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

Comments on the report of the LSA Correspondence Group

Submitted by IACS

SUMMARY

Executive summary:	This document provides comments on the report of the LSA Correspondence Group, as provided in document SSE 6/3 (United States)
Strategic direction, if applicable:	2
Output:	2.5
Action to be taken:	Paragraph 9
Related documents:	SSE 5/17 (paragraph 3.9) and SSE 6/3

Introduction

1 This document is submitted in accordance with paragraph 6.12.5 of the *Organization and method of work of the Maritime Safety Committee and the Marine Environment Protection Committee and their subsidiary bodies* (MSC-MEPC.1/Circ.5/Rev.1) and provides comments on document SSE 6/3.

Background

2 SSE 5 re-established the Correspondence Group on Life-Saving Appliances (LSA) to discuss, inter alia, the following matters (SSE 5/17, paragraph 3.9):

.1 compare annex 1 of document SSE 4/WP.3 with document SSE 5/INF.7 and resolve any differences;

.2 reach an agreement on the format of the presentation of the functional requirements;

.3 verify the completeness of the functional requirements by reviewing the LSA Code and make adjustments as necessary;

.4 further develop expected performances with a view to finalizing the functional requirements; and

.5 develop draft amendments to MSC.1/Circ.1212, following the principles provided in document SSE 5/3/1 and based on annex 4 to document SSE 4/WP.3.

3 IACS participated in the work of the Correspondence Group and would like to extend its deepest appreciation to the Coordinator and other participants for the constructive discussions in the Group. However, IACS has the following comments on annex 1 to document SSE 6/3, as discussed below.

Discussion and proposals

4 Regarding the structure of the functional requirements (FRs), it is noted that a clear guidance is provided in paragraphs 11 to 13 of the *Generic guidelines for developing goal-based standards* (MSC.1/Circ.1394/Rev.1) (hereafter referred to as the "GBS Guidelines"). According to paragraph 12 and appendix 2 to these Guidelines, FRs should address all relevant hazards in relation to the scope. In paragraph 13 it is highlighted that FRs should be formulated considering the assignment of "hazards to be mitigated by the function", which provides the rationale for the functional requirement under consideration. This would necessitate a hazard identification study (HAZID) or at least a study of SOLAS chapter III and the LSA Code to identify the hazards addressed by the requirements in these two instruments. Once the outcome of the HAZID is available, it would be simpler to connect all the hazards identified with the FRs and accordingly develop the expected performances (EPs). Therefore, in order to follow more closely the GBS Guidelines (MSC.1/Circ.1394/Rev.1), IACS suggests a HAZID be undertaken that provides standard requirements in a reasonable time and then the FRs can be developed based on the outcome of the HAZID.

5 Paragraph 13 of the GBS Guidelines states that EPs should be developed in quantitative terms. However, some of the EPs in appendix 5 to annex 1 to document SSE 6/3 have not been formulated in quantitative terms. For example, in EP 2 under FR 1, the term "far forward of" gives no substantial guidance on the distance between the propeller and the survival craft; and in EP 3 under FR 8, "sufficient buoyancy" provides no substantial criteria, and is ambiguous and unclear. It is also noted that some EPs are regulatory and not expected performance criteria and, therefore, they should be moved to tier IV, e.g. EP 3 to EP 7 under FR 2; and EP 5 and EP 6 under FR 3.

6 Consequently, IACS proposes the following specific editorial and substantive changes with a view to improving the use of quantitative terminology and the clarity of the draft EPs provided in appendix 5 to annex 1 to document SSE 6/3 (shown as additions/~~deletions~~):

.1 EP 2 under FR 1: All life-saving appliances should be protected from damage by fire and explosion during stowage and operation. ~~Each collective LSA should be stowed as far forward of the propeller as practicable.~~ The stowage should be at a secured and sheltered position, but readily accessible.

.2 EP 3 under FR 1: ~~All life-saving appliances should be designed and arranged to permit safe operation and ready access for inspection and maintenance of all parts for calibration, wear and deterioration to ensure reliability for the next~~

~~specified service period.~~ All life-saving appliances should be maintainable to ensure reliability for the specified service cycle.

.3 EP 5 under FR 1: ~~Descriptions and instructions for operation, inspection, maintenance and functional testing should be provided for all life-saving appliances.~~ All life-saving appliances should be provided with documentation specifying maintenance and inspection.

.4 EP 6 under FR 1: All life-saving appliances should be able to withstand environmental exposure of the ship ~~and adverse weather conditions~~ including sunlight, ozone, seawater (wash, heavy seas), icing, wind, humidity, oil, air temperature (at least -30°C to +65°C), ~~water temperature (at least -1°C to 30°C if it is likely to be immersed in seawater),~~ fungus, and marine atmosphere.

.5 EP 7 under FR 1: All life-saving appliances should be usable and operational under adverse vessel ~~damage~~ conditions, i.e. list of +/- [20] degrees and trim + /- [10] degrees~~, except where the Administration has determined alternate damage conditions appropriate for the parent vessel~~.

.6 EP 3 to EP 7 under FR 2 to be deleted.

.7 EP 5 and EP 6 under FR 3 to be deleted.

.8 EP 3 under FR 4: All passenger ships should establish a decision support system ~~for emergency management by the master for handling any combination of foreseeable emergency situations that may or may not require evacuation~~.

.9 EP 1 under FR 5: All ships should have the means to indicate their position visually in an emergency. The ship should be provided with active means of detection which makes it possible to detect and locate the ship from an altitude of at least 3,000 m at a range of at least 10 miles under clear daytime and night-time conditions for a period of at least 40 s.

.10 EP 2 under FR 5: All ships should be provided with means f~~or two-way on-scene communication between survival craft, between survival craft and ship, and between survival craft and rescue craft~~ to communicate in an emergency with two-way voice and/or data communications ship-to-ship and ship-to-shore.

.11 EP 4 and EP 5 under FR 6 to be deleted.

.12 EP 4 under FR 7: All [survival and rescue craft] should be stowed ~~as near the water surface as is safe and practicable~~ at least 2 m above the fully loaded waterline under adverse 10° trim and 20° list, as required. For oil tankers, chemical tankers and gas carriers heel may be greater than 20° based on its calculation in accordance with MARPOL.

.13 EP 6 under FR 8: Replace with the following: "All survival craft should have the ability to reach a safe distance from the ship in a timely manner and capable of marshalling, either assisted or non-assisted."

.14 EP 2 under FR 9: Each person ~~on board~~ should ~~have ready access to a physically suitable personal life-saving appliance, regardless of their location on the vessel~~ be provided with individual buoyancy equipment lifting the mouth at least 120 mm clear of the water, even when the person is helpless.

.15 EP 3 under FR 9: Replace with the following: "Individual buoyancy should be provided for each person on board and accessible in areas where people may become isolated."

.16 EP 1 under FR 12: Replace with the following: "Rescue craft should be launched in less than 5 minutes from the ship in a seaway with making way at speeds up to 5 knots."

.17 EP 5 under FR 12: Rescue craft should have sufficient mobility and manoeuvrability ~~in a seaway~~ to enable retrieval of persons from the water. ~~Ro-ro passenger ships should be equipped with effective means for rapidly recovering survivors from the water and transferring survivors from rescue or survival craft to the ship.~~

7 IACS would also offer the following comments regarding the draft EPs provided in appendix 5 to annex 1 to document SSE 6/3:

.1 EP 9 under FR 7 needs further consideration. This is not required for survival craft on passenger ships but required for cargo ships above 20,000 GT. For the passenger ships they should be capable of being towed with the ship proceeding at 5 knots. Further, this is not required for liferafts and marine evacuation systems.

.2 EP 1 and EP 2 under FR 8 overlap. If wind, spray temperature, etc. are influencing survivability, this cannot be regarded as a habitable environment. It is considered that this issue is not solved by the option proposed by the Correspondence Group Coordinator and further work is regarded as being necessary.

8 Noting the comments and proposals above, and that the draft FRs and EPs have not yet been checked against the hazards (see paragraph 4) or the provisions in resolution MSC.81(70) and the LSA Code, IACS sees the need for further consideration of annex 1 to document SSE 6/3. It is noted that SSE 5 decided that these FRs should become part of MSC.1/Circ.1212 to be used in alternative design and arrangements for SOLAS chapter III. However, any inconsistencies may cause problems in the alternative design process and its approval.

Action requested of the Sub-Committee

9 The Sub-Committee is invited to consider the comments and proposals in paragraphs 4 to 8 above, and take action, as appropriate.