

IMO SUB-COMMITTEE ON SHIP DESIGN & CONSTRUCTION 17 – 21 JANUARY 2022

The IMO Sub-Committee on Ship Design & Construction held its 8th Session (SDC 8) remotely from Monday 17 through Friday 21 January 2022 under the Chairmanship of Mrs Turid Stemre (Norway) and her Vice Chair, Mr Jaideep Sirkar (United States). Due to her unavailability for SDC 9, Mrs Stemre will be succeeded at SDC 9 by Mr Erik Tvedt (Denmark) who was duly elected, while Mr Sirkar will remain as his Vice-Chair.

The session was attended by delegations from Member States, Associate Members of IMO and observers from inter-governmental and non-governmental organisations in consultative status.

Three Working Groups (WG), one Expert Group (EG) and two Drafting Groups were formed and chaired as follows:

WG1 Amendments to the ESP Code, Mr. E. Tvedt (Denmark);

WG2 Revision of the Performance standards for water level detectors, Mr. T. Theocharis (Marshall Islands);

WG3 Underwater Noise Reduction, Mr. I. Lancaster (New Zealand);

EG Development of Functional Requirements for SOLAS Chapter II-1, Dr. K. Yoshida (Japan);

DG1 Development of Explanatory Notes to the Interim guidelines on second generation Intact stability criteria, Prof. Szozda (Poland); and,

DG2 Carriage of more than 12 Industrial Personnel on board Vessels Engaged on International Voyages, Mr. K. Paulsen (Norway).

ADDRESS BY THE SECRETARY-GENERAL OF IMO. It being the first formal meeting of 2022, Mr Kitack Lim wished all a happy New Year. On a more sombre note, he expressed his condolences to the Government and people of Tonga following the volcanic eruptions that caused a cloud of volcanic ash and tsunami wave, about which there was little information at that juncture.

Despite the ongoing pandemic, he reported that the work of the Organisation has continued in an exemplary fashion, as has the performance of the maritime sector as a whole. However, he felt that we must not relent in our efforts to support Seafarers in getting their vaccinations and boosters, to re-join their families and to facilitate their access to work and crew change; also, pressure should continue to be applied to Administrations and national authorities to recognise Seafarers as essential workers and to preserve their rights.

This year's World Maritime Theme is "New Technologies for greener-shipping", highlighting IMO's commitment to support transition of the maritime sector into a sustainable green future through technological innovation.

Despite almost 2 years elapsing since the last session of SDC, work has continued through correspondence groups, an Intersessional Working Group and many informal meetings to prepare for this session at which two very important items of work are expected to complete.

First, finalisation of the new SOLAS chapter XV and the associated new Code for Industrial Personnel, both of which provide mandatory provisions for ships giving them passage in order to ensure their safety.

The other instrument awaiting completion is the draft Explanatory Notes to the Interim guidelines on second generation intact stability criteria, the climax of more than 20 years of hard work. The Interim guidelines approved by the Sub-Committee are being used on a trial basis and are of paramount importance to provide uniform interpretation and application.

Mr Lim next singled out a new output on the Sub-Committee's agenda, namely a review of the MEPC guidelines for the reduction of underwater noise emitted by ships. Experts will examine the barriers to the uptake of the guidelines, which is currently very low, in an effort to make ships quieter and to protect the world's oceans and their inhabitants from ship-induced noise pollution. Further important matters to be considered will include:

- Safety objectives and functional requirement of the guidelines on alternative design and arrangements for SOLAS chapter II-1;
- Amendments to the ESP Code;
- Requirements for emergency towing equipment for ships in addition to those already in place for tankers;
- The revision of the MODU Codes to prohibit the use of asbestos; and,
- A revision of the performance standards for water level detectors to address multi-cargo hold cargo ships.

In concluding, the Secretary-General paid a warm tribute to Kees Metselaar of the Netherlands, recently deceased, a long-time IMO delegate and a friend of many attending the meeting.

With this, he wished the Sub-Committee every success and a happy, prosperous and healthy 2022.

OUTCOME OF MSC 104 AND MEPC 77. The Sub-Committee noted that MSC 104, having approved the draft amendments to the 1988 LL Protocol, MARPOL, the IBC and IGC Codes related to watertight doors on cargo ships, had agreed that they should apply to new and existing ships upon their entry into force, and that MEPC 77 had concurred with the above decision for the related amendments adopted under MARPOL Annex I and the IBC Code.

MANDATORY INSTRUMENT AND/OR PROVISIONS ADDRESSING SAFETY STANDARDS FOR THE CARIAGE OF MORE THAN 12 INDUSTRIAL PERSONNEL (IP) ON BOARD VESSELS ENGAGED ON INTERNATIONAL VOYAGES. The Sub-Committee considered the report of the IP Intersessional Working Group containing the drafts of the new SOLAS chapter XV and the new International Code of safety for ships

carrying industrial personnel (IP Code) (the IP instruments). Five related documents were also considered, following which the Intersessional report was approved in general and the following decisions made:

- In order to address the inherent ambiguity in the application of IP and SPS Codes, Explanatory Notes should be developed after finalisation of SOLAS chapter XV and the IP Code to clarify the interaction between the two Codes and the different categories on board;
- Passenger ship safety requirements, including transfer arrangements could be developed as part of the second phase of work related to the IP Code;
- IP Code provisions for the Carriage of IP on high-speed craft (HSC), are only applicable to those certified to the 2000 HSC Code;
- The number of persons on HSC cargo craft will be limited at present, to 60 persons;
- With respect to future work on this item, it was agreed to keep the current output on the biennial agenda in order to consider a second phase of regulatory development for high-speed carrying more than 60 persons; and,
- To endorse the draft SOLAS chapter XV and draft IP Code.

As already mentioned, the Sub-Committee agreed that a second phase of work related to the IP Code should be carried out, subject to approval by the Committee, and proposals for the work were invited to SDC 9.

Establishment of the IP Drafting Group. Following discussion, the IP Drafting Group was instructed to finalise the draft new SOLAS chapter XV and the draft new IP Code and to prepare part III of the check/monitoring sheet for the process of amending the Convention and related mandatory instruments.

Having considered the report submitted by DG 2, the Sub-Committee approved it in general, and in particular:

- Agreed to the draft new SOLAS chapter XV, sending it to MSC 105 for approval;
- Noted the finalisation of the draft new IP Code and in particular, the view of the Group that there is no need to add any provisions to further clarify the prohibition of berthing for IP;
- Agreed the draft new IP Code, for submission to MSC 105 for approval;
- Agreed to Part III of the check/monitoring sheet for the process of amending the (SOLAS) Convention and related mandatory instruments, with a view to submission to MSC 105 for consideration; and,
- Modifying the title of the output to “Further development of the IP Code and associated guidance”.

DEVELOPMENT OF EXPLANATORY NOTES TO THE INTERIM GUIDELINES ON SECOND GENERATION INTACT STABILITY CRITERIA. With the completion of the *Interim guidelines on the second generation intact stability criteria*, approved by MSC 102,

the Sub-Committee acknowledged the urgent need for finalisation of the associated Explanatory Notes at this session. Work done on the Notes by the Correspondence Group preceding SDC 8 was considered, together with two commenting submissions from China which led to discussion on the following aspects:

- The definition for ships with an extended low weather deck (LWD) which led to the conclusion that more data and information is needed on a definition of the term “ship with an extended LWD”;
- Trial use of the Interim guidelines for ships with moon pools, following which interested delegations were invited to study the application of the interim guidelines, including the effect of moon pools on various parameters, including roll damping and to include ships more susceptible to parametric roll;
- An agreement to task DG 1 to finalise the text of the Explanatory Notes; and,
- Following a provision in the Interim guidelines to keep them under review and taking into account experience in design and operation of ships gained during their application (plus four information papers by China), delegates were invited to report their experience to future sessions of the Sub-Committee.

Report of the Drafting Group (DG 1) on Intact Stability. The Sub-Committee approved the report of DG 1 in general, and in particular:

- Noted the Group discussions on the corrections incorporated into the draft explanatory notes for clarity and consistency;
- Agreed the draft Explanatory notes to the Interim guidelines on the second generation intact stability criteria and the associated MSC circular, for submission to MSC 105; and,
- Encouraged interested Member States and international organisations to provide feedback on the use of the draft explanatory notes, in expectation of MSC approval.

AMENDMENTS TO THE ESP CODE. The Sub-Committee recalled that resolution MSC.461(101), which replaced the complete text of the existing 2011 ESP Code after a comprehensive review, had entered into force on 1 January 2021. Document SDC 8/6 provided the outcome of MSC 103 with respect to Brazil (et al) proposing to address safety issues identified during the flag State’s investigation of the loss of **MV Stellar Daisy** by increasing the frequency of inspections of void spaces, based on the condition of hard coatings. In this connection, it was noted that MSC 103 had supported the proposal in general, as well as the comments by IACS on a perceived lack of evidence that would warrant additional survey requirements of void spaces for all bulk carriers. Following consideration, it was agreed to instruct WG 1 to finalise the draft ESP Code amendments, based on relevant MSC 102 documents and to also consider document SDC 8/6/1 by China which argued that there is no evidence that all bulk carriers should follow a stricter survey regime.

Report of the Working Group (WG 1). The Sub-Committee approved the report by WG 1 in general, and in particular:

- Noted the discussion on the requirements for ballast tanks on bulk carriers and the amendment to the examination criteria for ballast tanks in all bulk carriers, regardless of build, from POOR to less than GOOD;
- Noted the discussions on the frequency of examination of void spaces bounding cargo holds on certain bulk carriers in the survey requirements;
- Agreed to separate the requirements of examining ballast tanks and void spaces bounding cargo holds and to introduce examination requirements for double side-skin bulk carriers exceeding 20 years of age and of 150 metres in length and upwards with void spaces bounding cargo holds as additional provisions to part B of annex A to the 2011 ESP Code;
- Noted the discussions on oil tankers carrying oil in independent tanks; tank testing of ballast holds of bulk carriers; tank testing of cargo tanks on oil tankers; examination of ballast tanks and void spaces at annual surveys; and, updates of the references.
- Agreed to the draft amendment to the 2011 ESP Code for submission to MSC 105; and,
- Authorised the IMO Secretariat to make editorial changes to the draft consolidated 2011 ESP Code, as appropriate.

DISCONTINUATION OF OUTPUTS. In light of the absence of any submissions, the Sub-Committee agreed to invite the Committee to delete the outputs on:

- Mandatory application of the Performance standard for protective coatings for void spaces on bulk carriers and oil tankers; and,
- Performance standard for protective coatings for void spaces on all types of ships.

SAFETY OBJECTIVES AND FUNCTIONAL REQUIREMENTS OF THE GUIDELINES ON ALTERNATIVE DESIGN AND ARRANGEMENTS FOR SOLAS CHAPTERS II-1 AND III.

The Sub-Committee recalled that, after approval of the revision of the *Guidelines on alternative design and arrangements for SOLAS chapters II-1 and III*, MSC 101 had agreed that the remaining work on the safety objectives and functional requirements of the Revised Guidelines should be limited to SOLAS chapter II-1. Consequently, the output was transferred from SSE to SDC and the Correspondence Group (CG) on Safety Objectives and Functional Requirements for SOLAS chapter II-1, instructed to report to SDC 8.

In examining the report of the CG with respect to the actions requested, the Sub-Committee took the following decisions:

- Agreed to the order of priority for consideration of the parts of SOLAS chapter II-1, i.e. first part D, followed by parts C and E;
- Noted the discussion on the hazard identification and hazards identified by the Group; and,

- In considering the draft goal, functional requirements and expected performances of part D of SOLAS chapter II-1, agreed to the proposed text, subject to further modification by the Working Group.

Report of the Experts' Group. Having considered the report of the Experts' Group on Safety objectives and functional requirements for SOLAS chapter II-1, which it approved in general, the Sub-Committee:

- Agreed, in principle, to the draft goal, functional requirements and expected performances for SOLAS chapter II-1, part D;
- Endorsed the view of the Group on the method of expression of functional requirements and expected performances;
- Endorsed the view of the Group regarding the remaining work on the draft goal, functional requirements and expected performances for SOLAS chapter II-1, part D;
- Endorsed the time frame for finalising the draft circular; and,
- Re-established the Correspondence Group with terms of reference as agreed.

UNIFIED INTERPRETATION (UI) TO PROVISIONS OF IMO SAFETY, SECURITY, AND ENVIRONMENT-RELATED CONVENTIONS. A continuous item on the biennial agenda, the Assembly at its twenty-eighth session, expanded the output to include all proposed UIs to provisions of IMO safety, security, and environment-related Conventions, so that any newly developed or updated draft UIs could be submitted for consideration with a view to developing an appropriate IMO interpretation.

The following items were considered by the Sub-Committee:

- Clarification of paragraph 1.3.3 of part I-A of the Polar Code where the Sub-Committee agreed that the operational assessment required by paragraph 1.5 of part I-A of the Polar Code should not be used to exempt or reduce equipment requirements for ships subject to the Code and that neither SOLAS chapter XIV nor the Polar Code are open to such an interpretation;
- An IACS UI proposal concerning regulation 27(3) of the 1988 Load Lines Protocol needing modification, whilst agreed in principle, was passed to the WG on the Revision of the Performance Standards for Water Level Detectors for a detailed appraisal;
- A proposed UI on amendment to stability/loading information in conjunction with the alterations of lightweight which was referred to WG 2;
- A draft revised *UI regarding timber deck cargo in the context of damage stability requirements* which the Sub-Committee endorsed for submission to MSC 105;
- A proposal to amend section 4.2 of the annex to MSC.1/Circ.1572/Rev.1 concerning acceptable equivalent on service tank arrangements to meet SOLAS requirements was discussed and sent to WG 2 for further work; and,
- Following agreement to a minor revision of the draft UI to “workshops other than those forming part of machinery spaces” to ensure that it included the entire enclosed workshop, the Sub-Committee forwarded the draft UI to MSC 105 for approval.

REVISION OF THE 1979, 1989 AND 2009 MODU CODES AND ASSOCIATED MSC CIRCULARS TO PROHIBIT THE USE OF MATERIALS CONTAINING ASBESTOS, INCLUDING CONTROL OF THE STORAGE OF SUCH MATERIALS ON BOARD.

The Sub-Committee considered document SDC 8/11 by the Russian Federation proposing amendments to the 2009, 1989 and 1979 MODU Codes to prohibit materials which contain asbestos, as well as a draft UI on the matter. A document by China suggested a grace period before prohibiting asbestos-containing materials (ACM) set out in the 1979 and 1989 MODU Codes, as well as a list of ACMs in the draft UI. Although there was general support for the proposal, some delegations expressed the view that it was too long a period for exempting ACMs on units subject to the 1979 and 1989 Codes, following which the Sub-Committee agreed to progress the matter intersessionally by establishing a correspondence group which was subsequently enacted, with instructions to submit a written report to SDC 9.

REVISION OF THE PERFORMANCE STANDARDS FOR WATER LEVEL DETECTORS ON BULK CARRIERS AND SINGLE HOLD CARGO SHIPS OTHER THAN BULK CARRIERS (RESOLUTION MSC.188(79)).

It was recalled that MSC 103 had adopted SOLAS regulation II-1/25-1 on water level detectors on multiple cargo ships other than bulk carriers and tankers, which is expected to enter into force on 1 January 2024. With this adoption, there was an agreement that the resolution required a review, so as to address water level detectors on multi-hold cargo ships, and consequently, MSC 103 had agreed to:

- Extend the scope of the output and change its title to “Revision of the Performance standards for water level detectors on bulk carriers and single hold cargo ships other than bulk carriers;
- Instruct SDC to review the Performance Standards to include provisions for detectors for multiple hold cargo ships and to consider the equivalency between bilge alarms and water level detectors; and,
- Extend the target completion year to 2022.

Having discussed document SDC 8/13 proposing amendments to the Performance Standards together with a commenting document proposing amendments to ensure compliance with the alarm requirements in SOLAS regulations, as well as proposing a new section 6 to be added on periodical inspection and maintenance, the Sub-Committee agreed the draft amendments and instructed WG 2 to consider both documents in detail with a view to finalisation.

Report of the Working Group. Following subsequent deliberation by WG 2, the Sub-Committee approved the Group’s report in general, and in particular:

- Agreed the draft Performance standards for water level detectors on ships subject to SOLAS and the associated draft MSC resolution for submission to MSC 105 for approval and subsequent adoption;

- Endorsed the draft amendments to *Unified interpretations relating to the Protocol of 1988 relating to the International Convention on Load Lines, 1966* and associated MSC circular for submission to MSC 105 for approval;
- Endorsed the new draft UI of SOLAS regulations relating to the amendment to the stability/loading information in conjunction with the alterations for lightweight, for submission to MSC 105 for approval; and,
- Noted the consideration concerning the revision of UIs of SOLAS chapters II-1 and XII, of the technical provisions for means of access for inspections and of the performance standards for water level detectors on bulk carriers and single hold cargo ships other than bulk carriers with respect to the UI of SOLAS regulation II-1/26.

REVIEW OF THE GUIDELINES FOR THE REDUCTION OF UNDERWATER NOISE (MEPC.1/CIRC.833) AND IDENTIFICATION OF NEXT STEPS.

It was recalled that MEPC 76 had agreed to include an item in the biennial agenda of SDC for 2022-2023 and the provisional agenda for SDC 8 entitled “Review of the 2014 Guidelines for the reduction of underwater noise (URN) from commercial shipping to address adverse impacts on marine life” (herewith referred to as the ‘2014 Guidelines’) and identification of next steps”).

A total of nine submissions and two information papers were submitted for discussion and in connection with possible funding, it was noted that the IMO Department for Partnerships and Projects (DPP) has submitted a Project Identification Form to the Global Environment Facility for funding to develop a project on this issue, with the title of “Global Partnership for Mitigation of Underwater Noise from Shipping (Glonoise Partnership”.

In considering the documents submitted, the following views of most significance were espoused as follows:

- The lack of international policies and noise pollution limit values have hampered progress towards the mitigation of noise pollution from ships;
- The need for, and the efficiency of, URN, remains unclear but if pursued, should encompass a measurement method which will not impose undue time and cost burdens;
- Setting numerical targets and thresholds are feasible and underway whilst numerical thresholds could be ship type-specific;
- Any work on URN ships will require an holistic approach, including the impact such measures will have on energy efficiency and GHG reduction efforts;
- The potential impact on URN reduction in connection with the Energy Efficiency Design Index for existing ships (EEXI), the Carbon Intensity Indicator (CII) and measures to reduce GHG emissions will need to be considered;
- Since ambient sound differs from region to region and marine organisms have different hearing characteristics, the Revised Guidelines should accommodate for such differences;
- Technical and operational measures to reduce URN such as certain propeller types or wake field modification fins are incompatible for ice classed ships and put them at a disadvantage compared to other ships;

- Any measures developed to address URN must not compromise ship safety; and,
- The UN Declaration on the Rights of Indigenous Peoples states that Indigenous people have the right to maintain, control, protect and develop culture and traditional knowledge, which the Organisation needs to heed and consider when considering underwater noise reduction from ships.

Having debated the above matters, the Sub-Committee agreed that a working group (WG 3) should be established on underwater noise reduction from ships to consider the proposals in detail and advise the Sub-Committee accordingly. Before doing so, a discussion took place on how best to develop a work plan where it was agreed to use the draft plan in document SDC 8/14/4 as a basis for discussion by WG 3 whilst noting that, as there is currently no mandate to develop a mandatory instrument, the plan could only be viewed as a possible future step.

Actions requested of the Sub-Committee by WG 3 on Underwater Noise Reduction.

The Sub-Committee approved the report by WG 3 in general, and in particular:

- Noted the discussions of the Group on the interrelations of underwater radiated noise and IMO work on GHG emissions and carbon intensity. Note was also taken of the statement by ICS extolling the potential positive impacts of IMO's GHG reduction measures on global levels of underwater radiated noise which should be considered as part of the ongoing revision of the 2014 Guidelines;
- Noted the discussions of the Group on noise measurement and monitoring;
- Endorsed the Group's recommendation inviting all relevant IMO bodies to note the work on underwater radiated noise, in particular, where there are linkages, impacts or co-benefits;
- Agreed to the proposed work plan for the review of the 2014 Guidelines for the reduction of underwater noise and identification of next steps;
- Noted the discussion on barriers to uptake and implementation of the Guidelines; and,
- Endorsed the Group's recommendation to establish a Correspondence Group on Review of the Guidelines for the Reduction of Underwater Noise with draft terms of reference as issued by the Sub-Committee, and to take action as appropriate.

DATE OF NEXT MEETING. The next meeting of the Ship Design and Construction Sub-Committee, SDC 9, is scheduled for 23 – 27 January 2023.

End

Captain Paddy McKnight