

SUB-COMMITTEE ON SHIP DESIGN AND  
CONSTRUCTION  
11th session  
Agenda item 5

SDC 11/5/2  
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**REVISION OF THE INTERIM EXPLANATORY NOTES FOR THE ASSESSMENT OF  
PASSENGER SHIP SYSTEMS' CAPABILITIES AFTER A FIRE OR FLOODING  
CASUALTY (MSC.1/CIRC.1369) AND RELATED CIRCULARS**

**Organization of appendix 1 of the revised Explanatory Notes**

**Submitted by IACS**

**SUMMARY**

*Executive summary:* This document presents further proposals for the specific items within appendix 1 of the revised Explanatory Notes, set out in the annex to document SDC 11/5, containing the report of the Correspondence Group on the Revision of the Interim Explanatory Notes (MSC.1/Circ.1369).

*Strategic direction,  
if applicable:* 7

*Output:* 7.42

*Action to be taken:* Paragraph 9

*Related documents:* SDC 10/WP.5 and SDC 11/5

**Introduction**

1 This document provides further proposals by IACS for specific items within appendix 1 of the draft revision of *Interim explanatory notes for the assessment of passenger ship systems' capabilities after a fire or flooding casualty* (MSC.1/Circ.1369), set out in the annex to document SDC 11/5.

**Background**

2 Paragraphs 10 to 12 of document SDC 11/5 note that IACS took an active role in the work of the Correspondence Group focusing on ship design aspects and embarking on an extensive review of classification societies' experience in this respect. This resulted in a number of proposals to the Correspondence Group covering both the organization of appendix 1 of the revised Explanatory Notes and contents for the specific sections thereof.

3 Due to time constraints, the development of appendix 1 is still a work in progress. This document aims to contribute to that development process by providing:

- .1 a summary of the re-organization philosophy for appendix 1;
- .2 an overview of the resulting organization of appendix 1; and
- .3 a perspective for an additional appendix 2 dedicated to testing.

## **Discussion**

### ***Organization of appendix 1 – Remain operational***

4 Following a thorough review and initial drafting, it was deemed more straightforward to organize the requirements system by system, rather than splitting them between Safe Return to Port (SRtP) and orderly evacuation. A summary of this organization is given in the annex for reference. Some minor changes to appendix 1 of MSC.1/Circ.1369 contained in document SDC 11/5 are proposed to enhance readability and general document consistency, as follows:

- .1 requirements for stability computers, gas- and low-flashpoint-fuels-related safety systems and lithium battery-related safety systems are proposed to be grouped together under section 5.17, since they are all considered to belong to "Other systems determined by the Administration to be vital to damage control", which is expected to be further considered by a working group, if established at this session;
- .2 requirements for lighting along escape routes and guidance systems for evacuation are proposed to be moved before the "Other systems determined by the Administration to be vital to damage control" as sections 5.15 and 5.16, so as to keep the "other systems" at the end of the list of systems, same as in SOLAS regulation II-2/21; and
- .3 a placeholder for the "electrical system" is suggested to be added as section 5.18, since it should be covered by the SRtP assessment.

5 In annex 3 of document SDC 10/WP.5, the description of the systems was intended to be split into three levels:

- .1 functional requirements;
- .2 performance requirements; and
- .3 specific interpretations: this last level is provided to contain detailed interpretations, if any. There may be some systems for which no such specific interpretations are identified.

6 However, a significant number of redundancies were found between "functional requirements" and "performance requirements", or between "functional requirements" and SOLAS requirements. It is understood that, in general, the functional requirements for the SRtP are already expressed in SOLAS (i.e. the subject system shall remain operational after any fire or flooding casualty within the threshold); and there is no need to repeat it on a systematic basis in the "Remain operational" appendix to MSC.1/Circ.1369.

7 Therefore, it is suggested to move away from the threefold structure of "functional requirements/performance requirements/specific interpretations", depending on the actual contents of each paragraph.

### ***Testing requirements***

8 During the review of the system design requirements, it was identified that verification of compliance with the SRtP regulations\* requires several tests after construction or during sea trials. It is proposed that a dedicated appendix be included in the revised Explanatory Notes, which could gather a number of detailed requirements regarding the required testing to validate ship system design with respect to the SRtP regulations.

### **Action requested of the Sub-Committee**

9 The Sub-Committee is invited to consider the proposals in paragraphs 4, 7 and 8, to agree that the content of the annex may be used as a basis in a working group on the revision of MSC.1/Circ.1369, if established, and to take action, as appropriate.

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\* SOLAS regulations II-2/21, II-2/22, II-2/23 and II-1/8, collectively referred to as the "Safe Return to Port (SRtP) regulations".



## ANNEX

### ORGANIZATION OVERVIEW FOR DRAFT REVISED APPENDIX 1 OF MSC.1/CIRC.1369

#### CONTENTS OVERVIEW

- 1 Application
- 2 Scenarios
- 3 Casualty threshold
  - 3.1 Safe Return to Port
    - 3.1.1 Fire casualties
    - 3.1.2 Flooding casualties
  - 3.2 Orderly evacuation and abandonment
- 4 Consequences of casualties
  - 4.1 Safe Return to Port
    - 4.1.1 Return to port voyage
    - 4.1.2 Survivability after a fire casualty
    - 4.1.3 Survivability after a flooding casualty
    - 4.1.4 Manual actions
  - 4.2 Orderly evacuation and abandonment
- 5 Remain operational
  - 5.1 Propulsion
    - 5.1.1 System performance
    - 5.1.2 Manual control
    - 5.1.3 Shaft line arrangements
  - 5.2 Steering systems and steering control systems
  - 5.3 Navigational systems
  - 5.4 Systems for fill, transfer and service of fuel oil
    - 5.4.1 System performance
    - 5.4.2 Remote-operated valves
    - 5.4.3 Emergency power system

- 5.5 Internal communication
  - 5.5.1 Safe return to port
  - 5.5.2 Orderly evacuation and abandonment
- 5.6 External communication
  - 5.6.1 Safe return to port
  - 5.6.2 Orderly evacuation and abandonment
- 5.7 Fire main system
  - 5.7.1 Safe Return to Port
  - 5.7.2 Orderly evacuation and abandonment
- 5.8 Fixed fire-extinguishing system
- 5.9 Fire and smoke detection system
- 5.10 Bilge system
  - 5.10.1 Safe Return to Port
  - 5.10.2 Orderly evacuation and abandonment
  - 5.10.3 Discharge to the sea
- 5.11 Ballast system
  - 5.11.1 System performance
  - 5.11.2 Local control
  - 5.11.3 Discharge to the sea
- 5.12 Power-operated watertight and semi-watertight doors
- 5.13 Systems to support "safe areas"
- 5.14 Flooding detection
- 5.15 Lighting along escape routes
- 5.16 Guidance systems for evacuation
- 5.17 Other systems determined by the Administration to be vital to damage control
  - 5.17.1 Stability computer
  - 5.17.2 Gas- and low-flashpoint-fuels-related safety systems
  - 5.17.3 Lithium battery-related safety systems
- 5.18 Electrical system