

MARITIME SAFETY COMMITTEE
99th session
Agenda item 10

MSC 99/10/7
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SHIP DESIGN AND CONSTRUCTION

Comments on document MSC 99/10 Protection of electrical equipment in the event of raking damage

Submitted by the International Association of Classification Societies (IACS)

SUMMARY

Executive summary: This document provides comments on the discussion at SDC 5 regarding the protection of electrical equipment in the event of raking damage

Strategic direction, if applicable: Other work

Output: OW 32

Action to be taken: Paragraph 4

Related documents: SDC 5/15 and MSC 99/10

Introduction

1 This document is submitted in accordance with paragraph 6.12.5 of the *Organization and method of work of the Maritime Safety Committee and the Marine Environment Protection Committee and their subsidiary bodies* (MSC-MEPC.1/Circ.5) and provides comments on paragraph 2.1 of document MSC 99/10, which seeks confirmation from the Committee on whether this matter should be solved by applying electrical engineering solutions, rather than naval architectural solutions (i.e. double hull or other structural requirements that would impact not only the current safe-return-to-port concept, but also the probabilistic requirements in SOLAS chapter II-1), and clarify what the exact outcome expected from the Sub-Committee under this output is (see also paragraphs 3.4.2 and 3.5 of document SDC 5/15).

Discussion

2 IACS shares the concerns raised at SDC 5 about the direction that the discussions on this output have taken. It is recalled that many delegates to SDC 5 pointed out there was a lack of clarity about what must be achieved with this output and, therefore, the Committee was requested to clarify the scope of this output and confirm whether the matter should be solved by applying electrical engineering solutions (e.g. distribution of emergency sources of power), rather than naval architectural solutions, such as a double hull or other structural

requirements. If the former, then IACS is of the view that there is a need to determine whether it is the whole electrical supply system or only specific items, such as passenger lifts, which possibly require an emergency source of power.

3 IACS has a further concern, as it was explained at SDC 5, that any proposed "naval architecture" solution will have to carefully consider the consequential impact on the current probabilistic damage stability requirements. Should the raking damage stability standard as prepared by the Correspondence Group on Subdivision and Damage Stability (SDS), established at SDC 4, be pursued, there are concerns that it would not be consistent with the current rationale of the probabilistic stability framework. In particular, compliance with these new draft provisions may, in effect, provide the overriding factor to be considered in the design of a ship. For example, if applied in the case of a damage along a limited length of the ship, consideration of "minor damages" (in accordance with SOLAS regulation II-1/8) become moot. Also, consideration of side raking damage along the length of the ship, as envisaged in the draft SOLAS amendments developed by the SDS Correspondence Group, may promote a double side-skin arrangement along a significant portion of the length of the ship (i.e. not just in way of the machinery spaces). IACS understands that the flooding of such double-hull spaces, without suitable cross-flooding arrangements being provided that may not be practicable, may induce a significant list, which will make the required subdivision index *R* difficult to obtain.

Action requested of the Committee

4 The Committee is requested to consider the discussion in paragraphs 2 and 3 above when deciding on the action requested in paragraph 2.1 of document MSC 99/10.
