External Affairs Department
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IACS Technical Resolutions adopted from July to December 2015

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 the Unified Requirements (URs) and Unified Interpretations (UIs) adopted in 2015 and published from July 2015 to December 2015 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URs and UIs are technical resolutions, which are set, revised and withdrawn by IACS.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 on 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 July 2015 to December 2015

Resolution	Revision	Adoption	Title	Implementation	Outline
UR S10	Corr.1	Dec. 2015	Rudders, sole pieces and rudder horns	---	---
UR M44	Rev.9	Dec. 2015	Documents for the approval of diesel engines	1 Jul. 2016	(1)
UR S6	Rev.8	Dec. 2015	Use of Steel Grades for Various Hull Members - Ships of 90 m in Length and Above	1 Jan. 2017	(2)
UR Z21	Rev.4	Oct. 2015	Surveys of propeller shafts and tube shafts	1 Jan. 2017	(3)
UR M56	Rev.3	Oct. 2015	Marine gears – load capacity of involute parallel axis spur and helical gears	1 Jan. 2017	(4)
UR S33	Rev.1	Sep. 2015	Requirements for use of extremely thick plates in container ships	1 Jan. 2017	(5)
UR W31	Rev.1	Sep. 2015	Application of YP 47 Steel plates	1 Jan. 2017	(6)
UR Z11	Rev.5	Sep. 2015	Mandatory ship type and enhanced survey programme (ESP) notations	1 Jan. 2017	(7)
UR M74	New	Sep. 2015	Installation of ballast water management systems	1 Jan. 2017	(8)
UR E13	Rev.2	Aug. 2015	Test requirements for rotating machines	1 Jan. 2017	(9)

Resolution	Revision	Adoption	Title	Implementation	Outline
UR M72	Corr.1	Aug. 2015	Certification of engine components	---	---
UR Z7	Rev.23	Jul. 2015	Hull Classification Surveys	1 Jul. 2016	(10)

*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 July 2015 to December 2015

Resolution	Revision	Adoption	Title	Implementation	Outline
UI MPC88	Rev.1	Dec. 2015	Annex IV of MARPOL 73/78 Regulation 9.1.1	1 Jan. 2017	(11)
UI SC272	New	Dec. 2015	Inert gas supply to double-hull spaces (SOLAS II-/4.5.5.1)	1 Jan. 2017	(12)
UI SC213	Rev.3	Dec. 2015	Arrangements for remotely located survival craft	1 Jan. 2017	(13)
UI SC270	Rev.1/ Corr.2	Dec 2015/ Sep. 2015	Fire pumps in ships designed to carry five or more tiers of containers on or above the weather deck (Res. MSC.365(93), SOLAS II-2/10.2.1.3, II-2/10.2.2.4.1.2, II- 2/10.7.3.2.3, II-2/19.3.1.5 and IMO FSS Code Ch. 12.2.2.1.1)	1 Jan. 2017	(14)
UI SC274	New	Dec. 2015	Hazardous area classification in respect of selection of electrical equipment, cables and wiring and positioning of openings and air intakes	1 Jan. 2017	(15)
UI SC244	Corr.1	Nov. 2015	Load testing of hooks for primary release of lifeboats and rescue boats	---	---
UI MPC125 & UI MPC126	New	Nov. 2015	Technical Code on Control of Emission of Nitrogen Oxides from Marine Diesel Engines (NOx Technical Code 2008, Chapter 4, Paragraphs 4.4.6.1 & 4.4.6.2)	1 Jul. 2016	(16)
UI MPC107 to UI MPC124	New	Nov. 2015	2011 Guidelines Addressing Additional Aspects to the NOx Technical Code 2008 with regard to Particular Requirements related to Marine Diesel Engines fitted with Selective Catalytic Reduction (SCR) Systems (Resolution MEPC.198(62))	1 Jul. 2016	(16)
UI SC273	New	Nov. 2015	Inclusion of mediums of the fire-fighting systems in lightweight (SOLAS II-1/2.21 and SOLAS II-2/3.28) and lightship condition (IS Code 2008 Paragraph 2.23)	1 Jan. 2017	(17)
UI TM3	New	Nov. 2015	Interpretation of International Tonnage Calculation: Open Deck Spaces Bounded by Partitions or Bulkheads (ITC69 regulation 2(4), 2(5) and 6)	1 Jan. 2017	(18)
UI LL14	Corr.1	Oct. 2015	Protection of the crew (Regulation 25(2))	---	---
UI SC79	Rev.4	Oct. 2015	Certified Safe Type Electrical Equipment for Ships Carrying Dangerous Goods	1 Jan. 2017	(19)
UI TM2	New	Oct. 2015	International Tonnage Convention 1969 - Heat Exchangers (Coolers) Treatment	1 Jul. 2016	(20)
UI SC115	Delete	Oct. 2015	Fire detection system with remotely and individually identifiable detectors	---	(21)
UI MODU1	Rev.1	Oct. 2015	IACS Unified Interpretations for the application of MODU Code Chapter 2 paragraphs 2.1, 2.2, 2.3, 2.4 and revised Technical provisions for means of access for inspections (Resolution MSC.158(78))	1 Jan. 2017	(22)

Resolution	Revision	Adoption	Title	Implementation	Outline
UI MPC16	Delete	Oct. 2015	Annex VI of MARPOL 73/78 (Regulation 13 (1)(a)(i))	1 Nov. 2015	(23)
UI SC148	Rev.2	Sep. 2015	Ventilation by fan coil units and internal circulation fans	1 Jul. 2016	(24)
UI SC246	Rev.1	Sep. 2015	Steering gear test with the vessel not at the deepest seagoing draught	1 Jan. 2017	(25)
UI GC12	Rev.2	Aug. 2015	Secondary Barrier Testing Requirements	1 Jul. 2016	(26)
UI MPC9	Rev.1	Aug. 2015	Interpretation of Width of Wing Tanks and Height of Double Bottom Tanks at Turn of the Bilge Area	1 Jul. 2016	(27)
UI MPC6	Rev.1	Aug. 2015	Calculation of the aggregate capacity of SBT	1 Jul. 2016	(27)
UI MPC5	Rev.1	Aug. 2015	Minimum vertical depth of each double bottom tank or space	1 Jul. 2016	(27)
UI MPC4	Delete	Aug. 2015	Discharge of segregated ballast	1 Jul. 2016	(27)
UI MPC3	Delete	Aug. 2015	Machinery space oil discharge monitoring and control systems	1 Jul. 2016	(27)
UI MPC2	Rev.1	Aug. 2015	Operational manuals for oil discharge monitoring and control systems	1 Jul. 2016	(27)
UI MPC1	Delete	Aug. 2015	Periodical surveys of oil content meters	1 Jul. 2016	(27)
UI SC118	Rev.2	Jul. 2015	Exhaust duct from galley ranges	1 Jan. 2016	(28)
UI FTP6	Rev.1	Jul. 2015	Testing and approval of pipe penetrations and cable transits for use in “A” class divisions (IMO FTP Code 2010 Annex 1 Part 3)	1 Jan. 2016	(29)
UI MPC106	New	Jul. 2015	Technical Code on Control of Emission of Nitrogen Oxides from Marine Diesel Engines (NOx Technical Code 2008)	1 Jul. 2016	(30)
UI SC188	Rev.3	Jul. 2015	Segregation of cargo oil tanks (Reg.II-2/4.5.1.1)	1 Jan. 2016	(31)

*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 M44 (Rev.9)

UR M44 lists the documents necessary to approve a diesel engine design for conformance to the Rules and for use during manufacture and installation. The current revision of the UR was triggered by a request from International Council on Combustion Engines (CIMAC) to provide a harmonised application form across IACS members for approval of IC engines. In Rev.9, a new IC Engine Approval Application Form and Data Sheet was provided as Appendix 3.

(2) UR S6 (Rev.8)

UR S6 stipulates use of steel grades for various hull members, for ships other than CSR Bulk Carriers and Oil Tankers. Objective of Rev.8 is to establish the relationship between the polar service temperature (PST) which defined in Polar code and the IACS design temperature (t_D) defined in UR S6. Also the extent of application for internal structural members when applying the material classes and grades for structures exposed at low air temperatures is clarified.

(3) UR Z21 (Rev.4)

UR Z21 details survey procedures to assure the condition of the propeller shaft assembly of all vessels with conventional shafting fitted with a

propeller. In Rev.4, the criteria to apply the extension of surveys was revised. Also the definition of “alternative means” was revised in order to clearly exclude the shaft arrangements provided with the system for monitoring the working parameters from the application of the survey criteria set in the UR.

(4) UR M56 (Rev.3)

UR M56 details the estimation of load capacity of involute parallel axis spur and helical marine gears. Rev.3 of the UR introduces threshold values for gears intended for main propulsion and for essential auxiliary services below which the UR is not mandatorily applied (220 kW for gears intended for main propulsion and 110 kW for gears intended for essential auxiliary services).

(5) UR S33 (Rev.1)

UR S33 stipulates requirements for container ships incorporating extremely thick steel plates to longitudinal structural members in the upper deck and hatch coaming structural region. In Rev.1, areas of fillet weld to be considered as the location where brittle crack initiates are clarified. In addition, the ESSO test method used to estimate the brittle crack arrest toughness value and material related content was transferred from UR S33 to UR W31. Conversely design related content was transferred from UR W31 to the UR S33.

(6) UR W31 (Rev.1)

UR W31 defines YP47 steel, its approval requirements, its certification requirements, welding consumables requirements and requirements for weld procedure qualification. The UR was revised to transfer some requirements as explained in above (5).

(7) UR Z11 (Rev.5)

UR Z11 stipulates types and notations of ships subjected to the Enhanced Survey Programme (ESP). The UR has been revised to clarify that a self-unloading ship is subject to the ESP when it:

- is a self-propelled ship.
- is constructed generally with single deck, double bottom, hopper side tanks and topside tanks and with single or double side skin construction in cargo length area its midship section.
- is intended to carry and self-unload dry cargoes in bulk.

(8) UR M74 (New)

UR M74 details of the requirements of installation of the Ballast Water Management Systems (BWMS) based on BWM Convention (2004) in order to assist shipyards, ship owners and makers of BWMS in smooth implementation of the Convention. This UR has been developed based on the experience and knowledge of IACS Members.

(9) UR E13 (Rev.2)

UR E13 stipulates details of the test requirements for rotating machines. All tests are to be carried out according to IEC Publication 60092-301 and all machines of 100kW and over, intended for essential services, are to be surveyed by the Society during test and, if appropriate, during manufacturing. The UR is revised to ensure that the ability of the generator and its excitation system to maintain short-circuit is reflected in the UR.

(10) UR Z7 (Rev.23)

UR Z7 stipulates the requirements of hull classification surveys of self-propelled vessels. In Rev. 23, it is clarified that for structure built with non-steel metallic materials, alternative thickness measurement requirements may be developed and applied as deemed necessary by the Society.

(11) UI MPC88 (Rev.1)

UI MPC 88 interprets the term “installed”” in paragraph 1.3 of MEPC.159(55) which provides with the guideline on Implementation of Effluent Standards and Performance Tests for Sewage Treatment Plants. The UI has been revised in order that the same handling can be applied to MEPC.227(64) which supersedes resolution MEPC.159(55).

(12) UI SC272 (New)

UI SC272 defines “double-hull spaces” in SOLAS II-2/4.5.5.1. As per the UI, it is specified that double-hull spaces which are required to be fitted

with suitable connections for the supply of inert gas as per SOLAS II-2/4.5.5.1.4.1 are the same as the spaces where fixed hydrocarbon gas detection systems are required: all ballast tanks and void spaces of double-hull and double-bottom spaces adjacent to the cargo tanks, including the forepeak tank and any other tanks and spaces under the bulkhead deck adjacent to cargo tanks, except cargo pump-rooms.

(13) UI SC213 (Rev.3)

UI SC213 was originally developed in order to clarify whether life raft located at aft/forward end of the ships, if such location is distant more than 100 m from the closest survival craft, and identify the safety features these locations shall be provided with. Rev.3 of the UI provides specifications for self-contained battery powered lights to be used as an adequate means of illumination for the embarkation station and stowage location of remotely located survival craft.

(14) UI SC270 (Rev.1)

UI SC270 clarifies requirements related to the sizing of main and emergency fire pumps on board cargo ships designed to carry five or more tiers of containers on or above the weather deck. Rev.1 of the UI further clarifies the requirements related to the diameter of the fire main and the total capacity of the main fire pumps, in cases where mobile water monitors are supplied by the main fire pumps, and the mobile water monitors and the fixed arrangement of the water spray system are supplied by the main fire pumps.

(15) UI SC274 (New)

The aim of UI274 is to develop a common IACS position for hazardous area classification issues related to IEC 60092-502 (1999). IEC standard is referenced by SOLAS Regulation II-1/45.11, IBC Code Chapter 10.1.4 and IGC Code Chapter 10.1.4. The IEC standard addresses the zoning concept for hazardous area classification and contains requirements for electrical installations. However, there are differences between SOLAS & Codes and IEC Standards. IACS concurred that, in those cases, the prescriptive requirements in SOLAS and Codes take the precedence.

(16) UI MPC 107 to UI MPC 126 (New)

IACS, in consultation with engine manufacturers and other interested competent parties, has developed 20 Unified Interpretations regarding approval of selective catalytic reduction (SCR) systems in resolution MEPC.198(62) and guidance for the selection of an 'Engine Group' in the NOx Technical Code (2008). The aim of the UIs is to facilitate consistent and global implementation of the provisions of the NTC 2008 and resolution MEPC.198(62).

(17) UI SC273 (New)

The objective of UI SC273 is to clarify that weight of mediums stored on board for the fire-fighting systems (e.g. CO2, dry chemical powder, foam concentrate etc.) shall be included in the lightweight and lightship condition.

(18) UI TM3 (New)

The objective of UI TM3 is to clarify the definition of an open deck spaces bounded by partitions or bulkheads in the scope of the International Convention on Tonnage Measurement of Ships (1969). The interpretation is applicable to all ship types except Offshore Support Vessels and other similar vessels.

(19) UI SC79 (Rev.4)

UI SC79 gives references to IEC standards for electrical equipment for ships carrying dangerous goods. The UI was revised to address ships, when the cargo is considered dangerous for the capacity to develop flammable gases. The bilge pipes serving cargo area where flammable liquids are carried, and passing through enclosed spaces are to be fitted with equipment such as flanges, valves, pumps, the traversed spaces are to be classified extended hazardous area, unless they are provided with mechanical ventilation system with a minimum capacity of six air changes per hour.

(20) UI TM2 (New)

UI TM2 clarifies that heat exchangers (coolers) fitted in hull recesses or outside of the hull should

not be included in the calculation of total volume of all enclosed spaces (V) used in tonnage calculation. The UI is mainly applicable to pleasure vessels or small ships where heat exchangers (coolers) are fitted in hull recesses or outside of the hull.

(21) UI SC115 (Delete)

UI SC115 clarified the terms “Section” (Group of fire detectors and manually operated call points as reported in the indicating unit) and “Loop” (Electrical circuit linking detectors of various sections and connected to the control panel) in FSS Code, Ch. 9, 2.4.1.1 and 2.5.1.1. The UI is now considered to be superfluous as the definition of the term “Section” has now been included in New Chapter 9 Reg. 1.2.1 of FSS Code as amended by IMO Res. MSC.311(88) and term “Loop” is already explained in the IACS UI SC117 (Fire detection system with remotely and individually identifiable detectors). Therefore it was decided to withdraw UI SC115.

(22) UI MODU1 (Rev.1)

UI MODU1 was developed to set out interpretations in order to ensure robust compliance with paragraphs 2.1, 2.2, 2.3 and 2.4 of the Chapter 2 of MODU Code 2009 (IMO Res. A.1023(26)), in terms of providing permanent means of access (PMA). The scope of the UI on means of access for Bulk Carriers and Oil Tankers (UI SC 191) is applied to the relevant UI. In Rev.1, it was clarified that spud cans and openings in jack-cases of self-elevating units can be excluded from the requirements.

(23) UI MPC16 (Delete)

UI MPC16 interprets the term “installed” in MARPOL Annex VI of MARPOL 73/78 Regulation 13 (1) (a) (i) as engine that is permanently secured or connected to the ship’s structure, fuel / coolant / exhaust systems or power systems. As amendments to Annex VI adopted with Resolution MEPC.176(58) now give a definition of "installed" in Regulation 2.12, it was decided to delete UI MPC16.

(24) UI SC148 (Rev.2)

UI SC148 clarifies requirements of remote control of ventilation fans that do not supply outside air to a cabin, cabinet or switchboard for all ship types. The UI was revised to allow “fans not capable of supplying outside air to a cabin” to be exempted also from SOLAS Reg. II-2/5.2.1.2, meaning that such fans that are not capable of supplying outside air to the space need not be required to be controlled from outside the space being served for all ship types. Also a clarification regarding requirement for, and location of, controls for circulation fans inside cabinets and switchboards was included in the UI.

(25) UI SC246 (Rev.1)

UI SC246 was developed in respect of SOLAS Regulations II-1/29.3.2 and 29.4.2 and establish conditions for ships which cannot achieve deepest seagoing draught at the trial to replace the alternative requirement in UR M42.15(i). The amendment to the UI is as a result of MSC.1/Circ. 1425 which allows vessels to be tested at a ballast draught and the rudder load and torque to be reliably extrapolated to obtain the loading and torque at the full draught condition.

(26) UI GC12 (Rev.2)

UI GC12 provides interpretation to IGC code paragraphs 4.6.2.4 and 4.7.7, as amended by MSC.370(93). The UI was revised to clarify the principle that the test on glued secondary barrier of the membrane containment system of a gas carrier needs to be tested before and after the initial cooling down at the time of the ship’s construction.

(27) UI MPC9 (Rev.1), UI MPC6 (Rev.1), UI MPC5 (Rev.1), UI MPC4 (Delete), UI MPC3 (Delete), UI MPC2 (Rev.1) & UI MPC1 (Delete)

As a result of a periodical review of UIs on MARPOL Annex I, IACS decided to update references to IMO instruments in UI MPCs 2, 5, 6 & 9. No changes to the technical contents of the UIs have been made. Also it was found that UI MPCs 3 & 4 are outdated and UI MPC1 is adequately covered by the IMO Resolution A 1053(27). Hence UI MPCs 1, 3 & 4 were withdrawn.

(28) UI SC118 (Rev.2)

UI SC118 stipulates that fire dampers located in exhaust ducts for galley range required by Reg.

II-2/9.7.5.1.1 and 9.7.5.2.1 do not need to pass the fire test in either IMO Res. A 754(18) or Appendix 2 of Part 3, of Annex 1 of the 2010 FTP Code, 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. Existing IACS UI SC118 is no longer applicable after the release of IMO Res. MSC.365(93) which includes amendments to SOLAS Ch. II-2, Reg. 9.7, which came into force on 1 January 2016. However this UI is to be retained and amended for use in existing ships.

(29) UI FTP6 (Rev.1)

The scope of UI FTP6 is to clarify and harmonize additional design and test requirements for pipe penetrations and cable transits that do not incorporate the traditional welded structural steel sleeve with non-removable filling. Rev.1 aligns the UI with the text of MSC.1/Circ. 1488.

(30) UI MPC106 (New)

UI MPC106 is intended to establish a unified interpretation with regard to the EIAPP certification for engines manufactured by licensor and licensees under the group/family concept. Reference is made also to UR M44 where the involvement of the engine designer/licensor and engine builder/licensee in the certification of engines is addressed.

(31) UI SC188 (Rev.3)

UI SC188 stipulates that pump-rooms intended solely for ballast transfer need not comply with the requirements of regulation II-2/4.5.10, related to protection of cargo pump-rooms. The UI also stipulates that the requirements related to protection of cargo pump-rooms are applicable to the spaces where cargo pumps, stripping pumps, pumps for slop tanks, pumps for COW or similar pumps (including pumps intended for transfer of fuel oil having a flashpoint of less than 60°C) are provided. The UI was revised to clarify that the requirements related to protection of cargo pump-rooms are applicable to these spaces where cargo pumps, etc. are provided, regardless of their location.

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

For any questions about the above, please contact:

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