Dear Colleges,

Please find attached New IACS Unified Requirements and IMO Regulations entered into force from February 2015 and applicable for BRS Vessels during the Construction and Surveys.
IACS Technical Resolutions adopted from July to December 2014

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 2014 and published from July 2014 to December 2014 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URs and UIs are technical resolutions, which are set, revised and withdrawn by IACS.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 in ClassNK’s website.

Table 1 List of new/amendments to URs (Unified Requirements) published from July 2014 to December 2014

<table>
<thead>
<tr>
<th>Resolution</th>
<th>Revision</th>
<th>Adoption</th>
<th>Title</th>
<th>Implementation</th>
<th>Outline</th>
</tr>
</thead>
<tbody>
<tr>
<td>UR E18</td>
<td>Rev.1</td>
<td>Dec. 2014</td>
<td>Recording of the Type, Location and Maintenance Cycle of Batteries</td>
<td>1 Jan. 2016</td>
<td>(1)</td>
</tr>
<tr>
<td>UR E15</td>
<td>Rev.3</td>
<td>Dec. 2014</td>
<td>Electrical Services Required to be Operable Under Fire Conditions and Fire Resistant Cables</td>
<td>1 Jan. 2016</td>
<td>(2)</td>
</tr>
<tr>
<td>UR E10</td>
<td>Rev.6</td>
<td>Oct. 2014</td>
<td>Test Specification for Type Approval</td>
<td>1 Jan. 2016</td>
<td>(3)</td>
</tr>
<tr>
<td>UR Z18</td>
<td>Rev.4</td>
<td>Sep. 2014</td>
<td>Periodical Survey of Machinery</td>
<td>1 Jul. 2015</td>
<td>(4)</td>
</tr>
<tr>
<td>UR A2</td>
<td>Corr.1</td>
<td>Sep. 2014</td>
<td>Shipboard fittings and supporting hull structures associated with towing and mooring on conventional vessels</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>UR M68</td>
<td>Rev.1</td>
<td>Aug. 2014</td>
<td>Dimensions of propulsion shafts and their permissible torsional vibration stresses</td>
<td>1 Jul. 2015</td>
<td>(5)</td>
</tr>
<tr>
<td>UR Z22</td>
<td>Delete</td>
<td>May 2013</td>
<td>Survey requirements for automatic air pipe heads</td>
<td>1 Jul. 2014</td>
<td>(6)</td>
</tr>
</tbody>
</table>

*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 2014 to December 2014

<table>
<thead>
<tr>
<th>Resolution</th>
<th>Revision</th>
<th>Adoption</th>
<th>Title</th>
<th>Implementation</th>
<th>Outline</th>
</tr>
</thead>
<tbody>
<tr>
<td>UI SC234 / LL76 / MPC96</td>
<td>Rev.2</td>
<td>Dec. 2014</td>
<td>Initial statutory surveys at new construction</td>
<td>1 Jul.2015</td>
<td>(7)</td>
</tr>
<tr>
<td>UI SC269</td>
<td>New</td>
<td>Dec. 2014</td>
<td>Means of escape from the steering gear space in cargo ships</td>
<td>1 Jul.2016</td>
<td>(8)</td>
</tr>
<tr>
<td>UI SC165</td>
<td>Delete</td>
<td>Dec. 2014</td>
<td>Electrical cables for the emergency fire pump</td>
<td>---</td>
<td>(9)</td>
</tr>
<tr>
<td>UI SC223</td>
<td>Corr.1</td>
<td>Oct. 2014</td>
<td>For Application of SOLAS Regulation II-1/3-2 Performance Standard for Protective Coatings (PSPC) for Dedicated Seawater Ballast Tanks in All Types of Ships and Double-side Skin Spaces of Bulk Carriers, adopted by Resolution MSC.215(82)</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>UI SC191</td>
<td>Corr.1</td>
<td>Sep. 2014</td>
<td>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))</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>UI SC99</td>
<td>Rev.2</td>
<td>Aug. 2014</td>
<td>Flexible bellows of combustible materials</td>
<td>1 Jan. 2015</td>
<td>(10)</td>
</tr>
<tr>
<td>UI SC100</td>
<td>Corr.1</td>
<td>Aug. 2014</td>
<td>Closing appliances of ventilation inlets and outlets</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>UI LL79</td>
<td>New</td>
<td>Jul. 2014</td>
<td>Continuous hatchways (Regulation 36 (6))</td>
<td>1 Jul.2015</td>
<td>(11)</td>
</tr>
<tr>
<td>UI SC82</td>
<td>Delete</td>
<td>Jul. 2013</td>
<td>Protection against noise</td>
<td>1 Jul.2014</td>
<td>(12)</td>
</tr>
</tbody>
</table>

*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 E18 (Rev.1)**
   UR E18 stipulates the requirements for recording of the type, location and maintenance cycle of batteries which are fitted for use for essential and emergency services. In Rev.1 of the UR it was clarified that the maintenance cycle of batteries is to be reviewed by the Society during plan approval or the new building survey.

2. **UR E15 (Rev.3)**
   Electrical systems on-board ships are to be required to be operable under fire conditions stipulated in UR E15. Some spaces which are understood to have little or no fire risk according to MSC/Circ.1120 were treated as high fire risk areas in the UR. In Rev.3 definition of “high fire risk areas” is modified as stipulated in MSC/Circ.1120. Also it was decided to withdraw IACS UI SC165 (Electrical cables for the emergency fire pump) and the interpretations modified in line with MSC/Circ.1120 were incorporated into UR E15 (Rev.3).

3. **UR E10 (Rev.6)**
   UR E10 stipulates test specifications applicable to electrical, electronic and programmable equipment intended for control, monitoring, alarm and protection systems for use in ships. There was a request from Industry to include the requirements for wireless equipment also in the UR. Responding to this request, IACS examined the UR and updated some international standards referred to in the UR.
(4) UR Z18 (Rev.4)

UR Z18 stipulates the requirements for periodical survey of machinery. In Rev.4 of the UR it was clarified that, in cases where the vessel has been laid up or has been out of service for a considerable period because of a major repair or modification and only the overdue surveys are carried out, the next period of class will start from the expiry date of the special survey. If the special survey is carried out, the period of class will start from the survey completion date.

(5) UR M68 (Rev.1)

UR M68 stipulates formulae for dimensions of propulsion shafts and their permissible torsional vibration stresses. The UR applies to propulsion shafts such as intermediate and propeller shafts of traditional straight forged design and which are driven by rotating machines such as diesel engines, turbines or electric motors. In Rev.1 of the UR the dimension for shape of the slots of the shafting systems used for the calculation of intermediate shaft was amended.

(6) UR Z22 (Delete)

UR Z22 stipulated survey requirements for automatic air pipe heads. These requirements were incorporated into hull classification surveys in UR Z7 revised in May 2013 (Rev.20). This revision of UR Z7 came into force on 1 July 2014. Therefore IACS withdrew UR Z22 on 1 July 2014.

(7) UI SC234 / LL76 / MPC96 (Rev.2)

IACS UIs SC234, LL76 & MPC 96 was originally developed based on the IMO Resolution A.997 (25) ‘Survey Guidelines under the harmonized system of survey and certification 2007’. These HSSC Guidelines have been continually amended/updated and the current version is A.1053 (27) as amended by IMO Res. A.1076(28). IACS amended the text of the UIs to make it consistent with the requirements of the amendments of IMO Resolution A.1053 (27) and updated relevant survey requirements.

(8) UI SC269 (New)

UI SC269 was developed to provide an interpretation for the requirements related to arrangement of means of escape from the steering gear space in cargo ships (SOLAS Chapter II-2, Regulation 13.4.2.3). In the UI, it was clarified that steering gear spaces can have only one means of escape provided it leads directly onto the open deck. Also, the wording “direct access to the open deck” was clarified.

(9) UI SC165 (Delete)

UI SC165 provided interpretation of the requirements in Reg.II-2/10.2.2.3.1.2 related to electrical cables for the emergency fire pump. The interpretation was amended to be aligned with MSC/Circ.1120, and incorporated into Rev.3 of UR E15 (Electrical services required to be operable under fire conditions and fire resistant cables), (See above (2)).

(10) UI SC99 (Rev.2)

UI SC99 provides interpretation to SOLAS Reg. II-2/9.7.1.1, which allows flexible bellows constructed of combustible material may be used for connecting fans to the ducting in air conditioning rooms. The UI was revised to confirm that such flexible bellows may be used only on condition that their length does not exceed 600 mm. This makes the UI in line with MSC.1/Circ.1480.

(11) UI LL79 (New)

UI LL79 provides clarification of term “continuous hatchway treated as a trunk” in Regulation 36(6) of 1988 protocol of 1966 ICLL and its amendment MSC.143 (77). In the UI two types of ‘continuous hatchways’ are distinguished. In case of a single hatchway, the hatchway may be regarded as a ‘continuous hatchway’. In case more than one hatchway is fitted, hatchways may be regarded as ‘continuous hatchways’ provided that detached hatchways are linked by weathertight steel structures.

(12) UI SC82 (Delete)

UI SC82 provided interpretation to SOLAS Reg. II-1/36 which deals with noise levels in machinery spaces and makes reference to the Code on Noise Levels on Board Ships, adopted by IMO with Res. A.468 (XII). From 1 July 2014 SOLAS amendments
adopted by Res. MSC.338 (91) entered into force introducing new Reg. II-1/3-12 (making mandatory the Code on noise levels on board ships adopted by Res. MSC.337 (91)) and deleting existing Reg. II-1/36. Therefore IACS decided to withdraw UI SC82 from 1 July 2014.

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For any questions about the above, please contact:

NIPPON KAIJI KYOKAI (ClassNK)
External Affairs Division, Administration Center, Head Office
Address: 4-7 Kioi-cho, Chiyoda-ku, Tokyo 102-8567, Japan
Tel.: +81-3-5226-2038
Fax: +81-3-5226-2024
E-mail: xad@classnk.or.jp

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Preliminary Report of IMO SDC 2

The 2nd session of the IMO Sub-Committee on Ship Design and Construction (SDC 2) was held at the headquarters of the IMO in London from 16 to 20 February 2015. A summary of the outcome is given hereunder for your information.

Please note that this summary has been made based on informal information obtained from participants from ClassNK and Working Papers distributed during SDC 2 with priority given to disseminating the information as early as practicable.

Further, the outcome of SDC 2 will be brought up to the following meetings of its parent committees, i.e. Maritime Safety Committee (MSC) and Marine Environment Protection Committee (MEPC), and the final conclusion will be made afterward. Accordingly, please also note that the outcome of this meeting given hereunder is subject to the deliberation at the future IMO meetings.

1. Revision of SOLAS chapter II-1 subdivision and damage stability regulations

   (1) According to the revised SOLAS Chapter II-1, the probabilistic damage stability requirements harmonized with passenger ships requirements, as well as bottom damage stability requirements, are applied to ships keel laid on or after 1 January 2009. However, since many problems were pointed out by various Administrations soon after its enforcement, these requirements have been reviewed since the 52nd session of Sub-Committee on Stability and Load Lines and on Fishing Vessel Safety (SLF 52) held in January 2010.

   (2) At SDC 1, the amendments to Part A (General), B (Subdivision and stability), B-1 (Stability), B-2 (Subdivision, watertight and weathertight integrity) and B-3 (Subdivision load line assignment for passenger ships) were agreed. It was also agreed to continuously consider Part B-4 (Stability management) and regulation 35-1 (Bilge pumping arrangements) by the correspondence group (CG) for finalization at this session.

   (3) At this session, the results of the consideration conducted by the CG were reported, and the amendments to SOLAS Chapter II-1 including Part B-4 and regulation 35-1 were agreed, with a view to approval at MSC 95 in June 2015. Main contents of the amendments are as follows:

      1) Amendments to the definition of the length of ship;
      2) Clarification that butterfly valve may be used at the forepeak collision bulkhead for cargo ships;
      3) Amendments to make the requirements of the damage stability calculation for the spaces forward of the collision bulkhead mandatory; and
      4) Amendments to reinforce the requirements for the minimum vertical distance from the bottom of the wells constructed in the double bottom.

2. Testing arrangements for watertight compartment

   (1) At MSC 86 in May 2009, the amendments to SOLAS II-1/11 was referred to the Sub-Committee on Ship Design and Equipment (DE) based on the proposal from Cook Islands, Marshall Islands and IACS. Responding to this, the technical consideration has started since DE 56 in February 2012.

   (2) At SDC 1, the working group was established
and overall discussions were conducted, while the finalization was not achieved due to time constraint. Instead, it was agreed to continuously consider the alternative methods for testing by filling with water, and conditions to accept them at the CG.

(3) At this session, Japan, China, South Korea, Norway, Netherlands and Thailand supported the draft amendments to SOLAS II-1/11. However, Greece, Malta, Bahamas, US and Cyprus argued that these amendments are not necessary because the Administrations have already provided the authority for exemption of testing by filling water on a case-by-case basis, and the amendments may expand the exemptions.

(4) As a result of the deliberation, it was agreed to report to MSC 95 that the Sub-Committee concluded that the majority disagreed with the necessity of the amendments to SOLAS. Further, it was agreed to commit to MSC the decision on the course of action including the handling of the draft guidelines for testing by filling with water.

3. Unified interpretation on means of escape from ro-ro cargo spaces

(1) Development of the unified interpretation on means of escape from ro-ro cargo spaces as stipulated in SOLAS II-2/13.6 was proposed by Sweden at MSC 90 in May 2012. This issue has been under consideration by the Sub-Committee on Fire Protection (FP) followed by SDC.

(2) At SDC 1, views were split on the interpretation of terms “normally employed”, “safe escape” and “fore and aft ends of the ro-ro space”, which are stipulated in SOLAS II-2/13.6. Thus, this matter has been continuously discussed.

(3) At this session, interpretations as mentioned in paragraph (2) and an interpretation which requires to provide suitable signs and markings to indicate the route to the means of escape were agreed, with a view to approval at MSC 95.

4. Unified Interpretations (UIs)

(1) Unified interpretations (UIs) on vague wordings in international conventions such as SOLAS are developed by the related IMO Sub-Committees in order to ensure that the UIs shall be applied globally by Administrations.

(2) At this session, the following draft UIs were agreed. Further, it was agreed to submit them to MSC 95 with a view to approval.

1) Code on Noise Levels on board ships

Draft UIs on the Code on Noise Levels on board ships, adopted at MSC 91 in November 2012, to limit the level of noise from machinery spaces and noise exposure of crews to a certain level were developed. Main contents of the UIs are as follows:

- A navigating bridge provided with radio equipment should be regarded as a “navigating bridge” (65dB(A)).
- Enclosed type navigating bridge wings should be regarded as a part of “navigating bridge” (65dB(A)). However, enclosed navigating bridge with solid separation should be regarded as “navigating bridge wings” (70dB(A)).
- Air conditioning vents and louvres of cabin doors should be kept open during the taking of noise measurements on board, unless they are designed to be kept closed in the normal operating condition.
- As for the requirements regarding the airborne sound insulation properties, bathroom/toilet/lavatory is not regarded as a cabin. For this reason, partitions for compartments, such as those between bathrooms or between bathroom and passageway, are not required to have the airborne sound insulation properties. However, as these compartments are regarded as the origin of airborne sound, the partitions between these compartments and adjoining cabins are required to have the airborne sound insulation properties.
- A room consisting of day-room and bedroom should be regarded as a single “cabin”. For this purpose, partitions between day-room and bedroom need not have the airborne sound insulation properties.
- As for the requirements regarding airborne sound insulation properties for bulkheads, doors are regarded as a part of bulkheads. In cases of bulkheads consisting of acoustic insulation panels and doors, this
requirement is considered satisfactory where each component forming the surface of bulkheads has at least the required weighted sound reduction index (Rw). In cases where either acoustic insulation panels or doors forming part of bulkheads have Rw inferior to that required by the Code, the Rw of bulkheads can be evaluated by the calculation using both the airborne sound insulation properties and areas of the doors and the panels.

- The requirements regarding airborne sound insulation properties for decks should also apply to decks together with coverings and should, therefore, be tested in laboratory as in the onboard arrangement. However, they need not apply to ceiling panels.
- During the test of airborne sound insulation properties for doors in laboratory, louvres of cabin doors should be kept open. Further, doors should be tested with the associated door frame.

2) Cutting back of “A-60” class insulation

Unified interpretation on SOLAS II-2/9 has been circulated as MSC/Circ.1120, which allows cutting back the lower part of “A-60” class insulation to a maximum of 100 mm for drainage. At this session, it was clarified that the lining and steel coaming/gutter bar referred to in the circular are for accommodation spaces only.

3) Means of escape from machinery spaces of passenger ships and cargo ships

Draft UIs on SOLAS II-2/13.4.1 and 13.4.2 regarding means of escape from machinery spaces of passenger ships and cargo ships were developed. Main contents of the UIs are as follows:

- A “safe position” can be any spaces, from which access is provided and maintained clear of obstacles to the embarkation decks, excluding lockers and storerooms irrespective of their area, cargo spaces and spaces where flammable liquids are stowed.
- Inclined ladder/stairways in machinery spaces being part of, or providing access to, escape routes should not have an inclination greater than 60° and should not be less than 600 mm in clear width.
- A hatch may be fitted as means of egress from a protected enclosure (escape trunk) to an open deck. The hatch should have minimum internal dimensions of 800 mm x 800 mm.
- A protected enclosure (escape trunk) shall have diameter of at least 800 mm and it shall be clear of ship’s structure, with insulation and equipment. The ladder within the enclosure can be included in the internal dimensions of the enclosure, provided that the space of 600 mm in width is secured behind the ladder. When protected enclosures include horizontal portions, their clear width should not be less than 600 mm.

4) Two means of escape from machinery control room and main workshops

Draft UIs on the amended SOLAS II-2/13 to require two means of escape from machinery control rooms and main workshops located in machinery spaces of category “A” were developed. Main contents of the unified interpretation are as follows:

- A “main workshop” means a compartment enclosed on at least three sides by bulkheads or gratings, usually containing welding equipment, metal working machinery and workbenches.
- A “machinery control room” means a space which serves for control and/or monitoring of machinery used for ship’s main propulsion.
- A “continuous fire shelter” means a route which allows safe escape, without entering the machinery space, to a location outside the machinery space. Such a continuous fire shelter need not be a protected enclosure as envisaged by SOLAS II-2/13.4.1.1 or II-2/13.4.2.1.1. The details of a continuous fire shelter are as follows:
  - the boundaries of the continuous fire shelter shall be at least “A-0” class divisions and be protected by self-closing “A-0” class doors; and
  - the continuous fire shelter shall have minimum internal dimensions of at least 800 mm x 800 mm for vertical trunks and 600 mm in width.
for horizontal trunks.

5) Fire integrity of the boundaries of ro-ro/vehicle spaces

Draft UIs on SOLAS II-2/9 to require "A-30" fire integrity for the boundaries of ro-ro/vehicle spaces and "A-0" fire integrity for the boundaries between ro-ro/vehicle space and open deck were developed. Main contents of the unified interpretation are as follows:

✓ Decks to be insulated to "A-30" fire integrity are those boundaries of single spaces protected by their own fire-extinguishing system.

✓ Class "A" fire integrity does not apply to hatches fitted on open deck adjacent to ro-ro/vehicle spaces and on decks separating ro-ro/vehicle spaces, as well as to access doors to ro-ro/vehicle spaces fitted on open decks, provided that they are constructed of steel.

✓ Movable ramps and doors used for loading/unloading of vehicles shall be constructed of steel. Except for the working parts, such as cylinders, "A-30" fire integrity shall be applied to movable ramps and doors. Such movable ramps and doors need not be subject to fire test.

✓ Class "A" fire integrity does not apply to ventilators constructed of steel.

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For any questions about the above, please contact:

NIPPON KAIJI KYOKAI (ClassNK)
External Affairs Division, Administration Center Annex, Head Office
Address: 3-3 Kioi-cho, Chiyoda-ku, Tokyo 102-0094, Japan
Tel.: +81-3-5226-2038
Fax: +81-3-5226-2734
E-mail: xad@classnk.or.jp

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