INTERNATIONAL MARITIME ORGANIZATION

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SUB-COMMITTEE ON FIRE PROTECTION
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Agenda item 6

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MEASURES TO PREVENT EXPLOSIONS ON OIL AND CHEMICAL TANKERS TRANSPORTING LOW-FLASH POINT CARGOES

Recommendations for the installation of inert gas systems on new oil and chemical tankers of less than 20,000 tonnes deadweight

Submitted by China

SUMMARY

Executive summary:	This document provides some comments and recommendations for the installation of inert gas systems (IGSs) on new oil and chemical tankers of less than 20,000 tonnes deadweight
Strategic direction:	2
High-level action:	2.1.1
Planned output:	2.1.1.1
Action to be taken:	Paragraph 11
Related documents:	FP 53/5/1, FP 53/5/2, FP 53/5/3, FP 53/5/5, FP 53/5/6, FP 53/5/7, FP 53/23; FP 52/INF.2 and FP 51/10/1

FOREWORD

1 This document is submitted in accordance with the provisions 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 document FP 53/23, section 5.

BACKGROUND

2 The Sub-Committee, at its fifty-third session, discussed the issue of the installation of IGSs on new oil and chemical tankers of less than 20,000 tonnes deadweight, and finally agreed that new oil tankers of less than 20,000 tonnes deadweight should be fitted with inert gas systems, and that the need for application of a lower limit should be further considered based on the current proposals of [8,000] [6,000] [4,000] tonnes deadweight. Since chemical tankers presented much more complex problems than oil tankers, the Sub-Committee also agreed separate requirements for chemical tankers may need to be developed.

OPINION OF CHINA

Less than 20,000 tonnes deadweight oil tankers fitted with IGSs

3 Both of the FSA study results of Japan (FP 51/10/1 and FP 52/INF.2) and Norway (FP 53/5/3) indicated that installation of IGSs on oil tankers of less than 8,000 tonnes deadweight does not have cost-effectiveness advantage.

4 The following views should also be considered:

.1 from the point of view of the feasibility of the design and installation, machinery spaces of smaller tankers are commonly small and compact. In considering the large volume of the IGSs, it is hard to prepare the design and arrangement of the IGSs for smaller tankers. The investigations from ship design companies based on their experience in China show that installation of IGSs on oil tankers of 8,000 tonnes deadweight and above may be accepted; and

.2 in view of anti-pollution and protection of the environment, the inert gas from IGSs is mostly supplied by an oil-fired boiler which consumes large quantities of fuel and gives off additional emissions of carbon dioxide. Furthermore, installation of IGSs on board also greatly increases power supply. All of these would increase EEDI, which are in contradiction with green ship concepts that IMO has been actively advocating.

5 Moreover, as one effective measure, a Vapor Control System (VCS) can be used on the oil tankers instead of IGSs so that inert gas can be supplied from the shore, which would greatly minimize the risk of occurrence of fire and explosion accidents.

Less than 20,000 tonnes deadweight chemical tankers fitted with IGSs

6 Considering that chemical tankers always carry a wide range of cargoes, but in limited quantities, there is no necessity to install IGSs on chemical tankers transporting cargoes with a flashpoint below 60℃, since the requirements have been clearly prescribed in the table annotated "h" in chapter 17 of the latest IBC Code. Experience from industry also shows that, if IGSs were to be mandated for use on chemical tankers, on the one hand some liquid cargoes together with inert gas might form corrosive and toxic substances, on the other hand it would do harm to personnel entering the tank. In addition, the liquid cargoes may pass through the inert gas pipeline from one tank to another, resulting in a chemical reaction and polymerization, which would pollute other cargoes.

Data on fire and explosion casualties

7 In document FP 53/5/2, data on fire and explosion casualties of oil and chemical tankers show that, 90% among 15 casualties were caused by human factors, including improper washing and repairing operation without following the established safety management procedures. Therefore, tank inerting is not the only measure to prevent the accident, and the comprehensive approach should be considered and applied.

RECOMMENDATIONS

8 In light of the views expressed above, China's beliefs are stated hereunder.

The lower limit of oil tankers fitted with IGSs

9 For new oil tankers of less than 20,000 tonnes deadweight, the lower deadweight limit should be controlled at 8,000 tonnes.

The lower limit of chemical tankers fitted with IGSs

10 With regard to the new chemical tankers of less than 20,000 tonnes deadweight, it should not be mandated to install IGSs. However, it should depend on the kind of cargoes, which has been clearly prescribed in the provisions of the IBC Code, chapter 17. The requirements for installation of IGSs on new chemical tankers should be applied carefully, and it is better to submit the issue to the BLG Sub-Committee for consideration.

ACTION REQUESTED OF THE SUB-COMMITTEE

11 The Sub-Committee is invited to consider the recommendations given above and take action as deemed appropriate.

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