INTERNATIONAL MARITIME ORGANIZATION

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

Testing of fire monitors and foam applicators with foam concentrate

Submitted by IACS

SUMMARY

Executive summary:	This document discusses two possible interpretations on the testing requirements for fire monitors with foam concentrate as required by SOLAS regulation II-2/10.8 and chapter 14 of the FSS Code, as amended by resolution MSC.339(91)
Strategic direction:	1.1
High-level action:	1.1.2
Output:	1.1.2.3
Action to be taken:	Paragraph 7
Related documents:	None

Background

1 Fixed deck foam fire-extinguishing systems that comply with the FSS Code are required to be fitted on tankers (SOLAS regulation II-2/10.8). The relevant provisions in chapter 14 of the FSS Code, as amended by resolution MSC.339(91), state:

> "2.2.1.4 The foam concentrate supplied on board shall be approved by the Administration for the cargoes intended to be carried. Type B foam concentrates shall be supplied for the protection of crude oil, petroleum products and non-polar solvent cargoes. Type A foam concentrates shall be supplied for polar solvent cargoes, as listed in the table of chapter 17 of the IBC Code …
> …
> 2.2.2.1 Foam from the fixed foam system shall be supplied by means of monitors and foam applicators. Prototype tests of the monitors and foam applicators shall be performed to ensure the foam expansion and drainage time of the foam produced does not differ more than ± 10 per cent of that determined in paragraph 2.2.1.4. When medium expansion ratio foam (between 21 to 1 and 200 to 1 expansion ratio) is

employed, the application rate of the foam and the capacity of a monitor installation shall be to the satisfaction of the Administration…"

Discussion

2 Having reviewed chapter 14 of the FSS Code, as amended, IACS members have concluded that there is a lack of clarity on the "type" of foam to be used to perform the prototype tests of the foam-making equipment (the monitor and foam applicator), in order to ensure that the foam expansion and drainage time of the foam produced does not differ more than ±10 per cent of that determined in paragraph 2.2.1.4.

3 Due to this lack of clarity, two approaches have been identified for the type of foam to be used:

.1 the tests shall be done using the specific type (make) of foam concentrate that is intended to be used on board; or

.2 the tests shall be done using a type A or type B foam mentioned in paragraph 2.2.1.4.

4 The approach that uses the specific make of foam concentrate for prototype approval of the specific foam-making equipment, as described in paragraph 3.1 above, is needed in order to confirm that a sufficient quantity of foam at the required rate is provided. The results from prototype testing may then be employed to demonstrate compliance for all installations which use the same combination of foam-making equipment and concentrate.

5 The specific make(s) of foam concentrate in paragraph 4 above takes into account the unique formulation or composition of foam concentrate produced by a manufacturer and approved using the *Revised guidelines for the performance and testing criteria, and surveys of foam concentrates for fixed fire-extinguishing systems* (MSC.1/Circ.1312).

6 Alternatively, the approach in paragraph 3.2 above using a type A foam concentrate for prototype testing of the foam-making equipment can then be applied to all other type A foam concentrates. Similarly, the results of a prototype test completed with foam-making equipment and a type B foam concentrate can then be applied to all other type B foam concentrates.

Action requested of the Sub-Committee

7 The Sub-Committee is invited to consider the two approaches presented in paragraph 3 above, and decide as appropriate, noting that, based upon the decision taken, IACS is willing to develop a draft unified interpretation for consideration at a subsequent session of the Sub-Committee.