

SUB-COMMITTEE ON SHIP SYSTEMS AND
EQUIPMENT
5th session
Agenda item 7

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**REVIEW SOLAS CHAPTER II-2 AND ASSOCIATED CODES TO MINIMIZE THE
INCIDENCE AND CONSEQUENCES OF FIRES ON RO-RO SPACES
AND SPECIAL CATEGORY SPACES OF NEW AND EXISTING
RO-RO PASSENGER SHIPS**

**Controls for deluge systems in ro-ro spaces and special
category spaces (MSC.1/Circ.1430)**

Submitted by IACS

SUMMARY

Executive summary: This document discusses the implementation of the recommendations contained in the *Revised guidelines for the design and approval of fixed water-based fire-fighting systems for ro-ro spaces and special category spaces* (MSC.1/Circ.1430) relevant to the release controls of the system

Strategic direction:

High-level action:

Output: OW 36

Action to be taken: Paragraph 10

Related documents: None

Introduction

1 Guidelines for the design and approval of fixed water-based fire-fighting systems for open and closed ro-ro spaces and special category spaces, as defined in SOLAS regulations II-2/3.12, II-2/3.13, II-2/3.35, II-2/3.36, II-2/3.46 and II-2/3.49, are provided in the *Revised guidelines for the design and approval of fixed water-based fire-fighting systems for ro-ro spaces and special category spaces* (MSC.1/Circ.1430).

2 These Revised guidelines replace both the prescriptive provisions of the *Recommendation on fixed fire extinguishing systems for special category spaces* (resolution A.123(V)) for conventional water spray systems and the performance-based provisions of the *Guidelines for the approval of fixed water-based fire-fighting systems for ro-ro spaces and special category spaces equivalent to that referred to in resolution A.123(V)* (MSC.1/Circ.1272) for automatic sprinkler and deluge systems.

3 Section 3 of the annex to MSC.1/Circ.1430 is entitled "Principal requirements for all systems". Paragraph 3.2, inter alia, recommends that:

"It should be possible to manually open and close the section control valves either directly on the valve or via a control system routed outside of the protected spaces.",

and paragraph 3.23 recommends that:

"All release controls for deluge systems, monitor(s) for any CCTV system, the control panel (or an indication panel) for the fire detection system, water pressure on the discharge side of all pump units, and the position indication of all section valves should be available and grouped together in a continuously manned control station or the safety centre, if provided."

Discussion

4 Based on the above quoted provisions, it appears that the intention of MSC.1/Circ.1430 is to provide for the full control of the fixed water-based fire-fighting systems from a single room outside the protected space.

5 However, IACS understands that compliance with the provisions of MSC.1/Circ.1430 may be achieved by either of the following options:

Option 1

It is possible to carry out the following from the wheelhouse (or other continuously manned control station):

- .1 start the pump;
- .2 stop the pump;
- .3 open the section control valves (via remote control); and
- .4 close the section control valves (via remote control), or

Option 2

It is possible to carry out the following:

- .1 from the wheelhouse (or other continuously manned control station):
 - .1 start the pump; and
 - .2 open the section control valves (for compliance with paragraph 3.23 of the Revised guidelines); and
- .2 from a space outside the protected space: manually open and close the section control valves (for compliance with paragraph 3.2 of the Revised guidelines).

6 It is noted that remote release was only specified for "type B" systems in MSC.1/Circ.1272, i.e. systems fitted with automatic and manual release and providing extended coverage. However, the provisions of paragraph 4.5 of the Guidelines are now applied to all deluge systems as per paragraph 3.23 of the Revised guidelines.

7 On the other hand, it is noted that some requirements contained in resolution A.123(V) regarding the local release of the system have not been included in the Revised guidelines. In particular:

- .1 resolution A.123(V), annex, paragraph (d), inter alia, states that "Direct access to the distribution valves from the vehicle deck space and from outside that space should be provided"; and
- .2 resolution A.123(V), annex, paragraph (g) states that "The principal pump or pumps should be capable of being brought into operation by remote control (which may be manually actuated) from the position at which the distribution valves are situated".

IACS understands that the above provisions were aimed at facilitating local release of the drencher system, thus allowing for a quick reaction in case a fire was detected during a patrol or when the space was occupied, e.g. during loading and unloading of the ship.

8 Based on the above-mentioned comments and analysis, IACS is of the opinion that:

- .1 to provide full control of the fixed water-based fire-fighting systems from a single room, the arrangement on board stated in option 2, as explained in paragraph 5 above, should not be accepted;
- .2 the possibility to release and control the system from outside the protected space, without entering the protected spaces, is important for facilitating prompt action being taken in case of fire and, therefore, option 1, as explained in paragraph 5 above, provides an acceptable arrangement; and
- .3 remote release from a continuously manned control station or from the safety centre might be omitted provided quick and efficient local release is possible from the space in which the distribution valves for the system are fitted, e.g. the "drencher room". That space should have direct access to the ro-ro/special category space and should also be accessible without passing through the ro-ro/special category space. Furthermore, the section valves might be opened and the drencher pump might be started from the drencher room.

9 IACS considers that the above discussion highlights the need for clarification with a view to facilitating the global and consistent implementation of paragraphs 3.2 and 3.23 of the Revised guidelines.

Action requested of the Sub-Committee

10 The Sub-Committee is invited to consider the comments provided in the above paragraphs in order to evaluate the need for amending the *Revised guidelines for the design and approval of fixed water-based fire-fighting systems for ro-ro spaces and special category spaces* (MSC.1/Circ.1430) and take action as appropriate.