**SDC7 (3 - 7 February 2020)**

The 7th session of the Sub-Committee on Ship Design and Construction (SDC6), was held at IMOHeadquarters from 3 to 7 February 2020.

***Revised Explanatory Notes (EN) to the SOLAS chapter II-1 subdivision and damage stability Regulations (Resolution MSC.429(98))***

SDC6 had finalized the draft amendments to SOLAS chapter II-1 to ensure consistency betweenparts B-2 and B-4 of SOLAS chapter II-1 with regard to watertight integrity, and MSC 101 hadapproved the draft amendments with a view to adoption at MSC 102.

Following the finalization of the draft amendments to SOLAS chapter II-1, it had agreed toconsequently amend the associated provisions in the Revised Explanatory Notes to the SOLASchapter II-1 subdivision and damage stability Regulations (Resolution MSC.429(98)).

IACS has requested:

- clarification on the requirements for semi-watertight doors above the bulkhead deck thatbecome intermittently immersed (fully or partly) at angles of heel in the required range ofpositive stability beyond the equilibrium position, in particular with respect to conflictingrequirements for such remotely controlled sliding semi-watertight doors that are requiredto also meet the fire protection requirements of SOLAS Regulation II-2/9.4.1.1.

- clarification on the provisions on the prevention of progressive flooding in the RevisedExplanatory Notes to the SOLAS chapter II-1 subdivision and damage stability Regulations(Resolution MSC.429(98)), for SOLAS Regulations II-1/7.7 and II-1/7-1 with respect to theformulation "of the same order as their stiffening structure" for pipes and valves and theirseparation distance to the bulkhead or deck, and proposing to use a separation distanceof 450 mm instead.

SDC7 succeeded in finalizing the draft consolidated Revised Explanatory Notes and the associateddraft MSC Resolution, with a view to adoption by MSC 102 as ResolutionMSC.429(98)/Rev.1.

***Draft explanatory note for SOLAS Regulation II-1/7-2.5.5***

SDC7 agreed that a new EN was not necessary because the new SOLAS amendments had notchanged the meaning of the requirements.

***Explanatory notes for SOLAS Regulations II-1/17.1 and II-1/17.2***

SDC7 agreed to some modifications to the ENs for SOLAS Regulations II-1/17.1 and 17.2, in orderto provide clarity with regard to grandfathering. T

he references to SOLAS Regulation II-2/9.4.1.1.2has been replaced by the updated references to Regulation II-2/9.4.1.1.3.

***Explanatory note for SOLAS Regulation II-1/17.3***

SDC7 agreed that, to be considered capable of preventing the passage of water whenintermittently immersed in the required range of positive stability, the doors should meet awatertight standard for a minimum 1 m head of water.

This pressure head is sufficient for thisapplication and would provide a consistent standard for the approval of these doors.

Since these doors are located above the bulkhead deck, they must comply with a combination ofwatertight and fire protection requirements. In this context, these doors are required to complywith the fire protection requirements in SOLAS chapter II-2, and that because these doors are notwatertight doors that comply with the requirements in Regulation II-1/13, the exclusions forwatertight doors in chapter II-2 do not apply.

On this basis, SDC7 agreed to include relevantadditional requirements for these doors, based on the watertight door requirements in Regulation13.

***Explanatory notes for SOLAS Regulations II-1/7.7, 7-1.1.1 and II-1/7-1.1.2***

SDC7 agreed to add a provision that in no case should the separation distance on either side ofthe bulkhead or deck be more than 450 mm measured from the valves near end to the bulkheador deck. The sub-committee also agreed to include the necessary grandfathering clauses.

***Semi-watertight sliding doors above the bulkhead deck***

SDC7 agreed that the intention had been to include these semi-watertight doors in the "nonapplication" statement in SOLAS Regulation II-2/9.4.1.1.5 for power-operated watertight doors.

***Draft amendments to section 3 of MSC.1/Circ.1572 on watertight door requirements in SOLASchapter II-1, part B-1***

SDC6 had considered the updated IACS Unified Interpretation SC156 on "Doors in watertightbulkheads of cargo and passenger ships" (UI SC 156/Rev.1), which required consequentialamendments to the related provisions in MSC.1/Circ.1464, which had been replaced byMSC.1/Circ.1572.

SDC7 has finalized the draft amendments to section 3 of MSC.1/Circ.1572, with a view tosubmission to MSC 102 for approval.

In particular, SDC7 agreed that:

- with regard to paragraphs 3.5.1 and 3.5.4, for passenger ships, the alarms should belocated at the central operating console at the navigation bridge. For cargo ships, thealarms should be located at the navigation bridge;

- the correct reference in footnotes 5 and 6 is to the Code on Alerts and Indicators, 2009,(Resolution A.1021(26)).

The revised MSC.1/Circ.1572 should only apply to ships constructed on or after 1 January 2020 orfrom the effective date of the revised circular.

***Need to develop guidance for SOLAS Reg II-1/22.3***

The provision in Regulation II-1/22.3, which requires the Administration to authorize anywatertight doors that are permitted to be opened during navigation, is applicable to cargo ships.

In this regard, concerns were expressed that there is currently no guidance for cargo ships in this5respect as the Revised guidance for watertight doors on passenger ships which may be openedduring navigation (MSC.1/Circ.1564) only applies to passenger ships.

Having noted that SOLAS Regulation II-1/22.3 refers to guidance issued by the Organization, whichAdministrations shall take into account when authorizing watertight doors that may be openedduring navigation, SDC7 agreed to include a new EN for Regulation II-1/22.3, explaining that forcargo ships, these authorizations are left to the discretion of the Administration.

SDC7 estimated that there is no need to develop guidance for SOLAS Regulation II-1/22.3related to opening of watertight doors during navigation on cargo ships.

***Safety measures for non-SOLAS ships operating in Polar waters***

The Assembly, at its thirty-first session, had adopted ResolutionA.1137(31) on Interim safety measures for ships not certified under the SOLAS Conventionoperating in polar waters, urging Member States, on a voluntary basis, to implement the safetymeasures of the Polar Code, as far as practicable, for ships not certified under the SOLASConvention operating in polar waters, including fishing vessels of 24 m in length and over andpleasure yachts of 300 gross tonnage and above not engaged in trade.

SDC7 had for its consideration draft Guidelines for safety measures for fishing vessels of 24 m inlength and over operating in polar waters (Fishing Vessel Guidelines), and the draft Guidelines forpleasure yachts of 300 gross tonnage and above not engaged in trade operating in polar waters(Pleasure Yachts Guidelines).

***Draft guidelines for fishing vessels of 24m in length and over operating in polar waters***

SDC7 agreed to the draft Guidelines for fishing vessels of 24 m in length and over operating inpolar waters and the associated draft MSC circular, pending comments from HTW 7 on paragraph11.5, with a view to submission to MSC 103 for approval.

***Cape Town Agreement***

SDC7decided that with respect to the draft Fishing Vessel Guidelines, alignment with theprovisions of the 2012 Cape Town Agreement should be achieved without directly referencingprovisions therein, taking into account the non-mandatory status of the draft guidelines.

Owing to the fact that the Cape Town Agreement was pending entry into force, therefore, SDC7agreed only to include a general reference in the "Preamble" section, i.e. "These Guidelines aredesigned to align with the pending Cape Town Agreement of 2012."

No further direct reference tothe Cape Town Agreement of 2012 in the draft guidelines was agreed.

The definition of fishing vessel in the draft guidelines was deleted, in accordance with the decisionregarding the deletion of proposed options for a definition of pleasure yacht.

Personal survival kit and group survival kitSDC7 prepared the modified lists of sample items for inclusion in a personal survival kit and groupsurvival kit.

***Draft guidelines for pleasure yachts of 300 GT and above not engaged in trade operating inpolar waters***

SDC7 agreed to the draft Guidelines for pleasure yachts of 300 gross tonnage and above notengaged in trade operating in polar waters and the associated draft MSC circular, with a view tosubmission to MSC 103 for approval.

The sub-committee agreed to incorporate modified lists of sample items for inclusion in apersonal survival kit and group survival kit.

In addition, it agreed to add to these guidelines undersection 4.1 provision to carry insulated immersion suits onboard.

During the discussion on the section for navigation equipment, it was underlined that a number ofrequirements on different ships under SOLAS Chapter V, e.g. ships below 150 GT engaged on anyvoyage and ships below 500 GT not engaged on international voyages, could have an impact onpleasure yachts of 300 GT and above not engaged in trade operating in polar waters.

In thiscontext, it was agreed that Administrations should be encouraged to apply the navigationalprovisions in the draft Guidelines to pleasure yachts of 300 GT and above not engaged in tradeoperating in polar watersRegarding communications and voyage planning, SDC7 agreed to use similar provisions thanunder the draft Guidelines for fishing vessels of 24 m.

***Consideration on the regulatory gap***

SDC7 had for its consideration that pleasure yachts of 300 GT and above, but less than 500 GT,engaged in trade, i.e. commercial yachts and cargo vessels of 300 GT to 500 GT, were not coveredin the draft Guidelines, or under the SOLAS Convention, and therefore that a regulatory gapexists.

In this context, SDC7 invited interested Member States and international organizations tosubmit proposals to address the identified regulatory gap.

***Draft interim guidelines for the second generation intact stability criteria***

SDC7 had for its consideration the draft Interim guidelines on second generation intact stabilitycriteria (Interim guidelines) for the intact stability assessment of ship dynamics in waves as aconsolidated draft instrument comprising three sets of interim guidelines, namely guidelines onvulnerability criteria, for direct stability failure assessment and for operational measures.

SDC6had agreed to consolidate the three separate draft interim guidelines on second generation intactstability criteria (i.e. draft Interim guidelines: on vulnerability criteria, on specification of directstability assessment procedures and on preparation of operational limitations and operationalguidance) into a single set of guidelines to include all five stability failure modes, with a view tofinalization at SDC7.

SDC7 agreed to the draft Interim guidelines on the second generation intact stabilitycriteria and the associated draft MSC circular, with a view to approval by MSC 102.

Member States and all parties concerned are going to be invited to use the annexed Interimguidelines as complementary measures when applying the requirements of the mandatorycriteria of part A of the Intact Stability Code.

SDC7, noting the merit of not being restricted to certain paragraphs/sections of the draft Interimguidelines when drafting, finalizing and, if necessary, amending the Explanatory notes, agreed toremove all references to the draft Explanatory notes in the text.

***Draft explanatory notes for the second generation intact stability criteria***

SDC7 discussed the appropriate method to incorporate the draft Explanatory notes, whether theyshould be issued as a standalone circular or annexed to the Interim guidelines, once approved.

The Plenary agreed that the Explanatory notes should not be annexed to the Interim guidelinesand should instead be issued as a separate circular for facilitating their revisions in the future,without having to amend the Interim guidelines.

SDC7 did not embark on any drafting work to further develop the draft Explanatory notes, withthe understanding that the re-structuring work was to be conducted first by the CorrespondenceGroup.

***Draft new SOLAS chapter XV***

SDC7 agreed that the draft new chapter XV of SOLAS will apply to ships constructed on or afterthe date of entry into force of the new chapter and to ships constructed prior to the entry intoforce date starting to carry industrial personnel after the entry into force date.

According to the sub-committee, the decision on the application to ships currently transportingindustrial personnel is a policy decision that is under the purview of the Committee.

SDC7 invitedMSC 102 to consider the application of the draft new chapter XV of SOLAS to ships currentlytransporting industrial personnel in accordance with the provisions of the InterimRecommendations on the safe carriage of more than 12 industrial personnel on board vesselsengaged on international voyages (ResolutionMSC.418(97)).

The draft RegulationXV/3.2 remains in square brackets for the Committee's decision prior to the approval of the draftnew chapter XV of SOLAS.

Consequently, the definitions of the terms "Ship constructed" and "At similar stage ofconstruction" (draft Regulations XV/1.4 and 1.5), which are directly related to the application toships currently transporting industrial personnel, remain in square brackets pending theCommittee's decision on the draft Regulation XV/3.2

***Matters related to high-speed craft***

Recalling the urgency of the entry into force of a mandatory instrument regulating the safecarriage of industrial personnel, the Group agreed that if the work is not finalized at SDC8, thedraft new SOLAS chapter XV will not enter into force in 2024.

Therefore, it would be necessary toconsider the possibility of having the work done in a two-phase approach (i.e. the second phasefor crafts certified in accordance with SOLAS chapter X), underlining that the primary goal is todevelop a complete package of mandatory instruments for the carriage of industrial personnel intime for the entry into force in 2024.

SDC7 set up a two-phase approach of the work on the development of mandatoryprovisions addressing safety standards for the carriage of industrial personnel, in case the work onmatters related to high-speed craft is not finalized at SDC8, for referral to MSC 102 forendorsement.

***Input from the HTW Sub-Committee***

The delegation of France, supported by the delegation of the Bahamas, considered that humanelement is an important issue and gained that the HTW Sub-Committee should be informed indetail of the work done in the Working Group on this issue.

***Carriage of dangerous goods on ships transporting industrial personnel***

SDC7 agreed upon the following principles on which the goals, functional requirements andRegulations were developed:

- industrial personnel are not involved with the handling of dangerous goods; and

- dangerous goods brought on board by industrial personnel for their offshore activities, forthe purpose of the draft IP Code, are considered as cargo.

Having finalized the draft amendments to the goals, functional requirements and Regulations forthe carriage of dangerous goods, SDC7 has referred those draft amendments to CCC7 for noting,and to ESPH26 for concurrent agreement.

***Development of amendments to SOLAS chapter II-1 to include requirements for waterlevel detectors on non-bulk carrier cargo ships with multiple cargo holds***

In relation to the El Faro total loss, SDC7 had for its consideration proposal from USA to expandthe applicability of SOLAS Regulation II-1/25, which was currently applicable to single hold cargoships, to include cargo ships with multiple cargo holds by means of a new SOLAS Regulation II-1/25-1.

The sub-committee began with a discussion on the differences between the existing Regulation II-1/25 for water level detectors on single hold cargo ships other than bulk carriers and theproposed new Regulation II-1/25-1 for water level detectors on multiple hold cargo ships otherthan bulk carriers.

The discussion primarily focused on application of a damage stability standardand hull arrangements. In this regard, SDC7 agreed that the draft new Regulation 25-1 was areasonable safety enhancement that should apply irrespective of whether the ship complies witha damage stability requirement or the hull arrangements.

SDC7 agreed to a draft new SOLAS Regulation II-1/25-1, with a view to submission to MSC102 forapproval and subsequent adoption on water level detectors on multiple hold cargo ships otherthan bulk carriers and tankers.

***Provisions for Remote Inspection Techniques (RITs)***

IACS submitted to SDC7 draft amendments to the 2011 ESP Code to allow the use of RemoteInspection Techniques (RITs), such as Remotely Operated Vehicles (ROVs) and real-time sensingdevices that are carried by drones in the survey of existing ships as an alternative to a close-upsurvey.

SDC7 decided that, while the use of RIT for surveys under the 2011 ESP Code has beengenerally supported, the matter requires a broader consideration and that the Organization mayconsider taking a holistic approach in regulating RIT, including other instruments than ESP Code.

SDC7 agreed to invite interested Member States and international organizations to submitproposals on the matter to the cub-committee.

***Thickness measurements at the first renewal survey of double hull oil tankers***

IACS submitted amendments to annex 2 of part A of annex B of the 2011 ESP Code as amended byResolution MSC.461(101), whereby it would be sufficient to consider only suspect areas forthickness measurements at the first renewal survey of double hull oil tankers.

In order to determine the continued necessity of the requirement for taking thicknessmeasurements of the areas identified in the 2011 ESP Code, IACS collected data from its membersocieties.

The actual wastage reported at the first renewal survey was determined by a randomselection of 157 double hull oil tankers with cargo tanks that were either fully coated, partiallycoated or not coated.

This data showed that the normal range of reported wastage was minimal and, on average, was inthe range of approximately zero to three percent.

Even considering localized extreme values, themaximum reported wastage was 11%, which is still well below the substantial corrosion levelSDC7 agreed to the draft amendments, for submission to MSC 102 with a view to approval andsubsequent adoption.

***Draft amendments to Regulation 28.3.1 of MARPOL Annex 1, Regulation 27(13)(a) of theProtocol of 1988 relating to the International Convention on Load Lines, 1966, paragraph 2.9.2.1of the IBC Code and paragraph 2.7.1.1 of the IGC Code, concerning doors in watertightbulkheads***

IACS proposed to align the requirements with respect to doors in watertight bulkheads amongdifferent IMO instruments with that of the SOLAS Convention by amending Annex I of MARPOL,the 1966 Load Lines Convention, as well as the IBC and IGC Codes by explicitly excluding "hingedwatertight doors that are normally closed at sea" when considering openings through whichprogressive flooding or down-flooding may take place.

During the development of Rev.1 of UI SC156, which was submitted by IACS to SDC6 (SDC6/9/1,annex), IACS noted the following inconsistencies between requirements in the SOLAS, MARPOLand Load Line Conventions, the International Code for the Construction and Equipment of ShipsCarrying Dangerous Chemicals in Bulk (IBC Code) and the International Code for the Constructionand Equipment of Ships Carrying Liquefied Gases in Bulk (IGC Code) regarding doors in watertightbulkheads:

- SOLAS Regulation II-1/13-1.2 requires watertight doors that are used while at sea to be ofthe sliding type; on the other hand, doors that are normally closed at sea are not explicitlyrequired to be of the sliding type, i.e. they can be "hinged" type (SOLAS Regulation II-1/13-1.3);

- if, in the damage stability calculations, watertight doors are considered to be immersed,then:

-Regulation 28.3.1 of MARPOL Annex 1 requires such doors to be of the slidingtype; the same requirement appears in paragraph 2.9.2.1 of the IBC Code andparagraph 2.7.1.1 of the IGC Code; and

-Regulation 27(13)(a) of the Load Lines Convention requires watertight doors to beof the sliding type, except for doors separating a main machinery space from asteering gear compartment where they may be of the hinged type.

In addition, China proposed amendments to Annex I of MARPOL, the 1966 Load Lines Conventionand the IBC and IGC Codes with respect to permitting hinged watertight doors as an alternative toremotely operated sliding doors, provided that they are required "to be kept permanently closed"at sea, have the same level of watertight integrity and are equipped with a sound alarm device.

SDC7 agreed to the draft amendments to Regulation 28.3.1 of MARPOL Annex 1, Regulation27(13)(a) of the Protocol of 1988 relating to the International Convention on Load Lines, 1966,paragraph 2.9.2.1 of the IBC Code and paragraph 2.7.1.1 of the IGC Code, which should only beapplied to new ships, for submission to the Committees for approval, as appropriate, andsubsequent adoption with a view to entry into force on 1 January 2024.

The sub-committee noted that the requirement in SOLAS Regulation II-1/13-1.3, which allowshinged watertight doors that are normally closed at sea, is limited to "access doors".

SDC7agreed that the "access doors" limitation should be included in the amendment text, whileconsidering that the term "access doors" was unclear and therefore should be clarified to ensureconsistent application.

***Correction to the Guidelines for safe access to tanker bows (ResolutionMSC.62(67)) with regardto foot-stops***

SDC7 had for its consideration proposal from IACS to amend the Guidelines for safe access totanker bows (Resolution MSC.62(67)) with respect to foot-stops in order to replicate therespective mandatory provision on foot-stops in Regulations 25-1(2)(e) and (f) of the InternationalConvention on Load Lines, 1966.

SDC7agreed to the draft amendments to the Guidelines for safe access to tanker bows(ResolutionMSC.62(67)), for submission to MSC 102 for adoption as minor corrections, fordissemination as Resolution MSC.62(67)/Rev.1.

***Minor correction to the 1988 LL Protocol***

SDC7 agreed to the draft amendments to the 1988 LL Protocol, for submission to MSC102 for approval, with a view to subsequent adoption as minor corrections.It consists in deleting the reference to "inlets" therein, which is an editorial error.

***Correspondence groups established by SDC7***

1. Correspondence Group on Intact Stability (IS)

Terms of reference:

- further develop the draft Explanatory notes on the second generation intactstability criteria;

- structure the draft text in a similar manner to the paragraphs/sections of the draftInterim guidelines.

2. Correspondence Group on Industrial personnel

Terms of reference:

-further develop the draft IP Code, with a view to finalization;

-further consider the draft new SOLAS chapter XV on matters related to high-speedcraft;

-further consider the draft part V (Additional Regulations for ships certified inaccordance with SOLAS chapter X) of the draft IP Code.