

SUB-COMMITTEE ON SHIP DESIGN AND
CONSTRUCTION
7th session
Agenda item 3

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**AMENDMENTS TO THE EXPLANATORY NOTES TO SOLAS CHAPTER II-1
SUBDIVISION AND DAMAGE STABILITY REGULATIONS (RESOLUTION MSC.429(98))**

**Proposal to determine the phrase "separation is of the same order" in the Revised
Explanatory Notes regarding SOLAS regulations II-1/7 and II-1/7-1.1**

Submitted by IACS

SUMMARY

Executive summary: This document proposes changes to the *Revised Explanatory Notes to SOLAS chapter II-1 subdivision and damage stability regulations (resolution MSC.429(98))* regarding SOLAS regulations II-1/7.7 and II-1/7-1 in relation to consideration of progressive flooding when the separation distance is of the same order as the bulkhead or deck stiffening structure

Strategic direction, if applicable: Other work

Output: OW 41

Action to be taken: Paragraph 10

Related document: Resolution MSC.429(98)

Introduction

1 SOLAS regulation II-1/7.7 prescribes the requirements for the prevention of progressive flooding as follows:

"7 If pipes, ducts, or tunnels are situated within the assumed extent of damage, arrangements are to be made to ensure that progressive flooding cannot thereby extend to compartments other than those assumed flooded. However, the Administration may permit minor progressive flooding if it is demonstrated that its effects can be easily controlled and the safety of the ship is not impaired."

2 The first sentence of paragraph 1 of the *Revised explanatory notes to SOLAS chapter II-1 subdivision and damage stability regulations* (resolution MSC.429(98)) regarding SOLAS regulation II-1/7.7 states the following:

"Pipes and valves directly adjacent or situated as close as practicable to a bulkhead or to a deck can be considered to be part of the bulkhead or deck, provided the separation distance on either side of the bulkhead or deck is of the same order as the bulkhead or deck stiffening structure."

3 Similar text to that quoted in paragraph 2 above is also found in the Revised explanatory notes regarding SOLAS regulations II-1/7-1.1.1 and II-1/7-1.1.2, including the phrase "separation distance on either side of the bulkhead is of the same order as the bulkhead stiffening structure".

Discussion

4 Noting paragraphs 2 and 3 above, it is understood that although pipes and valves may be situated where they might lead to progressive flooding, progressive flooding need not be considered if the pipes and valves are situated as close as practicable to the bulkhead or deck, provided the separation distance to the bulkhead or deck is "of the same order as their stiffening structure".

5 However, because of the lack of a definition or explanation of the phrase "separation distance of the same order as the bulkhead or deck stiffening structure", the issue of whether or not to consider progressive flooding is difficult to conclude.

6 Having considered this issue, IACS has identified inconsistencies in the application of the Revised Explanatory Notes; some flag States require the whole body of the valve to be protected by the adjacent stiffeners, while others consider the practicality of the issue taking into account the size of the valve.

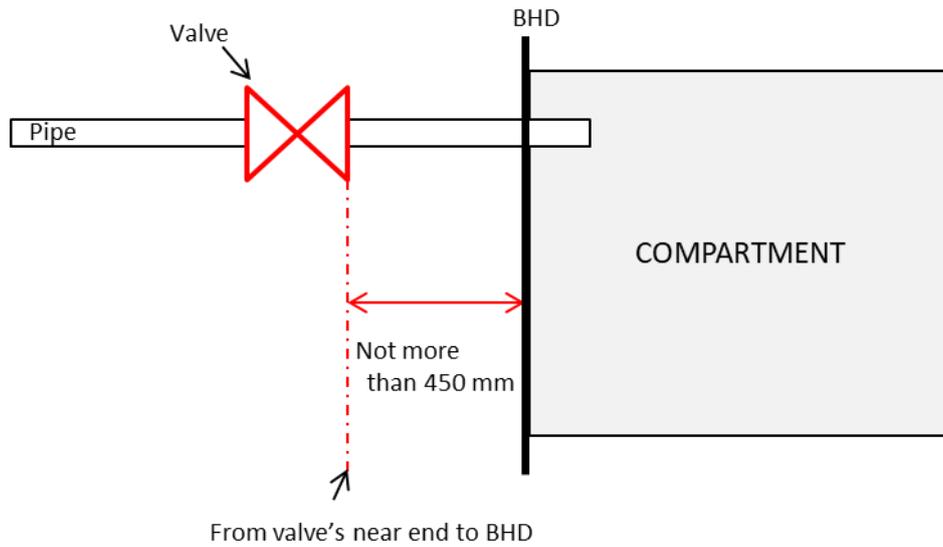
7 IACS considers that the Revised Explanatory Notes regarding SOLAS regulations II-1/7.7, 7-1.1.1 and 7-1.1.2 would benefit from further technical consideration of the phrase "separation distance of the same order as the bulkhead or deck stiffening structure". In this context, IACS considers the distance of 450 mm to prevent heat transmission in relation to penetrations in fire-resisting divisions, as prescribed in SOLAS regulation II-2/9.3.3.1, could provide the basis for a solution.

Proposal

8 In considering the above, it is proposed to clarify the text of the Revised explanatory notes to SOLAS regulation II-1/7.7 (and similarly for regulations II-1/7-1.1.1 and II-1/7-1.1.2) as follows (additions/deletions):

"... provided the separation distance ... is not more than 450mm measured from the valve's near end to the bulkhead or deck ~~of the same order as the bulkhead or deck stiffening structure...~~"

9 An example of the proposed arrangement is offered below for illustrative purposes.



Action requested of the Sub-Committee

10 The Sub-Committee is invited to consider the discussion above, in particular the proposal in paragraph 8, and take action, as appropriate.