TÜRK LOYDU RULE CHANGE SUMMARY

TL NUMBER: 01/2016 JANUARY 2016

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.

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CLASSIFICATION AND SURVEYS

01. Section 2 - Classification

Revision Date: December 2015

Entry into Force Date: January 2016

Item A.2.4.2.3, B, C and D are revised as follows:

A.2.4.2.3

...

TL requires the applicable Convention Certificates to be issued by a flag state or **TL** or an organization which is authorized by the flag state.

B

...

2. Assignment of Class to a New Ship

2.1 Scope

2.1.1 Classification covers the ship's hull, its machinery, equipment and electrical installations. For sailing ships, the rigging is also included.

2.1.2 On application, certain installations - e. g. refrigerating installations - may be classed separately

2.1.4 Structural systems and equipment determining the ship type are subject to examination within the scope of Classification, if the ship type is specified in the form of a Notation affixed to the Character of Classification (Refer to Table 2.1 ÷ 2.11 and Table 2.12, 2.13, 2.16, 2.17).

2.1.5 Cargo refrigerating installations for the refrigeration of insulated cargo holds and container refrigerating installations for the refrigeration of insulated containers, are considered to be refrigerating installations provided that the refrigerating installations are permanently installed and form an integral part of the ship.

The refrigerating installation includes the technical installations required for power supply.

Reefer units which can be connected to a container and transported in combination therewith, and containers with or without a reefer unit, are subject to Chapter 55 – Construction, Repair and Testing of Freight Containers.

...

~~**2.6.2.** Class may be transferred with recommendation not impairing safe operation of ship.~~

…

3.1.2 Class may be transferred with recommendation not impairing safe operation of ship.

C

2.4 Cargo Length Area

Cargo Length Area is that part of the ship which includes cargo holds and adjacent areas including fuel tanks, cofferdams, ballast tanks and void spaces.

C.5.2.3

...

If recommendations revealed during the surveys given above are not dealt with, or postponed by agreement by the due date, then vessel is subject to suspension procedure.

D.3.6.1

...

International Convention for the Control and Management of Ships' Ballast Water and Sediments, 2004, as amended and related guidelines (G1-G14)

Item 3.13 is added as follows:

3.13 Selective Catalytic Reduction Systems

Table 2.53 Notations for selective catalytic reduction systems

Class Notation	Description	Application	Rule Requirement, Design	Rule Requirement, Survey
SCR	Class notation is assigned to ships which Selective Catalytic Reduction catalysts is designed, constructed, and tested in accordance with SCR guide.		**TL** Guidelines For Selective Catalytic Reduction Systems, items A. and B.	TL Guidelines For Selective Catalytic Reduction Systems, item C.

Revision Date: September 2015

Entry into Force Date: January 2016

Definition of double class and dual class have been moved into item A.1.11 and A.1.12, and reference to IACS PR 1B and PR 1 Annex has been added as a new item into B.1.4, C.1.7 and C.5.6.4.

...

1.11 "Double class vessel" is a vessel which is classed by TL and another Society and where each work as if it is the only Society classing the vessel, and does all surveys in accordance with its own requirements and schedule.

1.12 "Dual class vessel" is a vessel which is classed by TL and another Society between which there is a written agreement regarding sharing of work.

...

1.4 Requirements pertaining to adding, maintaining or withdrawing of a double or dual class are to be in accordance with the IACS PR 1B and PR 1 Annex.

...

1.7 Requirements pertaining to adding, maintaining or withdrawing of a double or dual class are to be in accordance with the IACS PR 1B and PR 1 Annex.

...

5.6.4 Requirements pertaining to adding, maintaining or withdrawing of a dual class are to be in accordance with the IACS PR 1B and PR 1 Annex.

Revision Date: October 2015

Entry into Force Date: January 2016

Distinction between the notations "GRAB [X]" and "G" is achieved by revising their definition an application as follows:

For Table 2.4 Ship type notations for bulk carriers;

GRAB [X]

For ships with the notation CSR and with holds designed for loading /discharging by grabs. In the notation X is replaced by the unloaded grab weight.

For ships with the notation CSR and BC-A or BC-B the notation GRAB [X], with an unladen grab weight X equal to or greater than 20 tons is mandatory.

For ships with the notation CSR and other related notations than BC-A or BC-B the Notation GRAB [X] is voluntary.

For ships without the notation CSR and with holds designed for loading/discharging by grabs, G Notation is assigned.

For Table 2.20 Notations for use of grabs;

G

For ships with inner bottoms and/or coamings and longitudinal bulkheads strengthened for the use of grabs. Strengthening within the working range of grabs shall be in accordance with Chapter 1 Hull Section 27.

02. Section 3 - Classification And Certification Of Manned Submersibles

Revision Date: December 2015

Entry into Force Date: January 2016

Item A, B, C, D and F are generally revised as follows:

A

...

4.2.3 A survey planning meeting is to be held prior to the commencement of the survey.

4.2.4 Concurrent crediting to both Intermediate Survey and Class Renewal Survey for surveys and thickness measurements of spaces are not acceptable

...

4.3.7 A survey planning meeting is to be held prior to the commencement of the survey.

4.3.8 Concurrent crediting to both Intermediate Survey and Class Renewal Survey for surveys and thickness measurements of spaces are not acceptable.

...

4.7.1 The due date is set at intervals in accordance with the following:

- Two bottom surveys are required during each five year period of the class certificate except where SOLAS I Reg. 14 (e) or (f) is applicable.

- The intervals between any two successive bottom surveys are in no case to exceed 36 months.

4.7.2 An extension of the bottom survey may be granted in accordance with relevant provisions of Section 2 item C.3.2 under exceptional circumstances such as unavailability of dry-dock or repair facilities, unavailability of essential materials, equipment or spare parts or delays incurred by action taken to avoid severe weather conditions. The extension is not to exceed 3 months.

A.4.1.4

...

- Protective coating in double bottom/double side ballast tanks, void spaces and all other spaces adjacent to the shell should be maintained in GOOD condition;

B.3.4

...

Note:

Additional requirements given in UR Z10.2 shall also be applied.

B.3.5

Note:

Additional requirements given in UR Z10.5 shall also be applied.

B.3.6

Note:

Additional requirements given in UR Z10.4 shall also be applied.

...

For vessels built under IACS Common Structural Rules, the identified substantial corrosion areas are required to be examined and additional thickness measurements are to be carried out.

C

2. Documentation on Board Ships

2.1 Documentation on Board for ESP Vessels

2.1.1 For enhanced programme of inspections (ESP) during surveys for bulk carriers and oil tankers, the owner shall obtain, supply and maintain on board the ship documentation as specified in 2.1.1 and 2.1.2, which shall be readily available for the surveyor. The executive hull summary report referred to in 2.1.1 shall include a translation into English.

The documentation shall be kept on board for the lifetime of the ship.

A Survey Report File is to be part of the documentation on board:

- Reports on structural surveys
- Executive Hull Summary
- Thickness measurements reports

The Survey Report File is to be available also in the Owners management office.

...

Note: *Cargo and ballast history, extent of use of inert gas plant and tank cleaning procedures and records of inspections and actions by ship's personnel for structural deterioration, leakage in bulkheads and piping, condition of coating or corrosion prevention are applicable in conjunction with Class Notation ESP.*

D

- As part of the Class Renewal Survey of Machinery, a dock trial is to be carried out to attending Surveyors' satisfaction to confirm satisfactory operation of main and auxiliary machinery. If significant repairs are carried out to main or auxiliary machinery or steering gear, consideration should be given to a sea trial to attending Surveyors' satisfaction.

Revision Date: November 2015

Entry into Force Date: January 2016

According to UR Z21, Rev. 3, items A.4.9 and F are generally revised.

Revision Date: November 2015

Entry into Force Date: January 2016

UR Z17, Rev 10 is incorporated in item A.11 as follows:

11. External Service Suppliers

11.1 General

11.1.1 To approve firms providing services, such as measurements, tests or maintenance of safety systems and equipment, TL applies procedures provided in IACS UR Z17 with application scope provided in 11.2.

11.2 Application

11.2.1 The procedures defined in 11.1.1 based on UR Z17 are applied to the approval of the following categories of service suppliers:

11.2.1.1 Statutory services

- Firms engaged in servicing inflatable liferafts,
  Inflatable lifejackets, hydrostatic release units, inflatable rescue boats, marine evacuation systems
- Firms engaged in surveys and testing of radio communication equipment
- Firms engaged in surveys and maintenance of self contained breathing apparatus
- Firms engaged in annual performance testing of Voyage Data Recorders (VDR) and simplified Voyage Data Recorders (S-VDR)
- Firms engaged in sound pressure level measurements of public address and general alarm systems on board ships
- Firms engaged in surveys of low location lighting systems using photo luminescent materials and evacuation guidance systems used as as alternative to low-location lighting systems
- Firms engaged in the servicing and maintenance of lifeboats, launching appliances, on-load release gear and david-launched liferaft automatic release hooks
- Firms engaged in inspection, performance testing and maintenance od Automatic Identification Systems (AIS).

11.2.1.2 Classification and/or Statutory Services

- Firms engaged in thickness measurements on ships except
  (1) non-ESP ships less than 500 gross tonnage and
  (2) all fishing vessels.
- Firms carrying out in-water survey of ships and mobile offshore units
- Firms engaged in surveys and maintenance of fire extinguishing equipment and systems
- Firms engaged in tightness testing of closing appliances such as hatches, doors, etc. with ultrasonic equipment
- Firms engaged in measurements of noise level on board ships
- Firms engaged in examination of Ro-Ro ship's bow, stern, side and inner doors
- Firms engaged in testing of coating systems in accordance with IMO Resolution MSC.215 (82), as amended, and IACS UI SC 223 and/or MSC.288 (87), as amended
- Firms engaged in tightness testing of primary and secondary barriers of gas carriers with membrane cargo containment systems for vessels in service.

11.2.2 Where the results of the following service providers are used by a Surveyor of **TL** in making decision affecting classification then that service provider must be approved by **TL**.

- Firms engaged in thickness measurements on ships except
  (1) non-ESP ships less than 500 gross tonnage and

(2) all fishing vessels.

- Firms carrying out in-water surveys of ships and mobile offshore units
- Firms engaged in tightness testing of closing appliances such as hatches, doors, etc. with ultrasonic equipment.

11.2.3 Where such services are used by Surveyors in making decisions affecting statutory certifications, the firms are subject to approval by **TL** where **TL** is authorised by the relevant flag Administration (i.e. the flag of the ship on which the servicing is to be done or the service equipment is to used). For such services **TL** may accept approvals done by:

i. the flag Administration itself,
ii. duly authorized organizations acting on behalf of the flag Administration, or
iii. other organizations those are acceptable to the flag Administration (e.g. other governments, etc.).

11.2.4 Use of the approved service suppliers is not mandatory for the following services, unless instructed otherwise by the flag Administration with respect to statutory certification.

- Firms engaged in surveys of low location lighting systems using photo luminescent materials and evacuation guidance systems used as an alternative to low-location lighting systems
- Firms engaged in sound pressure level measurements of public address and general alarm systems on board ships
- Firms engaged in measurements of noise level on board ships
- Firms engaged in testing of coating systems in accordance with IMO Resolution MSC. 215 (82) as amended and IACS UI SC 223 and/or MSC. 288(87) as amended
- Firms engaged in examination of Ro-Ro ships bow, stern, side and inner doors.

Revision Date: November 2015

Entry into Force Date: January 2016

Item F. 1.1.2.15, Note is revised as follows:

Note: Refer to IACS Rec No.143 for Recommended procedure for the determination of contents of metals and other contaminants in a closed fresh water system lubricated stern tube.

PART A – CHAPTER 1 - HULL

01. Section 2 - Habitability

Revision Date: September 2015

Entry into Force Date: January 2016

Item C is revised as follows:

These requirements shall be verified by measurements and reporting in accordance with measurement procedures and Noise Survey Report of the Code following completion of the ship. Measurements are to be conducted, witnessed or assessed by **TL**'s Surveyors. To prevent potential problems, noise levels may be predicted by calculations during construction.

02. Section 3 - Design Principles

Revision Date: October 2015

Entry into Force Date: January 2016

Item E is revised in accordance with UR S14 Rev.5 as follows:

E. Testing Procedures of Watertight Compartments

1. General

These test procedures are to confirm the watertightness of tanks and watertight boundaries and the structural adequacy of tanks which consist of the watertight subdivisions of ships. These procedures may also be applied to verify the weathertightness of structures and shipboard outfitting. The tightness of all tanks and watertight boundaries of ships during new construction and those relevant to major conversions or major repairs **(1)** is to be confirmed by these test procedures prior to the delivery of the ship.

2. Application

2.1 All gravity tanks **(2)** and other boundaries required to be watertight or weathertight are to be tested in accordance with sub-section E. and proven to be tight and structurally adequate as follows:

2.1.1 Gravity Tanks for their tightness and structural adequacy,

2.1.2 Watertight Boundaries Other Than Tank Boundaries for their watertightness, and

2.1.3 Weathertight Boundaries for their weathertightness.

2.2 The testing of cargo containment systems of liquefied gas carriers is to be in accordance with standards deemed appropriate by **TL.**

2.3 The testing of structures not listed in Table 3.35 or 3.36 is to be specially considered.

3. Test Types and Definitions

3.1 The following two types of tests are specified in this requirement:

Structural Test: A test to verify the structural adequacy of tank construction. This may be a hydrostatic test or, where the situation warrants, a hydropneumatic test.

Leak Test: A test to verify the tightness of a boundary. Unless a specific test is indicated, this may be a hydrostatic / hydropneumatic test or an air test. A hose test may be considered an acceptable form of leak test for certain boundaries, as indicated by Footnote **(3)** of Table 3.35.

3.2 The definition of each test type is as follows:

Hydrostatic Test (Leak and Structural): A test wherein a space is filled with a liquid to a specified head.

Hydropneumatic Test (Leak and structural): A test combining a hydrostatic test and an air test wherein a space is partially filled with a liquid and pressurized with air.

Hose Test (Leak): A test to verify the tightness of a joint by a jet of water with the joint visible from the opposite side.

Air Test (Leak): A test to verify tightness by means of air pressure differential and leak indicating solution. It includes tank air test and joint air tests, such as compressed air fillet weld tests and vacuum box tests.

Compressed Air Fillet Weld Test (Leak): An air test of fillet welded tee joints wherein leak indicating solution is applied on fillet welds.

Vacuum Box Test (Leak): A box over a joint with leak indicating solution applied on the welds. A vacuum is created inside the box to detect any leaks.

Ultrasonic Test (Leak): A test to verify the tightness of the sealing of closing devices such as hatch covers by means of ultrasonic detection techniques.

Penetration Test (Leak): A test to verify that no visual dye penetrant indications of potential continuous leakages exist in the boundaries of a compartment by means of low surface tension liquids (i.e. dye penetrant test).

03. Section 5 - Design Loads

Revision Date: December 2015

Entry into Force Date: January 2016

Figure 5.1 is revised as follows:

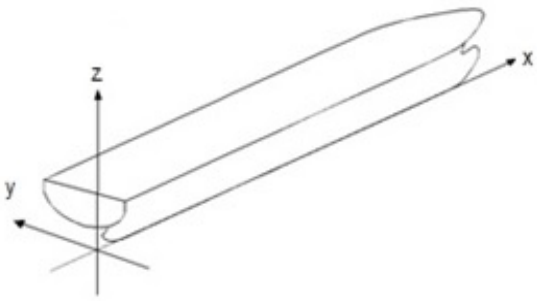


Figure 5.1 Reference coordinate system

04. Section 6 - Longitudinal Strength

Revision Date: December 2015

Entry into Force Date: January 2016

Items B.3.1 and E.3 are revised as follows:

for 0.65 < ≤ 1

...

$Q_{SW} = Q_T - f_c \cdot Q_{WV}$ [kN]

05. Section 7 - Plating

Revision Date: December 2015

Entry into Force Date: January 2016

Items A.2, B.2.2.1, B.3.3, C.2.2, D.8.2.1 and D.8.3.2 are revised as follows:

...

$t_{B,SW}$ = Thickness of the bottom shell plating for Ships engaged in Sheltered Water Service (Assigned with the Notations K6, L1 and L2) [mm],

$t_{min,SW}$ = Minimum shell plating thickness for Ships engaged in Sheltered Water Service (Assigned with the Notations K6, L1 and L2) [mm],

$t_{S,SW}$ = Thickness of the side shell plating for Ships engaged in Sheltered Water Service (Assigned with the Notations K6, L1 and L2) [mm],

...

2.2.1 The thickness $t_{B,SW}$ of bottom plating is not to be less than determined by the following formula:

$$t_{B,SW} = 1.3 \cdot \frac{a}{a_0} \cdot \sqrt{\frac{L \cdot T}{H}} \quad [mm]$$

$t_{B,SW}$ is not to be less than minimum thickness $t_{min,SW}$ determined in the item B.3.3

...

3.3 For ships engaged in sheltered water service (assigned with the notations **K6, L1** and **L2**), the minimum thickness $t_{min,SW}$ is defined as:

$t_{min,SW}$ = 3.5 [mm]

C.2.2

...

$t_{S,SW} = t_{B,SW}$ $t_{S,SW} \geq t_{min,SW}$

~~The thickness t_s of the side shell plating within 0.4**L** may be 0.5 mm less than the bottom plating according to item C.2.2.1 above.~~

C.3.3

...

3.3 For ships engaged in sheltered water service (assigned with the notations **K6, L1** and **L2**); the minimum thickness $t_{min,SW}$ is defined as:

$t_{min,SW}$ = 3.5 [mm]

D.8.2.1

...

$$P = 0.5G\left(1 + \frac{a_v}{g}\right) \qquad [kN]$$

$$F_V = M_e\left(1 + \frac{a_v}{g}\right) \qquad [kN]$$

D.8.3.2

...

$$\sigma_P = \frac{235}{k \cdot \gamma_f} \; [N/mm^2]$$

06. Section 8 - Supporting Structures

Revision Date: December 2015

Entry into Force Date: January 2016

Item A.2 is revised to increase understandability and accessibility to requirements as follows:

...

$$m_a = 0.204\frac{s}{\ell}\left[4 - \left(\frac{s}{\ell}\right)^2\right] \qquad \text{where } \left(\frac{s}{\ell}\right) \leq 1$$

$$m_k = 1 - \left[\frac{\ell_{KI} - \ell_{KJ}}{1000\ell}\right]$$

$$m = m_K{}^2 - m_a{}^2 \geq \frac{m_K{}^2}{2}$$

07. Section 9 - Stems

Revision Date: December 2015

Entry into Force Date: January 2016

Item A.1 is revised as follows:

...

The requirements specified in this ~~Chapter~~ Section apply to the construction, shape and scantlings of stems.

08. Section 12 - Tank Structures

Revision Date: December 2015

Entry into Force Date: January 2016

Item H is revised to increase understandability and to give correct references as follows:

...

~~Section 3, E.2.1 and E.2.2~~ (For testing procedures of watertight compartments, refer to Section 3, E.2.1 and E.2.2).

09. Section 16 - Hull Outfitting

Revision Date: November 2015

Entry into Force Date: January 2016

Item F.2.2.7 has been moved under as Note:

Note: A guard rail should also be required for first tier deckhouses and for superstructures' ends.

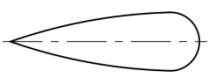
10. Section 18 - Rudder and Manoeuvring Arrangement

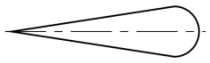
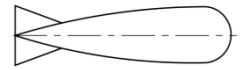
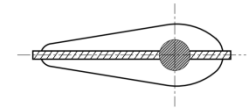
Revision Date: October 2015

Entry into Force Date: January 2016

Table 18.1 is revised as follows:

Table 18.1 Coefficient κ_2

Type of rudder/ profile	κ_2	
	Ahead condition	Astern condition
NACA-00 serie Göttingen 	1,1	0,8

flat side profiles 	1,1	0,9
hollow profiles 	1,35	0,9
high lift rudders 	1,7	to be specially considered; if not known: 1,3
Fish tail 	1,4	0,8
Single plate 	1,0	1,0
mixed profiles (e. g. HSVA)	1,21	1,4

11. Section 21 - Structural Fire Protection

Revision Date: October 2015

Entry into Force Date: January 2016

SOLAS II-2 Reg.9.7 has been amended by MSC 365(93) and amendments for ventilation systems have been incorporated into Türk Loydu Rules items B.12 and C.8.

Revision Date: October 2015

Entry into Force Date: January 2016

The note (7) given under item B.12.5 has been revised as to comply with UI SC118 Rev.2 as follows:

(7) *Fire dampers required by 12.5.1.and 12.5.2 do not need to pass the fire test in Res. A 754(18), but should be of steel and capable of stopping the draught. The requirements to "A" class applies only to the part of the duct outside of the galley. For ships constructed before 1 January 2016 refer to Retrospective TL Technical Circular S-P 03/15.*

Revision Date: October 2015

Entry into Force Date: January 2016

Items B.17.2.6 and B.17.2.7 are added as follows:

17.2.6 Escape from main workshops within machinery spaces

For ships constructed on or after 1 January 2016, two means of escape shall be provided from the main workshop within a machinery space. At least one of these escape routes shall provide a continuous fire shelter to a safe position outside the machinery space.

17.2.7 Inclined ladders and stairways

For ships constructed on or after 1 January 2016, all inclined ladders/stairways fitted to comply with item 17.2.2 with open treads in machinery spaces being part of or providing access to escape routes but not located within a protected enclosure shall be made of steel. Such ladders/stairways shall be fitted with steel shields attached to their undersides, such as to provide escaping personnel protection against heat and flame from beneath.

Revision Date: October 2015

Entry into Force Date: January 2016

Items C.11.2.5, C.11.2.6 and C.11.2.7 are added as follows:

11.2.5 Escape from machinery control rooms in machinery spaces of category "A"

For ships constructed on or after 1 January 2016, two means of escape shall be provided from the machinery control room located within a machinery space. At least one of these escape routes shall provide a continuous fire shelter to a safe position outside the machinery space.

11.2.6 Escape from main workshops in machinery spaces of category "A"

For ships constructed on or after 1 January 2016, two means of escape shall be provided from the main workshop within a machinery space. At least one of these escape routes shall provide a continuous fire shelter to a safe position outside the machinery space.

11.2.7 Inclined ladders and stairways

For ships constructed on or after 1 January 2016, all inclined ladders/stairways fitted to comply with item 11.2.2 with open treads in machinery spaces being part of or providing access to escape routes but not located within a protected enclosure shall be made of steel. Such ladders/stairways shall be fitted with steel shields attached to their undersides, such as to provide escaping personnel protection against heat and flame from beneath.

Revision Date: October 2015

Entry into Force Date: January 2016

Item E.2.1.1 has been revised according to UI SC188 Rev.2 and Rev.3.

...

Pump-rooms intended solely for ballast transfer need not comply with the requirements of Chapter 4 Machinery Section 20 C.7. The requirements of Chapter 4 Machinery Section 20 C.7 are only applicable to the pump-rooms, regardless of their location, where pumps for cargo, such as cargo pumps, stripping pumps, pumps for slop tanks, pumps for COW or similar pumps are provided (Refer also to MSC/Circ.1037 and MSC/Circ.1120).

"Similar pumps" includes pumps intended for transfer of fuel oil having a flashpoint of less than 60 °C. Pump rooms intended for transfer of fuel oil having a flashpoint of not less than 60°C need not comply with the requirements of Chapter 4 Machinery Section 20 C.7.

12. Section 28 - Oil Tankers

Revision Date: September 2015

Entry into Force Date: January 2016

New items D.2.6 and D.2.7 have been added as follows;

2.6 All oil tankers shall be fitted with a stability instrument, capable of verifying compliance with intact and damage stability requirements approved by the Administration having regard to the performance standards recommended by **TL (6)**:

2.6.1 Oil tankers constructed before 1 January 2016 shall comply with this requirement at the first scheduled renewal survey of the ship after 1 January 2016 but not later than 1 January 2021;

2.6.2 Notwithstanding the requirements of 2.6.1 a stability instrument fitted on an oil tanker constructed before 1 January 2016 need not be replaced provided it is capable of verifying compliance with intact and damage stability, to the satisfaction of the Administration; and

(6) *Refer to part B, chapter 4, of the International Code on Intact Stability, 2008 (2008 IS Code), as amended; the Guidelines for the Approval of Stability Instruments (MSC.1/Circ.1229), annex, section 4, as amended; and the technical standards defined in part 1 of the Guidelines for verification of damage stability requirements for tankers (MSC.1/Circ.1461).*

2.6.3 For the purposes of control under MARPOL Annex I Chapter 2 Regulation 11, the Administration shall issue a document of approval for the stability instrument.

2.7 The Administration may waive the requirements of 2.6 for the following oil tankers if loaded in accordance with the conditions approved by the Administration taking into account the guidelines developed by **TL (7)**:

2.7.1 Oil tankers which are on a dedicated service, with a limited number of permutations of loading such that all anticipated conditions have been approved in the stability information provided to the master in accordance with 2.5;

2.7.2 Oil tankers where stability verification is made remotely by a means approved by the Administration;

2.7.3 Oil tankers which are loaded within an approved range of loading conditions; or

2.7.4 Oil tankers constructed before 1 January 2016 provided with approved limiting KG/GM curves covering all applicable intact and damage stability requirements.

2.8 For oil tankers of 20.000 dwt and above, the damage assumptions prescribed in item 2.2.2 are to be supplemented by the following assumed bottom raking damage:

2.8.1 Longitudinal extent :

- Ships of 75.000 dwt and above:

0.6L measured from the forward perpendicular

- Ships of less than 75.000 dwt:
  0.4 L measured from the forward perpendicular

2.8.2 Transverse extent: B/3 anywhere in the bottom.

2.8.3 Vertical extent: breach of the outer hull.

(7) *Refer to operational guidance provided in part 2 of the Guidelines for verification of damage stability requirements for tankers (MSC.1/Circ.1461).*

PART B – CHAPTER 4 - MACHINERY

01. Section 5- Main Shafting

Revision Date: November 2015

Entry into Force Date: January 2016

Item C.6.2.3, Note is revised as follows:

Note: In a closed fresh water system lubricated stern tube, the sample is to be drawn from the same agreed position in the system which should be positively identified. The sample should be representative of the water circulating within the stern tube (also refer to IACS Rec. Recommended procedure for the determination of contents of metals and other contaminants in a closed fresh water system lubricated stern tube).

02. Section 8 - Propellers

Revision Date: October 2015

Entry into Force Date: January 2016

"Fe 7 Grey cast iron 250 N/mm^2" has been deleted from Table 8.1.

03. Section 9 - Steering Gears and Thrusters

Revision Date: October 2015

Entry into Force Date: January 2016

According to amendments of SOLAS Regulation II-1/29 TL item A.3.2.1.3 (and this item is referred to in item A.1.4.1) and item A.3.3.1.3 (and this item is referred to in item A.1.4.2) have been revised as follows:

3.2.1.3 Where it is impractical to demonstrate compliance with item 3.2.1.2 during sea trials with the ship at its deepest seagoing draught and running ahead at the speed corresponding to the number of maximum continuous revolutions of the main engine and maximum design pitch, ships regardless of date of construction may demonstrate compliance with this requirement by one of the following methods:

- During sea trials the ship is at even keel and the rudder fully submerged whilst running ahead at the speed corresponding to the number of maximum continuous revolutions of the main engine and maximum design pitch; or
- Where full rudder immersion during sea trials cannot be achieved, an appropriate ahead speed shall be calculated using the submerged rudder blade area in the proposed sea trial loading condition. The calculated ahead speed shall result in a force and torque applied to the main steering gear which is at least as great as if it was being tested with the ship at its deepest seagoing draught and running ahead at the speed corresponding to the number of maximum continuous revolutions of the main engine and maximum design pitch; or
- The rudder force and torque at the sea trial loading condition have been reliably predicted and extrapolated to the full load condition. The speed of the ship shall correspond to the number of maximum continuous revolutions of the main engine and maximum design pitch of the propeller;

3.3.1.3 Where it is impractical to demonstrate compliance with item 3.3.1.2 during sea trials with the ship at its deepest seagoing draught and running ahead at one half of the speed corresponding to the number of maximum continuous revolutions of the main engine and maximum design pitch or 7 knots, whichever is greater, ships regardless of date of construction, including those constructed before 1 January 2009, may demonstrate compliance with this requirement by one of the following methods:

- During sea trials the ship is at even keel and the rudder fully submerged whilst running ahead at one half of the speed corresponding to the number of maximum continuous revolutions of the main engine and maximum design pitch or 7 knots, whichever is greater; or
- Where full rudder immersion during sea trials cannot be achieved, an appropriate ahead speed shall be calculated using the submerged rudder blade area in the proposed sea trial loading condition. The calculated ahead speed shall result in a force and torque applied to the auxiliary steering gear which is at least as great as if it was being tested with the ship at its deepest seagoing draught and running ahead at one half of the speed corresponding to the number of maximum continuous revolutions of the main engine and maximum design pitch or 7 knots, whichever is greater; or
- The rudder force and torque at the sea trial loading condition have been reliably predicted and extrapolated to the full load condition; and

04. Section 16 - Pipe Lines, Valves, Fittings and Pumps

Revision Date: October 2015

Entry into Force Date: January 2016

Items H.2.3.4 is revised as follows:

2.3.4 ~~On engines provided for operation with gas oil only, differential pressure monitoring may be dispensed with.~~ Back-flushing intervals of automatic filters provided for intermittent back-flushing are to be monitored.

Revision Date: September 2015

Entry into Force Date: January 2016

Reference of Resolution MEPC.159(55) has been changed with Resolution MEPC.227(64) in item T.1.1 and footnote (8) has been changed as follows:

...

A sewage treatment plant approved according to Resolution MEPC.227(64), or

...

(8) *National requirements, if any, are to be observed.*

05. Section 18 - Fire Protection and Fire Extinguishing Equipment

Revision Date: October 2015

Entry into Force Date: January 2016

Item D.1 and D.3 are revised as follows:

1. Purpose and Application

1.1 The purpose of this subsection is to suppress and swiftly extinguish a fire in the space of origin, except for item 1.2. For this purpose, the following functional requirements shall be met:

- Fixed fire-extinguishing systems shall be installed having due regard to the fire growth potential of the protected spaces; and
- Fire-extinguishing appliances shall be readily available.

1.2 For open-top container holds (refer to MSC/Circ.608/Rev.1) and on deck container stowage areas on ships designed to carry containers on or above the weather deck, constructed on or after 1 January 2016, fire protection arrangements shall be provided for the purpose of containing a fire in the space or area of origin and cooling adjacent areas to prevent fire spread and structural damage.

…

3. Ships designed to carry containers on or above the weather deck

3.1 For open-top container holds **(10)** and on deck container stowage areas on ships designed to carry containers on or above the weather deck, constructed on or after 1 January 2016, fire protection arrangements shall be provided for the purpose of containing a fire in the space or area of origin and cooling adjacent areas to prevent fire spread and structural damage.

3.2 Ships shall carry, in addition to the equipment and arrangements required by this section for cargo holds, at least one water mist lance.

3.2.1 The water mist lance shall consist of a tube with a piercing nozzle which is capable of penetrating a container wall and producing water mist inside a confined space (container, etc.) when connected to the fire main.

3.2.2 Ships designed to carry five or more tiers of containers on or above the weather deck shall carry, in addition to the requirements of paragraph 3.2.1 mobile water monitors (also refer to MSC.1/Circ.1472 for design, performance, testing and approval of mobile water monitors used for the protection of on-deck cargo areas of ships designed and constructed to carry five or more tiers of containers on or above the weather deck) as follows:

(10) *For a definition of this term, and further requirements concerning open-top containerships refer to MSC/Circ.608/Rev.1.*

- *Ships with breadth less than 30 m: at least two mobile water monitors; or*
- *Ships with breadth of 30 m or more: at least four mobile water monitors.*

3.2.2.1 The mobile water monitors, all necessary hoses, fittings and required fixing hardware shall be kept ready for use in a location outside the cargo space area not likely to be cut-off in the event of a fire in the cargo spaces.

3.2.2.2 A sufficient number of fire hydrants shall be provided such that:

- All provided mobile water monitors can be operated simultaneously for creating effective water barriers forward and aft of each container bay;
- The two jets of water required by item E.2.4.1 can be supplied at the pressure required by paragraph E.2.3.4 and Table 18.3; and
- Each of the required mobile water monitors can be supplied by separate hydrants at the pressure necessary to reach the top tier of containers on deck.

3.2.2.3 The mobile water monitors may be supplied by the fire main, provided the capacity of fire pumps and fire main diameter are adequate to simultaneously operate the mobile water monitors and two jets of water from fire hoses at the required pressure values. If carrying dangerous goods, the capacity of fire pumps and fire main diameter shall also comply with P.3 as far as applicable to on-deck cargo areas.

Note: On board cargo ships designed to carry five or more tiers of containers on or above the weather deck, the total capacity of the main fire pumps need not exceed 180 m^3/h (also refer to item E.1.2.4) in cases where the mobile water monitors are supplied by separate pumps and piping system.

On board cargo ships designed to carry five or more tiers of containers on or above the weather deck, the total capacity of the emergency fire pump need not exceed 72 m^3/h (also refer to item E.1.4.1).

3.2.2.4 The operational performance of each mobile water monitor shall be tested during initial survey on board the ship to the satisfaction of the Administration. The test shall verify that:

- The mobile water monitor can be securely fixed to the ship structure ensuring safe and effective operation; and
- The mobile water monitor jet reaches the top tier of containers with all required monitors and water jets from fire hoses operated simultaneously.

Revision Date: October 2015

Entry into Force Date: January 2016

Item A.4 is revised and B.12 has been added as follows:

4. Definitions

For definitions of terms used in this Section, SOLAS - International Convention for the Safety of Life at Sea - Chapter II-2 - Construction - Fire protection, fire detection and fire extinction - Part A - General - Regulation 3 – Definitions is to be referred to.

...

12. Requirements for vehicle carriers carrying motor vehicles with compressed hydrogen or natural gas in their tanks for their own propulsion as cargo

12.1 Purpose

The purpose of this item is to provide additional safety measures for vehicle carriers with vehicle and ro-ro spaces intended for carriage of motor vehicles with compressed hydrogen or compressed natural gas in their tanks for their own propulsion as cargo.

12.2 Application

12.2.1 In addition to complying with the requirements of item 11, as appropriate, vehicle spaces of vehicle carriers constructed on or after 1 January 2016 intended for the carriage of motor vehicles with compressed hydrogen or compressed natural gas in their tanks for their own propulsion as cargo shall comply with the requirements in items 12.3 to 12.5.

12.2.2 In addition to complying with the requirements of item 11, as appropriate, vehicle carriers constructed before 1 January 2016, including those constructed before 1 July 2012 (refer to MSC.1/Circ.1471), shall comply with the requirements of item 12.5.

12.3 Requirements for spaces intended for carriage of motor vehicles with compressed natural gas in their tanks for their own propulsion as cargo

12.3.1 Electrical equipment and wiring

All electrical equipment and wiring shall be of a certified safe type for use in an explosive methane and air mixture (refer to IEC 60079).

12.3.2 Ventilation arrangement

12.3.2.1 Electrical equipment and wiring, if installed in any ventilation duct, shall be of a certified safe type for use in explosive methane and air mixtures.

12.3.2.2 The fans shall be such as to avoid the possibility of ignition of methane and air mixtures. Suitable wire mesh guards shall be fitted over inlet and outlet ventilation openings.

12.3.3 Other ignition sources

Other equipment which may constitute a source of ignition of methane and air mixtures shall not be permitted.

12.4 Requirements for spaces intended for carriage of motor vehicles with compressed hydrogen in their tanks for their own propulsion as cargo

12.4.1 Electrical equipment and wiring

All electrical equipment and wiring shall be of a certified safe type for use in an explosive hydrogen and air mixture (refer to IEC 60079).

12.4.2 Ventilation arrangement

12.4.2.1 Electrical equipment and wiring, if installed in any ventilation duct, shall be of a certified safe type for use in explosive hydrogen and air mixtures and the outlet from any exhaust duct shall be sited in a safe position, having regard to other possible sources of ignition.

12.4.2.2 The fans shall be designed such as to avoid the possibility of ignition of hydrogen and air mixtures. Suitable wire mesh guards shall be fitted over inlet and outlet ventilation openings.

12.4.3 Other ignition sources

Other equipment which may constitute a source of ignition of hydrogen and air mixtures shall not be permitted.

12.5 Detection

When a vehicle carrier carries as cargo one or more motor vehicles with either compressed hydrogen or compressed natural gas in their tanks for their own propulsion, at least two portable gas detectors shall be provided. Such detectors shall be suitable for the detection of the gas fuel and be of a certified safe type for use in the explosive gas and air mixture.

Revision Date: October 2015

Entry into Force Date: January 2016

Item G.3.1 is revised as follows:

3.1 When stored outside a protected space, r~~R~~ooms for CO_2 cylinders are not to be located forward of the collision bulkhead and shall, wherever possible, be situated on the open deck and are not to be used for other purposes. Access should be possible from the open deck and shall be independent of the protected space. CO_2 cylinder rooms below the open deck must have a stairway or ladder leading directly to the open deck.

…

For the purpose of the application of Part A Chapter 1 Hull Section 21 Tables 21.1 to 21.8, such cylinder storage rooms complying with this item 3 are to be treated as fire control stations.

Revision Date: October 2015

Entry into Force Date: January 2016

Item G.7.1 is revised as follows:

...

The system is to be designed such that flooding is not possible before this period of time has elapsed by means of a mechanical timer.

Revision Date: October 2015

Entry into Force Date: January 2016

Item K.3.2 has been revised as follows:

…

Note:

Refer to UI SC262 for largest protected space required for defining of sufficient foam generating capacity provided for machinery space of category A protected by a fixed high-expansion foam fire-extinguishing system complying with the provisions of the FSS Code.

~~*Sufficient foam generating capacity shall comply with UI SC262 which is to be uniformly implemented on ships contracted for construction on or after 1 January 2014.*~~

06. Section 20 - Tankers

Revision Date: November 2015

Entry into Force Date: January 2016

Item C.1.1, D.1, D.2 and D.3 are revised as follows:

Tankers of 20,000 DWT and upwards constructed on or after 1 July 2002 but before 1 January 2016, and tankers of 8,000 DWT and upwards constructed on or after 1 January 2016 are to be equipped with a permanently installed inert gas system in accordance with Subsection D.

For tankers not covered by this item 1.1, see D, 9

...

D. Inert Gas Systems for tankers

1. General

1.1 An inert gas system complying with the applicable requirements of Ch. 15 of the FSS Code, as amended by MSC.367 (93), is to be fitted on tankers which 8,000 DWT and upwards and when carrying;

- Crude oil or petroleum products having a flashpoint not exceeding 60°C (closed cup test), as determined by an approved flashpoint apparatus, and a Reid vapour pressure which is below the atmospheric pressure or other liquid products having a similar fire hazard or;
- Other than those referred to in the bullet above or liquefied gases which introduce additional fire hazards are intended to be carried, for which additional safety measures shall be required, having due regard to the provisions of the International Bulk Chemical Code, the Bulk Chemical Code, the International Gas Carrier Code and the Gas Carrier Code, as appropriate,

1.2. In applying the applicable requirements of Ch. 15 of the FSS Code, any use of the word "Administration" therein is to be considered as **TL**. The inert gas system is to be operated in accordance with SOLAS regulation II-2/16.3.3, as amended by MSC.365(93). In applying SOLAS regulation II-2/16.3.3.2, paragraph 2.2.1.2.4 of Ch. 15 of the FSS Code is to be complied with.

1.3 Tankers operating with a cargo tank cleaning procedure using crude oil washing shall be fitted with an inert gas system complying with the Fire Safety Systems Code and with fixed tank washing machines

1.4 Tankers required to be fitted with inert gas systems shall comply with provisions of item C.2.

1.5 The inert gas system shall be capable of inerting, purging and gas-freeing empty tanks and maintaining the atmosphere in cargo tanks with the required oxygen content.

1.6 Tankers fitted with a fixed inert gas system shall be provided with a closed ullage system.

1.7 An automatic control capable of producing suitable inert gas under all service conditions is to be fitted.

1.8 Subsequent surveys are to be carried out at the intervals as defined in TL, Classification and Survey Rules.

2. Additional Requirements for Nitrogen Generator Systems including Chemical Tankers

2.1 The following requirements apply where a nitrogen generator system is fitted on board as required by SOLAS regulation II-2/4.5.5.1. For the purpose, the inert gas is to be produced by separating air into its component gases by passing compressed air through a bundle of hollow fibres, semi-permeable membranes or adsorber materials.

2.2 In addition to the applicable requirements of Ch. 15 of the FSS Code, as amended by MSC.367(93), the nitrogen generator system is to comply with SOLAS regulations II- 2/4.5.3.4.2, 4.5.6.3 and 11.6.3.4.

2.3 A nitrogen generator is to consist of a feed air treatment system and any number of membrane or adsorber modules in parallel necessary to meet paragraph 2.2.1.2.4 of Ch.15 of the FSS Code, as amended by MSC.367(93).

2.4 The nitrogen generator is to be capable of delivering high purity nitrogen in accordance with paragraph 2.2.1.2.5 of Ch.15 of the FSS Code, as amended by MSC.367(93). In addition to paragraph 2.2.2.4 of Ch.15 of the FSS Code, as amended by MSC.367(93), the system is to be fitted with automatic means to discharge "off-spec" gas to the atmosphere during start-up and abnormal operation.

2.5 The system is to be provided with one or more compressors to generate enough positive pressure to be capable of delivering the total volume of gas required by 2.2.1.2 of the FSS Code, as amended by MSC.367(93). Where two compressors are provided, the total required capacity of the system is preferably to be divided equally between the two compressors, and in no case is one compressor to have a capacity less than 1/3 of the total capacity required.

2.6 The feed air treatment system fitted to remove free water, particles and traces of oil from the compressed air as required by 2.4.1.2 of Ch.15 of the FSS Code, as amended by MSC.367(93), is also to preserve the specification temperature.

2.7 The oxygen-enriched air from the nitrogen generator and the nitrogen-product enriched gas from the protective devices of the nitrogen receiver are to be discharged to a safe location **(5)** on the open deck.

2.8 In order to permit maintenance, means of isolation are to be fitted between the generator and the receiver.

3. Nitrogen /Inert Gas Systems Fitted for Purposes other than Inerting Required by SOLAS Reg. II-2/4.5.5.1 and 4.5.5.2

3.1 This item applies to systems fitted on oil tankers, gas tankers or chemical tankers to which SOLAS regulations II-2/4.5.5.1 and 4.5.5.2 do not apply.

---

(5) *"safe location" address the two types of discharges separately:*

1. oxygen-enriched air from the nitrogen generator – safe locations on the open deck are:

- outside of hazardous area;

- not within 3 m of areas traversed by personnel; and

- not within 6 m of air intakes for machinery (engines and boilers) and all ventilation inlets.

2. nitrogen-product enriched gas from the protective devices of the nitrogen receiver – safe locations on the open deck are:

- not within 3 m of areas traversed by personal: and

- not within 6 m of air intakes for machinery (engines and boilers) and all ventilation inlets/outlets.

3.2 Paragraphs 2.2.2.2, 2.2.2.4, 2.2.4.2, 2.2.4.3, 2.2.4.5.1.1, 2.2.4.5.1.2, 2.2.4.5.4, 2.4.1.1, 2.4.1.2, 2.4.1.3, 2.4.1.4, 2.4.2.1 and 2.4.2.2 of Ch.15 of the FSS Code, as amended by MSC.367(93), as applicable apply to the systems.

3.3 The requirements of D.2 apply except items 2.1, 2.2, 2.3 and 2.5.

3.4 Materials used in inert gas systems are to be suitable for their intended purpose in accordance with **TL**, Chapter 2, Material.

3.5 All the equipment is to be installed on board and tested under working conditions to the satisfaction of the Surveyor.

3.6 The two non-return devices as required by paragraph 2.2.3.1.1 of Ch.15 of the FSS Code, as amended by MSC.367(93) are to be fitted in the inert gas main. The non-return devices are to comply with 2.2.3.1.2 and 2.2.3.1.3 of Ch.15 of the FSS Code, as amended by MSC.367(93); however, where the connections to the cargo tanks, to the hold spaces or to

cargo piping are not permanent, the non-return devices required by paragraph 2.2.3.1.1 of Ch.15 of the FSS Code, as amended by MSC.367(93) may be substituted by two non-return valves.

PART B – CHAPTER 5 - ELECTRICAL INSTALLATION

01. Section 2 - Installation of Electrical Equipment

Revision Date: October 2015

Entry into Force Date: January 2016

Items C.8.1, C.8.3 and C.8.4 are revised as follows:

8.1 Where batteries are fitted for use for essential (UI SC 134) and emergency services a schedule of such batteries is to be compiled and maintained. The schedule, which is to be approved by **TL** during plan approval or the newbuilding survey, is to include at least the following information regarding the battery(ies):

…

8.3 Where vented **(2)** type batteries replace valve-regulated sealed **(3)** types, it is to be ensured that there is adequate ventilation **(4)** and that the **TL** requirements relevant to the location and installation of vented types batteries are complied with ~~(See 4.)~~.

8.4 Details of the schedule and of the procedures are to be included in the ship's safety management system and be integrated into the ship's operational maintenance routine as appropriate (Refer to IMO ISM Code Section 10) to be verified by the TL's surveyor.

...

(4) *For the ventilation arrangements for installation of vented type batteries which have charging power higher than 2kW, Item C.4.4 shall be applied*

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

Revision Date: October 2015

Entry into Force Date: January 2016

Item C.5.4.1 is revised as follows:

…

The system is to be designed such that flooding is not possible before this period of time has elapsed by means of a mechanical timer.

Revision Date: October 2015

Entry into Force Date: January 2016

UI SC271 and FSS Code Chapter 9.2.5.1.3 have been added into rules as item D.3.1.2.1 to 3.1.2.4:

3.1.2.1 In passenger ships, an indicating unit that is capable of individually identifying each detector that has been activated or manually operated call point that has operated shall be located on the navigation bridge.

3.1.2.2 In cargo ships, an indicating unit shall be located on the navigation bridge if the control panel is located in the fire control station.

3.1.2.3 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.

3.1.2.4 In cargo ships and on passenger cabin balconies, indicating units shall, as a minimum, denote the section in which a detector has activated or manually operated call point has operated.

Note

A space in which a cargo control console is installed, but does not serve as a dedicated cargo control room (e.g. ship's office, machinery control room), should be regarded as a cargo control room for the purposes of application of item 3.1.2.1 to 3.1.2.4 and therefore be provided with an additional indicating unit.

Revision Date: October 2015

Entry into Force Date: January 2016

UI SC115 has been deleted from item D.3.1.25 as follows:

3.1.25 Fire detectors shall be arranged in sections or detector loops. Activation of a fire detector shall initiate an optical and audible alarm in the central fire alarm panel and at the additional indicating devices. ~~(See UI SC115)~~

Revision Date: October 2015

Entry into Force Date: January 2016

Item D.3.7.2.4 is revised as follows:

…

Note: Control stations are those spaces in which the ship's radio or main navigating equipment or the emergency source of power is located or where the fire recording or fire control equipment is centralized. Spaces where the fire recording or fire control equipment is centralized are also considered to be a fire control station.

If the CO_2 system discharge pipes are used for the sample extraction smoke detection system, the control panel can be located in the CO_2 room provided that an indicating unit is located on the navigation bridge. Such arrangements are considered to satisfy first paragraph of this item 3.7.2.4.

Note: Indicating unit has the same meaning as repeater panel and observation of smoke should be made either by electrical means or by visual on repeater panel.

03. Section 12 - Cable Network

Revision Date: November 2015

Entry into Force Date: January 2016

Item B.3 is revised as follows:

...

~~for PVC (60 °C) 150 °C~~

~~for PVC (75 °C) 150 °C~~

Revision Date: October 2015

Entry into Force Date: January 2016

Items D.1.8, D.15.1.1.1 and D.15.1.2 are revised as follows:

1.8 For electrical cables to the emergency fire pumps refer to item 15.1.2.

...

15.1.1.1 Cables being of a fire resistant type complying with IEC 60331-1 for cables of greater than 20 mm overall diameter, otherwise IEC 60331-21 or IEC 60331-2 for cables with an overall diameter not exceeding 20 mm, are installed and run continuous to keep the fire integrity within the high fire risk area, see Fig.12.5.

...

15.1.2 The electrical cables to the emergency fire pump are not to pass through the machinery spaces containing the main fire pumps and their source(s) of power and prime mover(s).

They are to be of a fire resistant type, in accordance with 15.1.1.1, where they pass through other high fire risk areas.

Notes:

a) *The definition for "high fire risk areas" is the following:*

- Machinery spaces as defined in Chapter II-2/Reg.3.30 of SOLAS except spaces having little or no fire risk as defined by paragraphs (10) of Chapter II-2 / Reg. 9.2.2.3.2.2 of SOLAS. (Including the interpretations for tables 9.3, 9.4, 9.5, 9.6, 9.7 and 9.8 given in MSC/Circ.1120)

04. Section 20 - Electrical Equipment

Revision Date: November 2015

Entry into Force Date: January 2016

Item F.1.4 is revised as follows:

(*): Rationalization of the number of insulating and sheathing materials. In particular polyvinylchloride based insulation (PVC) and sheath (ST 1) have been removed.

PART C – CHAPTER 7 - HIGH SPEED CRAFTS

01. Section 1 - General Comments and Requirements

Revision Date: November 2015

Entry into Force Date: January 2016

Survey requirements for FRP crafts is added to Section 1.5 as follows:

1.5.8 Surveys of Fiber Reinforced Plastic (FRP) Crafts

1.5.8.1 Surveys in General

For all periodical surveys, the requirements of 1.5 are to be fulfilled. However, in the case of crafts more than 15 years old, the frequency of the bottom survey is subject to special consideration.

1.5.8.2 Surveys During Construction

1.5.8.2.1 With reference to lamination, special inspections are required at the following stages.

For hand lay-up lamination :

a) When the hull lamination starts with the application of gel-coat,
b) During the hull lamination at different stages,
c) Before starting the arrangement of internal stiffeners
d) When the hull is extracted from the mould,
e) When the connection of the hull to the deck starts,
f) Before the installation of dolly, if any,
g) When the core of sandwich structure is arranged.

1.5.8.2.2 For particular lamination processes in enclosed mould, such as infusion lamination, the lamination survey scope is to be agreed with the **TL** surveyor, but in any case special inspection are required at the following stages:

a) At the application of the release agent and the gel coat prior to starting with application of the laminate,
b) When the dry reinforcements layers and cores are fitted on the mould,
c) At the vacuum application for the initial check prior to starting with the lamination and releted to:
   - consolidation of the bag
   - vacuum application
   - vacuum/leakage control
d) During the resin infusion to verify and record the following data:
   - waiting time
   - infusion timr
   - vacuum level during the infusion
e) After the bag take-off to inspect the result of the lamination,
f) Before starting the arrangement of internal stiffeners,
g) When the hull is extracted from the mould for the final inspection,
h) When the connection of the hull to the deck starts,

i) Before the installation of the dolly, if any.

1.5.8.2.3 When thermosetting resins are empolyed, attention is to be payed to the type and quantity of catalist agent employed so as to be compatible with the resin and the temperature and humidity of the space where composite fabrication and the curing process take place.

1.5.8.2.4 On the basis of the internal controls of the shipyard, the **TL** surveyor may not attend some of the above inspections, provided that satisfactory records and internal checks are be submitted.

1.5.8.2.5 In addition, during the supervisionof the first hull, an inspection of the shipyard is performed in order to verify that it is provided with adequate equipment in relation to the materials used and to the type of manufacture and that the quality of the laminates is ensured.

1.5.8.3 Periodical Hull Surveys

1.5.8.3.1 Annual and Intermediate Surveys

In the case of hulls made of sandwich type structures, it is to be carefully checked that the parts are not to detached from the core. The check is to be performed by hammering the shell and evaluating the differences in the sound heard or by means of checks with non-destructive methods recognised by **TL**.

The connection between hull and deck is to be carefully checked, in particular when hull and deck are made of different materials.

1.5.8.3.2 Class Renewal Survey (hull) and Bottom Survey in Dry Condition

In addition to the requirements for the intermediate surveys given in 1.5.8.3.1, the presence of “osmosis” phenomena in the laminates of the underwater body and;/or cracks in the gel coat is to be verified.

To this end, the craft is to be made available for the bottom survey in dry condition before the application of any paint, so as to allow a careful visual inspection.

In-water survey in lieu of bottom survey in dry condition will be specially considered by TL on a case-by-case analysis.

1.5.8.4 Examination and Testing – Additional Items for Composite Crafts

The bonded attachments of frames, floors, bulkheads, structural joinery, engine bearers, sterntubes, rudder tubes and integral tank boundaries are to be examined.

The hull to deck joint together with any joints between the deck and deckhouses or superstructures are to be examined.

The structure in way of the bolted attachment of fittings including guardrail stanchions, windlas, shaft brackets, fenders, mooring bitts, mast steps, rigging chainplates, etc. are to be examined.

External hull structure are to be especially examined.

For composite hulls the gelcoat or other protective finish is to be examined for surface cracking, blisterinh or other damage which may impair the efficiency of the protection to the underlying laminate.

1.5.8.5 Suspect Areas

Suspect areas are locations within the hull structure vulnerable to increased likelihood of structural deterioration and may include:

For composite hulls, areas subject to impact damage.

1.5.8.5 Ballast Keel

In composite crafts care is to be taken to prevent crushing of GRP laminates through overtightening of keel bolts.

In the case of composite structures, including steel and GRP, consider4ation will be given to the use of steel rivets.

02. Section 3 - Structures

Revision Date: March 2015

Entry into Force Date: January 2016

A new sentence has been added into item K.3.1.4.1 as follows:

"Also midship section plan shall contain operational requirements (i.e. speed, max.wave height, service area restriction, etc.)."

03. Section 6 - Anchoring, Towing and Berthing

Revision Date: August 2015

Entry into Force Date: January 2016

Item 6.7.2 has been changed as follows:

The selection of shipboard fittings is to be made by the shipyard in accordance with an industry standard (e.g. ISO ~~3913~~ 13795 Ships and marine technology -- Ship's mooring and towing fittings -- Welded steel bollards for sea-going vessels ~~Shipbuilding Welded Steel Bollards~~) accepted by TL. When the shipboard fitting is not selected from an accepted industry standard, the design load used to assess its strength and its attachment to the ship is to be in accordance with 6.7.3.

04. Annex 13 - Water Jets

Revision Date: August 2014

Entry into Force Date: January 2016

A new section as "Annex 13 - Water Jets" has been created in Chapter 7.

PART C – CHAPTER 8 - CHEMICAL TANKERS

01. Section 1 - General

Revision Date: September 2015

Entry into Force Date: January 2016

Means of purging and gas-freeing are added as follows:

Purging means the introduction of inert gas into a tank which is already in an inert condition with the object of further reducing the oxygen content; and/or reducing the existing hydrocarbon or other flammable vapours content to a level below which combustion cannot be supported if air is subsequently introduced into the tank.

Gas-freeing means the process where a portable or fixed ventilation system is used to introduce fresh air into a tank in order to reduce the concentration of hazardous gases or vapours to a level safe for tank entry.

02. Section 2 - Ship Survival Capability and Location of Cargo Tanks

Revision Date: September 2015

Entry into Force Date: January 2016

Item 2.2 has been renamed and new items 2.2.6, 2.2.7 have been added according to MEPC.250(66) as follows:

2.2 Freeboard and ~~intact~~ stability

...

2.2.6 All ships, subject to the Code, shall be fitted with a stability instrument, capable of verifying compliance with intact and damage stability requirements, approved by the Administration having regard to the performance standards recommended by **TL (1)**:

2.2.6.1 Ships constructed before 1 January 2016 shall comply with this requirement at the first scheduled renewal survey of the ship after 1 January 2016 but not later than 1 January 2021;

2.2.6.2 Notwithstanding the requirements of 2.2.6.1, a stability instrument fitted on a ship constructed before 1 January 2016 need not be replaced provided it is capable of verifying compliance with intact and damage stability, to the satisfaction of the Administration; and

2.2.6.3 For the purposes of control under regulation 16 of MARPOL Annex II, the Administration shall issue a document of approval for the stability instrument.

2.2.7 The Administration may waive the requirements of 2.2.6 for the following ships provided the procedures employed for intact and damage stability verification maintain the same degree of safety, as being loaded in accordance with the approved conditions **(2)**. Any such waiver shall be duly noted on the International Certificate of Fitness referred to in paragraph 1.5.4:

(1) *Refer to part B, chapter 4, of the International Code on Intact Stability, 2008 (2008 IS Code), as amended; the Guidelines for the Approval of Stability Instruments (MSC.1/Circ.1229), annex, section 4,*

as amended; and the technical standards defined in part 1 of the Guidelines for verification of damage stability requirements for tankers (MSC.1/Circ.1461).

(2) *Refer to operational guidance provided in part 2 of the Guidelines for verification of damage stability requirements for tankers (MSC.1/Circ.1461).*

2.2.7.1 Ships which are on a dedicated service, with a limited number of permutations of loading such that all anticipated conditions have been approved in the stability information provided to the master in accordance with the requirements of 2.2.5;

2.2.7.2 Ships where stability verification is made remotely by a means approved by the Administration;

2.2.7.3 Ships which are loaded within an approved range of loading conditions; or

2.2.7.4 Ships constructed before 1 January 2016 provided with approved limiting KG/GM curves covering all applicable intact and damage stability requirements.

03. Section 8 - Cargo Tank Venting and Gas-Freeing Arrangements

Revision Date: September 2015

Entry into Force Date: January 2016

Item 8.1 is revised and item 8.5 is added as follows:

...
The requirements of this Section apply in lieu of SOLAS Regulation II-2/4.5.3, 4.5.6 and 16.3.2.

...

8.5 Cargo tank purging

When the application of inert gas is required by Section 11, 11.1.1, before gas-freeing, the cargo tanks shall be purged with inert gas through outlet pipes with cross-sectional area such that an exit velocity of at least 20 m/s can be maintained when any three tanks are being simultaneously supplied with inert gas. The outlets shall extend not less than 2 m above the deck level. Purging shall continue until the concentration of hydrocarbon or other flammable vapours in the cargo tanks has been reduced to less than 2% by volume.

04. Section 9 - Environmental Control

Revision Date: September 2015

Entry into Force Date: January 2016

Item 9.1.3 is revised according to MEPC.250(66) as follows:

9.1.3 Where inerting or padding of cargo tanks is required by IBC Code in column "h" of chapter 17:

Revision Date: October 2015

Entry into Force Date: January 2016

Item 9.1.3, Note is revised as follows:

...

Note: *Chemical tankers of 8000 dwt and above, constructed on or after 1 January 2016 shall be fitted with a fixed inert gas system. Requirements given for inert gas plants in the FSS Code Ch. 15 as amended by IMO Res. MSC.367 (93) shall apply.*

Chemical tankers when transporting oil with flashpoint not exceeding 60°C shall comply with the inert gas requirements of SOLAS Reg. II-2/4.5.5.

05. Section 11 - Fire Protection and Fire Extinction

Revision Date: September 2015

Entry into Force Date: January 2016

Item 11.1.1 has been revised according to MEPC.250(66) as follows:

...

Regulations ~~4.5.5~~ 10.8 and 10.9 shall not apply;

06. Section 15 - Special Requirements

Revision Date: September 2015

Entry into Force Date: January 2016

Item 15.13.5 has been revised according to MEPC.250(66) as follows:

15.13.5 When a product containing an oxygen-dependent inhibitor is to be carried:

15.13.5.1 In a ship for which inerting is required under SOLAS regulation II-2/4.5.5, as amended, the application of inert gas shall not take place before loading or during the voyage, but shall be applied before commencement of unloading ~~A product containing an oxygen-dependent additive shall be carried without inertion (in tanks of a size not greater than 3,000 m3). Such cargoes shall not be carried in a tank requiring inertion under the requirements of SOLAS chapter II-2*.~~ **(1)**;

15.13.5.2 In a ship to which SOLAS regulation II-2/4.5.5, as amended, does not apply, the product may be carried without inertion (in tanks of a size not greater than 3,000 m^3). If inertion is to be applied on such a ship, then the application of inert gas shall not take place before loading or during the voyage, but shall be applied before commencement of unloading **(1)**.

~~*~~ **(1)** Refer to the MSC-MEPC circular on Products requiring oxygen dependent inhibitors. ~~For equivalency arrangements for the carriage of styrene monomer, see MSC/Circ.879 and MSC/Circ.879/Corr.1~~

PART C – CHAPTER 9 - CONSTRUCTION AND CLASSIFICATION OF YACHTS (TURKISH)

01. Section 2 - Hull Construction - General Requirements

Revision Date: August 2015

Entry into Force Date: January 2016

Item A.5.2 Openings in Watertight Bulkheads and Decks have been revised by reviewing of a number of sources:

5.2 Su geçirmez perdelerdeki ve güvertelerdeki açıklıklar

Not: *Su geçirmez perdelerdeki kapıların, menhollerin vb. tipleri ve düzenlemeleri onaya tabidir.*

5.2.1 Su geçirmez perdelerdeki açıklıklar

5.2.1.1 Baş çatışma perdelerine hiçbir geçiş konulmayacaktır. Baş pike, baş çatışma perdesi dışından ulaşımın mümkün olmadığı özel gemilerde geçiş konulması ayrıca özel olarak değerlendirilebilir. Bu durumda giriş konulursa açıklıklar olabildiğince küçük olacak ve dizayn su hattından olabildiğince yukarıda bulunacaktır. Ölçüleri maksimum 500x500 mm. olan bir emercensi kaçış kabul edilebilir.

Kapama düzenekleri su geçirmez olacak ve sadece tek taraftan açılıp kapanabilmesi durumunda ayrıca incelenecektir. Baş pikin dreyn edilmesi için kullanılan bir boru, perdenin hemen yukarısında bir kapama cihazı mevcutsa perdeden geçebilir.

5.2.1.2 Su geçirmez bölme perdelerindeki açıklık sayısı, dizayn ve yatın uygun çalışması ile uyumlu olarak minimum sayıda tutulacaktır. Eğer bölmeleme ve yaralı stabilite gereklilikleri uygulanıyorsa ve ulaşım, boru sistemi, havalandırma, elektrik kabloları vb. gibi sebeplerle su geçirmez perdelerin delinmesi gerekiyorsa; su geçirmezliğin, mukavemetin ve yangın direncinin muhafaza edilmesi için gerekli düzenlemeler yapılacaktır.

Perdeden geçen borular metal değilse, yukarıda belirtilen düzenler, asgari olarak, perde ile aynı malzemeden yapılan, perdenin yapısal bütünlüğü bozulmayacak tarzda konulmuş, D borunun dış çapı olmak üzere 10·D boyunda olan bir boru şeklinde olacaktır. Bu borunun boyunun 400 mm.den fazla olmasına gerek yoktur.

İkiz güvertelerden geçen, derin tanklara ve tünellere ait manikalar, maruz kalabilecekleri basınçlara dayanabilecek yeterlilikte boyutlara sahip olacaklar ve su geçirmez olarak yapılacaklardır.

5.2.1.3 Yangına dayanıklı kablo sızdırmazlık contaları (sızdırmazlık bileşeni dahil) yanmaz malzemeden yapılacaktır.

5.2.1.4 Fribord güvertesi altında bazı açıklıklara, sayıları asgari olmak ve su geçirmezlik standartlarına uygun kapama vasıtaları ile donatılmış olmak koşulları ile izin verilir. Tüm bu açıklıklar sörveyörün uygun bulmasına bağlıdır.

5.2.1.5 Kurşun ya da diğer ısıya hassas malzemeler, su geçirmez perdeleri ve güverteleri delen ve yangın durumunda hasar görmesi halinde su geçirmez bütünlüğe zarar verebilecek sistemlerde kullanılmayacaktır.

5.2.1.6 Boru sistemine dahil olmayan valfleri su geçirmez perdelerde ve güvertelerde izin verilmeyecektir.

5.2.2 Su geçirmez perdelerdeki kapılar

5.2.2.1 Baş çatışma perdeleri dışındaki su geçirmez perdelere su geçirmez kapı konulabilir. En derin yüklü su hattının altında bu kapılar sürgülü kapı olarak yapılacaktır. Durum bazlı olarak bazı muafiyetler TL tarafından tanınabilir. TL, en derin su hattının üzerine menteşeli kapı konmasını onaylayabilir.

5.2.2.2 5.2.2.1'de belirtilen su geçirmez kapılar, uygun şekilde imal edilecekler, konulacaklar, delinmemiş perde ile aynı mukavemet değerini sağlayacak şekilde olacaklar ve su geçirmez olarak kapatılabileceklerdir. Bu kapılar, kapıların uygun konulmasını sağlayacak ve su geçirmezliği garanti edecek şekilde uygun olarak kapı kasasına oturtulacaklardır.

5.2.2.3 Su geçirmez perdeler ve bunların kasaları, gemiye konulmadan önce **TL**'nin uygun göreceği şekilde teste tabi tutulacaklardır. Alternatif olarak tip onaylı su geçirmez kapılar, **TL**'nin onayına bağlı olarak kullanılabilir. Gemiye konulduktan sonra bu kapılar, sızdırmazlık için sabun testine ve operasyonel teste tabi tutulacaktırlar.

5.2.2.4 Kapıların açık ya da kapalı olduğunu gösteren indikatörler köprüye yerleştirilecektir.

5.2.2.5 Kapılar, perdenin her iki tarafından da kumanda edilebiliyor olacaklardır. Güç kontrollü sürgülü kapılar, yerel olarak hem güç ile hem de etkili manüel mekanizmalar ile açılıp kapanabiliyor olacaklardır.

5.2.2.6 Seyir esnasında kullanılması gerekmeyen kapılar menteşeli ya da sürgülü olabilir. Bu tip kapılara, tekne seyir esnasında iken kapıların sürekli kapalı tutulması gerektiğini belirten uyarılar asılmalıdır.

5.2.2.7 Seyir esnasında açık olması öngörülen kapılar, köprüden uzaktan kumanda edilebilen sürgülü tipten kapılar olacaklardır. Kapıya sesli bir alarm konulacaktır. Güç, kontrol ve indikatörler güç kesintisi durumunda çalışabilir olacaklardır. Kontrol sistemi hatasının etkisinin minimuma indirilmesi için büyük özen gösterilecektir.

5.2.2.8 5.2.2.7'de belirtilen sürgülü kapılara alternatif olarak, sürgülü kapılar kadar etkin olduğu kanıtlanabildiği durumlarda menteşeli su geçirmez kapıların konması özel olarak göz önünde bulundurulacaktır. Uygun bir seyir defteri sistemi, ulaşım için açık olduğu durumlar hariç bu menteşeli kapıların kapalı tutulduğundan emin olunması için kullanılacaktır.

5.2.2.9 5.2.2.7 ve 5.2.2.8'de verilen gerekliliklere bağlı olarak, onaylı bir modelden yapılan menteşeli su geçirmez kapılar ikiz güvertelerde uygun pozisyonlarda kullanılabilirler. Bu kapıların menteşelerine, TL tarafından uygun görülen bakır alaşımlı bir pin ya da kovan konulacaktır.

~~5.2 Su geçirmez perdelerdeki ve güvertelerdeki açıklıklar~~

~~Su geçirmez perdelerdeki açıklıkların sayısı yatın işlevini sürdürmesi için gerekli olan en az sayıda tutulacaktır. Borular ve elektrik kabloları, perdenin su geçirmezliği ve yapısal bütünlüğü, TL'nin uygun bulacağı düzenlerle sağlanması koşuluyla, su geçirmez perdelerden geçebilir. Bu düzenlerle ilgili ayrıntılar onay için TL'na verilmelidir.~~

~~Perdeden geçen borular metal değilse, yukarıda belirtilen düzenler, asgari olarak, perde ile aynı malzemeden yapılan, perdenin yapısal bütünlüğü bozulmayacak tarzda konulmuş, D borunun dış çapı olmak üzere 10 • D boyunda olan bir boru şeklinde olacaktır. Bu borunun boyunun 400 mm.den fazla olmasına gerek yoktur.~~

~~Su geçirmez perdelerdeki kapılar, su geçirmez kapı olarak onaylanacaktır.~~

~~Genel bir kural olarak, çatışma perdesinde giriş açıklıkları bulunamaz. Özel dizayna sahip yatlarda, dizayn su hattının mümkün olduğu kadar üzerinde yer alan ve su geçirmez şekilde kapatılan açıklıklar özel olarak değerlendirilecektir. Ölçüleri maksimum 500x500 mm. olan bir emercensi kaçış kabul edilebilir.~~

Revision Date: February 2015

Entry into Force Date: January 2016

A new formula for diameter of keel connection bolts is introduced in item B.3.1 and the item is generally revised as follows:

3.1 Safra omurga bağlantı civataları (saplamalar)

Tekne dışındaki safra omurga ağırlığının boş deplasmana oranı, genelde 0,4 ÷ 0,5'dir.

Omurgadaki safra omurga, tekne içinde veya dışında olabilir. Birinci halde, safra omurga teknenin mukavemetli bir yapısına (döşek, posta, vb.) kelepçe veya eşdeğeri bir vasıta ile sabit olarak bağlanmalıdır. Ancak, safra omurga hiçbir surette yalpa ve baş-kıç vurmadaki hareket sonucu oluşan ek yükler nedeniyle üzerine yük gelmemesi gereken dış kaplamaya bağlanamaz.

İkinci halde ise, tekne içinden geçen, bir ucu başlı (veya kontra somunlu), diğer ucu kontra somunlu, safra omurga yüksekliğinin tamamını veya bir kısmını kapsayacak uzunlukta cıvatalarla tekneye bağlantı yapılır. Söz konusu somunlar, sac parçası veya geniş pul üzerine oturacak ve kolayca muayene edilebilmesini sağlamak üzere, üzeri kaplanmayacaktır. Safra omurganın üst kısmı ile tekne yüzeyi arasındaki geçiş düzgün olacak, cıvata delikleri, cıvata ile delikler arasında boşluk olmayacak tarzda işleme yapabilen donanımla işlenecek ve somunlar üniform olarak sıkılacaktır.

Cıvata çapı d (mm), aşağıdaki formülde verilmiştir:

$$d = \sqrt{\frac{2 \cdot W_k \cdot h_k \cdot b_{maks}}{R_{eH} \cdot \Sigma(b_i^{\,2})}} \quad [mm]$$

R_{eH} = 235 N/mm^2 ise d_{min}= 12 mm olacaktır.

d = safra omurga cıvata kök çapı

W_k = safra omurga ağırlığı (N)

h_k = omurga ağırlık merkezinden omurga üst kenarına olan mesafe (aşağıdaki şekli inceleyiniz)

b_{maks}= maksimum boyutlandırma genişliği b_i

bi = her omurga cıvata çiftinde boyutlandırma genişliği(mm) (aşağıdaki şekli inceleyiniz)

$$b_i = 0.5 \cdot b_{bi} + 0.4 \cdot b_{ki}$$

Tekne dışındaki safra omurga ağırlığının boş deplasmana oranı, genelde 0,4 ÷ 0,5'dir.

Omurgadaki safra omurga, tekne içinde veya dışında olabilir. Birinci halde, safra omurga teknenin mukavemetli bir yapısına (döşek, posta, vb.) kelepçe veya eşdeğeri bir vasıta ile sabit olarak bağlanmalıdır. Ancak, safra omurga hiçbir surette yalpa ve baş-kıç vurmadaki hareket sonucu oluşan ek yükler nedeniyle üzerine yük gelmemesi gereken dış kaplamaya bağlanamaz.

İkinci halde ise, tekne içinden geçen, bir ucu başlı (veya kontra somunlu), diğer ucu kontra somunlu, safra omurga yüksekliğinin tamamını veya bir kısmını kapsayacak uzunlukta cıvatalarla tekneye bağlantı yapılır. Söz konusu somunlar, sac parçası veya geniş pul üzerine oturacak ve kolayca muayene edilebilmesini sağlamak üzere, üzeri kaplanmayacaktır. Safra omurganın üst kısmı ile tekne yüzeyi arasındaki geçiş düzgün olacak, cıvata delikleri, cıvata ile delikler arasında boşluk olmayacak tarzda işleme yapabilen donanımla işlenecek ve somunlar üniform olarak sıkılacaktır.

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$$d = \sqrt{\frac{2 \cdot W_k \cdot h_k \cdot b_{maks}}{R_{eH} \cdot \Sigma(b_i^{\,2})}} \quad [mm]$$

R_{eH} = 235 N/mm^2 ise d_{min}= 12 mm olacaktır.

d = safra omurga cıvata kök çapı

W_k = safra omurga ağırlığı (N)

h_k = omurga ağırlık merkezinden omurga üst kenarına olan mesafe (aşağıdaki şekli inceleyiniz)

b_{maks}= maksimum boyutlandırma genişliği b_i

bi = her omurga cıvata çiftinde boyutlandırma genişliği(mm) (aşağıdaki şekli inceleyiniz)

$$b_i = 0.5 \cdot b_{bi} + 0.4 \cdot b_{ki}$$

Not: Balast bağlantı cıvataları, çiftler olarak yerleştirilmiyorsa mümkün olabildiğince merkez hattından şaşırtmalı olarak yerleştirilmelidir. Cıvataların omurganın boyuna eksenine konulduğu hallerde; bbi sıfır alınacak, bki cıvatanın bulunduğu eksende omurganın boyutlandırma genişliği alınacaktır.

ReH= cıvata malzemesinin akma mukavemeti N/mm2

Her saplama cıvata başının altına, uygun çap ve kalınlıkta (referans olarak 24 m altı tekneler için bu; safra omurga çapı(d)'nın 4 katı çapında ve safra omurga çapı(d)'nın 0.25 katı kalınlıkta olabilir) pul konulacaktır. Saplama cıvata dişi, kilit somunlarının ya da diğer uygun kitleme düzeneklerinin bağlanmasını mümkün kılacak uzunlukta olacaktır.

Safra omurga civataları onaylı korozyon dayanımlı malzemeden yapılacaktır. Somunlar, pullar ve diğer fitingler cıvata ile aynı malzemeden olabileceği gibi cıvata malzemesi ile benzer özellikleri gösteren

malzemelerden imal edilebilir. Döşeklere ya da görderlere ya da her ikisine de yükün iletilmesi amacı ile dabler ya da braket kullanılması gerekebilir. Omurga saplama aralıkları, safra omurga ağırlığının civatalara düzgün olarak dağılımını sağlayacak şekilde olacaktır. Aluminyum teknelerde civatalar, somunlar, pullar vs. uygun şekilde izole edileceklerdir. Saplama civataları; oluşması muhtemel yükler göz önüne alınarak, omurgaya arkalık levhalarına oturmuş cıvatalarla ya da "j" civataları ile ya da diğer etkin yöntemlerle etkin olarak bağlanacaktır.

Not: Balast bağlantı cıvataları, çiftler olarak yerleştirilmiyorsa mümkün olabildiğince merkez hattından şaşırtmalı olarak yerleştirilmelidir. Cıvataların omurganın boyuna eksenine konulduğu hallerde; b_{bi} sıfır alınacak, b_{ki} cıvatanın bulunduğu eksende omurganın boyutlandırma genişliği alınacaktır.

R_{eH}= cıvata malzemesinin akma mukavemeti N/mm^2

Her saplama cıvata başının altına, uygun çap ve kalınlıkta (referans olarak 24 m altı tekneler için bu; safra omurga çapı(d)'nın 4 katı çapında ve safra omurga çapı(d)'nın 0.25 katı kalınlıkta olabilir) pul konulacaktır. Saplama cıvata dişi, kilit somunlarının ya da diğer uygun kitleme düzeneklerinin bağlanmasını mümkün kılacak uzunlukta olacaktır.

Safra omurga civataları onaylı korozyon dayanımlı malzemeden yapılacaktır. Somunlar, pullar ve diğer fitingler cıvata ile aynı malzemeden olabileceği gibi cıvata malzemesi ile benzer özellikleri gösteren malzemelerden imal edilebilir. Döşeklere ya da görderlere ya da her ikisine de yükün iletilmesi amacı ile dabler ya da braket kullanılması gerekebilir. Omurga saplama aralıkları, safra omurga ağırlığının civatalara düzgün olarak dağılımını sağlayacak şekilde olacaktır. Aluminyum teknelerde civatalar, somunlar, pullar vs. uygun şekilde izole edileceklerdir. Saplama civataları; oluşması muhtemel yükler göz önüne alınarak, omurgaya arkalık levhalarına oturmuş cıvatalarla ya da "j" civataları ile ya da diğer etkin yöntemlerle etkin olarak bağlanacaktır.

Revision Date: February 2015

Entry into Force Date: January 2016

Item E.5.3.1 is revised as follows:

…

- Baş kaime'de: 0,04 / (C_B - 0,024)
- Ara konumlardaki değerler enterpolasyonla bulunur.

F_L = ~~pdr'nin~~ rn'nin boyuna konumunun fonksiyonu olarak, Şekil 2.8'de verilen katsayı,

Revision Date: June 2015

Entry into Force Date: January 2016

Item E.5.3.1 is revised as follows:

…

$\beta_{LG\text{~~C~~}CG}$ = LCG civarındaki kesitteki sintine kalkımı açısı [°],

β_x ve β_{LCG} açıları 10˚ den az, 30˚ den çok alınmamalıdır.

Revision Date: March 2015

Entry into Force Date: January 2016

The formula given in item E.5.3.1 is revised as follows:

…

$$P_2 = 15 \cdot (1 + a_V) \cdot \frac{\Delta}{L \cdot C_S} \cdot g \cdot F_L \cdot F_1 \cdot F_a$$

02. Section 4 - Hull Construction - Fiber Reinforced Plastics Hulls

Revision Date: February 2015

Entry into Force Date: January 2016

Item J.4.1 is revised as follows:

…

$W = 13{,}5 \cdot s \cdot S^2 \cdot h \cdot c \cdot k_o$

c katsayısı değerleri ile, h boyutlandırma yüksekliği Tablo ~~4.6'da~~ 4.12'de verilmiştir.

03. Section 7 - Machinery and Auxiliary Systems

Revision Date: August 2015

Entry into Force Date: January 2016

Item E.12.4.7 is revised as follows:

Özellikle, sıvı yakıt devreleri, hiçbir zaman 0,4 MPa (4 bar)

04. Section 9 - Electrical Installations

Revision Date: February 2015

Entry into Force Date: January 2016

Item C.1.3 is revised as follows:

500 GRT altı gemilerde en az 3 saat kapasiteli bir emercensi güç kaynağının sağlanması gerekir. Bu emercensi alıcılar en az;

a) VHF,
b) Seyir fenerleri,
c) Emercensi aydınlatma,
d) Genel alarm,
e) Yangın alarm,
f) Düdük,
g) Sabit gazlı yangın söndürme sistemini beslemelidir.

~~Ancak, emercensi jeneratörler ve/veya akümülatörler 50 GRT'den büyük tekneler için gereklidir ve genel olarak "TL Kuralları, Kısım 5-Elektrik" esas alınarak, ilgili tüketiciler her durum için ayrı ayrı değerlendirilecektir.~~

Revision Date: November 2015

Entry into Force Date: January 2016

Item D.1.1 is revised as follows:

~~(1) Bu hususstaki bazı kurallar aşağıda verilmiştir;~~

~~Kural 20-12 sayı 198-V-1964 Kauçuk veya polivinil kloridle izole edilmiş kablolar;~~

~~Kural 20-15 sayı 217-V-1966-G1 Kauçukla izole edilmiş kablolar;~~

~~Kural 20-20 sayı 378-V-1976 Polivinil kloridle (PVC) izole edilmiş kablolar.~~

...

(*): İzolasyon ve kılıf malzemelerinin sayılarını makul hale getirmek için polivinilklorür (PVC) esaslı izolasyon ve kılıflar (ST 1) kaldırılmıştır.

PART C – CHAPTER 10 - LIQUEFIED GAS TANKERS

01. General

Revision Date: October 2015

Entry into Force Date: January 2016

Part C Chapter 10 Liquefied Gas Tankers is generally revised in accordance with IGC Code as amended by MSC 370 (93) and Item 9.5.4, Note is revised as amended by MSC 365(93) as follows:

...

Note:

Gas carriers built also to carry oil with flashpoint less than 60°C shall comply with the inert gas requirements of SOLAS as for oil tankers, Chapter 4 Section 20 or for Chemical Tankers, Chapter 8.

For further reference, see IACS Unified Requirements F20 on inert gas systems. Requirements for nitrogen generator systems: F20.3.3, F20.4.4, F20.4.5, F20.4.6, F20.4.9, F20.4.11, F20.4.12, F20.4.14, F20.4.15, F20.4.16, F20.4.17, F20.4.18, F20.5.3, and for nitrogen membrane systems the following requirements applies: F20.4.8, F20.4.10, F20.4.13, F20.4.16 (1-4), F20.4.17, and F20.4.18.

PART C – CHAPTER 11 - FIRE FIGHTING SHIPS

01. Section 1 - Equipment on Fire Fighting Ships

Revision Date: February 2015

Entry into Force Date: January 2016

Item C.6.1.4 and Table 1.1 are revised as follows:

...

6.1.4 Each hose box is to be equipped with two approved fire hoses with 38 – 65 mm diameter, each ~~15 m~~ 20 m long; one approved multi-purpose spray/jet nozzle and one hose wrench.

Table 1.1 Required documentation for the different Notations

Documentation Requirements			
Function	**Documentation Type**	**Additional Description**	**Relevant Notation**
Sea chest	System diagram, arrangement	The location and design of the sea connections and sea chests for fire fighting monitors	FF0, FF1, FF2, FF3
Fire Fighting Arrangements	Operation and maintenance manuals	Fi-fi operation, according to B-1 of this section.	FF0, FF1, FF2, FF3
Fire Water Supply and Distribution Arrangement	Piping diagram, capacity analysis, arrangement plan	Details of all fire fighting equipment required by these rules such as pumps and monitors, including their capacity, range and trajectory of delivery	FF0, FF1, FF2, FF3
FF Vessel Fire Extinguishing System	Structural drawing	Supporting structure for pumps, pump drivers and monitors	FF0, FF1, FF2, FF3
FF Vessel Monitor Water-Spray Fire Extinguishing System	Fixed fire extinguishing system documentation	Including specification of height and length of throw, location of pumps, pump drivers, monitors, hose connections and hose stations, seating of monitors and their fastening methods, torsional vibration calculation for engine driven monitor pumps having a power > 200 kw	FF0, FF1, FF2, FF3
Fire Fighter's Outfit	Arrangement plan		FF0, FF1, FF2, FF3
Breathing Air Compressor Unit	Arrangement plan		FF0, FF1, FF2, FF3
Lighting	Arrangement plan, specification	Details of the manufacturer, type, electrical power, protection degree and location of the searchlights	FF0, FF1, FF2, FF3
Stability	Preliminary and final stability booklet	Documentation showing the stability in all fire fighting operating conditions based on the results of an approved inclining test (lightweight survey) and including the proof of the maximum heeling moment corresponding to the maximum output of all monitors in any direction.	FF0, FF1, FF2, FF3

Manoeuvrability	Proof that the ship's propulsion plant and thrusters are capable of holding it (in calm waters) and in the required direction against the resultant forces of the monitors	According to B-2 of this section.	FF1, FF2, FF3
Power control system		An operating control system of the power supplied by the engines is to be provided, including an alarm device operating at 80% of the maximum propulsive power available in free navigation, and an automatic reduction of power on reaching 100% of the above propulsive power, to prevent engine overload. Such operating control system may not be required where the installed power is redundant.	FF1, FF2, FF3
Remote Control and Remote Operation	Piping/wiring diagram, arrangement plan	Arrangement and diagram of the local and remote operation equipment for the water and foam monitors, remote control equipment	FF0, FF1, FF2, FF3
Electrical Systems	Calculation report	Load balance calculation including required consumers in the case of fire fighting for simultaneous operation of fire pumps, thrusters, active rudders, water-spray system, lighting, etc.	FF0, FF1, FF2, FF3
Fuel Systems	Capacity analysis	Calculation of required fuel capacity (24 hours for FF1, 96 hours for FF2 and FF3)	FF1, FF2, FF3
Structural Fire Protection Arrangements	Structural fire protection drawing	Outer boundaries including doors, windows and other closing devices of openings in A Class and B Class divisions, fire test reports for insulation materials	FF0,FF1
External Surface Protection Water-Spray Fire Extinguishing System	Fixed fire extinguishing system documentation	Diagram of the water-spray system and the arrangement of the nozzles, pumps and valves together with the capacity calculation of the water-spray system	FF0,FF1
Fixed Foam System	Piping diagram, capacity analysis, arrangement plan	Diagram and arrangement of the fixed installed foam system including the storage tanks, mixing unit, monitors and pipelines as well as capacity calculation	FF3
Portable Foam Generator	Specification	Details of the type and performance of the portable foam generator, foam concentrate calculation and location of the foam concentrate storage tanks	FF2, FF3

PART C – CHAPTER 15 - RULES FOR THE CONSTRUCTION OF REFRIGERATING INSTALLATIONS

01. General

Revision Date: May 2015

Entry into Force Date: January 2016

Chapter 15 - Rules for the Construction of Refrigerating Installations is generally revised.

PART C – CHAPTER 34 - TENTATIVE RULES FOR THE CLASSIFICATION OF SPECIAL CRAFTS – PATROL BOAT

01. Section 1 - General Requirements and References

Revision Date: November 2015

Entry into Force Date: January 2016

Item E.1.1 is revised as follows:

...

~~– In case of Naval Patrol Boats If if noise is to be considered, the requirements of the TL Naval Rules for Hull Structures and Ship Equipment (Chapter 102), Section 16, B. are to be observed, but this is in general not subject to Classification.~~

02. Section 8 - Equipment on Fire Fighting Ships

Revision Date: June 2015

Entry into Force Date: January 2016

Item A.4.2.1.2 is revised as follows:

4.2.1.2 ~~The structural fire protection time for fire resisting divisions is 30 minutes~~ Principal partition is to have an A-30 insulation. For steel structures, A-0 towards void and open spaces is considered sufficient.

Note: A principal partition is the partition (bulkhead or deck) between machinery space on one hand and the steering position or cabin above or adjoining on the other.

PART D – CHAPTER 53 - SUBMERSIBLES

01. Section 1 - Classification And Certification Of Manned Submersibles

Revision Date: February 2015

Entry into Force Date: January 2016

Item B.2.1 is revised as follows:

...

~~**100A5**~~ **1A5 SUBMERSIBLE**

...

~~**MC S**~~ **M S**

02. Annex E - Basic Requirements For Umbilicals

Revision Date: November 2015

Entry into Force Date: January 2016

Item B.3.3 is revised as follows:

...

(*): Rationalization of the number of insulating and sheathing materials. In particular polyvinylchloride based insulation (PVC) and sheath (ST 1) have been removed.

PART E – CHAPTER 101 - NAVAL SHIP TECHNOLOGY, CLASSIFICATION AND SURVEYS

01. Section 2 - Class Designation

Revision Date: May 2015

Entry into Force Date: January 2016

Notations NAV and NAV-INS added in item C.2.4.5 as follows:

2.4.5 Bridge design

Where ships are to be operated by one person only, or a very limited number of personnel, the workplaces on the bridge shall be arranged according to ergonomic principles ~~, see TL Construction Rules, Chapter 21 - Navigation Bridge Visibility, Bridge Arrangement and Equipment~~.

Ships, which date of contract for construction before 1st February 2013 and designed in compliance with the rules for Chapter 21 – Navigation Bridge Arrangement and Equipment on Seagoing Ships, One-Man Control Console are to be given notation:

NAV-O The bridge is designed for ocean area.

NAV-OC The bridge is designed for ocean area and coastal waters.

Ships which date of contract for construction on or after 1st February 2013, and designed in compliance with the rules for and Chapter 21 - Navigation Bridge Visibility, Bridge Arrangement and Equipment Rules are to be given notation:

NAV Designed in compliance with Chapter 21 and equipped with Chapter 21, Section 4, B.1.

NAV-INS Integrated Navigation Systems, Designed in compliance with Chapter 21 and equipped with Chapter 21, Section 4, B.2, and C.

Revision Date: November 2015

Entry into Force Date: January 2016

New items have been added as C.2.1.2 and C.4.2.12, and Table 2.2 has been revised as follows:

C.2.1.2

…

TUG

ESCORT TUG (p,V)

…

4.2.12 Fire Fighting

Following notations are assigned to ships which are complying with Part C, Chapter 11.

FF0 For 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.

FF1 For ships provided with equipment for fighting fires in the initial stage and performing rescue operations in the immediate vicinity of the installation on fire.

FF2 For ships provided with equipment for sustained fighting of large fires and for cooling parts of the installation on fire.

FF3 For ships provided with equipment corresponding to FF2, but with greater fire-extinguishing capacity and more comprehensive fire-extinguishing equipment.

FF1/2 For ships provided with equipment corresponding to FF2 and additionally suited for rescue operations as per FF1.

FF1/3 For ships provided with equipment corresponding to FF3 and additionally suited for rescue operations as per FF1.

Table 2.2 Summary of notations for naval ships

Chapter 101 **Classification and Surveys**	**Chapter 102** **Hull Structures and Ship Equipment**	**Chapter 104** **Propulsion Plants**	**Chapter 105/106** **Electrical Installations / Automation**	**Chapter 107** **Ship Operation, Installations and Auxiliary Systems**
Ship type: **CORVETTE** **FRIGATE** **DESTROYER** **CRUISER** **MINE WARFARE VESSEL** **AMPHIBIOUS WARFARE SHIP** **AIRCRAFT CARRIER** **PATROL BOAT** **SUPPLY VESSEL** **RESEARCH VESSEL** **AMPHIBIOUS WARFARE SHIP** (LPD, LST, LCT, LCM, etc.) **MOSHIP** Submarine Rescue Mother Ship **RATSHIP** Rescue and Towing Ship **LCT** Landing Craft Tank **LCM** Landing Craft Mechanized **LST** Landing Ship Tank **LPD** Landing Platform Dock **PRODUCT TANKER** **TUG (4)** **ESCORT TUG (p,V) (5)** **SUBMARINE** Special types, e.g.: **HYDROFOIL** **CATAMARAN** **WATER JET** High speed craft: **HSC-N** **HSDE** Auxiliary ship-Navy: **AUX-NH** **AUX-NM** Certificate of Conformity: **CoC** IACS Common Structural Rules: **CSR** Naval Ship Code: **NSC** Submersible: **U**	Ambient conditions: **AC1** **ACS** Material: **(HIGHER STRENGTH HULL STRUCTURAL STEEL)** **ALUMINIUM** **FRP** Residual strength after military effects: **RSM** Rational ship design: **RSD (F25)** **RSD (F30)** **RSD (ACM)** In-water survey: **IWS** Structural fire protection: **SFP** Navigation in ice: **B** Bridge design: **NAV-O** **NAV-OC** Novel design: **EXP** Emergency response service: **ERS** Service range: **Y** **K50/K20** **K6** Towing arrangement: **TA1 (TA2, TA3)** Corrosion Protection **(1)**: **PCWBT** Loading Instrument **(2)**: **LI**	Condition monitoring: **CM1** **CM2** **CM3** **CM4** Redundant propulsion: **RP1** x % **RP2** x % **RP3** x % Dynamic positioning: **DK1** **DK2** **DK3** Fuel Cell Systems: **FC-xxx** **with FC** Navigation in ice: **B** Novel design: **EXP** Air Independent Power: **AIP-xxx** **with AIP** Manoeuvring Capability Assessment **(3)**: **MCA**	Automation: **AUT-N** **AUT-Nnh** **AUT-C(NS)** Degaussing: **DEG** Quality of Electrical Power Supplies: **ELS** Integrated Computer Control: **ICC**	Lifting appliances: **LA** **LA (CL)** **LA (CR)** **LA (PL)** Replenishment at sea: **RAS** Flight operation: **FO** NBC protection: **NBC** Diving systems: **DI** Environmental Passport: **EP (6)** Fire Fighting **(7)** : **FF0** **FF1** **FF2** **FF3** **FF1/2** **FF1/3**

(1) *For **PCWBT** Notation, see **TL** Rules Chapter 1 Hull Section 22 A.7.1.*
(2) *For **LI** Notation, see **TL** Rules Chapter 1 Hull Section 6 H. and Section 26 F.*
(3) *For **MCA** Notation, see IMO Res.MSC 137(76), IMO Res.A601(15) and MSC Circ.1053.*

(4) *For **TUG** Notation, see **TL** Rules Chapter 1 Hull Section 29.*
(5) *For **ESCORT TUG (p,V)** Notation, see **TL** Rules Chapter 1 Hull Section 29 and Chapter 13 Escort Tugs.*
(6) *For **EP** Notation, see **TL** Rules Chapter 76 Environmental Protection System.*
(7) *For **FF0, FF1, FF2, FF3, FF1/2, FF1/3** Notations, see **TL** Rules Chapter 11 Fire Fighting Ships.*

PART E – CHAPTER 102 - HULL STRUCTURES AND SHIP EQUIPMENT

01. Section 8 - Decks and Longitudinal Walls

Revision Date: December 2015

Entry into Force Date: January 2016

Item E is revised as follows:

E. Helicopter Deck

If this deck is also used for drone (UAV) operation, the loads would normally be less and therefore not form the critical case.

For take-off and landing decks for fixed wing aircraft compare Section 23, B.4.

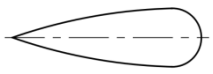
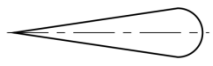
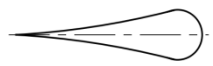
02. Section 12 - Rudder and Manoeuvring Arrangement

Revision Date: October 2015

Entry into Force Date: January 2016

Table 12.1 is revised as follows:

Table 12.1 Coefficient κ_2 for different types of rudder profiles

Type of rudder/ profile	κ_2	
	Ahead condition	Astern condition
NACA-00 serie 	1,1	1,4
flat side profiles 	1,1	1,4
hollow profiles 	1,35	1,4

high lift rudders 	1,7	to be specially considered; if not known: 1,7
mixed profiles (e. g. HSVA)	1,21	1,4

03. Section 19 - Hull Outfit

Revision Date: December 2015

Entry into Force Date: January 2016

Item C.1.2 is revised as follows:

1.2 Decks for aircraft operation and helicopter landing

The special, additional requirements for flight decks are specified in Section 23, B.5.1.

04. Section 23 - Provisions for Flight Operations

Revision Date: December 2015

Entry into Force Date: January 2016

Section 23 - Provisions for Flight Operations is generally revised.

PART E – CHAPTER 105 - ELECTRIC

01. Section 7 - Power Equipment

Revision Date: March 2015

Entry into Force Date: January 2016

Item A.5.3 is revised as follows:

5.3 Where thermal relays are provided to protect the stalled motor, they shall be set to a value equivalent to twice the rated current of the motor. Steering gear motor circuits obtaining their power supply via an electronic converter and which are limited to full load current are exempt from above requirement to provide protection against excess current, including starting current, of not less than twice the full load current of the motor. The required overload alarm is to be set to a value not greater than the normal load of the electronic converter.

Note:

Normal load is the load in normal mode of operation that approximates as close as possible to the most severe conditions of normal use in accordance with the manufacturer's operating instructions.

02. Section 9 - Control, Monıtorıng and Shıp's Safety Systems

Revision Date: October 2015

Entry into Force Date: January 2016

Item B.4.4.1 is revised as follows:

...

The system is to be designed such that flooding is not possible before this period of time has elapsed by means of a mechanical timer.

PART E – CHAPTER 107 - SHIP OPERATION INSTALLATIONS AND AUXILIARY SYSTEMS

01. Section 7 - Storage Of Liquid Fuels, Lubricating And Hydraulic Oils As Well As Oil Residues

Revision Date: September 2015

Entry into Force Date: January 2016

Item B.1.4 is revised as follows:

...

~~If fuel tanks are adjoining the shell, the design has to limit the filling ratio to 85 %.~~

02. Section 9 - Fire Protection and Fire Extinguishing Equipment

Revision Date: October 2015

Entry into Force Date: January 2016

Item H.2.9.1 is revised as follows:

...

The system is to be designed such that flooding is not possible before this period of time has elapsed by means of a mechanical timer.

03. Section 13 - Aircraft Handling Systems

Revision Date: December 2015

Entry into Force Date: January 2016

Item C has been added as follows:

C. Special Requirements for Drone Handling

1. The handling requirements depend very much on size and weight of the drone.

2. Big drones

For drones of a size near to a light helicopter which are equipped with wheels the handling may be organized as defined in B.

3. Medium sized drones

3.1 For other, medium sized drones without wheels it has to be ensured that the drone can be safely transferred from the drone hangar to the starting/ landing areas and vice versa.

3.2 Transport platform

3.2.1 For the requirements according to 3.1 it might be favourable to introduce a movable transport platform of reasonable size from where the drone can start and land and which can be transfered with the drone into the hangar.

3.2.2 The drone has always to be fixed with its legs to the platform and the connection shall only be opened after running warm and immediately before the start. Opening and closing of the leg connection has to be possible for all legs simultaneously.

3.2.3 The transport platform should be equipped with small wheels and permanently be connected to glide bearings within deck slots (or within a guiding construction bolted to the deck, if no occasional helicopter landings are planned on this deck) leading from the open start/landing area to the storage, maintenance and refuelling location in the drone hangar. It will be recommendable to cover such a slot with a stainless spring steel band.

The movement of this platform may be done manually by the crew, but at the locations in the hangar and outside for starting/landing the platform is to be safely locked. If the movement is established mechanically, e.g. by pulling rope and winch or by a rack and pinion system, limit switches and locking devices are to be provided at the end positions of this movement. In case of mechanical drive an emergency operation is to be made possible.

3.2.4 If the platform is designed also as turntable, several useful positions around the circumference are to be locked safely.

4. Small drones

Small drones may be handled manually by several crew members. But also for such drones the storage/ maintenance/re-fuelling location inside the hangar has to be equipped with a safe fixing of the drone to the ship during all its thinkable movements.

5. Other solutions

Other solutions achieving the demonstrated requirements for drone handling in different ways may be presented and have to be agreed by TL.

ADDITIONAL RULE – REGULATIONS FOR THE PERFORMANCE OF THE TYPE TESTS PART 1 - TEST REQUIREMENTS FOR ELECTRICAL/ELECTRONIC EQUIPMENT, COMPUTERS AND PERIPHERALS

01. General

Revision Date: November 2015

Entry into Force Date: January 2016

"Additional Rule - Regulations for the Performance of the Type Tests Part 1- Test Requirements for Electrical/Electronic Equipment, Computers and Peripherals" is superseded by "Additional Rule - Regulations for the Performance of the Type Tests Part 1-Test Specification for Type Approval" according to IACS UR E10 Rev.6.

ADDITIONAL RULE – UNIFIED INTERPRETATIONS FOR THE IMPLEMENTATION OF MARPOL ANNEX VI AND NOX TECHNICAL CODE

01. General

Revision Date: November 2015

Entry into Force Date: January 2016

UI MPC16 is deleted from TL Additional Rules for Implementation MARPOL Annex VI and NOx Technical Code.

ADDITIONAL RULE – UNIFIED INTERPRETATIONS FOR THE IMPLEMENTATION OF FTP CODE – INTERNATIONAL CODE FOR APPLICATION OF FIRE TEST PROCEDURES

01. General

Revision Date: October 2015

Entry into Force Date: January 2016

TL Additional Rule “Unified Interpretations for the Implementation of FTP Code – International Code for Application of Fire Test Procedures” has been revised in accordance with UI FTP6 Rev.1 as follows:

(Rev.1 July 2015)

Testing and approval of pipe penetrations and cable transits for use in “A” class divisions (IMO FTP Code 2010 Annex 1 Part 3)

IMO FTP Code 2010 Annex 1 Part 3 Appendix 1 item 1.13 reads:

...

- ~~Prior to fire testing,~~ T~~t~~he pipe penetration/cable transit shall not have any visible openings. It shall not be possible to manually penetrate any part of the penetration with a ~~pointed~~

~~implement such as a pen or a screwdriver~~ 6 mm gap gauge, as described in paragraph 7.10 of Appendix 1 of Part 3 to Annex 1 of the 2010 FTP Code.

...

2. Rev. 1 of this UI is to be uniformly implemented by IACS Societies for approvals granted on or after 1 January 2016.

ADDITIONAL RULE – UNIFIED INTERPRETATIONS FOR LIFE SAVING APPLIANCES

01. General

Revision Date: October 2015

Entry into Force Date: January 2016

UI SC267 (Jan 2015) Implementation of the requirements relating to lifeboat release and retrieval systems (LSA Code Paragraph 4.4.7.6 as amended by resolution MSC.320(89)) has been entered into the Rule.

Revision Date: December 2015

Entry into Force Date: January 2016

TL Additional Rule Unified Interpretations for Life Saving Appliances is revised as per UI SC244 Corr.1 as follows:

...

SC

244

(Rev.1 Nov 2012)

(Corr.1 Nov 2015)

...

4. The “weight of the boat” to be considered for the load in the case of single fall systems is the “weight of the boat with its full complement of persons and equipment”, which according to MSC.81(70), Part 2, Paragraph 5.3.4 shall be multiplied by two.

ADDITIONAL RULE – TENTATIVE RULES FOR POLYETHYLENE CRAFTS

01. General

Revision Date: January 2015

Entry into Force Date: January 2016

Item C.4.2.1 is added as follows:

4.2.1 Scantling values obtained by direct calculation methods shall not be less than 80% of those stated in relevant ampirical formula given in these Tentative Rules.

For further information:

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