INTERNATIONAL MARITIME ORGANIZATION

E

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

SDC 11/5/1
31 October 2024
Original: ENGLISH
Pre-session public release: ☒

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

Draft amendments to appendix 1 of the Interim Explanatory Notes (MSC.1/Circ.1369)

Submitted by IACS

SUMMARY

Executive summary:	This document proposes amendments to appendix 1 of the Interim Explanatory Notes (MSC.1/Circ.1369), providing interpretations for each safe return to port (SRtP) system to "remain operational".
Strategic direction, if applicable:	7
Output:	7.42
Action to be taken:	Paragraph 18
Related document:	SDC 11/5

Introduction

1 This document provides further proposals for specific items within appendix 1 of the draft revised Explanatory Notes set out in document SDC 11/5 (Norway).

Discussion

Steering systems and steering control systems (draft appendix 1, paragraph 5.2)

2 Interpretation 21 in appendix 1 of *Interim explanatory notes for the assessment of passenger ship systems' capabilities after a fire or flooding casualty* (MSC.1/Circ.1369) mentions that emergency means of steering, such as azimuth thrusters, pump jets, etc. should be considered when documenting that the steering system is operable. However, IACS members experience that solutions are not considered for this purpose. Interpretation 21 also mentions tunnel thrusters in the context of emergency steering; however, a tunnel thruster cannot provide steering.

3 To avoid ambiguities, IACS therefore suggests that only item "a)" of interpretation 21 be taken forward, as follows:*

"***5.2. Steering systems and steering control systems***

~~When documenting that steering system is operable the following should be taken into consideration:~~

~~.1~~ ~~l~~Local control of remaining steering system is acceptable provided adequate communication and emergency lighting are arranged.~~;~~

~~.2 emergency means of steering, e.g. azimuth thrusters, pump jets, rudder, propellers, may be considered; and~~

~~.3 in general, tunnel thrusters should not be considered adequate for emergency steering.~~

~~(MSC.1/Circ.1369, interpretation 21).~~"

4 A performance requirement for the steering system after a SRtP casualty could be useful and IACS would encourage the development of such a requirement in due time.

Navigational systems (draft appendix 1, paragraph 5.3)

5 The following is suggested:

"***5.3 Navigational systems***

Equipment essential for navigation, position fixing and detection of risk of collision should be available as per the following list, at either the navigation bridge or at the SRtP bridge:

.1 a properly adjusted standard magnetic compass;

.2 a receiver for a global navigation satellite system or a terrestrial radionavigation system;

.3 a 9 GHz radar;

.4 Electronic Chart Display and Information System (ECDIS) or an appropriate folio of paper nautical charts and publications;

.5 whistle;

.6 controllers for navigation lights and signal lights;

.7 internal communications with engine control room and steering gear compartment, and with:

.1 other locations where local control may be provided in SRtP situations; and

.2 proper look-out positions, if proper look-out is not provided from the SRtP bridge;

* The tracked changes made to the annex of document SDC 11/5 are indicated in "grey shading".

.8 short- and long-distance external communications (GMDSS or the VHF Marine and Air Band);

.9 a pelorus or compass bearing device to take bearings; and

.10 means of correcting heading and bearings to true at all times.

The ship should be capable of displaying the proper light configuration in compliance with the COLREG (International Regulations for Preventing Collisions at Sea) in force."
(NOTE: MSC.1/Circ.1369/Add.1, interpretation 22 reworded).

6 The wording "SRtP bridge" is used with reference to internal communication (SDC 11/5, appendix 1, paragraph 5.5) and navigational systems. The SRtP bridge refers to the space where backup navigation instruments and systems are provided, in case of a casualty affecting the navigation bridge.

7 IACS proposes that a definition of the "SRtP bridge" or another appropriate term be included in the main body of the draft revised Explanatory Notes, such as:

"The SRtP bridge is a space where backup communication and navigation instruments and systems are provided, as per appendix [1] paragraphs 5.3, 5.5 and 5.6 in case of a casualty affecting the navigation bridge."

Systems for fill, transfer and service of fuel oil (draft appendix 1, paragraph 5.4)

8 The following paragraph 5.4 is suggested:

"***5.4 Systems for fill, transfer and service of fuel oil***

5.4.1 *System performance*

Systems for internal fill, transfer and service of fuel oil should, after any SRtP casualty, remain operational to provide the necessary fuel to ensure propulsion and power generation machinery at the required capacity; for the duration of the SRtP voyage.
(NOTE: MSC.1/Circ.1369 Interpretation 23, reworded)

Systems for internal fill, transfer and service of:

.1 fuel;

.2 other flammable hydrocarbons; or

.3 any fluid that may be flammable or dangerous if heated to a very high temperature (both within the pipe and on-going through pumps, orifices or other equipment),

should not be considered operational within spaces affected by a fire casualty.
(NOTE: MSC.1/Circ.1369 Interpretation 24)

5.4.2 *Remote-operated valves*

The remote-operated valves for fuel oil tanks above the double bottom (quick-closing valves) should, after any SRtP casualty, remain operational in the fuel oil systems that are required to remain operational.

5.4.3 *Emergency power system*

The emergency power system should remain available also during the SRtP voyage, unless the emergency diesel generator is in a space affected by the casualty.

If the SRtP power balance depends on the emergency generator, the emergency power generation system should be designed for continuous service for the required voyage duration, including fuel oil supply."

Fire main system (draft appendix 1, paragraph 5.7)

9 Additional fire hoses coming from a non-affected main vertical zone (MVZ) adjacent to the MVZ affected by the casualty may be considered to provide the required two jets of water for the protection of the affected MVZ itself. The following new paragraphs 5.7.1.2 and 5.7.1.3 are suggested:

"5.7.1.2 Connection from adjacent MVZ

.1 Fire-fighting in spaces outside the casualty threshold within the same MVZ may be covered by hoses connected to hydrants in the adjacent MVZs, provided that the fire water system in the MVZ containing the casualty can be isolated from the adjacent MVZs.

.2 It should be possible to reach all areas by two hoses connected to different hydrants, and, in general, not more than two lengths of hoses may be connected. More than two lengths of hoses for one jet of water may however be joined, or the length of the fire hoses, used to keep the functionality of the fire main in the affected MVZ after a fire or flooding casualty, may exceed the limits set out in SOLAS regulation II-2/10.2.3.1.1, provided it is justified that:

.1 the required pressure is available at the hydrant;

.2 sufficient pressure is available at the nozzle to ensure a jet of water; and

.3 the hoses may be easily handled and controlled.

.3 Additional or extra-length hoses should be marked and their storage location should be indicated onboard. In addition, the storage locations of these extra hoses should be indicated in the fire control plan."

"5.7.1.3 Additional hydrants

Protected branch-off from the operational part of the fire water system in the adjacent zone, with an A-60-protected connection cabinet, may be arranged."

10 It is further noted that interpretation 53, on orderly evacuation and abandonment, states that "the fire main should remain operational in all main vertical zones not directly affected by the casualty" and that "water for fire-fighting purposes should be available to all areas of the ship". IACS notes that the two sentences of interpretation 53 may appear as contradictory, as the latter could suggest that water for fire-fighting purpose should be available also in the affected MVZ. Paragraph 5.7.2 on orderly evacuation and abandonment should be considered accordingly.

Exemptions from environmental requirements (draft appendix 1, paragraphs 5.10.3 and 5.11.3)

11 MSC.1/Circ.1369 contains a reference to a possible exception from MARPOL requirements for the discharge of untreated sewage and grey water into the sea. For the sake of good order, it is suggested that similar references to MARPOL Annex I be included in paragraph 5.10.3, and to the BWM Convention in paragraph 5.11.3, as follows:

"*5.10.3 Discharge to the sea*

Untreated oily water may be discharged to the sea after an SRtP or orderly evacuation and abandonment casualty, in the conditions allowed by MARPOL Annex I, regulation 4."

"*5.11.3 Discharge to the sea*

Untreated ballast water may be disposed of into the sea, in the conditions allowed by the Ballast Water Management Convention, regulation A-3."

Ballast system (draft appendix 1, paragraph 5.11)

12 The following paragraph 5.11 is suggested:

"***5.11 Ballast system***

5.11.1 System performance

After an SRtP casualty, the ballast pumping system should be operational in all ballast tanks, except that it is acceptable to lose ballasting operations in water ballast tanks immediately adjacent to or below the affected space if the ballast tank valves are located therein.

The heeling system is not considered part of the ballast system for SRtP purposes.

5.11.2 Local control

Local manual control of the ballast system is acceptable after an SRtP casualty, provided that the manual control locations comply with §4.1.4 of the present appendix."
(NOTE: Rewording and complementation of MSC.1/Circ.1369, interpretation 38).

Systems vital to damage control (draft appendix 1, paragraph 5.15)

13 Requirements for loading instruments are well detailed in *Guidelines on operational information for masters of passenger ships for safe return to port by own power or under tow* (MSC.1/Circ.1400), which foresees two solutions to provide the relevant stability information to the master during the safe return to port voyage. One solution is the shore-based support, which needs not be further covered by the SRtP assessment, or the redundancy of an onboard computer, which is very well detailed in MSC.1/Circ.1400. If the redundancy option is chosen, it should not be possible however that both computers are affected by a single SRtP casualty.

14 Emergency shutdown systems are considered covered by the safety systems related to gas or other low-flashpoint fuels.

15 Accordingly, IACS suggests that a stability computer be included among the "other systems determined by the Administration to be vital to damage control", and that the individual sub-items are addressed separately, as follows:

"**5.15 Other systems determined by the Administration to be vital to damage control**

This includes:

.1 Stability computer ~~Loading computer?~~

(…)

5.15.1 Stability computer

If the stability information provided to the master is based on onboard computers without shore-based support (ref. MSC.1/Circ.1400), the required two computers and power supplies should be arranged within different casualty thresholds, so that no SRtP casualty impairs both computers.

5.15.2 Gas- and low-flashpoint-fuels-related safety systems.

5.15.3 Lithium battery-related safety systems."

Lighting along escape routes and guidance systems for evacuation (draft appendix 1, paragraphs 5.18 and 5.19)

16 Lighting along escape routes should be required to remain operational for all 3 hours of the orderly evacuation scenario, as follows:

"*5.18 Lighting along escape routes*

Lighting along escape routes, at assembly stations and at embarkation stations of life-saving appliances should remain operational for at least 3 h outside of the affected MVZ."

17 However, it is suggested that photoluminescent low-location lighting (LLL) as a guidance system for evacuation only needs to be able to provide illumination for 1 hour after activation in the case of orderly evacuation, considering that LLL will be used only in case of significantly reduced visibility (e.g. due to smoke) along the escape route, which is not a situation expected to last more than 1 hour. Therefore, the following draft new paragraph is suggested:

"*5.19 Guidance systems for evacuation*

In case of photoluminescent low location lighting, 1 h availability after activation of the system as required by resolution A.752(18) and ISO 15370:2021 is acceptable. In the case of an electrical system, the control and power supply should remain available in all MVZ not affected by the casualty."

Action requested of the Sub-Committee

18 The Sub-Committee is invited to consider the proposals above and to take action, as appropriate.