INTERNATIONAL MARITIME ORGANIZATION

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SUB-COMMITTEE ON FIRE PROTECTION
54th session
Agenda item 11

FP 54/11/1
19 February 2010
Original: ENGLISH

FIXED HYDROCARBON GAS DETECTION SYSTEMS ON DOUBLE-HULL OIL TANKERS

Comments on the draft guidelines

Submitted by Japan

SUMMARY

Executive summary:	This document provides comments on the report of the Correspondence Group on Performance Testing and Approval Standards for Fire Safety Systems relating to the development of the draft guidelines for the design, construction and testing of fixed hydrocarbon gas detection systems, and proposes modification to the draft Guidelines
Strategic direction:	2.1
High-level action:	2.1.1
Planned output:	2.1.1.1
Action to be taken:	Paragraph 16
Related document:	FP 54/11

Introduction

1 This document is submitted in accordance with the provisions of paragraph 4.10.5 of the Guidelines on 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.2), and provides comments on the report of the Correspondence Group on Performance Testing and Approval Standards for Fire Safety Systems (FP 54/11) relating to the development of the Guidelines for the design, construction and testing of fixed hydrocarbon gas detection systems (hereinafter referred to as "the draft Guidelines").

2 In this document, Japan is of the view that the following three issues – extraction pumps, automatic reset function of control panels, and switchover sequence when detecting flammable gases – need further discussion, and proposes modifications to the draft Guidelines on these matters.

Switchover sequence when detecting flammable gases

3 The draft Guidelines do not include the specification of the switchover sequence in the occasion of detecting flammable gas above the alarm level at a sampling point. In addition, as a result of examining the specification used for existing ships, it was found the following two (2) patterns can be used:

.1 Pattern A: switchover function goes on to change a sampling point one after another; and

.2 Pattern B: switchover function stops to continuously extract gas samples at the sampling point, where the flammable gas above the alarm level was detected.

4 Japan considers that Pattern A is suitable because it may take long time to take measures to stop a flammable gas leakage and because it is necessary to monitor other sampling points even after the gas leakage is detected at one sampling point.

5 The proposed amendment is presented in paragraph 15.

Extraction pumps (2.2.2.2 of the draft Guidelines)

6 As for sub-paragraph 2.2.2.2, the system is required to provide back-up extraction pump(s) with automatic switchover functions.

7 However, Japan considers that this requirement of automatic back-up is not necessary and that it is sufficient to provide a spare extraction pump as a minimum requirement. This is because there is little possibility that an extraction pump failure and a flammable gas leakage will occur at the same time; moreover, the sample extraction smoke detection system and the cargo pump-room gas detection system, both of which are similar to this system, are not required to provide such back-up extraction pump(s).

8 Japan understands that the last sentence regarding spares was added as a compromise solution during the discussion by the correspondence group, but Japan still has the same concern for this sentence as suggested above; back-up extraction pump(s) with automatic switchover functions is unnecessary. Hence, Japan considers that the provision of a spare pump is sufficient as a minimum requirement.

9 The proposed amendment is presented in paragraph 15.

Automatic reset function of control panels (3.1.3 of the draft Guidelines)

10 As for paragraph 3.1.3, the control panel is required to have a means to clear alarm and fault conditions.

11 However, Japan considers that it is impossible to clear alarm and fault conditions from the control panel because such alarm and fault conditions are caused by concrete problems, such as flammable gas leakages, sampling pipe blockages and equipment malfunctions. Therefore, it is necessary to carry out concrete measures against those problems, such as the repair and/or replacement of damaged parts.

12 In addition, the control panel is required to automatically reset to its normal operating condition after such alarm and fault conditions are resolved. However, Japan considers that such an automatic reset is undesirable, in consideration of the possibility that the system will be reset without clearing any of the above problems (e.g., in cases where a sampling pipe is momentarily blocked due to debris, sample gas extraction might be restored before removing such debris).

13 Therefore, Japan considers it to be better that the system is manually reset by the ship officer in charge of the system after confirming that any problems have been completely cleared.

14 The proposed amendment is presented in paragraph 15.

Proposals

15 In light of the above, Japan proposes to:

.1 add a new paragraph containing the following general engineering specification after paragraph 2.1.8 as follows:

"*2.1.9 The switchover sequence should be designed to keep changing the sampling point according to a planned sequence, even if flammable gas above the alarm level is detected at a sampling point.*"

.2 change subparagraph 2.2.2.2 in the annex to document FP 54/11 as follows:

"*At least one spare extraction pump or equivalent spare parts should be provided onboard*"; and

.3 change paragraph 3.1.3 in the annex to document FP 54/11 as follows:

"*The control panel should have a button or switch to manually reset to normal operating condition after alarm and fault conditions are cleared.*"

Action requested of the Sub-Committee

16 The Sub-Committee is invited to consider the above proposals and take action as appropriate.