INTERNATIONAL MARITIME ORGANIZATION

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UNIFIED INTERPRETATION OF PROVISIONS OF IMO SAFETY, SECURITY, AND ENVIRONMENT-RELATED CONVENTIONS

Ships intended to operate in low air temperature in polar waters – capabilities of survival craft and rescue boat communication equipment

Submitted by IACS

SUMMARY

Executive summary:	This document provides a draft unified interpretation in relation to the requirements in part I-A of the Polar Code regarding the survival craft and rescue boat communication equipment of ships intended to operate in low air temperatures, with a view to facilitating the global and consistent implementation of these mandatory requirements in a practical manner
Strategic direction, if applicable:	6
Output:	6.1
Action to be taken:	Paragraph 10
Related documents:	NCSR 5/10 and NCSR 5/23

Introduction

1 The International Code for Ships Operating in Polar Waters (Polar Code), part I-A, paragraph 1.2.7 (resolutions MSC.385(94) and MEPC.264(68)) reads (with emphasis shown by underlining):

> "Maximum expected time of rescue means the time adopted for the design of equipment and system that provide survival support. It shall never be less than 5 days."

2 The Polar Code, part I-A, paragraph 10.2.2 reads (with emphasis shown by underlining):

"Survival craft and rescue boat communications capabilities

10.2.2.1 For ships intended to operate in low air temperature, all rescue boats and lifeboats, whenever released for evacuation, shall maintain capability for distress alerting, locating and on-scene communications.

10.2.2.2 For ships intended to operate in low air temperature, all other survival craft, whenever released, shall maintain capability for transmitting signals for location and for communication.

10.2.2.3 Mandatory communication equipment for use in survival craft, including liferafts and rescue boats, shall be capable of operation during the maximum expected time of rescue."

3 The Polar Code, part I-A, paragraph 10.3.2 reads (with emphasis shown by underlining):

"Survival craft and rescue boat communications capabilities

10.3.2.1 For ships intended to operate in low air temperature, in order to comply with the functional requirements of paragraph 10.2.2.1 above, all rescue boats and lifeboats, whenever released for evacuation, shall:

.1 for distress alerting, carry one device for transmitting ship to shore alerts;

.2 in order to be located, carry one device for transmitting signals for location; and

.3 for on-scene communications, carry one device for transmitting and receiving on-scene communications.

10.3.2.2 For ships intended to operate in low air temperature, in order to comply with the functional requirements of paragraph 10.2.2.2 above, all other survival craft shall:

.1 in order to be located, carry one device for transmitting signals for location; and

.2 for on-scene communications, carry one device for transmitting and receiving on-scene communications.

10.3.2.3 In order to comply with the functional requirements of paragraph 10.2.2.3 above, recognizing the limitations arising from battery life, procedures shall be developed and implemented such that mandatory communication equipment for use in survival craft, including liferafts, and rescue boats are available for operation during the maximum expected time of rescue."

4 NCSR 4 established a Correspondence Group on Consequential Work Related to the Polar Code to develop a work plan listing all performance standards and requirements in need of revision in this respect. This Group considered the SOLAS requirements relating to radio and navigational equipment, corresponding performance and test standards, relevant factors

under polar conditions (NCSR 5/10). NCSR 5 subsequently re-established the Correspondence Group on Consequential Work Related to the Polar Code and instructed it to (NCSR 5/23, paragraph 10.4):

".1 prepare, on the basis of document NCSR 5/10, paragraph 5.3, draft general guidance for navigation and communication equipment intended for use on ships operating in polar waters, taking into account the table on Overview action items according to carriage requirements, as set out in the annex to document NCSR 5/10, and the outcome of the discussions at NCSR 5, MSC 99 and MSC 100, as appropriate; and

.2 submit a report to NCSR 6 for consideration."

5 Notwithstanding the above work, as discussed below, IACS considers a number of requirements relating to the carriage requirements and performance standards of the survival craft and rescue boat radio and navigational equipment require immediate clarification.

Discussion

6 IACS has identified two issues on which the global and consistent implementation of the requirements in the Polar Code relating to survival craft and rescue boat communication equipment will benefit from further clarification.

7 The first issue is the number of communication devices for survival craft on ships intended to operate in low air temperatures, in accordance with the Polar Code, part I-A, chapter 10. It is noted that SOLAS regulations III/21 and III/31, in particular, provide for some redundancy in aggregate capacity of the survival craft. In this regard IACS considers two different approaches could apply in assigning the required number of communication devices. The first approach is based on the assumption that all survival craft under certain scenario can be released for evacution simultaniously. The second approach utilizes the concept that the number of the survival craft released for evacuation should be calculated on the basis of the survival craft needed to accommodate the total number of persons on board, i.e. for a cargo ship to which SOLAS regulation III/31 applies, only lifeboats on one side of the ship are considered.

8 The second issue is the consistent interpretation of the terms "shall maintain capability for", "shall be capable of operation during the maximum expected time of rescue" and "are available for operation during the maximum expected time of rescue" used in the Polar Code, part I-A, chapter 10 (see paragraphs 2 and 3 above); especially as to whether the communication devices can be turned on at specific, pre-agreed (as stated in the Polar Water Operation Manual (PWOM)) intervals during rescue to preserve battery life or shall be assumed to be in continuous operation for the period of the maximum expected time of rescue i.e. minimum five days.

Proposal

9 With a view to facilitating the global and consistent implementation of the survival craft and rescue boat communication equipment capability requirements in the Polar Code, and taking into account the above comments, IACS has drafted a unified interpretation as set out in the annex to this document.

Action requested of the Sub-Committee

10 The Sub-Committee is invited to consider the foregoing and the unified interpretation as set out in the annex and to take action as appropriate.

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ANNEX

DRAFT UNIFIED INTERPRETATION

Ships intended to operate in low air temperature in polar waters – Survival craft and rescue boat communications capabilities

1 International Code for Ships Operating in Polar Waters (Polar Code), part I-A, paragraph 1.2.7,[1] reads:

"Maximum expected time of rescue means the time adopted for the design of equipment and system that provide survival support. It shall never be less than 5 days."

2 Polar Code, part I-A, section 10.2.2, reads:

"Survival craft and rescue boat communications capabilities

10.2.2.1 For ships intended to operate in low air temperature, all rescue boats and lifeboats, whenever released for evacuation, shall maintain capability for distress alerting, locating and on-scene communications.

10.2.2.2 For ships intended to operate in low air temperature, all other survival craft, whenever released, shall maintain capability for transmitting signals for location and for communication.

10.2.2.3 Mandatory communication equipment for use in survival craft, including liferafts and rescue boats, shall be capable of operation during the maximum expected time of rescue."

3 Polar Code, part I-A, section 10.3.2, reads:

"Survival craft and rescue boat communications capabilities

10.3.2.1 For ships intended to operate in low air temperature, in order to comply with the functional requirements of paragraph 10.2.2.1 above, all rescue boats and lifeboats, whenever released for evacuation, shall:

.1 for distress alerting, carry one device for transmitting ship to shore alerts;

.2 in order to be located, carry one device for transmitting signals for location; and

.3 for on-scene communications, carry one device for transmitting and receiving on-scene communications.

[1] Resolutions MSC.385(94) and MEPC.264(68).

10.3.2.2 For ships intended to operate in low air temperature, in order to comply with the functional requirements of paragraph 10.2.2.2 above, all other survival craft shall:

.1 in order to be located, carry one device for transmitting signals for location; and

.2 for on-scene communications, carry one device for transmitting and receiving on-scene communications.

10.3.2.3 In order to comply with the functional requirements of paragraph 10.2.2.3 above, recognizing the limitations arising from battery life, procedures shall be developed and implemented such that mandatory communication equipment for use in survival craft, including liferafts, and rescue boats are available for operation during the maximum expected time of rescue."

Interpretation

4 All rescue boats, all lifeboats and all other survival craft carried by the ship, notwithstanding the redundancy in aggregate capacity of survival craft required by SOLAS regulations III/21 and III/31 and, taking into account the different possible distress scenarios, are considered able to be released for evacuation simultaneously and should be provided with mandatory communication equipment accordingly.

5 The expressions "shall maintain capability for", "shall be capable of operation during the maximum expected time of rescue" and "are available for operation during the maximum expected time of rescue" used in paragraphs 10.2.2.1 and 10.2.2.2, 10.2.2.3, 10.3.2.3 of part I-A mean the ability of mandatory communication equipment for use in survival craft, including liferafts, and rescue boats to maintain the ready for operation state within the maximum expected time of rescue at the Polar Service Temperature (PST) assigned to the ship, and, after that, to be capable to perform its functions at the Polar Service Temperature (PST) assigned to the ship for the operating time not less than that specified in respective existing performance standards.[2]

Note: For example, it is not required that EPIRB being used for distress alerting continues distress messaging for maximum expected time of rescue and two-way VHF radiotelephone apparatus being used for transmitting and receiving on-scene communications does not need to be technically in operation at its highest rated power with a duty cycle of 1:9 for maximum expected time of rescue.

6 Procedures referred to in paragraph 10.3.2.3 can include both operational requirements and any other means including technical solutions i.e. thermal insulation, chemical heat sources, additional batteries, rechargeable batteries with respective chargers, etc., and should be documented in the Polar Water Operational Manual (PWOM).

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[2] EPIRB – resolution A.810(19); Radar transponder – resolution A.802(19); AIS-SART – resolution MSC.246(83); Two-way VHF radiotelephone apparatus – resolution MSC.149(77).