INTERNATIONAL MARITIME ORGANIZATION

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SUB-COMMITTEE ON SHIP SYSTEMS AND EQUIPMENT
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Agenda item 21

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REPORT TO THE MARITIME SAFETY COMMITTEE

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LIST OF ANNEXES

1 GENERAL

1.1 The Sub-Committee on Ship Systems and Equipment (SSE) held its first session from 10 to 14 March 2014 under the chairmanship of Dr. S. Ota (Japan), who was unanimously elected as Chairman for 2014 at the opening of the session. The Vice-Chairman, Mr. K. Hunter (United Kingdom), who was unanimously elected as Vice-Chairman for 2014 at the opening of the session, was also present.

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

Opening address

1.3 The Secretary-General, after expressing his sincere sympathies to those affected by the Malaysian Airlines incident, 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

1.4 The delegation of Malaysia made a statement of appreciation in response to the condolence message by the Secretary-General. The full text of their statement is set out in annex 18.

Chairman's remarks

1.5 Responding to the Secretary-General's opening address, the Chairman thanked him 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.

Adoption of the agenda and related matters

1.6 The Sub-Committee adopted the agenda (SSE 1/1) and agreed to be guided in its work, in general, by the annotations contained in documents SSE1/1/1 and SSE 1/1/1/Corr.1 (Secretariat) and the arrangements in document SSE 1/1/2 (Secretariat). The agenda, as adopted, together with the list of documents considered under each agenda item, is set out in document SSE 1/INF.9.

2 DECISIONS OF OTHER IMO BODIES

2.1 The Sub-Committee noted the decisions and comments pertaining to its work made by MEPC 65, MSC 92, STW 44, DSC 18, C 110, A 28 and SDC 1, as reported in documents SSE 1/2, SSE 1/2/1 and SSE 1/2/2 (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, had requested 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 former sub-committee structure.

2.3 The Sub-Committee further noted that the Assembly, at its twenty-eighth session, had 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 of the Organization and priorities for the 2014-2015 biennium* (resolution A.1061(28)).

3 DEVELOPMENT OF REQUIREMENTS FOR SHIPS CARRYING HYDROGEN AND COMPRESSED NATURAL GAS VEHICLES

General

3.1 The Sub-Committee recalled that FP 56 had developed draft amendments to SOLAS regulations II-2/1 and II-2/3 and new SOLAS regulation II-2/20-1 concerning requirements for vehicle carriers carrying motor vehicles with compressed hydrogen or natural gas in their tanks for their own propulsion, all of which had been approved at MSC 92, with a view to adoption at MSC 93.

3.2 The Sub-Committee also recalled that FP 56 had agreed to further consider the draft MSC circular on the recommendation on safety measures for existing pure car carriers transporting motor vehicles with compressed hydrogen or natural gas in their tanks for their own propulsion, which had been developed in support of the aforementioned draft amendments to SOLAS.

3.3 The Sub-Committee had for its consideration document SSE 1/3 (Japan), proposing a revised draft recommendation on safety measures for existing vehicle carriers carrying motor vehicles with compressed hydrogen or natural gas in their tanks for their own propulsion as cargo.

3.4 In considering document SSE 1/3, the Sub-Committee noted the following views expressed on this matter:

.1 that the ship's crew should only check that isolation valves are closed and that there is no smell of gas, as it is impractical for the crew to check for gas leakage from vehicles; and

.2 that the shipper should be responsible for checking the condition of the vehicle prior to shipment and confirm that gas-tightness checks have been performed, which should be indicated by signage or stickers on the vehicle.

Establishment of a working group

3.5 Recalling the relevant decision at MSC 92, the Sub-Committee established the Working Group on Fire Protection and instructed it, taking into account comments made in plenary, to consider matters related to safety measures for existing vehicle carriers carrying motor vehicles with compressed hydrogen or natural gas in their tanks for their own propulsion as cargo, taking into account document SSE 1/3, and advise the Sub-Committee on how best to proceed (see also paragraphs 5.5, 6.4 and 17.5).

Report of the Working Group on Fire Protection

3.6 Having considered the report of the working group (SSE 1/WP.3), the Sub-Committee approved it in general and took action as described in paragraphs 3.7 to 3.10.

3.7 The Sub-Committee noted that the group, having agreed that the shipper is responsible for checking the cargo prior to loading, and having noted that paragraph 2 of the draft recommendation (SSE 1/3, annex) implies liability implications for the owner, decided to replace the aforementioned paragraph by two new paragraphs addressing liability issues and the relevant provisions of the IMDG Code for the carriage of this type of cargo.

3.8 The Sub-Committee also noted the views of several delegations that the carriage of motor vehicles with compressed hydrogen or natural gas in their tanks for their own propulsion as cargo should not be permitted on existing ships unless the provisions of new regulation II-2/20-1 were met and, therefore, agreed to the group's decision to make their carriage subject to the satisfaction of the Administration.

3.9 In this regard, the Sub-Committee noted the statement of the delegation of Norway that the term "to the satisfaction of the Administration" was too vague and that they would prefer to address this issue with a mandatory requirement in SOLAS in order to ensure consistent implementation worldwide. In their opinion, this amendment would allow existing ships with ro-ro and vehicle spaces to carry cars with alternative fuels provided that suitable measures, such as continuous operation of the ventilation fans, are implemented.

3.10 Having noted the above matters, the Sub-Committee agreed to the draft MSC circular *Recommendation on safety measures for existing vehicle carriers carrying motor vehicles with compressed hydrogen or natural gas in their tanks for their own propulsion as cargo*, as set out in annex 1, for submission to MSC 93 for approval, in conjunction with the adoption of the associated draft new SOLAS regulation II-2/20-1.

Completion of the work on the output

3.11 The Committee was invited to note that the work on this output had been completed.

4 DEVELOPMENT OF AMENDMENTS TO SOLAS REGULATION II-1/40.2 CONCERNING GENERAL REQUIREMENTS ON ELECTRICAL INSTALLATIONS

General

4.1 The Sub-Committee recalled that DE 57 had supported, in principle, a proposal in document DE 57/5 (Denmark) for amendments to SOLAS regulations II-1/45 and the HSSC Guidelines to ensure that electrical installations on board ships were manufactured and maintained according to relevant and recognized electrical standards, in order to provide a sufficient safety level and protection against fire on board ships.

4.2 The Sub-Committee also recalled that DE 57, noting concerns regarding the use of vague terminology, had invited Member Governments and international organizations to submit comments and proposals on the matter.

4.3 The Sub-Committee had for its consideration document SSE 1/4 (Denmark), proposing to amend SOLAS regulation II-1/45 to ensure that electrical installations on board ships are manufactured and maintained according to relevant and recognized electrical standards in order to provide a sufficient safety level and protection against fire on board ships.

4.4 In considering document SSE 1/4, the Sub-Committee, having noted the views expressed that the existing SOLAS regulations remain fit for purpose and that issues related to maintenance of such systems are adequately addressed by the ISM Code, decided not to proceed with amendments to SOLAS regulations II-1/45.

4.5 In this regard, the observer from ITF made a statement that the Sub-Committee should seek to extend the work on this agenda item to cover electrical considerations in line with SOLAS regulation II-1/40.2 for passenger ship safety and also consider the possible amendments required to SOLAS regulation II-1/42. The full text of the statement is set out in annex 18.

Completion of the work on the output

4.6 The Committee was invited to note that the work on this output had been completed.

5 SMOKE CONTROL AND VENTILATION

General

5.1 The Sub-Committee recalled that FP 46, when finalizing the *Guidelines for smoke control and ventilation systems for internal assembly stations and atriums on new passenger ships* (MSC/Circ.1034), had decided that it should deal with the issue of interaction between smoke control systems and fixed fire-extinguishing systems at a future session.

5.2 The Sub-Committee also recalled that FP 56, having considered a proposal by the Correspondence Group on Development of Requirements for the Fire Resistance of Ventilation Ducts (FP 56/4) to develop guidance on the safety objectives, functional requirements and performance standards for smoke management systems and smoke dampers on cargo and passenger ships, had decided to include an agenda item on "Smoke control and ventilation" in the provisional agenda for SSE 1.

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

.1 SSE 1/5 (Germany), containing a draft performance standard and functional requirements for smoke-management systems and suggesting that such systems be designed with a view to maintaining sufficiently smoke-free escape ways within public areas, internal assembly stations, safe areas and staircases; and

.2 SSE 1/5/1 (China), providing comments on the draft performance standards and functional requirements set out in document SSE 1/5 and proposing to conduct further work with a view to developing a complete set of performance standards once the functional requirements are finalized.

5.4 In considering the above documents, the Sub-Committee noted the following views expressed on the matter:

.1 that this matter is related to evacuation analysis and, therefore, the goal-based concept may need to be applied;

.2 that guidance for crew on actions to be taken in different situations should be developed; and

.3 that this matter is very complex and, therefore, a significant amount of work is still necessary before this work can be finalized.

Instructions to the Working Group on Fire Protection

5.5 Having considered the above views, the Sub-Committee instructed the Working Group on Fire Protection, established under agenda item 3 (Development of requirements for ships carrying hydrogen and compressed natural gas vehicles), taking into account the comments and decisions made in plenary, to consider the draft performance standard and functional requirements for the assessment of smoke management systems, as set out in the annex to document SSE 1/5 and taking into account document SSE 1/5/1, and advise the Sub-Committee on how best to proceed.

Report of the Working Group on Fire Protection

5.6 Having considered the part of the report of the Working Group on Fire Protection (SSE 1/WP.3) dealing with the agenda item, the Sub-Committee took action as outlined in paragraphs 5.7 to 5.9.

Draft performance standard and functional requirements for the assessment of smoke control systems

5.7 The Sub-Committee, taking into account the group's conclusion that the best way forward would be first to develop broad functional requirements to benchmark the intended smoke control system objectives, noted that the group had prepared the draft functional requirements for inclusion in the draft performance standard for the assessment of smoke control systems, as set out in annex 2 to document SSE 1/WP.3.

Future work on matters related to smoke control and ventilation

5.8 The Sub-Committee noted that in order to finalize this work it would be necessary to:

.1 consider possible amendments to SOLAS chapter II-2;

.2 consider the suitability of detailed performance criteria that may be adapted from existing sources/standards;

.3 further develop the draft performance standard for the assessment of smoke control systems; and

.4 further develop functional requirements based on the above.

5.9 In this connection, the Sub-Committee noted the group's recommendation on the necessary future work on matters related to smoke control and ventilation, as set out in annex 3 to document SSE 1/WP.3 (see also paragraph 18.4.1).

Establishment of a Correspondence Group on Fire Protection (FP)

5.10 Having considered the above matters and in order to progress the work intersessionally, the Sub-Committee decided to establish a Correspondence Group on Fire Protection (FP), under the coordination of Germany and the Netherlands*, and instructed it to:

.1 further consider the draft performance standard and functional requirements for the assessment of smoke control systems, taking into account documents SSE 1/5, SSE 1/5/1 and SSE 1/WP.3, annexes 2 and 3; and

.2 submit a report to SSE 2 (see also paragraph 6.13).

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6 DEVELOPMENT OF AMENDMENTS TO SOLAS REGULATION II-2/20 AND ASSOCIATED GUIDANCE ON AIR QUALITY MANAGEMENT FOR VENTILATION OF CLOSED VEHICLE SPACES, CLOSED RO-RO AND SPECIAL CATEGORY SPACES

Background

6.1 The Sub-Committee recalled that FP 56 had established a correspondence group to further consider proposed draft amendments to SOLAS regulation II-2/20 and the associated draft MSC circular, as contained in document FP 56/17, taking into account the additional safety aspects raised at FP 56 (FP 56/23, paragraph 17.4).

Report of the correspondence group established at FP 56

6.2 The Sub-Committee, having considered the report of the correspondence group established at FP 56 (SSE 1/6), approved the report in general and noted the following views expressed on the matter:

.1 that the new SOLAS regulation II-2/20-1 is applicable regardless of whether an air quality management system has been installed;

.2 that amendment to SOLAS regulation II-2/20.3.2.2, which permits ten air changes per hour as an alternative to the use of explosion-proof electrical equipment, might be appropriate;

.3 with regard to MSC/Circ.729, that different views were expressed on the maximum response time for gas detection and normal levels of CO and NO_2 in protected spaces; and

.4 that Norway advised that it should not be included in the list of participants as it had not participated in the work of this correspondence group.

6.3 The Sub-Committee, in considering the actions requested in paragraph 16 of the group's report:

.1 noted the group's observation that both fire safety and personnel protection from harmful gases are currently included in SOLAS regulation II-2/20 and the Design Guidelines (MSC/Circ.729), while the draft amended SOLAS regulation II-2/20.3 was prepared to take into account flammable gases and vapours only;

.2 with regard to the applicability of air quality management to the new SOLAS regulation II-2/20-1, noted the view expressed by the delegations of Japan and Spain that this regulation is not related to ventilation itself and, therefore, does not need to be amended, and agreed that this matter should be further considered by the Working Group on Fire Protection;

.3 with regard to the two alternative proposed draft amendments to SOLAS regulation II-2/20.3, noted the view expressed by IACS that a clear application statement should be added and decided to instruct the Working Group on Fire Protection to further consider this issue;

.4 noted the group's view that the Design Guidelines (MSC/Circ.729) should be updated as a whole;

.5 with regard to the maximum response time for gas detection and the maximum gas concentration admissible in protected spaces, agreed that this matter should be further considered by the Working Group on Fire Protection;

.6 with regard to the need to establish normal levels of CO and NO_2 in the guidelines to assess air quality systems approval, decided that this matter should be finalized by the Working Group on Fire Protection; and

.7 noted the concern expressed by Germany, which was supported by ICS, regarding health hazards involved when reducing the ventilation, as well as the need to measure gases and vapours that could be dangerous to members of the crew when controlling ro-ro spaces, and decided to instruct the Working Group on Fire Protection to further consider this issue.

Instructions to the Working Group on Fire Protection

6.4 Following the above discussion, the Sub-Committee instructed the Working Group on Fire Protection, established under agenda item 3 (Development of requirements for ships carrying hydrogen and compressed natural gas vehicles), taking into account the comments and decisions made in plenary, to:

.1 consider whether the proposed air quality management system should also be applicable for the new SOLAS regulation II-2/20-1 and advise the Sub-Committee accordingly;

.2 finalize the draft amendments to SOLAS regulation II-2/20.3; and

.3 decide upon the value of maximum response time for gas detection and the levels of CO and NO_2 in protected spaces and finalize the draft amendments to MSC/Circ.729.

Report of the Working Group on Fire Protection

6.5 Having considered the part of the report of the Working Group on Fire Protection (SSE 1/WP.3) dealing with the agenda item, the Sub-Committee took action as outlined in paragraphs 6.6 to 6.14.

Draft amendments to SOLAS regulation II-2/20.3

6.6 The Sub-Committee noted that the group, having considered options 1 and 2 of the proposed amendments to SOLAS regulation II-2/20.3 (SSE 1/6, annex 1), had decided that the draft text of option 1 was preferred; however, it could be improved by adding the text of paragraph 3.1.2.4 of option 2 which refers to the guidelines to be developed by the Organization.

6.7 The Sub-Committee concurred with the group's view that the air quality management system should not be applicable to the new SOLAS regulation II-2/20-1 (Requirements for vehicle carriers carrying motor vehicles with compressed hydrogen or natural gas in their tanks for their own propulsion as cargo), as the current SOLAS requirements only consider gasoline and diesel as fuel.

Scope of application

6.8 With regard to matters related to scope of application of SOLAS regulation II-2/20, the Sub-Committee noted that the group had agreed to include the following phrase at the beginning of paragraph 3.1.2.4:

"For all passenger and cargo ships,",

so as to make the option of using the air quality control system available on both new and existing ships.

6.9 In light of the above decision, the Sub-Committee agreed to the draft amendments to SOLAS regulation II-2/20, as set out in annex 2, for submission to MSC 94 for approval, with a view to subsequent adoption.

***Draft amendments to the* Design guidelines and operational recommendations for ventilation systems in ro-ro cargo spaces (MSC/Circ.729)**

6.10 The Sub-Committee noted that the group had been unable to finalize the draft amendments to the *Design guidelines and operational recommendations for ventilation systems in ro-ro cargo spaces* (MSC/Circ.729), as there are no internationally accepted levels for CO and NO_2 and the nationally accepted levels differ considerably. The Sub-Committee also noted the group's view that further detailed consideration of the draft amendments to the Design Guidelines was necessary.

6.11 In this regard, the Sub-Committee noted the group's view that the draft amendments to MSC/Circ.729 could be finalized at SSE 2 for approval by MSC 95, in conjunction with the adoption of the associated draft amendments to SOLAS regulation II-2/20.3.

6.12 The Sub-Committee noted the modifications proposed by the group to the draft new appendix 3 to part 1 of the Design Guidelines, as set out in annex 5 of document SSE 1/WP.3, and endorsed the group's recommendation on the necessary provisions to be included in the draft new appendix 3 to part 1 of the *Design guidelines and operational recommendations for ventilation systems in ro-ro cargo spaces* (MSC/Circ.729), as set out in annex 6 to document SSE 1/WP.3.

Instructions to the FP Correspondence Group

6.13 Having considered the above matters and in order to progress the work intersessionally, the Sub-Committee decided to further instruct the FP Correspondence Group established under agenda item 5 (see paragraph 5.10) to:

.1 further consider in detail the draft new appendix 3 to part 1 of the *Design guidelines and operational recommendations for ventilation systems in ro-ro cargo spaces* (MSC/Circ.729), taking into account annexes 5 and 6 to document SSE 1/WP.3; and

.2 revise and update MSC/Circ.729, taking into account the current state of technology for the design of ventilation systems.

Extension of the target completion year

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

7 DEVELOPMENT OF LIFE-SAFETY PERFORMANCE CRITERIA FOR ALTERNATIVE DESIGN AND ARRANGEMENTS FOR FIRE SAFETY (MSC/CIRC.1002)

General

7.1 The Sub-Committee recalled that MSC 90, having considered document MSC 90/25/3 (United States) proposing an unplanned output to develop agreed life-safety performance criteria to be used in fire modelling carried out in conjunction with the *Guidelines on alternative design and arrangements for fire safety* (MSC/Circ.1002), had agreed to include in the post-biennial agenda of the Committee an output on "Development of life-safety performance criteria for alternative design and arrangements for fire safety (MSC/Circ.1002)", with one session needed to complete the item.

7.2 The Sub-Committee also recalled that MSC 92 had decided to place this output on the agenda for SSE 1.

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

.1 MSC 90/25/3 (United States), providing the view that inclusion of minimum established life-safety performance criteria in the *Guidelines on alternative design and arrangements for fire safety* (MSC/Circ.1002) will ensure consistent results of evaluations of proposals for alternative design and arrangements;

.2 SSE 1/7 (IACS), providing comments on the proposals in document MSC 90/25/3 and suggesting that further guidance should be developed, and included in MSC/Circ.1002, on how the different types of performance criteria that are required to be agreed (paragraph 6.3.4 of the annex to MSC/Circ.1002) should be sourced, justified, selected and applied, when conducting an alternative design approach;

.3 SSE 1/7/1 (China), proposing recommendations on revision of performance criteria in the *Guidelines on alternative design and arrangements for fire safety* (MSC/Circ.1002) and recommending to develop the rules for determination of safety evacuation on the basis of the added index of life-safety criteria and increase the application of safety factors in order to facilitate the achievement of the life-safety objective; and

.4 SSE 1/INF.6 (China), providing detailed background information on the study on life-safety performance criteria.

7.4 In considering the above documents, the Sub-Committee noted the following views expressed on this matter:

.1 that further development of the performance criteria is needed;

.2 that the proposals in document SSE 1/7/1 should be considered in detail from a technical point of view; and

.3 that the consideration of this matter may be combined with the agenda item on smoke control and ventilation.

Establishment of a correspondence group

7.5 Following discussion, the Sub-Committee decided to establish a Correspondence Group on Development of Life-Safety Performance Criteria for Alternative Design and Arrangements for Fire Safety (MSC/Circ.1002), under the coordination of the United States*, and instructed it, taking into account documents MSC 90/25/3, SSE 1/7, SSE 1/7/1 and SSE 1/INF.6, to:

.1 review available research, accepted methodologies and available standards with regard to the allowable levels of fire effluents considered safe for human exposure to address paragraph 6.3.4.1 of the *Guidelines on alternative design and arrangements for fire safety* (MSC/Circ.1002);

.2 consider whether the safety margins employed in shoreside building design are adequate for use on ships, taking into account the differences in shipboard means of escape and the availability of trained crew members to assist with the evacuation;

.3 develop appropriate framework for assessment of minimum life-safety performance criteria and safety margins to address the survivability of passengers and crew exposed to the effects of heat, smoke, toxicity, reduced visibility, etc., in relation to evacuation time; and

.4 submit a report to SSE 2.

Extension of the target completion year

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

8 DEVELOPMENT OF A NEW FRAMEWORK OF REQUIREMENTS FOR SAFETY OBJECTIVES AND FUNCTIONAL REQUIREMENTS FOR THE APPROVAL OF ALTERNATIVE DESIGN AND ARRANGEMENTS FOR SOLAS CHAPTERS II-1 (PARTS C, D AND E) AND III

General

8.1 The Sub-Committee recalled that DE 57 had agreed, in principle, to the draft *Goal-based guidelines on the framework of requirements for ships' life-saving appliances* (DE 57/WP.5, annex 1) and had decided that the outcome of the work of the Working Group on Life-Saving Appliances (LSA) established at DE 57, relating to the work plan for the development of safety objectives and functional requirements of the *Guidelines on alternative design and arrangements for SOLAS chapters II-1 and III*, would be presented in part 2 of the report of the group (DE 57/WP.5/Add.1) for consideration by SSE 1.

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8.2 The Sub-Committee also recalled that DE 57 had agreed that the draft guidelines should be submitted to the Committee for approval once the work on the development of safety objectives and functional requirements of the *Guidelines on alternative design and arrangements for SOLAS chapters II-1 and III* had been finalized.

Outcome of other IMO bodies

8.3 The Sub-Committee was advised that the following parts of the draft guidelines had been referred to HTW and NSCR for further consideration: functional requirements related to the human element, communication and search and rescue. In this regard, the Sub-Committee noted the information provided verbally by the Secretariat that HTW 1 had no further comments on the functional requirements in Tier II of the draft *Goal-based guidelines on the framework of requirements for ships' life-saving appliances*.

Second part of the report of the LSA Working Group established at DE 57

8.4 The Sub-Committee, having considered document DE 57/WP.5/Add.1 containing the second part of the LSA Working Group's report and having noted in particular:

.1 the group's view that Failure Mode and Effect Analysis (FMEA) is just one of the analysis tools and that the analysis tools should not be restricted; and

.2 the group's conclusion that gap analysis would be important at this stage, in addition to a revision of the issue raised by the Industry Lifeboat Group (ISWG LRH/2/3), in order to identify the actual matters that need to be considered under the scope of this output,

decided that the work plans for LSA requirements and for SOLAS chapter II-1 (DE 57/WP.5/Add.1, annexes 1 and 2) needed to be further developed at this session.

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

.1 SSE 1/8 (Japan), providing the information on the outcome of investigation of the LSA requirements in the SOLAS Convention taking into account the draft *Goal-based guidelines on the framework of requirements for ships' life-saving appliances* and proposing some modifications to improve the draft guidelines;

.2 SSE 1/8/1 (ICS et al.), containing information on the gap analysis conducted by industry associations to support the development at Tier 4 and Tier 5 of the goal-based framework for LSA and highlighting the concern on practical implementation of MSC.1/Circ.1392;

.3 SSE 1/8/2 (Germany), informing of observations detected while trying to map the current requirements pertaining to life-saving appliances in SOLAS;

.4 SSE 1/8/3 (ILAMA), supporting document MSC 92/13/3 (Dominica) and the proposed amendments for paragraphs 6.2.6.5 and 6.2.7.5 of the new requirements for operational testing of davit-launched lifeboat and rescue boat on-load and off-load release gear;

.5 SSE 1/8/4 (China), providing the results of an investigation of SOLAS chapter III requirements based on draft *Goal-based guidelines on the framework of requirements for ships' life-saving appliances*, as contained in document SSE 1/8, and proposing modifications to the draft guidelines;

.6 SSE 1/INF.2 (Japan), setting out text from part B of SOLAS chapter III organized according to respective functional requirements and parameters specified in the draft *Goal-based guidelines on the framework of requirements for ships' life-saving appliances*; and

.7 SSE 1/INF.5 (Germany), proposing to develop the new framework for SOLAS chapter III using a structured approach for subdividing functions into a functional map by making use of the related current safety standards.

Investigations of the LSA requirements in the SOLAS Convention, the LSA Code and the referenced MSC circulars

8.6 The Sub-Committee, having considered documents SSE 1/8, SSE 1/INF.2, SSE 1/8/2, SSE 1/INF.5 and SSE 1/8/4 and having noted the following views:

.1 that there should be a document supporting the implementation of life-saving appliance requirements in general, similar to other provisions in SOLAS that have supporting explanatory notes and background information, which would assist when implementing such provisions (SSE 1/8/2, paragraph 25); and

.2 that the issue related to helicopter landing and pick-up areas (SSE 1/8/2, paragraphs 13 to 16) may require a new unplanned output,

endorsed the proposal in paragraph 25 of document SSE 1/8/2 and invited MSC 93 to note the aforementioned proposal in the context of its work on the application of amendments to the 1974 SOLAS Convention.

Evaluation of existing on-load release and retrieval systems

8.7 In considering document SSE 1/8/1, the Sub-Committee noted the concerns expressed by the co-sponsors regarding the application of the *Guidelines for evaluation and replacement of lifeboat release and retrieval systems* (MSC.1/Circ.1392). In this regard, the co-sponsors stated that existing on-load release hooks should be reapproved under MSC.1/Circ.1392 only when the function of the hook itself was safe without the use of additional operating mechanisms or devices, and that this requirement had not been met for some hooks listed in the GISIS database as having been re-approved. Subsequently, they encouraged Member Governments to:

.1 ensure that modifications of hooks carried out to obtain re-approval do not use additional operating mechanisms; and

.2 provide unambiguous information regarding the names of release hooks and any remedial actions required when including the results of evaluations of on-load release hooks conducted in compliance with MSC.1/Circ.1392 in the GISIS database.

ILAMA comments on making the provisions of MSC.1/Circ.1206/Rev.1 mandatory

8.8 In considering document SSE 1/8/3, the Sub-Committee, having noted the concern expressed by the observer from IFSMA that the master may be placed in a difficult situation when managers seek to ignore the guidance by instructing abandon ship drills with fully loaded lifeboats, and having also noted the view that care should be taken to ensure that the outcome of any proposed amendment to the testing requirements at least maintains the existing level of functional assurance for LSA, decided to bring the above views to the attention of MSC 93.

Establishment of the Working Group on Life-Saving Appliances (LSA)

8.9 Recalling the relevant decision at MSC 92, the Sub-Committee established the LSA Working Group and instructed it (see also paragraph 11.4), taking into account the comments and decisions made in plenary, to:

.1 update the work plans for LSA requirements and for SOLAS chapter II-1 proposed in annexes 1 and 2 to document DE 57/WP.5/Add.1, taking into account documents DE 57/WP.5, SSE 1/8, SSE 1/8/1, SSE 1/8/2, SSE 1/8/4, SSE 1/INF.2 and SSE 1/INF.5; and

.2 prepare draft terms of reference for a LSA Correspondence Group, if necessary, on the development of a new framework of requirements for safety objectives and functional requirements for the approval of alternative design and arrangements for SOLAS chapters II-1 (parts C, D and E) and III, for consideration by the Sub-Committee.

Report of the LSA Working Group

8.10 Having considered the report of the LSA Working Group (SSE 1/WP.4), the Sub-Committee approved it in general and took action as described in paragraphs 8.11 to 8.19.

Draft Goal-based guidelines on the framework of requirements for ships' life-saving appliances

8.11 The Sub-Committee endorsed the group's view that before it started its work on updating the work plans for LSA requirements and for SOLAS chapter II-1 and III, it was necessary to address the draft *Goal-based guidelines on the framework of requirements for ships' life-saving appliances*.

8.12 The Sub-Committee also endorsed the following main uses of the guidelines identified by the group:

.1 restructuring/rearrangement of SOLAS chapter III in order to give the chapter an improved user-friendly structure; in this case, no new or additional requirements should be introduced or added; and

.2 evaluating the feasibility, adequacy and effectiveness of future proposals on new requirements.

8.13 The Sub-Committee noted the group's opinion that the draft *Goal-based guidelines on the framework of requirements for ships' life-saving appliances*, as contained in annex 1 to document DE 57/WP.5, should be further developed to:

.1 amend paragraph 1.3 in the preamble by incorporating the decision taken at MSC 82 (MSC 82/24, paragraph 21.49);

.2 agree on Tier I (Goals), in principle;

.3 improve further Tier II (Functional requirements), taking into account documents SSE 1/8/2, SSE 1/8/4, SSE 1/INF.2 and SSE 1/INF.5; and

.4 establish Tier IV (Basic requirements), taking into account the methodology presented in documents DE 57/7, SSE 1/8/2 and SSE 1/INF.5 and the results of the gap analysis in documents SSE 1/8, SSE 1/8/1 and SSE 1/INF.2.

8.14 The Sub-Committee also noted that the contents of Tier II (Functional requirements) and Tier IV (Basic requirements) were related to each other and, in particular, that the text of Tier II could be rearranged during the development of Tier IV.

8.15 The Sub-Committee further noted that the group had agreed to amend paragraph 1.3 in the preamble of the draft *Goal-based guidelines on the framework of requirements for ships' life-saving appliances*, as follows:

"1.3 This framework of the requirements for ships' life-saving appliances is intended to form the basis for safety objectives and functional requirements for SOLAS chapter III and for restructuring/rearrangement of present requirements in SOLAS chapter III. It should be the basis for the development of new requirements for life-saving appliances only. The framework acknowledges that other means, tools and relevant IMO instruments are read in conjunction with other provisions of SOLAS that govern the evacuation from ships including emergency communications."

8.16 In this connection, the observer from ICS expressed a concern that the statement by the Secretary-General in his opening address to the Sub-Committee regarding the evaluation of hooks under MSC.1/Circ.1392 had not been fully considered in this work. That concern was shared by BIMCO, INTERTANKO, ITF, NI and OCIMF. The full text of the statement is set out in annex 18.

Safety objectives and functional requirements of the guidelines on alternative design and arrangements for SOLAS chapter II-1, (parts C, D and E) and III

8.17 The Sub-Committee endorsed the group's decision that the *Guidelines for the approval of alternatives and equivalents as provided for in various IMO instruments* (MSC.1/Circ.1455) should be used for the purpose of approval of alternative design and arrangements for SOLAS chapters II-1 (parts C, D, and E) and III, and further that, for the purpose of paragraph 5.1.3 of these Guidelines, the framework requirement in SOLAS chapters II-1 (parts C, D, and E) and III should be developed.

8.18 The Sub-Committee agreed to the updated work plans for the new framework of requirements for life-saving appliances and to the draft safety objectives and functional requirements of the guidelines on alternative design and arrangements for SOLAS chapter II-1 and chapter III, as set out in annexes 2 and 3 to document SSE 1/WP.4.

Establishment of a Correspondence Group on Life-Saving Appliances (LSA)

8.19 Having considered the above matters and in order to progress the work intersessionally, the Sub-Committee established a Correspondence Group on Life-Saving Appliances (LSA), under the coordination of Japan*, with the following terms of reference:

.1 further develop the draft *Goal-based guidelines on the framework of requirements for ships' life-saving appliances*, based on annex 1 to document DE 57/WP.5 and taking into account documents SSE 1/8, SSE 1/8/1, SSE 1/8/2, SSE 1/8/4, SSE 1/INF.2, SSE 1/INF.5 and SSE 1/WP.4, in particular to:

.1 review Tier II (Functional requirements);

.2 establish Tier IV (Basic requirements) on ships' life-saving appliances, taking into account the methodology presented in documents DE 57/7, SSE 1/8/2 and SSE 1/INF.5 and the results of the gap analysis in SSE 1/8/, SSE 1/8/1 and SSE 1/INF.2; and

.3 prepare the draft text of the guidelines for finalization at SSE 2;

.2 review the regulation mapping in the annex to SSE 1/INF.2 and SSE 1/INF.5 in light of the reviewed Tier II;

.3 if time permits, consider the draft goal for the framework of requirements for approval of alternative design and arrangements for SOLAS chapter II-1 (parts C, D and E); and

.4 submit a report to SSE 2.

9 DEVELOPMENT OF AMENDMENTS TO THE LSA CODE FOR THERMAL PERFORMANCE OF IMMERSION SUITS

General

9.1 The Sub-Committee recalled that DE 56 had instructed the LSA Correspondence Group to consider the methodology for ensuring consistent outcomes of thermal testing using manikins instead of human test subjects and, if necessary, the appropriate application and specification of immersion suit RTDs, and to prepare relevant draft amendments to the LSA Code and the *Revised recommendation on testing of life-saving appliances* (MSC.81(70)) for consideration by DE 57.

9.2 The Sub-Committee also recalled that DE 57 had had for its consideration documents DE 57/9 (Japan), DE 57/9/1 (Denmark), DE 57/9/2 (Denmark) and DE 57/9/3 (Canada) but, owing to lack of time, had been unable to consider them.

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9.3 The Sub-Committee, having noted that the sponsors of documents submitted to DE 57 had now submitted document SSE 1/9 proposing to remove this output from the active agenda of the Sub-Committee pending completion of ongoing practical work by Member Governments, decided to consider document SSE 1/9 in lieu of the LSA Correspondence Group report (DE 57/9) in order to save time.

9.4 In considering document SSE 1/9, the Sub-Committee, having noted the views expressed by the co-sponsors on this matter, in particular that:

.1 work is still necessary to determine suitable thermal resistance criteria, and to finalize and validate the test methodology in order to form a basis for developing draft amendments to the *Revised recommendation on testing of life-saving appliances* (resolution MSC.81(70)); and

.2 this planned output should be retained in the post-biennial agenda of the Committee to facilitate resumption of consideration of this issue when the ongoing practical work is complete,

agreed to move this output to the Committee's post-biennial agenda to await the outcome of the aforementioned work.

Postponement of the work on this output

9.5 Consequently, the Sub-Committee invited the Committee to place this output on its post-biennial agenda.

10 DEVELOPMENT OF AMENDMENTS TO THE LSA CODE FOR FREE-FALL LIFEBOATS WITH FLOAT-FREE CAPABILITY

General

10.1 The Sub-Committee recalled that DE 57 had had for its consideration document DE 57/10 (ILAMA), which recalled relevant draft amendments to SOLAS regulation III/31 developed by a working group at DE 47 (DE 47/WP.9), informed the Sub-Committee of the problems inherent in requiring float-free capabilities for free-fall lifeboats, and, consequently, advised the Sub-Committee not to develop relevant requirements. However, owing to lack of time, the Sub-Committee decided to defer consideration of this agenda item.

10.2 In considering document DE 57/10, the Sub-Committee noted the information provided by ICS that the proposal for "free-fall lifeboats with float-free capability" originated as a RCO from the FSA study on bulk carrier safety over ten years previously. The RCO had been accepted by the Committee and a new SOLAS regulation mandating the use of free-fall lifeboats with float-free capability on bulk carriers had been agreed, but not adopted, and remained in abeyance awaiting verification of the availability of such equipment (MSC 78/26, paragraph 5.28).

10.3 Taking into account the above information, the Sub-Committee decided not to proceed with development of the relevant requirements.

Completion of the work on the output

10.4 Consequently, the Sub-Committee invited MSC 93 to withdraw the previous agreement at MSC 78 (see paragraph 10.2 above) and to note that the work on this output had been completed.

11 DEVELOPMENT OF AMENDMENTS TO THE 2009 MODU CODE CONCERNING LIFEBOAT DRILLS

General

11.1 The Sub-Committee noted that MSC 89, having considered document MSC 89/22/6 (Brazil) proposing to develop amendments to the 2009 MODU Code to allow alternative drills for lifeboats on mobile offshore drilling units to those required by paragraph 14.12.5 of the Code, which referred to the requirements set out in SOLAS regulation III/19.3.3.3, had agreed to include in the post-biennial agenda of the Committee an output on "Development of amendments to the 2009 MODU Code concerning lifeboat drills", with two sessions needed to complete the output. MSC 92 subsequently agreed to place the matter on the agenda for SSE 1.

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

.1 SSE 1/11 (Brazil), proposing an alternative procedure for lifeboat tests exclusively for mobile offshore units (MOUs) in the operational area to achieve the basic objectives of the 2009 MODU Code, which requires lifeboat launching drills at least once every three months; and

.2 SSE 1/11/1 (Marshall Islands), proposing an amendment to paragraph 14.12.4.2 of the 2009 MODU Code to provide MOUs with alternative means, through guidelines to be developed by the Organization, for meeting the requirement that lifeboats (except free-fall lifeboats) are to be "launched and manoeuvred with the assigned operating crew on board" at least once every three months when conditions permit.

11.3 In considering the above documents, the Sub-Committee noted the following views expressed on this matter:

.1 that there is the possibility to extend the application of alternative methods to other types of vessels; however, such an extension is outside the scope of the current planned output;

.2 that the familiarity of crew with onboard equipment should be ensured;

.3 that the need for amendments to previous editions of the MODU Code should be considered;

.4 that the safety level should be equal to the current requirements; and

.5 that the distinction between "good weather" and "bad weather" should be defined.

Instructions to the LSA Working Group

11.4 Having considered the above views, the Sub-Committee instructed the LSA Working Group established under agenda item 8 (Development of a new framework of requirements for safety objectives and functional requirements for the approval of alternative design and arrangements for SOLAS chapters II-1 (parts C, D and E) and III), taking into account the comments and decisions made in plenary, to review the alternative procedures in document SSE 1/11 and the amendments in document SSE 1/11/1, taking into account that references to SOLAS regulation III/19.3.3.3 need to be replaced with references to SOLAS regulation III/19.3.4.3 after acceptance of the amendments adopted by resolution MSC.350(92) (i.e. after 1 July 2014), and to prepare amendments to the 2009 MODU Code (including consequential amendments to old MODU Code) concerning lifeboat drills.

Report of the LSA Working Group

11.5 Having considered the part of the report of the LSA Working Group (SSE 1/WP.4) dealing with the agenda item, the Sub-Committee:

.1 agreed to the draft MSC resolution on amendments to the 2009 MODU Code, as set out in annex 3, for submission to MSC 94 for adoption; and

.2 agreed to the draft MSC circular on *Guidelines on alternative methods for lifeboat drills on MODUs*, as set out in annex 4, for approval by MSC 94, in conjunction with the associated amendments above.

11.6 In this connection, the Sub-Committee noted the group's opinion that the above draft guidelines may be used in conjunction with the provision of onboard training and instructions in paragraph 10.6.3 of the 1979 MODU Code and in paragraph 14.12 of 1989 MODU Code, and that this matter was included in the aforementioned circular.

Completion of the work on this output

11.7 In view of the above, the Sub-Committee invited the Committee to note that the work on this output had been completed.

12 REVISION OF THE RECOMMENDATION ON CONDITIONS FOR THE APPROVAL OF SERVICING STATIONS FOR INFLATABLE LIFERAFTS (RESOLUTION A.761(18))

General

12.1 The Sub-Committee recalled that DE 56 had considered document DE 56/17 (ILAMA), which proposed to amend the *Recommendation on conditions for the approval of servicing stations for inflatable liferafts* (resolution A.761(18)) and the *Guidelines for the approval of inflatable liferafts subject to extended service intervals not exceeding 30 months* (MSC.1/Circ.1328), with regard to date-expired items in the contents of packed inflatable liferafts and to eliminating the inconsistency between them.

12.2 The Sub-Committee also recalled that DE 56 had supported the need for relevant amendments with regard to date-expired items, and invited Member Governments and international organizations to submit concrete proposals for amendments to the recommendation and the guidelines to DE 57.

12.3 The Sub-Committee further recalled that DE 57 had had for its consideration document DE 57/15 (ILAMA), proposing to amend paragraph 5.11 of the recommendation; however, owing to lack of time, DE 57 had decided to defer consideration of this agenda item.

12.4 In considering document DE 57/15, the Sub-Committee noted the following views expressed on this matter:

.1 that the requirements for all types of survival craft should be harmonized with the requirements for lifeboats and, therefore, there should be an extension of the target completion year;

.2 that it should be taken into account that service stations may undertake work for a number of manufacturers;

.3 that consistency of the recommendation with current SOLAS requirements should be verified and, as such, a comprehensive review should be undertaken; and

.4 that equipment should be fit for purpose between service intervals and, as such, there may be a need to prescribe a methodology for determining expiry dates.

12.5 With regard to various proposals to expand the work of this output, the Sub-Committee invited interested Member Governments and international organizations to submit a justification for a new unplanned output in accordance with the Committees' guidelines (MSC-MEPC.1/Circ.4/Rev.2).

12.6 In considering the proposal in paragraph 6 of document DE 57/15, the Sub-Committee agreed to the draft MSC resolution on *Amendment to the recommendation on conditions for the approval of servicing stations for inflatable liferafts* (resolution A.761(18)), as set out in annex 5, for adoption by MSC 94.

Completion of the work on the output

12.7 In view of the above, the Sub-Committee invited the Committee to note that the work on this output had been completed.

13 DEVELOPMENT OF REQUIREMENTS FOR ONBOARD LIFTING APPLIANCES AND WINCHES

General

13.1 The Sub-Committee recalled that DE 57 had established a correspondence group on lifting appliances and winches with the terms of reference set out in paragraph 18.10 of document DE 57/25.

Report of the correspondence group established at DE 57

13.2 The Sub-Committee, having considered the report of the correspondence group (SSE 1/13 and SSE 1/INF.3) and, in particular, the group's conclusions on the scope of future guidelines as follows:

.1 that the application should be limited to "all onboard cargo lifting appliances" (for clarity, this does not include stores cranes, lifts and escalators, gear on fishing vessels, life-saving appliances); and

.2 that the guidelines should be applied to new and existing onboard cargo-lifting appliances,

noted the concern expressed by a number of delegations that some participants had experienced technical difficulties in corresponding with the coordinator and that the report had not been circulated to the group prior to submission in accordance with the Committees' *Guidelines on the organization and method of work*. Consequently, the Sub-Committee agreed to note the report and decided not to proceed with the actions requested in paragraph 10 of the group's report.

13.3 The Sub-Committee also had the following documents for consideration:

.1 SSE 1/13/1 (Germany), proposing to consider extracts from German Accident Prevention Regulations for Shipping Enterprises relating to onboard lifting appliances, cranes and winches with a view to completing the list of existing regulations and standards for onboard lifting appliances and winches;

.2 SSE 1/INF.4 (Germany), providing the aforementioned extracts from German Accident Prevention Regulations for Shipping Enterprises; and

.3 SSE 1/13/2 and SSE 1/13/3 (New Zealand), containing proposed amendments to SOLAS and supporting guidelines to ensure the design, certification, testing and examination of onboard lifting appliances.

13.4 In considering the above documents, the Sub-Committee noted the following comments expressed during the discussion:

.1 that the scope and applicability of the requirements should not be limited to cargo-lifting appliances only and should be further clarified;

.2 that matters relating to operational procedures and maintenance are already regulated on a mandatory basis via the provisions of the ISM Code;

.3 that a renewal survey needs to be consistent with other surveys, so the five-year interval should be used; and

.4 that standards for loose gear steel wire rope and shackles should be developed.

13.5 In this connection, the observer from ISO advised the Sub-Committee that ISO/TC 8 had already identified all the potentially relevant ISO standards and had presented the list to the correspondence group. ISO currently had two groups examining relevant standards and, therefore, any advice from IMO would be most appreciated. In addition, ISO/TC 8 had increased its liaison with more organizations in order to strengthen the technical base within ISO/TC 8. IMO stakeholders were encouraged to contact ISO, either through the ISO observers directly or through their national standards bodies, in order to contribute to the debate on the above ISO standards.

Establishment of a working group

13.6 Following a lengthy discussion and recalling the relevant decision of MSC 92, the Sub-Committee established the Working Group on Development of Requirements for Onboard Lifting Appliances and Winches and instructed it, taking into account the comments and decisions made in plenary, to:

.1 consider the scope and application of measures, identifying ranges of equipment and type of ships, taking into account all relevant incident reports and data, including those for the ships **Blest Marine** and **Creciente**, and those in document SSE 1/INF.3;

.2 identify which elements of existing regulations and instruments (e.g. ILO Convention No.152, SOLAS, STCW, ISM Code, LSA Code, HSSC Guidelines, MODU Code, ISO Standards, etc.) could be cross-referenced in measures and any gaps to be covered, taking into account the information in documents SSE 1/13/1 and SSE 1/INF.4;

.3 develop a detailed work plan for the future course of action; and

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

Report of the working group

13.7 Having considered the report of the working group (SSE 1/WP.5), the Sub-Committee took action as outlined in paragraphs 13.8 to 13.25.

Scope and application

13.8 The Sub-Committee noted the group's view that the incident data and analysis contained in document SSE 1/INF.3 (New Zealand) was valuable, but not sufficient on its own for the group to make a strong recommendation on the scope and application of potential future measures for onboard lifting appliances and winches, and on the necessity of specific measures. The Sub-Committee also noted the group's conclusion that a more detailed consideration of all the incidents listed in document SSE 1/INF.3 should be undertaken by a correspondence group, including the detailed background incident reports and investigations (see also paragraph 13.25).

13.9 Having noted that some delegations in the group were confident that additional incident data existed and, therefore, that this data should be considered before determining the scope and application of any potential measures, the Sub-Committee encouraged all Member States and international organizations having access to incident data and reports relevant to onboard lifting appliances and winches, particularly industry organizations such as ICHCA, whose members may have relevant marine claims at their disposal, to make them available to the correspondence group.

13.10 With regard to the lack of publically available "near miss" data in the maritime field, the Sub-Committee noted the group's view that Member States and international organizations could suggest improvements to marine accident reporting practices by submitting proposals to the Organization.

13.11 The Sub-Committee endorsed the following recommendations of the group on incident data analysis methodology:

.1 that common elements and trends in the incident reports should be identified;

.2 that where possible, the onboard lifting appliance operators (i.e. ship's crew or shore-based personnel) should be determined;

.3 that where relevant data is available, the status of certification and test reports of onboard lifting appliances and winches should be determined;

.4 that possible misuse of equipment that may have contributed to the incident should be considered; and

.5 that incident reports could be classified according to the level of detail and completeness of information that they contain; however, care should be taken during such an exercise, since many incident reports that are not originally available in English, may not be provided in full, and reporting administrations would have to exercise their judgement when selecting the relevant sections of a report that should be translated into English.

Types of equipment

13.12 The Sub-Committee endorsed the group's view that the scope of potential measures for onboard lifting appliances and winches should be broad for initial consideration, and not limited to cargo-handling lifting appliances.

13.13 The Sub-Committee also endorsed the group's view that personnel/passenger elevators (lifts) and escalators on board ships should not be included in the scope of potential measures.

13.14 In regard to equipment regulated by the LSA Code, the Sub-Committee endorsed the view that such equipment should not be included in the scope of potential measures, in order to avoid duplication or conflicting requirements with other IMO instruments, unless such equipment has dual or multiple purpose and the alternate uses are not covered by existing regulations.

13.15 The Sub-Committee noted the group's conclusion that, based on presently available data, onboard lifting appliances might be defined as stationary or mobile load-handling appliances used on board ships for suspending, raising or lowering loads, or for moving loads from one position to another while suspended. The Sub-Committee also noted that the above definition could be further expanded or refined by a correspondence group, based on further consideration of the data available.

Types of ships

13.16 The Sub-Committee endorsed the group's view that potential measures for onboard lifting appliances and winches should be considered for application to all ships to which SOLAS applies.

13.17 The Sub-Committee also endorsed the view that MOUs certified under the MODU Code should not be included in the scope of potential measures.

13.18 In regard to fishing vessels, the Sub-Committee endorsed the group's view that such vessels should be left out of the scope of potential measures at this stage and noted the group's opinion that fishing vessels may need to be addressed in future.

New and existing ships

13.19 The Sub-Committee noted the group's discussion regarding the application of potential measures, in particular the following: if the measures address operation, maintenance, training, inspection, testing and certification, these provisions might be applicable to new and existing ships; if, however, the measures address the issue of design and construction, such provisions might apply to newly-installed equipment, regardless of whether the equipment would be installed on new or existing ships; and if this item is included in potential measures, a transitional period for existing ships should be considered.

13.20 In this connection, the observer from IACS, noting that there are many organizations that could be tasked with issuing any certification of this equipment, urged the Sub-Committee to consider very carefully the certification of existing ships. IACS offered the following examples of challenges that may be faced by organizations tasked with issuing such certification on existing ships that may have been in service for many years:

.1 how do such organizations know that what they are looking at is what was originally installed;

.2 how is the specification of any parts that need replacing to be determined; and

.3 how is it known what the original supporting structure arrangements were, in particular if they have been modified/removed or they are in need of renewal?

Focus of the measures

13.21 The Sub-Committee endorsed the group's recommendations on the issues associated with the focus of potential measures that could be considered, based on the presently available incident data. The following items stood out and could be further considered at this initial stage:

.1 insufficient safety procedures in place;

.2 lifting hooks not engaged properly;

.3 training in operation and maintenance; and

.4 operational and maintenance conditions that could induce failure of onboard lifting appliances and winches, and particularly wire rope.

13.22 With regard to training, the Sub-Committee noted the group's view that ILO should be consulted and included in further consideration of potential measures, in order to avoid duplication of effort, and, in addition, national requirements for training should be taken into consideration.

Status of the measures

13.23 With regard to the group's discussion regarding the mandatory or non-mandatory status of potential measures for onboard lifting appliances and winches, the Sub-Committee noted the group's opinion that the issue of the future status of the measures for onboard lifting appliances and winches should be considered by the Sub-Committee at its next session after a draft framework had been produced and the focus of the measures had been refined by the correspondence group.

Updated Action Plan

13.24 The Sub-Committee agreed, in principle, to the detailed work plan for developing measures for onboard lifting appliances and winches, as set out in the annex to document SSE 1/WP.5.

Establishment of a correspondence group

13.25 To progress the work on this matter intersessionally, the Sub-Committee established a Correspondence Group on Onboard Lifting Appliances and Winches, under the coordination of New Zealand*, with the following terms of reference:

.1 collect and analyse additional incident reports and data related to onboard lifting appliances and winches and review detailed background reports associated with all identified incidents, including the incidents listed in document SSE 1/INF.3 and those for the ships **Blest Marine** and **Creciente**;

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.2 further consider the need for and scope and application of potential measures for onboard lifting appliances and winches, identifying ranges of equipment and types of ships, and refine the focus of the measures based on the incident data analysis;

.3 where necessary, develop a framework for potential measures for onboard lifting appliances and winches, taking into account available standards such as those listed in annex 2 to document DE 57/WP.7, and identify additional elements of existing instruments that could be cross-referenced (e.g. ILO instruments, SOLAS, STCW, ISM Code, BLU Code, HSSC Guidelines, PSC Guidelines, etc.) and any gaps to be covered;

.4 if time permits, develop draft text for a subset of the items identified in the framework to serve as examples, to assist the deliberations of the Sub-Committee; and

.5 submit a report to SSE 2.

14 CONSIDERATIONS RELATED TO DOUBLE-SHEATHED LOW-PRESSURE FUEL PIPES FOR FUEL INJECTION SYSTEM IN ENGINES ON CRUDE OIL TANKERS

14.1 The Sub-Committee recalled that MSC 91 had instructed the FP Sub-Committee to consider RCO 9 (double-sheathed low-pressure fuel pipes for fuel injection systems in engines) of the FSA studies on crude oil tankers, for application to new ships only, and that MSC 92 had agreed to place this output on the agenda of SSE 1.

14.2 Having briefly considered documents MEPC 58/17/2 and MEPC 58/INF.2 (Denmark), providing information on the FSA study on crude oil tankers carried out within the research project SAFEDOR, the Sub-Committee noted the following views:

.1 that RCO 9 needs further consideration at SSE 2, including detailed review of the background to the recommendation and the cost-efficiency analysis;

.2 that this output should be expanded since the hazard that the risk control option attempts to reduce is also applicable to engine rooms on other types of ships;

.3 that there may be other lower cost options for reducing the fire risk identified in the FSA study and, as such, other options should be considered; and

.4 that the first step should be to consider the RCO for new crude oil tankers only, as instructed by MSC 91, and advise the Committee accordingly on how best to proceed, including the development of a justification for a new unplanned output, if necessary, using the FSA as the basis for the compelling need.

14.3 Taking into account the above views, the Sub-Committee decided to invite Member Governments and international organizations to submit comments and proposals to SSE 2.

15 DEVELOPMENT OF AMENDMENTS TO THE PROVISIONS OF SOLAS CHAPTER II-2 RELATING TO SECONDARY MEANS OF VENTING CARGO TANKS

General

15.1 The Sub-Committee recalled that BLG 16 had had for its consideration IACS Unified Interpretation SC 140, which aimed to clarify the 1996 amendments to SOLAS chapter II-2 relating to the secondary means of venting cargo tanks, and had agreed on a justification for a new output to develop appropriate amendments to SOLAS regulations II-2/4 and II-2/11, based on a proposal by IACS, OCIMF, IPTA and INTERTANKO.

15.2 The Sub-Committee also recalled that MSC 90 had agreed on the proposed new output for the post-biennial agenda of the Committee and that MSC 92 had subsequently placed it on the agenda for SSE 1.

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

.1 SSE 1/15 (Liberia et al.), proposing amendments to SOLAS chapter II-2 to clarify the provisions relating to the secondary means of venting cargo tanks, noting that the proper and effective design, installation and operation of a secondary means of venting cargo tanks is critical to the safety of the vessel and those on board; in general terms, the proposal will require new tankers to install full flow P/V-valves on each cargo tank in order to ensure adequate safety against over- and under-pressure in the event of a cargo tank isolation valve being damaged or inadvertently closed; and

.2 SSE 1/15/1 (Japan), providing comments on the proposed draft amendments to SOLAS chapter II-2, as set out in annex 7 to document BLG 16/16, and suggesting amendments to paragraphs 5.3.2.2 of regulation 4 and paragraphs 6.2 and 6.3.2 of regulation 11.

15.4 In considering the above documents, the Sub-Committee, having supported the proposed amendments in document SSE 1/15 as modified by document SSE 1/15/1, agreed to the draft amendments to SOLAS regulations II-2/4.5 and II-2/11.6, as set out in annex 6, for submission to MSC 94 for approval with a view to subsequent adoption.

Completion of the work on the output

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

16 DEVELOPMENT OF AMENDMENTS TO THE REQUIREMENTS FOR FOAM-TYPE FIRE EXTINGUISHERS IN SOLAS REGULATION II-2/10.5

General

16.1 The Sub-Committee recalled that FP 56 had considered documents FP 56/16 and FP 56/INF.6 (China), proposing to amend SOLAS regulation II-2/10.5.1 regarding the arrangement of 135 *l* foam-type extinguishers in boiler rooms and the related information regarding extinguishing tests of foam-type extinguishers, and had decided that additional justification was needed before making the 135 *l* wheeled foam-type extinguishers obsolete.

16.2 The Sub-Committee also recalled that Member Governments and international organizations had been invited to submit comments and proposals on this matter.

16.3 The Sub-Committee considered document SSE 1/16 (China), proposing to amend the existing SOLAS regulation II-2/10.5.1.2.2 regarding the arrangement of 135 l foam-type extinguishers in boiler rooms, and, having noted both supporting and differing views expressed by delegations during the discussion, decided that further consideration of this issue is necessary. The Sub-Committee invited Member Governments and international organizations to submit comments and proposals to SSE 2.

Extension of the target completion year

16.4 The Sub-Committee requested the Committee to extend the target completion year for this output to 2015.

17 CONSIDERATION OF IACS UNIFIED INTERPRETATIONS

General

17.1 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 the consideration of the Sub-Committee with a view to developing appropriate IMO interpretations, if deemed necessary. In this context, the Sub-Committee was advised that the Assembly, at its twenty-eighth session, had expanded the output to now include all proposed unified interpretations to provisions of IMO safety-, security-, and environment-related Conventions (refer to the annex of resolution A.1061(28)).

Sample extraction smoke detection system (paragraph 2.4.1.2 of chapter 10 of the FSS Code)

17.2 In considering document SSE 1/17/2 (IACS), regarding IACS UI SC 260 on the arrangement of control panels for sample extraction smoke detection systems, in particular the acceptability of having a control panel located in a CO_2 room and an indicating unit (repeater panel) on the navigation bridge, the Sub-Committee agreed to instruct the Working Group on Fire Protection to consider the matter and advise the Sub-Committee accordingly (see paragraph 17.5).

Testing and approval of pipe penetrations and cable transits which do not utilize conventional components, for use in "A" class divisions

17.3 The Sub-Committee considered document SSE 1/17/4 (IACS), the annex to which contained a copy of IACS UI FTP 6 on the testing and approval of pipe penetrations and cable transits which do not utilize conventional components, for use in "A" class divisions (part 3 of annex 1 to the 2010 FTP Code), and decided to instruct the Working Group on Fire Protection to consider the matter and advise the Sub-Committee accordingly (see paragraph 17.5).

Ventilation ducts

17.4 In considering document SSE 1/17/5 (IACS), discussing two issues relevant to SOLAS regulation II-2/9.7 (the first issue relating to the use of flexible bellows (IACS UI SC 99) and the second issue to the term "heat resisting"), the Sub-Committee, noting that consensus could not be achieved on the proposal to delete "heat resisting", agreed to instruct the Working Group on Fire Protection to consider the matter and advise the Sub-Committee accordingly (see paragraph 17.5).

Instructions to the Working Group on Fire Protection

17.5 The Sub-Committee instructed the Working Group on Fire Protection established under agenda item 3 (Development of requirements for ships carrying hydrogen and compressed natural gas vehicles), taking into account the comments and decisions made in plenary, to consider the documents SSE 1/17/2, SSE 1/17/4 and SSE 1/17/5 and advise the Sub-Committee accordingly.

Report of the Working Group on Fire Protection

17.6 Having considered the part of the report of the Working Group on Fire Protection (SSE 1/WP.3) dealing with the agenda item, the Sub-Committee took action as outlined in paragraphs 17.7 to 17.11.

Sample extraction smoke detection system (paragraph 2.4.1.2 of chapter 10 of the FSS Code)

17.7 The Sub-Committee noted that the majority of the group had concurred with the view expressed by Denmark that SOLAS regulation II-2/10.4.3 states that the CO_2 storage room should be used for no other purposes. The Sub-Committee also noted that the group had agreed that in certain cases where the CO_2 system discharge piping is used as part of the sample extraction system, the control panel could be located in the CO_2 storage room provided an indicating unit is also installed on the navigation bridge. Having noted the above views, the Sub-Committee agreed to the draft unified interpretation of chapter 10 of the FSS Code, as set out in annex 7, for submission to MSC 94 with a view to approval (see also paragraphs 17.36 and 17.41).

Testing and approval of pipe penetrations and cable transits for use in "A" class divisions

17.8 The Sub-Committee noted that the group, having considered the testing and approval of pipe penetrations and cable transits which do not utilize conventional components, for use in "A" class divisions (part 3 of annex 1 to the 2010 FTP Code), and taking into account document SSE 1/17/4 (IACS), had agreed that the provisions of the 2010 FTP Code could be improved, but the draft interpretation contained in the annex to document SSE 1/17/4 also needed clarification.

17.9 The Sub-Committee, having noted the group's conclusion that the use of gap gauges for the testing of penetrations, instead of a pointed implement such as a pen or a screwdriver, would improve the draft text, agreed to the draft MSC circular on the unified interpretation of part 3 of annex 1 to the 2010 FTP Code, as set out in annex 8, for submission to MSC 94 with a view to approval.

The term "heat resisting" in the draft amendments to SOLAS regulation II-2/9.7.1.1

17.10 With regard to the term "heat resisting" introduced into the draft amendments to SOLAS regulation II-2/9.7.1.1, approved at MSC 92 (MSC 92/26, paragraphs 8.5 to 8.7 and annex 13), with a view to its adoption at MSC 93, the Sub-Committee, having noted that the term was vague and would need a definition in the Convention, or at a later stage a unified interpretation, agreed to the group's recommendation to delete the term and advise MSC 93 accordingly.

Use of flexible bellows

17.11 Having noted that flexible bellows (that may not be made of steel or equivalent material) are an appropriate and proper means to protect the ventilation duct more effectively than steel, especially when considering the vibration generated by the machinery, and considering the draft interpretation contained in the annex to document SSE 1/17/5, the Sub-Committee:

.1 endorsed the group's view that the length of the bellows should be limited to 600 mm;

.2 agreed to the draft MSC circular on the unified interpretation of SOLAS regulation II-2/9.7.1.1 for application to existing ships only, as set out in annex 9, for submission to MSC 93 for approval; and

.3 noting that the revised SOLAS regulation II-2/9.7.1.1, to be adopted at MSC 93, only applies to new ships, agreed to advise MSC 93 to modify the text of the first sentence of the draft revised regulation as follows:

"7.1.1 Ventilation ducts, including single and double wall ducts, shall be of steel or equivalent material <u>except flexible bellows of short length not exceeding 600 mm used for connecting fans to the ducting in air-conditioning rooms</u>."

Load testing of hooks intended for the primary release of lifeboats

17.12 Having considered document SSE 1/17/7 (IACS), which reviewed the discussion at DE 57 of document DE 57/3/5 (IACS) and provided comments on the concerns raised by some delegations to IACS UI SC244 relating to paragraph 5.3.4 of part 2 of the *Revised recommendation on testing of life-saving appliances* (resolution MSC.81(70)) on load testing of hooks intended for the primary release of lifeboats and rescue boats, the Sub-Committee agreed to the proposed revision of IACS UI SC 244.

17.13 Having considered the draft MSC circular prepared by the Secretariat (SSE 1/WP.6), the Sub-Committee agreed to the draft MSC circular on the unified interpretation of the *Revised recommendation on testing of life-saving appliances* (resolution MSC.81(70)), as set out in annex 10, for submission to MSC 94 for approval.

Periodic servicing of launching appliances and on-load release gear

17.14 In considering document SSE 1/17/15 (IACS), advising the Sub-Committee of the work IACS has undertaken to review IACS UI SC 144 in order to further clarify the periodic servicing of launching appliances and on-load release gear as required by SOLAS regulation III/20.11, the Sub-Committee noted the following views expressed on this matter:

.1 that it is expected that MSC 93 will adopt the mandatory requirements for periodic servicing and maintenance;

.2 that the proposed unified interpretation does not indicate any limitations regarding service providers; and

.3 that this issue depends on entry into force of the amendments to SOLAS chapter III related to periodic servicing and maintenance, so it is premature to consider this IACS UI before MSC 93.

17.15 Taking into account the above views, the Sub-Committee decided not to take any action at this stage and invited IACS to note the above comments.

Proposed amendments to MARPOL regulation I/12

17.16 The Sub-Committee recalled that DE 57, following consideration of documents MEPC 63/7/5 and DE 57/3/12 (Denmark, Spain and BIMCO) and MEPC 63/7/9 (IACS), had agreed to a draft MEPC circular on amendments to the unified interpretation of regulation 12.2 of MARPOL Annex I (MEPC.1/Circ.753), which had subsequently been approved by MEPC 65 as MEPC.1/Circ.753/Rev.1.

17.17 The Sub-Committee also recalled that MEPC 65, on approving the revised interpretation of regulation 12.2 of MARPOL Annex I (MEPC.1/Circ.753/Rev.1), had instructed the DE Sub-Committee to expedite its work on the matter.

17.18 The Sub-Committee further recalled that DE 57, with regard to the proposed amendments to MARPOL regulation I/12 as set out in annex 2 to document MEPC 63/7/9, had agreed to consider them further, together with additional modifications to the draft amendments proposed at DE 57, and requested the Secretariat to prepare a document setting out the amendments, as modified, for consideration at this session.

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

.1 SSE 1/17 (Secretariat), providing the draft amendments to MARPOL regulations I/1 and I/12, based on annex 2 to document MEPC 63/7/9, including the modifications agreed at DE 57;

.2 SSE 1/17/16 and SSE 1/17/16/Corr.1 (IACS), proposing a completely new version of MARPOL regulation I/12, consequential amendments to MARPOL regulation 1/1.28 and MARPOL Annex I Unified Interpretation 6; and

.3 SSE 1/17/17 (Japan), inviting the Sub-Committee to consider the necessity of an unplanned output for the amendment to MARPOL Annex I and proposing draft amendments to regulations 1 and 12 of MARPOL Annex I to clarify the application of each regulation and ensure that new mandatory requirements raised from the existing unified interpretation related to ship's structure need not apply to existing ships.

17.20 In considering the above documents, the Sub-Committee noted the views expressed on this matter and decided to establish a drafting group to finalize the draft text of the proposed MARPOL amendments for consideration by the Sub-Committee.

Establishment of the drafting group

17.21 The Sub-Committee established the Drafting Group on Proposed Amendments to MARPOL regulation I/12 and instructed it, taking into account the comments and decisions made in plenary, to:

.1 finalize the draft amendments to MARPOL Annex I, using documents SSE 1/17/16 and Corr.1 as a basis, for submission to MEPC 67 for approval, with a view to subsequent adoption; and

.2 prepare the consequential amendments to relevant unified interpretations.

Report of the drafting group

17.22 Having considered the report of the Drafting Group on Proposed Amendments to MARPOL regulation I/12 (SSE 1/WP.7), the Sub-Committee took action as outlined in paragraphs 17.23 to 17.30.

Proposed amendments to MARPOL Annex I

17.23 The Sub-Committee noted the group's understanding that, due to the delay of the work, the draft amendments are now expected to enter into force on 1 January 2017 and the date "1 January 2014" should be replaced with "1 January 2017".

17.24 The Sub-Committee also noted the group's view that a more efficient and less cumbersome application scheme for this revised regulation to new ships and, retroactively, to existing ships would be to use "ships constructed" and, consequently, there is no need for a new definition of ships delivered before 1 January 2017.

17.25 In light of the retroactive application to existing ships, the Sub-Committee noted that the group had agreed to apply the same retroactive implementation scheme to new regulations 12.3.3.1 and 12.3.3.2 and, therefore, had revised regulation 12.4 to refer to regulation 12.3.3.

17.26 In considering the draft new regulation 12.3.2, the Sub-Committee further noted the group's view that the text inadvertently requires all sludge tanks to have a dedicated discharge pump for disposing to the standard discharge connection referred to in regulation 13 of MARPOL Annex I, and its proposal to delete a reference to regulation 13 and to move the text concerning approved means of disposal to regulation 12.2.

17.27 Following discussion, the Sub-Committee agreed to the draft amendments to MARPOL Annex I, as set out in annex 11, for submission to MEPC 67 for approval with a view to subsequent adoption.

Revised associated unified interpretations of MARPOL Annex I

17.28 The Sub-Committee, having reviewed the consequential draft amendments to the unified interpretations to regulation 12 of MARPOL Annex I, noted the group's conclusion that the existing UI should apply until the entry into force of the amendments to regulation 12 and that the revised UI should apply afterwards. It was also noted by the Sub-Committee that paragraph 4 of the existing UI should remain valid while other paragraphs will become irrelevant.

17.29 The Sub-Committee further noted that there is no need for a new definition of ships delivered before 1 January 2017 and the group's view that no amendment needs to be introduced in UI 6; however, there might be a need to revise other MARPOL UIs, including UIs 17, 18 and 19.

17.30 In view of the above, the Sub-Committee agreed to the draft revised unified interpretation of regulation 12 of MARPOL Annex I, as set out in annex 12, for submission to MEPC for consideration, with a view to approval by MEPC 70 (after the deemed acceptance date for the amendments to MARPOL Annex I).

Embarkation station and stowage location of the liferaft

17.31 The Sub-Committee recalled that DE 57, owing to time constraints, had decided to postpone consideration of document DE 57/3/7 (IACS), which provided a draft unified interpretation on the embarkation station and stowage location of the liferaft as required by SOLAS regulation III/31.1.4, to SSE 1.

17.32 In considering document SSE 1/17/8, which superseded document DE 57/3/7 and provided the latest version of IACS Unified Interpretation SC 213 on the embarkation station and stowage location of the liferaft as required by SOLAS regulation III/31.1.4, the Sub-Committee noted the following views expressed on this matter:

.1 that paragraph 6 of the proposed UI and reference to SOLAS regulation III/11.7 should be deleted; and

.2 that the liferaft stowage position should also be provided with adequate means of illumination.

17.33 Having agreed to modify the proposed UI SC 213 (SSE 1/WP.6), the Sub-Committee agreed to the draft MSC circular on the unified interpretation of SOLAS regulation III/31.1.4, as set out in annex 13, for submission to MSC 94 for approval.

General emergency alarm and public address system

17.34 The Sub-Committee recalled that DE 57, due to time constraints, had decided to postpone consideration of document DE 57/3/8 (IACS), which provided a draft revised UI SC 145 concerning the application of the general emergency alarm and public address system and sought clarification on whether a general emergency alarm is required in ro-ro spaces on cargo ships, to SSE 2.

17.35 In considering document DE 57/3/8, the Sub-Committee, having noted the following views expressed on this matter:

.1 that for cargo ships it is not necessary to provide ro-ro cargo spaces with a public address system, i.e. only a general emergency alarm is required in ro-ro spaces on cargo ships; and

.2 that the UI should be applied to new ships only,

invited IACS to finalize the UI SC 145, taking into account the above comments, for consideration at SSE 2.

Fixed fire detection and fire alarm systems

17.36 Having considered document SSE 1/17/3 (IACS), whose annex contained a copy of the latest version of IACS UI SC 35 relating to the provisions in chapter 9 of the FSS Code on fixed fire detection and fire alarm systems, the Sub-Committee agreed to the draft unified interpretation of chapter 9 of the FSS Code, as set out in annex 7, for submission to MSC 94 for approval.

Fixed foam fire-extinguishing systems – foam-generating capacity

17.37 In considering document SSE 1/17/10 (IACS), which provided IACS UI SC 262 relating to the foam-generating capacity of fixed foam fire-extinguishing systems as required by paragraphs 3.2.1.2 and 3.3.1.2 of chapter 6 of the FSS Code, as amended by resolution MSC.327(90), the Sub-Committee noted the following views expressed on this matter:

.1 Sweden indicated that they cannot support the IACS proposal because it is not an interpretation; in particular, regarding paragraph 5 of the proposed UI, where IACS refers to the fire risk objects defined in regulation II-2/3.34, Sweden took the view that not only these but other fire risks should be considered, such as exhaust gas boilers and oil tanks or other expansion oil tanks placed high up in the engine casing; and

.2 the use of term "casing" is ambiguous and, therefore, a clear definition may be necessary.

17.38 Following discussion, the Sub-Committee invited IACS, taking into acount the above comments, to revise UI SC 262 for submission to SSE 2.

Gaskets used in fixed gas fire-extinguishing systems

17.39 In considering document SSE 1/17/6 (IACS), whose annex contained a copy of IACS UI SC 263 relating to gaskets used in fixed gas fire-extinguishing systems (SOLAS regulation II-2/10.4 and the FSS Code, chapter 5), the Sub-Committee noted, in particular, the following views:

.1 that this issue cannot be addressed in a UI, but would necessitate an amendment to the FSS Code;

.2 that there is a need to consider the situation when gaskets start melting in pipes of fixed gas systems using CO_2; and

.3 that there are no problems with complying with the current requirements.

17.40 Following discussion, the Sub-Committee did not agree with the proposed UI and invited IACS to note the above comments and take action as appropriate.

Release operation of the CO_2 system

17.41 Having considered document SSE 1/17/9 (IACS), which provided the latest version of IACS UI SC 132 relating to the release operation of the CO_2 system (FSS Code, chapter 5), the Sub-Committee agreed to the draft unified interpretation of chapter 5 of the FSS Code and the associated MSC circular, as set out in annex 7, for submission to MSC 94 for approval.

FSS Code – Sizing of pumps and pressure tank for automatic sprinkler systems

17.42 Having considered document SSE 1/17/1/Rev.1 (IACS), which prescribed two possible approaches for sizing the pump and tank and sought clarification regarding the intent of the FSS Code requirements pertaining to the sizing of the pumps and pressure tank for automatic sprinkler systems, the Sub-Committee agreed to the approach proposed in paragraphs 5 and 6 of the above document and invited IACS to advise SSE 2 as to whether

any further action should be taken with respect to development of a new unified interpretation.

Fixed gas fire-extinguishing systems and fixed fire detection and fire alarm systems

17.43 In considering document SSE 1/17/11 (IACS), which discussed issues relevant to the provisions of paragraph 2.2.1.7 of chapter 5 and paragraph 2.2.4 of chapter 9 of the FSS Code (the first issue is related to the number of setting points to the discharge control for the fire-extinguishing medium and the second to the time period of the power supply to the fire detection and fire alarm system), the Sub-Committee noted the following additional views expressed by the observer from IACS:

.1 that two different understandings exist with respect to the last sentence of paragraph 2.2.1.7 of chapter 5 of the FSS Code;

.2 that two different understandings are also provided regarding the provisions of paragraphs 2.1.1.1 and 2.2.1.1 of chapter 5 of the FSS Code; and

.3 that the wording used in the paragraph 2.2.4 of chapter 9 of the FSS Code, and specifically the words "at the end of that period", can be interpreted in two different ways, which does not facilitate consistent implementation.

17.44 Following discussion, the Sub-Committee, having noted the view expressed by some delegations that 30 minutes had specifically been added by the FP Sub-Committee to the period specified in SOLAS, invited IACS to prepare a draft MSC circular, which should include understanding 1 from paragraph 5 of document SSE 1/17/11 and both options proposed in paragraph 6, for further consideration at SSE 2.

Installation of manually operated call points in way of Bosun stores

17.45 In considering document SSE 1/17/12 (IACS), which discussed the conditions of spaces where manually operated call points are required to be installed under SOLAS regulation II-2/7.7 and described the common understanding of IACS with a view to developing a unified interpretation on the matter, the Sub-Committee noted, in particular, the following:

.1 that IACS, in view of enhancing the level of fire safety, believes that Bosun stores located remotely from accommodation blocks and used for the storage of flammable liquid as mentioned above should be arranged with appropriate fire protection and, therefore, recommends that manually operated call points should be required at exits of such Bosun stores;

.2 that some delegations expressed the view that no specific interpretation is needed, although the clarification that a Bosun store is a service space may be useful; and

.3 that other delegations raised the concern that use of the term "Bosun store" may make the requirement not applicable and proposed to replace "Bosun store" with "Bosun/forepeak store".

17.46 Following discussion, the Sub-Committee invited Member Governments and international organizations to submit their comments and proposals to SSE 2.

Implementation of the FSS Code, chapter 14 – Fixed deck foam systems

17.47 In considering document SSE 1/17/13 (IACS), which commented on the amendments to paragraph 2.3.2.3 of the FSS Code, chapter 14, as adopted by resolution MSC.339(91), and proposed a revision of MSC/Circ.1120 in order to facilitate consistent implementation of its provisions upon entry into force of the related amendments adopted by resolution MSC.339(91) from 1 July 2014, the Sub-Committee noted the following views expressed on this matter:

.1 that there was an understanding that the above amendment was intended to incorporate the interpretation from MSC/Circ.1120 and that it was not intended to preclude the positioning of the aftermost foam monitors on the deck in the area above oil bunker tanks, as was previously permitted by MSC/Circ.1120; and

.2 that, in addition to the need to revise MSC/Circ.1120, a review of the definition for "cargo area" in SOLAS regulation II-2/3 should also be undertaken.

17.48 The Sub-Committee agreed to the draft MSC circular on amendments to the unified interpretations of SOLAS chapter II-2, the FSS Code, the FTP Code and related fire test procedures (MSC/Circ.1120), as set out in annex 14, for submission to MSC 94 for approval.

Location of the fire main isolation valves in tankers

17.49 Having considered document SSE 1/17/14 (IACS), which requested further consideration of the interpretation of the phrase "the isolation valves shall be fitted in the fire main at the poop front in a protected position" in SOLAS regulation II-2/10.2.1.4.4, as set out in paragraph 4 of annex 1 to MSC.1/Circ.1456, the Sub-Committee agreed to the draft MSC circular on amendments to the unified interpretations of SOLAS chapter II-2 and the FSS and FTP Codes (MSC.1/Circ.1456), as set out in annex 15, for submission to MSC 94 for approval.

18 BIENNIAL AGENDA AND PROVISIONAL AGENDA FOR SSE 2

Outcome of A 28

18.1 The Sub-Committee noted that the Assembly, at its twenty-eighth session, had 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 of the Organization and priorities for the 2014-2015 biennium* (resolution A.1061(28)).

Biennial status report and proposed provisional agenda for SSE 2

18.2 Taking into account the progress made at the session, the Sub-Committee prepared the proposed biennial status report of the Sub-Committee for the 2014-2015 biennium (SSE 1/WP.2, annex 1) and the proposed provisional agenda for SSE 2 (SSE 1/WP.2, annex 2), as set out in annexes 16 and 17 respectively, for consideration by MSC 93.

Correspondence groups established at the session

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

.1 fire protection (see paragraphs 5.10 and 6.13);

.2 development of life-safety performance criteria for alternative design and arrangements for fire safety (MSC/Circ.1002) (see paragraph 7.5);

.3 life-saving appliances (LSA) (see paragraphs 8.19 and 20.16); and

.4 onboard lifting appliances and winches (see paragraph 13.25).

Arrangements for the next session

18.4 The Sub-Committee agreed to establish at its next session working groups on the following subjects:

.1 fire protection (agenda items 3, 4 and 5)*;

.2 life-saving appliances (LSA) (agenda items 6 and 7); and

.3 onboard lifting appliances and winches (agenda item 8),

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

Date of next session

18.5 The Sub-Committee noted that the second session of the Sub-Committee has been tentatively scheduled to take place from 23 to 27 March 2015.

19 ELECTION OF CHAIRMAN AND VICE-CHAIRMAN FOR 2015

19.1 In accordance with the Rules of Procedure of the Maritime Safety Committee, the Sub-Committee unanimously re-elected Dr. S. Ota (Japan) as Chairman and Mr. K. Hunter (United Kingdom) as Vice-Chairman, both for 2015.

20 ANY OTHER BUSINESS

Comments on the *Guidelines for evaluation and replacement of lifeboat release and retrieval systems* (MSC.1/Circ.1392) referred to in SOLAS regulation III/1.5

20.1 In considering document SSE 1/20/4 (ILAMA), which provided comments on the *Guidelines for evaluation and replacement of lifeboat release and retrieval systems* (MSC.1/Circ.1392) and invited the Sub-Committee to reconsider the requirements for a post-installation towing test after replacement of a lifeboat release and retrieval system as required in paragraph 24.3 of the circular, the Sub-Committee noted the following views expressed by the following delegations:

.1 ICS, supported by observers from ITF and NI, expressed the view that, as the designed function of the lifeboat and davit system is to accommodate a launch and release in conditions similar to those simulated by the 5 knot launch test, the proposal to discard this test should be very carefully considered; they were also of the view that the proposed amendment to paragraph 24.3 of MSC.1/Circ.1392 implies dynamic movement; but, a dynamic movement has not been discussed in document SSE 1/20/4, so further clarification of the proposed amendment is necessary;

* Refer to annex 17.

.2 Germany, supported by delegations of the Netherlands and Norway, agreed with the comments in document SSE 1/20/4 and the proposal to amend test procedure in MSC.1/Circ.1392, and, bearing in mind that MSC.1/Circ.1392 applies only within this very limited time frame, proposed that any decisions to be taken should be duly recorded; and

.3 the United States, supported by the delegation of Spain, while agreeing to some of the elements in the above document, were of the view that the boat should be released during testing and proposed that further careful consideration is needed, given some contradictions in the ILAMA proposal.

20.2 Following discussion, the Sub-Committee, as it did not support the ILAMA proposal, decided not to proceed with this issue further.

Development of a Mandatory Code for Ships Operating in Polar Waters

20.3 The Sub-Committee recalled that SDC 1 finalized chapters 8 (Fire safety/protection) and 9 (Life-saving appliances and arrangements) of the draft Mandatory Code for Ships Operating in Polar Waters ("Polar Code") and requested the Sub-Committee to consider the need to develop additional performance or test standards and advise MSC 93 accordingly.

20.4 In considering document SSE 1/INF.8 (Secretariat), which provided the finalized texts of chapters 8 and 9 of the draft Polar Code, the Sub-Committee noted the following views expressed on this matter:

.1 that there are several places in the proposed text where further work (i.e. interpretation/clarification) is needed; in particular, the Committee should be invited to replace the term "as practicable" with "as far as practical", as the latter term provides the flexibility intended;

.2 that the applicability of existing test procedures and performance standards should be further considered;

.3 that the FSS and LSA Codes should be reviewed for the purpose of the Polar Code; and

.4 that any detailed proposals outside the scope of the specific request of SDC 1 should be submitted directly to MSC 93 for consideration.

20.5 Following discussion, the Sub-Committee, having generally agreed that additional performance or test standards may be necessary, decided that a detailed discussion should not be started until after MSC 93 has finalized the Polar Code. The Sub-Committee requested the Secretariat to inform MSC 93 of the above decision, including the matter raised in paragraph 20.4.1.

Draft International Code of safety for ships using gas or other low-flashpoint fuels (IGF Code)

20.6 The Sub-Committee recalled that BLG 16, having noted that there were no additional requirements in the draft text of the IGF Code for life-saving appliances (LSA) over and above those in existing conventions, had invited DE 57 to consider the need for additional or alternative requirements for LSA on ships covered by the Code, with a view to advising the BLG Sub-Committee accordingly (paragraph 3 of document DE 57/2/2 (Secretariat)).

20.7 The Sub-Committee also recalled that DE 57, due to lack of time, had decided to defer consideration of document DE 57/2/2 to DE 58 (now SSE 1).

20.8 In considering the need for additional or alternative requirements for LSA on ships covered by the IGF Code, the Sub-Committee, taking into account that no comments or proposals had been submitted to this session, agreed that no further action is necessary on this matter. Subsequently, the Sub-Committee requested the Secretariat to inform CCC 1 accordingly.

Casualty analysis

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

.1 DE 57/2/3 (Secretariat), informing that MSC 91 had instructed the Sub-Committee to consider the reports on the incidents of the **BBC Atlantic** (GISIS incident C0007492), **Star Java** (GISIS incident C0007519), **Knud Lauritzen** (GISIS incident C0007251), **Sand Falcon** (GISIS incident C0007978) and **Wellservicer** (GISIS incident C0007608), as well as the analysis and comments made by the FSI Correspondence Group on Casualty Analysis (FSI 20/5), and to advise the Committee accordingly; and

.2 SSE 1/20 (Secretariat), providing information on the request from FSI 21 and MSC 92 for the Sub-Committee to consider the investigation reports on the incidents of the **Commodore Clipper**, **Lisco Gloria**, **Pearl of Scandinavia** and **Deepwater Horizon**, together with the analyses and comments made by the FSI Correspondence Group on Casualty Analysis (FSI 21/5).

20.10 The Sub-Committee, recalling the decision of MSC 92 (MSC 92/26, paragraph 22.29) regarding the approach to be taken in Sub-Committee deliberations on casualty analysis, decided to take no action at this time on the matters forwarded to DE 57 and SSE 1 in the absence of a clear link to existing outputs.

20.11 The Sub-Committee was advised by the delegation of the United States that a document, co-sponsored by the Marshall Islands, United States and IADC, had been submitted to MSC 93, proposing a new unplanned output on revision of the fire safety provisions of the 2009 MODU Code, which is based on the recommendations emanating from the investigation of **Deepwater Horizon** casualty.

Application of paragraphs 8.10.1.4, 8.10.1.5 and 8.10.1.6 of the 2000 HSC Code

20.12 In considering document DE 57/23/1 (IACS), which sought clarification regarding the implementation of paragraphs 8.10.1.4, 8.10.1.5 and 8.10.1.6 of the 2000 HSC Code concerning the exemption from the carriage requirement for a rescue boat for high-speed craft of less than 30 m in length, the Sub-Committee noted the view expressed by the Netherlands that an alternative solution should be available.

20.13 The Sub-Committee noted that IACS intented to submit a document on the issue related to possible discrepencies in the HSC Code to MSC 94.

Safe working load and lowering test load for launching appliances

20.14 In considering document MSC 90/9/2 (IACS), which offered a relevant unified interpretation on the application of the increased average person mass for occupants of liferafts, to 82.5 kg, to both new and existing ships, and the effect this has on the safe working load of any davits employed to launch these liferafts, the Sub-Committee agreed with the view of ICS that no specific action needs to be taken as MSC.1/Circ.1361 is applicable to passenger ships only and, therefore, on cargo ships, the safe working load of the launching appliance should not be less than the certified weight of the liferaft.

Scope of application and drafting of amendments to the LSA Code

20.15 In considering document DE 57/23/5 (Secretariat), which requested the Sub-Committee to consider the draft amendments to the LSA Code related to the scope of application, including the concern expressed by IACS on the application of SOLAS regulation III/1.4.2 to inflatable liferafts and draft MSC circular on guidance for drafting amendments to the LSA Code, the Sub-Committee noted the following views expressed on this matter:

.1 that the term "recently" in the draft amendments should be clarified;

.2 that with regard to the scope of application, the term "constructed after" should be used instead of "constructed on or after";

.3 that the application dates in SOLAS chapter III, the LSA Code and the recommendation on testing should be harmonized; and

.4 that it is premature to consider this issue until the guidance related to the application of amendments to SOLAS, which is currently being developed by the Committee (MSC 92/26, paragraphs 3.86 to 3.89), is finalized.

20.16 Having been advised that the LSA Code is outside the scope of work currently under consideration by the Committee, the Sub-Committee decided to instruct the LSA Correspondence Group (see paragraph 8.19) to consider document DE 57/23/5, taking into account the relevant outcome of MSC 93, and to advise SSE 2 accordingly. The Sub-Committee requested the Secretariat to advise MSC 93 of the above decision.

Amendments to the *Guidelines for construction, installation, maintenance and inspection/survey of means of embarkation and disembarkation* (MSC.1/Circ.1331)

20.17 In considering document DE 57/23/2 (Republic of Korea), which proposed amendments to the *Guidelines for construction, installation, maintenance and inspection/survey of means of embarkation and disembarkation* (MSC.1/Circ.1331) concerning the location of the means of embarkation and disembarkation, lifebuoys and lightest seagoing condition, the Sub-Committee, having noted that there was no planned output for this issue, invited the Republic of Korea to prepare a justification for a new unplanned output in accordance with the Committee's *Guidelines on the organization and method of work*.

Correction to resolution MSC.81(70), as revised by resolution MSC.323(89)

20.18 In considering document DE 57/23/4 (China), which identified an oversight in the editorial changes to resolution MSC.81(70) effected by resolution MSC.323(89), inadvertently extending tensile strength test for buoyancy material of lifejackets to that of lifeboats, the Sub-Committee agreed that a corrigendum should be issued to modify paragraph 6.2.2 of part 1 in resolution MSC.81(70), as follows:

> "When inherent buoyant material is required, the material should be subjected to the tests prescribed in 2.6, other than 2.6.8, except that in 2.6.6.3 high-octane petroleum spirit should be substituted for diesel oil.",

and requested the Secretariat to take action accordingly. The Committee was invited to note the above decision.

Information on equipment for MOB situations

20.19 The Sub-Committee noted documents DE 57/INF.11 and DE 57/INF.12 (Spain), which contained information on the Ocean Safety System S2S, developed to provide safety measures for seafarers working on deck to address man overboard (MOB) situations, and the Albatros Suit, an innovative LSA for seafarers.

Proposed amendments to the MODU Code and the *Recommendation on helicopter landing areas on ro-ro passenger ships* (MSC/Circ.895)

20.20 The Sub-Committee recalled that FP 56 had considered document FP 56/20/3 (United States), suggesting amendments to SOLAS regulation II-2/18.5, the MODU Code and the *Recommendation on helicopter landing areas on ro-ro passenger ships* (MSC/Circ.895), and had referred the draft amendments to the MODU Code and MSC/Circ.895, as set out in annexes 2 and 3, to DE 57 for appropriate action, noting that these draft amendments were applicable to new MODUs and new ro-ro passenger ships, as appropriate.

20.21 In considering annexes 2 and 3 of document FP 56/20/3, the Sub-Committee noted the concern expressed by ICS with regard to the requirements of paragraph 3.4 of MSC.1/Circ.1431 and their request for further clarification.

20.22 The Sub-Committee invited interested Member Governments and international organizations to submit their comments to SSE 2.

Testing of automatic sprinkler systems on passenger ships

20.23 The Sub-Committee noted the information provided by the Bahamas (MSC 92/INF.10) on findings from the testing of automatic sprinklers on passenger ships and expressing the view that the scope of testing in MSC.1/Circ.1432 may not adequately assess the actual condition of automatic sprinkler systems and updated information regarding testing carried out since MSC 92. The Bahamas invited other Member States to advise the Maritime Safety Committee of the results of the application of MSC.1/Circ.1432 to passenger ships under their jurisdiction.

Inspection and maintenance of fixed carbon dioxide fire-extinguishing system

20.24 In considering document SSE 1/20/3 (Bahamas), which informed of a failure of the control valves in the delivery manifold of the fixed carbon dioxide fire-extinguishing system during a serious fire in a main machinery space and proposing the amendment to section 6

of MSC.1/Circ.1318 to harmonize with paragraph 9.1 of MSC.1/Circ.1432, the Sub-Committee noted the wide support received and agreed to the proposal in principle.

20.25 However, it noted comments related to the practical realization of the proposal on some installations, risks associated with in-situ disassembly, and the sufficiency of manufacturer recommendations decided to invite interested Member governments to submit a justification for the new unplanned output in accordance with the Committees' *Guidelines on the organization and method of work*.
20.26 In this regard, the delegation of the Bahamas expressed their disappointment at the decision of the Sub-Committee to defer the amendment of MSC.1/Circ.1318 as requested in document SSE 1/20/3. The full text of the statement is set out in annex 18.

Consideration of the amendments to the EmS Guide

20.27 The Sub-Committee noted the information provided in document SSE 1/20/1 (Secretariat), informing of the outcome of DSC 18 regarding the draft amendments to the EmS Guide, which are expected to be adopted at MSC 93.

Development of amendments to the IMDG Code and supplements

20.28 The Sub-Committee noted the information in paragraph 5 of document SSE 1/2/1 (Secretariat) on the outcome of DSC 18 related to draft amendments to SP 961 and SP 962 in the IMDG Code.

Clarification of a vague expression in chapter 9 of the FSS Code on fixed fire detection and fire alarm systems

20.29 In considering document SSE 1/20/2 (IACS), presenting the understanding of IACS in relation to paragraph 2.5.1.3 of chapter 9 of the FSS Code, as amended, the Sub-Committee agreed to the IACS understanding.

Possible errors in the 2010 FTP Code

20.30 In discussing document SSE 1/20/5 (Norway), which addressed two possible errors in part 10 of the 2010 FTP Code, the Sub-Committee, having noted that these errors may cause problems in connection with testing and certification of materials used for furniture and other components of high-speed craft, requested the Secretariat to issue an erratum.

Inert gas system using a nitrogen generator

20.31 The Sub-Committee noted document SSE 1/INF.7 (Republic of Korea), containing information on inert gas systems, using a nitrogen generator with a minimized number of membranes, which can be applied in tankers less than 20,000 deadweight, and the results of a sample calculation verifying the possibility of practical application of this system on ships.

Test laboratories recognized by Administrations and availability of halons

20.32 The Sub-Committee recalled that the FP Sub-Committee issued annually two FP circulars, one on halon banking and reception facilities and the other on test laboratories recognized by Administrations. In this regard, the Sub-Committee noted the following information provided by the Secretariat on the status of the aforementioned FP circulars:

.1 the revised annual FP circular on test laboratories recognized by Administrations (FP.1/Circ.45) was published on 24 January 2013 and two addenda FP.1/Circ.45/Add.1 and FP.1/Circ.45/Add.2 were published on 4 March 2013 and 21 November 2013, respectively; and

.2 the annual FP circular on halon banking and reception facilities (FP.1/Circ.46) was published on 25 January 2013.

20.33 Referring to the restructuring of the IMO Sub-Committees, which took effect on 1 January 2014, the Sub-Committee, having considered whether an annual issue of the aforementioned circulars should be continued as SSE circulars, decided to request the Secretariat to issue all future circulars as "SSE circulars" and update them only as and when necessary in lieu of issuing them annually (i.e. as revisions to the base circulars). MSC 93 was invited to note the above decision.

21 ACTION REQUESTED OF THE COMMITTEES

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

.1 approve the draft MSC circular on *Recommendation on safety measures for existing vehicle carriers carrying motor vehicles with compressed hydrogen or natural gas in their tanks for their own propulsion as cargo*, in conjunction with the adoption of draft new SOLAS regulation II-2/20-1 (paragraph 3.10 and annex 1);

.2 note, in the context of the Committee's work on the application of amendments to SOLAS, the Sub-Committee's view that there should be explanatory notes and background information to support the implementation of life-saving appliance requirements (paragraph 8.6);

.3 note the concern expressed regarding abandon ship drills with fully loaded lifeboats and that the outcome of any proposed amendments to the testing requirements for lifeboats should maintain the existing level of functional assurance for life-saving appliances (paragraph 8.8);

.4 note that the work on development of amendments to the LSA Code for free-fall lifeboats with float-free capability had been completed and agree to withdraw the previous agreement reached at MSC 78, i.e. to keep in abeyance the part of the proposed amendments to SOLAS chapter III (paragraphs 10.2 and 10.4);

.5 consider the Sub-Committee's recommendation with regard to the term "heat resisting", which was introduced into the draft amendments to SOLAS regulation II-2/9.7.1.1, to be adopted at MSC 93, and take action as appropriate (paragraph 17.10);

.6 approve the draft MSC circular on the unified interpretation of SOLAS regulation II-2/9.7.1.1 (paragraph 17.11.2 and annex 9);

.7 consider the Sub-Committee's recommendation to modify the text of the first sentence of the draft revised SOLAS regulation II-2/9.7.1.1, which is to be adopted at MSC 93, and take action as appropriate (paragraph 17.11.3);

.8 approve the proposed biennial status report of the Sub-Committee for the 2014-2015 biennium (paragraph 18.2 and annex 16);

.9 approve the proposed provisional agenda for SSE 2 (paragraph 18.2 and annex 17);

.10 consider the Sub-Committee's recommendation to replace the term "as practicable" with "as far as practical" in the draft Polar Code, as the latter term provides the flexibility intended, and take action as appropriate (paragraphs 20.4.1 and 20.5);

.11 note that the Sub-Committee considered the finalized chapters 8 (Fire safety/protection) and 9 (Life-saving appliances and arrangements) of the draft Polar Code as requested by SDC 1 and, having agreed that additional performance or test standards may be necessary, decided that a detailed discussion should not be started until the Polar Code has been adopted by the Committee (paragraph 20.5);

.12 note that the Sub-Committee reviewed the relevant parts of the IGF Code referred by the BLG Sub-Committee and that the outcome has been forwarded to CCC 1 accordingly (paragraph 20.8);

.13 note, in the context of the Committee's work on the application of amendments to SOLAS, the Sub-Committee's views on the scope of application and drafting of amendments to the LSA Code (paragraph 20.16); and

.14 note the Sub-Committee's decision to reissue the annual FP circulars on halons and test laboratories as SSE circulars (paragraph 20.33).

21.2 The Marine Environment Protection Committee, at its sixty-seventh session, is invited to:

.1 approve the draft amendments to MARPOL Annex I with a view to subsequent adoption (paragraph 17.27 and annex 11); and

.2 consider the draft revised unified interpretation of regulation 12.3.3 of MARPOL Annex I with a view to approval by MEPC 70 (after the deemed acceptance date for the amendments to MARPOL Annex I) (paragraph 17.30 and annex 12).

21.3 The Maritime Safety Committee, at its ninety-fourth session, is invited to:

.1 approve the draft amendments to SOLAS regulation II-2/20 with a view to subsequent adoption (paragraph 6.9 and annex 2);

.2 adopt the draft MSC resolution on *Amendments to the Code for the Construction and Equipment of Mobile Offshore Drilling Units, 2009* (2009 MODU Code) (paragraph 11.5.1 and annex 3);

.3 approve the draft MSC circular on *Guidelines on alternative methods for lifeboat drills on MODUs* (paragraph 11.5.2 and annex 4);

.4 adopt the draft MSC resolution on *Amendment to the recommendation on conditions for the approval of servicing stations for inflatable liferafts* (resolution A.761(18)) (paragraph 12.6 and annex 5);

.5 approve the draft amendments to SOLAS chapter II-2 with a view to subsequent adoption (paragraph 15.4 and annex 6);

.6 approve the draft MSC circular on unified interpretations of chapters 5, 9 and 10 of the FSS Code (paragraphs 17.7, 17.36 and 17.41 and annex 7);

.7 approve the draft MSC circular on the unified interpretation of part 3 of annex 1 to the 2010 FTP Code (paragraph 17.9 and annex 8);

.8 approve the draft MSC circular on the unified interpretation of the *Revised recommendation on testing of life-saving appliances* (resolution MSC.81(70)) (paragraph 17.13 and annex 10);

.9 approve the draft MSC circular on the unified interpretation of SOLAS regulation III/31.1.4 (paragraph 17.33 and annex 13);

.10 approve the draft MSC circular on amendments to the unified interpretations of SOLAS chapter II-2, the FSS Code, the FTP Code and related fire test procedures (MSC/Circ.1120) (paragraph 17.48 and annex 14);

.11 approve the draft MSC circular on amendments to the unified interpretations of SOLAS chapter II-2 and the FSS and FTP Codes (MSC.1/Circ.1456) (paragraph 17.49 and annex 15);

.12 note the Sub-Committee's decision to issue a corrigendum to modify paragraph 6.2.2 of part 1 in resolution MSC.81(70), due to an inadvertent omission (paragraph 20.18);

.13 note the Sub-Committee's decision to issue an erratum on part 10 of the 2010 FTP Code (paragraph 20.30); and

.14 approve the report in general.

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ANNEX 1

DRAFT MSC CIRCULAR

RECOMMENDATION ON SAFETY MEASURES FOR EXISTING VEHICLE CARRIERS CARRYING MOTOR VEHICLES WITH COMPRESSED HYDROGEN OR NATURAL GAS IN THEIR TANKS FOR THEIR OWN PROPULSION AS CARGO

1 The Maritime Safety Committee, at its [ninety-third session (14 to 23 May 2014)], in adopting the amendments to SOLAS chapter II-2 to include requirements for vehicle carrier carrying motor vehicles with compressed hydrogen or natural gas in their tanks for their own propulsion as cargo, approved the *Recommendation on safety measures for existing vehicle carriers carrying motor vehicles with compressed hydrogen or natural gas in their tanks for their own propulsion as cargo*, as set out in the following paragraphs.

2 The carriage of vehicles with compressed hydrogen or compressed natural gas in their tanks for their own propulsion should be to the satisfaction of the Administration, taking into account SOLAS regulation II-2/20-1 and SP 961 and SP 962 of the IMDG Code, as applicable.

3 The shipper should provide a signed certificate or declaration that the vehicle fuel system, as offered for carriage, has been checked for leak-tightness and the vehicle is in proper condition for carriage prior to loading. In addition, the shipper is to mark, label or placard each vehicle, after it has been checked for leak-tightness and that it is in proper condition for carriage. During loading, the crew should check each vehicle for the shipper's markings.

4 Member States are invited to use the recommendations above on a voluntary basis when approving the carriage of motor vehicles with compressed hydrogen or compressed natural gas in their tanks for their own propulsion as cargo on existing vehicle carriers and bring them to the attention of owners, operators and other parties concerned, as appropriate.

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ANNEX 2

DRAFT AMENDMENTS TO SOLAS REGULATION II-2/20

Regulation 20 – Protection of vehicle, special category and ro-ro spaces

The existing paragraph 3.1.2 is replaced by the following:

"**3.1.2** ***Performance of ventilation systems***

3.1.2.1 In passenger ships, the power ventilation system ~~required in paragraph 3.1.1~~ shall be separate from other ventilation systems and shall be ~~in operation~~ operated to give at least the number of air changes required in paragraph 3.1.1 at all times when vehicles are in such spaces, except where an air quality control system in accordance with paragraph 3.1.2.4 is provided. Ventilation ducts serving such cargo spaces capable of being effectively sealed shall be separated for each such space. The system shall be capable of being controlled from a position outside such spaces.

3.1.2.2 In cargo ships, the ventilation fans shall normally be run continuously and give at least the number of air changes required in paragraph 3.1.1 whenever vehicles are on board, except where an air quality control system in accordance with paragraph 3.1.2.4 is provided. Where this is impracticable, they shall be operated for a limited period daily as weather permits and in any case for a reasonable period prior to discharge, after which period the ro-ro or vehicle space shall be proved gas-free. One or more portable combustible gas detecting instruments shall be carried for this purpose. The system shall be entirely separate from other ventilating systems. Ventilation ducts serving ro-ro or vehicle spaces shall be capable of being effectively sealed for each cargo space. The system shall be capable of being controlled from a position outside such spaces.

3.1.2.3 The ventilation system shall be such as to prevent air stratification and the formation of air pockets.

3.1.2.4 For all passenger and cargo ships, where an air quality control system is provided based on the guidelines developed by the Organization,* the ventilation system may be operated at decreased capacity."

* Refer to the *Design guidelines and operational recommendations for ventilation systems in ro-ro cargo spaces* (MSC/Circ.729), as amended.

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ANNEX 3

DRAFT MSC RESOLUTION

AMENDMENTS TO THE CODE FOR THE CONSTRUCTION AND EQUIPMENT OF MOBILE OFFSHORE DRILLING UNITS, 2009 (2009 MODU CODE)

THE MARITIME SAFETY COMMITTEE,

RECALLING Article 28(b) of the Convention on the International Maritime Organization concerning the functions of the Committee,

RECALLING ALSO that the Assembly, when adopting resolution A.1023(26) on the *Code for the Construction and Equipment of Mobile Offshore Drilling Units, 2009 (2009 MODU Code)*, authorized the Committee to amend the 2009 MODU Code as appropriate, taking into consideration developments in design and technology, in consultation with appropriate organizations,

NOTING that the 2009 MODU Code contains the requirements regarding the type, quantity, operation and maintenance of life-saving appliances for mobile offshore units for drilling, production and service in offshore oil and gas fields as well as the corresponding provisions for crew training,

RECOGNIZING that these requirements and provisions are very similar to the SOLAS requirements and that some of them, being applied to mobile offshore units, may lead to potentially hazardous situations, due to the fact that they have been developed on the basis of typical operations for conventional ships,

HAVING CONSIDERED, at its [ninety-fourth] session, the recommendation made by the Sub-Committee on Ship Systems and Equipment at its first session, upon review the 2009 MODU Code,

1. ADOPTS, the amendments to the Code for the Construction and Equipment of Mobile Offshore Drilling Units, 2009 (2009 MODU Code), as set out in the annex to the present resolution, for mobile offshore drilling units, the keels of which are laid or which are at a similar stage of construction on or after [*date of adoption*];

2. INVITES Governments to implement the amendments attached to the present resolution and to bring them to the attention of all parties concerned.

ANNEX

AMENDMENTS TO THE 2009 MODU CODE

Chapter 14

Operations

14.12 Practice musters and drills

In paragraph 14.12.4 a new subparagraph ".3" is added with the following:

".3 alternatively, the provisions regarding launching and manoeuvring may be considered as having been met for those units that have, (a) implemented the Guidelines developed by the Organization* and they are included in the unit's operating procedures or, (b) by other equivalent means acceptable to the Administration."

and the following corresponding footnote is added:

"* Refer to the *Guidelines on alternative methods for lifeboat drills on MODUs*, developed by the Organization and included in MSC.1/Circ.[…]."

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ANNEX 4

DRAFT MSC CIRCULAR

GUIDELINES ON ALTERNATIVE METHODS FOR LIFEBOAT DRILLS ON MODUs

1 The Maritime Safety Committee, at its [ninety-fourth session (17 to 21 November 2014)], approved the *Guidelines on alternative methods for lifeboat drills on MODUs*, set out in the annex, following the recommendations made by the Sub-Committee on Ship Systems and Equipment at its first session (11 to 12 March 2014).

2 Member Governments are invited to use the annexed guidelines when applying the *Code for the Construction and Equipment of Mobile Offshore Drilling Units, 2009 (2009 MODU Code)*, as adopted by resolution A.1023(26), as amended by resolution [MSC….(94)], and to bring them to the attention of all parties concerned.

3 Administration may consider applying these guidelines also to the 1979 MODU Code adopted by resolution A.414(XI) and to the 1989 MODU Code adopted by resolution A.649(16).

4 Member Governments, shipowners and manufacturers of lifeboats are strongly encouraged to use the annexed *Guidelines on alternative methods for lifeboat drills on MODUs* at the earliest available opportunity.

ANNEX

GUIDELINES ON ALTERNATIVE METHODS FOR LIFEBOAT DRILLS ON MODUS

BACKGROUND

1 Paragraph 3.3.6 of SOLAS chapter III, regulation 19, requires the "launching of lifeboats with their assigned crew on board and manoeuvring in the water" at least once every three months, as far as reasonable and practicable.

2 Similarly, paragraph 14.12.4.2 of the 2009 MODU Code specifies:

> "…… at least once every three months when conditions permit, launching and manoeuvring with the assigned operating crew on board."

3 Such lifeboat drills provide an opportunity to verify that the emergency life-saving system and associated equipment is in place, in good working order and ready for use. Such drills are also necessary to train and evaluate the crew in the use of the equipment and demonstrate that they have the capability and readiness to manage an emergency in which lifeboats are employed.

4 The launching, manoeuvring and retrieval of lifeboats in remote offshore locations and similar unfavourable environmental conditions creates hazardous situations and potentially the inability to carry out such drills safely and fully.

5 Accordingly, the 2009 MODU Code allows for the situation where the regular, and full, completion of lifeboat launch and manoeuvre may not be possible.

6 Paragraph 14.12.4.3 of the 2009 MODU Code specifies:

> "alternatively, the provisions regarding launching and manoeuvring may be considered as having been met for those units that have, (a) implemented the Guidelines developed by the Organization and they are included in the unit's operating procedures or, (b) by other equivalent means acceptable to the Administration."

7 The person in charge (PIC) of the unit is encouraged to place the lifeboats in the water and exercise them when conditions allow.

ALTERNATIVE METHODS

8 Where alternative methods of achieving the objectives of three-monthly launch and manoeuvre of lifeboats are to be employed, they should ensure achievement of a level of assurance of capability and readiness at least equivalent to that achieved through three-monthly launching and manoeuvring.

9 Such assurance includes the lifeboat equipment, the lifeboat crew and procedures and systems.

ELEMENTS OF TYPICAL THREE-MONTHLY LIFEBOAT LAUNCH AND MANOEUVRE DRILL

10 The launch and manoeuvre element of the three-monthly drill specified in SOLAS and the MODU Code consists primarily of the following elements:

.1 prepare and make ready the lifeboat;

.2 deploy and lower the boat into the water;

.3 release the boat;

.4 propel and steer the boat; and

.5 functioning of the lifeboat onboard systems such as deluge, air, etc.

GUIDELINES

11 The following guidelines are intended to assist the operator of a mobile offshore unit in a situation where the execution of the three-monthly launch and manoeuvre of lifeboats as specified in paragraph 14.12.4.2 of the 2009 MODU Code is not possible. This is on condition that there is no reduction in ability to demonstrate assurance and capability of readiness to safely evacuate the unit's personnel by way of lifeboats.

11.1 Equipment

11.1.1 A comprehensive maintenance and inspection plan meeting the criteria found in [MSC.1/Circ.1206/Rev.1] should be in place. This plan should be to the satisfaction of the Administration.

11.1.2 Weekly and monthly inspections should be conducted in accordance with sections 10.18.7 and 10.18.8 of the 2009 MODU Code.

11.1.3 In addition, on a monthly basis, each lifeboat should be lowered to just above but not entering the water, and returned to the original stowage position; the condition of the hull, hook release and retrieval systems (lubrication, integrity and storage) and the operational condition of davit systems should be checked.

11.1.4 Insofar as possible, those on board responsible for lifeboat-launching should be involved in the annual servicing and function test of release gear carried out in accordance with [MSC.1/Circ.1206/Rev.1].

11.2 Personnel

11.2.1 A competence assurance programme should be in place and cover all aspects of instruction and exercising of the crew as pertains to lifeboats and should be in accordance with the *Recommendations for the training and certification of personnel on mobile offshore units (MOUs)* (resolution A.1079(28)).

11.2.2 In addition to the specified mandatory training (e.g. as shown in table A-VI/2-1 of the STCW Code), the lifeboat coxswain should receive intermediate training (at least once every 2.5 years) at a facility satisfactory to the Administration. This training should include practical demonstration of all the elements that are described in paragraph 10 above of these guidelines and are part of the three-monthly launch/manoeuvre exercise. This training should

be carried out utilizing a lifeboat system the same as, or substantially similar to, that which is fitted on board the unit;

11.2.3 Regarding drills and exercises, reference is made to appendix 1 of resolution A.1079(28).

11.2.4 Simulators can form a useful and important part of an overall competence assurance programme. Where such simulators are to be used they should be wholly appropriate to the lifeboat system encountered on board the unit. Simulators should not be seen as a complete replacement for practical, hands-on, training and drills.

11.2.5 Records of training in proficiency in lifeboats, including that carried out at a facility satisfactory to the Administration (resolution A.1079(28)), should be readily accessible.

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ANNEX 5

DRAFT MSC RESOLUTION

AMENDMENT TO THE RECOMMENDATION ON CONDITIONS FOR THE APPROVAL OF SERVICING STATIONS FOR INFLATABLE LIFERAFTS (RESOLUTION A.761(18))

THE MARITIME SAFETY COMMITTEE,

RECALLING Article 28(b) of the Convention on the International Maritime Organization concerning the functions of the Committee,

RECALLING ALSO that the Assembly, when adopting resolution A.761(18) *Recommendation on conditions for the approval of servicing stations for inflatable liferafts*, authorized the Committee to keep this resolution under review and to adopt, when appropriate, amendments thereto,

HAVING CONSIDERED, at its [ninety-fourth] session, the recommendation made by the Sub-Committee on Ship Systems and Equipment at its first session, upon review the Recommendation,

1. ADOPTS the amendment to the *Recommendation on conditions for the approval of servicing stations for inflatable liferafts* (annex to resolution A.761(18)), as set out in the annex to the present resolution;

2. INVITES Governments to inspect servicing stations for inflatable liferafts within their authority in accordance with the recommendation as amended by the present resolution.

ANNEX

AMENDMENT TO THE RECOMMENDATION ON CONDITIONS FOR THE APPROVAL OF SERVICING STATIONS FOR INFLATABLE LIFERAFTS (RESOLUTION A.761(18))

ANNEX

The existing subparagraph 5.11 is replaced by the following:

".11 all items of equipment should be checked to ensure that they are in good condition and that dated items are replaced at the time of servicing in cases where the expiry date falls before the next service date of the liferaft;"

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ANNEX 6

DRAFT AMENDMENTS TO SOLAS CHAPTER II-2

Regulation 4
Probability of ignition

1 At the end of paragraph 5.3.2.2, the following sentence is added:

"For tankers constructed on or after [*date of entry into force*], any isolation shall also continue to permit the passage of large volumes of vapour, air or inert gas mixtures during cargo loading and ballasting, or during discharging in accordance with regulation 11.6.1.2."

Regulation 11
Structural integrity

2 At the end of paragraph 6.2, the following sentence is added:

"For tankers constructed on or after [date], the openings shall be arranged in accordance with regulation 4.5.3.4.1."

3 In paragraph 6.3.2, the first sentence is replaced by the following text:

"A secondary means of allowing full flow relief of vapour, air or inert gas mixtures shall be provided to prevent over-pressure or under-pressure in the event of failure of the arrangements in paragraph 6.1.2. In addition, for tankers constructed on or after [date], the secondary means shall be capable of preventing over-pressure or under-pressure in the event of damage to, or inadvertent closing of, the means of isolation required in regulation 4.5.3.2.2."

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ANNEX 7

DRAFT MSC CIRCULAR

UNIFIED INTERPRETATIONS OF CHAPTERS 5, 9 AND 10 OF THE FSS CODE

1 The Maritime Safety Committee, at its [ninety-fourth session (17 to 21 November 2014)], with a view to providing more specific guidance for release operation of the CO_2 system, fixed fire detection and fire alarm systems and sample extraction smoke detection systems, approved unified interpretations on chapters 5, 9 and 10 of the FSS Code, as prepared by the Sub-Committee on Ship Systems and Equipment at its first session (10 to 14 March 2014), as set out in the annex.

2 Member Governments are invited to use the annexed unified interpretations as guidance when applying paragraph 2.1.3.2 of chapter 5, paragraph 2.5.1.1 of chapter 9 and paragraph 2.4.1.2 of chapter 10 of the FSS Code to the systems to be installed on board ships constructed on or after [*date of approval of the circular*] and to bring the unified interpretation to the attention of all parties concerned.

ANNEX

UNIFIED INTERPRETATIONS OF CHAPTERS 5, 9 AND 10 OF THE FSS CODE

CHAPTER 5 – FIXED GAS FIRE-EXTINGUISHING SYSTEMS

Release operation of the CO_2 systems (paragraph 2.1.3.2, as amended by resolution MSC.339(91))

1 *Conventional cargo spaces* means cargo spaces other than ro-ro spaces or container holds equipped with integral reefer containers, which need not be provided with means for automatically giving audible and visual warning of the release.

2 The requirements of FSS Code, chapter 5, paragraph 2.2.2 apply to the spaces identified in paragraph 2.1.3.2 of chapter 5 of the FSS Code.

CHAPTER 9 – FIXED FIRE DETECTION AND FIRE ALARM SYSTEM

Power supply to the alarm sounder system when not an integral part of the detection system (paragraph 2.5.1.1)

3 The alarm sounder system utilized by the fixed fire detection and fire alarm system should be powered from no less than two sources of power, one of which should be an emergency source of power.

4 In vessels required by SOLAS regulation II-1/42 or II-1/43 to be provided with a transitional source of emergency electrical power, the alarm sounder system should also be powered from this power source.

CHAPTER 10 – SAMPLE EXTRACTION SMOKE DETECTION SYSTEMS

CO_2 room with control panel (paragraph 2.4.1.2, as amended by MSC.292(87))

5 If the CO_2 system discharge pipes are used for the sample extraction smoke detection system, the control panel can be located in the CO_2 room provided that an indicating unit* is located on the navigation bridge. Such arrangements are considered to satisfy the requirements of the FSS Code, chapter 10, paragraph 2.4.1.2, as amended by resolution MSC.292(87).

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* Indicating unit has the same meaning as repeater panel and observation of smoke should be made either by electrical means or by visual on repeater panel.

ANNEX 8

DRAFT MSC CIRCULAR

UNIFIED INTERPRETATION OF PART 3 OF ANNEX 1 TO THE 2010 FTP CODE

1 The Maritime Safety Committee, at its [ninety-fourth session (17 to 21 November 2014)], with a view to providing more specific guidance for testing and approval of pipe penetrations and cable transits which do not utilize conventional components, for use in "A" class divisions, approved a unified interpretation on part 3 of annex 1 to the 2010 FTP Code, prepared by the Sub-Committee on Ship Systems and Equipment at its first session (10 to 14 March 2014), as set out in the annex.

2 Member Governments are invited to use the annexed unified interpretation as guidance when applying paragraph 1.13 of appendix 1 to the 2010 FTP Code, annex 1, part 3, for approvals to be granted on or after [*date of approval of the circular*] and to bring the unified interpretation to the attention of all parties concerned.

ANNEX

UNIFIED INTERPRETATION OF PART 3 OF ANNEX 1 TO THE 2010 FTP CODE

TEST FOR "A", "B" AND "F" CLASS DIVISIONS (ANNEX 1 TO PART 3)

1 Arrangement

1.1 "A" class pipe penetrations and cable transits that are:

.1 constructed without structural sleeves of minimum 3 mm thickness and minimum 60 mm length welded or bolted to the division; and/or

.2 constructed with removable, soft or intumescent filling material,

are "those types of constructions which do not utilize conventional components of horizontal and vertical divisions" (appendix 1, paragraph 1.13) and are to be subject to additional testing and/or design criteria as described below.

2 Additional testing/design criteria

2.1 Filling materials should be adequately secured by bonded materials or mechanical means that cannot be removed without the use of tools in order to prevent damage by normal ship vibrations and pressures.

2.2 The pipe penetration/cable transit should not have any visible openings. It should not be possible to manually penetrate any part of the penetration with a 6 mm gap gauge, as described in paragraph 7.10 of annex 1 to part 3 of the 2010 FTP Code.

3 Approval

3.1 Penetrations in structural divisions should not impair the structural strength of the division. The structural make-up of the penetration is to be fully described so that its use and the need for additional stiffening for the division can be fully assessed.

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ANNEX 9

DRAFT MSC CIRCULAR

UNIFIED INTERPRETATION OF SOLAS REGULATION II-2/9.7.1.1

1 The Maritime Safety Committee, at its [ninety-third session (14 to 23 May 2014)], with a view to providing more specific guidance on flexible bellows of combustible materials, approved a unified interpretation on SOLAS regulation II-2/9.7.1.1, prepared by the Sub-Committee on Ship Systems and Equipment at its first session (10 to 14 March 2014), as set out in the annex.

2 Member Governments are invited to use the annexed unified interpretation as guidance when applying SOLAS regulation II-2/9.7.1.1 to ships constructed before [*date of entry into force*] and to bring the unified interpretation to the attention of all parties concerned.

ANNEX

UNIFIED INTERPRETATION OF SOLAS REGULATION II-2/9.7.1.1

A short length, not exceeding 600 mm, of flexible bellows constructed of combustible material may be used for connecting fans to the ducting in air-conditioning rooms.

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ANNEX 10

DRAFT MSC CIRCULAR

UNIFIED INTERPRETATION OF THE REVISED RECOMMENDATION ON TESTING OF LIFE-SAVING APPLIANCES (RESOLUTION MSC.81(70))

1 The Maritime Safety Committee, at its [ninety-fourth session (17 to 21 November 2014)], with a view to providing more specific guidance for load testing of hooks for primary release of lifeboats and rescue boats, approved a unified interpretation on the *Revised recommendation on testing of life-saving appliances* (resolution MSC.81(70)), prepared by the Sub-Committee on Ship Systems and Equipment at its first session (10 to 14 March 2014), as set out in the annex.

2 Member Governments are invited to use the annexed unified interpretation as guidance when applying paragraph 5.3.4 of part 2 of the *Revised recommendation on testing of life-saving appliances* (resolution MSC.81(70)), to the lifeboats and rescue boats to be installed on board ships constructed on or after [*date of approval of the circular*] and to bring the unified interpretation to the attention of all parties concerned.

ANNEX

UNIFIED INTERPRETATION OF THE REVISED RECOMMENDATION ON TESTING OF LIFE-SAVING APPLIANCES (RESOLUTION MSC.81(70))

Load testing of hooks for primary release of lifeboats and rescue boats (paragraph 5.3.4 of part 2 of the *Revised recommendation on testing of life-saving appliances* (resolution MSC.81(70)))

1 The above regulation applies only to lifeboats and rescue boats launched by falls.

2 The test does not apply to the secondary means of launching for free-fall lifeboats.

3 The test may be carried out on board the ship or on shore, either at the manufacturer's plant or at the shipyard, by using an appropriate mock-up of the launching arrangements which is equivalent to the launching arrangement installed on board the ship.

4 The "weight of the boat" to be considered for the load in the case of single fall systems is the "weight of the boat with its full complement of persons and equipment", which shall be multiplied by two.

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ANNEX 11

DRAFT AMENDMENTS TO MARPOL ANNEX I

CHAPTER 3 – REQUIREMENTS FOR MACHINERY SPACES OF ALL SHIPS

Part A – Construction

Tanks for oil residues (sludge)

1 Regulation 12 is replaced by the following:

"1 Unless indicated otherwise, this regulation applies to every ship of 400 gross tonnage and above except that regulation 12.3.5 need only be applied as far as is reasonable and practicable for ships delivered on or before 31 December 1979, as defined in regulation 1.28.1.

2 Oil residue (sludge) may be disposed of directly from the oil residue (sludge) tank(s) to reception facilities through the standard discharge connection referred to in regulation 13 of this Annex, or to any other approved means of disposal of oil residue (sludge), such as an incinerator, auxiliary boiler suitable for burning oil residues (sludge) or other acceptable means which shall be annotated in item 3.2 of the Supplement to IOPP Certificate Form A or B.

3 Oil residue (sludge) tank(s) shall be provided and:

.1 shall be of adequate capacity, having regard to the type of machinery and length of voyage, to receive the oil residues (sludge) which cannot be dealt with otherwise in accordance with the requirements of this Annex;

.2 shall be provided with a designated pump that is capable of taking suction from the oil residue (sludge) tank(s) for disposal of oil residue (sludge) by means as described in regulation 12.2.

.3 shall have no discharge connections to the bilge system, oily bilge water holding tank(s), tank top or oily water separators, except that:

.1 the tank(s) may be fitted with drains, with manually operated self-closing valves and arrangements for subsequent visual monitoring of the settled water, that lead to an oily bilge water holding tank or bilge well, or an alternative arrangement, provided such arrangement does not connect directly to the bilge discharge piping system;

.2 the sludge tank discharge piping and bilge-water piping may be connected to a common piping leading to the standard discharge connection referred to in regulation 13 of this Annex; the connection of both systems to the possible common piping leading to the standard discharge connection referred to in regulation 13 shall not allow for the transfer of sludge to the bilge system;

.4 shall not be arranged with any piping that has direct connection overboard, other than the standard discharge connection referred to in regulation 13 of this Annex; and

.5 shall be designed and constructed so as to facilitate their cleaning and the discharge of residues to reception facilities.

4 Ships constructed before [1 January 2017] shall be arranged to comply with regulation 12.3.3 not later than the first renewal survey carried out on or after [1 January 2017]."

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ANNEX 12

DRAFT REVISED UNIFIED INTERPRETATION OF REGULATION 12 OF MARPOL ANNEX I

"**Regulation 12.3.3**

A screw-down non-return valve, arranged in lines connecting to common piping leading to the standard discharge connection required by regulation 13, provides an acceptable means to prevent sludge from being transferred or discharged to the bilge system, oily bilge water holding tank(s), tank top or oily water separators."

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ANNEX 13

DRAFT MSC CIRCULAR

UNIFIED INTERPRETATION OF SOLAS REGULATION III/31.1.4

1 The Maritime Safety Committee, at its [ninety-fourth session (17 to 21 November 2014)], with a view to providing more specific guidance on arrangements for remotely located survival craft, approved a unified interpretation of SOLAS regulation III/31.1.4, prepared by the Sub-Committee on Ship Systems and Equipment at its first session (10 to 14 March 2014), as set out in the annex.

2 Member Governments are invited to use the annexed unified interpretation as guidance when applying SOLAS regulation III/31.1.4 to the liferafts to be installed on board ships constructed on or after [*date of approval of the circular*] and to bring the unified interpretation to the attention of all parties concerned.

3 This circular supersedes MSC.1/Circ.1243.

ANNEX

UNIFIED INTERPRETATION OF SOLAS REGULATION III/31.1.4

Arrangements for remotely located survival craft

1 Liferafts required by SOLAS regulation III/31.1.4 should be regarded as "remotely located survival craft" with regard to SOLAS regulation III/7.2.1.4.

2 The area where these remotely located survival craft are stowed should be provided with:

.1 a minimum number of two lifejackets and two immersion suits;

.2 adequate means of illumination complying with SOLAS regulation III/16.7, either fixed or portable, which should be capable of illuminating the liferaft stowage position, as well as the area of water into which the liferaft should be launched; portable lights, when used, should have brackets to permit their positioning on both sides of the vessel; and

.3 an embarkation ladder or other means of embarkation enabling descent to the water in a controlled manner[1] as per SOLAS regulation III/11.7.

3 With regard to the distance between the embarkation station and stowage location of the liferaft as required by SOLAS regulation III/31.1.4 (remotely located survival craft), the embarkation station should be so arranged that the requirements of regulation III/13.1.3 can be satisfied.

4 Exceptionally, the embarkation station and stowage position of the liferaft (remotely located survival craft) may be located on different decks provided that the liferaft can be launched from the stowage deck using the attached painter to relocate it to the embarkation ladder positioned on the other deck (traversing a stairway between different decks with the liferaft carried by crew members is not acceptable).

5 Notwithstanding paragraph 2, where the exceptional cases mentioned in paragraph 4 exist, the following provisions should be applied:

.1 the lifejackets and the immersion suits required by paragraph 2.1 may be stowed at the embarkation station;

.2 adequate means of illumination complying with paragraph 2.2 should also illuminate the liferaft stowage position, embarkation station and area of water where the liferaft is to be embarked;

.3 the embarkation ladder or other means of embarkation as required by paragraph 2.3 may be stowed at the embarkation station; and

.4 notwithstanding the requirements in paragraph 4.1.3.2 of the LSA Code, the painter should be long enough to reach the relevant embarkation station.

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[1] Controlled manner: a knotted rope is not acceptable for this purpose.

ANNEX 14

DRAFT MSC CIRCULAR

AMENDMENTS TO THE UNIFIED INTERPRETATIONS OF SOLAS CHAPTER II-2, THE FSS CODE, THE FTP CODE AND RELATED FIRE TEST PROCEDURES (MSC/Circ.1120)

1 The Maritime Safety Committee, at its [ninety-fourth session (17 to 21 November 2014)], with a view to facilitating consistent implementation of paragraph 2.3.2.3 of chapter 14 of the FSS Code upon entry into force of the related amendments adopted by resolution MSC.339(91), approved unified interpretations on foam systems positions of aft monitors, prepared by the Sub-Committee on Ship Systems and Equipment at its first session, as set out in the annex, in the form of amendments to MSC/Circ.1120.

2 Member Governments are invited to use the unified interpretations set out in the annex as guidance when applying paragraph 2.3.2.3 of chapter 14 of the FSS Code and to bring them to the attention of all parties concerned.

ANNEX

AMENDMENTS TO THE UNIFIED INTERPRETATIONS OF SOLAS CHAPTER II-2, THE FSS CODE, THE FTP CODE AND RELATED FIRE TEST PROCEDURES (MSC/Circ.1120)

ANNEX

The existing interpretation on foam systems positions of aft monitors (paragraph 2.3.2.3 of the FSS Code, chapter 14) is replaced by the following:

"**Foam systems positions of aft monitors**

The port and starboard monitors required by this paragraph may also be located in the cargo area above oil bunker tanks adjacent to cargo tanks if capable of protecting the deck below and aft of each other."

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ANNEX 15

DRAFT MSC CIRCULAR

AMENDMENTS TO THE UNIFIED INTERPRETATIONS OF SOLAS CHAPTER II-2 AND THE FSS AND FTP CODES (MSC/Circ.1456)

1 The Maritime Safety Committee, at its [ninety-fourth session (17 to 21 November 2014)], with a view to facilitating consistent implementation of SOLAS regulation II-2/10.2.1.4.4, approved unified interpretations on the location of the fire main isolation valves in tankers, prepared by the Sub-Committee on Ship Systems and Equipment at its first session, as set out in the annex, in the form of amendments to MSC.1/Circ.1456.

2 Member Governments are invited to use the annexed unified interpretations as guidance when applying SOLAS regulation II-2/10.2.1.4.4 and to bring them to the attention of all parties concerned.

ANNEX

AMENDMENTS TO THE UNIFIED INTERPRETATIONS OF SOLAS CHAPTER II-2 AND THE FSS AND FTP CODES (MSC/Circ.1456)

ANNEX 1

The existing paragraph 4 is replaced by the following:

"**4 Location of the fire main isolation valves in tankers (regulation II-2/10.2.1.4.4)**

The complete interpretation of the phrase "the isolation valves shall be fitted in the fire main at the poop front in a protected position" would be that the valve should be located within an accommodation space, service spaces or control station. However, the valve may be located on the open deck aft of the cargo area provided that the valve is located:

.1 at least 5 m aft of the aft end of the aftermost cargo tank; or

.2 if the above .1 is not practical, within 5 m aft of the aft end of the aftermost cargo tank provided the valve is protected by a permanent steel obstruction."

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ANNEX 16

PROPOSED BIENNIAL STATUS REPORT OF THE SUB-COMMITTEE FOR THE 2014-2015 BIENNIUM

SUB-COMMITTEE ON SHIP SYSTEMS AND EQUIPMENT (SSE)								
Planned output number	**Description***	**Target completion year**	**Parent organ(s)**	**Coordinating organ(s)**	**Associated organ(s)**	**Status of output for Year 1**	**Status of output for Year 2**	**References**
1.1.2.3	Unified interpretation of provisions of IMO safety-, security-, and environment-related Conventions	Continuous	MSC/MEPC		III / PPR / CCC / SDC / SSE / NCSR	Continuous		MSC 92/26, paragraph 23.26; SSE 1/21, section 17
2.0.1.6	Amendments to SOLAS regulation II-1/40.2 concerning general requirements on electrical installations	2014	MSC	SSE		Completed		MSC 86/26, paragraph 23.26; and SSE 1/21, section 4
5.1.1.4	Development of life-safety performance criteria for alternative design and arrangements for fire safety (MSC/Circ.1002)	2014	MSC	SSE		In progress		MSC 90/28, paragraph 25.12; SSE 1/21, section 7
Notes: Extend target completion year to 2015.								
5.1.2.1	New framework of requirements for life-saving appliances	2015	MSC	SSE		In progress		MSC 82/24, paragraph 21.49; SSE 1/21, section 8
5.2.1.5	Amendments to the provisions of SOLAS chapter II-2 relating to secondary means of venting cargo tanks	2015	MSC	SSE		Completed		MSC 90/28, paragraph 25.5; SSE 1/21, section 15
5.2.1.6	Amendments to the 2009 MODU Code concerning lifeboat drills	2015	MSC	SSE		Completed		SSE 1/21, section 11

* Output descriptions aligned with resolution A.1061(28).

Planned output number	Description	Target completion year	Parent organ(s)	Coordinating organ(s)	Associated organ(s)	Status of output for Year 1	Status of output for Year 2	References
5.2.1.7	Considerations related to double-sheathed low-pressure fuel pipes for fuel injection systems in engines on crude oil tankers	2015	MSC	SSE		In progress		MSC 91/22, paragraph 19.13; SSE 1/21, section 14
5.2.1.8	Smoke control and ventilation	2015	MSC	SSE		In progress		FP 46/16, section 4; MSC 91/22/Add.2, annex 38; SSE 1/21, section 5
5.2.1.9	Requirements for ships carrying hydrogen and compressed natural gas vehicles	2014	MSC	SSE		Completed		SSE 1/21, section 3
5.2.1.10	Safety objectives and functional requirements of the *Guidelines on alternative design and arrangements for SOLAS chapters II-1 and III*	2015	MSC	SSE		In progress		MSC 84/24, paragraph 3.92; SSE 1/21, section 8
5.2.1.11	Amendments to the LSA Code for thermal performance of immersion suits	2017	MSC	SSE		Postponed		MSC 84/24, paragraph 22.48; and SSE 1/21, section 9
	Notes: Moved to Committee's post-biennial agenda.							
5.2.1.14	Amendments to SOLAS regulation II-2/20 and associated guidance on air quality management for ventilation of closed vehicle spaces, closed ro-ro and special category spaces	2014	MSC	SSE		In progress		MSC 88/26, paragraph 23.11; SSE 1/21, section 6
	Notes: Target completion date extended to 2015							

Planned output number	Description	Target completion year	Parent organ(s)	Coordinating organ(s)	Associated organ(s)	Status of output for Year 1	Status of output for Year 2	References
5.2.1.22	Requirements for onboard lifting appliances and winches	2015	MSC	SSE		In progress		MSC 89/25, paragraph 22.26; SSE 1/21, section 13
5.2.1.25	Revised recommendation on conditions for the approval of servicing stations for inflatable liferafts (resolution A.761(18))	2014	MSC	SSE		Completed		MSC 87/26, paragraph 24.30; SSE 1/21, section 12
5.2.1.28	Amendments to the requirements for foam-type fire extinguishers in SOLAS regulation II 2/10.5	2014	MSC	SSE		In progress		MSC 89/25, paragraph 22.9; SSE 1/21, section 16
Notes: Target completion date extended to 2015								
5.2.1*	Development of amendments to the *Guidelines for vessels with dynamic positioning (DP) systems* (MSC/Circ.645)	2016	MSC	SSE	NCSR			MSC 90/28, paragraph 25.34; SSE 1/21, paragraph 18.2
12.1.2.1	Analysis of casualty and PSC data to identify trends and develop knowledge and risk-based recommendations	Annual	MSC/MEPC	III	HTW/PPR/SDC/ SSE/NCSR	Continuous		MSC 92/26, paragraph 22.26; SSE 1/21, paragraph 20.10

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* Council to assign number in due course, if approved by MSC 93.

ANNEX 17

PROPOSED PROVISIONAL AGENDA FOR SSE 2*

Opening of the session

1 Adoption of the agenda

2 Decisions of other IMO bodies

3 Smoke control and ventilation (5.2.1.8)

4 Amendments to SOLAS regulation II-2/20 and associated guidance on air quality management for ventilation of closed vehicle spaces, closed ro-ro and special category spaces (5.2.1.14)

5 Development of life-safety performance criteria for alternative design and arrangements for fire safety (MSC/Circ.1002) (5.1.1.4)

6 New framework of requirements for life-saving appliances (5.1.2.1)

7 Safety objectives and functional requirements of the Guidelines on alternative design and arrangements for SOLAS chapters II-1 and III (5.2.1.10)

8 Measures for onboard lifting appliances and winches (5.2.1.22)

9 Considerations related to the double-sheathed low-pressure fuel pipes for fuel injection systems in engines on crude oil tankers (5.2.1.7)

10 Amendments to the requirements for foam-type fire-extinguishers in SOLAS regulation II-2/10.5 (5.2.1.28)

11 Unified interpretation of provisions of IMO safety-, security-, and environment-related Conventions (1.1.2.3)

12 Development of amendments to the Guidelines for vessels with dynamic positioning (DP) systems (MSC/Circ.645) (5.2.1)

13 Biennial agenda and provisional agenda for SSE 3

14 Election of Chairman and Vice-Chairman for 2016

15 Any other business

16 Report to the Maritime Safety Committee

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* Agenda items are aligned with the output titles contained in resolution A.1061(28), including the associated output numbers.

ANNEX 18

STATEMENTS BY DELEGATIONS AND OBSERVERS*

AGENDA ITEM 1

STATEMENT BY THE DELEGATION OF MALAYSIA

"Now that we have come to the end of the meeting, I would like to take this opportunity to say a few words, in response to the Secretary-General's message in his opening remarks on Monday morning, which is reflected in paragraph 1.3 of document WP.1, and also for all other messages that have been expressed by many delegations, colleagues and friends during the course of this week's meeting, with regards to the missing Malaysia Airlines aircraft, flight MH 370. I have conveyed your messages to the High Commissioner of Malaysia and also to my capital, in particular the Ministry of Transport, the main agency coordinating the search and rescue efforts to search for the missing plane.

Mr Chairman,

On behalf of the Government of Malaysia and its people, I wish to convey our heartfelt appreciation to the Secretary-General and all delegations of this Sub-Committee for your messages, expressing your thoughts and prayers to the passengers and crew and their families. The people of Malaysia pray for the safety of all 227 passengers and 12 crew members and the nation is united in hope, praying for the aircraft to be found soon.

It has been seven days now since the aircraft was reported missing and the search for the aircraft continues relentlessly. The search has become more intense with more vessels and people deployed and the search area expanded to areas many hundreds of miles away from the flight path.

The Government of Malaysia wishes to assure the delegation of China that no effort and expense is being spared to find the missing plane because the Government of Malaysia believes that we owe it to the families of the passengers and the crew members to do everything possible to search for the aircraft until it is found. There are many theories but very few facts, but no matter how difficult and arduous this task may be, the Minister of Transport of Malaysia promises that the search will continue regardless.

The search and rescue operation is the biggest in recent times, involving some 80 surface ships and aircrafts, from the Malaysian military services, from various other agencies and from 12 other countries. The scale of SAR that we witness in the search for the MH 370 aircraft is truly unprecedented, having many countries working together to search for the aircraft. This is indeed a multinational operation of very large scale.

Last but not least Mr. Chairman, the Government of Malaysia wishes to record its gratitude to the Governments of Viet Nam, Singapore, China, Philippines, Australia, United States of America, Thailand, Indonesia, New Zealand, India, Japan, Republic of Korea and Brunei for assisting Malaysia in the SAR operation."

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* Statements have been included in this annex in the order in which they were given, sorted by agenda items, and in the language of submission (including translation into any other language if such translation was provided). Statements are available in all the official languages on audio file: http://docs.imo.org/Meetings/Media.aspx

AGENDA ITEM 4

STATEMENT BY THE OBSERVER FROM ITF

"Following the **Costa Concordia** incident, the Maritime Safety Committee has been considering passenger ship safety and it has identified in document MSC 92/WP.8/Rev.1, the Passenger Ship Safety Working Group report, a link between the vital equipment and electrical distribution and the findings in the **Costa Concordia** accident investigation report, and has included the issue as a new planned output. MSC has also identified a link between emergency power generation and the **Costa Concordia** accident investigation report.

The ITF considers that these new outputs identified by the MSC 92 are a continuation of the work undertaken by the DE Sub-Committee. The specifics are regarding recommendations to consider:

a. discontinuity between compartments containing ship's essential systems,

b. more detailed criteria for the distribution, along the length of the ship, of bilge pumps and requirement on capacity,

c. relocation of the main switchboard above the bulkhead deck.

The recommendations regarding emergency power generation are to consider:

a. increasing the emergency generator capacity,

b. a second emergency diesel generator located in another main vertical zone

c. emergency lights in all cabins.

The ITF considers that the Sub-Committee on Ship Design and Equipment should seek to extend the work on this agenda item to cover electrical considerations in line with SOLAS regulation II-1/40.2 on passenger ship safety following with the new output of the Maritime Safety Committee. The SSE Sub-Committee in its deliberation should consider the possible amendments required to SOLAS regulation II-1/42."

AGENDA ITEM 8

STATEMENT BY THE OBSERVER FROM ICS

"ICS expresses its concern that recommendations by the Secretary-General in his opening speech to the Sub-Committee have not been fully addressed by this work.

Paragraphs 18 to 21 of the WG report confirm that there was extensive consideration of the issues raised by industry in SSE 1/8/1. Consequently we are disappointed that the Sub-Committee is only invited to note the discussion and no proposal for action has been made.

We consider that the concern expressed by ILG members regarding the evaluation of hooks under MSC.1/Circ.1392, which was supported by ILAMA who advised the WG that they regarded some re-evaluated hooks to be dangerous, was worthy of further action.

We believe that the concern that records of some positively evaluated hooks in the GISIS database lack supporting detail, as discussed in the initial plenary debate, has not been appropriately addressed. We recognize that the WG has accepted the ILAMA position that the lack of detail is justified for proprietary interests; however, ICS strongly believes that the safety interests of ships and crews should not be secondary to intellectual property rights, in this case. We request that this comment is captured in the report of the SC.

Our expressed concerns with this work do not detract from our appreciation of the efforts and leadership of Yoshida San who very effectively managed the allocated tasks so ably."

AGENDA ITEM 20

STATEMENT BY THE DELEGATION OF THE BAHAMAS

"The Bahamas is grateful for the significant support from delegations at this session but notes, with disappointment, the decision of the Sub-Committee to defer the amendment of MSC.1/Circ.1318 requested in document SSE 1/20/3.

The consequence of this decision is that the recommendation for the internal examination of control valves applied to fixed gas fire-extinguishing systems covered by MSC.1/Circ.1432, paragraph 9.1 is not applied to fixed fire-fighting systems using carbon dioxide.

The Bahamas considers the lack of consistency between the two circulars to result in a serious omission to the inspection and maintenance guidelines set out in MSC.1/Circ.1318.

The invitation to Member Governments to propose a new unplanned output means that no amendment can be anticipated for a period which will be measured in years. The Bahamas advises the Sub-Committee that it will continue to require the five-yearly internal examination of control valves on all gas fixed fire-fighting systems and invites other Administrations that share this view to adopt a similar approach."