External Affairs Department
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IACS Technical Resolutions adopted from January to December 2017

ClassNK has been regularly providing preliminary reports of outcomes of the International Maritime Organization (IMO)'s meetings and the latest development at IACS.

For this issue, we would like to introduce Unified Requirements (URs) and Unified Interpretations (UIs) adopted and published from Jan 2017 to Dec 2017 with their summaries.

URs and UIs are technical resolutions, which are set, revised and withdrawn by IACS. URs are classification rules established for the uniform implementation among IACS member societies. URs shall be incorporated in the rules of each member society within one year of adoption unless otherwise specified.

UIs are developed for uniform interpretations of the requirements of Convention which are left to the satisfaction of the Administration or vaguely worded while Administrations have not set clear instructions.

These resolutions are/will be incorporated into ClassNK's Rules and Guidance for the survey and construction of steel ships after review by ClassNK's relevant Technical Committee.

Texts of these resolutions and their Technical Backgrounds have been published in IACS website. In addition, the underlined versions (revised parts are clearly shown) of URs and UIs have been published on ClassNK's website.

Table 1 List of new/amendments to URs (Unified Requirements) published from Jan 2017 to Dec 2017

Resolution	Revision	Adoption	Title	Implementation	Outline
UR Z25	New / Rev.1	Jan. 2017 / Sep. 2017	Periodic Survey of Fuel Installations on Ships other than Liquefied Gas Carriers utilizing gas or other low flush point fuels	1 Jan.2018 / 1 Jan.2019	(1)
UR A2	Corr.2	Mar. 2017	Shipboard fittings and supporting hull structures associated with towing and mooring on conventional ships	1 Jul. 2018	-
UR A1	Corr.2	Mar. 2017	Anchoring Equipment	1 Jul. 2018	-
UR S4	Rev.4	Apr. 2017	Criteria for the Use of High Tensile Steel with Minimum Yield Stress of 315 N/mm^2, 355 N/mm^2 and 390 N/mm^2	---	(2)
UR W11	Rev.9	May 2017	Normal and higher strength hull structural steels	1 Jul. 2018	(3)
UR A3	New	Jun. 2017	Anchor Windlass Design and Testing	1 Jul. 2018	(4)
UR L5	Rev.3	Jun. 2017	Computer Software for Onboard Stability Calculations	1 Jul. 2018	(5)
UR M25	Rev.4	Jun. 2017	Astern power for main propulsion	1 Jul. 2018	(6)
UR M53	Rev.3	Jun. 2017	Calculations for I.C. Engine Crankshafts	1 Jul. 2018	(7)

Resolution	Revision	Adoption	Title	Implementation	Outline
UR Z18	Rev.7	Jun. 2017	Survey of Machinery	1 Jul. 2018	(6)
UR Z7.1	Rev.13	Aug. 2017	Hull Surveys for General Dry Cargo Ships	1 Jan. 2019	(8)
UR Z10.2	Rev.34	Sep. 2017	Hull Surveys of Bulk Carriers	1 Jan. 2019	(9)
UR Z10.5	Rev.17	Sep. 2017	Hull Surveys of Double Skin Bulk Carriers	1 Jan. 2019	(9)

*Corr.(Corrigenda) means the correction that basically does not include the contents of resolution but literal error.

Table 2 List of new/amendments to UIs (Unified Interpretations) published from Jan 2017 to Dec 2017

Resolution	Revision	Adoption	Title	Implementation	Outline
UI SC191	Corr.3	Jan.2017	IACS Unified Interpretations (UI) SC 191 for the application of amended SOLAS regulation II-1/3-6 (resolution MSC.151(78)) and revised Technical provisions for means of access for inspections (resolution MSC.158(78))	---	---
UI SC220	Corr. 2	Mar. 2017	Special requirements for ro-ro passenger ships	---	---
UI GC15	Rev.1	Aug. 2017	Closing Devices for Air Intakes	1 Jan. 2018	(10)
UI GC19	New	Aug.2017	External surface area of the tank for determining sizing of pressure relief valve (paragraph 8.4.1.2 and figure 8.1)	1 Jan. 2018	(11)
UI SC221	Withdrawn	Sep. 2017	Separation of Galley Exhaust Ducts from Spaces (Reg II-2/9)	---	---
UI GF2	New	Sep. 2017	Ship Steel Protection against Liquefied Gas Fuel (Part A-1, paragraph 6.3.10)	1 Jan. 2019	(12)
UI SC144	Rev.3	Oct. 2017	Maintenance, Thorough Examination, Operational Testing, Overhaul and Repair of Lifeboats, Rescue Boats and Fast Rescue Boats, Launching Appliances and Release Gear	1 Jan. 2020	(13)
UI GF3	New	Dec. 2017	Tank connection space for tanks on open deck and tank connection space equipment	1 Jan. 2018	(14)
UI GF4	New	Dec. 2017	Fuel preparation room	1 Jan. 2018	(14)
UI GF5	New	Dec. 2017	Appropriate location of premixed engines using fuel gas mixed with air before the turbocharger	1 Jan. 2018	(15)
UI GF6	New	Dec. 2017	Protection against cryogenic leakage and control of hazardous zones in fuel preparation rooms on open deck	1 Jan. 2018	(16)
UI GF7	New	Dec. 2017	External surface area of the tank for determining sizing of pressure relief valve	1 Jan. 2018	(17)
UI GF8	New	Dec. 2017	Control and maintenance of pressure and temperature of liquefied gas fuel tanks after the activation of the safety system	1 Jan. 2018	(18)
UI GF9	New	Dec. 2017	Special consideration within the risk assessment of closed or semi-enclosed bunkering stations	1 Jan. 2018	(19)
UI GF10	New	Dec. 2017	Ventilation of machinery spaces	1 Jan. 2018	(20)

UI GF11	New	Dec. 2017	Ventilation of double piping and gas valve unit spaces in gas safe engine-rooms	1 Jan. 2018	(21)
UI GF12	New	Dec. 2017	Ventilation inlet for double wall piping or duct	1 Jan. 2018	(22)
UI SC242	Corr.1 (Rev.1 is deleted and Corr.1 is Reinstated.)	Dec.2017	Arrangements for steering capability and function on ships fitted with propulsion and steering systems other than traditional arrangements for a ship's directional control	21 Dec. 2017	---
UI SC281	Withdrawn	June 2017	Single fall and hook system used for launching a lifeboat or rescue boat - Interpretation of the LSA Code as amended by MSC.320(89) and MSC.81(70) as amended by MSC.321(89)	---	---

*Corr.(Corrigenda) means the correction that basically does not include the contents of resolution but literal error.

Outlines of IACS Technical Resolutions listed in the above Tables are mentioned below.

(1) UR Z25 (New/Rev. 1)

UR Z25 was developed in conformity with requirements of IGF Code. This stipulates requirements for the fuel systems at periodical surveys for ships utilizing gas fuel or other low flashpoint fuels.

The amendments of Rev.1 clearly stipulates that all pressure relief valves for the fuel supply and bunkering piping are to be opened for examination at special surveys.

(2) UR S4 (Rev.4)

UR S4 stipulates the criteria for the Use of High Tensile Steel. The revision accepts the material factor 0.66 for steel with minimum yield stress of 390 N/mm^2 or more (YP40) subject to a fatigue assessment of the structure is performed to verify compliance with the requirements of the Society.

(3) UR W11 (Rev.9)

UR W11 is the requirement for normal and higher strength steels intended for use in hull construction. The amendments introduce requirements for surface quality of plates supplied to shipyards, by means of the incorporation of IACS Recommendation 12 into the UR. In addition, the definitions of heat treatment and the requirements of impact tests for higher strength steels have been revised.

(4) UR A3 (New)

UR A3 was developed to reduce failures of windlass hydraulic motors and specifies the requirements for design/inspection of anchor windlass.

(5) UR L5 (Rev.3)

UR L5 is the requirements for onboard stability computer software. This amendment clarifies some unclear requirements including acceptable tolerance of calculation results for stability software. In addition, it specifies the definition and technical requirements of stability software for passenger ships required by SOLAS II-1/8-1.

(6) UR M25 (Rev.4) / UR Z18

UR M25 provides the requirement for astern performance of propulsion systems. The amendments require astern testing to be carried out on all ships at the construction stage and clarify items to be confirmed at the astern testing.

Further, UR Z18 which specifies required machinery surveys of ships in service was amended to require astern testing upon significant repairs in propulsion systems.

(7) UR M53 (Rev.3)

UR M53 stipulates the strengths calculation for crankshaft of I.C. engine. The amendments introduced Guidance for Evaluation of Fatigue Tests, Calculation of Surface Treated Fillets and Oil Bore Outlets and Calculation of Stress Concentration Factors in the Oil Bore Outlets of crankshafts through utilization of the Finite Element Method.

(8) UR Z7.1 (Rev.13)

UR Z7.1 provides the requirements for hull surveys for General Dry Cargo Ships. The purpose of the amendments is to clarify the applicability of hybrid cargo hold arrangements, and to introduce the

criteria for the steel renewal which belongs under UR S18 and S21A and are related to the net scantling approach.

(9)UR Z10.2 (Rev.34) / UR Z10.5 (Rev.17)

UR Z10.2 and Z10.5 respectively provides the requirements for hull surveys for Bulk Carriers and Double Skin Bulk Carriers. The amendments to UR Z10.2 is to permit the use of cherry picker by taking into account that the maximum allowed working height should not be more than 17 meter, for close-up surveys of the cargo hold of bulk carriers having DWT equal or more 100,000MT. In addition, the amendments to UR Z10.2 and Z10.5 are to introduce the criteria for the steel renewal which belongs under UR S18 and S21A and are related to the net scantling approach.

(10) UI GC15 (Rev.1)

UI GC15 provides an interpretation for closing devices for air intakes. The amendments clarify that the remote operation cannot be accepted as the alternative means to control the closing devices to be operated from inside the space, and that all the closing devices shall be operable from outside of the protected space, in line with MSC.1/Circ.1559 which was approved at MSC 97.

(11) UI GC19 (New)

UI GC19 clarifies an external surface area of prismatic cargo tanks of gas carriers to determine the size of pressure relief valve.

(12) UI GF2 (New)

UI GF2 clarifies that whether drip trays are required or not depends on location of liquefied gas fuel storage tanks and tank connections, etc.

(13) UI SC144 (Rev.3)

UI SC144 provides the interpretation on Periodic Servicing of Launching Appliances and on-load Releasing Gear specified in SOLAS III/20.11. At MSC 96, resolution MSC.402(96) on the requirements for maintenance, operational testing, overhaul and etc. of lifeboats and rescue boats, launching appliances and release gear was adopted in conjunction with the adoption of the amendments to SOLAS III/3 and III/20 (resolution MSC.404(96)) to make the MSC resolution mandatory. The purpose of the amendments is to update in line with these MSC resolutions.

(14) UI GF3 (New)/ UI GF4 (New)

UI GF3 and GF4 provide the interpretation on installation criteria of tank connection space specified in 2.2.15.3 of IGF Code, and clarify the equipment which may be contained in the space.

(15) UI GF5 (New)

UI GF5 clarifies premixed engines using fuel gas mixed with air before the turbocharger need to be located in ESD protected machinery spaces.

(16) UI GF6 (New)

UI GF6 provides the interpretation on protection against cryogenic leakage and control of hazardous zones in fuel preparation rooms.

(17) UI GF7 (New)

UI GF7 clarifies an external surface area of prismatic gas fuel tanks to determine the size of pressure relief valve.

(18) UI GF8 (New)

UI GF8 clarifies the requirement for a period to maintain and to control the pressure and temperature of liquefied gas fuel tanks within the design range needs to be fulfilled even after activation of the safety system which shutdowns gas supply to machinery.

(19) UI GF9 (New)

UI GF9 clarifies items to be specially considered within the risk assessment required for closed or semi-enclosed bunkering stations.

(20) UI GF10 (New)

UI GF10 provides the interpretation that spaces enclosed in the boundaries of machinery spaces (such as purifier's room, engine-room workshops and stores) are considered an integral part of machinery spaces containing gas-fuelled consumers, and their ventilation system need not be independent of the one of machinery spaces.

(21) UI GF11 (New)

UI GF11 provides the interpretation that double piping and gas valve unit spaces in gas safe engine-rooms are considered an integral part of the fuel supply systems, and their ventilation system does not need to be independent of other fuel supply ventilation systems.

(22) UI GF12 (New)

UI GF12 provides the interpretation that ventilation inlet for the double wall piping or ducts always to be located in a non-hazardous area in open air away from ignition sources.

ClassNK External Affairs Department is pleased to provide international trends promptly.

For any questions about the above, please contact:

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