INTERNATIONAL MARITIME ORGANIZATION

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SUB-COMMITTEE ON SHIP DESIGN AND CONSTRUCTION
1st session
Agenda item 26

SDC 1/WP.1
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DRAFT REPORT TO THE MARITIME SAFETY COMMITTEE

1 GENERAL

1.1 The Sub-Committee on Ship Design and Construction (SDC) held its first session from 20 to 24 January 2014 under the chairmanship of Mrs. A. Jost (Germany), who was unanimously elected as Chairman for 2014 at the opening of the session. Capt. N. Campbell (South Africa) was also unanimously elected as Vice-Chairman for 2014 at the opening of the session.

1.2 The session was attended by delegations from Members Governments; [Associate Members of IMO; by representatives from United Nations and specialized agencies;] by observers from intergovernmental organizations; and by non-governmental organizations in consultative status, as listed in document SDC 1/INF.1.

Opening address

1.3 The Secretary-General welcomed participants and delivered his opening address, the full text of which can be downloaded from the IMO website at the following link: http://www.imo.org/MediaCentre/SecretaryGeneral/Secretary-GeneralsSpeechesToMeetings/Pages/Default.aspx

Chairman's remarks

1.4 In responding, the Chairman thanked the Secretary-General for his words of guidance and encouragement and assured him that his advice and requests would be given every consideration in the deliberations of the Sub-Committee.

Statement by the delegation of Japan

1.5 The Sub-Committee noted the statement by the delegation of Japan on the loss of the **MOL Comfort**, which was mentioned by the Secretary-General in his opening address. In this context, the Sub-Committee was informed that as the **MOL Comfort** builder, operator and classification society are all located in Japan and are able to closely share information and discuss safety measures, the Japanese government established the Committee on large containership safety, in August 2013, composed of members from the maritime industry, experts with relevant knowledge and experience, and the related research institution staff. The interim report of this committee was issued in December 2013, with the intention to inform the industry, classification societies and Member Governments about the safety measures discussed by the committee. The Sub-Committee noted that Japan plans to submit a document to MSC 93 and III 1 based on this interim report, with the Bahamas, as the flag State.

Adoption of the agenda and related matters

1.6 The Sub-Committee adopted the agenda (SDC 1/1/Rev.2) and agreed to be guided in its work, in general, by the annotations contained in document SDC 1/1/1 (Secretariat) and the arrangements in document SDC 1/1/2 (Secretariat). The agenda, as adopted, together with the list of documents considered under each agenda item, is set out in document SDC 1/INF.15.

2 DECISIONS OF OTHER IMO BODIES

2.1 The Sub-Committee noted the decisions and comments pertaining to its work made by FSI 21, STW 44, MEPC 65 and MSC 92, as reported in documents SDC 1/2 and SDC 1/2/1 (Secretariat), including the outcome of C 110 and A 28 as reported verbally by the Secretariat, and took them into account in its deliberations when dealing with the relevant agenda items.

2.2 The Sub-Committee also noted that the Council, at its 110th session, approved the Committees' proposal for full five-day sessions, with interpretation, for the first sessions of the Sub-Committee on Navigation, Communications and Search and Rescue (NCSR) and the Sub-Committee on Ship Design and Construction (SDC), to enable them to cope with their heavy agendas; and also approved their decision to request the Secretariat to make the necessary changes to the IMODOCS website to reflect the new sub-committee structure, while also maintaining access to documents under the previous sub-committee structure.

2.3 The Sub-Committee further noted that the Assembly, at its twenty-eighth session, approved the *Strategic plan for the Organization (for the six-year period 2014 to 2019)* (resolution A.1060(28)) and the *High-level Action Plan and priorities for the 2014-2015 biennium* (resolution A.1061(28)).

3 DEVELOPMENT OF A MANDATORY CODE FOR SHIPS OPERATING IN POLAR WATERS

General

3.1 The Sub-Committee recalled that DE 57 re-established the Polar Code Correspondence Group and instructed it to further develop the draft Polar Code, based on the report of the correspondence group (DE 57/11/6), the report of the working group at DE 57 (DE 57/WP.6 and DE 57/WP.6/Add.1) and the report of DE 57 (DE 57/25), taking into account the outcome of the consideration of the relevant chapters by other IMO bodies; and prepare draft amendments to mandatory IMO instruments.

3.2 The Sub-Committee also recalled that FP 56 established the Correspondence Group on Development of a Mandatory Code for Ships Operating in Polar Waters with terms of reference, as set out in paragraph 20.12.4 of document FP 56/23, and instructed the group to submit a report to FP 57 (SDC 1).

3.3 The Sub-Committee further recalled that SLF 55 instructed the IS and SDS Correspondence Groups to consider the proposed text of chapters 3 and 4 of the draft Polar Code, as contained in the annex to documents SLF 55/13 and DE 57/11, taking into account document SLF 55/13/1, and advise the Sub-Committee accordingly.

3.4 The Sub-Committee noted that MSC 92 had approved an Intersessional Working Group on the Polar Code, from 30 September to 4 October 2013, as concurrently approved by MEPC 65, with terms of reference as set out in paragraphs 11.45 and 11.46 of document DE 57/25.

Russian research ship Akademik Shokalskiy

3.5 The Sub-Committee noted that statements made by the delegations of Australia and the Russian Federation regarding the incident involving the **Akademik Shokalskiy,** both of which are set out in annex […].

Report of the correspondence group established at FP 56

3.6 The Sub-Committee considered the report of the correspondence group established at FP 56 (SDC 1/3/5) and, having approved it in general, noted that the group agreed that SOLAS chapter II-2 and the FSS Code do not adequately address concerns and the effect of extreme low temperature on equipment in all cases and there is a need to address them in the draft Polar Code. Having considered whether temperature ranges should be prescribed for systems and appliances, the Sub-Committee also noted that the group, in general, preferred a performance-based approach and did not support specifying temperature ranges or specific temperature values for the systems and appliances in the draft chapter 8.

3.7 Following consideration of the report of the correspondence group established at FP 56, the Sub-Committee agreed that document SDC 1/3/5 should be taken into account by the working group to be established, as appropriate.

Report of the correspondence groups established at SLF 55

Report of the SDS Correspondence Group

3.8 The Sub-Committee considered the report of the SDS Correspondence Group established at SLF 55 (SDC 1/3/6) and, having approved it in general, noted that the report summarizes the work and recommendations of the SDS Correspondence Group regarding the development of chapters 3 and 4 of the draft the Polar Code.

3.9 In considering the report of the SDS Correspondence Group, the Sub-Committee, having noted the concerns expressed by some delegations regarding the requirements for category C ships; matters related to ice-strengthening and subdivision; the blanket application of provisions to all ships; and the need to take into account actual operating parameters of ships, agreed that the working group should consider, in particular, the concerns expressed regarding paragraphs 5, 6, 7, 9 and 11 of document SDC 1/3/6. In addition, the Sub-Committee agreed to refer the proposals related to chapters 3 and 4 of the draft Polar Code, as set out in the annex to document SDC 1/3/6, to the working group for further consideration.

Report of the IS Correspondence Group

3.10 The Sub-Committee considered the report of the IS Correspondence Group established at SLF 55 (SDC 1/5) and, having approved it in general, noted that the report summarizes the work of the group concerning the proposed text of chapters 3 and 4 of the

draft Polar Code, as contained in the annex to document SLF 55/13, taking into account documents SLF 55/13/1 and DE 57/11. In this context, the Sub-Committee also noted that there was a general agreement in the group that ice accretion allowances should be retained in the 2008 IS Code and that the draft Polar Code should only seek to refer to them.

3.11 Having considered the report of the IS Correspondence Group, the Sub-Committee agreed to refer the draft text of chapters 3 and 4 of the draft Polar Code, as set out in annex 1 to document SDC 1/5, to the working group for further consideration.

Reports of the intersessional working and correspondence groups

General

3.12 The Sub-Committee considered the following documents:

.1 SDC1/3 (Norway), presenting the text of the draft International Code of Safety for Ships Operating in Polar Waters (Polar Code), as prepared by the Intersessional Working Group on the Polar Code (30 September to 4 October 2013); and

.2 SDC 1/3/3 and SDC 1/INF.10 (Norway), providing the report of the correspondence group established at DE 57. The correspondence group continued the development of the draft Polar Code, and submitted its report to the Intersessional Working Group on the Polar Code (ISWG PC/1). The outcome of the work of the intersessional working group was used as the basis for additional work in the correspondence group after the intersessional meeting. The group also prepared draft amendments to SOLAS and MARPOL in order to make the Polar Code mandatory, as set out in the annex.

3.13 The Sub-Committee, having thanked the members of the correspondence group and in particular the coordinator, Mrs. T. Stemre of Norway, for the enormous amount of work carried out, approved the above reports in general and noted the progress made to date with the development of the draft Polar Code and the need for further discussions in a working group.

Report of the intersessional working group

3.14 In regard to the outcome of the intersessional working group (SDC 1/3), the Sub-Committee, having approved the report in general, decided to only note the actions requested in paragraph 30 of document SDC 1/3 at this stage, taking into account that the working group would further consider the report in detail.

Report of the correspondence group

3.15 In regard to the outcome of the correspondence group (SDC 1/3/3 and SDC 1/INF.10), the Sub-Committee approved the report in general and in particular:

.1 agreed to forward chapters 10 and 11 to NCSR 1 for consideration with a view to submitting any comments and proposals directly to MSC 94;

.2 noted the proposal to merge the various operational chapters;

.3 having noted the alternative proposals for chapter 13, instructed the Polar Code Working Group to reduce the alternative chapters to one text and agreed to forward chapter 13 to HTW 1 for consideration with a view to submitting any comments and proposals directly to MSC 93;

.4 noted the draft amendments to SOLAS and MARPOL and the proposal that any exemptions from the established applicability parameters in SOLAS and MARPOL preferably should be included in the draft text of the Code; and

.5 instructed the Polar Code Working Group to consider whether the words "of Safety" should be in the title of the Code and advise the Sub-Committee accordingly.

3.16 In considering the reports of the intersessional working group and the correspondence group, the Sub-Committee, having noted concerns expressed by some delegations regarding the large number of vague phrases; the issuance of statutory certificates; the scope of application to the northern part of the Bering Sea; provisions that may conflict with other IMO conventions; and matters related to construction standards for ships carrying noxious liquid substances, agreed to forward the above reports to the working group for further consideration with a view to finalization of the Code, based on the text in

document SDC 1/INF.10. In doing so, the Sub-Committee instructed the Polar Code Working Group to further consider matters related to the use of vague expressions (i.e. the word "sufficient"), the issuance of statutory certificates and noxious liquid substances, and advise the Sub-Committee accordingly.

3.17 Regarding matters related to geographical application, the Sub-Committee invited the Committees to consider whether the Polar Code scope of application should include the northern part of the Bering Sea, taking into account the statement by the Russian Federation set out in annex […]. Consequently, the Polar Code Working Group was instructed not to consider this matter any further since this issue falls under the purview of the Committees.

Draft amendments to MARPOL Annexes I, II, IV and V

General

3.18 The Sub-Committee considered the proposed draft amendments to MARPOL Annexes I, II, IV and V (SDC 1/WP.3, annex 2), consisting of the addition of definitions of "Polar Code" and "polar waters" to the definition sections and the addition of a paragraph to the application provisions in the MARPOL Annexes to make the relevant chapters in part II-A of the draft Polar Code mandatory, according to the subject matters regulated under the various MARPOL Annexes.

3.19 In the ensuing discussion, the following views were, inter alia, expressed:

.1 the text and structure of the draft amendments were in line with the decisions of MEPC 63 and MSC 91 concerning how to make the Polar Code mandatory under SOLAS and MARPOL;

.2 instead of amending the existing definition sections and application provisions in the MARPOL Annexes, an additional chapter entitled "International Code for ships operating in polar waters" could be added to the Annexes, consisting of the definition of the Polar Code and its application, to make the relevant chapters in part II-A of the Polar Code mandatory;

.3 the requirements in part II-A of the Code should be incorporated directly in the text of the MARPOL Annexes, rather than by reference, in order to avoid significant legal uncertainty regarding how particular Polar Code regulations relate to existing MARPOL requirements; part II-A of the Code could reference the binding obligations located in the various MARPOL Annexes, so that the Code would remain intact, but formally each requirement would take legal force within MARPOL; and incorporation of part II-A by reference would require significant edits and additions to the proposed amendments to MARPOL, as well as to the goals and functional requirements in part II-A of the Code, to avoid confusion; and

.4 text for a new paragraph 8 of regulation 2 of MARPOL Annex I was proposed, to be repeated in the application sections of Annexes II, IV, and V, to clarify the relationship between the Polar Code, other international agreements and international law.

Text of the draft amendments

3.20 With regard to the definition of "Polar Code", the Sub-Committee agreed to include the text describing the mandatory or recommendatory nature of parts I-A, I-B, II-A and II-B of the Code in square brackets, and to replace the word "shall" contained in the text related to parts I-A and I-B with the word "should".

3.21 With regard to the proposal for an additional paragraph on application, the Sub-Committee agreed to delete the words ", as amended" at the end of the first sentence and the complete second sentence; and to add the words "environment-related provisions of the" before the word "introduction" in the first sentence.

3.22 The Sub-Committee agreed to forward the draft amendments to MARPOL Annexes I, II, IV and V, as set out in annex […], to MEPC 66 for consideration and action, as appropriate (see also document SDC 1/WP.3/Rev.1). In this connection, the Sub-Committee invited MEPC 66, in its deliberation of the draft amendments, to consider:

.1 the need to resolve the application of part II-A of the Polar Code, in particular, with regard to existing and new ships, bearing in mind the different application requirements contained in MARPOL and SOLAS;

.2 the need to prepare consequential amendments to the certificates under MARPOL Annexes II and IV, in light of proposed new requirements in part II-A of the Code concerning tank separation distance for chemical tankers and the discharge of sewage in polar waters, pending the Committee's decision on the need for such new requirements; and

.3 the need to amend the exemption requirements in the MARPOL Annexes, in order to cross reference them with part II-A of the Code.

Relaxation of the deadline for submissions to MEPC 66 commenting on the outcome of the agenda item

3.23 With a view to expediting the finalization of the Polar Code and the associated amendments to MARPOL, and in accordance with paragraph 6.14 of the Committees' Guidelines, the Sub-Committee requested the Secretariat, in consultation with the Chairman of the MEPC, to relax the deadline for submitting documents of 4 pages or fewer, commenting on the outcome of the Sub-Committee by two weeks, i.e. to 21 February 2014.

Draft new chapter XIV of SOLAS

General

3.24 The Sub-Committee considered the proposed draft new chapter [XIV] to SOLAS (SDC 1/WP.3), containing definitions for the terms "Polar Code" and "polar waters" similar to the MARPOL amendments, including provisions covering operational limitations and certification.

3.25 In the ensuing discussion, the following views were, inter alia, expressed:

.1 the text and structure of the draft amendments were in line with the decisions of MEPC 63 and MSC 91 concerning how to make the Polar Code mandatory under SOLAS and MARPOL;

.2 while some delegations expressed the view that the new SOLAS amendments should only be applicable to ships for which SOLAS chapter 1 applies, others expressed the view that the amendments should apply to all ships, irrespective of type and size; and

.3 that the new SOLAS chapter should take into account the different types of voyages for ships operating in Arctic waters verses those operating in Antarctic waters (i.e. domestic verse international voyages).

Text of the draft amendments

3.26 As with the MARPOL amendments (see paragraph 3…), the Sub-Committee agreed that the definition of "Polar Code" should include the text describing the mandatory or recommendatory nature of parts I-A, I-B, II-A and II-B of the Code in square brackets, and to replace the word "shall" contained in the text related to parts I-A and I-B with the word "should".

3.27 With regard to the proposal to include in draft regulation XIV/2.1 the words "engaged on international voyages", the Sub-Committee agreed to retain this text in square bracket for further consideration by MSC 93.

[to be prepared by the Secretariat in consultation with the Chairman after the session, based on the Sub-Committee's further consideration of document SDC 1/WP.3]

[3.28 Having considered the above issues, the Sub-Committee agreed to forward the draft new chapter [XIV] to SOLAS, as set out in annex […], to MSC 93 for consideration and action, as appropriate (see also document SDC 1/WP.3/Rev.1).]

Scope of application of the Polar Code

3.29 The Sub-Committee had for its consideration the following documents:

.1 SDC 1/3/4 (New Zealand), discussing the application of the draft Polar Code to non-SOLAS ships, including fishing vessels, pleasure craft, MODUs, SPS ships and ships wintering over in ports and how the application may be achieved;

.2 SDC 1/3/15 (FOEI, WWF, IFAW, Pacific Environment), providing views on the application of the draft Polar Code of relevance to the proposed amendments to SOLAS and MARPOL contained in document SDC 1/3/3 (Norway) and proposed provisions of the draft Code contained in document SDC 1/INF.10;

.3 SDC 1/3/17 (Russian Federation), discussing implications of the draft amendments to SOLAS and the corresponding draft text of the Polar Code (application) for "existing" ships in terms of the future Code; and

.4 SDC.1/INF.2 (New Zealand), outlining key lessons learned by New Zealand when conducting Search and Rescue (SAR) operations in the Ross Sea with regard to: the types of incidents that occur in the Ross Sea; the key features of SAR operations in the Ross Sea; and communication between Rescue Coordination Centres (RCCs) and operators.

3.30 After an in-depth discussion on matters related to the scope of application in regard to the types of ships to be covered by the Code as well as its application to new and existing ships, the Chairman recalled that the MSC had tasked the DE Sub-Committee to cover all types of ships when developing the polar code and that DE 55, in considering how best to proceed, had decided to undertake the work based on a two-step approach, i.e. the Code would initially apply to SOLAS passenger and cargo ships, taking into account the urgent need for relevant mandatory requirements, and later requirements for non-SOLAS ships, such as fishing vessels, would be developed after the first step has been concluded. Therefore, documents addressing non-SOLAS ships would be held in abeyance until such matters are considered by the Sub-Committee. In regard to the application of the Code to new and existing ships, the Sub-Committee, having noted that there was a clear majority for the Code to be applied to both new and existing ships, agreed that both new and existing ships should be certificated under the Code. In regard to structural requirements, the Sub-Committee instructed the Polar Code Working Group to further consider this issue with a view to developing concrete exemptions for the structural requirements that should not be applied to existing ships.

3.31 In regard to document SDC 1/3/17, the Sub-Committee instructed the Polar Code Working Group to further consider the proposal for a phase-in period for existing ships and advise the Sub-Committee accordingly.

Definition and use of temperature on the Polar Code

3.32 The Sub-Committee had for its consideration the following documents:

.1 SDC 1/3/2 (Argentina), presenting a study of the aspects to be considered in selecting various temperature parameters appropriate to the matters that the Polar Code is intended to regulate, and proposing a set of definitions of "temperature" for inclusion in the Code to facilitate its smooth implementation;

.2 SDC 1/3/9 (Canada), discussing how low air temperature requirements can be interpreted and applied to the design and operation of polar ships, and provides information and guidance on how temperature can be defined, selected and applied for polar class ships;

.3 SDC 1/3/14 (Argentina), presenting the results of a statistical analysis of temperature variations with a view to determining design temperatures, in particular the determination of minimum anticipated temperature (MAT) representing an estimate of absolute minimum recorded temperature; and

.4 SDC 1/INF.12 (Canada), providing information on statistical temperature data for polar and sub-polar regions.

3.33 Following a brief discussion, the Sub-Committee referred the above documents to the Polar Code Working Group for further consideration.

Environmental protection aspects of the Polar Code

General

3.34 The Sub-Committee had for its consideration the following documents:

.1 SDC 1/3/1 (Kiribati, et al.), proposing new text for insertion into paragraph 1.7.1 of chapter 1 of part II-A of the draft Code, as set out in the annex, regarding reception facilities for oil and oily mixtures, to ensure that adequate facilities are in place in the Arctic waters;

.2 SDC 1/3/18 (Russian Federation), proposing a change to paragraph 1.5.1.2 of chapter 1 of part II-A of the draft Code related to the prohibition of any discharge of oil or oily mixtures from any ship in the Arctic, stating that a complete ban of such discharges, as currently provided for in paragraph 1.5.1.2, would be extremely difficult to adhere to, given the significant length of ships' voyages;

.3 SDC 1/3/19 (United States), making explicit recommendations as to the applicability of the provisions contained in part II-A of the draft Code for new or existing ships and suggesting that all operational requirements should be applicable to existing ships; proposing the inclusion of text for adequate reception facilities for MARPOL Annexes I and II wastes in the corresponding chapters of part II-A of the draft Code; and recommending the deletion of the goals and functional requirements throughout part II-A and the incorporation of the substance of the functional requirements related to records, manuals and plans as prescriptive requirements in the corresponding chapters of part II-A; and

.4 SDC 1/3/23 (FOEI, Pacific Environment and WWF), opposing the proposal in document SDC 1/3/1 regarding new text on port reception facilities for chapter 1 of part II-A of the draft Polar Code.

Ban of discharge into the sea of oil or oily mixtures

3.35 The Sub-Committee, having recalled that MEPC 65 had agreed to prohibit any discharge into the sea of oil or oily mixtures from any ships, did not agree to the changes to paragraph 1.5.1.2 of chapter 1 of part II-A of the draft Code proposed by the Russian Federation (SDC 1/3/18), and noted the intention of the delegation to submit a document on the matter to MEPC 66.

Applicability of provisions contained in part II-A of the draft Code

3.36 The Sub-Committee, having agreed that the proposal by the United States concerning the applicability of provisions contained in part II-A of the draft Code merited further discussion, referred the relevant part of document SDC 1/3/19 (paragraphs 3 to 5) to the Polar Code Working Group for further consideration.

Goal-based approach

3.37 The proposal by the United States (SDC 1/3/19, paragraphs 7 to 10) to delete the goals and functional requirements throughout part II-A of the draft Code did not receive sufficient support.

Port reception facilities

3.38 During the discussion of the proposals concerning port receptions facilities (SDC 1/3/1, SDC 1/3/19 and SDC 1/3/23), the following views, inter alia, were expressed:

.1 "zero tolerance of illegal discharges from ships" can only be effectively enforced when there are adequate reception facilities in ports and the intention of the proposed regulatory text on port reception facilities is to provide support to the international shipping industry and to ensure that the Code can fully stand the test of time;

.2 the proposed requirements on port reception facilities for ports within the Arctic area would be excessively burdensome, logistically and economically, on Arctic States and affected communities;

.3 other arrangements can be made regarding the disposal of oil or oily mixture wastes, and adequate port reception facilities are already in place just outside the Arctic region; and

.4 the relevant text in regulation 38 (Reception facilities) of MARPOL Annex I should be used rather than developing alternative text for inclusion in part II-A of the draft Code.

3.39 Following an extensive discussion and having noted the differing views on the matter, the Sub-Committee agreed not to instruct the Polar Code Working Group to further consider the issue and invited MEPC 66, bearing in mind that the matter in question is of policy nature and that the Committee is the appropriate body to consider it, to note the debate (see paragraph 3.22), together with documents SDC 1/3/1, SDC 1/3/19 (paragraph 6) and SDC 1/3/23, and take action as appropriate.

Hull, machinery and equipment

3.40 The Sub-Committee had for its consideration the following documents:

.1 SDC 1/3/7 (France), presenting a proposal for encouraging ice-strengthening of category C ships intended for operation in polar waters where ice may be present;

.2 SDC 1/3/8 (Canada, Norway), discussing how existing and new ships can be assigned a category and equivalent ice class based on structural analysis and risk assessment. This is intended to supplement the generic approximate equivalency tables in part I-B of the draft Polar Code, by providing a method for developing a ship specific assessment;

.3 SDC 1/3/12 (France), comments on tables 2.1 and 2.2 in part I-B of the draft Polar Code, which show correspondences between polar classes for existing ships and the requirements of classification societies; and

.4 SDC 1/3/16 (Finland, Sweden), commenting on document SDC 1/3/8, and describing how the equivalence of ice class rules of international classification societies with the Finnish-Swedish Ice Class Rules has been determined.

3.41 Following discussion, the Sub-Committee referred the above documents to the Polar Code Working Group for further consideration (see also paragraph 3.13).

Navigational and operational matters and Polar Water Operational Manual

3.42 The Sub-Committee had for its consideration the following documents:

.1 SDC 1/3/10 (Canada), providing proposals for a standardized table of contents for the Polar Waters Operational Manual (PWOM), and for additional guidance on detailed contents, in order to assist Administrations in reviewing the scope, reduce the complexity of training, and lessen the possibility of misunderstanding;

.2 SDC 1/3/11 (Argentina), containing proposals for consideration by the Working Group on the Polar Code in connection with the training of seafarers, in order to provide additional guidance for HTW 1;

.3 SDC 1/3/13 (IHO), proposing a revised input to the Preamble, the list of hazards and chapter 10 (Safety of Navigation) of the draft Polar Code. This was in response to the request by the Chairman of the Intersessional Working Group on the Polar Code (30 September to 4 October 2013), for IHO to slightly amend the proposal contained in document DE 57/11/24;

.4 SDC 1/3/20 (CLIA), commenting on the survival craft communications capabilities described in chapter 11 (Communication) of the draft Polar Code. CLIA is of the view that the absence of further justification, the proposed functional requirements for GMDSS on lifeboats and rescue boats should be deleted as it was not recommended by COMSAR 17;

.5 SDC 1/3/21 (CLIA), commenting on the proposed requirements for personal and group survival equipment within chapter 9 (Life-saving appliances and arrangements) of the draft Polar Code; and

.6 SDC 1/3/22 (CLIA), commenting on the proposed requirements for nautical information within chapter 10 (Safety of Navigation) of the draft Polar Code. CLIA is of the view that forward looking echo-sounding devices have merit under certain circumstances, but are not useful for all voyage types.

3.43 Following discussion, the Sub-Committee referred the above documents, together with the comments and decisions made in plenary, to the Polar Code Working Group for further consideration.

Establishment of the Polar Code Working Group

3.44 Consequently, the Sub-Committee established the Polar Code Working Group and instructed it, taking into account comments and decisions made in plenary, to finalize the draft International Code of safety for ships operating in polar waters (Polar Code), on the basis of the reports of the correspondence groups (SDC 1/3/3, SDC 1/3/5, SDC 1/3/6, SDC 1/5 and SDC 1/INF.10), taking into account the documents submitted to this session.

Report of the Working Group

3.45 Having considered the report of the working group (SDC 1/WP.4), the Sub-Committee approved it in general and took action as described in the following paragraphs.

[to be prepared by the Secretariat in consultation with the Chairman after the session, based on the group's report and the actions requested therein, taking into account the decisions taken by the Sub-Committee during subsequent discussions]

4 DEVELOPMENT OF PROVISIONS TO ENSURE THE INTEGRITY AND UNIFORM IMPLEMENTATION OF THE 1969 TM CONVENTION

4.1 The Sub-Committee recalled that SLF 55 established the Correspondence Group on the Development of Provisions to Ensure the Integrity and Uniform Implementation of the 1969 TM Convention with terms of reference as set out in paragraph 9.16 of document SLF 55/17 and had instructed it to submit a report to this session.

Report of the working group (part 2) established at SLF 55

4.2 The Sub-Committee considered part 2 of the report of the Working Group on the Development of Provisions to Ensure the Integrity and Uniform Implementation of the 1969 TM Convention established at SLF 55 (SLF 55/WP.5/Add.1) and, having approved it in general, noted that the group's report had been considered in detail by the correspondence group established at SLF 55.

Report of the correspondence group and related submissions

4.3 The Sub-Committee considered the report of the correspondence group (SDC 1/4 and SDC 1/INF.4) and, noted that the group prepared a draft TM.5 circular on Unified interpretations of the International Convention on Tonnage Measurement of Ships, 1969 (SDC 1/4, annex 1), to supersede TM.5/Circ.5. In this connection, the Sub-Committee also noted that the group developed, but could not reach agreement on a number of different approaches to address the many complex issues related to tonnage implications of alterations and modifications, including provisions to accept national tonnages for certain older qualifying ships under article 3(2)(d) of the 1969 TM Convention (the so-called "GRT tonnage grandfathering provisions"). The Sub-Committee further noted that the group considered approaches and alternatives to implementing a reduced gross tonnage (GTr) parameter for accommodation spaces but could not reach agreement on this matter.

4.4 In addition, the Sub-Committee had the following documents for consideration:

.1 SDC 1/4/1 (IACS), requesting clarification on how to measure the tonnage of ships constructed with material other than metal, so that this issue can be clarified in the ongoing work on the development of appropriate interpretations of the 1969 TM Convention;

.2 SDC 1/4/2 (Germany), commenting on living conditions on board ships by means of a reduced gross tonnage (GTr) parameter for assessing fees;

.3 SDC 1/4/3 (United States), commenting on the 1% criterion for alterations and modifications deemed to be a substantial variation in a ship's gross tonnage and proposing the deletion of the entire square-bracketed interpretation of A.3(2)(d) in annex 1 to document SDC 1/4; and

.4 SDC 1/4/4 (IACS), proposing that an additional tolerance be agreed addressing an acceptable per cent difference (2%) when re-measurement takes place on a ship where there has not been an alteration or modification.

4.5 Having considered the report of the correspondence group and the documents above, the Sub-Committee agreed that the proposal contained in document SDC 1/4/3, to delete the square-bracketed draft Unified interpretation A.3(2)d in annex 1 to document SDC 1/4, had not received sufficient support. Thus, the square brackets could be removed and the paragraph would remain intact.

4.6 In regard to the proposal for a 2% margin for remeasurement only, as contained in document SDC 1/4/4, the Sub-Committee noted that the proposal had received support and should be taken forward.

4.7 In considering the request for clarification on how to measure the tonnage of ships constructed with material other than metal, as contained in document SDC 1/4/1, the Sub-Committee agreed that this issue could be addressed by developing a draft Unified interpretation but further in-depth discussion was still required.

4.8 In considering the proposal contained in document SDC 1/4/2, the Sub-Committee noted the support to further develop a reduced gross tonnage parameter for accommodation

spaces. In this regard, the observer from IFSMA stated that the issue of crew accommodation should be addressed without delay, either with a novel solution as suggested by Germany or a simple one such as the use of Net Tonnage. The full text of the statement by IFSMA is set out in annex […].

4.9 With regard to the draft Unified interpretations of the 1969 Tonnage Convention and the associated draft TM.5 circular set out in annex 1 to document SDC 1/4, the delegation of the Bahamas stated that they could not accept the proposed Unified interpretation regarding regulation 1(3) in its current form as some of the language of the interpretation goes beyond the scope of an interpretation in its directions as to what "should not" or "cannot" be construed as "novel". These could be considered to be instructions and are contradictory to the provisions of the regulation which sets out the absolute right of an Administration to apply the regulation as it deems appropriate. In addition, the delegation of the Bahamas expressed a further concern that the proposed Unified interpretation could be used as grounds for one Administration to question the application of regulation 1(3) when neither article 11 on "Acceptance of Certificate" nor article 12 on "Inspection" provide any such right. Nevertheless, the Unified interpretation would be acceptable to the delegation of the Bahamas if the text was limited to the final sentence. Consequently, the Sub-Committee agreed to place square brackets around the proposed Unified interpretation for regulation 1(3) apart from the last sentence, pending further consideration by the Sub-Committee.

4.10 The Sub-Committee also took note of the well-developed draft unified interpretations or figures (ten in total) identified in table 3-2 of annex 1 to document SDC 1/INF.4 that received favourable support from the correspondence group but achieved only moderate consensus, and thus were not included in the draft TM.5 circular set out in annex 1 to document SDC 1/4. The Sub-Committee decided that these draft interpretations should be further considered for inclusion by a drafting group.

Establishment of a drafting group

4.11 Having considered the above issues, the Sub-Committee established a Drafting Group on Development of Provisions to Ensure the Integrity and Uniform Implementation of the 1969 TM Convention and instructed it, taking into account the decisions taken in plenary, to:

.1 finalize the draft Unified interpretations to the 1969 TM Convention and the associated draft TM.5 circular, based on annex 1 to document SDC 1/4, taking into account documents SDC 1/4/1, SDC 1/4/4 and SDC 1/INF.4; and

.2 take into account document SDC 1/4/2, and consider a reduced gross tonnage parameter for accommodation spaces with a view towards its further development, and if necessary, prepare draft terms of reference for a future group to progress the development of a reduced gross tonnage parameter for accommodation spaces and any work outstanding from documents SDC 1/4/1 and SDC 1/4/4.

Report of the drafting group

4.12 Having considered the report of the drafting group (SDC 1/WP.7), the Sub-Committee took action as outlined hereunder.

[to be prepared by the Secretariat in consultation with the Chairman after the session, based on the group's report and the actions requested therein, taking into account the decisions taken by the Sub-Committee during subsequent discussions]

5 DEVELOPMENT OF SECOND-GENERATION INTACT STABILITY CRITERIA

General

5.1 The Sub-Committee recalled that SLF 55 re-established the Correspondence Group on Intact Stability, with the terms of reference as set out in paragraph 3.14 of document SLF 55/17, to continue the work on the development of second-generation intact stability criteria, taking into account the Updated plan of action agreed at that session (SLF 55/WP.3, annex 3).

Ice accretion in timber deck cargo

5.2 The Sub-Committee considered the relevant part of the report of the correspondence group (SDC 1/5) and, having approved it in general, noted that the group considered the development of draft guidance for ships carrying timber deck cargoes regarding the increased weight of ice, based on document SLF 55/3/8, and taking into account document SLF 55/3/10. In this connection, the amended draft text of chapter 6 of

part B of the 2008 IS Code is set out in annex 2. The Sub-Committee also noted that there was a general agreement that the 2008 IS Code should have a minimum standard of ice accretion applicable to all ships operating in areas where icing may occur. The formulation to account for the weight of ice accretion proposed for timber deck carriers could also be extended to other types of ships for which no specific guidance is contained in chapter 6 of the 2008 IS Code.

Second-generation intact stability criteria

5.3 The Sub-Committee considered the report of the correspondence group (SDC 1/5/3 and SDC 1/INF.8) and noted that the group had continued its work on the development of second-generation intact stability criteria.

5.4 In the context of the above, the Sub-Committee had the following documents for consideration:

.1 SDC 1/5/1 (Germany), commenting on specific matters related to the development of the second-generation intact stability criteria, in particular, the level 3 criteria, and providing the opinion that level 3 criteria have to be released at the same time as levels 1 and 2 criteria;

.2 SDC 1/5/2 (Germany), providing the recalculation of the sample vessels that have been used in document SLF 55/INF.5, using a software by Napa Ltd.;

.3 SDC 1/5/4 (Japan), providing a draft working version of explanatory notes on the vulnerability of ships to the broaching stability failure mode, in order to facilitate the discussion on the second-generation intact stability criteria at this session;

.4 SDC 1/5/5 (Germany), proposing a way forward to finalize the work on the levels 1 and 2 excessive accelerations criteria, as follows:

.1 finalization of level 1: development of empirical formulae for effective wave slope, roll damping parameters and natural roll period. These formulae should be more accurate and also have

significantly extended applicability range compared to the empirical formulae in the present weather criterion; and

.2 finalization of level 2: development of a simplified formulation for roll damping, which is more accurate than the formulation in level 1. This formulation should work for large breadth to draught ratios, including ratios characteristic for ballast conditions. Besides, an empirical formula for natural roll period is also required;

.5 SDC 1/5/6 (Italy), commenting on the report of the IS Correspondence Group, with reference to the weighting factors of wave cases (SDC 1/INF.8, annex 3), and pointing out that the weighting factors for the wave cases do not exactly sum up to 1.0, as the underlying procedure would require. The actual sum is, indeed, 1.000014. Although the difference from 1.0 is very small (1.4E-5), it is desirable to fix this discrepancy in the present early development stage. The reason for this difference is not associated with the theoretical background, but only to the truncation error associated with the significant digits which have been reported in the tables, both in the original submission by Italy (SLF 55/INF.15, annex 1) and also in subsequent texts developed by the correspondence group;

.6 SDC 1/5/7 (China), commenting on the calculation method of roll damping utilized in the parametric rolling and excessive acceleration level 2 draft criteria of second-generation intact stability criteria, updated in the IS Correspondence Group report (SDC 1/5/3 and SDC 1/INF.8). It is proposed to adopt validated computational fluid dynamics (CFD) method as an added permissible method for the simulation of roll damping. Additionally, an option of calculation method for roll moment of inertia is proposed for consideration;

.7 SDC 1/5/8 (SYBAss), containing sample calculation results of the proposed second-generation intact stability criteria regarding the levels 1 and 2 failure modes Parametric Roll and Pure Loss of Stability for superyachts. The results indicate that superyachts are more sensitive for Parametric Roll and Pure Loss of Stability in light conditions of loading;

.8 SDC 1/5/9 (China), providing supplementary sample calculations for 52 loading conditions of 29 ships (oil tanker, bulk carrier, fishing vessel and containerships (seven of them installed with bilge keel)), using the draft criteria contained in document SLF 55/WP.3, and updated by the correspondence group. Based on the analysis of the results, further comments on the draft amendments of parametric rolling criteria (SDC 1/5/3 and SDC 1/INF.8, annex 1) were made;

.9 SDC 1/5/10 (China), providing supplementary sample calculations for 42 loading conditions of 26 ships (containerships, oil tankers, bulk carriers, fishing vessels and tumblehome ships) for a more comprehensive analysis of the effects of the draft criteria on the ships. Based on the analysis of the results, further comments on the draft amendments of pure loss of stability criteria (SDC 1/5/3 and SDC 1/INF.8, annex 2) were made; and

.10 SDC 1/INF.6 (Italy and Japan), containing a working document regarding possible draft explanatory notes for vulnerability assessment methods for dead-ship stability failure mode. The draft text of the explanatory notes is based on the discussion which took place at SLF 55 (SLF 55/3/11). Although some aspects of the proposed calculation methodology are still open, the fundamental characteristics of the calculation method have been clarified and described.

5.5 Following consideration of the report of the IS Correspondence Group and the above related documents, the Sub-Committee agreed that the documents referred to in paragraph 5.4 should be further considered by a correspondence group. In this connection, the delegation of the United Kingdom made a statement, the text of which is set out in annex […].

Instructions to the Stability Working Group

5.6 Subsequently, the Sub-Committee instructed the Stability Working Group, established under agenda item 6 (Review of the damage stability regulations for ro-ro passenger ships), taking into account the comments and decisions made in plenary, to:

.1 review the Updated plan of action for matters related to intact stability (SLF 55/WP.3, annex 3), taking into account the progress made intersessionally by the IS Correspondence Group (SDC 1/5, SDC 1/5/3 and

SDC 1/INF.8), and prepare a revised plan, identifying the priorities, time frames and objectives for the work to be accomplished; and

.2 prepare draft terms of reference for a correspondence group for consideration by the Sub-Committee.

Report of the Stability Working Group

5.7 Having considered the part of the report of the working group (SDC 1/WP.5) dealing with this agenda item, the Sub-Committee approved it in general and took action as outlined hereunder.

[to be prepared by the Secretariat in consultation with the Chairman after the session, based on the group's report and the actions requested therein, taking into account the decisions taken by the Sub-Committee during subsequent discussions]

6 REVIEW OF DAMAGE STABILITY REGULATIONS FOR RO-RO PASSENGER SHIPS

General

6.1 The Sub-Committee recalled that SLF 55, having noted that views were divided on matters related to the residual freeboard option as part of the new requirements to account for water-on-deck effects, decided that this issue should be further considered at this session.

6.2 The Sub-Committee noted documents SDC 1/6 and SDC 1/INF.7 (Japan) and decided to consider them under agenda item 7 (Revision of SOLAS chapter II-1 subdivision and damage stability regulations) (see paragraphs 7.10.1).

Residual freeboard

6.3 The Sub-Committee recalled that SLF 55 had instructed the SDS Working Group to consider matters related to the residual freeboard option as new requirements to account for water-on-deck effects and that the outcome of the group's consideration is contained in paragraphs 10 to 30 of the group's report (SLF 55/WP.4).

6.4 In considering how best to proceed and recalling that SLF 55 had noted the group's decision on excluding the residual freeboard option as part of the new requirements to account for water-on-deck effects, the Sub-Committee agreed no further consideration of this matter was necessary.

6.5 Notwithstanding the above decision, the Sub-Committee noted the view of the delegation of the United Kingdom that there is ample evidence for the efficacy on the use of residual freeboard within damage stability assessments for ro-ro passenger ships from many research projects over a number of years, which included a large number of ships. The delegation stated that, in document SLF 55/INF.10, they presented details of a possible approach for the evaluation of ro-ro damage stability, which includes consideration of the accumulation of water on deck and does not impose an additional burden on ships that do not accumulate water on deck by virtue of having sufficient residual freeboard. The delegation was also of the view that this conclusion has been reached after full consideration of tried and tested data and as such is fully integrated and conforms with the probabilistic damage stability framework. They were in no doubt that the use of residual freeboard, as a proven method of compliance, offers a significant benefit with neither cost nor penalty implications for the industry, and strongly recommended that the Sub-Committee adopt the use of residual freeboard.

Completion of the work on the output

6.6 The Sub-Committee invited the Committee to note that the work on the output had been completed.

7 REVISION OF SOLAS CHAPTER II-1 SUBDIVISION AND DAMAGE STABILITY REGULATIONS

General

7.1 The Sub-Committee recalled that SLF 55 re-established the SDS Correspondence Group with terms of reference as set out in paragraph 8.20 of document SLF 55/17, and instructed the group to submit a report to this session.

7.2 The Sub-Committee noted that MSC 92, in considering the recommendations of the Working Group on Passenger Ship Safety (MSC 92/WP.8/Rev.1) related to the survivability of passenger ships, had agreed to forward documents MSC 92/6/6 and MSC 92/6/7, together with the EMSA and GOALDS studies (SLF 55/INF.6, SLF 55/INF.7, SLF 55/INF.8 and SLF 55/INF.9), to SDC 1 for consideration.

7.3 The Sub-Committee also noted that in light of the above, MSC 92 instructed SDC 1 to examine the phase 1 options that were technically justifiable for raising the Required Subdivision Index "R" and to review other aspects deemed relevant to the issue, such as the

length of the ship, number of persons on board and practical and operational aspects, taking into account actual economic factors and advise MSC 93 accordingly.

7.4 The Sub-Committee further noted that MSC 92 instructed the FSA Experts Group to review the EMSA and GOALDS studies (SLF 55/INF.6, SLF 55/INF.7, SLF 55/INF.8 and SLF 55/INF.9), taking into account the risk models and calculated risk and the validity of the data and assumptions that were used, based on the revised FSA Guidelines (MSC-MEPC.2/Circ.12). The report of the FSA Experts Group is contained in document MSC 93/6/2.

7.5 The Sub-Committee further noted that MSC 92, in considering the recommendations of the Working Group on Passenger Ship Safety (MSC 92/WP.8/Rev.1), expanded this planned output to include consideration to limit the down-flooding points on the bulkhead deck for passenger ships.

Report (part 2) of the working group established at SLF 54

7.6 The Sub-Committee considered part 2 of the report of the SDS Working Group at SLF 55 (SLF 55/WP.4/Add.1) and, having approved it in general, noted that the group's report had been considered in detail by the SDS Correspondence Group (SDC 1/7 and Add.1) established at SLF 55.

Report of the correspondence group and related submissions

7.7 The Sub-Committee considered the report of the correspondence group (SDC 1/7 and Add.1) and, having approved it in general, noted that the group had progressed the work on the revision of SOLAS chapter II-1 subdivision and damage stability regulations and the associated explanatory notes considerably, as set out in the annexes to the report, but that, however, a vast amount of work still remained.

7.8 In this context, the Sub-Committee also considered the following documents:

.1 SDC 1/7/1 (Germany), providing an alternative method to the use of GM limiting curves to comply with SOLAS chapter II-1, parts B-1 to B-4;

.2 SDC 1/7/4 (United States), commenting on the report of the correspondence group (SDC 1/7), proposing revised text for SOLAS regulations II-1/2.19 and II-1/7.3 and offering an editorial correction for regulation II-1/8.1. The proposals to amend the draft regulation text are

intended to improve clarity to support the completion of the draft amendments at this session; and

.3 SDC 1/7/5 (Republic of Korea), commenting on the report of the correspondence group (SDC 1/7), with regard to the new draft SOLAS regulation II-1/9.3.3 in order to improve the transparency in applying this regulation.

7.9 In considering the above documents, the Sub-Committee, having noted the concerns expressed regarding the alternative method proposed in document SDC 1/7/1, decided to forward all of the documents to the working group for further consideration when finalizing the draft amendments to SOLAS chapter II-1.

Survivability of passenger ships

7.10 The Sub-Committee had for its consideration the following documents:

.1 SDC 1/6 and SDC 1/INF.7 (Japan), providing information on the technical consideration of the Required subdivision index ''R'' and other relevant aspects, such as escape, evacuation and operational aspects;

.2 SDC 1/7/2 (United States), providing a proposal for a moderate phase 1 increase in the SOLAS regulation II-1/6 passenger ship Required subdivision index "R", to be included in the comprehensive package of revisions to SOLAS chapter II-1 subdivision and damage stability regulations, which should only apply to new passenger ships;

.3 SDC 1/7/3 (CLIA), providing information on the work of the Cruise Ship Safety Forum (CSSF), a tripartite group of cruise ship operators, shipbuilders, and classification societies, on matters related to damage stability on cruise ships, including solutions for newbuilding and existing ships, and in particular probabilistic damage stability, watertight doors and damage response tools/procedures that represent a comprehensive approach from the design, operation and emergency situation management aspects of the ship; and

.4 SDC 1/7/6 (CESA), commenting on the proposals (SDC 1/7/2) for a moderate phase 1 increase of the SOLAS requirements for the Required subdivision index "R" for passenger ships.

7.11 Following discussion, the Sub-Committee decided to forward documents SDC 1/6 and SDC 1/INF.7 to MSC 93 for consideration with the report of the FSA Experts Group (MSC 93/6/2) and, having noted the support for the proposals in document SDC 1/7/2, decided to instruct the working group to use the aforementioned document as a starting point for decisions on this issue, taking into account documents SDC 1/7/3, SDC 1/7/6, MSC 92/6/6 and MSC 92/6/7, and the relevant comments made in plenary.

7.12 Notwithstanding the above decision, the Sub-Committee noted that statement by the observer from the European Commission regarding documents SDC 1/6 and SDC 1/INF.7, the full text of which is set out in annex […].

Limit the down-flooding points on the bulkhead deck for passenger ships

7.13 Whilst noting that no documents were submitted on matters related to limiting the down-flooding points on the bulkhead deck for passenger ships, the Sub-Committee invited Member Governments and international organizations to submit comments and proposals to SDC 2.

Instructions to the Stability Working Group

7.14 In light of the above, the Sub-Committee instructed the Stability Working Group, established under agenda item 8 (see paragraph 8....), taking into account the comments and decisions taken in plenary, to:

.1 finalize the draft amendments to SOLAS chapter II-1, based on part 2 of the report of the working group at SLF 55 (SLF 55/WP.4/Add.1) and the report of the correspondence group (SDC 1/7 and Add.1), taking into account documents SDC 1/7/1, SDC 1/7/4 and SDC 1/7/5;

.2 further consider matters related to the survivability of passenger ships, taking into account documents SDC 1/7/2, SDC 1/7/3, SDC 1/7/6, MSC 92/6/6 and MSC 92/6/7, and advise the Sub-Committee as appropriate;

.3 examine the phase 1 options in documents MSC 92/6/6 and SDC 1/7/3, taking into account documents SDC 1/7/2, SDC 1/7/6 and MSC 92/6/7, that are technically justified for raising the Required subdivision index "R" and review other aspects deemed relevant to the issue, such as the length of the ship, number of persons on board and practical and operational aspects, taking into account actual economic factors, and advise the Sub-Committee accordingly;

.4 consider whether it is necessary to establish a correspondence group and, if so, prepare terms of reference for consideration by the Sub-Committee; and

.5 submit a written report (part 1), and continue working through the week and submit part 2 of the report to SDC 2, as soon as possible after this session, so that it can be taken into account by a correspondence group, if established.

Report of the Stability Working Group

7.15 Having considered the part of the report of the Stability Working Group (SDC 1/WP.5/Add.1) dealing with the agenda item, the Sub-Committee took action as outlined hereunder.

[to be prepared by the Secretariat in consultation with the Chairman after the session, based on the group's report and the actions requested therein, taking into account the decisions taken by the Sub-Committee during subsequent discussions]

8 DEVELOPMENT OF GUIDELINES ON SAFE RETURN TO PORT FOR PASSENGER SHIPS

General

8.1 The Sub-Committee recalled that SLF 55 re-established the SDS Correspondence Group with terms of reference, as set out in paragraph 4.13 of document SLF 55/17, and instructed the group to submit a report to this session.

Report of the correspondence group and related submissions

8.2 The Sub-Committee considered the report of the correspondence group (SDC 1/8) and noted that the report summarizes the work and recommendations of the group regarding the further development of guidelines on safe return to port for passenger ships with respect to the accuracy of damage stability calculation modules and their approval. The Sub-Committee also noted that the group agreed that guidelines for the approval of damage stability modules, as originally defined by Germany (MSC 89/9/4) and subsequently agreed by SLF 53 (SLF 53/19, paragraph 7.17) should be developed. In this context, the Sub-Committee further noted that the group recommended that some work is also needed on reconsidering the *Guidelines on operational information for masters of passenger ships for safe return to port by own power or under tow* (MSC.1/Circ.1400) in the light of the view first expressed by IACS in document SLF 54/4/1 (SLF 54/17, paragraphs 4.6 and 4.7) that post-damage strength assessments should, in view of their complexity, only be undertaken by shore-based systems.

8.3 In the context of the above, the Sub-Committee also considered document SDC 1/8/1 (Germany), drawing the attention of the Sub-Committee to potential weaknesses of the *Guidelines on operational information for masters of passenger ships for safe return to port by own power or under tow* (MSC.1/Circ.1400), which might lead to partly ineffective application of SOLAS regulation II-1/8-1, due to a lack of detailed technical information; and proposing to develop an improved guideline for the approval of stability software which clearly also addresses all the damage stability related matters which are still missing in the *Guidelines for the approval of stability instruments* (MSC.1/Circ.1229) and which is covering most ship types.

8.4 Following discussion, the Sub-Committee agreed that the working group should consider the comments made in plenary when addressing the matter, bearing in mind that this work is of high priority since it will directly support the implementation of SOLAS regulation II-1/8-1 (System capabilities after a flooding casualty on passenger ships), which entered into force on 1 January 2014.

Establishment of the Stability Working Group

8.5 Recalling the relevant decision at MSC 92, the Sub-Committee established the Stability Working Group and instructed it, as a high-priority matter, to further develop draft *Guidelines for the approval of damage stability modules for safe return to port*, taking into account the report of the correspondence group (SDC 1/8) and document SDC 1/8/1.

Report of the Stability Working Group

8.6 Having considered the part of the report of the Stability Working Group (SDC 1/WP.5/Add.1) dealing with the agenda item, the Sub-Committee took action as outlined hereunder.

[to be prepared by the Secretariat in consultation with the Chairman after the session, based on the group's report and the actions requested therein, taking into account the decisions taken by the Sub-Committee during subsequent discussions]

9 AMENDMENTS TO SOLAS REGULATION II-1/11 AND DEVELOPMENT OF ASSOCIATED GUIDELINES TO ENSURE THE ADEQUACY OF TESTING ARRANGEMENTS FOR WATERTIGHT COMPARTMENTS

General

9.1 The Sub-Committee recalled that DE 57 had for its consideration documents DE 57/16 and DE 57/INF.6 (IACS), containing updated draft *Guidelines for procedures of testing tanks and tight boundaries*, and documents DE 57/16/1 and DE 57/INF.7 (China, Japan, Republic of Korea and IACS), reporting the work of a joint industry working group (JWG) regarding quality control of shipyards when carrying out tests for tanks and tight boundaries according to the procedures set out in document DE 57/INF.6, and providing a draft *Guidance on survey of the quality management systems on testing tanks and tight boundaries for shipyards*, developed by the JWG, which is proposed to be an annex to the *Guidelines for procedures of testing tanks and tight boundaries*, as set out in the annex to document DE 57/INF.6.

9.2 The Sub-Committee also recalled that DE 57 had noted that the Secretariat, to facilitate the discussions, had prepared a working paper (DE 57/WP.3), containing the complete text of the proposed draft Guidelines (DE 57/INF.6 and DE 57/INF.7) in the three working languages.

9.3 The Sub-Committee noted that DE 57, due to time constraints, decided to defer consideration of this agenda item to this session.

9.4 The Sub-Committee had the following documents for consideration:

.1 SDC 1/9 and SDC 1/INF.13 (IACS), reiterating support of the proposed amendments to SOLAS regulation II-1/11 as presented in paragraph 12 of document MSC 89/23/13; containing information on informal discussions with interested stakeholders since DE 57; and providing updated draft

Guidelines for procedures of testing tanks and tight boundaries (SDC 1/INF.13, annex);

.2 SDC 1/9/1 (Japan), providing a proposed revised draft *Guidance on verification of the quality management systems on testing tanks and tight boundaries for shipyards*, which took into account the outcome of the joint industry working group (JWG) and other information available; and

.3 SDC 1/9/2 (China), providing comments on documents SDC 1/9 and SDC 1/INF.13 (IACS) and supporting the proposal by IACS that the latest version of the draft Guidelines (SDC 1/INF.13) should be referred to an appropriate working group for finalization, taking into account that the draft Guidelines do not contain draft *Guidance on verification of the quality management systems on testing tanks and tight boundaries for shipyards* (DE 57/INF.7).

9.5 In considering the above documents, the Sub-Committee noted the following views expressed during the discussion:

.1 the possibility of decreasing the level of safety by replacement of physical tests with modelling simulations;

.2 the absence of an equivalence between the current SOLAS requirement and the proposed alternative;

.3 the need to avoid automatically granted exemptions;

.4 verification of a shipyard quality system by different Flag Administrations;

.5 non-mandatory status of *Guidelines on testing tanks and tight boundaries*; and

.6 the need to take into account dynamic aspects of operational conditions.

Instructions to the Working Group on Construction

9.6 Having considered the above views, the Sub-Committee instructed the Working Group on Construction, established under agenda item 19 (Carriage of more than 12 industrial personnel on board vessels engaged in international voyages), taking into account documents MSC 86/23/13, SDC 1/9, SDC 1/9/1, SDC 1/9/2 and SDC 1/INF.13 and the comments and decisions made in plenary, to:

.1 prepare an action plan, identifying the priorities, time frames and objectives for the work to be accomplished under this output; and

.2 prepare draft terms of reference for a correspondence group for consideration by the Sub-Committee.

Report of the Working Group on Construction

9.7 Having considered the part of the report of the working group (SDC 1/WP.6/Add.1) dealing with this agenda item, the Sub-Committee approved it in general and took action as outlined hereunder.

[to be prepared by the Secretariat in consultation with the Chairman after the session, based on the group's report and the actions requested therein, taking into account the decisions taken by the Sub-Committee during subsequent discussions]

10 DEVELOPMENT OF AMENDMENTS TO THE 2011 ESP CODE

General

10.1 The Sub-Committee recalled the new procedure for undertaking regular updates to the 2011 ESP Code agreed at DE 57, as set out in paragraph 24.5 of document DE 57/25, and noted that MSC 92 had concurred with the aforementioned procedure.

Proposed amendments to the 2011 ESP Code

10.2 The Sub-Committee had for its consideration documents:

.1 SDC 1/10 (IACS), containing proposed amendments to the 2011 ESP Code, which takes into account the procedure agreed at DE 57, and endorsed by MSC 92, in order to deal with updates to the IACS UR Z10

series. It was noted that no proposals were made at this time to amend any of the annexes to annex A, parts A and B, or annex B, parts A and B, to the Code; and

.2 SDC 1/INF.3 (IACS), providing at its annex a "track changes" version of the 2011 ESP Code, as per the agreed procedure at DE 57, showing proposed updates to the Code to provide alignment with the IACS UR Z10 series.

10.3 The Sub-Committee considered the list of the proposed amendments set out in paragraph 4 of document SDC 1/10 and took the following actions:

.1 concurred with annexes A and B, parts A and B, paragraph 5.3.2.3 – hydraulic arm vehicles such as conventional cherry pickers are added as a means of access for close up surveys of the hull structure;

.2 concurred with annexes A and B, parts A and B, new paragraph 5.5 – this new paragraph states that rescue and emergency response equipment should be suitable for the configuration of the space being surveyed, as IACS members have noted a few cases where emergency response equipment could not be used due to the different configuration with the means of access equipment;

.3 did not concur with Annex B, parts A and B, paragraph 2.6.1 – guidelines and conditions are included to consider the a master's statement regarding cargo tank testing;

.4 concurred with annex A, parts A and B, and annex B, part A, paragraphs 6.1.3 and 6.3.2 – new provisions relating to maintaining and updating the Ship Construction Files (SCF) on board are included for ships subject to the requirements of the IMO Goal Base Standards (GBS) regime; and

.5 concurred with annex A, parts A and B, and annex B, part A, paragraphs 6.4.2 and 6.4.3 – new provisions on verifying the updating of Ship Construction Files (SCF) are included for ships subject to the requirements of the IMO Goal Base Standards (GBS) regime.

10.4 In regard to paragraph 10.3.3 above, the IACS observer, commenting upon the decision of the Sub-Committee that the testing of cargo oil tanks shall only be done in the presence of a surveyor; the IACS observer noted that the proposal to allow the vessel's crew to undertake this testing under the direction of the master would be subject to a number of specific conditions. The following implications of the Sub-Committee's decision were also brought to the attention of the Sub-Committee. The cargo of an oil tanker has a density less than the water, therefore in order to avoid any undue stress on the ship's structure, it is preferable to test the tank as loaded with the cargo. To test the tank when the ship is under survey, which almost certainly will be with water (fresh or sea), needs to be carefully planned and undertaken in order to avoid unintentional overloading of the structure. Any draft restrictions at the survey location, lack of availability of appropriate water quality due to limited water depth (mud suck into tanks); cleaning of piping, pumps and tanks; and difficulties in disposing of very large quantities of "contaminated" water upon completion of testing (availability of suitable and adequate reception facilities); all present further challenges.

10.5 Following consideration, the Sub-Committee agreed to draft amendments to the 2011 ESP Code, as set out in annex […], for submission to MSC 93 for approval, with a view to subsequent adoption.

11 DEVELOPMENT OF GUIDELINES FOR USE OF FIBRE-REINFORCED PLASTIC (FRP) WITHIN SHIP STRUCTURES

11.1 The Sub-Committee recalled that FP 56 established the Correspondence Group on Development of Guidelines for Use of Fibre-reinforced Plastic (FRP) within Ship Structures, with the terms of reference, as set out in paragraph 12.5 of document FP 56/23, and instructed it to submit a report to this session.

Report of the correspondence group

11.2 The Sub-Committee considered the report of the correspondence group (SDC 1/11 and SDC 1/INF.5) and noted that the group could not reach consensus regarding the possible use of FRP composite structures in the light of SOLAS regulation II-2/17, having regard to regulation II-2/2 (Fire safety objectives and functional requirements):

.1 the first view, agreed by the majority of the group, support the position that all of the prescriptive requirement in parts B, C, D, E and G in SOLAS chapter II-2 can be deviated from provided that the alternative design and

arrangement can meet the fire safety objectives and functional requirements of SOLAS chapter II-2; and

.2 the second view was that the objectives in part A of SOLAS chapter II-2 may not be altered by the regulations in the other parts, since these are fundamental requirements of chapter II-2, and regulation II-2/17 should not be used to alter these provisions.

11.3 The Sub-Committee also noted the group's conclusion that the current prescriptive regulations assume non-combustible construction. Therefore, if SOLAS regulation II-2/17 is used to justify the use of combustible structure, a thorough review of chapter II-2 is required to find any prescriptive requirements affected by an alternative design that assumes non-combustible construction. It was pointed out that the aforementioned matter needs to be resolved first in order to further progress the work on the draft guidelines (SDC 1/INF.5).

11.4 In this context, the Sub-Committee further noted the proposal by the group that the scope of the draft guidelines should be broadened, to not only cover the use of FRP in structures but also other uses of FRP on board ships, which would facilitate the approval process of FRP used in restricted applications on ships.

11.5 Following discussion, the Sub-Committee, having noted the views expressed regarding structural integrity during a fire (i.e. loss of local bonding), practical experience on use of FRP on board ships, need of reviewing a lot of requirements of SOLAS chapter II-2 and compliance with other functional requirements, agreed that the matter is complex and a cautious approach is necessary.

11.6 In discussing a possible way forward, Sub-Committee, taking into account differing views expressed during the discussion, agreed to the following way forward:

.1 to reinstate the correspondence group to continue its work on the first view (see paragraph 11.2.1), based on the terms of reference approved by FP 56, and define the consequences that this view would have on the other issues than fire protection for consideration at SDC 2;

.2 to instruct the correspondence group to review the matter raised by IACS at FP 56 regarding the use of FRP grating on tankers; and

.3 to invite the Committee to endorse the view that the background of the objectives in part A needs to be reconsidered before deciding on the restricted use of FRP materials.

ISO Standards related to FRP construction

11.7 The Sub-Committee also noted the information provided by ISO on the development of two new standards (ISO 300021 and ISO 834-12) that may be used in conjunction with FTP Code part 3 for FRP.

Extension of target completion year

11.8 In light of the above decision, the Committee was invited to extend the target completion year for this output to 2015.

12 DEVELOPMENT OF AMENDMENTS TO SOLAS CHAPTER II-2, THE FTP CODE AND MSC/CIRC.1120 TO CLARIFY THE REQUIREMENTS FOR PLASTIC PIPES ON SHIPS

12.1 The Sub-Committee recalled that FP 56, having considered document FP 56/14 (Denmark) proposing to introduce a requirement for a fire endurance test for plastic pipes penetrating bulkheads and decks and questioning whether the test requirements for pipe penetrations in the FTP Code are adequate to prevent the spread of fire downwards, noted that the aforementioned proposal was supported in general.

12.2 The Sub-Committee also recalled that FP 56 had agreed that the matter needed further detailed consideration and invited Member States and international organizations to submit comments and proposals on documents FP 56/14 and MSC 88/23/8 to this session.

12.3 In the context of the above, the Sub-Committee further noted that FP 56 agreed that the scope of the item should also include a possible review of the *Guidelines for the application of plastic pipes on ships* (resolution A.753(18), as amended by resolution MSC.313(88)).

12.4 The Sub-Committee had for its consideration the following documents:

.1 SDC 1/12 (Denmark), proposing to revise the requirement in the *Guidelines for the application of plastic pipes on ships* (resolution A.753(18), as amended by resolution MSC.313(88)), in order to include specific provisions on the smoke and toxicity requirements; and to divide the use of

plastic pipes into three groups and to revise the test requirement and the fire endurance matrix accordingly; and

.2 SDC 1/INF.9 (Denmark), providing detailed information on the proposed modifications, contained in document SDC 1/12, to the *Guidelines for the application of plastic pipes on ships* (resolution A.753(18), as amended by resolution MSC.313(88)).

12.5 Following discussion, the Sub-Committee, having noted several views expressed on technical matters and application issues, agreed that further detailed consideration was necessary and invited Member Governments and international organizations to submit comments and proposals to SDC 2.

Extension of the target completion year

12.6 Consequently, the Sub-Committee invited the Committee to extend the target completion year for this output to 2015.

13 REVIEW OF THE RECOMMENDATION ON EVACUATION ANALYSIS FOR NEW AND EXISTING PASSENGER SHIPS

General

13.1 The Sub-Committee recalled that FP 56 had noted that the issue of evacuation in an emergency was included in the long-term work plan of the Organization on the enhancement of safety of passenger ships (MSC 91/WP.8, annex 3), as agreed by MSC 91 in response to the **Costa Concordia** casualty.

13.2 The Sub-Committee also recalled that FP 56, having recognized that the review of recommendations on evacuation analysis was a high-priority item and that the issue of modelling the human behaviour in an emergency represented a highly complicated problem, decided to request an extension of the target completion year for this output, and invited Member States and international organizations to submit detailed proposals to this session.

13.3 The Sub-Committee noted that MSC 92, having noted the consideration by the Working Group on Passenger Ship Safety of documents MSC 92/6/2, MSC 92/6/4, MSC 92/6/10 and MSC.1/Circ.1238 related to evacuation analysis, agreed to instruct SDC 1 to consider the mandatory application of evacuation analysis to non-ro-ro passenger ships and advise MSC 93 accordingly.

13.4 The Sub-Committee had for its consideration document SDC 1/13 (Germany), stating that the current regulations and guidelines do not require the mandatory application of evacuation analysis to non-ro-ro passenger ships, and summarising the decisions and discussion under consideration of the outcome of MSC 92 and the results of the Working Group on Passenger Ship Safety (MSC 92/WP.8/Rev.1). They also proposed the establishment of a correspondence group at this session to progress the work on this output, based on the draft terms of reference contained in paragraph 12 of document SDC 1/13.

13.5 Following discussion, the Sub-Committee, noting the full support for document SDC 1/13, agreed that amendments to SOLAS to make the application of evacuation analysis to new and existing passenger ships mandatory is necessary and requested the Secretariat to prepare a justification to expand the scope of work on the existing output for consideration by the Sub-Committee.

13.6 In considering how best to undertake this work, the Sub-Committee requested the Secretariat, with the assistance of interested delegations, to also prepare a draft terms of reference for a correspondence group.

Justification to expand the scope of work on the existing output

13.7 Having considered the draft justification and proposed terms of reference prepared by the Secretariat (SDC 1/WP.8), the Sub-Committee took action as outlined hereunder.

[to be prepared by the Secretariat in consultation with the Chairman after the session, based on the SDC 1/WP.8, taking into account the decisions taken by the Sub-Committee during subsequent discussions]

14 DEVELOPMENT OF AMENDMENTS TO THE CRITERION FOR MAXIMUM ANGLE OF HEEL IN TURNS OF THE 2008 IS CODE

General

14.1 The Sub-Committee recalled that SLF 55, having considered the part of the report of the IS Working Group (SLF 55/WP.3) dealing with the matter and, having noted that, due to time constraints, the group was unable to consider the draft amendments to chapter 3 of part A of the 2008 IS Code, invited Member Governments and international organizations to submit comments and proposals on the draft amendments (SLF 55/12, annex) to this session.

Proposed amendments to the 2008 IS Code

14.2 In considering the proposed amendments to the 2008 IS Code on this matter, the Sub-Committee had for its consideration the following documents:

.1 SDC 1/14 (Japan), commenting on document SLF 55/12, expressing concerns for the amendment proposal and having discussion on the mandatory requirement without actual ship data from full scale trials, and providing actual trial data of a cruise ship and three ro-pax ships, in order to further examine the proposal by RINA; and

.2 SDC 1/14/1 (Poland), containing a proposal for the structure of the criterion for the maximum angle of heel in turns of the 2008 IS Code to be in line with that developed by SLF 51 within the framework for the second generation intact stability criteria. Additionally, they proposed to consider the transient maximum angle of heel caused by the turning manoeuvre instead of "steady state" heel as it is used in the 2008 IS Code.

14.3 Having considered the aforementioned documents and noted the views expressed on the need to further consider action of the proposed amendments, the Sub-Committee invited Member Governments and international organizations to submit their comments and proposals to SDC 2.

Extension of target completion year

14.4 In light of the above decision, the Committee was invited to extend the target completion year for this output to 2015.

15 DEVELOPMENT OF AMENDMENTS TO PART B OF THE 2008 IS CODE ON TOWING, LIFTING AND ANCHOR-HANDLING OPERATIONS

General

15.1 The Sub-Committee recalled that SLF 55 had instructed the IS Correspondence Group (SLF 55/17, paragraphs 3.14 and 10.8) to further consider the proposed amendments to the 2008 IS Code concerning towing, lifting and anchor-handling operations.

Report of the correspondence group

15.2 The Sub-Committee considered the relevant part of the report of the correspondence group (SDC 1/5) and, having approved it in general, noted that the group prepared the following draft amendments to the 2008 IS Code:

.1 proposed amendments common to all the operational modes, with special emphasis on chapters 3 and 4 of part B of the 2008 IS Code (annex 3);

.2 proposed amendments to chapter 2 of part B of the 2008 IS Code regarding vessels engaged in anchor handling operations (annex 4);

.3 proposed amendments to chapter 2 of part B of the 2008 IS Code regarding vessels engaged in towing operations (annex 5); and

.4 proposed amendments to chapter 2 of part B of the 2008 IS Code regarding vessels engaged in lifting operations (annex 6).

15.3 In this connection, the Sub-Committee also noted that the group discussed the inclusion of provisions for escort towing in the draft amendments to part B of the 2008 IS Code; however, as it was considered that it might be outside the terms of reference for the group, provisions related to escort towing were included in square brackets for consideration by the Sub-Committee, as appropriate.

15.4 In considering the group's report, the Sub-Committee, having noted the views expressed regarding matters related to escort towing, the stability criteria for lifting operations and possible unintended mandatory application of some provisions within part B of the 2008 IS Code, decided not to finalize the proposed amendments at this stage.

15.5 Subsequently, Member Governments and international organizations were invited to submit comments and proposals to SDC 2.

Extension of target completion year

15.6 In light of the above decision, the Committee was invited to extend the target completion year for this output to 2015.

16 GENERAL CARGO SHIP SAFETY

16.1 The Sub-Committee recalled that MSC 90, following consideration of document MSC 90/WP.7, included in the 2012-2013 biennial agenda of the relevant sub-committees and in the provisional agenda for their forthcoming sessions output 5.2.1.7 on "Review of general cargo ship safety", with a target completion year of 2013, instructing the DE Sub-Committee to consider the relevant risk control options listed in annex 4 to document MSC 90/WP.7.

16.2 The Sub-Committee recalled that DE 57 had noted that it had been instructed to further examine measures to strengthen the maintenance responsibilities for ship machinery in the context of implementing the Safety Management System (SMS) and ship survey requirements, as proposed by Argentina in document MSC 89/17/1. However, due to lack of time, DE 57 decided to defer consideration of this agenda item to SDC 2.

16.3 Following discussion on the proposal to establish an extended survey system for general cargo ships and strengthen the maintenance responsibilities for ship machinery in the context of the SMS and ship survey requirements, the Sub-Committee noted the views expressed regarding the application of the IACS UR Z7, positive outcome of relative cost benefit assessment carried out by IACS and the possibility of administrative and economic burdens caused by extending the survey system.

16.4 In light of the above, the Sub-Committee invited Member Governments and international organizations to submit comments and proposals to SDC 2.

17 DEVELOPMENT OF INTERPRETATION OF SOLAS REGULATION II-2/13.6 ON MEANS OF ESCAPE FROM RO-RO SPACES

General

17.1 The Sub-Committee recalled that MSC 90, having agreed with the view of Sweden (MSC 90/25/16) that the text of regulation II-2/13.6 on means of escape from ro-ro spaces may contain vague wording leading to differing interpretations, agreed to include in the biennial agenda of the FP Sub-Committee and agenda for FP 56, an unplanned output to develop a relevant interpretation for SOLAS regulation II-2/13.6 on means of escape from ro-ro spaces.

17.2 The Sub-Committee also recalled that FP 56 considered that the interpretations proposed in document FP 56/22 (Sweden) needed further refinement, in particular relating to the level of safety of escape routes offered by the proposed interpretation, which should be carefully compared to that for other ship types, as prescribed by SOLAS chapter II-2; the definition of the term "normally employed", which in its proposed form may be applicable to a wider range of ship types than just ro-ro ships; and the inclusion of decks that can be hoisted.

17.3 The Sub-Committee further recalled that FP 56, subsequently, decided to further consider the matter and invited Member Governments and international organizations to submit proposals and comments to that session.

17.4 The Sub-Committee had for its consideration the following documents:

.1 SDC 1/17 (IACS), discussing the arrangements to facilitate the safe escape route from ro-ro spaces on cargo ships with respect to the draft interpretation of SOLAS regulation II-2/13.6 (FP 56/22) and providing proposed modifications to the draft text with a view to uniformly implementing the interpretation in the future;

.2 SDC 1/17/1 (Sweden), providing further comments and proposals to the proposals contained in document FP 56/22, taking into account the views expressed at FP 56, towards an interpretation regarding means of escape from ro-ro spaces on cargo ships; and

.3 SDC 1/17/2 (Republic of Korea), proposing clarification of SOLAS regulation II-2/13.6 on means of escape from ro-ro spaces on cargo ships, and aiming to provide a clear understanding in order to develop a common interpretation of the terms "normally employed" and "safe escape."

17.5 In considering the above documents, the Sub-Committee, having noted the following views that:

.1 any enhanced measures should be appropriate for the risks identified and be applied to new ships only;

.2 one of the means of escape should be permanently protected against fire while open ladders could be used as a secondary means of escape;

.3 EEBDs should be provided for all open escape ladders so that crew members have proper protection from smoke;

.4 requiring continuous fire shelter is outside the scope of this output; and

.5 escapes should be well marked, taking into account that some people do not know the routes for escape,

agreed that more time was needed to consider the matter in detail and invited Member Governments and international organizations to submit comments and proposals to SDC 2.

Extension of the target completion year

17.6 Subsequently, the Sub-Committee invited the Committee to extend the target completion year for this output to 2015.

18 CLASSIFICATION OF OFFSHORE INDUSTRY VESSELS AND CONSIDERATION OF THE NEED FOR A NON-MANDATORY CODE FOR OFFSHORE CONSTRUCTION SUPPORT VESSELS

18.1 The Sub-Committee recalled that DE 57 established the Correspondence Group on Guidelines for Offshore Wind Farm Vessels, with terms of reference set out in paragraph 12.7 of document DE 57/25, and instructed it to submit a report to this session.

18.2 The Sub-Committee, noting that document SDC 1/18/2 (CESA) had been submitted under this agenda item, decided to consider the aforementioned document under agenda item 19 (see paragraph 19…).

Report of the correspondence group

18.3 The Sub-Committee considered the relevant part of the report of the correspondence group (SDC 1/18 and SDC 1/INF.11) and noted that the group prepared draft *Guidelines for offshore service craft (OSCs) used in windfarm service* (SDC 1/INF.11, annex 1) and draft *Guidelines for offshore construction vessels (OCVs) used in windfarm service* (SDC 1/INF.11, annex 2). The Sub-Committee also noted that the group was of the view that guidance is needed to address the specific operating conditions for windfarm vessels, and that further consideration is required on the structure and content of the aforementioned two draft Guidelines, to include such matters as personnel transfer/access, cargo and overnight accommodation. Additionally, further consideration should be given on

how to reflect complications arising out of vessels being of non-Convention size and for vessels undertaking non-international voyages.

18.4 In the context of the above, the Sub-Committee also noted the relevant parts of document SDC 1/18/1 (Vanuatu), commenting on the report of the correspondence group on the classification of offshore industry vessels and supporting the development of a code for offshore construction support vessels (see also paragraph 19.4.1).

18.5 Following discussion, the Sub-Committee approved the report of the correspondence group in general and in particular:

.1 endorsed the approach taken by the Correspondence Group on the draft Guidelines for windfarm vessels, including the main construction standards suggested in the draft guidelines; and

.2 agreed on the need for further work to progress towards fully meeting the goals identified in the correspondence group's terms of reference through a working group and/or correspondence group.

Instructions to the Working Group on Construction

18.6 Having considered the above documents, the Sub-Committee instructed the Working Group on Construction, established under agenda item 19 (Carriage of more than 12 industrial personnel on board vessels engaged in international voyages), taking into account the comments and decisions made in plenary and documents SDC 1/18, SDC 1/18/1 and SDC 1/INF.11, to:

.1 finalize the different options for construction standards for windfarm vessels (e.g. what kind of guidelines should be developed and on what basis, if any);

.2 further develop the draft *Guidelines for offshore service craft (OSC) used in windfarm service*, based on annex 1 to document SDC 1/INF.11, taking into account document SDC 1/INF.14; and

.3 further develop the draft *Guidelines for offshore construction vessels (OCV) used in windfarm service*, based on annex 2 to document SDC 1/INF.11.

Report of the Working Group on Construction

18.7 Having considered the part of the report of the Working Group on Construction (SDC 1/WP.6) dealing with the agenda item, the Sub-Committee took action as outlined hereunder.

[to be prepared by the Secretariat in consultation with the Chairman after the session, based on the group's report and the actions requested therein, taking into account the decisions taken by the Sub-Committee during subsequent discussions]

19 CARRIAGE OF MORE THAN 12 INDUSTRIAL PERSONNEL ON BOARD VESSELS ENGAGED IN INTERNATIONAL VOYAGES

19.1 The Sub-Committee recalled that MSC 92, having considered a proposal by DE 57 (DE 57/25/Add.1, annex 10), to develop guidance/clarification on appropriate methods for addressing the carriage of more than 12 industrial personnel, taking into account comments provided in document MSC 92/13/2 (United Kingdom), agreed to include, in the 2012-2013 biennial agenda of the DE Sub-Committee, the 2014-2015 biennial agenda of the SDC Sub-Committee and in the provisional agenda for SDC 1, an unplanned output on guidelines addressing the carriage of more than 12 industrial personnel on board vessels engaged on international voyages, with a target completion year of 2015.

19.2 The Sub-Committee also recalled that MSC 92 agreed to instruct the correspondence group established at DE 57 to consider guidelines for offshore wind farm vessels, coordinated by the United Kingdom, to include the new output in the scope of its work (as agreed at DE 57, pending the decisions of MSC 92).

Report of the correspondence group and related submissions

19.3 The Sub-Committee considered the relevant part of the report of the correspondence group (SDC 1/18 and SDC 1/INF.11) and noted that the group had an in-depth discussion on matters related to the development of guidelines addressing the carriage of more than 12 industrial personnel on board vessels engaged on international voyages (paragraphs 24 to 32 of the report). From the discussions, it was clear on the need for the definition of industrial personnel for all ship types (not only for specialized offshore industry vessels engaged in wind farms), which is a highly complex issue. In this context, the Sub-Committee also noted that there was some support in the group for the term "industrial personnel" to be aligned with the Special Purpose Ships Code, 2008, definition of "special personnel". However, there was a concern that industrial personnel should not just be incorporated in the Special Personnel definition, because the definition in the Code may

suggest or support a view that such a person automatically becomes a seafarer, which is something that the industry would wish to avoid, and there is no basis to necessarily assume that every windfarm technician and similar offshore worker should automatically be regarded as a "seafarer". Consequently, although the special personnel definition and training requirements may be considered as a basis for "industrial personnel", the two definitions should remain as two categories.

19.4 In the context of the above, the Sub-Committee had for its consideration the following documents:

.1 SDC 1/18/1 (Vanuatu), commenting on the report of the correspondence group and expressing the view that a more robust description of the maritime training and experience of the embarked personnel is needed to allow for a more direct assessment of the operational risk involved in the designation of vessels that are fit for these windfarm purposes, taking into account that the types of ships addressed by the 1983 SPS Code operate in a significantly different manner compared to OCVs and OSCs especially with regard to time and distance from safe harbour, the safety training of "special persons" and manoeuvring in close proximity to offshore assets;

.2 SDC 1/18/2 (CESA), presenting the view of CESA that it will be difficult to accomplish the goal of safely carrying more than 12 industrial personnel with vessels that are neither passenger ships nor cargo ships by means of minor modifications to the definitions in the existing IMO instruments; and

.3 SDC 1/INF.14 (Germany), proposing an interim solution for the carriage of more than 12 persons on board a vessel "who are not carried on board in connection with the special purpose of that ship or because of special work being carried out aboard that ship". A draft Code for the Construction, Equipment and Operation of Offshore Service Vessels (Code for Offshore Service Vessels) is presented in the annex.

19.5 In considering the above documents, the Sub-Committee, having noted that there was strong support for a short- and long-term solution for addressing this issue and the proposals in document SDC 1/18/2, noted the views expressed within the correspondence group on the subject of industrial personnel (SDC 1/18, paragraphs 24 to 32), in particular

the two approaches for dealing with the regulation of offshore shipping in paragraphs 26 and 27, and endorsed the intention for discussion to continue with such issues taken into consideration.

Establishment of the Working Group on Construction

19.6 Following discussion, the Sub-Committee established a Working Group on Construction and instructed it, taking into account the comments and decisions made in plenary and documents SDC 1/18, SDC 1/18/1, SDC 1/18/2, SDC 1/INF.11 and SDC 1/INF.14, to:

.1 identify short- and long-term options for addressing the carriage of more than 12 industrial personnel on board vessels engaged in international voyages;

.2 develop a definition of industrial personnel, taking into account generic requirements for physical abilities, education and training;

.3 develop a plan of action, identifying the priorities, time frames and objectives for the work to be accomplished; and

.4 consider whether there is a need to establish a correspondence group and, if so, prepare draft terms of reference for consideration by the Sub-Committee.

Report of the Working Group on Construction

19.7 Having considered the part of the report of the Working Group on Construction (SDC 1/WP.6) dealing with the agenda item, the Sub-Committee took action as outlined hereunder.

[to be prepared by the Secretariat in consultation with the Chairman after the session, based on the group's report and the actions requested therein, taking into account the decisions taken by the Sub-Committee during subsequent discussions]

20 DEVELOPMENT OF GUIDELINES FOR WING-IN-GROUND CRAFT

20.1 The Sub-Committee recalled that DE 57 had for its consideration document DE 57/14 (Russian Federation), proposing a substantial number of amendments to the *Interim Guidelines for wing-in-ground (WIG) craft* (MSC/Circ.1054 and Corr.1) and recommending a thorough analysis of WIG craft casualty reports to develop well-founded

requirements and safety measures. However, due to time constraints, DE 57 decided to defer consideration of this agenda item to this session.

20.2 The Sub-Committee had for its consideration the following documents:

.1 SDC 1/20 (France), presenting a proposal concerning the development of final *Guidelines for wing-in-ground (WIG) craft*, aimed at enhancing the safety of the goods and persons carried, and suggesting that the approach to be followed is strengthened regulations, applied in a sensible manner, to encourage development of future technologies, such as those of WIG craft;

.2 DE 57/14 and SDC 1/20/1 (Russian Federation), providing a substantial number of amendments to the *Interim Guidelines for wing-in-ground (WIG) craft* (MSC/Circ.1054 and Corr.1) and specifically refining the definition of type "A" WIG craft; and

.3 SDC 1/20/2 (China), commenting on documents DE 56/18 and DE 57/14 and providing proposals for amendments to the *Interim Guidelines for wing-in-ground (WIG) craft* (MSC/Circ.1054), based on the research carried out by China.

20.3 Following consideration, the Sub-Committee, having noted a general summary provided by the Republic of Korea on the accident that occurred in 2012 and the views expressed regarding the scope of application of the *Interim Guidelines* and the need to further amend them with a view to developing well-founded requirements and safety measures, requested the Secretariat to prepare a consolidated text of the Guidelines with the proposed amendments contained in documents DE 56/18 (Republic of Korea), DE 57/14, SDC 1/20, SDC 1/20/1 and SDC 1/20/2 for further consideration.

20.4 In light of the above decision, the Sub-Committee invited Member Governments and international organizations to submit comments and proposals on the aforementioned consolidated text to SDC 2.

21 CONSIDERATION OF IACS UNIFIED INTERPRETATIONS

General

21.1 The Sub-Committee recalled that this was a continuous item on its biennial agenda, established by MSC 78, so that IACS could submit any newly developed or updated unified interpretations for consideration of the Sub-Committee with a view to developing appropriate IMO interpretations, if deemed necessary.

Application of the Performance standard for alternative means of corrosion protection for cargo oil tanks of crude oil tankers (resolution MSC.289(87))

21.2 In considering document SDC 1/21 (IACS), providing in the annex a copy of IACS UI SC 258 on the application of the *Performance standard for alternative means of corrosion protection for cargo oil tanks of crude oil tankers* (resolution MSC.289(87)), as referred to in SOLAS regulation II-1/3-11, the Sub-Committee agreed to the draft Unified interpretation on the application of the *Performance standard for alternative means of corrosion protection for cargo oil tanks of crude oil tankers* (resolution MSC.289(87)), and the associated draft MSC circular, as set out in annex [...], for submission to MSC 93 for approval.

Application of the Performance standard for protective coatings for cargo oil tanks of crude oil tankers (PSPC-COT) (resolution MSC.288(87))

21.3 In considering document SDC 1/21/1 (IACS), providing in the annex a copy of IACS UI SC 259 on the application of the *Performance standard for protective coatings for cargo oil tanks of crude oil tankers* (PSPC-COT) (resolution MSC.288(87)), as referred to in SOLAS regulation II-1/3-11, the Sub-Committee agreed to the draft Unified interpretation on the application of the *Performance standard for protective coatings for cargo oil tanks of crude oil tankers* (PSPC-COT) (resolution MSC.288(87)), and the associated draft MSC circular, set out in annex [...], for submission to MSC 93 for approval.

Means of escape from machinery control rooms and main workshops

21.4 The Sub-Committee had for its consideration the following documents:

.1 SDC 1/21/2 (IACS), seeking clarifications on the arrangement of a continuous fire shelter to a safe position outside the machinery space and the meaning of the term "main workshop" with respect to the draft amendments to SOLAS regulation II-2/13, approved by MSC 92; and

.2 SDC 1/24/3 (Japan), proposing a modification to draft the amendments to SOLAS regulation II-2/13.4, approved by MSC 92.

21.5 In considering document SDC 1/21/2, the Sub-Committee noted the statement by the delegation of the Bahamas that, in their view, a "continuous fire shelter" means a route from a main workshop, or from an engine control room, which allows 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 regulation II-2/13.4.2.1.1. In addition, they considered that a "main workshop" is a compartment enclosed on at least three sides by bulkheads or gratings, usually containing welding equipment, metalworking machinery and workbenches.

21.6 The Sub-Committee endorsed the above interpretations and invited IACS to submit a finalized unified interpretation to SDC 2, including the above definitions and the sketches set out in paragraph 5 of document SDC 1/21/2.

21.7 In considering document SDC 1/24/3, the Sub-Committee noted that there was no support at this stage. In any case, further interpretations would be considered at SDC 2 when reconsidering this matter.

Clarifications on the Code on Noise Levels on Board Ships

21.8 The Sub-Committee considered document SDC 1/21/3 (IACS), seeking clarifications on the Code on Noise Levels on Board Ships, adopted by resolution MSC.337(91), which is expected to enter into force on 1 July 2014; in order to facilitate global and unified implementation of the Code.

21.9 Following discussion, the Sub-Committee agreed that no interpretations were necessary for paragraph 3.3.2 of the Noise Code on the issues discussed in paragraph 4 of document SDC 1/21/3, as:

.1 while some delegations agreed with the understanding of IACS that "normal service speed" should be interpreted as meaning the "normal design service shaft speed", the text in the Code is clear that the noise measurements are to be taken at no less than 80% of the maximum continuous rating (MCR); and

.2 the text in the Code is clear in that Administrations will give due consideration in relation to "special ship types" and "ships with special propulsion and power configuration", and therefore internationally agreed understandings of these terms are not appropriate.

Fire integrity of boundaries of ro-ro/vehicle spaces

21.10 The Sub-Committee considered document SDC 1/21/4 (IACS), seeking clarification on the fire integrity of boundaries of ro-ro/vehicle spaces, adopted by resolution MSC.338(91), which will enter into force on 1 July 2014; in order to facilitate global and unified implementation of these provisions.

21.11 Following discussion, the Sub-Committee invited IACS to submit a document on the matter to SDC 2, taking into account the comments made at the session.

Sill and coaming heights for openings on top of deckhouses and companionways

21.12 The Sub-Committee considered document SDC 1/21/5 (IACS), seeking clarification on the minimum height of sills and coamings for various openings on the top of deckhouses or companionways on the freeboard deck.

21.13 Following discussion, the Sub-Committee decided not to pursue an amendment to the LL Convention and Protocol as it was outside the scope of this output, whilst recognizing that a long-term solution on this issue was needed. In responding, the observer from IACS offered to provide technical assistance to any Member State wishing to take this matter forward to the Committee. Subsequently, the Sub-Committee invited IACS to submit a unified interpretation to SDC 2 as a short-term solution.

Unified interpretations of the Performance standard for protective coatings for dedicated seawater ballast tanks in all types of ships and double-side skin spaces of bulk carriers (resolution MSC.215(82)) (MSC.1/Circ.1465) – Alternative Systems

21.14 The Sub-Committee had for its consideration the following documents:

.1 SDC 1/21/6 (IACS), providing in the annex unified interpretations relevant to section 8 (Alternative systems) of resolution MSC.215(82), which DE 57 and MSC 92 decided not to include in the text of MSC.1/Circ.1465; which it is proposed should be included in an amendment to these Unified interpretations; and

.2 SDC 1/21/7 (Republic of Korea), providing views for IACS Unified Interpretations relevant to section 8 (Alternative systems) of the *Performance standard for protective coatings for dedicated seawater ballast tanks in all types of ships and double-side skin spaces of bulk carriers* (PSPC) (resolution MSC.215(82)).

21.15 Following consideration, the Sub-Committee, having noted that there was not enough support at this stage to take action on this matter, invited IACS to submit an updated unified interpretation to SDC 2, taking into account the comments made at the session.

[22 BIENNIAL AGENDA AND PROVISIONAL AGENDA FOR SDC 2

Outcome of A 28

22.1 In considering matters related to the biennial agenda and provisional agenda, the Sub-Committee recalled that the Assembly, at its twenty-eighth session, approved the *Strategic plan for the Organization (for the six-year period 2014 to 2019)* (resolution A.1060(28)) and the *High-level Action Plan and priorities for the 2014-2015 biennium* (resolution A.1061(28)).

Biennial status report and proposed provisional agenda for SDC 2

22.2 Taking into account the progress made at the session and the instructions of MSC 92, the Sub-Committee prepared the biennial status report (SDC 1/WP.2, annex 1) and the proposed provisional agenda for SDC 2 (SDC 1/WP.2, annex 2), as set out in annexes […] and […], respectively, for consideration by MSC 93.

Correspondence groups established at the session

22.3 The Sub-Committee established correspondence groups on the following subjects, due to report to SDC 2:

[*to be completed by the Secretariat after the session*]

Working arrangements for the next session

22.4 The Sub-Committee agreed to establish at its next session working and/or drafting groups on the following subjects:

[*to be completed by the Secretariat after the session*]

whereby the Chairman, taking into account the submissions received on the respective subjects, would advise the Sub-Committee well in time before SDC 2 on the final selection of such groups.

Date of next session

22.5 The Sub-Committee noted that the second session of the Sub-Committee has been tentatively scheduled to take place from 16 to 20 February 2015].

23 ELECTION OF CHAIRMAN AND VICE-CHAIRMAN FOR 2015

23.1 In accordance with the Rules of Procedure of the Maritime Safety Committee, the Sub-Committee unanimously re-elected Mrs. A. Jost (Germany) as Chairman and Mr. N. Campbell (South Africa) as Vice-Chairman, both for 2015.

24 ANY OTHER BUSINESS

Development of risk-based distance criteria for gas fuel tanks

24.1 The Sub-Committee had for its consideration the following documents:

.1 SDC 1/24 (Norway), proposing amendments to the draft IGF Code related to location of LNG tanks. Following up on the hazard report submitted to SLF 55 (SLF 55/INF.12), Norway has further assessed a possible risk-based approach to the distance criteria in section 5.3 of the draft IGF Code;

.2 SDC 1/24/4 (Germany and CESA), presenting a proposal to harmonize the damage assumptions and subdivision requirements according to SOLAS regulation II-1/8 with regulation 5.3.4 of the draft IGF Code (BLG 17/8/1) providing both protection and flexibility;

.3 SDC 1/24/5 (France), providing the views, based on its known projects of LNG fuelled ships currently under development, that the drastic limitation criteria, as proposed by Norway, would allow the design of LNG fuelled ships with tanks in the upper part of the ship and for short sea shipping only;

.4 SDC 1/24/6 (CLIA), commenting on Norway's proposal to develop risk-based distance criteria for gas fuel tanks for inclusion in the draft IGF Code (SDC 1/24), and providing the view that certain elements of Norway's proposal regarding risk-based distance criteria need further detailed consideration, including matters related to capacity, placement of tanks, and feasibility; and

.5 SDC 1/24/7 (CESA), welcoming the Norwegian initiative to complement deterministic gas fuel tank location requirements of the draft IGF Code by a probabilistic concept. The discussion of the proposed provisions reveals, however, that the limit values are too strict to facilitate the use of gas fuel beyond short sea shipping applications.

24.2 Following discussion, the Sub-Committee, having agreed to take a risk-based approach, instructed the Stability Working Group, established under agenda item 8, taking into account comments and decisions made in plenary, as a high priority, to finalize the draft amendments to section 5 of the draft IGF Code related to location of LNG tanks, taking into account documents SDC 1/24, SDC 1/24/4, SDC 1/24/5, SDC 1/24/6 and SDC 1/24/7.

24.3 Having considered the part of the report of the Stability Working Group (SDC 1/WP.5/Add.1) related to the matter, the Sub-Committee …

[to be prepared by the Secretariat in consultation with the Chairman after the session, based on the group's report and the actions requested therein, taking into account the decisions taken by the Sub-Committee during subsequent discussions]

Outcome of FSI 21 and MSC 92 – Consideration of casualty reports

24.4 The Sub-Committee considered document SDC 1/24/1 (Secretariat), reporting on the outcome of FSI 21 and MSC 92, and noted that MSC 92 endorsed the FSI 21 decision to forward the reports on the incidents of the **Commodore Clipper** (GISIS incident C0008451); **Lisco Gloria** (GISIS incident C0008391); **Pearl of Scandinavia** (GISIS incident C0008286); **CMA CGM Christophe Colomb** (GISIS incident C0008272-R01); and **Deepwater Horizon**, together with the analyses and comments made by the correspondence group (FSI 21/5), to the Sub-Committees for consideration under this agenda item to advise MSC 93 on how best to proceed.

24.5 In considering the above casualties, the Sub-Committee having noted the Statement by the delegation of the United States, which advised that they intended to co-sponsor a document to MSC 93 on matters related to the **Deepwater Horizon** casualty, and the statement by the delegation of India, which proposed that a review of the MODU Code be undertaken in light of the aforementioned casualty, invited interested Member Governments and international organizations to submit proposals for new outputs to the Committee in accordance with the Guidelines on the organization and method of work.

Threshold values for asbestos

24.6 The Sub-Committee considered document SDC 1/24/2 (Secretariat), reporting on the outcome of MSC 92, and noted that, in the context of the review of the 2011 Guidelines for the development of the inventory of hazardous materials (resolution MEPC.197(62)), MEPC 65 had requested MSC 92 to give consideration to a threshold value for asbestos for the purpose of listing it in the Inventory of Hazardous Materials. Subsequently, MSC 92 referred the issue for a detailed technical review to the Sub-Committee for reporting to MSC 93. In this context, the Sub-Committee was invited to consider the detectability of asbestos in asbestos containing materials (ACMs) and the availability of relevant test methods, and provide guidance to MSC 93 regarding an adequate threshold value for the purpose of listing asbestos in the Inventory of Hazardous Materials, as required under regulation 5 of the Hong Kong International Convention for the Safe and Environmentally Sound Recycling of Ships, 2009.

24.7 The Sub-Committee noted the information by the delegation of Japan concerning the work of the MEPC Correspondence Group on Ship Recycling, which had submitted its report (MEPC 66/3) for consideration at the forthcoming MEPC 66. The group, having discussed the detectability of asbestos and the availability of relevant test methods, recognized that in national laws and regulations in various countries the determination of threshold values for asbestos had a close linkage with testing methods presently applied in these countries. Consequently, the group had agreed to a compromise proposal of 0.1% as the threshold value and a footnote including a reference to the UN recommendation "Globally Harmonized System of Classification and Labelling of Chemicals (GHS)" as the basis for the value and a relaxation clause which allows the 1% threshold to be applied, subject to this being recorded in the Material Declaration and the Inventory.

24.8 Following discussion, the Sub-Committee, having noted the support expressed by several delegations for the compromise proposal described in paragraph 24.7 above, endorsed the above proposal and requested the Secretariat to inform MEPC 66 and MSC 93 of this decision.

[25 REVIEW OF CONDITIONS UNDER WHICH PASSENGER SHIP WATERTIGHT DOORS MAY BE OPENED DURING NAVIGATION AND DEVELOPMENT OF AMENDMENTS TO SOLAS REGULATION II-1/22 AND MSC.1/CIRC.1380

25.1 The Sub-Committee recalled that MSC 92, having considered the report of the Working Group on Passenger Ship Safety (MSC 92/WP.8/Rev.1) and document MSC 92/23/2 (Norway, Spain, United Kingdom and United States), proposing to review the conditions under which watertight doors of passenger ships may be opened during navigation and to prepare amendments to MSC.1/Circ.1380 and SOLAS regulation II-1/22, as appropriate, had decided to include, in the 2014-2015 biennial agenda of the SDC Sub-Committee and provisional agenda for SDC 1, an output on "Review of conditions under which passenger ship watertight doors may be opened during navigation and prepare amendments to SOLAS regulation II-1/22 and MSC.1/Circ.1380", with a target completion year of 2015.

25.2 Following discussion, the Sub-Committee invited Member Governments and international organizations to submit comments and proposals to SDC 2.]

26 ACTION REQUESTED OF THE COMMITTEES

26.1 The Maritime Safety Committee, at its ninety-third session, is invited to:

[to be prepared by the Secretariat in consultation with the Chairman after the meeting]

26.2 The Marine Environment Protection Committee, at its sixty-sixth session, is invited to:

[to be prepared by the Secretariat in consultation with the Chairman after the meeting]

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ANNEXES

[to be prepared by the Secretariat after the session]