TÜRK LOYDU RULE CHANGE SUMMARY

TL NUMBER: 01/2014 JUNE 2014

Latest editions of TL Rules incorporate all rule changes. The latest rule revisions of a published rule are shown with a vertical line. Changes after the publication of the rule are written in red colour.

Please note that within this document added items are written in red and for deleted items strikethrough is applied. After the publication of relevant rule, those revisions are to be indicated with a vertical line. Following Rule Changes presented in English are also implemented into Turkish Version of Rules.

CLASSIFICATION AND SURVEYS

Section 1 – General Conditions

Revision date: May 2014

Entry into force date: July 2014

Following revision is made in Item H:

H. Applicable Law and Jurisdiction

~~The place of jurisdiction is court of İstanbul Tuzla. The place of performance is İstanbul. The governing law is Turkish law.~~ Any and all disputes arising out of or in connection with Türk Loydu services shall be subject to Turkish law and exclusive jurisdiction of Istanbul (Caglayan) Courts and Bailiff's Offices.

Section 2 – Classification & Section 3 – Surveys

Revision date: May 2014

Entry into force date: July 2014

For providing cohesion between Rules and Marine Industry Documentation; the terms "condition of class, recommendation and/or condition of class etc." have been revised throughout the Chapter by using only the term "recommendation" as shown by the example below:

Class entry surveys may be, but are not required to be, credited as periodical surveys for maintenance of classification. ~~*Recommendations and/or conditions of class*~~ *Recommendations due for compliance at a specified periodical survey for maintenance of classification need not be carried out/complied with at a class entry survey unless the class entry survey is credited as the specified periodical survey for maintenance of classification or the* ~~*recommendation / condition of classification*~~ *recommendation is overdue.*

Section 2 – Classification

Revision date: January 2014

Entry into force date: July 2014

Following notations are added to Item D.2.4.3.2 and MOTOR SAILER notation in Item D.8.1.3 is deleted. Table 2.3 is updated as per those added and deleted notations.

2.4.3.1 Unrestricted Service Area

UN (unrestricted navigation) service area notation is assigned to yachts intended to navigate at any time of the year and within any zone.

2.4.3.2 Restricted Service Area

For yachts of less than 24 m, LN-B (Limited Navigaiton –Design Category B) notation is assigned to yachts whose design category is assigned as B and LN-C (Limited Navigaiton –Design Category C) notation is assigned to yachts whose design category is assigned as C according to essential requirements of Recreational Craft Directive 94/25/EC and 2003/44/EC

~~**D.2.8.1.3 Motor sailer**~~

~~Yachts having sails as main means of propulsion which may also be propelled by internal combustion engines are to be given MOTOR SAILER notation.~~

- Item D.2.2.2 is revised as follows:

The construction symbol (+) is to be given to ships constructed under the supervision of TL and without certification of materials, machinery and equipment required to be certified according to TL rules.

Note:

This notation is only applicable to machinery of all non-SOLAS ships and passenger ships of length less than 24 m which are engaged in domestic voyage.

Revision date: March 2014

Entry into force date: July 2014

- Following note has been added under D.3.3.1 and Table 2.4 to define ice conditions into which ships assigned with ICE-B Class notation may enter.

Note:

Ships assigned with the class notation ICE-B are intended to navigate in light and very light localised drift ice in mouths of rivers and coastal areas.

- A.1.10 is revised as to comply with UI MPC104, LL78, HSC 9 Corr.1.

Note:

For the purposes of the application of the IMO Conventions and Codes (Performance Standards, Technical Standards, Resolutions and Circulars) for Fibre-Reinforced Plastic (FRP) Craft, the term "the keels of which are laid or which are at a similar stage of construction" should be interpreted as the date that the first structural reinforcement of the complete thickness of the approved hull laminate schedule is laid either in or on the mould. ~~(This provision is to be implemented from 01 January 2014)~~

- Item A.2.6 is added and Item B.4.1.1 is revised as follows:

A.2.6 Register

The Classification data of each ship classified will be included in the TL data file. An extract of these ship data will be entered in the Register published by TL. During the period of Class TL will update these details on the basis of relevant reports submitted by the Surveyors.

B.4.1.1 When a vessel has been transferred class, Item A 2.6 is to be followed. ~~the classification data of ship is to be included in the TL data file. An extract of these ship data is to be entered in the Register Book published by TL. During the period of class TL will update these details on the basis of relevant reports submitted by the Surveyors.~~

- For FF0 notation, following item is added to D.3.6.4.5 and Table 2.4.

FF0 is assigned to ships when the characteristics of the fire-fighting system are not those required for the assignment of the additional service features FF1, FF2 or FF3, and when the system is specially considered by TL.

Revision date: April 2014

Entry into force date: July 2014

B.3.3 is revised as follows

3.3 Class entry surveys

Note:

Class entry surveys may be, but are not required to be, credited as periodical surveys for maintenance of classification. Recommendations due for compliance at a specified periodical survey for maintenance of classification need not be carried out/complied with at a class entry survey unless the class entry survey is credited as the specified periodical survey for maintenance of classification or the recommendation is overdue.

For ships classified in the meantime by a non-IACS Classification Society, class renewal survey is required. ~~*or intermediate survey may be required, whichever is due next.*~~

Revision date: May 2014

Entry into force date: July 2014

- Following reference has been added to Item C.7.1 for newly published TL Guideline about Laid Up Vessels:

For TL recommendations about laying-up processes, survey items, maintenance and preservation methods during lay-up refer to “TL Guidelines for Laid-Up Vessels”.

- Following revisions are carried out in items C.5.1.8 and C.5.2.5 to provide compliance with PR 1C Rev.3

5. Suspension, Reinstatement and Withdrawal of Class

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5.1.8 The surveys to be carried out are to be based upon the survey requirements at the original date due and not on the age of the vessel when the survey is carried out. Such surveys are to be credited from the date originally due.

5.2.5 If, due to circumstances reasonably beyond the owner's or TL's control, the vessel is not in a port where the overdue surveys can be completed at the expiry of the periods allowed above, TL may allow the vessel to sail, in class, directly to an agreed discharge port, and if necessary, hence, in ballast, to an agreed port at which the survey will be completed, provided TL.

- Exams the ship's records,
- Carries out the due and/or overdue surveys and examination of recommendations at the first port of call when there is an unforeseen inability of the TL to attend the vessel in the present port, and
- Has satisfied itself that the vessel is in condition to sail for one trip to a discharge port and subsequent ballast voyage to a repair facility if necessary. (Where there is unforeseen inability of the TL to attend the vessel in the present port, the master is to confirm that his ship is in condition to sail to the nearest port of call.)

If class has already been automatically suspended in such cases, it may be reinstated subject to the conditions prescribed in this item.

- Following revision is carried out in item B.3.2.1.7.

3.2.1.7 Additional plans required for unattended machinery space notation

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Note:

1. Additional information may be necessary according to Flag State requirements.

2. Alternative technical data may be accepted ~~by the gaining Society~~ in lieu of specific items of the listed documentation not being available at the time of the transfer.

Section 3 – Surveys

Revision date: April 2014

Entry into force date: July 2014

Item A.1.22 is revised as follows to comply with UR Z7.1 Rev.9.

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- Ships subject to UR Z10.2 or UR Z10.5;

- Dedicated container carriers;

~~- Dedicated forest product carriers (not timber or log carriers);~~

- Ro-ro cargo ships;

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Revision date: May 2014

Entry into force date: July 2014

- Following revisions have been performed in Item A.8.4.

8.4 Maintenance work, repairs and conversions of classed ships and special equipment ~~classed~~ have to be carried out under the supervision of TL to ensure maintenance or reassignment of class.

Materials and special equipment to be used in maintenance works, repairs and conversions shall be certified

- Following note has been added under the Item A.10 to give reference to MSC.333(90) and UI SC261 about Shipborne Voyage Data Recorders (VDRs)

Note: MSC.333(90) as interpreted by UI SC261 is to be applied for Performance Standards for Shipborne Voyage Data Recorders (VDRs)

- Items E.1.6 and E.3.3.1 are revised as to comply with UR Z3 Rev.6.

1.6 Visible parts of side thrusters are to be examined. Other propulsion systems which also have manoeuvring characteristics (such as directional propellers, vertical axis propellers, water jet units) are to be examined externally with focus on the condition of gear housing, propeller blades, bolt locking and other fastening arrangements. Sealing arrangement of propeller blades, propeller shaft and steering column shall be verified.

3.3.1 Unless accessible from outside with the aid of the vessel's trim and/or heel, underwater parts are to be surveyed and/or relevant maintenance work is to be carried out with assistance by ~~a diver whose performance is controlled by a Surveyor, using an underwater camera with monitor, communication and recording systems.~~ a qualified diver under surveillance of a Surveyor. The diver is to be employed by a firm approved as a service supplier according to UR Z17. The Surveyor is to be satisfied with the method of pictorial representation (i.e. an underwater camera with monitor with recording systems), and a good two-way communication between the Surveyor and divers is to be provided.

- Item D.2.7.2.8 is revised as to comply with UR Z16 Rev.4.

2.7.2.8 For membrane and semi-membrane tanks systems, inspection and testing are to be carried out in accordance with programmes specially prepared in accordance with an approved method for the actual tank system.

For membrane containment systems a tightness test of the primary and secondary barrier shall be carried out in accordance with the system designers' procedures and acceptance criteria as approved by the TL. Low differential pressure tests may be used for monitoring the cargo containment system performance, but are not considered an acceptable test for the tightness of the secondary barrier.

For membrane containment systems with glued secondary barriers if the designer's threshold values are exceeded, an investigation is to be carried out and additional testing such as thermographic or acoustic emissions testing should be carried out. ~~the values obtained shall be compared with previous results or results obtained at newbuilding stage. If significant differences are observed for each tank or between tanks, the Surveyor is to require an evaluation and additional testing as necessary.~~

-Table 3.5 is revised as follows to comply with UR Z7 Rev.20.

Table 3.5 Survey requirements for automatic pipe heads at class renewal surveys

Class renewal survey No.1 Age ≤ 5	Class renewal survey No.2 5 < Age ≤ 10	Class renewal survey No.3 and subsequent 10 < Age
- Two air pipe heads, one port and one starboard, located on the exposed decks, in the forward 0.25 L, preferably air pipes serving ballast tanks. - Two air pipe heads, one port and one starboard, on exposed decks, serving spaces aft of 0.25 L, preferably air pipes serving ballast tanks. (1) (2)	- All air pipe heads located on the exposed decks in the forward 0.25 L. - At least 20% of air pipe heads on the exposed decks serving spaces aft of 0.25 L, preferably air pipes serving ballast tanks. (1) (2)	- All air pipe heads located on the exposed decks (3)

(1) *The selection of air pipe heads to be examined is left to the attending surveyor.*

(2) *According to the results of this examination, the surveyor may require the examination of other heads located on the exposed decks.*

(3) *Exemption may be considered for air pipe heads where there is substantial evidence of replacement after the last class renewal survey.*

- Item D.2.6.2.7 is revised as follows to comply with UR Z10.3 Rev.15.

2.6.2.7 Extent of tank testing

- The minimum requirements for ballast tank testing at class renewal survey are given in 2.6.1.8.3 and Table 3.21. The minimum requirements for cargo tank testing at class renewal survey are given in 2.6.1.8.4 and Table 3.21. Cargo tank testing carried out by the vessel's crew under the direction of the Master may be accepted by the surveyor provided the following conditions are complied with: ~~Pressure testing of cargo tanks may be accepted based on a confirmation from the master stating that the pressure testing has been carried out according to the requirements with a satisfactory result.~~

-a tank testing procedure has been submitted by the owner and reviewed by TL prior to the testing being carried out;

-there is no record of leakage, distortion or substantial corrosion that would affect the structural integrity of the tank;

-the tank testing has been satisfactorily carried out within class renewal survey window not more than 3 months prior to the date of the survey on which the overall or close up survey is completed;

-the satisfactory results of the testing are recorded in the vessel's logbook;

-the internal and external condition of the tanks and associated structure are found satisfactory by the surveyor at the time of the overall and close up survey.

2.6.2.7.2 The surveyor may extend the tank testing as deemed necessary.

2.6.2.7.3 Boundaries of ballast tanks are to be tested with a head of liquid to the top of air pipes.

2.6.2.7.4 Boundaries of cargo tanks are to be tested to the highest point that liquid will rise under service conditions.

2.6.2.7.5 The testing of double bottom tanks and other spaces nor designed for the carriage of liquid may be omitted, provided a satisfactory internal examination together with an examination of the tank top is carried out.

- Item A.1.22, C.2.3, D.2.6.1.8 is revised as follows to comply with UR Z10.4 Rev.11. Revisions in items A.1.22 and C.2.3 also meet UR Z10.5 Rev.13.

A.1.22

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The requirements apply to surveys of hull structure and piping systems in way of cargo holds, cofferdams, pipe tunnels, void spaces and fuel oil tanks within the cargo area and all ballast tanks. The requirements are additional to the classification requirements applicable to the remainder of the ship. Refer to UR Z7

C.2.3 Effective from 01 July 2016, for tankers and bulk carriers subject to SOLAS Chapter II-1 Part A-1 Regulation 3-10, the Ship Construction File (SCF), limited to the items to be retained on board, is to be available on board.

D.2.6.1.8 Extent of tank testing

2.6.1.8.1 The minimum requirements for ballast tank testing at class renewal survey are given in 2.6.1.8.3 and Table 3.21.

The minimum requirements for cargo tank testing at class renewal survey are given in 2.6.1.8.4 and Table 3.21.

Cargo tank testing carried out by the vessel's crew under the direction of the Master may be accepted by the surveyor provided the following conditions are complied with: ~~Pressure testing of cargo tanks may be accepted based on a confirmation from the master stating that the pressure testing has been carried out according to the requirements with a satisfactory result.~~

-a tank testing procedure has been submitted by the owner and reviewed by TL prior to the testing being carried out;

-there is no record of leakage, distortion or substantial corrosion that would affect the structural integrity of the tank;

-the tank testing has been satisfactorily carried out within class renewal survey window not more than 3 months prior to the date of the survey on which the overall or close up survey is completed;

-the satisfactory results of the testing are recorded in the vessel's logbook;

-the internal and external condition of the tanks and associated structure are found satisfactory by the surveyor at the time of the overall and close up survey.

2.6.1.8.2 The surveyor may extend the tank testing as deemed necessary.

2.6.1.8.3 Boundaries of ballast tanks are to be tested with a head of liquid to the top of air pipes.

2.6.1.8.4 Boundaries of cargo tanks are to be tested to the highest point that liquid will rise under service conditions.

2.6.1.8.5 For double hull oil tankers the testing of double bottom tanks and other spaces not designed for the carriage of liquid may be omitted, provided a satisfactory internal examination together with an examination of the tank top is carried out.

- Item A.4.2.2 is deleted.

4.2 Intermediate surveys

Intermediate survey schedule is as follows:

4.2.1 The Intermediate Survey is to be held at or between either the 2nd or 3rd Annual Survey. Those items which are additional to the requirements of the Annual Surveys may be surveyed either at or between the 2nd and 3rd Annual Survey.

~~**4.2.2** The class intermediate survey is to be completed concurrently with the second or third class annual survey in each period of the class certificate.~~

PART A CHAPTER 1 – HULL

Section 1 - General, Definitions

Revision date: May 2014

Entry into force date: July 2014

Item E.1 is revised as to comply with UR L2 Rev.2

Adequate intact stability means compliance with standards laid down by the Administration. TL reserve the rights deviate there from, if required for special reasons, taking into account the ships' size and type. The level of intact stability for ships ~~all sizes~~ with a length of 24 m and above in any case should not be less than that provided by ~~the International Code on Intact Stability (2008 IS Code)~~ Part A of IMO Resolution MSC.267 (85) – Adoption of the International Code on Intact Stability, 2008 as applicable to the type of ship being considered, unless special operational restrictions reflected in the class notation render this possible.

Where other criteria are accepted by the Administration concerned, these criteria may be used for the purpose of classification.

Part A Chapter 2 Item 2.3 - Severe Wind and Rolling Criterion (Weather Criterion) of MSC. 267(85) has only to be taken into account on special advice of the competent Administration.

Revision date: June 2014

Entry into force date: July 2014

Item F.2 has been revised as follows:

~~Suitable precautions are to be taken to keep noises as low as possible particularly in the crew's quarters working spaces, passengers' accommodations etc.~~

~~Attention is drawn to regulations concerning noise level limitations, if any, of the flag administration.~~

Suitable precautions are to be taken to keep noises as low as possible particularly in the crew's quarters working spaces, passengers' accommodations etc. Ships, which are 1,600 gross tonnage and above as defined in SOLAS II-1/3-12 shall be constructed to reduce onboard noise and to protect personnel from the noise in accordance with "the Code on noise levels on board ships" (adopted by resolution MSC.337(91)) unless the Administration deems that compliance with a particular provision is unreasonable or impractical.

Section 2 - Habitability

Revision date: June 2014

Entry into force date: July 2014

Item C. has been revised totally. All paragraphs have been deleted. Tables and figures are renumbered and only reference of Noise Code has been added as follows:

"The Code on noise levels on board ships" (adopted by resolution MSC.337(91)) is to be applied.

Section3 - Design Principles

Revision date: May 2014

Entry into force date: July 2014

A.2.3.2, Table 3.2, Table 3.3, Table 3.11 are revised, Table 3.4 and Figure 3.1 are added as to comply with UR S6 Rev.7.

2.3.2 Material selection for longitudinal structural members

Materials in the various strength members are not to be of lower grade than those corresponding to the material classes and grades specified in Table 3.2 to Table 3.8. General requirements are given in Table 3.2, while additional minimum requirements ~~for ships with length exceeding 150 m and 250 m, bulk carriers subject to the requirements of SOLAS regulation XII/ 6.4.3, and ships with ice strengthening are given in Table 3.3 to Table 3.6~~ are given in the following:

Table 3.3: For ships, excluding liquefied gas carriers covered in Table 3.4, with length exceeding 150 m and single strength deck,

Table 3.4: for membrane type liquefied gas carriers with length exceeding 150 m,

Table 3.5: For ships with length exceeding 250 m,

Table 3.6: For single side bulk carriers subjected to SOLAS regulation XII/6.4.3,

Table 3.7: For ships with ice strengthening.

The material grade requirements for hull members of each class depending on the thickness are defined in Table 3.8.

For strength members not mentioned in Tables 3.2 to 3.7, Grade A/AH may generally be used. The steel grade is to correspond to the as-built plate thickness and material class.

Plating materials for stern frames supporting the rudder and propeller boss, rudders, rudder horns and shaft brackets are in general not to be of lower grades than corresponding to Class II. For rudder

and rudder body plates subjected to stress concentrations (e.g. in way of lower support of semi-spade rudders or at upper part of spade rudders) Class III is to be applied.

Table 3.2 Material classes and grades for ships in general

Structural member category	Material class / grade
Secondary: **1.** Longitudinal bulkhead strakes, other than that belonging to the Primary category **2.** Deck plating exposed to weather, other than that belonging to the Primary or Special category **3.** Side plating	- Class I within 0.4 L amidships - Grade A/AH outside 0.4 L amidships
Primary: **1.** Bottom plating, including keel plate **2.** Strength deck plating, excluding that belonging to the Special category **3.** Continuous longitudinal plating of strength members above strength deck, excluding hatch coamings **4.** Uppermost strake in longitudinal bulkhead **5.** Vertical strake (hatch side girder) and uppermost sloped strake in top wing tank	- Class II within 0.4 L amidships - Grade A/AH outside 0.4 L amidships
Special: **1.** Sheer strake at strength deck **(1)** **2.** Stringer plate in strength deck **(1)** **3.** Deck strake at longitudinal bulkhead, excluding deck plating in way of inner-skin bulkhead of double-hull ships **(1)**	- Class III within 0.4 L amidships - Class II outside 0.4 L amidships - Class I outside 0.6 L amidships
4. Strength deck plating at outboard corners of cargo hatch openings in container carriers and other ships with similar hatch opening configurations	- Class III within 0.4 L amidships - Class II outside 0.4 L amidships - Class I outside 0.6 L amidships - Minimum Class III within cargo region
5. Strength deck plating at corners of cargo hatch openings in bulk carriers, ore carriers, combination carriers and other ships with similar hatch opening configurations **5.1** Trunk deck and inner deck plating at corners of openings for liquid and gas domes in membrane type liquefied gas carriers	- Class III within 0.6 L amidships - Class II within rest of cargo region
6. Bilge strake in ships with double bottom over the full breadth and length less than 150 m **(1)**	- Class II within 0.6 L amidships - Class I outside 0.6 L amidships
7. Bilge strake in other ships **(1)**	- Class III within 0.4 L amidships - Class II outside 0.4 L amidships - Class I outside 0.6 L amidships
8. Longitudinal hatch coamings of length greater than 0.15 L including coaming top plate and flange **9.** End brackets and deck house transition of longitudinal cargo hatch coamings	- Class III within 0.4 L amidships - Class II outside 0.4 L amidships - Class I outside 0.6 L amidships - Not to be less than grade D/DH
(1) *Single strakes required to be of Class III within 0.4 L amidships are to have breadths not less than 800 + 5 L [mm], but not greater than 1800 mm, unless limited by the geometry of the ship's design.*	

Table 3.3 Minimum material grades for ships, excluding liquefied gas carriers covered in Table 3.4, with length exceeding 150 m and single strength deck

Structural member category	Material grade
• Longitudinal plating of strength deck where contributing to longitudinal strength • Continuous longitudinal plating of strength members above strength deck	Grade B/AH within 0.4 L amidships
Single side strakes for ships without inner continuous longitudinal bulkhead(s) between bottom and the strength deck	Grade B/AH within cargo region

Table 3.4 Minimum Material Grades for membrane type liquefied gas carriers with length exceeding 150 m (1)

Structural member category		Material grade
Longitudinal plating of strength deck where contributing to the longitudinal strength		Grade B/AH within 0.4L amidships
Continuous longitudinal plating of strength members above the strength deck	Trunk deck plating	Class II within 0.4L amidships
	• Inner deck plating • Longitudinal strength member plating between the trunk deck and inner deck	Grade B/AH within 0.4L amidships
(1)Table 3.4 is applicable to membrane type liquefied gas carriers with deck arrangements as shown in Figure 3.1. Table 3.4 may apply to similar ship types with a "double deck" arrangement above the strength deck.		

Table 3.11 Material grade requirements for classes I, II and III at low temperatures

	Class III			
Plate thickness [mm]	t_D -20 / -25 °C	t_D -26 / -35 °C	t_D -36 / -45 °C	t_D -46 / -55 °C
t ≤ 10	D / DH	D / DH	E / EH	E / EH
10 < t ≤ 20	D / DH	E / EH	E / EH	FH
20 < t ≤ 25	E / EH	E / EH	E / FH	FH
25 < t ≤ 30	E / EH	E / EH	FH	FH
30 < t ≤ 35	E / EH	FH	FH	
35 < t ≤ 40	E / EH	FH	FH	
40 < t ≤ 50	FH	FH		

Section 8– Supporting Structures

Revision date: May 2014

Entry into force date: July 2014

Item C.2.3.1 is revised as to incorporate first approximation of hull bending stress.

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However, as a first approximation σ_L may be taken as follows:

For bottom:

$$\sigma_{LB} = 12{,}6 \cdot \frac{\sqrt{L}}{k} \left[N/mm^2\right] \quad \text{for } L < 90 \text{ m}$$

$$\sigma_{LB} = \frac{120}{k} \left[N/mm^2\right] \quad \text{for } L \geq 90 \text{ m}$$

For side:

$$\sigma_{LS} = 0.76 \cdot \sigma_{LB} \left[N/mm^2\right]$$

For deck:

$$\sigma_{LD} = 1.25 \cdot \sigma_{LB} \left[N/mm^2\right]$$

…

Section 14 – Ice Strengthening

Revision date: March 2014

Entry into force date: July 2014

Following note has been added under Item E to define ice conditions into which ships assigned with ICE-B Class notation may enter.

E. Ice Strengthening for Class Notation ICE-B

Requirements in this section for class notation ICE-B are intended for light and very light localised drift ice in mouths of rivers and coastal areas.

Section 16 – Hull Outfitting

Revision date: March 2014

Entry into force date: July 2014

Item A.2 is deleted as per deletion of UR F9

~~**2. Lighting and Sighting Ports in Pump Room / Engine Room Bulkheads**~~

~~**2.1** Where the pump room is illuminated through glazed ports, these are to be effectively protected from mechanical damage and are to have strong covers secured from the side of the sage space.~~

~~**2.2** Glazed ports are to be so constructed that glass and sealing will not be impaired by the working of the ship.~~

~~**2.3** The glass and the protection of the light fitting are not to impair the integrity of the bulkhead and are to be of equivalent strength.~~

~~**2.4** The fitting is to have the same resistance to fire and smoke as the unpierced bulkhead.~~

Revision date: May 2014

Entry into force date: July 2014

Items D.4.2.1 and E.5.2.1 are revised as to comply with UR S27 Rev.6.

4.2.1 The pressure p [kN/m^2] acting on air pipes and their closing devices may be calculated from:

$p = 0.5 \cdot \rho \cdot V^2 \cdot C_d \cdot C_s \cdot C_p$

ρ = Density of sea water [1.025 t/m^3]

V = Velocity of water over the fore deck ~~[13.5 m/sec]~~

= 13.5 m/s for $d \le 0.5\ d_1$

= $13.5\sqrt{2 \cdot \left(1 - \frac{d}{d_1}\right)}$ m/s for $0.5 \cdot d_1 < d < d_1$

d = distance from summer load waterline to exposed deck

d_1 = 0.1L or 22 m whichever is lesser

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5.2.1 The pressure p [kN/m^2] acting on ventilator pipes and their closing devices may be calculated from:

$p = 0.5 \cdot \rho \cdot V^2 \cdot C_d \cdot C_s \cdot C_p$

ρ = Density of sea water [1.025 t/m^3]

V = Velocity of water over the fore deck ~~[13.5 m/sec]~~

= 13.5 m/s for $d \le 0.5\ d_1$

= $13.5\sqrt{2 \cdot \left(1 - \frac{d}{d_1}\right)}$ m/s for $0.5 \cdot d_1 < d < d_1$

d = distance from summer load waterline to exposed deck

d_1 = 0.1L or 22 m whichever is lesser

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Section 21 – Structural Fire Protection

Revision date: March 2014

Entry into force date: July 2014

- Table 21.1 Bulkheads not bounding either main vertical zones or horizontal zones has been revised.

Table 21.1 Bulkheads not bounding either main vertical zones or horizontal zones

Spaces		[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]	[14]
Control stations	[1]	**(1)** B-0	A-0	A-0	A-0	A-0	A-60	A-60	A-60	A-0	A-0	A-60	A-60	A-60	A-60
Stairways	[2]		**(1)** A-0	A-0	A-0	A-0	A-0	A-15	A-15	**(3)** A-0	A-0	A-15	A-30	A-15	A-30
Corridors	[3]			B-15	A-60	A-0	B-15	B-15	B-15	B-15	A-0	A-15	A-30	A-0	A-30
Evacuation stations and external escape routes	[4]					A-0	**(2)(4)** A-60	**(2)(4)** A-60	**(2)(4)** A-60	A-0 **(4)**	A-0	**(2)** A-60	**(2)** A-60	**(2)** A-60	**(2)** A-60
Open deck spaces	[5]						A-0	A-0	A-0	A-0	A-0	A-0	A-0	A-0	A-0
Accommodation spaces of minor fire risk	[6]						B-0	B-0	B-0	C	A-0	A-0	A-30	A-0	A-30
Accommodation spaces of moderate fire risk	[7]							B-0	B-0	C	A-0	A-15	A-60	A-15	A-60

- Following items have been revised as follows:

B. Rules on Fire Protection for Passenger Ships

and

C. Rules on Fire Protection for Cargo Ships of 500 GT and over

1. Materials of construction

1.1 ...

Steel or other equivalent material means any non-combustible material which, by itself or due to insulation provided, has structural and integrity properties equivalent to steel at the end of the applicable exposure to the standard fire test (e.g. aluminium alloy with appropriate insulation).

For the purpose of applying the definition of steel or other equivalent material the "applicable fire exposure" shall be according to the integrity and insulation standards given in tables 21.1 to 21.4. For example, where divisions such as decks or sides and ends of deckhouses are permitted to have "B-0" fire integrity, the "applicable fire exposure" shall be half an hour.

...

1.3 Crowns and casings of machinery spaces of category A are to be of steel construction, adequately insulated (as required by Table 21.5 and 21.8) and any openings therein, if any, are to be suitably arranged and protected to prevent the spread of fire.

1.4 The floor plating of normal passageways in machinery spaces of category A shall be made of steel.

1.5 Materials readily rendered ineffective by heat shall not be used for overboard scuppers, sanitary discharges, and other outlets which are close to the waterline and where the failure of the material in the event of fire would give rise to danger of flooding.

Revision date: May 2014

Entry into force date: July 2014

Tables 21.3, 21.4, 21.5, 21.6 are revised as follows:

Table 21.3 Fire integrity of bulkheads separating adjacent spaces

Spaces		[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]
Control stations	[1]	**(3)** A-0	A-0	A-60	A-0	A-15	A-60	A-15	A-60	A-60	**(7)**	A-60
Corridors	[2]		**(5)** C	**(5)** B-0	**(1)** A-0 **(5)** B-0	**(5)** B-0	A-60	A-0	A-0	A-15 **(4)** A-0	**(7)**	A-30 **(8)**
Accommodation spaces	[3]			**(5)** C	**(1)** A-0 **(5)** B-0	**(5)** B-0	A-60	A-0	A-0	A-15 **(4)** A-0	**(7)**	A-30 **(4)** A-0
Stairways	[4]				**(1)** A-0 **(5)** B-0	**(1)** A-0 **(5)** B-0	A-60	A-0	A-0	A-15 **(4)** A-0	**(7)** **(7)**	A-30 **(8)**
Service spaces (Low risk)	[5]					**(5)** C	A-60	A-0	A-0	A-0	**(7)**	A-0
Machinery spaces of category A	[6]						**(7)**	A-0	A-0	A-60	**(7)**	A-60
Other machinery spaces	[7]							**(2)** A-0	A-0	A-0	**(7)**	A-0
Cargo spaces	[8]								**(7)**	A-0	**(7)**	A-0
Service spaces (High risk)	[9]									**(2)** A-0	**(7)**	A-30
Open decks	[10]										-	A-0
Special category spaces and ro-ro cargo spaces	[11]											A-30 **(8)**

Notes to be applied to Tables 21.3 and 21.4, as appropriate:

(1) *For clarification as to which applies see item 3. and 5.*

(2) *Where spaces are of the same numerical category and* ***(2)*** *appears, a bulkhead or deck of the ratings shown in the tables in only required when the adjacent spaces are for a different purpose, e.g. in category [9]. A galley next to a galley does not require a bulkhead but a galley next to a paint room requires an "A-0" bulkhead.*

(3) *Bulkheads separating the wheelhouse and chartroom from each other may be "B-0" rating. No fire rating is required for those partitions separating the navigation bridge and the safety centre when the latter is within the navigation bridge.*

(4) *In determining the applicable fire integrity standard of a boundary between two spaces within a main vertical zone or horizontal zone which is not protected by an automatic sprinkler system complying with the provisions of the FSS Code or between such zones neither of which is so protected, the higher of the two values given in the tables shall apply.*
In determining the applicable fire integrity standard of a boundary between two spaces within a main vertical zone or horizontal zone which is protected by an automatic sprinkler system complying with the provisions of the FSS Code or between such zones both of which are so protected, the lesser of the two values given in the tables shall apply. Where a zone with sprinklers and a zone without sprinklers meet within accommodation and service spaces, the higher of the two values given in the tables shall apply to the division between the zones.

(5) *For the application of item 2.2,"B-0" and "C", where appearing in Table 21.3, shall be read as "A-0".*

(6) *Fire insulation need not be fitted if the machinery space of category [7], in the opinion of the Administration, has little or no fire risk.*

(7) *Where* ***(7)*** *appears in the tables, the division is required to be of steel or other equivalent material but is not required to be of "A" class standard.*
However, where a deck, except in a category (10) space, is penetrated for the passage of electric cables, pipes and vent ducts, such penetrations should be made tight to prevent the passage of flame and smoke. Divisions between control stations (emergency generators) and open decks may have air intake openings without means for closure, unless a fixed gas fire-fighting system is fitted.For the application of item 2.2 a where ***(7)*** *appears in Table 21.4, except for categories [8] and [10], shall be read as "A-0".*

(8) *Ships constructed before 1 July 2014 shall comply, as a minimum, with the previous requirements applicable at the time the ship was constructed, as specified in SOLAS Chapter II-2, Regulation 1.2.*

Table 21.4 Fire integrity of decks separating adjacent spaces

Spaces above → / **Space below ↓**		**[1]**	**[2]**	**[3]**	**[4]**	**[5]**	**[6]**	**[7]**	**[8]**	**[9]**	**[10]**	**[11]**
Control stations	[1]	A-0	A-0	A-0	A-0	A-0	A-60	A-0	A-0	A-0	**(7)**	A-60 **(8)**
Corridors	[2]	A-0	**(7)**	**(7)**	A-0	**(7)**	A-60	A-0	A-0	A-0	**(7)**	A-30 **(8)**
Accommodation spaces	[3]	A-60	A-0	**(7)**	A-0	**(7)**	A-60	A-0	A-0	A-0	**(7)**	A-30 **(4)** A-0
Stairways	[4]	A-0	A-0	A-0	**(7)**	A-0	A-60	A-0	A-0	A-0	**(7)**	A-30 **(8)**
Service spaces (Low risk)	[5]	A-15	A-0	A-0	A-0	**(7)**	A-60	A-0	A-0	A-0	**(7)**	A-0
Machinery spaces of category A	[6]	A-60	A-60	A-60	A-60	A-60	**(7)**	**(6)** A-60	A-30	A-60	**(7)**	A-60
Other machinery spaces	[7]	A-15	A-0	A-0	A-0	A-0	A-0	**(7)**	A-0	A-0	**(7)**	A-0
Cargo spaces	[8]	A-60	A-0	A-0	A-0	A-0	A-0	A-0	**(7)**	A-0	**(7)**	A-0
Service spaces (High risk)	[9]	A-60	A-30 **(4)** A-0	A-30 **(4)** A-0	A-30 **(4)** A-0	A-0	A-60	A-0	A-0	A-0	**(7)**	A-30
Open decks	[10]	**(7)**	**(7)**	**(7)**	**(7)**	**(7)**	**(7)**	**(7)**	**(7)**	**(7)**	-	A-0
Special category spaces	[11]	A-60	A-30 **(8)**	A-30 **(4)** A-0	A-30 **(8)**	A-0	A-60 **(8)**	A-0	A-0	A-30	A-0	A-30 **(8)**

See notes under Table 21.3.

Table 21.5 Fire integrity of bulkheads separating adjacent spaces

Spaces		[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]
Control stations	[1]	**(5)** A-0	A-0	A-60	A-0	A-15	A-60	A-15	A-60	A-60	**(10)**	A-60
Corridors	[2]		C	B-0	B-0 **(3)** A-0	B-0	A-60	A-0	A-0	A-0	**(10)**	A-30
Accommodation spaces	[3]			**(1)** **(2)** C	B-0 **(3)** A-0	B-0	A-60	A-0	A-0	A-0	**(10)**	A-30
Stairways	[4]				B-0 **(3)** A-0	B-0 **(3)** A-0	A-60	A-0	A-0	A-0	**(10)** **(10)**	A-30
Service spaces (Low risk)	[5]					C	A-60	A-0	A-0	A-0	**(10)**	A-0
Machinery spaces of category A	[6]						**(10)**	A-0	**(7)** A-0	A-60	**(10)**	**(6)** A-60
Other machinery spaces	[7]							**(4)** A-0	A-0	A-0	**(10)**	A-0
Cargo spaces	[8]								**(10)**	A-0	**(10)**	A-0
Service spaces (High risk)	[9]									**(4)** A-0	**(10)**	A-30
Open decks	[10]										-	A-0
Ro/ro cargo spaces	[11]											A-30 **(11)**

Notes to be applied to Tables 21.5 and 21.6, as appropriate

(1) *No special requirements are imposed upon bulkheads in methods IIC and IIIC fire protection.*

(2) *In case of method IIIC "B" class bulkheads of "B-0" rating shall be provided between spaces or groups of spaces of 50 m^2 and over in area.*

(3) *For clarification as to which applies, see item 3. and 5.*

(4) *Where spaces are of the same numerical category and **(4)** appears, a bulkhead or deck of the rating shown in the Tables in only required when the adjacent spaces are for a different purpose, e.g. in category [9]. A galley next to a galley does not require a bulkhead but a galley next to a paint room requires an "A-0" bulkhead.*

(5) *Bulkheads separating the wheelhouse, chartroom and radio room from each other may be "B-0" rating.*

(6) *A-0 rating may be used if no dangerous goods are intended to be carried or if such goods are stowed not less than 3 m horizontally from such bulkhead.*

(7) *For cargo spaces in which dangerous goods are intended to be carried, item 15.2 applies.*

(8) *Deleted.*

(9) *Fire insulation need not be fitted if the machinery space in category [7], has little or no fire risk.*

(10) *Where a **(10)** appears in the Tables, the division is required to be of steel or other equivalent material but is not required to be of "A" class standard. However, where a deck, except an open deck, is penetrated for the passage of electric cables, pipes and vent ducts, such penetrations should be made tight to prevent the passage of flame and smoke. Divisions between control stations (emergency generators) and open decks may have air intake openings without means for closure, unless a fixed gas fire-fighting system is fitted.*

(11) *Ships constructed before 1 July 2014 shall comply, as a minimum, with the previous requirements applicable at the time the ship was constructed, as specified in SOLAS Chapter II-2, Regulation 1.2.*

Table 21.6 Fire integrity of decks separating adjacent spaces

Spaces above → / Space below ↓		[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]
Control stations	[1]	A-0	A-0	A-0	A-0	A-0	A-60	A-0	A-0	A-0	**(10)**	A-60
Corridors	[2]	A-0	**(10)**	**(10)**	A-0	**(10)**	A-60	A-0	A-0	A-0	**(10)**	A-30
Accommodation spaces	[3]	A-60	A-0	**(10)**	A-0	**(10)**	A-60	A-0	A-0	A-0	**(10)**	A-30
Stairways	[4]	A-0	A-0	A-0	**(10)**	A-0	A-60	A-0	A-0	A-0	**(10)**	A-30
Service spaces (Low risk)	[5]	A-15	A-0	A-0	A-0	**(10)**	A-60	A-0	A-0	A-0	**(10)**	A-0
Machinery spaces of category A	[6]	A-60	A-60	A-60	A-60	A-60	**(10)**	**(9)** A-60	A-30	A-60	**(10)**	A-60
Other machinery spaces	[7]	A-15	A-0	A-0	A-0	A-0	A-0	**(10)**	A-0	A-0	**(10)**	A-0
Cargo spaces	[8]	A-60	A-0	A-0	A-0	A-0	A-0	A-0	**(10)**	A-0	**(10)**	A-0
Service spaces (High risk)	[9]	A-60	A-0	A-0	A-0	A-0	A-60	A-0	A-0	**(4)** A-0	**(10)**	A-30
Open decks	[10]	**(10)**	**(10)**	**(10)**	**(10)**	**(10)**	**(10)**	**(10)**	**(10)**	**(10)**	-	A-0 **(11)**
Ro/ro cargo spaces	[11]	A-60	A-30	A-30	A-30	A-0	A-60	A-0	A-0	A-30	A-0 **(11)**	A-30 **(11)**
See notes under Table 21.5.												

- Reference to FSS Code Chapter 13 is added to Item B.17.1.

17. Means of Escape

17.1 Means of escape from control stations, accommodation spaces and service spaces

For arrangement of means of escape see FSS Code Chapter 13.

17.1.1 General requirements

...

Section 29 - Tugs

Revision date: April 2014

Entry into force date: July 2014

Item C.3 is revised as follows

3. Companionways

Companionways leading to spaces below weather deck are to have sill height not less than 600 mm and are to have watertight steel doors which can be opened and closed watertight from either side.

Note: For vessels of less than 24 m, sill height of companionways leading to spaces below weather deck may be reduced to 450 mm.

PART A CHAPTER 2 – MATERIAL

Section 2 - Mechanical And Technological Testing Procedures

Revision date: May 2014

Entry into force date: July 2014

- New taper ratio of the mandrel is defined as 1:5 instead of 1,5 in "Figure 2.12 Ring expanding test **"**

Section 9 - Copper Alloys

Revision date: May 2014

Entry into force date: July 2014

Table 9.10 Suitable cast copper alloys

Material designation		Composition [%]																				
TL – Material code	Material no./code acc. to EN 1982	Element	Al	B	Bi	C	Cd	Cr	Cu	Fe	Mg	Mn	Nb	Ni	P	Pb	S	Sb	Se	Si	Sn	Te	Zn
TL-CuAl10Ni (1)	CC333G/ CuAl10Fe5Ni5-C	min.	8.5		-			-	76.0	4.0	-	-		4.0		-				-	-		-
		max.	10.5		0.01			0.05	83.0	5.5	0.05	3.0		6.0		0.03				0.10	0.1		0.5
TL -CuAl11Ni (2)	CC334G/ CuAl11Fe6Ni6-C	min.	10.0						72.0	4.0	-	-		4.0		-				-	-		-
		max.	12.0						82.5	7.0	0.05	2.5		7.5		0.05				0.10	0.2		0.5
TL -CuNi10	CC380H/ CuNi10Fe1Mn1-C	min.	-			-			84.5	1.0		1.0	-	9.0		-				-			-
		max.	0.01			0.10			-	1.8		1.5	1.0	11.0		0.03				0.10			0.5
TL -CuNi30	CC383H/ CuNi30Fe1Mn1NbSi -C	min.	-	-	-	-	-		Remainder	0.5	-	0.6	0.5	29.0	-	-	-		-	0.30		-	-
		max.	0.01	0.01	0.01	0.03	0.02			1.5	0.01	1.2	1.0	31.0	0.01	0.01	0.01		0.01	0.70		0.01	0.5
TL -CuSn10 (3)	CC480K/ CuSn10-C	min.	-						88.0	-		-		-	-	-	-	-		-	9.0		-
		max.	0.01						90.0	0.2		0.1		2.0	0.20	1.0	0.05	0.2		0.02	11.0		0.5
TL -CuSn12 (4)	CC483K/ CuSn12-C	min.	-						85.0	-		-		-	-	-	-	-		-	11.0		-
		max.	0.01						88.5	0.2		0.2		2.0	0.60	0.7	0.05	0.15		0.01	13.0		0.5
TL -CuSn12Ni	CC484K/ CuSn12Ni2-C	min.	-						84.5	-		-		1.5	0.05	-	-	-		-	11.0		-
		max.	0.01						87.5	0.2		0.2		2.5	0.40	0.3	0.05	0.1		0.01	13.0		0.4
TL - CuSn5ZnPb (3)	CC491K/ CuSn5Zn5Pb5-C	min.	-						83.0	-				-	-	4.0	-	-		-	4.0		4.0
		max.	0.01						87.0	0.3				2.0	0.10	6.0	0.10	0.25		0.01	6.0		6.0
TL - CuSn7ZnPb (3), (5)	CC493K/ CuSn7Zn4Pb-7-C	min.	-						81.0	-				-	-	5.0	-	-		-	6.0		2.0
		max.	0.01						85.0	0.2				2.0	0.10	8.0	0.10	0.3		0.01	8.0		5.0

(2) *For permanent mould castings minimum iron content shall be 3.0%, and minimum aluminium content shall be 9.0%. In this case maximum copper content shall be 84.5%.*

(3) *Nickel included (For copper).*

(4) *For continuous and centrifuge castings, minimum tin content shall be 10.5% and maximum copper content shall be 89%.*

(5) *For continuous and centrifuge castings minimum tin content shall be 5.2%, maximum copper content shall be 86%.*

PART B CHAPTER 4 - MACHINERY

Section 1 - General Rules and Instructions

Revision date: June 2014

Entry into force date: July 2014

Item E.7 has been revised as follows:

~~In compliance with the relevant national regulations, care is to be taken to ensure that operation of the ship is not unacceptably impaired by engine noise.~~

"The Code on noise levels on board ships" (adopted by resolution MSC.337(91)) is to be applied.

Section 2 - Internal Combustion Engines and Air Compressors

Revision date: March 2014

Entry into force date: January 2015

Item M.5.1 has been revised as follows:

5.1 Reducing agent

For Selective Catalytic Reduction (SCR) type exhaust gas cleaning systems the reducing agent (Ammonia, dissolved Ammonia, Urea or the like) has to be stored and pumped in tanks and pipes made of approved materials for these types of agents, see Section 16.

For more details see UI MPC 105 and Resolution MEPC.198(62).

Section 5 - Main Shafting

Revision date: March 2014

Entry into force date: July 2014

Fourth paragraph of item E.2 has been revised as follows:

2. Non-destructive Tests and Inspections

...

Forgings for all shafts are to be ultrasonically examined to the satisfaction of the attending Surveyor according to Chapter 2, Material, Section 5. Conformity with the Chapter 2 - Material or equivalent, will be considered to meet this requirement. Tail shafts in the finished machine condition are to be subjected to magnetic particle, dye penetrant or other nondestructive examinations. They are to be free of linear discontinuities greater than 3.2 mm, except that in the following locations the shafts are to be free of all linear discontinuities:

Section 8 - Propellers

Revision date: May 2014

Entry into force date: July 2014

Formula of "half taper of propeller shaft" has been revised as follows:

Θ = Half taper of propeller shaft (C/2), (e.g. taper (C) = 1/15, θ =1/30).

~~Θ = 1/30~~

Section 16 - Pipe Lines, Valves, Fittings and Pumps

Revision date: March 2014

Entry into force date: July 2014

- Item D.5.3 has been revised as follows:

  5.3 Valves with only one flange may be used on the ship's side (shell plating) and on the sea chests only after special approval.

  Wafer type valves are not to be used for any connections to the vessel's shell unless specially approved. Lug type butterfly valves used as shell valves are to have a separate set of bolts on each end of the valve so that the inboard end may be disconnected with the valve closed to maintain its watertight integrity.

- A new item has been added as D.1.5 as follows:

  1.5 Protection against corrosion and erosion

  1.5.1 Pipes are to be efficiently protected against corrosion, particularly in their most exposed parts, either by selection of their constituent materials, or by an appropriate coating or treatment.

  1.5.2 The layout and arrangement of sea water pipes are to be such as to prevent sharp bends and abrupt changes in section as well as zones where water may stagnate. The inner surface of pipes is to be as smooth as possible, especially in way of joints. Where pipes are protected against corrosion by means of galvanising or other inner coating, arrangements are to be made so that this coating is continuous, as far as possible, in particular in way of joints.

  1.5.3 If galvanised steel pipes are used for sea water systems, the water velocity is not to exceed 3 m/s.

  1.5.4 If copper pipes are used for sea water systems, the water velocity is not to exceed 2 m/s.

  1.5.5 Arrangements are to be made to avoid galvanic corrosion.

  1.5.6 If aluminium brass pipes are used for sea water systems, the water velocity is not to exceed 3 m/s.

  1.5.7 If 90/10 copper-nickel-iron pipes are used for sea water systems, the water velocity is not to exceed 3,5 m/s.

  1.5.8 If 70/30 copper-nickel pipes are used for sea water systems, the water velocity is not to exceed 5 m/s.

  1.5.9 If GRP pipes are used for sea water systems, the water velocity is not to exceed 5 m/s.

Revision date: April 2014

Entry into force date: July 2014

- Item T.4 has been totally revised.

<u>Section 18 - Fire Protection and Fire Extinguishing Equipment</u>

Revision date: May 2014

Entry into force date: July 2014

- Items G.5.9 and G.7.3 have been revised as follows:

5.9 Two separate controls (as defined in 5.2) are also to be provided in ro-ro spaces, container holds equipped with integral reefer containers, spaces accessible by doors or hatches, and other spaces in which personnel normally work or to which they have access.

In conventional cargo spaces and small spaces (such as compressor rooms, paint lockers etc.) with only a local release, two separate controls are not required.

Note: Conventional cargo spaces means cargo spaces other than ro-ro spaces or container holds equipped with integral reefer containers, and they need not be provided with means for automatically giving audible and visual warning of the release.

The two controls shall be located inside a release box clearly identified for the particular space. If the box containing the controls is to be locked, a key to the box shall be in a break-glass-type enclosure conspicuously located adjacent to the box.

7.3 Audible and visual warnings (pre-discharge alarms as defined in 7.1) are also to be provided in any ro-ro spaces, container holds equipped with integral reefer containers, spaces accessible by doors or hatches, and other spaces in which personnel normally work or to which they have access.

In conventional cargo spaces audible/visual alarms are not required.

Note: Conventional cargo spaces means cargo spaces other than ro-ro spaces or container holds equipped with integral reefer containers, and they need not be provided with means for automatically giving audible and visual warning of the release.

In small spaces (such as compressor rooms, paint lockers etc.) with only a local release, the alarms may be dispensed with if the CO2 system can be released either from a place next to the access door outside of this space or from the CO2 room provided this room is located in close vicinity to the protected space.

- Item L.3.3 has been revised as follows:

3.3 The fixed local application fire-fighting systems are to protect areas such as the following without the necessity of engine shutdown, personnel evacuation, or sealing of the spaces:

- For ships constructed before 1 July 2014, the fire hazard portions of internal combustion machinery used for the ship's main propulsion power generation and other purposes. For ships constructed after 1 July 2014, the fire hazard portions of internal combustion machinery. In multi-engine installations, at least two sections should be arranged.

- Item G.1 has been revised as follows:

1. Calculation of the Necessary Quantity of CO_2

The calculation of the necessary quantity of CO_2 is to be based on a gas volume of 0,56 m^3 per kg of CO_2.

If two or more individually floodable spaces are connected to the CO_2 system, the total CO_2 quantity available need not be more than the largest quantity required for one of these spaces. The system shall be fitted with normally closed control valves arranged to direct the agent into the appropriate space.

Adjacent spaces with independent ventilation systems not separated by at least A-0 class divisions should be considered as the same space.

- A new paragraph has been added into item G.2.1.3 as follows:

For container and general cargo spaces (primarily intended to carry a variety of cargoes separately secured or packed) the fixed piping system shall be such that at least two thirds of the gas can be discharged into the space within 10 min. For solid bulk cargo spaces the fixed piping system shall be such that at least two thirds of the gas can be discharged into the space within 20 min. The system controls shall be arranged to allow one third, two thirds or the entire quantity of gas to be discharged based on the loading condition of the hold.

- Third paragraph of item E.1.4.11 has been revised as follows:

If starting by hand-cranking is impracticable an alternative independent means of power (compressed air, electricity, or other sources of stored energy, including hydraulic power or starting cartridges) starting shall be provided. This means shall be such as to enable the diesel to be started at least 6 times within the period of 30 min, and at least twice within the first 10 min.

- Item K.2 has been revised totally as follows:

2.1 Deck foam systems on tankers carrying chemicals in bulk listed in Chapter 17 of the IBC Code having a flashpoint not exceeding 60 ºC are to be designed according to the Rules of Chapter 8 - Chemical Tankers, Section 11, 11.3.

2.2 Deck foam systems on tankers carrying (see note below):

- crude oil or petroleum products having a flashpoint not exceeding 60 ºC; or
- IBC Code chapter 18 products having a flashpoint not exceeding 60 ºC; or
- petroleum products with a flashpoint exceeding 60 ºC; or
- IBC Code chapter 17 products with a flashpoint exceeding 60 °C

shall be designed according to the revised Chapter 14 of the FSS Code as implemented with Res.MSC.339(91).

Note: For details, refer to paragraph 2.2.1.1 of the revised Chapter 14 of the FSS Code adopted with Res. MSC.339(91).

~~**2.2**~~ **2.3** The foam fire extinguishing system is to be so designed that foam is available for the entire cargo deck area as well as for any cargo tank, the deck of which has ruptured.

~~**2.3**~~ **2.4** The deck foam system shall be capable of simple and rapid operation. The main control station for the system shall be suitably located outside the cargo area, adjacent to the accommodation spaces and readily accessible and operable in the event of fire in the areas protected.

~~**2.4**~~ **2.5** Capacity of the foam fire extinguishing system pump and supply of foam solution:

2.5.1 The foam concentrate supplied on board shall be approved by TL (see note below) for the cargoes intended to be carried. Type B foam concentrates shall be supplied for the protection of crude oil, petroleum products and non-polar solvent cargoes. Type A foam concentrates shall be supplied for polar solvent cargoes, as listed in the table of Chapter 17 of the IBC Code. Only one type of foam concentrate shall be supplied, and it shall be effective for the maximum possible number of cargoes intended to be carried. For cargoes for which foam is not effective or is incompatible, additional arrangements to the satisfaction of TL shall be provided.

Note: Refer to the Guidelines for performance and testing criteria and surveys of foam concentrates for fixed fire-extinguishing systems (MSC.1/Circ.1312).

2.5.2 Liquid cargoes with a flashpoint not exceeding 60 °C for which a regular foam fire-fighting system is not effective shall comply with the provisions of Regulation II-2/1.6.2.1 of SOLAS.

~~2.5~~ 2.6 Foam distribution and capacity of monitors

Foam from the fixed foam system shall be supplied by means of monitors and foam applicators. Prototype tests of the monitors and foam applicators shall be performed to ensure the foam expansion and drainage time of the foam produced does not differ more than ± 10 per cent of that determined in item 2.5.1. When medium expansion ratio foam (between 21 to 1 and 200 to 1 expansion ratio) is employed, the application rate of the foam and the capacity of a monitor installation shall be to the satisfaction of TL.

~~2.5.1~~ 2.6.1 The foam from the fixed foam system is to discharged through monitors and foam applicators. Each monitor must be capable of supplying at least 50 % of the required foam solution. The delivery rate of a monitor may not be less than 1250 litres/minute.

~~2.5.2~~ 2.6.2 The number and position of the monitors is to comply with the requirements specified in 2.3. The capacity of any monitor in litres per minute of foam solution must be at least three times the deck area in square metres protected by that monitor, such area being entirely forward of the monitor.

~~2.5.3~~ 2.6.3 The distance from the monitor to the farthest extremity of the protected area forward of that monitor shall not be more than 75 % of the monitor throw in still air conditions.

~~2.5.4~~ 2.6.4 A monitor and a hose connection for a foam applicator shall be situated to both port and starboard at the poop front or the accommodation spaces facing the cargo deck. The port and starboard monitors may be located in the cargo areas provided they are aft of cargo tanks and that they protect below and aft of each other In addition, connections for foam applicator are to be sited between the monitors to give greater flexibility in the fighting of fires. The capacity of each foam applicator may not be less than 400 litres per minute and the applicator throw may not be less than 15 m. still air conditions.

~~2.5.5~~ 2.6.5 On tankers of less than 4000 dwt, one hose connection each for a foam applicator is to be provided to port and starboard at the poop front or the accommodation spaces facing the cargo deck. The capacity of each foam applicator must be equivalent to at least 25 % of the quantity of foam solution calculated in accordance with 2.5 a) or 2.5 b). The capacity and throw of the foam applicators may not be less than those specified in 2.6.4.

~~2.5.6~~ 2.6.6 ~~Immediately forward of each monitor, both the foam main and the fire main are to be fitted with shutoff valves to enable damaged sections of these lines to be isolated.~~ Valves shall be provided in the foam main, and in the fire main when this is an integral part of the deck foam system, immediately forward of any monitor position to isolate damaged sections of those mains.

~~2.6~~ 2.7 Operation of the foam system at its required capacity shall permit the simultaneous use of the water fire extinguishing system as per E. over the full length of the ship on deck, in accommodation spaces, control stations, service spaces and machinery spaces.

~~2.7~~ 2.8 The supply of foam concentrate and the necessary pumps are to be located outside the area to be protected. The means of control of any such sytems shall be readily accessible and simple to operate and shall be grouped together in as few locations as possible at positions not likely to be cut off by a fire in the protected space.

Revision date: June 2014

Entry into force date: July 2014

Item B.13.1 has been revised as follows:

13.1 All discharge piping, fittings and nozzles in the protected spaces shall be constructed of materials having a melting temperature which exceeds 925°C. The piping and associated equipment shall be adequately supported.

~~*Note: Gaskets used in discharge piping inside protected spaces need not be constructed of materials having a melting temperature which exceeds 925°C.*~~

Section 20 - Tankers

Revision date: March 2014

Entry into force date: July 2014

Item C.8.3.2 has been revised as follows:

8.3.2 Oil tankers with constant operative inerting systems for such spaces need not be equipped with afixed hydrocarbon gas detection system. (See also IACS Recommendation 131)

PART B CHAPTER 4-1 – AUTOMATION

Section 7 - Tests

Revision date: February 2014

Entry into force date: July 2014

- Following revisions have been carried out.

D. Tests on Board

1. General

...

The test procedures are based on form~~s AUT M and AUT D~~ PL-M-CL006 for engine driven systems.~~ and team driven systems respectively~~ .

~~**1.1 AUT 1**~~

~~Form AUT 1 – "Details on Automatic and Remote Controls of Propelling Machinery" is used to apply for the relevant class notation.~~ Part I of Form PL-M-CL006 is used to apply for the relevant class notation. Concept approval for the whole system is given due to the information provided.

~~**1.2 AUT 2**~~

~~Form AUT 2 – "Test report for Automatic and Remote Controls of Propelling Machinery" is used for the operational testing of the whole system.~~ Part II of Form PL-M-CL006 is used for the operational testing of the whole system. Following successful completion of the tests, the relevant class notation is issued.

3. Tests During Commissioning

…

Form ~~AUT 2~~ PL-M-CL006 is to be used as a basis.

4.4 De-Briefing

4.4.1 The trials report is to be completed in accordance with form ~~AUT-2~~ PL-M-CL006.

PART B CHAPTER 5 - ELECTRICAL INSTALLATION

Revision date: May 2014

Entry into force date: July 2014

Section 9 - Control, Monitoring and Ship's Safety Systems

- Items D.3.1.13, D.3.1.14 and D.3.1.19 have been revised as follows:

  3.1.13 Smoke detectors required in all stairways, corridors and escape routes within accommodation spaces shall be certified to operate before the smoke density exceeds 12.5 % obscuration per metre, but not until the smoke density exceeds 2 % obscuration per metre, when tested according to standards EN 54 and IEC 60092-504.

  3.1.14 Heat detectors shall be certified to operate at a temperature of between 54°C and 78°C when the temperature rises to those limits at a rate of rise less than 1°C per minute, when tested according to standards EN 54 and IEC 60092-504. In case of a faster temperature rise a higher threshold value may be permitted by agreement with TL.

  3.1.19 Flame detectors shall only be used in addition to the detectors mandatory required. Flame detectors shall be tested according to standards EN 54-10 and IEC 60092-504.

- Item D.7.1 has been revised as follows:

  "The Voyage Data Recorder should be supplied from the main- and emergency switchboard, see Section 4, I.9.1, 9.3 and also Resolution MSC.333(90)."

- Items D.3.2.2.1, D.3.2.2.3, D.3.2.3.1, D.3.7.2.4 have been revised and item D.3.1.27 has been added as a new item as follows:

  3.2.2.1 On ships constructed on or after 1 July 2014, operation of the automatic changeover switch or a failure of one of the power supplies shall not result in permanent or temporary degradation of the fire detection and fire alarm system.

  3.2.2.3 On ships constructed on or after 1 July 2014, the arrangement of electrical power supplies to an automatic changeover switch shall be such that a fault will not result in the loss of all supplies to the automatic changeover switch.

  3.2.3.1 The fire detection and fire alarm system emergency power may be supplied by an accumulator battery or from the emergency switchboard. The power source shall be sufficient to maintain the operation of the fire detection and fire alarm system for the periods required under SOLAS Chapter II-1, Regulations 42 and 43, at the end of that period, shall be capable of operating all connected visual and audible fire alarm signals for a period of at least 30 min.

  On ships constructed on or after 1 July 2014, where the system is supplied from an accumulator battery, the arrangements are to comply with the following requirements:

3.7.2.4 The control panel shall be located on the navigation bridge or in the fire control station. An indicating unit shall be located on the navigation bridge if the control panel is located in the fire control station (See UI SC260 which is to be implemented not later than 1 January 2014). In ships constructed on or after 1 July 2014, with a cargo control room, an additional indicating unit shall be located in the cargo control room.

3.1.27 On ships constructed on or after 1 July 2014, detectors installed within cold spaces such as refrigerated compartments shall be tested using procedures having due regard for such locations.

Note: Refer to the recommendations of the International Electrotechnical Commission, in particular publication IEC 60068-2-1 – Section one -Test Ab, Environmental Testing – Part 2-1: Tests – Test A: Cold.

PART C CHAPTER 10 – LIQUEFIED GAS CARRIERS (2013)

Revision date: May 2014

Entry into force date: July 2014

Section 4 - Cargo Containment

Item 4.7.7 is revised as follows:

4.7.7 The secondary barrier should be capable of being periodically checked for its effectiveness, by means of a pressure/vacuum test, a visual inspection or another suitable method acceptable to the Administration. The method should be submitted to the Administration for approval.

For containment systems with glued secondary barriers:

- *A tightness test should be carried out in accordance with approved system designers' procedures and acceptance criteria before and after initial cool down. Low differential pressures tests are not considered an acceptable test.*
- *If ~~significant differences in the results before and after cool down for each tank or between tanks or if other anomalies are observed~~, the designer's threshold values are exceeded,an investigation is to be carried out and additional testing such as ~~differential pressure~~, thermographic or acoustic emissions testing should be carried out ~~as necessary~~.*
- *The values recorded should be used as reference for future assessment of secondary barrier tightness.*

For containment systems with welded metallic secondary barriers, a tightness test after initial cool down is not required.

Note: The phrases written in red are to be applied to tests commenced on or after 1 July 2014.

PART C CHAPTER 11 – FIRE FIGHTING SHIPS (2012)

Revision date: March 2014

Entry into force date: April 2014

- A new notation "FF0" is added and following paragraph is added under Item A.2. And as per FF0, following items are added to indicate relaxations of the notation.

FF0 This notation is assigned when the characteristics of the fire-fighting system are not those required for the assignment of the additional service features FF1, FF2 or FF3, and when the system is specially considered by TL.

C.3.1.7 For ships having the notation FF0, the characteristics of the water fire-fighting system will be given special consideration by the TL.

C.4. Foam Monitor System

For ships having the notation FF0 some relaxation in the provisions of this Section may be accepted by TL.

Table 1.6 Required Additional Fire Hydrant Manifolds, Hose Connections and Nozzles for the different Notations

Arrangement of Additional Fire Hydrant Manifolds, Hose Connections and Nozzles				
Notation	Number of Fire Hydrant Manifolds		Number of Hose Connections at Each Manifold	Number of Hose Box at Each Side (P/S)
	Port	Starboard		
FF0	1	1	4	2
FF1	1	1	4	2
FF2	1	1	6	3
	2	2	3	3
FF3	1	1	8	4
	2	2	4	4
Note: *Hose boxes to be arranged in accordance with C-6.1.3 of this section*				

- Item A.4 is added

4. Certification

Certificates shall be required for the components shown in Table 1.2.

- Item B.3.1 is revised as follows:

3. Intact Stability

3.1 General

The stability of the ship for the loading conditions defined in Chapter 1 - Hull, Section 26, ~~B.2.2~~ and B.2.11 is to be in compliance with the requirements in Chapter 1 - Hull, Section 26, B.10 and B.11.

- "Table 1.5 Required equipment for the different Notations" is revised as follows

Equipment parameters	Notations affixed to the Character of Classification					
	FF1	FF2			FF3	
Water monitors:	2	2	3	4	3	4
Output [m³/h] per monitor	1200	3600	2400	1800	3200	2400

Length of throw [m] **(1)**	120	150	150
Height of throw [m] **(2)**	45	70	70
Pumps: (7)	2	2 - 4	2 -4
Total pump capacity [m3/h]	2400	7200	9600
Foam monitors:	–	–	2
Duration of supply of foam concentrate for foam monitors [min]	–	–	30 **(3)**
Foam capacity per monitor [litre/min]	–	–	5000
Portable foam generator:	–	1	1
Duration of supply of foam concentrate for portable foam generator [min]	–	30 **(3)**	30 **(3)**
High-expansion foam output of portable foam generator [m³/min]	–	100	100
Water spray system **(6)**	1	– **(4)**	– **(4)**
Number of fire hydrants on each side of ship (hose connections)	4	~~8~~ 6	8
Firemen's outfits (total numbers)	4	8	8
Fuel supply [h] **(5)**	24	96	96

Remarks

1) *Horizontal distance from monitor outlet to centre of impact area.*

2) *Vertical distance from surface of water to centre of impact area at a distance of at least 70 m from the closest portion of the ship.*

3) *Duration (in minutes) of uninterrupted foam production with generator operating at rated output.*

4) *A water spray system is to be installed in the case of the combined Notations affixed to the Character of Classification FF1/2or FF1/3.*

5) *With all monitors in uninterrupted operation.*

6) *Where the water monitor pumps are also used for the self-protection water-spraying system, their capacity is to be sufficient to ensure the simultaneous operation of both systems at the required performances.*

7) *For ships assigned with FF0, the number of pumps shall be one as minimum where capacity and other characteristics of those pumps shall be agreed with **TL**.*

***Note:** For ships assigned with FF0, the number of fire hydrants on each side of ship (hose connections) and number of firemen's outfits shall comply with Table 1.6 and Table 1.7 respectively.*

- Item C.6 is revised as follows:

6. Portable Fire Fighting Equipment

6.1 Hose connections/Hydrants and hose boxes

...

6.1.3 Hose boxes are to be provided for at least every ~~second~~ two hose connection/hydrant.

- Item C.7.1.1 is revised and Table 1.7 is added.

7.1.1 Firemen's outfit shall conform to ~~SOLAS 74, as Amended, II-2, Reg. 10, 10~~ Fire Safety Systems Code. For number of firemen's outfit, Table 1.7 is to be referred.

Table 1.7 Number of firemen's outfits

Number of firemen's outfits			
FF0	FF1	FF2	FF3
4	4	8	8

PART C CHAPTER 27 - CONSTRUCTION of WOODEN PASSENGER VESSELS LESS THAN 24 M. IN LENGTH

Revision date: March 2014

Entry into force date: May 2014

Chapter 27, Section 1 and Section 6 have been totally revised.

PART D CHAPTER 76 – ENVIRONMENTAL SERVICE SYSTEM (2013)

Revision date: January 2014

Entry into force date: February 2014

MEPC. 179(59) references are corrected as MEPC. 197(62).

ADDITIONAL RULES for IMPLEMENTATION MARPOL ANNEX VI and NO_X TECHNICAL CODE

Revision date: March 2014

Entry into force date: January 2015

- UI MPC 105 has been added to the related additional rule as follows:

MPC

105

(Nov 2013)

Gaseous emissions calculation of marine diesel engines fitted with selective catalytic reduction (SCR) systems

Resolution MEPC.198(62)

5.2.1 The calculation method in section 5.12 of the NTC 2008 is also applied to engine systems fitted with SCR. No allowance is made for the reductant solution injected into the exhaust gas stream in

respect of its effect on exhaust gas mass flow rate calculation (appendix VI) or dry/wet correction factor (equation (11), paragraph 5.12.3.2.2 of the NTC 2008). The NO_x correction factor for humidity and temperature (equations (16) or (17), paragraphs 5.12.4.5 and 5.12.4.6, respectively, of the NTC 2008) should not be applied.

Interpretation

The gaseous emissions calculation method given in Resolution MEPC.198(62) paragraph 5.2.1 for Scheme A is the approach to use, it applies to both Scheme A and Scheme B certification of marine diesel engines fitted with selective catalytic reduction (SCR) systems.

- The Additional Rule is revised as to comply with deleted IACS Unified Interpretations (UI MPC13, 15, 17, 18, 19, 21, 22, 23, 24, 25, 26, 27, 82, 83, 84).

ADDITIONAL RULES for UNIFIED INTERPRETATIONS for LIFE SAVING APPLIANCES

Revision date: May 2014

Entry into force date: July 2014

Following revision is made in the Additional Rule as to provide compliance with UI SC213 Rev.2

SC
213
~~(Corr.2 June 2011)~~ (Rev.2 Nov 2013)
Arrangements for remotely located survival craft
(SOLAS Regulations III/31.1.4, III/7.2.1.4, III/11.4, III/11.7, III/13.1.3, III/16.7 and LSA Code paragraph 4.1.3.2)
Application

Regulation III/31.1.4 reads:

“Cargo ships where the horizontal distance from the extreme end of the stem or stern of the ship to the nearest end of the closest survival craft is more than 100 m shall carry, in addition to the liferafts required by paragraphs 1.1.2 and 1.2.2, a liferaft stowed as far forward or aft, or one as far forward and another as far aft, as is reasonable and practicable. Such liferaft or liferafts may be securely fastened so as to permit manual release and need not be of the type which can be launched from an approved launching device”

Regulation III/7.2.1.~~2~~4

"A sufficient number of lifejackets shall be carried for persons on watch and for use at remotely located survival craft stations. The lifejackets carried for persons on watch should be stowed on the bridge, in the engine control room and at any other manned watchstation.”

Regulation III/11.4

“Muster and embarkation stations shall be adequately illuminated by lighting supplied from the emergency source of electrical power required by regulation II-1/42 or II-1/43, as appropriate.”
Regulation III/11.7

"An embarkation ladder complying with the requirements of paragraph 6.1.6 of the Code extending, in a single length, from the deck to the waterline in the lightest seagoing condition under ~~unfavourable~~ all conditions of trim of up to 10° and a list of up to 20° either way shall be provided at each embarkation station or at every two adjacent embarkation stations for survival craft launched down the side of the ship. However, the Administration may permit such ladders to be replaced by approved devices to afford access to the survival craft when waterborne, provided that there shall be at least one embarkation ladder on each side of the ship. Other means of embarkation enabling descent to the water in a controlled manner may be permitted for the liferafts required by regulation 31.1.4.”

Regulation III/13.1.3

“1 Each survival craft shall be stowed:

…

.3 in a state of continuous readiness so that two crew members can carry out preparations for embarkation and launching in less than 5 min”

Regulation III/16.7

“During preparation and launching, the survival craft, its launching appliance, and the area of water into which it is to be launched shall be adequately illuminated by lighting supplied from the emergency source of electrical power required by regulation II-1/42 or II-1/43, as appropriate.”

LSA Code paragraph 4.1.3.2

“The liferaft shall be fitted with an efficient painter of length equal to not less than 10 m plus the distance from the stowed position to the waterline in the lightest seagoing condition or 15 m whichever is the greater. …”

Interpretation

1. Liferafts required by reg. III/31.1.4 shall be regarded as "remotely located survival craft" with regard to reg. III/7.2.1.~~2~~4.

2. The area where these remotely located survival craft are stowed shall be provided with:
- a minimum number of 2 lifejackets and 2 immersion suits;
- adequate means of illumination complying with reg. III/16.7, either fixed or portable, which shall be capable of illuminating the liferaft stowage position as well as the area of water into which the liferaft should be launched. Portable lights, when used, shall have brackets to permit their positioning on both sides of the vessel; and
- an embarkation ladder or other means of embarkation enabling descent to the water in a controlled manner **(1)** as per reg.III/11.7.

3. With regard to the distance between the embarkation station and stowage location of the liferaft as required by reg. III/31.1.4 (remotely located survival craft), the embarkation station shall be so arranged that the requirements of reg. III/13.1.3 can be satisfied.

4. Exceptionally, the embarkation station and stowage position of the liferaft (remotely located survival craft) may be located on different decks provided the liferaft can be launched from the stowage deck using the attached painter to relocate it to the embarkation ladder positioned on the other deck (traversing a stairway between different decks with the liferaft carried by crew members is not acceptable).

5. Notwithstanding paragraph 2, where the exceptional cases mentioned in paragraph 4 exist, the following provisions shall be applied:,

- the lifejackets and the immersion suits required by paragraph 2.1 may be stowed at the embarkation station;

- adequate means of illumination complying with paragraph 2.2, shall also illuminate the area of water where the liferaft is to be embarked;

- the embarkation ladder or other means of embarkation as required by paragraph 2.3 may be stowed at the embarkation station; and

- notwithstanding the requirements in LSA Code paragraph 4.1.3.2, the painter is to be long enough to reach the relevant embarkation station.

6. The length of the embarkation ladder used to board this liferaft (remotely located survival craft) is calculated by applying an adverse list of 20 degrees, to the loading condition taken from the approved loading manual which gives the lightest draft at the embarkation station.

(1) *Controlled manner: a knotted rope is not acceptable for this purpose.*

Notes:
1. This UI is to be uniformly implemented by IACS Societies for ships contracted for construction on or after 1 January 2007
2. Rev.1 of this UI is to be uniformly implemented by IACS Societies for ships contracted for construction on or after 1 July 2008.
3. Rev.2 of this UI is to be uniformly implemented by IACS Societies for ships contracted for construction on or after 1 July 2014.
~~3~~4. The “contracted for construction” date means the date on which the contract to build the vessel is signedbetween the prospective owner and the shipbuilder. For further details regarding the date of “contract for construction”, refer to IACS Procedural Requirement (PR) No. 29.

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