel and trim, any of the following **(1)** to **(3)** immerse at the final waterline:

(1) The openings through which progressive flooding may take place and such flooding is not accounted for in the calculation of probability of survival (s_i)

(2) Air-pipes, ventilators and the openings which are closed by means of weathertight doors or hatch covers

(3) Any of the bulkhead deck considered a horizontal evacuation route for compliance with Chapter II-2, *SOLAS* Convention

11 The probability of survival (s_i) is to be taken as 0 if, taking into account sinkage, heel and trim, any of the following **(1)** to **(3)** occur in any intermediate stage or in the final stage of flooding:

(1) Immersion of any vertical escape hatch in the bulkhead deck

(2) Any controls intended for the operation of watertight doors, valves on piping or on ventilation ducts intended to maintain the integrity of watertight bulkheads from above the bulkhead deck become inaccessible or inoperable

(3) Immersion of piping or ventilation ducts ~~maintained a watertight and located within any compartment~~ 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.

Paragraph 2.3.7 has been amended as follows.

2.3.7 Special Requirements Concerning Passenger Ship Stability (*SOLAS* Chap.II-1 Reg.8)

1 A passenger ship intended to carry 400 or more persons is to have watertight subdivision abaft the collision bulkhead so that $s_i = 1$ for a damage involving all the compartments within 0.08 L_f measured from the forward perpendicular for the three loading conditions ~~on which is based the calculation of the~~ used to calculate the attained subdivision index A ~~and for a damage involving all the compartments within 0.08 L_s measured from the forward perpendicular~~. If the attained subdivision index A is calculated for different trims, this requirement is also to 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 **-3**. Compliance with this regulation is to be achieved by demonstrating that s_i, as defined in **2.3.6**, is not less than 0.9 for the three loading conditions used to calculate the attained ~~on which is based the calculation of the~~ subdivision index A. If the attained subdivision index A is calculated for different trims, this requirement is also to be satisfied for those loading conditions.

3 The damage extent to be assumed when demonstrating compliance with **-2** above, is to be dependent on ~~both N as defined in **2.3.4-1**~~ the total number of persons carried, and ~~L_s as defined in **2.1.6, Part 1**~~ L_f and, is to be specified in following **(1)** to **(5)**.

(1) The vertical extent of damage is to extend from the ship's moulded baseline to a position up to 12.5*m* above the position of the deepest subdivision draught as defined in **2.1.10**, **Part 1**, unless a lesser vertical extent of damage were to give a lower value of s_i, in which case this reduced extent is to be used.

(2) Where 400 or more persons are to be carried, a damage length of 0.03~~L_s~~ L_f but not less than 3*m* is to be assumed at any position along the side shell, in conjunction with a penetration inboard of 0.1*B*' but not less than 0.75*m* measured inboard from the ship side, at right angle to the centreline at the level of the deepest subdivision draught.

(3) Where less than 400 persons are carried, damage length is to be assumed at any position along the shell side between transverse watertight bulkheads provided that the distance between two adjacent transverse watertight bulkheads is not less than the assumed damage length. If the distance between adjacent transverse watertight bulkheads is less than the assumed damage length, only one of these bulkheads is to be considered effective for the purpose of demonstrating compliance with **-2** above.

(4) Where 36 persons are carried, a damage length of 0.015~~L_s~~ L_f but not less than 3*m* is to be assumed, in conjunction with a penetration inboard of 0.05*B*' but not less than 0.75*m*;

(5) Where more than 36, but fewer than 400 persons are carried the values of damage length and penetration inboard, used in the determination of the assumed extent of damage, are to be obtained by linear interpolation between the values of damage length and penetration which apply for ships carrying 36 persons and 400 persons as specified in **(4)** and **(2)** above.

Chapter 4 INTACT STABILITY

4.3 Stability Information

4.3.1 General*

Sub-paragraph -1 has been amended as follows.

1 Passenger ships are to be inclined upon its completion ~~and the elements of its stability determined~~. The lightship displacement and the longitudinal, transverse and vertical position of its centre of gravity are to be determined. The master is to be supplied with such information satisfactory to the Society 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.

Part 5 MACHINERY INSTALLATIONS

Chapter 2 SCUPPERS, SANITARY DISCHRGES, ETC., BILGE AND BALLAST PIPING SYSTEMS

2.2 Scuppers, Sanitary Discharges, etc.

2.2.1 General (*SOLAS* Reg. II-1/15.8 and 35-1.2, and *LOAD LINE* Reg. 22)*

Sub-paragraph -1 has been amended as follows.

1 Scupper pipes sufficient in number and size to provide effective drainage are to be provided in all decks. However for the drainage of enclosed cargo spaces situated on the bulkhead deck, the Society may permit the means of drainage to be dispensed with in any particular compartment of any ship or class of ship provided that the safety of the ship is considered not to be impaired by reasons coming from size or internal subdivision of those spaces. For the special hazards associated with loss of stability when fitted with fixed pressure water-spraying fire-extinguishing systems refer to Regulation 20.6.1.4, Chapter II-2, *SOLAS* Convention.

2.3 Bilge and Ballast Pipings

2.3.1 General (*SOLAS* Reg. II-1/35-1.2 and 35-1.3)*

Sub-paragraph -5 has been amended as follows.

5 In case where the bilge suction pipe is at any part situated in the following **(1)** or **(2)**, a non-return valve is to be fitted to the pipe in the compartment containing the open end.

(1) Areas nearer the side of the ship than one fifth of the breadth of the ship where, the breadth of the ship is the width measured at right angles to the centreline at the level of the deepest subdivision ~~load line~~ draught.

(2) Duct keel

2.3.4 Bilge Pumps (*SOLAS* Reg. II-1/35-1.3)

Sub-paragraph -1 has been amended as follows.

1 Number and arrangement of bilge pumps

(1) All ships are to be provided with at least three independent power bilge pumps connected to the main bilge line, one of which may be driven by the propulsion machinery. Where the criterion of service numeral prescribed in **2.~~2.~~1.37**, **Part 1** is 30 or more, one additional independent power pump is to be provided.

(2) Ballast, sanitary and general service pumps driven by independent power may be accepted as independent power bilge pumps in **(1)** above, provided that they are connected properly to the main bilge line.

(3) Where practicable, the power bilge pumps are to be placed in separate watertight

compartments and so arranged or situated that these compartments will not be flooded by the same damage. If the main propulsion machinery, auxiliary machinery and boilers are in two or more watertight compartments, the pumps available for bilge service are to be distributed as far as possible throughout these compartments.

(4) On a ship of 91.5*m* in length and upwards or having a criterion of service numeral prescribed in **2.~~2.~~1.37**, **Part 1** of 30 or more, the arrangements are to be such that at least one power bilge pump is to be available for use in all flooding conditions which the ship is required to withstand, and in all flooding conditions derived from consideration of minor damages as specified in **2.3.7**, **Part 4** as follows.
   (a) One of the required bilge pumps is to be an emergency pump of a reliable submergible type having a source of power situated above the bulkhead deck.
   (b) The bilge pumps and their sources of power are to be so distributed throughout the length of the ship that at least one pump as an emergency pump in an undamaged compartment will be available.

(5) With the exception of additional pumps which may be provided for peak compartments only, each required bilge pump is to be so arranged as to draw water from any space required to be drained by **2.3.1-1**.

EFFECTIVE DATE AND APPLICATION (Amendment 2-2)

1. The effective date of the amendments is 1 January 2020.

2. Notwithstanding the amendments to the Rules, the current requirements apply to ships other than ships that fall under the following:
   (1) for which the contract for construction is placed on or after the effective date; or
   (2) in the absence of a contract for construction, the keels of which are 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.

   (Note) The term "*a similar stage of construction*" means the stage at which the construction identifiable with a specific ship begins and the assembly of that ship has commenced comprising at least 50 *tonnes* or 1% of the estimated mass of all structural material, whichever is the less.

Amendment 2-3

Part 3 HULL CONSTRUCTION AND EQUIPMENT

Chapter 7 OPENINGS IN THE SHELL PLATING AND THE WATERTIGHT INTEGRITY

7.1 General

7.1.1 Application

Sub-paragraph -4 has been added as follows.

4 If watertight doors are to be fitted, they are to be in accordance with *IACS* Unified Interpretation SC156 (as amended), unless otherwise specified in this chapter.

EFFECTIVE DATE AND APPLICATION (Amendment 2-3)

1. The effective date of the amendments is 1 January 2020.

2. Notwithstanding the amendments to the Rules, the current requirements apply to ships other than ships that fall under the following:

(1) for which the contract for construction* is placed on or after the effective date; or

(2) in the absence of a contract for construction, the keels of which are laid or which are at *a similar stage of construction* on or after 1 July 2020; or

(Note) The term "*a similar stage of construction*" means the stage at which the construction identifiable with a specific ship begins and the assembly of that ship has commenced comprising at least 50 *tonnes* or 1% of the estimated mass of all structural material, whichever is the less.

(3) the delivery of which is on or after 1 January 2024.

* "contract for construction" is defined in the latest version of IACS Procedural Requirement (PR) No.29.

IACS PR No.29 (Rev.0, July 2009)

1. The date of "contract for construction" of a vessel is the date on which the contract to build the vessel is signed between the prospective owner and the shipbuilder. This date and the construction numbers (i.e. hull numbers) of all the vessels included in the contract are to be declared to the classification society by the party applying for the assignment of class to a newbuilding.

2. The date of "contract for construction" of a series of vessels, including specified optional vessels for which the option is ultimately exercised, is the date on which the contract to build the series is signed between the prospective owner and the shipbuilder.

For the purpose of this Procedural Requirement, vessels built under a single contract for construction are considered a "series of vessels" if they are built to the same approved plans for classification purposes. However, vessels within a series may have design alterations from the original design provided:

(1) such alterations do not affect matters related to classification, or

(2) If the alterations are subject to classification requirements, these alterations are to comply with the classification requirements in effect on the date on which the alterations are contracted between the prospective owner and the shipbuilder or, in the absence of the alteration contract, comply with the classification requirements in effect on the date on which the alterations are submitted to the Society for approval.

The optional vessels will be considered part of the same series of vessels if the option is exercised not later than 1 year after the contract to build the series was signed.

3. If a contract for construction is later amended to include additional vessels or additional options, the date of "contract for construction" for such vessels is the date on which the amendment to the contract, is signed between the prospective owner and the shipbuilder. The amendment to the contract is to be considered as a "new contract" to which **1.** and **2.** above apply.

4. If a contract for construction is amended to change the ship type, the date of "contract for construction" of this modified vessel, or vessels, is the date on which revised contract or new contract is signed between the Owner, or Owners, and the shipbuilder.

Note:
This Procedural Requirement applies from 1 July 2009.

Amendment 2-4

Part 5 MACHINERY INSTALLATIONS

Chapter 1 GENERAL

1.1 General

1.1.1 Scope*

Sub-paragraphs -3(12) and (13) are amended as follows.

3 For machinery installations, the requirements in **Part D of the Rules for the Survey and Construction of Steel Ships** listed in the following **(1)** to **(18)** as well as the requirements of this Part are to be applied.

(1) **Chapter 1** GENERAL (excluding those in **1.1.1**)
(2) **Chapter 2** DIESEL ENGINES
(3) **Chapter 3** STEAM TURBINES
(4) **Chapter 4** GAS TURBINES
(5) **Chapter 5** POWER TRANSMISSION SYSTEMS
(6) **Chapter 6** SHAFTINGS
(7) **Chapter 7** PROPELLERS
(8) **Chapter 8** TORSIONAL VIBRATION OF SHAFTINGS
(9) **Chapter 9** BOILERS ETC. AND INCINERATORS
(10) **Chapter 10** PRESSURE VESSELS
(11) **Chapter 11** WELDING FOR MACHINERY INSTALLATIONS
(12) **Chapter 12** PIPES, VALVES, PIPE FITTINGS AND AUXILIARIES (The "freeboard deck~~s~~" referred to in ~~**12.3.3-2 and**~~ **Table D12.8 Notes (7), Part D of the Rules for the Survey and Construction of Steel Ships** is to be read as "bulkhead deck~~s~~".)
(13) **Chapter 13** PIPING SYSTEMS (excluding those in **13.2.5**, **13.4** and **13.5**. Furthermore, the "freeboard deck" referred to in **13.2.4-3, Part D of the Rules for the Survey and Construction of Steel Ships** is to be read as "bulkhead deck".)
(14) **Chapter 15** STEERING GEARS (excluding those in **15.1.1**, **15.2.1**, **15.2.2**, **15.2.3** and **15.6**)
(15) **Chapter 16** WINDLASSES AND MOORING WINCHES
(16) **Chapter 17** REFRIGERATING EQUIPMENT
(17) **Chapter 18** AUTOMATIC AND REMOTE CONTROL
(18) **Chapter 21** SPARE PARTS, TOOLS AND INSTRUMENTS

EFFECTIVE DATE AND APPLICATION (Amendment 2-4)

1. The effective date of the amendments is 1 January 2020.

2. Notwithstanding the amendments to the Rules, the current requirements apply to ships for which the date of contract for construction* is before the effective date.

* "contract for construction" is defined in the latest version of IACS Procedural Requirement (PR) No.29.

IACS PR No.29 (Rev.0, July 2009)

1. The date of "contract for construction" of a vessel is the date on which the contract to build the vessel is signed between the prospective owner and the shipbuilder. This date and the construction numbers (i.e. hull numbers) of all the vessels included in the contract are to be declared to the classification society by the party applying for the assignment of class to a newbuilding.

2. The date of "contract for construction" of a series of vessels, including specified optional vessels for which the option is ultimately exercised, is the date on which the contract to build the series is signed between the prospective owner and the shipbuilder.

For the purpose of this Procedural Requirement, vessels built under a single contract for construction are considered a "series of vessels" if they are built to the same approved plans for classification purposes. However, vessels within a series may have design alterations from the original design provided:

(1) such alterations do not affect matters related to classification, or

(2) If the alterations are subject to classification requirements, these alterations are to comply with the classification requirements in effect on the date on which the alterations are contracted between the prospective owner and the shipbuilder or, in the absence of the alteration contract, comply with the classification requirements in effect on the date on which the alterations are submitted to the Society for approval.

The optional vessels will be considered part of the same series of vessels if the option is exercised not later than 1 year after the contract to build the series was signed.

3. If a contract for construction is later amended to include additional vessels or additional options, the date of "contract for construction" for such vessels is the date on which the amendment to the contract, is signed between the prospective owner and the shipbuilder. The amendment to the contract is to be considered as a "new contract" to which **1.** and **2.** above apply.

4. If a contract for construction is amended to change the ship type, the date of "contract for construction" of this modified vessel, or vessels, is the date on which revised contract or new contract is signed between the Owner, or Owners, and the shipbuilder.

Note:
This Procedural Requirement applies from 1 July 2009.

Amendment 2-5

Part 6 ELECTRICAL INSTALLATIONS

Chapter 2 DESIGN OF INSTALLATIONS

2.3 Emergency Source of Electrical Power

2.3.2 Capacity of Emergency Source of Power (*SOLAS* Reg. II-1/42.2)*

Sub-paragraph -2(3) has been amended as follows.

2 The emergency source of electrical power is to be capable, having regard to starting currents and the transitory nature of certain loads, of supplying simultaneously at least the following services for the periods specified hereinafter, if they depend upon an electrical source for their operation:
((1) and (2) are omitted.)

(3) For a period of 36 *hours*, ~~VHF radio installations, MF radio installations, INMARSAT Ship Earth Stations and MF/HF radio~~ installations listed in the following **(a)** to **(d)** as required by Chapter IV of *SOLAS* and installed in the ship. Where, however, these radio installations are installed in duplicate, it is not necessary to consider duplicated installations are operated simultaneously in determining capacity of the emergency source of electrical power.
   (a) *VHF* radio installations
   (b) *MF* radio installations
   (c) Recognized mobile satellite service ship earth stations
   (d) *MF/HF* radio installations

((4) to (13) are omitted.)

EFFECTIVE DATE AND APPLICATION (Amendment 2-5)

1. The effective date of the amendments is 1 January 2020.

GUIDANCE FOR THE SURVEY AND CONSTRUCTION OF PASSENGER SHIPS

GUIDANCE

2019 AMENDMENT NO.2

Notice No.84 27 December 2019
Resolved by Technical Committee on 22 July 2019

Notice No.84 27 December 2019
AMENDMENT TO THE GUIDANCE FOR THE SURVEY AND CONSTRUCTION OF PASSENGER SHIPS

"Guidance for the survey and construction of passenger ships" has been partly amended as follows:

Amendment 2-1

Part 5 MACHINERY INSTALLATIONS

Chapter 2 SCUPPERS, SANITARY DISCHARGES ETC., BILGE AND BALLAST PIPING SYSTEMS

2.4 Flooding Detection Systems

Paragraph 2.4.1 has been amended as follows.

2.4.1 General

1 Flooding detection systems required in **2.4.1, Part 5 of the Rules** are to be in accordance with the following ~~2~~**(1)** to ~~12~~**(11)**.

~~2~~(1) Definitions

(~~1~~a) *Flooding detection system* means a system of sensors and alarms that detect and warn of water ingress into watertight spaces. Continuous flood level monitoring may be provided, but is not required.

(~~2~~b) *Sensor* means a device fitted at the location being monitored that activates a signal to identify the presence of water at the location.

(~~3~~c) *Alarm* means an audible and visual signal which announces a flooding condition requiring attention.

~~3~~(2) The number and location of flooding detection sensors is to be sufficient to ensure that any substantial water ingress into a watertight space requiring a flooding detection system is detected under reasonable angles of trim and heel. Generally, flooding detection sensors are to be installed as indicated below.

(~~1~~a) Vertical location

Sensors are to be installed as low as practicable in the watertight space.

(~~2~~b) Longitudinal location

In watertight spaces located forward of the mid-length, sensors are generally to be installed at the forward end of the space. In watertight spaces located aft of the mid-length, sensors are generally to be installed at the aft end of the space. For watertight spaces located in the vicinity of the mid-length, consideration is to be given to the appropriate longitudinal location of the sensor. In addition, any watertight space of more than *Ls*/5 in length or with arrangements that would seriously restrict the longitudinal flow of water is to be provided with sensors at both the forward and aft ends.

(~~3~~c) Transverse location

Sensors are generally to be installed at the centreline of the space (or alternatively at both the port and starboard sides). In addition, any watertight space that extends the full breadth of the ship or with arrangements that would seriously restrict the transverse flow of water is to be provided with sensors at both the port and starboard sides.

~~4~~(3) Where a watertight space extends in height over more than one deck, there are to be at least one flooding detection sensor at each deck level. This provision is not applicable in cases where a continuous flood level monitoring system is installed.

~~5~~(4) For watertight spaces with unusual arrangements or in other cases where the requirements in ~~-3~~**(2)** and ~~-4~~**(3)** would not achieve the intended purpose, the number and location of flooding detection sensors are to be subject to special consideration.

~~6~~(5) Each flooding detection system is to give an audible and visual alarm at the navigation bridge and the safety centre, if located in a separate space from the navigation bridge. These alarms are to indicate which watertight space is flooded.

~~7~~(6) Visual and audible alarms are to be capable of being distinguished from other alarms.

~~8~~(7) The flooding detection system and equipment are to be suitably designed to withstand supply voltage variation and transients, ambient temperature changes, vibration, humidity, shock, impact and corrosion normally encountered in ships. Sensor cabling and junction boxes are to be suitably rated to ensure operability of the detection system in a flooded condition. In addition, the detection system is to be designed on the fail-to-safety principle, where an open sensor circuit is to result in an alarm condition.

~~9~~(8) The flooding detection system is to be continuously powered and to have an automatic change-over to a stand-by power supply in case of loss of the normal power supply. Failure of the normal power supply is to be indicated by an alarm.

~~10~~(9) Documented operating, maintenance and testing procedures for the flooding detection system are to be kept on board and be readily accessible.

~~11~~(10) Flooding detection system sensors and equipment are to be installed where they are accessible for testing, maintenance and repair.

~~12~~(11) The flooding detection system is to be capable of being functionally tested using either direct or indirect methods. Records of testing are to be retained on board.

2 Any watertight spaces that are separately equipped with a liquid level monitoring system (such as fresh water, ballast water, fuel, etc.), with an indicator panel or other means of monitoring at the navigation bridge (and the safety centre if located in a separate space from the navigation bridge), need not to comply with the requirement of **-1** above.

3 The liquid level monitoring systems specified in **-2**, which are used as, or to replace, flooding detection systems are to comply with Regulation 21.4, Chapter II-2, *SOLAS* Convention.

Annex 7-1 INTERPRETATION OF PROVISION OF CHAPTER II-2, *SOLAS* CONVENTION ON PASSENGER SHIPS

1 INTERPRETATION OF PROVISION OF CHAPTER II-2, *SOLAS* CONVENTION

Table 7-1-A1 has been amended as follows.

Table 7-1-A1 Interpretation of *SOLAS* II-2

Number	*SOLAS*	Interpretation
(omitted)		
21.4	***Safe return to port****	*: In accordance with *MSC*.1/*Circ*.1437 in addition to *MSC*.1/*Circ*.1369 (includes amendments made by *MSC*.1/*Circ*.1369/*Add*.1).
21.4.13	***flooding detection systems****; and	*: For passenger ships carrying 36 or more persons and subject to **II-1/8-1**, the Safe Return To Port (SRTP) requirements of **II-2/21.4** apply to both: .1 the flooding detection systems in the spaces as defined in paragraph 6 of *MSC*.1/*Circ*.1291; and .2 the liquid level monitoring systems, which are used as, or replace, the flooding detection systems, as specified in paragraph 7 of *MSC*.1/*Circ*.1291. Therefore, for systems noted in sub-paragraph .**2** above, the phrase "excluded from these requirements" in paragraph 7 of *MSC*.1/*Circ*.1291 is not an exclusion from the general provision in **II-2/21.4.13** (remain operational in the event of fire). This exclusion pertains only to the detailed provisions in *MSC*.1/*Circ*.1291.

EFFECTIVE DATE AND APPLICATION (Amendment 2-1)

1. The effective date of the amendments is 27 December 2019.

2. Notwithstanding the amendments to the Guidance, the current requirements apply to ships for which the date of contract for construction is before 1 July 2019.

Amendment 2-2

Part 2 CLASS SURVEY

Chapter 4 SPECIAL SURVEYS

4.2 Hull, Equipment and Fire Extinguishing Systems

Paragraph 4.2.1 has been amended as follows.

4.2.1 Hull

1 An example of the procedure of the lightweight check specified in **4.2.1(2)**, **Part 2 of the Rules**, is shown below:

(1) Lightweight

(a) Drafts for the test condition are measured at the bow, midship and stern by draft scales and sea water temperature and density are also measured. If necessary, sea water density is corrected by sea water temperature.

(b) Additional weight such as measuring equipment and liquid in tanks for the test condition are measured and included in the calculation of the lightweight.

(c) The lightweight is calculated on the basis of the results of the measurement mentioned above and the hydraulic curves (indicating the change of displacement per *cm*). However, in case where ship's trim or deflection is relatively large, the light weight needs to be corrected by a suitable method.

(2) ~~Longitudinal c~~Centre of gravity

The ~~longitudinal~~ centre of gravity of the ship is calculated on the basis of the results of the measurements mentioned in **(1)** above (ship's drafts, additional weights and lightweight) and hydraulic curves indicating the centre of buoyancy, the change of trim per *cm*.

2 When the lightweight survey results do not exceed the deviation limits specified in **4.2.1(2), Part 2 of the Rules**, the lightship displacement and the longitudinal and transverse centres of gravity obtained from the lightweight survey are to be used in conjunction with the vertical centre of gravity derived from the most recent inclining in all subsequent stability information supplied to the master.

Part 3 HULL CONSTRUCTION AND EQUIPMENT

Chapter 4 DOUBLE BOTTOM CONSTRUCTION

4.2 Arrangement

Paragraph 4.2.1 has been amended as follows.

4.2.1 Arrangement

1 In the case of ships to which the provisions of **2.1.36, Part 1** of the Rules apply and which are engaged on regular service within the limits of a short international voyage as defined in **1.2.14**, **Part 1** of the Rules, the Society may permit a double bottom to be dispensed with in any part of the ship which is subdivided by a factor not exceeding 0.5, 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.

2 "provided the safety of the ship is not impaired" specified in **4.2.1-2**, **Part 3** of the Rules means to satisfy the requirement of damaged stability specified in **Part 4** of the Rules.

3 Application for the omission of double bottom or unusual bottom arrangements given by requirements of **4.2.1-2**, **Part 3** of the Rules is to be in accordance with following **(1)** and **(2)**. For example, arrangements in which parts of the double bottom do not extend for the full width of the ship or in which the inner bottom is located higher than the partial subdivision draught (d_p) defined in **2.1.12, Part 1** of the Rules are to be considered to be unusual bottom arrangements.

(1) When it is assumed that such spaces are subject to a bottom damage, compartments are to be arranged to demonstrate that the factor s_i, when calculated in accordance with **2.3.6**, **Part 4** of the Rules, is not less than 1 for those service conditions which are the three loading conditions used to calculate the Attained Subdivision Index (A) specified in **2.3.4-2, Part 4** of the Rules. Assumed extent of damage is to be in accordance with following **Table 3.4.2.1**. If any damage of a lesser extent than the maximum damage specified in **Table 3.4.2.1** would result in a more severe condition, such damage is to be considered.

(2) Flooding of such spaces is not to render emergency power and lighting, internal communication, signals or other emergency devices inoperable in other parts of the ship.

Table 3.4.2.1 Assumed Extent of Damage

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

Notes:

1. Keel line is to be in accordance with **2.1.22**, **Part 1** of the Rules.
2. Ship breadth (B') is to be in accordance with **2.1.5-1**, **Part 1** of the Rules.

4 "As deemed appropriate by the Society" stipulated in **4.2.1-4, Part 3** of the Rules means that the requirements specified in **-3(1)** above are satisfied.

5 "Protection equivalent to that afforded by a double bottom complying with this regulation" stipulated in **4.2.1-4, Part 3** of the Rules means that the requirements specified in **-3(1)** above are satisfied. However, wells for lubricating oil below main engines may protrude into the double bottom below the boundary line defined by the distance *h* (*h* is specified in **4.2.1-3, Part 3** of the Rules) provided that the vertical distance between the well bottom and a plane coinciding with the keel line is not less than 0.5*h* or 500 *mm*, whichever is greater.

~~4~~**6** With respect to the provisions of **4.2.1-5**, **Part 3** of the Rules, when flooding calculation is carried out in accordance with **-3** above, assuming an increased vertical extent is to be required.

Chapter 6 WATERTIGHT BULKHEAD AND THE OPENING

6.2 Watertight Bulkhead and Tunnel

6.2.1 Collision Bulkhead

Sub-paragraph -2 has been amended as follows.

2 "Long forward superstructure" specified in ~~**6.2.1-3**~~**6.2.1-4, Part 3** of the Rules means the superstructure having length not less than 0.25 *L*.

6.4 Watertight Door

Paragraph 6.4.5 has been added as follows.

6.4.5 Opening and Closing of Watertight Doors

In applying the requirements specified in **6.4.5-2, Part 3 of the Rules**, with respect to the impact on ship operations and survivability, reference is to be made to the *MSC*.1/*Circ*.1564 *"Revised guidance for watertight doors on passenger ships which may be opened during navigation"*.

Part 4 SUBDIVISION AND STABILITY

Chapter 2 SUBDIVISION

2.3 Damage Stability

Paragraph 2.3.6 has been amended as follows.

2.3.6 Probability of Survival (s_i) (*SOLAS* Chap.II-1 Reg.7-2)

1 In applying θ_v specified in **2.3.6-2, Part 4 of the Rules**, an "opening incapable of being closed weathertight" includes ventilators provided with weathertight closing appliances in accordance with the requirements of **7.1.1-1, Part 3 of the Rules** that for operational reasons have to remain open to supply air to the engine room or emergency generator room (if the same is considered buoyant in the stability calculation or protecting openings leading below) for the effective operation of the ship.

2 In applying the requirements specified in **2.3.6-8, Part 4 of the Rules**, with respect to equalization devices, reference is to be made to the *IMO Res. MSC*.362(92) *"Revised Recommendation on a standard method for evaluating cross-flooding arrangements"*, as amended.

EFFECTIVE DATE AND APPLICATION (Amendment 2-2)

1. The effective date of the amendments is 1 January 2020.

2. Notwithstanding the amendments to the Guidance, the current requirements apply to ships other than ships that fall under the following:

(1) for which the contract for construction is placed on or after the effective date; or

(2) in the absence of a contract for construction, the keels of which are 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.

(Note) The term "*a similar stage of construction*" means the stage at which the construction identifiable with a specific ship begins and the assembly of that ship has commenced comprising at least 50 *tonnes* or 1% of the estimated mass of all structural material, whichever is the less.

Amendment 2-3

Part 3 HULL CONSTRUCTION AND EQUIPMENT

Chapter 6 WATERTIGHT BULKHEAD AND THE OPENING

6.4 Watertight Door

6.4.1 General

Sub-paragraphs -4 and -5 have been added as follows.

4 In the application of **6.4, Part 3 of the Rules**, *IACS* Unified Interpretation SC156 (as amended) is to be satisfied in cases where watertight doors are to be fitted.
5 In the application of **6.4, Part 3 of the Rules**, the relevant part of *IMO* Resolution *MSC*.429(98) "REVISED EXPLANATORY NOTES TO THE SOLAS CHAPTER II-1 SUBDIVISION AND DAMAGE STABILITY REGULATIONS" is to be referred to meet the requirements of Regulation 17.1, Chapter II-1 of *SOLAS*.

Chapter 7 OPENINGS IN THE SHELL PLATING AND THE WATERTIGHT INTEGRITY

Section 7.3 has been added as follows.

7.3 Watertight Integrity and Openings above Bulkhead Deck

7.3.1 Watertight Integrity above Bulkhead Deck

The relevant part of *IMO* Resolution *MSC*.429(98) "REVISED EXPLANATORY NOTES TO THE SOLAS CHAPTER II-1 SUBDIVISION AND DAMAGE STABILITY REGULATIONS" is to be referred to meet the requirements of Regulation 17.1, Chapter II-1 of *SOLAS*.

Annex 7-1 INTERPRETATION OF PROVISION OF CHAPTER II-2, *SOLAS* CONVENTION ON PASSENGER SHIPS

1 INTERPRETATION OF PROVISION OF CHAPTER II-2, *SOLAS* CONVENTION

1.1 Interpretation

Table 7-1-A1 has been amended as follows.

Table 7-1-A1 Interpretation of *SOLAS* II-2

Number	*SOLAS*	Interpretation
(Omitted)		
9.4.1.1.2	The construction of doors and door frames in "*A*" class divisions, with the means of securing them when closed, shall provide resistance to fire as well as to the passage of smoke and flame ***equivalent to that of the bulkheads**** in which the doors are situated, this being determined in accordance with the Fire Test Procedures Code. Such doors and door frames shall be constructed of steel or other equivalent material. Doors approved without the sill being part of the frame, which are installed on or after 1 July 2010, shall be installed such that the gap under the door does not exceed 12 *mm*. A non-combustible sill shall be installed under the door such that floor coverings do not extend beneath the closed door.	*: In principle, doors which pass the fire testing in accordance with the **FTP ~~c~~Code** are to be used, except for watertight doors. *: Where required divisions are replaced by divisions of a higher standard, the door need only conform to the required division. *: Watertight doors constructed in accordance with *SOLAS* regulation **II-1/15** and fitted below the bulkhead deck that are required to be watertight need not be tested to the **FTP Code** provided that the doors meet the requirements for water tightness in *SOLAS* Regulation **II-1/18**. However, doors fitted above the bulkhead deck, which are required to meet both the fire protection and watertight requirements, are to be tested to the **FTP Code**.
(Omitted)		

EFFECTIVE DATE AND APPLICATION (Amendment 2-3)

1. The effective date of the amendments is 1 January 2020.

2. Notwithstanding the amendments to the Guidance, the current requirements apply to ships other than ships that fall under the following:

(1) for which the contract for construction* is placed on or after the effective date; or

(2) in the absence of a contract for construction, the keels of which are laid or which are at *a similar stage of construction* on or after 1 July 2020; or

(Note) The term "*a similar stage of construction*" means the stage at which the construction identifiable with a specific ship begins and the assembly of that ship has commenced comprising at least 50 *tonnes* or 1% of the estimated mass of all structural material, whichever is the less.

(3) the delivery of which is on or after 1 January 2024.

* "contract for construction" is defined in the latest version of IACS Procedural Requirement (PR) No.29.

IACS PR No.29 (Rev.0, July 2009)

1. The date of "contract for construction" of a vessel is the date on which the contract to build the vessel is signed between the prospective owner and the shipbuilder. This date and the construction numbers (i.e. hull numbers) of all the vessels included in the contract are to be declared to the classification society by the party applying for the assignment of class to a newbuilding.

2. The date of "contract for construction" of a series of vessels, including specified optional vessels for which the option is ultimately exercised, is the date on which the contract to build the series is signed between the prospective owner and the shipbuilder.

For the purpose of this Procedural Requirement, vessels built under a single contract for construction are considered a "series of vessels" if they are built to the same approved plans for classification purposes. However, vessels within a series may have design alterations from the original design provided:

(1) such alterations do not affect matters related to classification, or

(2) If the alterations are subject to classification requirements, these alterations are to comply with the classification requirements in effect on the date on which the alterations are contracted between the prospective owner and the shipbuilder or, in the absence of the alteration contract, comply with the classification requirements in effect on the date on which the alterations are submitted to the Society for approval.

The optional vessels will be considered part of the same series of vessels if the option is exercised not later than 1 year after the contract to build the series was signed.

3. If a contract for construction is later amended to include additional vessels or additional options, the date of "contract for construction" for such vessels is the date on which the amendment to the contract, is signed between the prospective owner and the shipbuilder. The amendment to the contract is to be considered as a "new contract" to which **1.** and **2.** above apply.

4. If a contract for construction is amended to change the ship type, the date of "contract for construction" of this modified vessel, or vessels, is the date on which revised contract or new contract is signed between the Owner, or Owners, and the shipbuilder.

Note:
This Procedural Requirement applies from 1 July 2009.

Amendment 2-4

Part 5 MACHINERY INSTALLATIONS

Chapter 1 GENERAL

1.1 General

1.1.1 Scope

Sub-paragraphs -3 and -4 have been added.

1 In **Part 5 of the Rules**, "main propulsion machinery" means the following machinery which generates or converts motive power capable of propelling a ship at the speed specified in **2.1.8**, **Part A of the Rules for the Survey and Construction of Steel Ships**:
(1) Diesel engines (including superchargers)
(2) Steam turbines (including main condensers)
(3) Gas turbines (including combustors)
(4) Generating plants and motors for propulsion (excluding **Chapter 18**, **Part D of the Rules for the Survey and Construction of Steel Ships**)

2 Means provided to complement the motive power generated by main propulsion machinery specified in **-1**, which is connected directly to the propulsion shafting system is to be included in the shafting system, and the rest of the portion is to be regarded as auxiliary machinery essential for main propulsion.

3 In applying **1.1.3, Part D of Rules for the Survey and Construction of Steel Ships** and **Annex D1.1.3-1, Part D of Guidance for the Survey and Construction of Steel Ships**, as required by **1.1.1-3(1), Part 5 of the Rules**, the "while operating with all steering gear steering actuating systems" referred to in **1.1.3-3(1) of the Annex** is to be read as "while any one of the steering gear steering actuating systems is out of operation" for waterjet propulsion systems.

4 In applying **1.1.3, Part D of Rules for the Survey and Construction of Steel Ships** and **Annex D1.1.3-3, Part D of Guidance for the Survey and Construction of Steel Ships**, as required by **1.1.1-3(1), Part 5 of the Rules**, the "while operating with all steering gear steering actuating systems" referred to in **1.1.3-3(1) of the Annex** is to be read as "while any one of the steering gear steering actuating systems is out of operation" for azimuth thrusters.

EFFECTIVE DATE AND APPLICATION (Amendment 2-4)

1. The effective date of the amendments is 1 January 2020.

2. Notwithstanding the amendments to the Guidance, the current requirements apply to waterjet propulsion systems or azimuth thrusters whose applications for approval are submitted to the Society before the effective date installed on ships for which the date of contract for construction* is before the effective date.

* "contract for construction" is defined in the latest version of IACS Procedural Requirement (PR) No.29.

IACS PR No.29 (Rev.0, July 2009)

1. The date of "contract for construction" of a vessel is the date on which the contract to build the vessel is signed between the prospective owner and the shipbuilder. This date and the construction numbers (i.e. hull numbers) of all the vessels included in the contract are to be declared to the classification society by the party applying for the assignment of class to a newbuilding.

2. The date of "contract for construction" of a series of vessels, including specified optional vessels for which the option is ultimately exercised, is the date on which the contract to build the series is signed between the prospective owner and the shipbuilder.

For the purpose of this Procedural Requirement, vessels built under a single contract for construction are considered a "series of vessels" if they are built to the same approved plans for classification purposes. However, vessels within a series may have design alterations from the original design provided:

(1) such alterations do not affect matters related to classification, or

(2) If the alterations are subject to classification requirements, these alterations are to comply with the classification requirements in effect on the date on which the alterations are contracted between the prospective owner and the shipbuilder or, in the absence of the alteration contract, comply with the classification requirements in effect on the date on which the alterations are submitted to the Society for approval.

The optional vessels will be considered part of the same series of vessels if the option is exercised not later than 1 year after the contract to build the series was signed.

3. If a contract for construction is later amended to include additional vessels or additional options, the date of "contract for construction" for such vessels is the date on which the amendment to the contract, is signed between the prospective owner and the shipbuilder. The amendment to the contract is to be considered as a "new contract" to which **1.** and **2.** above apply.

4. If a contract for construction is amended to change the ship type, the date of "contract for construction" of this modified vessel, or vessels, is the date on which revised contract or new contract is signed between the Owner, or Owners, and the shipbuilder.

Note:
This Procedural Requirement applies from 1 July 2009.

Amendment 2-5

Part 5 MACHINERY INSTALLATIONS

Chapter 1 GENERAL

1.1 General

1.1.1 Scope

Sub-paragraphs -3 to -5 have been added as follows.

1 In **Part 5 of the Rules**, "main propulsion machinery" means the following machinery which generates or converts motive power capable of propelling a ship at the speed specified in **2.1.8**, **Part A of the Rules for the Survey and Construction of Steel Ships**:
(1) Diesel engines (including superchargers)
(2) Steam turbines (including main condensers)
(3) Gas turbines (including combustors)
(4) Generating plants and motors for propulsion (excluding **Chapter 18**, **Part D of the Rules for the Survey and Construction of Steel Ships**)

2 Means provided to complement the motive power generated by main propulsion machinery specified in **-1**, which is connected directly to the propulsion shafting system is to be included in the shafting system, and the rest of the portion is to be regarded as auxiliary machinery essential for main propulsion.

3 In applying **12.1.6, Part D of Rules for the Survey and Construction of Steel Ships** and **Annex D12.1.6-2, Part D of Guidance for the Survey and Construction of Steel Ships**, as required by **1.1.1-3(12), Part 5 of the Rules**, the requirements regarding external pressures specified in **1.4.1-2(2) of the Annex** are to be applied to any pipe installation required to remain operational in the case of flooding damage, as per **2.5.1, Part 4 of the Rules**.

4 In applying **12.1.6, Part D of Rules for the Survey and Construction of Steel Ships** and **Annex D12.1.6-2, Part D of Guidance for the Survey and Construction of Steel Ships**, as required by **1.1.1-3(12), Part 5 of the Rules**, the requirements regarding fire endurance specified in **1.5.1-1 of the Annex** are to be applied to any pipe installation used for Safe Return to Port purposes (*SOLAS* II-2, Reg.21.4). Such installations can be considered to remain operational after a fire casualty if the plastic pipes and fittings have been tested to L1 standard.

5 In applying **12.1.6, Part D of Rules for the Survey and Construction of Steel Ships** and **Annex D12.1.6-2, Part D of Guidance for the Survey and Construction of Steel Ships**, as required by **1.1.1-3(12), Part 5 of the Rules**, the following note is added to **Table 1 of the Annex** and is to be considered in addition to the rest of **Table 1**:

For Passenger Ships subject to *SOLAS* II-2, Reg.21.4 (Safe Return to Port), plastic pipes for services required to remain operative in the part of the ship not affected by the casualty thresholds, such as systems intended to support safe areas, are to be considered essential services. In accordance with MSC Circular *MSC*.1/*Circ*.1369, interpretation 12, for Safe Return to Port purposes, plastic piping can be considered to remain operational after a fire casualty if the plastic pipes and fittings have been tested to L1 standard.

EFFECTIVE DATE AND APPLICATION (Amendment 2-5)

1. The effective date of the amendments is 1 January 2020.

2. Notwithstanding the amendments to the Guidance, the current requirements apply to plastic piping systems other than those which fall under the following:

(1) plastic piping systems for which the application for approval of use is submitted to the Society on or after the effective date;

(2) plastic piping systems for which the date of renewal of approval of use is on or after the effective date; or

(3) plastic piping systems used on ships for which the date of contract for construction* is on or after 1 July 2021.

* "contract for construction" is defined in the latest version of IACS Procedural Requirement (PR) No.29.

IACS PR No.29 (Rev.0, July 2009)

1. The date of "contract for construction" of a vessel is the date on which the contract to build the vessel is signed between the prospective owner and the shipbuilder. This date and the construction numbers (i.e. hull numbers) of all the vessels included in the contract are to be declared to the classification society by the party applying for the assignment of class to a newbuilding.

2. The date of "contract for construction" of a series of vessels, including specified optional vessels for which the option is ultimately exercised, is the date on which the contract to build the series is signed between the prospective owner and the shipbuilder.

For the purpose of this Procedural Requirement, vessels built under a single contract for construction are considered a "series of vessels" if they are built to the same approved plans for classification purposes. However, vessels within a series may have design alterations from the original design provided:

(1) such alterations do not affect matters related to classification, or

(2) If the alterations are subject to classification requirements, these alterations are to comply with the classification requirements in effect on the date on which the alterations are contracted between the prospective owner and the shipbuilder or, in the absence of the alteration contract, comply with the classification requirements in effect on the date on which the alterations are submitted to the Society for approval.

The optional vessels will be considered part of the same series of vessels if the option is exercised not later than 1 year after the contract to build the series was signed.

3. If a contract for construction is later amended to include additional vessels or additional options, the date of "contract for construction" for such vessels is the date on which the amendment to the contract, is signed between the prospective owner and the shipbuilder. The amendment to the contract is to be considered as a "new contract" to which **1.** and **2.** above apply.

4. If a contract for construction is amended to change the ship type, the date of "contract for construction" of this modified vessel, or vessels, is the date on which revised contract or new contract is signed between the Owner, or Owners, and the shipbuilder.

Note:
This Procedural Requirement applies from 1 July 2009.

Amendment 2-6

Part 6 ELECTRICAL INSTALLATIONS

Chapter 2 DESIGN OF INSTALLATIONS

2.3 Emergency Source of Electrical Power

2.3.2 Capacity of Emergency Source of Power

Sub-paragraph -2 has been amended as follows.

2 "~~VHF radio installations, MF radio installations, *INMARSAT* Ship Earth Stations and MF/HF radio i~~Installations as required by Chapter IV of *SOLAS*" as specified in **2.3.2-2(3), Part 6 of the Rules** are the installations which are required by *GMDSS* (*Global Maritime Distress and Safety System*).

Annex 7-1 INTERPRETATION OF PROVISION OF CHAPTER II-2, *SOLAS* CONVENTION ON PASSENGER SHIPS

1 INTERPRETATION OF PROVISION OF CHAPTER II-2, *SOLAS* CONVENTION

1.1 Interpretation

Table 7-1-A1 has been amended as follows.

Table 7-1-A1 Interpretation of *SOLAS* II-2

Number	*SOLAS*	Interpretation
(Omitted)		
10.5.1.2.2	There shall be at least two portable foam extinguishers or ***equivalent***[*1] in each firing space in each boiler room and in ***each space in which a part of the oil fuel installation is situated***[*2]. There shall be not less than one approved foam-type extinguisher of at least 135*l* capacity or ***equivalent***[*1] in each boiler room. These extinguishers shall be provided with hoses on reels suitable for reaching any part of the boiler room. In the case of domestic boilers of less than 175*kW*, or boilers protected by fixed water-based local application fire-extinguishing systems, an approved foam-type extinguisher of at least 135*l* capacity is not required.	*1: The "equivalent " are to comply with the following: A carbon dioxide gas fire extinguisher with a mass of 45*kg* may be deemed equivalent to a foam fire extinguisher with a capacity of 135*l* in fire extinguishing efficiency. A carbon dioxide fire extinguisher with a mass of 16*kg* or a powder fire extinguisher with a mass of 23*kg* may be deemed equivalent to a foam fire extinguisher with a capacity of 45*l* in fire extinguishing efficiency. In case where the carbon dioxide gas fire extinguishers provided in ships which are capable of discharging the carbon dioxide gas to all areas within the spaces of boiler rooms, etc. and the quantity of the carbon dioxide gas used exclusively for such purpose is not less than 16*kg*, such fire-extinguishing arrangement may be deemed equivalent to a foam fire extinguisher with a capacity of 45*l* in fire-extinguishing efficiency. *2: "Each space in which a part of the oil fuel installation is situated" means the space in which fuel oil transfer pumps or oil purifiers are provided or the space where an aggregate of valves of the fuel oil transfer line are provided among the spaces provided with the oil fuel installations.
(Omitted)		

EFFECTIVE DATE AND APPLICATION (Amendment 2-6)

1. The effective date of the amendments is 1 January 2020.

Amendment 2-7

Annex 7-1 INTERPRETATION OF PROVISION OF CHAPTER II-2, *SOLAS* CONVENTION ON PASSENGER SHIPS

1 INTERPRETATION OF PROVISION OF CHAPTER II-2, *SOLAS* CONVENTION

Table 7-1-A1 has been amended as follows.

Table 7-1-A1 Interpretation of *SOLAS* II-2

Number	*SOLAS*	Interpretation
(Omitted)		
9.2.2.3.2.2 (10)	(10) Tanks, voids and auxiliary machinery spaces having little or no fire risk Water tanks forming part of the ship's structure. Voids and ***cofferdams***[*17]. Auxiliary machinery spaces which do not contain machinery having a pressure lubrication system and where storage of combustibles is prohibited, such as: ventilation and air-conditioning rooms; windlass room; steering gear room; stabilizer equipment room; electrical propulsion motor room; rooms containing ***section switchboards***[*18] and purely electrical equipment other than oil-filled electrical transformers (above 10*kVA*); shaft alleys and pipe tunnels; spaces for pumps and refrigeration machinery (not handling or using flammable liquids). Closed trunks serving the spaces listed above. Other closed trunks such as pipe and cable trunks.	Spaces where urea or sodium hydroxide solution tanks for selective catalytic reduction systems, exhaust gas recirculation systems or exhaust gas cleaning systems are installed are to be considered as "Tanks, voids and auxiliary machinery spaces having little or no fire risk". (Except in the cases where such tanks are installed in machinery spaces of category *A*.) *17: If a cofferdam is open to some other space, it is considered to be part of that other space. *18: Section switchboards may be located behind panels/linings within accommodation spaces including stairway enclosures, without the need to categorize the space, provided no provision is made for storage. Such location also need not to be categorized in (10) according to regulation **9.2.2.3.2.2**. If section switchboards are located in an identifiable space having a deck area of less than $4m^2$, this space may be categorized in (7) according to regulation **9.2.2.3.2.2**.
(Omitted)		

EFFECTIVE DATE AND APPLICATION (Amendment 2-7)

1. The effective date of the amendments is 1 January 2020.

2. Notwithstanding the amendments to the Guidance, the current requirements apply to ships for which the date of contract for construction* is before the effective date.

* "contract for construction" is defined in the latest version of IACS Procedural Requirement (PR) No.29.

IACS PR No.29 (Rev.0, July 2009)

1. The date of "contract for construction" of a vessel is the date on which the contract to build the vessel is signed between the prospective owner and the shipbuilder. This date and the construction numbers (i.e. hull numbers) of all the vessels included in the contract are to be declared to the classification society by the party applying for the assignment of class to a newbuilding.

2. The date of "contract for construction" of a series of vessels, including specified optional vessels for which the option is ultimately exercised, is the date on which the contract to build the series is signed between the prospective owner and the shipbuilder.

For the purpose of this Procedural Requirement, vessels built under a single contract for construction are considered a "series of vessels" if they are built to the same approved plans for classification purposes. However, vessels within a series may have design alterations from the original design provided:

(1) such alterations do not affect matters related to classification, or

(2) If the alterations are subject to classification requirements, these alterations are to comply with the classification requirements in effect on the date on which the alterations are contracted between the prospective owner and the shipbuilder or, in the absence of the alteration contract, comply with the classification requirements in effect on the date on which the alterations are submitted to the Society for approval.

The optional vessels will be considered part of the same series of vessels if the option is exercised not later than 1 year after the contract to build the series was signed.

3. If a contract for construction is later amended to include additional vessels or additional options, the date of "contract for construction" for such vessels is the date on which the amendment to the contract, is signed between the prospective owner and the shipbuilder. The amendment to the contract is to be considered as a "new contract" to which **1.** and **2.** above apply.

4. If a contract for construction is amended to change the ship type, the date of "contract for construction" of this modified vessel, or vessels, is the date on which revised contract or new contract is signed between the Owner, or Owners, and the shipbuilder.

Note:
This Procedural Requirement applies from 1 July 2009.

Amendment 2-8

Annex 7-1 INTERPRETATION OF PROVISION OF CHAPTER II-2, *SOLAS* CONVENTION ON PASSENGER SHIPS

1 INTERPRETATION OF PROVISION OF CHAPTER II-2, *SOLAS* CONVENTION

1.1 Interpretation

Table 7-1-A1 has been amended as follows.

Table 7-1-A1 Interpretation of *SOLAS* II-2

Number	*SOLAS*	Interpretation
(Omitted)		
15.2.2.6	An onboard means of recharging breathing apparatus cylinders used during drills shall be provided or ***a suitable number of spare cylinders**** shall be carried on board to replace those used.	*: "A suitable number of spare cylinders" is to be at least one "set of cylinders" for each mandatory breathing apparatus required by regulations **II-2/10.10.2** and **18.5.1.~~6~~7**. If additional spare cylinders are required by the shipboard safety management system (*SMS*), the number of spare cylinders carried on board is to be in accordance with the *SMS*. "Set of cylinders" means the number of cylinders which are required to operate the breathing apparatus. No additional cylinders are required for fire drills for breathing apparatus sets required by regulation **II-2/19**.
(Omitted)		
Reg.18	***Regulation 18 Helicopter facilites****	*: In regulation **III/28.1**, the installation of winching area for helicopter is required for all Ro-Ro passenger ships, and the installation of helicopter landing area ~~**for helicopter**~~ is required for Ro-Ro passenger ships not less than 130 *m* in length constructed after 1 July, 1999. The requirements of helicopter ~~**facilities**~~landing area are to be in accordance with ~~**R18, Part B of the Guidance for the Survey and Construction of Steel Ships**~~"*MSC*/*Circ*.895 (as amended, including the amendments by *MSC*.1/*Circ*.1524)".
(Omitted)		

EFFECTIVE DATE AND APPLICATION (Amendment 2-8)

1. The effective date of the amendments is 1 January 2020.

2. Notwithstanding the amendments to the Guidance, the current requirements apply to ships the keels of which were laid or which were at *a similar stage of construction* before the effective date.
(Note) The term "*a similar stage of construction*" means the stage at which the construction identifiable with a specific ship begins and the assembly of that ship has commenced comprising at least 50 *tonnes* or 1% of the estimated mass of all structural material, whichever is the less.

Japanese Translation

Rules for the survey and construction of passenger ships

規則の節･条タイトルの末尾に付けられたアスタリスク (*) は, その規則に対応する要領があることを示しております。

「旅客船規則」の一部を次のように改正する。

改正その 1

2 編　船級検査

2 章　　登録検査

2.1　製造中登録検査

2.1.7　　船上に保持すべき図面等*

-1.(2)を次のように改める。

-1. 製造中登録検査の完了に際しては，次に掲げる図面等のうち該当するものについて，完成図が船舶に備えられていることを確認する。

（(1)は省略）

(2)　その他の手引書等

（(a)から(m)は省略）

(n)　浸水警報装置の手引書（**5 編 2.4.1**）

5 編　機関

2 章　排水装置，衛生装置等，ビルジ管装置及びバラスト管装置

2.4 浸水警報装置

2.4.1 を次のように改める。

2.4.1　一般（*SOLAS* II-1 章 22-1 規則）*

36 人以上の~~旅客~~者を運送する船舶においては，隔壁甲板下のすべての水密区画であって，次の**(1)**又は**(2)**のいずれか大きい方の値より容積が大きいものに対し，浸水警報装置を備えなければならない。~~ただし，船橋及び安全センター（船橋とは別に設けられている場合に限る。）に表示板又は他の監視のための手段を備える液位監視装置（清水，バラスト水，燃料等）が別に設置されている場合，当該水密区画を除く。~~

(1)　最高区画喫水における船舶の毎センチメートル型排水量（m^3）

(2)　30 m^3

附　則（改正その 1）

1.　この規則は，2019 年 12 月 27 日から施行する。

2.　2019 年 7 月 1 日前に建造契約が行われた船舶にあっては，この規則による規定にかかわらず，なお従前の例による。

改正その 2

1 編　総則

2 章　定義

2.1　一般

2.1.10 を次のように改める。

2.1.10　最高区画喫水（*SOLAS* II-1 章 2.10 規則）
「最高区画喫水（d_s）」とは，船舶の~~夏季満載喫水に対応する喫水~~夏期満載喫水をいう。

2.1.13 を次のように改める。

2.1.13　喫水（*SOLAS* II-1 章 2.9 規則）
~~**規則 3 編 3 章**から **5 章**に規定される場合を除き，~~「喫水（d）」とは，船の中央におけるキール線から考慮する喫水までの垂直距離をいい，その単位は，メートル（*m*）とする。

2.1.14 を次のように改める。

2.1.14　船の中央（*SOLAS* II-1 章 2.2 規則）
「船の中央」とは，~~L_s，~~船の乾舷用長さ（L_f）の中央をいう。

2.1.16 を次のように改める。

2.1.16　トリム（*SOLAS* II-1 章 2.13 規則）
「トリム」とは，~~船首端と船尾端~~船の乾舷用長さ（L_f）の前端と後端における垂線でそれぞれ測った船首喫水と船尾喫水の差をいう。

2.1.21 を次のように改める。

2.1.21　隔壁甲板（*SOLAS* II-1 章 2.19 規則）
「隔壁甲板」とは，~~区画用長さ上の任意の点において，~~主たる隔壁及び船舶の外板が水密性を担う最上層の甲板~~及び損傷による浸水の任意の段階において，旅客及び船員の避難が浸水により妨げられない最下層の甲板~~をいう。隔壁甲板は段付きの甲板として差し支えない。

2 編　船級検査

4 章　定期検査

4.2　船体構造，船体艤装及び消火設備等

4.2.1 を次のように改める。

4.2.1　船体関係*

船体及び船体艤装の定期検査では，次に規定する検査に適合しなければならない。

(1)　**3.2.1** の検査及び効力試験を行う。

(2)　軽荷重量検査を行う。なお，軽荷重量検査の結果，前回の検査結果との差異が，軽荷重量~~が~~において 2%~~及び~~又は縦重心位置~~が~~において ~~**1 編 2.1.6** に規定する区画用長さ（L_s）~~ L_f の 1%~~以上前回の検査結果と差異がある~~を超える場合は，傾斜試験を行い，復原性資料にその結果を記載しなければならない。

3 編　船体構造及び艤装

4 章　二重底構造

4.2 配置

4.2.1 配置（*SOLAS* II-1 章 9 規則）*

-4.を次のように改める。

-1. 船首隔壁から船尾隔壁まで，水密構造の二重底を設けなければならない。

-2. 適当な大きさの液体を積載しない区画を含む水密区画のある箇所については，二重底は，船底又は船側に損傷を受けても船舶の安全が害されないことを条件に設けることを要しない。

-3. 二重底を設ける場合には，内底板は，船底をわん曲部まで保護するように，船側まで達するものとし，いずれの位置においても **1 編 2.1.22** に規定するキール線から垂直上方 *h* に位置するキール線と平行な平面より上方となるよう配置しなければならない。

$h = B'/20$

B'：**1 編 2.1.5-2.**の規定による。

ただし，いかなる場合も *h* は，0.76*m* 以上とする。また，2.0*m* を超えることを要しない。

-4. ~~船倉等の~~排水装置に連結して二重底に設ける小さいウェルは，必要以上に深いものであってはならない。~~ただし，軸路の後端においては，船底外板まで達するウェルを設けてもよい。~~考慮しているウェルの底面からキール線に平行な平面までの垂直距離を前**-3.**に規定する *h* の値の 0.5 倍若しくは 500 *mm* のいずれか大きい方以上とするか，又は本会が適当と認める方法を講じなければならない。その他のウェル（例えば，主機関下の潤滑油用のもの）については，本規定に適合する二重底による保護と同程度の保護を与える措置がとられていると本会が認める場合に限って，これを認めることがある。~~このようなウェルについては，いかなる場合も，**1 編 2.1.22** に規定するキール線からウェル底部までの垂直距離は，0.5*m* 未満としてはならない。~~

-5. 低層に大きな貨物倉を備える船舶にあっては，**1 編 2.1.22** に規定するキール線からの二重底の高さを，*B*'/10 又は 3*m* のいずれか小さい方の値を超えない高さまで増加するよう要求をすることがある。

6 章　水密隔壁及びその開口

6.2　水密隔壁及び軸路

6.2.1 を次のように改める。

6.2.1　船首隔壁（*SOLAS* II-1 章 12.1，12.2，12.3，12.~~6~~4，12.7 ~~及び~~，12.8 及び 12.9 規則）*

-1. 船舶には，隔壁甲板まで水密な船首隔壁を設けなければならない。船首隔壁は，船首垂線からの距離が船舶の乾舷用長さの 5%に相当する距離又は 10*m* のいずれか短い方以上及び本会が認める場合を除き，船舶の乾舷用長さの 8%に相当する距離又は 3*m* と船舶の乾舷用長さの 5%に相当する距離との和のいずれか長い方を超えない位置に設けなければならない。

-2. 船首隔壁より前方のあらゆる箇所が垂直方向の制限なしに浸水すると想定し，**4 編 2.3.6** の規定に従って計算された残存確率 s_i が，最高区画喫水における積付状態，トリム無し又は船首トリムとなるあらゆる積付状態において 1 未満となってはならない。

-~~2~~3. 船舶の喫水線の下方のいずれかの部分が，球状船首のように船首垂線の前方にある場合には，前**-1.**に規定する距離は，以下の点のうち船首垂線からの距離が最小となる点から測るものとする。

(1) 当該いずれかの部分が船首垂線の前方に張り出している距離の 2 分の 1 の距離にある点

(2) 船首垂線から前方に測って船舶の乾舷用長さの 1.5%に相当する距離にある点

(3) 船首垂線から前方に測って 3*m* の距離にある点

-~~3~~4. 長い前部船楼が設けられる場合には，船首隔壁は，隔壁甲板の直上の全通甲板まで延長しなければならない。また，延長部分は風雨密とする。ランプを含む当該延長部分の全部が，前**-1.**又は前~~**-2.**~~**-3.**に定める範囲内にあり，かつ，階段部を形成する甲板の部分が有効に風雨密である場合には，当該延長は船首隔壁の直上にする必要がない。この延長は，バウドア又はランプの損傷，脱落の場合に，バウドア又はランプが延長部分の損傷を起こす可能性を排除するように配置されなければならない。

-~~4~~5. バウドアが設けられ，かつ，スローピングランプが隔壁甲板上方の船首隔壁の延長の一部を形成する場合には，ランプは，その全長にわたり風雨密としなければならない。前述の規定に適合しないランプは，船首隔壁の延長とはみなさない。

-~~5~~6. 前**-1.**又は前-~~2~~**3.**に規定する範囲内においては，隔壁にステップ又はリセスを設けても差し支えない。

-~~6~~7. 乾舷甲板上の船首隔壁の延長における開口の数は，船舶の設計及び通常の操作に準ずるよう最小限にとどめなければならない。これらすべての開口は，風雨密に閉鎖できるものでなければならない。

6.4 水密戸

6.4.5 を次のように改める。

6.4.5 水密戸の開閉状態（*SOLAS* II-1 章 ~~19.2,~~ 22.1~~,~~ 及び 22.3 ~~及び 22.4~~ 規則）

-1. 水密戸は，次の**-2.**~~から **3.**まで~~の規定により航行中に開放することができる場合を除くほか，航行中は閉鎖しなければならない。**6.5.2** の規定により認められた機関区域における 1.2*m* を超える幅の水密戸は，**6.5.2** に規定する状況においてのみ開放しておくことができる。本項の規定に従い開放しているいかなる戸も直ちに閉鎖することができるようにしなければならない。

-2. 水密戸は，旅客もしくは乗組員の通行を認めるため又はその水密戸に著しく近接して作業する際，開放する必要がある場合において，航行中開放することができる。水密戸は，戸の通り抜けが完了し又は戸を開放する必要があった作業が終了したときには，直ちに閉鎖されなければならない。このような水密戸の開放は，船舶の運航及び残存性に対する影響を考慮した上で主管庁が問題ないと判断した場合にのみ認められる。航行中の開放が認められた水密戸は，復原性に関する資料において明確に表示され，常に直ちに閉鎖できるようにしておかなければならない。

~~-3. 水密戸は，絶対に必要であると認められる場合，すなわち，船舶の機関を安全かつ有効に操作し又は旅客に対し旅客区域内の通常の制限のない通行を認めるために戸の開放が真に必要である場合であって，本会が船舶の運航及び残存性に対する影響を考慮した上で問題ないと判断した場合には，航行中開放しておくことができる。このように開放しておく水密戸は，復原性に関する資料において明確に表示され，常に直ちに閉鎖できるようにしておかなければならない。~~

6.5 トランク及びその他

6.5.1 トランク（*SOLAS* II-1 章 13.11 及び 16-1 規則）*

-4.及び-5.を次のように改める。

-4. 通風トランクが隔壁甲板を貫通する場合には，トランクは，**4 編 2.3.6** により得られる浸水~~の中間段階~~時での最大~~許容~~傾斜角を考慮して，トランク内にある水圧に耐えられるような構造としなければならない。

-5. ロールオン・ロールオフ旅客船にあっては，隔壁甲板の貫通の全部または一部が主ロールオン・ロールオフ甲板上にある場合には，トランクはロールオン・ロールオフ甲板上の行き場を失った水の内部の動きによる衝撃圧に耐えなければならない。

6.5.2 を次のように改める。

6.5.2 取り外し可能なカバープレート（*SOLAS* II-1 章 13.10 及び 22.~~5~~4 規則）*

水密隔壁に取り付ける点検口用等のカバープレートで取り外し可能なものは，機関区域以外においては認められない。そのカバープレートは，常に船舶の出港前に取り付けるものとし，航行中は，緊急の必要があり，かつ，船長の裁量に基づく場合を除くほか，取り外してはならない。そのカバープレートを再び取り付けるに当たっては，接合部が水密で

あることを確保するために必要な注意を払わなければならない。緊急の必要があり，かつ，船長の裁量に基づく場合を除くほか，出港前に閉鎖し，かつ，航行中に閉鎖しておくことを条件として，本会は，これらの取り外し可能なカバープレートの代わりに，各水密隔壁に **6.4.2(2)**に規定する水密動力滑り戸より大きいひとつの水密動力滑り戸の設置を認めることがある。これらの水密動力滑り戸は，手動装置を操作して 90 秒以内に完全に閉鎖することとする **6.4.2(4)**の規定の要件を満たす必要はない。また，本項の規定により機関区域において設置することが許可される水密動力滑り戸については，緊急の必要があり，かつ，船長の指示により開放する場合を除くほか，出港前に閉鎖し，かつ，航行中に閉鎖されたままとしなければならない。

6.5.2 Portable Plates on Bulkhead (*SOLAS* Chap.II-1 Reg.13.10 and 22.~~5~~4)*

Portable plates on bulkheads are not to be permitted except in machinery spaces. Such plates always are to be in place before the ~~ship leaves port~~ voyage commences, and are not to be removed during navigation except in case of urgent necessity at the discretion of the master. When any such portable plates are removed and replaced, the necessary precautions are to be taken in replacing them to ensure that the joints are watertight. The Society may permit not more than one power-operated sliding watertight door in each main transverse bulkhead larger than those specified in paragraph **6.4.2(2)** to be substituted for these portable plates, provided these doors are closed before the ~~ship leaves port~~ voyage commences and remain closed during navigation except in case of urgent necessity at the discretion of the master. These doors need not meet the requirements of paragraph **6.4.2(4)** regarding complete closure by hand-operated gear in 90 *seconds*. Power-operated sliding watertight doors permitted in machinery spaces in accordance with the provisions under this paragraph is to be closed before the ~~ship leaves port~~ voyage commences and is to remain closed during navigation except in case of urgent necessity at the discretion of the master.

7 章　外板の開口及び水密性

7.2　隔壁甲板の下方の開口

7.2.2 の表題を次のように改める。

7.2.2　舷窓（*SOLAS* II-1 章 15.3 から 15.6，15.9，22.~~7~~6 及び 22.14~~3~~ から 22.1~~6~~5 規則）*

-3.を次のように改める。

-3.　甲板間において，前**-2.**に規定するいずれかの舷窓の下縁が，船舶の出港の際の水面から上方へ 1.4*m* に船舶の幅の 2.5%に相当する長さを加えた距離をその最低点として，船側における隔壁甲板に対し平行に引いた線の下方にある場合には，その甲板間のすべての舷窓は，船舶の出港前に水密に閉鎖して錠を下ろすものとし，次の港に着く前に開けてはならない。

3　Where in a between decks, the sills of any of the side scuttles referred to in paragraph **-2** are below a line drawn parallel to the bulkhead deck at side and having its lowest point 1.4*m* plus 2.5% of the breadth of the ship above the water when the ~~ship departs from any port~~ voyage commences, all the side scuttles in that between decks are to be closed watertight and locked before the ~~ship leaves port~~ voyage commences, and they are not to be opened before the ship arrives at the next port.

-4.を次のように改める。

-4.　最高区画~~満載~~喫水~~線~~で浮いている場合で，その舷窓が前**-3.**に規定する位置にある船舶については，本会は，限界平均喫水を指示することができるものとし，その限界平均喫水は，これに対応する喫水線から上方へ 1.4*m* に船舶の幅の 2.5%に相当する長さを加えた距離をその最低点として，船側における隔壁甲板に対し平行に引いた線の上方にそれらの舷窓の下縁がくるようにしなければならない。その限界平均喫水で浮いている船舶は，舷窓を閉鎖して錠を下ろすことなく出港すること及び~~次の港までの~~航海中に船長の責任で海上において舷窓を開けることができる。現行の満載喫水線に関する国際条約に定める熱帯においては，その限界喫水は，0.3*m* だけ増加させることができる。

-5.を次のように改める。

-5.　舷窓には，容易に，有効に，かつ，水密に閉鎖することができる効果的なヒンジ内ぶたを取り付けなければならない。ただし，船首垂線から ~~**1 編 2.1.6** に規定する区画用長さ（L_s）~~船舶の長さの 8 分の 1 に相当する距離にある箇所の後方において，かつ，最高区画~~満載~~喫水~~線~~から上方へ 3.7*m* に船舶の幅の 2.5%に相当する長さを加えた距離をその最低点として，船側における隔壁甲板に対し平行に引いた線の上方においては，~~本会が適当と認めた~~旅客の居住に充てる場所の内ぶたは，現行の満載喫水線に関する国際条約により内ぶたを定位置に恒久的に取り付けることが要求される場合を除くほか，取り外し可能なものとすることができる。取り外し可能な内ぶたは，使用される舷窓の近くに備えておかな

ければならない。

-6.を次のように改める。

-6. 航行中に近づくことができない舷窓及びその内ぶたは，船舶の出港前に確実に閉鎖しなければならない。

6 Side scuttles and their dead lights which will not be accessible during navigation are to be closed and secured before the ~~ship leaves port~~ voyage commences.

7.2.3 の表題を次のように改める。

7.2.3 舷門及び載貨門等（*SOLAS* II-1 章 15.9 及び 22.~~7~~6 規則）

-1.を次のように改める。

-1. 隔壁甲板の下方に設ける舷門及び載貨門は，船舶の出港前に有効かつ水密に閉鎖するものとし，航行中閉鎖しておかなければならない。

1 Gangway and cargo ports fitted below the bulkhead deck are to be effectively closed and secured watertight before the ~~ship leaves port~~ voyage commences, and are to be kept closed during navigation.

7.3 隔壁甲板の上方の水密性及び開口

7.3.1 隔壁甲板上方の水密性（*SOLAS* II-1 章 17.1 から 17.3 規則）

-3.を次のように改める。

-3. 水密の閉鎖装置を設けられていない船楼内で終わる空気管~~の開放端~~は，~~船舶の傾斜が 15 度または直接計算により決定される浸水の中間段階の最大の傾斜角のいずれか大きい方の場合に，少なくとも水線上 1*m* の位置になければならない。もしくは，油タンク以外のタンクからの空気管は，船楼の側面を通して排出してもよい。~~**4 編 2.3.4-6.**の適用において，保護されていない開口として考慮しなければならない。

7.3.2 の表題を次のように改める。

7.3.2 隔壁甲板上方の開口（*SOLAS* II-1 章 17.4，17.5，22.~~8~~7 及び 22.~~9~~8 規則）

-3.を次のように改める。

-3. 隔壁甲板の上方にある次に掲げる戸は，~~船舶のいかなる航海への~~出航前に~~も，~~閉鎖して錠を下ろし，船舶が次に接岸するまでは，閉鎖して錠を下ろしておかなければならない。

ただし，船舶の接岸中に戸を開けること又は閉鎖することができない場合には，その戸

は，船舶が着岸し又は離岸する時に，その戸を直ちに操作できることが必要である限り，開けること又は開けておくことができる。いかなる場合にも，内部バウドアは，閉鎖しておかなければならない。

(1) 外板又は閉囲船楼の周壁に取り付けた貨物の積載用の戸
(2) 前**(1)**に示された位置に取り付けたバウバイザー
(3) 船首隔壁に取り付けた貨物の積載用の戸
(4) 前**(1)**から**(3)**までに掲げる戸に代わる閉鎖装置を形成するランプ

7.4 ロールオン・ロールオフ旅客船の水密性

7.4.1 ロールオン・ロールオフ甲板（隔壁甲板）から下層区域への水密性（*SOLAS* II-1 章 17-1.1 及び 23.3 規則）

-2.を次のように改める。

-2. ロールオン・ロールオフ甲板及び車両ランプから隔壁甲板の下層区域へ通じるすべての出入口は，~~いかなる航海においても停泊地を離れる~~航海前に閉鎖され，次の停泊地に着くまで閉鎖されたままとしなければならない。

7.4.2 を次のように改める。

7.4.2 ロールオン・ロールオフ甲板の閉鎖（*SOLAS* II-1 章 23.1 及び 23.7 規則）

-1. 特殊分類区域またはロールオン・ロールオフ貨物区域は，航海中，荒天時の車両の移動並びにこれらの区域への許可を得ていない乗客の立ち入りに対して，これらの区域を巡視し，また，テレビ監視装置のような効果的な手段によって監視されなければならない。

-2. ロールオン・ロールオフ甲板に滞留する海水を遮るために効果があると考えられるすべての横置または縦隔壁は，その船舶が停泊地を離れる前に所定の位置に固定され，次の停泊地に着くまでそのままの状態に保たれなければならない。

7.4.2 Closure of the Ro-ro Deck (*SOLAS* Chap.II-1 Reg.23.1 and 23.7)

1 Special category spaces and Ro-Ro cargo spaces are to be continuously patrolled or monitored by effective means, such as television surveillance, so that movement of vehicles in adverse weather and unauthorized access by passengers can be observed ~~whilst the ship is underway~~ during navigation.

2 All transverse or longitudinal bulkheads which are taken into account as effective to confine the seawater accumulated on the Ro-Ro deck are to be in place and secured before the ~~ship leaves the berth~~ voyage commences and remain in place and secured until the ship is at its next berth.

4 編　区画及び復原性

2 章　区画

2.3 損傷時復原性

2.3.4 を次のように改める。

2.3.4　区画指数（*SOLAS* II-1 章 6 及び 7 規則）*

-1. 本章における損傷時復原性に関する要件が適用される旅客船の要求区画指数（R）は，~~次の算式による値とする~~表 **4.2.2** によること。

~~$R = 1 - \dfrac{5000}{L_s + 2.5N + 15225}$~~

~~N：次の算式による。~~

~~$N = N_1 + 2N_2$~~

~~N_1：救命ボートが供給される人数~~

~~N_2：N_1を超えて船舶への乗船を許可されている人数（船長及び船員を含む。）~~

表 4.2.2　R の値

乗船者数	R
$N < 400$	$R = 0.722$
$400 \le N \le 1{,}350$	$R = \dfrac{N}{7580} + 0.66923$
$1{,}350 < N \le 6{,}000$	$R = 0.0369 ln\left(N + 89.048\right) + 0.579$
$6{,}000 < N$	$R = 1 - \dfrac{852.5 + 0.03875N}{N + 5000}$

（備考）

N = 乗船者数の合計

~~-2. 前**-1.**にかかわらず，N を $N_1 + 2N_2$ とすることが非現実的な航海状態については，本会が適当と認める場合，N を減じることを認めることがある。ただし，いかなる場合も N を $N_1 + N_2$ 未満としてはならない。~~

~~-3~~2. 船舶の到達区画指数（A）は，前**-1.**の要求区画指数（R）以上としなければならない。A は **1 編 2.1.10** から **2.1.12** に規定する d_s，d_p 及び d_l の各喫水に対して算出される部分区画指数 A_s，A_p 及び A_l に加重平均により得られる値で，次の算式による。また，部分区画指数はそれぞれ $0.9R$ 以上としなければならない。

$A = 0.4A_s + 0.4A_p + 0.2A_l$

各部分区画指数は，考慮する損傷ケースから得られる確率値の総和で，次の算式による。

$A_x = \Sigma\, p_i \cdot s_i$

A_x：**1 編 2.1.10** から **2.1.12** に規定する各喫水に対する部分指数を表す。

p_i：対象とする一区画又は区画群のみが浸水する確率（以下，「区画浸水確率」という。）で，**2.3.5** の規定による。

s_i：対象とする一区画又は区画群が浸水した後，当該船舶が残存する確率（以下，

「残存確率」という。）で，**2.3.6** の規定による。
i：対象とするそれぞれの区画又は区画群を表す。

~~3~~**2** The Attained Subdivision Index (A) for ship is to be not less than the Required Subdivision Index (R), calculated in accordance with **-1** above. A is obtained by the summation of the partial indices A_s, A_p and A_l, ~~(~~weighted as shown~~)~~ and calculated for the draughts d_s, d_p and d_l specified in **2.1.10** to **2.1.12**, **Part 1** in accordance with the following formula:

$$A = 0.4A_s + 0.4A_p + 0.2A_l$$

Each partial index is a summation of contributions from all damage cases taken in consideration, using the following formula:

$$A_x = \Sigma\, p_i \cdot s_i$$

Where, each partial index is not less than $0.9R$.

A_x: Each partial index correspond to draughts, d_s, d_p and d_l specified in **2.1.10** to **2.1.12**, **Part 1**.

p_i: Probability that only a compartment or a group of compartments in question may be flooded (hereinafter referred to as “compartment flooding probability”), which is to be in accordance with the requirements in **2.3.5**.

s_i: Probability of survival after flooding a compartment or a group of compartments in question (hereinafter referred to as “survival probability”), which is to be in accordance with the requirements in **2.3.6**.

i : Indication of each compartment or group of compartments in question.

Σ: Summation of all cases of loading in which a compartment or a group of compartments is involved.

~~4~~3. A_x は，次に掲げる条件で計算しなければならない。

(1) 少なくとも最高区画喫水及び部分積載区画喫水についてはトリムが無いものと~~し，~~する。軽荷航海喫水に対しては~~実際の~~想定した航海上のトリムを用いる~~ものとする~~ことができる。d_s から d_l までの喫水範囲で予想されるいずれかの航海状態におけるトリムが，計算に使用したトリムと比較して $0.005L_s$~~，~~L_f を超える場合，~~同じ喫水で異なるトリムの 1 つ以上の状態について A_x を計算し，~~すべての航海状態について，計算に使用したいずれかの参照トリムと比較して，トリムの差が ~~$0.005L_s$ より小さくなるように~~ $0.005\,L_f$ 以下となることを確認するために，同じ喫水で十分なトリムの状態について A_x を計算しなければならない。A_x に対する追加の計算については，前**-2.**を満たさなければならない。

(2) A_x の算入は L_s にわたり，区画ないし区画群が浸水する全ての場合を対象とする。

(3) 仮想船体損傷範囲は次による。

(a) 垂直方向は，基線から d' + 12.5（m）までとする。ただし，それ以下の損傷範囲でより厳しい結果となる場合には，そうした範囲の損傷も仮定しなければならない。

(b) 船幅方向は，最高区画喫水の位置で，船体中心線に対して直角となる方向に船側から内側に測った範囲とし，船舶の半幅 $B'/2$ を超える船幅方向の損傷は除くものとする。また，船体中心線以外の位置に設けられた縦通隔壁により区画が形成されている場合には，最も船側寄りの一区画（以下，「ウイング区画」という。）から順次船体中心線までの区画群の損傷を仮定する。

(4) 浸水計算を行う際には，船体の損傷は 1 箇所で発生するものと仮定し，1 つの自由表面のみを考慮する。

(5) 非対称な区画配置となる場合の到達区画指数は，両舷において計算した値の平均値とする。いずれかの舷において不利な計算結果が得られることが明白である場合には，当該舷の区画に対してのみ計算を行った値として差し支えない。

(6) 浸水状態の中間及び最終的な平衡状態における残存復原力曲線の正の復原梃を決定する場合，非損傷時の積付状態の排水量を用いるものとする。すべての計算は，船体のトリム変化の影響を考慮して行う。

~~5~~4. 管，ダクト又はトンネルが仮想損傷範囲の中に配置される場合，当該仮想損傷範囲以外の区画への浸水を防止するための措置を講じなければならない。ただし，小規模な浸水の広がりについてその影響を容易に制御することができ，かつ，船舶の安全が損なわれないことが証明される場合は，この限りではない。

2.3.5 区画浸水確率（p_i）（*SOLAS* II-1 章 7-1 規則）*

-1.を次のように改める。

-1. 区画又は区画群の区画浸水確率（p_i）は，損傷を受ける区画の数に応じて，次の**(1)**から**(3)**のいずれかにより決定しなければならない。

(1) 単一の領域にのみ関わる損傷の場合

$$p_i = p(x1_j, x2_j)\cdot[r(x1_j, x2_j, b_k) - r(x1_j, x2_j, b_{k-1})]$$

x1：船尾端から当該領域後端までの距離（*m*）

x2：船尾端から当該領域前端までの距離（*m*）

b： 外板と，縦通隔壁との幅方向の距離（*m*）で，最高区画喫水線において船体中心線に対して直角に測る。また，実際の縦通隔壁が外板に対して平行でない場合については，当該縦通隔壁の全体又は一部を共有する又は接する仮想垂直面を想定し，当該区画又は区画群の長さの中央位置における仮想垂直面と縦通隔壁の距離とする。なお，仮想垂直面は，船の長さ方向の中央位置において船側外板との幅方向の距離が最大となり，かつ，船側外板との幅方向の距離の最小値の 2 倍を越えないように想定しなければならない。いかなる場合においても，*b* は，*B*/2 以下としなければならない。

j： 考慮する損傷区画の損傷領域番号を表す。（最も船尾側の領域を番号 1 とする。）

k： 船側外板から船体中心線方向に数えた，損傷領域において横方向の貫通に対して障壁となる特定の縦通隔壁の数を表す。ただし，船側外板について *k* は 0 とする。

p(*x1*, *x2*)：後**-2.**による。

r(*x1*, *x2*, *b*)：後**-3.**による。ただし，*r*(*x1*, *x2*, b_0)は 0 とする。

（(2)及び(3)は省略）

2.3.5 Compartment Flooding Probability (p_i) (*SOLAS* Chap.II-1 Reg.7-1)*

1 The Compartment Flooding Probability (p_i) for a compartment or group of compartments is to be determined by the following **(1)**, **(2)** or **(3)** according to the number of damaged compartment.

(1) Where the damage involves a single zone only:

$$p_i = p(x1_j, x2_j)\cdot[r(x1_j, x2_j, b_k) - r(x1_j, x2_j, b_{k-1})]$$

Where:

x1: The distance (*m*) from the aft terminal of L_s to the aft end of the zone in question

x2: The distance (*m*) from the aft terminal of L_s to the forward end of the zone in question

b: The mean transverse distance (*m*) measured at right angles to the centreline at the deepest subdivision ~~loadline~~ draught between the shell and an assumed vertical plane extended between the longitudinal limits used in calculating the factor p_i and which is a tangent to, or common with, all or part of the outermost portion of the longitudinal bulkhead under consideration. This vertical plane is to be so orientated that the mean transverse distance to the shell is a maximum, but not more than twice the least distance between the plane and the shell. If the upper part of a longitudinal bulkhead is below the deepest subdivision ~~loadline~~ draught the vertical plane used for determination of *b* is assumed to extend upwards to the deepest subdivision waterline. In any case, *b* is not to be taken greater than *B*'/2.

j: The aftmost damage zone number involved in the damage starting with no.1 at the stern

k: The number of a particular longitudinal bulkhead as barrier for transverse penetration in a damage zone counted from shell towards the centre line. However, value of *k* according to side shell is to be taken as zero.

p(*x1*, *x2*): It is specified in **-2**.

r(*x1*, *x2*, *b*): It is specified in **-3**. However, *r*(*x1*, *x2*, b_0) is to be taken as zero.

（(2) and (3) are omitted.）

2.3.6 残存確率（s_i）（*SOLAS* II-1 章 7-2 規則）*

-3.から-5.を次のように改める。

-3. 残存確率 $s_{final,i}$ は次式による。

~~$s_{final,i} = K \left[\frac{GZ_{max} \quad Range}{0.12 \quad 16} \right]^{\frac{1}{4}}$~~ $s_{final,i} = K \cdot \left[\frac{GZ_{max}}{TGZ_{max}} \times \frac{Range}{TRange} \right]^{\frac{1}{4}}$

K：係数で次による。

$\theta_e \le \theta_{min}$ の場合：$K = 1$

$\theta_e \ge \theta_{max}$ の場合：$K = 0$

その他の場合：$K = \sqrt{\frac{\theta_{max} - \theta_e}{\theta_{max} - \theta_{min}}}$

ここで，θ_{min} は 7 度とし，θ_{max} は 15 度とする。

θ_v 及び θ_e ：前**-2.**による。

GZ_{max}：前**-2.**による。ただし，$s_{final,i}$ の算定においては ~~*0.12m*~~*TGZ*$_{max}$ 以下とする。

Range：前**-2.**による。ただし，$s_{final,i}$ の算定において *Range* は ~~16 度~~*TRange* 以下とする。

TGZ$_{max}$：ロールオン・ロールオフ旅客船であって，ロールオン・ロールオフ区画を含む各損傷ケースについては，0.20 *m* とし，その他の場合については，0.12 *m* とする。

TRange：ロールオン・ロールオフ旅客船であって，ロールオン・ロールオフ区画を含む各損傷ケースについては，20 度とし，その他の場合については，16 度とする。

-4. 残存確率 $s_{mom,i}$ は次式による。

$$s_{\mathrm{mom,i}} = \frac{(GZ_{\max} - 0.04)\cdot V}{M_{heel}}$$

$GZ_{\max}$：前**-2.**による。

V：~~区画喫水~~ d_s，d_p 又は d_l の各喫水における非損傷時の船舶の排水量

M_{heel}：横傾斜モーメントで，後**-5.**の規定による。

-5. 横傾斜モーメント M_{heel} は次式による。また，算式中の $M_{\mathrm{passenger}}$，M_{wind} 及び $M_{\mathrm{Survivalcraft}}$ は次の**(1)**から**(3)**にてそれぞれ決定しなければならない。

$$M_{\mathrm{heel}} = \mathrm{maximum}\{M_{\mathrm{passenger}} \text{ or } M_{\mathrm{wind}} \text{or} M_{\mathrm{Survivalcraft}}\}$$

(1) $M_{\mathrm{passenger}}$ は，旅客の移動により生じる仮想最大横傾斜モーメントをいい，次のいずれかによること。

(a) $M_{\mathrm{passenger}} = (0.075\cdot N_p)\cdot(0.45\cdot B')$ （$t\cdot m$）

N_p： 当該最大区画~~満載~~喫水に対して，運航時に船上に乗せることが許可された旅客の最大人数

B'： **1 編 2.1.5-1** による。

(b) 召集場所が設けられる甲板において，次の **i)**から **iii)**に従って旅客が分布していると仮定した時の横傾斜モーメント

i) 横傾斜モーメントが最大となるように，当該甲板の旅客が利用できる部分において，旅客が片舷に偏在した状態とする。

ii) $1m^2$ 当たり旅客は 4 人とすること。

iii) 旅客 1 人当たりの体重は $75kg$ とする。

(2) M_{wind} は，損傷時に作用する仮想最大風力モーメントをいい，次の算式により得られる。

$$M_{\mathrm{wind}} = (P\cdot A\cdot Z)/9.806 \quad (t\cdot m)$$

P：120 N/mm^2 とする。

A：喫水線より上方の投影側面積（m^2）

Z：喫水線より上方の投影側面積の中心から $T/2$ までの距離（m）

T：~~初期積載状態に対する喫水~~ d_s，d_p 又は d_l の各喫水（m）

(3) $M_{\mathrm{Survivalcraft}}$ は，船体の片舷における満載状態にしたダビット進水式の救命艇の進水により生じる最大仮想横傾斜モーメントをいい，次の**(a)**から**(e)**の仮定を考慮して決定しなければならない。

(a) 損傷を受けた後に船舶が横傾斜する側に配置される全ての救命艇及び救助艇は，満載で，かつ，下降できる状態で振り出す。

(b) 格納場所から満載状態で進水する救命挺については，進水中の最大横傾斜モーメントとする。

(c) 損傷を受けた後に船舶が横傾斜する側のダビットに取り付けられ，満載状態でのダビット進水式の救命いかだは，下降できる状態で振り出す。

(d) 振り出される救命設備の中にいない人々については，追加の横傾斜モーメント又は復原力のどちらにも寄与しない。

(e) 船舶が横傾斜する側と反対側の救命設備は格納場所にあること。

-10.及び-11.を次のように改める。

-10. 船体の沈下，横傾斜及びトリムを考慮した最終段階の水線において次の**(1)**から**(3)**のいずれかが没水する場合~~に~~，~~あらゆる状況に対する~~残存確率 s_i は 0 とする。

(1) 連続的な浸水が起こり得る，かつ，そのような浸水が残存確率 s_i の計算に考慮されていない開口
(2) 空気管，通風管及び風雨密戸又は倉口蓋により閉鎖される開口
(3) 隔壁甲板であって，*SOLAS* II-2 章の適用において必要な水平方向の脱出経路となる部分

-11. 船体の沈下，横傾斜及びトリムを考慮し，浸水の中間段階又は最終段階において次の**(1)**から**(3)**のいずれかの状況が発生する場合において，残存確率 s_i は 0 とする。
(1) 隔壁甲板における垂直脱出倉口が没水する場合
(2) 隔壁甲板上の水密戸の開閉，水密隔壁の管又は通風ダクトの弁等を操作する制御装置に近づけなくなる又は操作不能になる場合
(3) ~~区画内に配置される水密を維持する~~仮想損傷範囲内に配置され，水密な境界を貫通する管又は通風ダクトが没水~~する~~し，浸水を想定していない区画が浸水し得る場合

2.3.7 を次のように改める。

2.3.7 旅客船の復原性に関する特別要件（*SOLAS* II-1 章 8 規則）

-1. 400 人以上の人を輸送しようとする船舶は，区画指数の算定に基づく 3 つの積載状態及び船首垂線から後方に測って 0.08 ~~L_s~~L_f 内のすべての区画にかかわる損傷に対して，残存確率 s_i が 1 になるよう，船首隔壁の後方に水密区画を設けなければならない。異なるトリム状態について区画指数（*A*）を計算する場合，それらの積載状態についても本規定を満足しなければならない。

-2. 36 人以上の人を輸送しようとする船舶は，後**-3.**に規定される範囲の船側外板に沿った損傷に耐久できなければならない。本項の要求は，**2.3.6** に規定される係数 s_i が区画指数の算定に基づく 3 つの積載状態に対して 0.9 以上となることを実証することにより認められる。異なるトリム状態について区画指数（*A*）を計算する場合，それらの積載状態についても本規定を満足しなければならない。

-3. 前**-2.**の要件が実証される場合に想定される損傷範囲は，~~**2.3.4-1.**に定義される *N*~~輸送される人の総人数及び ~~**1 編 2.1.6** に定義される L_s~~L_f の両方に依存し，次の**(1)**から**(5)**に規定されるものとする。
(1) 船舶の長さ方向の損傷範囲は，考慮している船舶の基線から **1 編 2.1.10** に規定される最高区画喫水位置上方 12.5*m* の位置に至るものとする。ただし，より小さい垂直方向の損傷範囲から，より低い残存確率 s_i が得られるときに，この軽減した損傷範囲を用いることとしなければならない。
(2) 400 人以上の人が輸送される場合には，幅方向については，最高区画喫水の箇所において船体中心線に対して垂直方向に船内へ 0.1*B'* 貫通し（ただし，船側から測って 0.75*m* 以上とする。），船舶の長さ方向については，船側外板に沿った任意の位置において 0.03~~L_s~~L_f（ただし，3*m* 以上とする。）の損傷長さを想定する。
(3) 400 人未満の人が輸送される場合に，隣接する水密横隔壁間の距離が仮想損傷長さ以上となることを条件に，水密横隔壁間の船側外板に沿った任意の位置において損傷長さを想定する。隣接する水密横隔壁間の距離が仮想損傷長さ未満の場合，**前-2.** の要件を実証するにあたり，該当隔壁のうち片方のみを有効とみなさなければならない。
(4) 36 人の人を輸送する場合には，幅方向については，高区画満載喫水の箇所において船体中心線に対して垂直方向に船内へ 0.05*B'* 貫通し（ただし，船側から測って

0.75*m* 以上とする。），船舶の長さ方向については，船側外板に沿った任意の位置において 0.015~~L_s~~L_f（ただし，3*m* 以上とする。）の損傷長さを想定する。

(5) 36 人を超え 400 人未満の人を輸送する場合において，仮想損傷範囲を決定するのに用いられる損傷長さ及び船内への貫通の値は，前**(2)**及び前**(4)**に規定される 36 人及び 400 人の人を輸送する船舶に対して適用する損傷長さ及び貫通の値を用いた線形補間により得られる。

4 章　非損傷時復原性

4.3 復原性資料

4.3.1 一般*

-1.を次のように改める。

-1. 旅客船について，その完成後に行われる傾斜試験に基づき~~復原性の要素~~軽荷排水量並びに縦，横及び垂直方向の重心位置を決定した上で，船長には，各種の使用状態における船舶の復原性についての正確な指針を，迅速かつ容易に得ることができるように，本会が承認した資料を提供しなければならない。

5 編　機関

2 章　排水装置，衛生装置等，ビルジ管装置及びバラスト管装置

2.2 排水装置及び衛生装置等

2.2.1 一般（*SOLAS* II-1 章 15.8 及び 35-1.2 規則並びに *LOAD LINE* 22 規則）*

-1.を次のように改める。

-1. 各甲板には，有効に排水できるように十分な数と大きさの排水管を設けなければならない。ただし，隔壁甲板上の閉囲された貨物区域の排水管にあって，貨物区域の大きさ，内部区画の状況等を考慮して，船舶の安全性が損なわれないと本会が判断した場合はこの排水管の設置を省略することができる。固定式加圧水噴霧装置を備える場合には，復原力の消失にかかわる特別な危険性に対して *SOLAS* 条約 II-2 章第 20 規則 6.1.4 を参照すること。

2.3 ビルジ管装置及びバラスト管装置

2.3.1 一般（*SOLAS* II-1 章 35-1.2 及び 35-1.3 規則）*

-5.を次のように改める。

-5. ビルジ管のいずれの部分についても，その位置が，次のいずれかにある場合には，当該管の開放端のある区画に逆止弁を設けなければならない。

(1) 船側から船舶の幅の 5 分の 1 に相当する距離よりも船側寄りにある場合
この場合，船舶の幅は最高区画~~満載~~喫水~~線~~の水平面において中心線に対し直角に測られたものとする。

(2) ダクトキール内にある場合

2.3.4 ビルジポンプ（*SOLAS* II-1 章 35-1.3 規則）

-1.を次のように改める。

-1. ビルジポンプの数及び配置

(1) 船舶には，独立の動力によって駆動されるポンプを少なくとも 3 台備え，ビルジ吸引主管からそれぞれ吸引可能なように配置しなければならない。このうち 1 台は主機関によって駆動されるものとすることができる。ただし，**1 編 2 章 2.1.37** に規定される標準数が 30 以上である場合には，追加の 1 台のビルジポンプを装備しなければならない。

(2) 独立の動力によって駆動されるバラストポンプ，衛生ポンプ，雑用ポンプ等がビルジ主管に適当に連結されている場合には，これらのポンプは，前**(1)**の独立の動力によって駆動されるビルジポンプとみなすことができる。

(3) 動力ビルジポンプは，できる限り別の水密区画に配置し，同一の損傷によって浸水しないようにしなければならない。主機，補助機関及びボイラが 2 つ以上の水密区画にある場合には，当該ポンプは，できる限りこれらの区画に分散して配置しなければならない。

(4) 船の長さが 91.5*m* 以上又は **1 編 2 章 2.1.37** に規定される標準数が 30 以上の船舶については，船舶が耐えるよう要求される全ての浸水状態において，また，**4 編 2 章 2.3.7** に規定される損傷により発生する全ての浸水状態において，少なくとも 1 台の動力ビルジポンプを利用し得るように次のいずれかの措置を講じなければならない。

(a) 要求される動力ビルジポンプの 1 台を，隔壁甲板の上方に動力源を有する信頼性のあるサブマージドタイプの非常動力ビルジポンプとする。

(b) 非常動力ビルジポンプとして，少なくとも 1 台の動力ビルジポンプ及びその動力源を，損傷を受けない区画室内に配置し利用し得るようする。

(5) 動力ビルジポンプは，船首尾区画用としてのみ設ける追加のポンプを除くほか，**2.3.1-1.**の規定により排水することを要求されるいずれの場所からも排水できるものとしなければならない。

附　則（改正その 2）

1. この規則は，2020 年 1 月 1 日（以下，「施行日」という。）から施行する。

2. 次のいずれかに該当する船舶以外の船舶にあっては，この規則による規定にかかわらず，なお従前の例による。

(1) 施行日以降に建造契約が行われる船舶

(2) 建造契約が存在しない場合には，2020 年 7 月 1 日以降にキールが据え付けられる船舶又は特定の船舶として確認できる建造が開始され，かつ，少なくとも 50 トン又は全建造材料の見積重量の 1%のいずれか少ないものが組み立てられた状態にある船舶

(3) 2024 年 1 月 1 日以降の引き渡しが行われる船舶

改正その 3

3 編　船体構造及び艤装

7 章　外板の開口及び水密性

7.1　一般

7.1.1　適用

-4.として次の 1 項を加える。

-4.　水密戸を設ける場合は，特に本章に規定されていない事項については，*IACS* 統一解釈 *SC*156（以後の改正を含む。）によること。

附　則（改正その 3）

1. この規則は，2020 年 1 月 1 日（以下，「施行日」という。）から施行する。

2. 次のいずれかに該当する船舶以外の船舶にあっては，この規則による規定にかかわらず，なお従前の例による。

(1) 施行日以降に建造契約*が行われる船舶

(2) 建造契約が存在しない場合には，2020 年 7 月 1 日以降にキールが据え付けられる船舶又は特定の船舶として確認できる建造が開始され，かつ，少なくとも 50 トン又は全建造材料の見積重量の 1%のいずれか少ないものが組み立てられた状態にある船舶

(3) 2024 年 1 月 1 日以降の引き渡しが行われる船舶

* 建造契約とは，最新の IACS Procedural Requirement (PR) No.29 に定義されたものをいう。

IACS PR No.29 (Rev.0, July 2009)

英文（正）

1. The date of “contract for construction” of a vessel is the date on which the contract to build the vessel is signed between the prospective owner and the shipbuilder. This date and the construction numbers (i.e. hull numbers) of all the vessels included in the contract are to be declared to the classification society by the party applying for the assignment of class to a newbuilding.
2. The date of “contract for construction” of a series of vessels, including specified optional vessels for which the option is ultimately exercised, is the date on which the contract to build the series is signed between the prospective owner and the shipbuilder.
   For the purpose of this Procedural Requirement, vessels built under a single contract for construction are considered a “series of vessels” if they are built to the same approved plans for classification purposes. However, vessels within a series may have design alterations from the original design provided:
   (1) such alterations do not affect matters related to classification, or
   (2) If the alterations are subject to classification requirements, these alterations are to comply with the classification requirements in effect on the date on which the alterations are contracted between the prospective owner and the shipbuilder or, in the absence of the alteration contract, comply with the classification requirements in effect on the date on which the alterations are submitted to the Society for approval.

   The optional vessels will be considered part of the same series of vessels if the option is exercised not later than 1 year after the contract to build the series was signed.
3. If a contract for construction is later amended to include additional vessels or additional options, the date of “contract for construction” for such vessels is the date on which the amendment to the contract, is signed between the prospective owner and the shipbuilder. The amendment to the contract is to be considered as a “new contract” to which 1. and 2. above apply.
4. If a contract for construction is amended to change the ship type, the date of “contract for construction” of this modified vessel, or vessels, is the date on which revised contract or new contract is signed between the Owner, or Owners, and the shipbuilder.

Note:
This Procedural Requirement applies from 1 July 2009.

仮訳

1. 船舶の「建造契約日」とは，予定所有者と造船所との間で建造契約のサインが交わされた日をいう。なお，この契約日及び契約を交わす全ての船舶の建造番号（船番等）は，新造船に対し船級登録を申込む者によって，船級協会に申告されなければならない。

2. オプションの行使権が契約書に明示されている場合，オプション行使によるシリーズ船の「建造契約日」は，予定所有者と造船所との間で建造契約のサインが交わされた日をいう。本 Procedural Requirement の適用において，1 つの建造契約書に基づく船舶が同一の承認図面によって建造される場合は，シリーズ船と見なす。しかしながら，以下の条件を満たす設計変更にあっては，シリーズ船は原設計から設計変更を行うことができる。

   (1) 設計変更が船級要件に影響を及ぼさない，
   又は，
   (2) 設計変更が船級規則の対象となる場合，当該変更が予定所有者と造船所との間で契約された日に有効な船級規則に適合している，又は設計変更の契約が無い場合は承認のために図面が船級協会に提出された日に有効な船級規則に適合している。

   オプションによる建造予定船は，シリーズ船の建造契約が結ばれてから 1 年以内にオプションが行使される場合，シリーズ船として扱われる。

3. 建造契約の後に追加の建造船又は追加のオプションを含める契約の変更がなされた場合，建造契約日は予定所有者と造船所との間で契約変更がなされた日をいう。この契約変更は前 1. 及び 2.に対して，「新しい契約」として扱わなければならない。

4. 船舶の種類の変更による建造契約の変更があった場合，改造された船舶の「建造契約日」は，予定所有者と造船所との間で契約変更又は新規契約のサインが交わされた日をいう。

備考：
1. 本 PR は，2009 年 7 月 1 日から適用する。

改正その 4

5 編　機関

1 章　通則

1.1　一般

1.1.1　適用*

-3.(12)及び(13)を次のように改める。

-3.　船舶に施設される機関は，**鋼船規則 D 編**の規定のうち，次に示す**(1)**から**(18)**の規定を適用するほか，本編の規定にも適合しなければならない。

(1)　**1 章**　通則（**1.1.1** を除く。）
(2)　**2 章**　ディーゼル機関
(3)　**3 章**　蒸気タービン
(4)　**4 章**　ガスタービン
(5)　**5 章**　動力伝達装置
(6)　**6 章**　軸系
(7)　**7 章**　プロペラ
(8)　**8 章**　軸系ねじり振動
(9)　**9 章**　ボイラ等及び焼却設備
(10)　**10 章**　圧力容器
(11)　**11 章**　機関の溶接
(12)　**12 章**　管，弁，管取付け物及び補機（~~**鋼船規則 D 編 12.3.3-2.**及び~~**鋼船規則 D 編表 D12.8** の(注)(7)中の「乾舷甲板」については，「隔壁甲板」に読み替えて適用する。）
(13)　**13 章**　管艤装（**13.2.5**，**13.4** 及び **13.5** を除く。また，**鋼船規則 D 編 13.2.4-3.**中の「乾舷甲板」については，「隔壁甲板」に読み替えて適用する。）
(14)　**15 章**　操舵装置（**15.1.1**，**15.2.1**，**15.2.2**，**15.2.3** 及び **15.6** を除く。）
(15)　**16 章**　ウインドラス及びムアリングウインチ
(16)　**17 章**　冷蔵装置
(17)　**18 章**　自動制御及び遠隔制御
(18)　**21 章**　予備品，要具及び装備品

附　則（改正その 4）

1. この規則は，2020 年 1 月 1 日（以下，「施行日」という。）から施行する。

2. 施行日前に建造契約*が行われた船舶にあっては，この規則による規定にかかわらず，なお従前の例による。

* 建造契約とは, 最新の IACS Procedural Requirement (PR) No.29 に定義されたものをいう。

IACS PR No.29 (Rev.0, July 2009)

英文（正）

1. The date of “contract for construction” of a vessel is the date on which the contract to build the vessel is signed between the prospective owner and the shipbuilder. This date and the construction numbers (i.e. hull numbers) of all the vessels included in the contract are to be declared to the classification society by the party applying for the assignment of class to a newbuilding.
2. The date of “contract for construction” of a series of vessels, including specified optional vessels for which the option is ultimately exercised, is the date on which the contract to build the series is signed between the prospective owner and the shipbuilder.
   For the purpose of this Procedural Requirement, vessels built under a single contract for construction are considered a “series of vessels” if they are built to the same approved plans for classification purposes. However, vessels within a series may have design alterations from the original design provided:
   (1) such alterations do not affect matters related to classification, or
   (2) If the alterations are subject to classification requirements, these alterations are to comply with the classification requirements in effect on the date on which the alterations are contracted between the prospective owner and the shipbuilder or, in the absence of the alteration contract, comply with the classification requirements in effect on the date on which the alterations are submitted to the Society for approval.

   The optional vessels will be considered part of the same series of vessels if the option is exercised not later than 1 year after the contract to build the series was signed.
3. If a contract for construction is later amended to include additional vessels or additional options, the date of “contract for construction” for such vessels is the date on which the amendment to the contract, is signed between the prospective owner and the shipbuilder. The amendment to the contract is to be considered as a “new contract” to which 1. and 2. above apply.
4. If a contract for construction is amended to change the ship type, the date of “contract for construction” of this modified vessel, or vessels, is the date on which revised contract or new contract is signed between the Owner, or Owners, and the shipbuilder.

Note:
This Procedural Requirement applies from 1 July 2009.

仮訳

1. 船舶の「建造契約日」とは，予定所有者と造船所との間で建造契約のサインが交わされた日をいう。なお，この契約日及び契約を交わす全ての船舶の建造番号（船番等）は，新造船に対し船級登録を申込む者によって，船級協会に申告されなければならない。

2. オプションの行使権が契約書に明示されている場合，オプション行使によるシリーズ船の「建造契約日」は，予定所有者と造船所との間で建造契約のサインが交わされた日をいう。本 Procedural Requirement の適用において，1 つの建造契約書に基づく船舶が同一の承認図面によって建造される場合は，シリーズ船と見なす。しかしながら，以下の条件を満たす設計変更にあっては，シリーズ船は原設計から設計変更を行うことができる。

   (1) 設計変更が船級要件に影響を及ぼさない，
   又は，
   (2) 設計変更が船級規則の対象となる場合，当該変更が予定所有者と造船所との間で契約された日に有効な船級規則に適合している，又は設計変更の契約が無い場合は承認のために図面が船級協会に提出された日に有効な船級規則に適合している。

   オプションによる建造予定船は，シリーズ船の建造契約が結ばれてから 1 年以内にオプションが行使される場合，シリーズ船として扱われる。

3. 建造契約の後に追加の建造船又は追加のオプションを含める契約の変更がなされた場合，建造契約日は予定所有者と造船所との間で契約変更がなされた日をいう。この契約変更は前 1. 及び 2.に対して，「新しい契約」として扱わなければならない。

4. 船舶の種類の変更による建造契約の変更があった場合，改造された船舶の「建造契約日」は，予定所有者と造船所との間で契約変更又は新規契約のサインが交わされた日をいう。

備考：
1. 本 PR は，2009 年 7 月 1 日から適用する。

改正その 5

6 編　電気設備

2 章　設備計画

2.3　非常電気設備

2.3.2　非常電源装置の容量及び給電時間（*SOLAS* II-1 章 42.2 規則）*

-2.(3)を次のように改める。

-2.　非常電源装置は，特定の負荷の始動電流と過渡特性を考慮し，少なくとも次の負荷（電気に依存するものに限る。）にそれぞれ指定された時間，同時に給電できるものでなければならない。

（(1)及び(2)は省略）

(3)　*SOLAS* IV 章により要求される次の**(a)**から**(d)**に掲げる ~~*VHF* 無線設備, *MF* 無線設備, インマルサット船舶地球局装置及び *MF/HF* 無線~~設備であって船舶に装備されているものに対して 36 時間。ただし，これらの無線設備が二重に装備される場合は，非常電源装置の容量を算定する際，二重に装備された設備が同時に使用されることを考慮する必要はない。

(a)　*VHF* 無線設備

(b)　*MF* 無線設備

(c)　認定された移動衛星業務による船舶地球局装置

(d)　*MF/HF* 無線設備

（(4)から(13)は省略）

附　則（改正その 5）

1.　この規則は，2020 年 1 月 1 日から施行する。

Japanese Translation

Guidance for the survey and construction of passenger ships

「旅客船規則検査要領」の一部を次のように改正する。

改正その 1

5 編　機関

2 章　排水装置，衛生装置等，ビルジ管装置及びバラスト管装置

2.4　浸水警報装置

2.4.1 を次のように改める。

2.4.1　一般

-1.　**規則 5 編 2.4.1** の浸水警報装置については，次の~~**-2.**~~**(1)**から~~**-12**~~**(11)**によること。

~~-2.~~(1) 定義

(~~1~~a) 「浸水警報装置」とは，水密区画への浸水を検知する検知部及びこれを警告する警報装置からなる装置をいう。連続~~水~~浸水液位監視装置を設置しても差し支えない。

(~~2~~b) 「検知部」とは，水を探知すると信号を発する監視される場所に設置される装置をいう。

(~~3~~c) 「警報装置」とは，浸水状態を知らせて注意を促す可視可聴の警報を発する装置をいう。

~~-3.~~(2) ある程度のトリム及びヒール状態においても，浸水警報装置が要求される水密区画への浸水を検知することが可能となるよう，十分な数の検知部を適切に配置すること。一般的には以下の通りとすること。

(~~1~~a) 垂直方向位置

検知部は，水密区画の中の可能な限り低い位置に設置すること。

(~~2~~b) 船長方向位置

船体中央部より前方に位置する水密区画においては，検知部は区画の前端に設置すること。船体中央部より後方に位置する水密区画では，検知部は区画の後端に設置すること。船体中央部付近に位置する水密区画においては，検知部の適切な位置を検討すること。長さが *Ls*/5 よりも長い水密区画及び船長方向の水の流れが著しく制限されるような配置の水密区画に関しては，前端と後端の両方に検知部を設置すること。

(~~3~~c) 横方向位置

検知部は区画の幅方向の中央又は両舷に設置すること。船舶の全幅にわたる水密区画及び横方向の水の流れが著しく制限されるような配置の水密区画に関しては，検知部は両舷に設置すること。

~~-4.~~(3) 水密区画が複数の甲板で構成される場合，少なくとも，それぞれの甲板レベルに一つの浸水警報検知部を設置すること。ただし，連続水位監視装置が設置されている場合は，この限りではない。

~~-5.~~(4) 特殊な配置の水密区画等，~~**-3.**~~**(2)**及び~~**-4.**~~**(3)**の要件では本来の目的を達成できないこ

とが予測される場合については，浸水警報検知部の数及び設置場所について，特別に配慮すること。

~~6.~~(5) 浸水警報装置は，船橋及び安全センター（船橋とは別に設けられている場合に限る。）において可視可聴警報を発するとともに，浸水区画を表示すること。

~~7.~~(6) 可視可聴警報は，他の警報と識別することが可能なものとすること。

~~8.~~(7) 浸水警報装置は，船舶において通常起こりうる，供給電圧の変動及び過渡現象，周囲の温度変化，振動，湿度，衝撃及び腐食に耐えることが出来るように適切に設計すること。また，検知部ケーブル及び接続箱は，浸水状態において警報装置が作動するように，適切な保護外被とすること。さらに，警報装置はフェイルセーフの原則で設計を行い，検知回路が断路した場合には警報を発するものとすること。

~~9.~~(8) 浸水警報装置は，常時，主電源より給電され，主電源からの給電が停止した場合には，非常電源に自動的に切り替わること。また，主電源からの給電が停止した場合は，警報によって知らせること。

~~10.~~(9) 浸水警報装置の操作，保守及び試験についての文書化された手順を船上に保管し，容易に使用可能な状態とすること。

~~11.~~(10) 浸水警報装置の検知部及び機器は，試験，保守及び修理のためにアクセスしやすい場所に設置すること。

~~12.~~(11) 浸水警報装置は，直接的又は間接的な方法で，機能試験が可能であること。また，試験の記録は，船上に保管すること。

-2. 船橋及び安全センター（船橋とは別に設けられている場合）に表示板又は他の監視のための手段を備える液位監視装置が別に設置されている水密区画（清水，バラスト水，燃料等）にあっては，当該液位監視装置は前**-1.**の要件に適合する必要はない。

-3. 前**-2.**に掲げる液位監視装置であって，浸水警報装置として使用される液位監視装置及び浸水警報装置の代替となる液位監視装置は，*SOLAS* 条約 II-2 章第 21 規則 4 に適合すること。

付録 7-1　　*SOLAS* II-2 章の旅客船関係の条文解釈

1　　*SOLAS* II-2 章の条文解釈

表 7-1-A1 を次のように改める。

表 7-1-A1　*SOLAS* II-2 章の条文解釈

条項番号	*SOLAS* 条文	条文解釈
	A 部　総則	
Reg.3	第 3 規則　定義	
（省略）		
Reg.21	海難の基準，安全な帰港及び安全区域	
21.4	***安全な帰港*** *	**MSC*.1/*Circ*.1369（*MSC*.1/*Circ*.1369/*Add*.1 による改正を含む。）に加え，*MSC*.1/*Circ*.1437 による。
21.4.13	***浸水警報装置*** *	**36 人以上の者を運送し，II-1 章 **8-1** 規則の適用を受ける旅客船は，**21.4** 規則における安全な帰港(SRTP)の要件を以下の両方に適用する。* *(1)　*MSC*.1/*Circ*.1291 のパラグラフ 6 で定義される空間にある浸水警報装置* *(2)　*MSC*.1/*Circ*.1291 のパラグラフ 7 に規定される液位監視装置であって浸水警報装置として使用されるもの，又は代替となるもの* *すなわち，**(2)**に示す装置について，*MSC*.1/*Circ*.1291 のパラグラフ 7「これらの要件から除外する」という文言は，**21.4.13** 規則の一般的な規定（火災時に機能し続ける）からの除外ではない。この除外は，*MSC*.1/*Circ*.1291 の詳細規定にのみ関係する。*

附　則（改正その 1）

1.　この達は，2019 年 12 月 27 日から施行する。

2.　2019 年 7 月 1 日前に建造契約が行われた船舶にあっては，この達による規定にかかわらず，なお従前の例による。

改正その 2

2 編　船級検査

4 章　定期検査

4.2　船体構造，船体艤装及び消火設備等

4.2.1 を次のように改める。

4.2.1　船体関係

-1.　**規則 2 編 4.2.1(2)**に規定される軽荷重量検査の代表的な方法を以下に示す。

(1)　軽荷重量

(a) 船舶の船首，船尾及び中央におけるドラフトスケールにて，試験時の船舶の喫水を計測する。このとき，海水の温度及び密度を計測する。必要に応じ海水の温度等を用いて海水密度を補正する。

(b) 試験時における船舶に搭載している付加重量物，例えば，計測機器及びタンク等に残っている液体の重量を計測又は算定する。

(c) 上記の結果と排水量曲線等（毎センチメートル排水トン数）を用いて軽荷重量を算定する。なお，縦傾斜が大きい場合又は撓曲している場合は適当な方法で修正する必要がある。

(2)　~~縦~~重心位置

前**(1)**の試験時の船舶の喫水，軽荷重量及び付加物等の重量と排水量曲線図等（浮心曲線，毎センチトリム変化モーメント）を用いて~~縦~~重心位置を算定する。

-2.　軽荷重量検査の結果が，**規則 2 編 4.2.1(2)**に規定される前回の検査結果との差異を超えない場合，その後の全ての復原性資料において使用される値は，軽荷重量，長さ方向及び幅方向の重心位置については軽荷重量検査から得られる値とし，深さ方向の重心位置については直近の傾斜試験から得られた値とすること。

3 編　船体構造及び艤装

4 章　二重底構造

4.2 配置

4.2.1 を次のように改める。

4.2.1　配置

-1.　**規則 1 編 1.1.3** の規定が適用される船舶であって**規則 1 編 2.1.36** に定義する短国際航海の範囲内で定期業務に従事するものについては，0.50 を超えない係数で区画された船舶の部分に，二重底を設けることが船舶の設計及び固有の用途に適さないと本会が認めた場合には，その部分の二重底を省略することができる。

-2.　**規則 3 編 4.2.1-2.**で「船舶の安全が害されないことを条件に」とは，**規則 4 編**の損傷時の復原性の要件を満足することをいう。

-3.　**規則 3 編 4.2.1-2.**の規定により二重底を省略する場合，及び特殊な船底構造とする場合には，次の**(1)**及び**(2)**によること。なお，特殊な船底構造とは，例えば，内底板が船の全幅にわたるものとなっていない構造や，内底板が**規則 1 編 2.1.12** に定義する部分積載区画喫水(d_p)よりも上方に位置する構造をいう。

(1)　船底損傷の影響を受ける可能性がある場合，二重底を省略する区画について，**規則 4 編 2.3.6** の規定に従って残存確率 s_i を計算し，**規則 4 編 2.3.4-2.** に規定する到達区画指数 A の計算に用いられる 3 つの喫水における航海状態において，s_i が 1 以上となるよう区画を配置すること。損傷範囲については，**規則 4 編 2.3.4-3.(3)**の規定に替えて，**表 3.4.2.1** に規定する損傷範囲を適用すること。また，より狭い範囲の損傷の方がより厳しい状態を生じる場合には，そのような損傷範囲を考慮すること。

(2)　二重底を省略する区画の浸水が，船舶の他の場所にある非常電源，照明，船内の通信，信号装置及びその他の非常用装置を操作不能な状態にするものでないこと。

表 3.4.2.1　仮想損傷範囲

	船首垂線から 0.3L の範囲	その他の範囲
船長方向範囲	$1/3\,L_f^{2/3}$ 又は 14.5m の いずれか小さい方	$1/3\,L_f^{2/3}$ 又は 14.5m の いずれか小さい方
船幅方向範囲	B'/6 又は 10m の いずれか小さい方	B'/6 又は 5m の いずれか小さい方
キール線から測った 垂直方向範囲	~~B'/20 又は 2m の いずれか小さい方~~ B'/20 ただし，0.76 m 以上かつ 2 m 以下とする。	~~B'/20 又は 2m の いずれか小さい方~~ B'/20 ただし，0.76 m 以上かつ 2 m 以下とする。

（備考）

1. キール線は，**規則 1 編 2.1.22** の規定による。
2. 船の幅（B'）は，**規則 1 編 2.1.5-1.**の規定による。

-4. **規則 3 編 4.2.1-4.**にいう「本会が適当と認める方法」とは，前**-3.(1)**に規定する要件を満足することをいう。

-5. **規則 3 編 4.2.1-4.**にいう「本章に規定する二重底と同程度の保護」とは，前**-3.(1)**に規定する要件を満足することをいう。ただし，主機関下の潤滑油用のウェルにあっては，ウェルの底面からキール線に一致する平面までの垂直距離が**規則 3 編 4.2.1-3.**に規定する *h* の値の 0.5 倍若しくは 500 *mm* のいずれか大きい方以上となる場合，二重底内の距離 *h* により定義される境界線の下方へ突出しても差し支えない。

-~~4~~6. **規則 3 編 4.2.1-5.**の適用上, 前**-3.**の規定により浸水計算を実施する場合にあっては，垂直方向の損傷範囲を増すことを要求することがある。

6 章　水密隔壁及びその開口

6.2　水密隔壁及び軸路

6.2.1　船首隔壁

-2.を次のように改める。

-2. **規則 3 編 ~~6.2.1-3.~~6.2.1-4.**における「長い前部船楼」とは，その長さが 0.25*L* 以上のものをいう。

6.4　水密戸

6.4.5 として次の 1 条を加える。

6.4.5　水密戸の開閉状態

規則 3 編 6.4.5-2.の適用上，船舶の運航及び残存性に対する影響については，*IMO* が策定した指針 *“Revised Recommendation on a standard method for evaluating cross-flooding arrangements”*（*MSC.*1/Circ.1564）を参照すること。

4 編　区画及び復原性

2 章　　区画

2.3　損傷時復原性

2.3.6 を次のように改める。

2.3.6　　残存確率（s_i）（*SOLAS* II-1 章 7-2 規則）

-1.　**規則 4 編 2.3.6-2.**に規定するθ_vの適用上，「閉鎖された風雨密となり得ない開口」には，**規則 3 編 7.1.1-1.**に従って風雨密の閉鎖装置を備える通風筒であっても，運航上の理由から，機関室又は非常用発電機室（非常用発電機室は，復原性計算において浮力に算入されている場合又は下方に通じる開口を保護している場合）に給気を行うために開放しておく必要がある通風筒を含む。

-2.　**規則 4 編 2.3.6-8.**の適用上，平衡化のための装置については，*IMO* 決議 *MSC.*362(92) *"Revised Recommendation on a standard method for evaluating cross-flooding arrangements"*（その後の改正を含む）を参照すること。

附　則（改正その 2）

1.　この達は，2020 年 1 月 1 日（以下，「施行日」という。）から施行する。

2.　次のいずれかに該当する船舶以外の船舶にあっては，この達による規定にかかわらず，なお従前の例による。

(1) 施行日以降に建造契約が行われる船舶

(2) 建造契約が存在しない場合には，2020 年 7 月 1 日以降にキールが据え付けられる船舶又は特定の船舶として確認できる建造が開始され，かつ，少なくとも 50 トン又は全建造材料の見積重量の 1%のいずれか少ないものが組み立てられた状態にある船舶

(3) 2024 年 1 月 1 日以降の引き渡しが行われる船舶

改正その 3

3 編　船体構造及び艤装

6 章　水密隔壁及びその開口

6.4　水密戸

6.4.1　一般

-4.及び-5.として次の 2 項を加える。

-4.　**規則 6.4** の適用上，水密戸を設ける場合は，*IACS* 統一解釈 *SC*156（以後の改正を含む。）によること。

-5.　**規則 6.4** の適用上，*SOLAS* 条約 II-1 章第 17.1 規則の要件については，*IMO* 決議 *MSC*.429(98)「*SOLAS* 条約 II-1 章の区画及び損傷時復原性規則に関する解説文書の改正」（“*REVISED EXPLANATORY NOTES TO THE SOLAS CHAPTER II-1 SUBDIVISION AND DAMAGE STABILITY REGULATIONS*”）の該当箇所を参照すること。

7 章　外板の開口及び水密性

7.3 として次の 1 節を加える。

7.3　隔壁甲板の上方の水密性及び開口

7.3.1　隔壁甲板上方の水密性

SOLAS 条約 II-1 章第 17.1 規則の要件については，*IMO* 決議 *MSC*.429(98)「*SOLAS* 条約 II-1 章の区画及び損傷時復原性規則に関する解説文書の改正」（“*REVISED EXPLANATORY NOTES TO THE SOLAS CHAPTER II-1 SUBDIVISION AND DAMAGE STABILITY REGULATIONS*”）の該当箇所を参照すること。

付録 7-1　　SOLAS II-2 章の旅客船関係の条文解釈

1　　*SOLAS* II-2 章の条文解釈

1.1　条文解釈

表 7-1-A1 を次のように改める。

表 7-1-A1　*SOLAS* II-2 章の条文解釈

条項番号	*SOLAS* 条文	条文解釈
（省略）		
9.4.1.1.2	「*A*」級仕切りにおけるすべての戸及び戸枠の構造並びに戸を閉鎖したときに定着させる装置は，火災並びに煙及び炎の通過の阻止について，実行可能な限り，戸が取り付けられる***隔壁と同等のもの****でなければならず，火災試験方法コードに基づき決定される。これらの防火戸及び戸枠は，鋼その他これと同等の材料で造ること。戸枠の一部として縁材を設けずに承認された戸であって，2010 年 7 月 1 日以降に取り付けられたものは，戸の下部の間隙が 12 *mm* を超えないよう取り付けられなくてはならない。床材が閉じた戸の真下に入りこまないよう，不燃性の縁材が戸の下部に取り付けられなくてはならない。	*：原則として，水密戸を除く戸は火災試験方法コードに基づく試験に合格したものとする。 *：要求される防熱値よりも高い防熱値を持つ隔壁に取付けられるドアは，要求される防熱値とするだけでよい。 *： **II-1** 章 **15** 規則の要件に適合し，隔壁甲板の下方に取り付けられる水密戸は，**II-1** 章 **18** 規則に規定される水密戸の要件に適合していれば，火災試験方法コードに基づき試験される必要はない。隔壁甲板の上方に取り付けられる戸は，防火要件及び水密戸の要件に適合する必要があり，火災試験方法コードに基づき試験されたものとすること。
（省略）		

附　則（改正その 3）

1. この達は，2020 年 1 月 1 日（以下，「施行日」という。）から施行する。

2. 次のいずれかに該当する船舶以外の船舶にあっては，この達による規定にかかわらず，なお従前の例による。

(1) 施行日以降に建造契約*が行われる船舶

(2) 建造契約が存在しない場合には，2020 年 7 月 1 日以降にキールが据え付けられる船舶又は特定の船舶として確認できる建造が開始され，かつ，少なくとも 50 トン又は全建造材料の見積重量の 1%のいずれか少ないものが組み立てられた状態にある船舶

(3) 2024 年 1 月 1 日以降の引き渡しが行われる船舶

* 建造契約とは，最新の IACS Procedural Requirement (PR) No.29 に定義されたものをいう。

IACS PR No.29 (Rev.0, July 2009)

英文（正）

1. The date of “contract for construction” of a vessel is the date on which the contract to build the vessel is signed between the prospective owner and the shipbuilder. This date and the construction numbers (i.e. hull numbers) of all the vessels included in the contract are to be declared to the classification society by the party applying for the assignment of class to a newbuilding.
2. The date of “contract for construction” of a series of vessels, including specified optional vessels for which the option is ultimately exercised, is the date on which the contract to build the series is signed between the prospective owner and the shipbuilder.
   For the purpose of this Procedural Requirement, vessels built under a single contract for construction are considered a “series of vessels” if they are built to the same approved plans for classification purposes. However, vessels within a series may have design alterations from the original design provided:
   (1) such alterations do not affect matters related to classification, or
   (2) If the alterations are subject to classification requirements, these alterations are to comply with the classification requirements in effect on the date on which the alterations are contracted between the prospective owner and the shipbuilder or, in the absence of the alteration contract, comply with the classification requirements in effect on the date on which the alterations are submitted to the Society for approval.
   The optional vessels will be considered part of the same series of vessels if the option is exercised not later than 1 year after the contract to build the series was signed.
3. If a contract for construction is later amended to include additional vessels or additional options, the date of “contract for construction” for such vessels is the date on which the amendment to the contract, is signed between the prospective owner and the shipbuilder. The amendment to the contract is to be considered as a “new contract” to which 1. and 2. above apply.
4. If a contract for construction is amended to change the ship type, the date of “contract for construction” of this modified vessel, or vessels, is the date on which revised contract or new contract is signed between the Owner, or Owners, and the shipbuilder.

Note:
This Procedural Requirement applies from 1 July 2009.

仮訳

1. 船舶の「建造契約日」とは，予定所有者と造船所との間で建造契約のサインが交わされた日をいう。なお，この契約日及び契約を交わす全ての船舶の建造番号（船番等）は，新造船に対し船級登録を申込む者によって，船級協会に申告されなければならない。

2. オプションの行使権が契約書に明示されている場合，オプション行使によるシリーズ船の「建造契約日」は，予定所有者と造船所との間で建造契約のサインが交わされた日をいう。本 Procedural Requirement の適用において，1 つの建造契約書に基づく船舶が同一の承認図面によって建造される場合は，シリーズ船と見なす。しかしながら，以下の条件を満たす設計変更にあっては，シリーズ船は原設計から設計変更を行うことができる。

   (1) 設計変更が船級要件に影響を及ぼさない，
   又は，
   (2) 設計変更が船級規則の対象となる場合，当該変更が予定所有者と造船所との間で契約された日に有効な船級規則に適合している，又は設計変更の契約が無い場合は承認のために図面が船級協会に提出された日に有効な船級規則に適合している。

   オプションによる建造予定船は，シリーズ船の建造契約が結ばれてから 1 年以内にオプションが行使される場合，シリーズ船として扱われる。

3. 建造契約の後に追加の建造船又は追加のオプションを含める契約の変更がなされた場合，建造契約日は予定所有者と造船所との間で契約変更がなされた日をいう。この契約変更は前 1. 及び 2.に対して，「新しい契約」として扱わなければならない。

4. 船舶の種類の変更による建造契約の変更があった場合，改造された船舶の「建造契約日」は，予定所有者と造船所との間で契約変更又は新規契約のサインが交わされた日をいう。

備考：
1. 本 PR は，2009 年 7 月 1 日から適用する。

改正その 4

5 編　機関

1 章　通則

1.1　一般

1.1.1　適用

-3.及び-4.として次の 2 項を加える。

-1.　**規則 5 編**において主機とは，船舶を**鋼船規則 A 編 2.1.8** にいう船の速力を保って航行する原動力を発生又は変換するものをいう。
(1)　ディーゼル機関（過給機を含む。）
(2)　蒸気機関（主復水器を含む。）
(3)　ガスタービン機関（燃焼器を含む。）
(4)　推進用発電装置及び推進用電動機（**鋼船規則 D 編 18 章**を除く。）

-2.　前**-1.**の主機の発生する原動力を補う目的で設置される装置は，推進軸系に直結する部分を当該推進軸系に含め，それ以外の部分を推進補機に含める。

-3.　**規則 5 編 1 章 1.1.1-3.(1)**により要求される**鋼船規則 D 編 1 章 1.1.3** 及び**附属書 D1.1.3-1** の適用上，ウォータージェット推進装置については，**同附属書 1.1.3-3.(1)**中の「すべての操舵装置の操舵駆動システムを作動している状態」を「いずれか 1 の操舵装置の操舵駆動システムが作動していない状態」に読み替えて同規定を適用する。

-4.　**規則 5 編 1 章 1.1.1-3.(1)**により要求される**鋼船規則 D 編 1 章 1.1.3** 及び**附属書 D1.1.3-3.** の適用上，旋回式推進装置については，**同附属書 1.1.3-3.(1)**中の「すべての操舵装置の操舵駆動システムを作動している状態」を「いずれか 1 の操舵装置の操舵駆動システムが作動していない状態」に読み替えて同規定を適用する。

附　則（改正その 4）

1. この達は，2020 年 1 月 1 日（以下，「施行日」という。）から施行する。

2. 施行日前に建造契約*が行われた船舶に搭載されるウォータージェット推進装置又は旋回式推進装置であって，施行日前に承認申込みのあったものについては，この達による規定にかかわらず，なお従前の例による。

* 建造契約とは，最新の IACS Procedural Requirement (PR) No.29 に定義されたものをいう。

IACS PR No.29 (Rev.0, July 2009)

英文（正）

1. The date of “contract for construction” of a vessel is the date on which the contract to build the vessel is signed between the prospective owner and the shipbuilder. This date and the construction numbers (i.e. hull numbers) of all the vessels included in the contract are to be declared to the classification society by the party applying for the assignment of class to a newbuilding.
2. The date of “contract for construction” of a series of vessels, including specified optional vessels for which the option is ultimately exercised, is the date on which the contract to build the series is signed between the prospective owner and the shipbuilder.
   For the purpose of this Procedural Requirement, vessels built under a single contract for construction are considered a “series of vessels” if they are built to the same approved plans for classification purposes. However, vessels within a series may have design alterations from the original design provided:
   (1) such alterations do not affect matters related to classification, or
   (2) If the alterations are subject to classification requirements, these alterations are to comply with the classification requirements in effect on the date on which the alterations are contracted between the prospective owner and the shipbuilder or, in the absence of the alteration contract, comply with the classification requirements in effect on the date on which the alterations are submitted to the Society for approval.

   The optional vessels will be considered part of the same series of vessels if the option is exercised not later than 1 year after the contract to build the series was signed.
3. If a contract for construction is later amended to include additional vessels or additional options, the date of “contract for construction” for such vessels is the date on which the amendment to the contract, is signed between the prospective owner and the shipbuilder. The amendment to the contract is to be considered as a “new contract” to which 1. and 2. above apply.
4. If a contract for construction is amended to change the ship type, the date of “contract for construction” of this modified vessel, or vessels, is the date on which revised contract or new contract is signed between the Owner, or Owners, and the shipbuilder.

Note:
This Procedural Requirement applies from 1 July 2009.

仮訳

1. 船舶の「建造契約日」とは，予定所有者と造船所との間で建造契約のサインが交わされた日をいう。なお，この契約日及び契約を交わす全ての船舶の建造番号（船番等）は，新造船に対し船級登録を申込む者によって，船級協会に申告されなければならない。

2. オプションの行使権が契約書に明示されている場合，オプション行使によるシリーズ船の「建造契約日」は，予定所有者と造船所との間で建造契約のサインが交わされた日をいう。本 Procedural Requirement の適用において，1 つの建造契約書に基づく船舶が同一の承認図面によって建造される場合は，シリーズ船と見なす。しかしながら，以下の条件を満たす設計変更にあっては，シリーズ船は原設計から設計変更を行うことができる。

   (1) 設計変更が船級要件に影響を及ぼさない，
   又は，
   (2) 設計変更が船級規則の対象となる場合，当該変更が予定所有者と造船所との間で契約された日に有効な船級規則に適合している，又は設計変更の契約が無い場合は承認のために図面が船級協会に提出された日に有効な船級規則に適合している。

   オプションによる建造予定船は，シリーズ船の建造契約が結ばれてから 1 年以内にオプションが行使される場合，シリーズ船として扱われる。
3. 建造契約の後に追加の建造船又は追加のオプションを含める契約の変更がなされた場合，建造契約日は予定所有者と造船所との間で契約変更がなされた日をいう。この契約変更は前 1. 及び 2.に対して，「新しい契約」として扱わなければならない。

4. 船舶の種類の変更による建造契約の変更があった場合，改造された船舶の「建造契約日」は，予定所有者と造船所との間で契約変更又は新規契約のサインが交わされた日をいう。

備考：
1. 本 PR は，2009 年 7 月 1 日から適用する。

改正その 5

5 編　機関

1 章　通則

1.1　一般

1.1.1　適用

-3.から-5.として次の 3 項を加える。

-1.　**規則 5 編**において主機とは，船舶を**鋼船規則 A 編 2.1.8** にいう船の速力を保って航行する原動力を発生又は変換するものをいう。
(1)　ディーゼル機関（過給機を含む。）
(2)　蒸気機関（主復水器を含む。）
(3)　ガスタービン機関（燃焼器を含む。）
(4)　推進用発電装置及び推進用電動機（**鋼船規則 D 編 18 章**を除く。）

-2.　前**-1.**の主機の発生する原動力を補う目的で設置される装置は，推進軸系に直結する部分を当該推進軸系に含め，それ以外の部分を推進補機に含める。

-3.　**規則 5 編 1 章 1.1.1-3.(12)**により要求される**鋼船規則 D 編 12 章 12.1.6** 及び**附属書 D12.1.6-2.**中，**1.4.1-2.(2)**に規定する外圧に関する要件は，**規則 4 編 2.5.1** にいう浸水が生じた場合でも機能することが要求される全ての管にも適用される。

-4.　**規則 5 編 1 章 1.1.1-3.(12)**により要求される**鋼船規則 D 編 12 章 12.1.6** 及び**附属書 D12.1.6-2.**中，**1.5.1-1.**の適用上，*SOLAS* 条約第 II-2 章第 21 規則 4 項にいう安全な帰港のために用いるプラスチック管装置にも耐火要件が要求される。試験により L1 であると認められているプラスチック管装置を，火災後にも使用可能であるものとみなすことができる。

-5.　**規則 5 編 1 章 1.1.1-3.(12)**により要求される**鋼船規則 D 編 12 章 12.1.6** 及び**附属書 D12.1.6-2.**中，**表 1** の適用上，次の備考が付されるものとする。

SOLAS 条約第 II-2 章第 21 規則 4 項（安全な帰港）が適用される旅客船にあっては，海難の基準の影響を受けない箇所において機能が喪失しないことが要求される用途に用いられるプラスチック管（例えば，安全区域の機能に必要な装置）は，重要な用途に用いられるものとみなされる。*MSC.*1/*Circ.*1369，interpretation 12 に基づき，安全な帰港のために用いるプラスチック管装置にあっては，試験により L1 に適合するプラスチック管装置を，火災後にも使用可能であるものとみなす。

附　則（改正その 5）

1. この達は，2020 年 1 月 1 日（以下，「施行日」という。）から施行する。

2. 次のいずれにも該当しないプラスチック管装置にあっては，この達による規定にかかわらず，なお従前の例による。

(1) 施行日以降に使用承認の申込みのあったプラスチック管装置

(2) 施行日以降に使用承認の更新を行うプラスチック管装置

(3) 2021 年 7 月 1 日以降に建造契約*が行われる船舶に搭載されるプラスチック管装置

* 建造契約とは，最新の IACS Procedural Requirement (PR) No.29 に定義されたものをいう。

IACS PR No.29 (Rev.0, July 2009)

英文（正）

1. The date of “contract for construction” of a vessel is the date on which the contract to build the vessel is signed between the prospective owner and the shipbuilder. This date and the construction numbers (i.e. hull numbers) of all the vessels included in the contract are to be declared to the classification society by the party applying for the assignment of class to a newbuilding.
2. The date of “contract for construction” of a series of vessels, including specified optional vessels for which the option is ultimately exercised, is the date on which the contract to build the series is signed between the prospective owner and the shipbuilder.
   For the purpose of this Procedural Requirement, vessels built under a single contract for construction are considered a “series of vessels” if they are built to the same approved plans for classification purposes. However, vessels within a series may have design alterations from the original design provided:
   (1) such alterations do not affect matters related to classification, or
   (2) If the alterations are subject to classification requirements, these alterations are to comply with the classification requirements in effect on the date on which the alterations are contracted between the prospective owner and the shipbuilder or, in the absence of the alteration contract, comply with the classification requirements in effect on the date on which the alterations are submitted to the Society for approval.

   The optional vessels will be considered part of the same series of vessels if the option is exercised not later than 1 year after the contract to build the series was signed.
3. If a contract for construction is later amended to include additional vessels or additional options, the date of “contract for construction” for such vessels is the date on which the amendment to the contract, is signed between the prospective owner and the shipbuilder. The amendment to the contract is to be considered as a “new contract” to which 1. and 2. above apply.
4. If a contract for construction is amended to change the ship type, the date of “contract for construction” of this modified vessel, or vessels, is the date on which revised contract or new contract is signed between the Owner, or Owners, and the shipbuilder.

Note:
This Procedural Requirement applies from 1 July 2009.

仮訳

1. 船舶の「建造契約日」とは，予定所有者と造船所との間で建造契約のサインが交わされた日をいう。なお，この契約日及び契約を交わす全ての船舶の建造番号（船番等）は，新造船に対し船級登録を申込む者によって，船級協会に申告されなければならない。

2. オプションの行使権が契約書に明示されている場合，オプション行使によるシリーズ船の「建造契約日」は，予定所有者と造船所との間で建造契約のサインが交わされた日をいう。本 Procedural Requirement の適用において，1 つの建造契約書に基づく船舶が同一の承認図面によって建造される場合は，シリーズ船と見なす。しかしながら，以下の条件を満たす設計変更にあっては，シリーズ船は原設計から設計変更を行うことができる。

   (1) 設計変更が船級要件に影響を及ぼさない，
   又は，
   (2) 設計変更が船級規則の対象となる場合，当該変更が予定所有者と造船所との間で契約された日に有効な船級規則に適合している，又は設計変更の契約が無い場合は承認のために図面が船級協会に提出された日に有効な船級規則に適合している。

   オプションによる建造予定船は，シリーズ船の建造契約が結ばれてから 1 年以内にオプションが行使される場合，シリーズ船として扱われる。

3. 建造契約の後に追加の建造船又は追加のオプションを含める契約の変更がなされた場合，建造契約日は予定所有者と造船所との間で契約変更がなされた日をいう。この契約変更は前 1. 及び 2.に対して，「新しい契約」として扱わなければならない。

4. 船舶の種類の変更による建造契約の変更があった場合，改造された船舶の「建造契約日」は，予定所有者と造船所との間で契約変更又は新規契約のサインが交わされた日をいう。

備考：
1. 本 PR は，2009 年 7 月 1 日から適用する。

改正その 6

6 編　電気設備

2 章　設備計画

2.3　非常電気設備

2.3.2　非常電源装置の容量及び給電時間

-2.を次のように改める。

-2.　**規則 6 編 2.3.2-2.(3)**の規定において，*SOLAS* IV 章により要求される ~~*VHF* 無線設備，*MF* 無線設備，インマルサット船舶地球局装置及び *MF/HF* 無線~~設備とは，*GMDSS*（*Global Maritime Distress and Safety System*）で要求される設備をいう。

付録 7-1　　*SOLAS* II-2 章の旅客船関係の条文解釈

1　　*SOLAS* II-2 章の条文解釈

1.1　条文解釈

表 7-1-A1 を次のように改める。

表 7-1-A1　*SOLAS* II-2 章の条文解釈

条項番号	*SOLAS* 条文	条文解釈
（省略）		
	C 部　　火災及び爆発の抑制	
Reg.10	第 10 規則　消火	
10.5.1.2.2	ボイラ室のたき火場及び***燃料油設備の一部がある場所*** [*1] には，少なくとも 2 の持運び式泡消火器又はこれと***同等のもの*** [*2] を備える。ボイラ室には，容量 135 ℓ以上の少なくとも 1 つの承認された泡消火器又はこれと***同等のもの*** [*2] を備える。これらの消火器には，ボイラ室のいずれの部分にも達し得るホースをリールに巻いて備える。貨物船における出力 175 *kw* 未満の船内生活用ボイラ及び固定式水系局所消火装置により保護されるボイラについては，少なくとも 135 ℓの容量を有する承認された泡消火器は要求されない。	*1：「燃料油設備の一部がある場所」とは，燃料油装置のある場所のうち，燃料油移送ポンプ又は油清浄器を設置した場所及び燃料油移送管系で弁の集合した場所をいう。 *2：「同等の消火器」とは以下のものをいう。 質量 45 *kg* の炭酸ガス消火器は，容量 135 ℓの泡消火器と同等の効力を有する消火器とみなす。質量 16 *kg* の炭酸ガス消火器又は質量 23 *kg* の粉末消火器は，容量 45 ℓの泡消火器と同等の効力を有するとみなす。また，船舶に備える炭酸ガス消火装置で，ホースにより炭酸ガスをボイラ室等のいずれにも放出散布することができ，かつ，このためにのみ使用する炭酸ガスの量が 16 *kg* 以上であるときは，この装置は，容量 45 ℓの泡消火器と同等の効力を有する消火器とみなす。
（省略）		

附　則（改正その 6）

1.　この達は，2020 年 1 月 1 日から施行する。

改正その 7

付録 7-1　　*SOLAS* II-2 章の旅客船関係の条文解釈

1　　*SOLAS* II-2 章の条文解釈

表 7-1-A1 を次のように改める。

表 7-1-A1　*SOLAS* II-2 章の条文解釈

条項番号	*SOLAS* 条文	条文解釈
（省略）		
9.2.2.3.2.2(10)	(10)　火災の危険性のほとんどない又は全くないタンク，空所及び補機室: 船体構造の一部を形成する水タンク。 空所及び***コファダム*** [*17]。 強制潤滑装置のある機械を備えていない補機室であって可燃性物質の収納を禁じられているもの。例えば，送風機室，空調機室，揚錨機室，操舵機室，減揺装置室，推進用電動機室，***配電盤*** [*18] 又は電気設備（10 *KVA* を超える容量の油入り変圧器を除く）のみを備える室，軸路，パイプトンネル並びに可燃性液体を使用しないポンプ及び冷凍機を備える室。 前記の各場所に通ずる閉囲されたトランク。 管及び電線を通すトランクその他の閉囲されたトランク。	選択式触媒還元脱硝装置，排ガス再循環装置又は排ガス浄化装置に供する尿素又は水酸化ナトリウム水溶液を貯蔵するタンクが設置される区画は「火災の危険性のほとんどない又は全くないタンク，空所及び補機室」とみなす。（当該タンクが A 類機関区域に分類される機関室に設置される場合を除く。） *17：他の区画に開放されたコファダムは，その区画の一部とみなすこと。 *18：配電盤については，居住区域内の区画（階段室を含む。）の内張り等の裏側に設置して差し支えない。ただし，当該場所を収納場所として使用しないこと。なお，内張り等の裏側のスペースを別の区画とはみなさない。また，これらの区画を「火災の危険性のほとんどない又は全くないタンク，空所及び補機室」とはみなさない。区画として認知される場所であって面積が 4 m^2 未満のものに配電盤を設置する場合，当該場所は「火災の危険性が中程度である居住区域」とみなす。
（省略）		

附　則（改正その 7）

1. この達は，2020 年 1 月 1 日（以下，「施行日」という。）から施行する。

2. 施行日前に建造契約*が行われた船舶にあっては，この達による規定にかかわらず，なお従前の例による。

* 建造契約とは，最新の IACS Procedural Requirement (PR) No.29 に定義されたものをいう。

IACS PR No.29 (Rev.0, July 2009)

英文（正）

1. The date of “contract for construction” of a vessel is the date on which the contract to build the vessel is signed between the prospective owner and the shipbuilder. This date and the construction numbers (i.e. hull numbers) of all the vessels included in the contract are to be declared to the classification society by the party applying for the assignment of class to a newbuilding.
2. The date of “contract for construction” of a series of vessels, including specified optional vessels for which the option is ultimately exercised, is the date on which the contract to build the series is signed between the prospective owner and the shipbuilder.
   For the purpose of this Procedural Requirement, vessels built under a single contract for construction are considered a “series of vessels” if they are built to the same approved plans for classification purposes. However, vessels within a series may have design alterations from the original design provided:
   (1) such alterations do not affect matters related to classification, or
   (2) If the alterations are subject to classification requirements, these alterations are to comply with the classification requirements in effect on the date on which the alterations are contracted between the prospective owner and the shipbuilder or, in the absence of the alteration contract, comply with the classification requirements in effect on the date on which the alterations are submitted to the Society for approval.

   The optional vessels will be considered part of the same series of vessels if the option is exercised not later than 1 year after the contract to build the series was signed.
3. If a contract for construction is later amended to include additional vessels or additional options, the date of “contract for construction” for such vessels is the date on which the amendment to the contract, is signed between the prospective owner and the shipbuilder. The amendment to the contract is to be considered as a “new contract” to which 1. and 2. above apply.
4. If a contract for construction is amended to change the ship type, the date of “contract for construction” of this modified vessel, or vessels, is the date on which revised contract or new contract is signed between the Owner, or Owners, and the shipbuilder.

Note:
This Procedural Requirement applies from 1 July 2009.

仮訳

1. 船舶の「建造契約日」とは，予定所有者と造船所との間で建造契約のサインが交わされた日をいう。なお，この契約日及び契約を交わす全ての船舶の建造番号（船番等）は，新造船に対し船級登録を申込む者によって，船級協会に申告されなければならない。

2. オプションの行使権が契約書に明示されている場合，オプション行使によるシリーズ船の「建造契約日」は，予定所有者と造船所との間で建造契約のサインが交わされた日をいう。本 Procedural Requirement の適用において，1 つの建造契約書に基づく船舶が同一の承認図面によって建造される場合は，シリーズ船と見なす。しかしながら，以下の条件を満たす設計変更にあっては，シリーズ船は原設計から設計変更を行うことができる。

   (1) 設計変更が船級要件に影響を及ぼさない，
   又は，
   (2) 設計変更が船級規則の対象となる場合，当該変更が予定所有者と造船所との間で契約された日に有効な船級規則に適合している，又は設計変更の契約が無い場合は承認のために図面が船級協会に提出された日に有効な船級規則に適合している。

   オプションによる建造予定船は，シリーズ船の建造契約が結ばれてから 1 年以内にオプションが行使される場合，シリーズ船として扱われる。
3. 建造契約の後に追加の建造船又は追加のオプションを含める契約の変更がなされた場合，建造契約日は予定所有者と造船所との間で契約変更がなされた日をいう。この契約変更は前 1. 及び 2.に対して，「新しい契約」として扱わなければならない。

4. 船舶の種類の変更による建造契約の変更があった場合，改造された船舶の「建造契約日」は，予定所有者と造船所との間で契約変更又は新規契約のサインが交わされた日をいう。

備考：
1. 本 PR は，2009 年 7 月 1 日から適用する。

改正その 8

付録 7-1　　*SOLAS* II-2 章の旅客船関係の条文解釈

1　　*SOLAS* II-2 章の条文解釈

1.1　条文解釈

表 7-1-A1 を次のように改める。

表 7-1-A1　*SOLAS* II-2 章の条文解釈

条項番号	*SOLAS* 条文	条文解釈
（省略）		
15.2.2.6	操練で使用された呼吸具のシリンダを再充填する手段を船上に備えなければならない。または，***適切な数の予備のシリンダ*** *を交換用として船上に備えなければならない。	*：「適切な数の予備のシリンダ」とは，*SOLAS* 条約 II-2 章第 10.10.2 規則及び第 18.5.1.~~6~~7 規則で要求される各消防員装具の呼吸具につき，少なくとも 1 組のシリンダとする。ただし，本船の安全管理システムにおいて当該シリンダの追加の設置が定められている場合にあっては，安全管理システムに定める数のシリンダを備えること。「1 組のシリンダ」とは，呼吸具を動作させるために必要なシリンダの数をいう。なお，*SOLAS* 条約 II-2 章第 19 規則で要求される呼吸具については，訓練のための予備シリンダを備えなくても差し支えない。
（省略）		
Reg.18	***第 18 規則　ヘリコプタ施設*** *	*： **III 章 28.1** 規則により，すべての Ro-Ro 旅客船にはヘリコプタのウインチング~~区域~~場所の設置が要求され，さらに 1999 年 7 月 1 日以降建造される長さ 130 *m* 以上の Ro-Ro 旅客船には，ヘリコプタ~~のランデング区域~~着船場所の設置が要求されている。ヘリコプタ~~施設~~着船場所に関する要件については，~~**鋼船規則検査要領 R 編 R18***MSC/Circ.*895 (*MSC.*1/*Circ.*1524 及びその後の改正を含む) にもよること。
（省略）		

附　則（改正その 8）

1.　この達は，2020 年 1 月 1 日（以下，「施行日」という。）から施行する。

2.　施行日前にキールが据え付けられる船舶又は特定の船舶として確認できる建造が開始され，かつ，少なくとも 50 トン又は全建造材料の見積重量の 1%のいずれか少ないものが組み立てられた状態にある船舶については，この達による規定にかかわらず，なお従前の例による。