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Agenda item 2

CONSIDERATION OF THE DRAFT TEXT OF ANNEX I OF THE INTERNATIONAL CONVENTION FOR THE PREVENTION OF POLLUTION FROM SHIPS, 1973

Segregated ballast oil tankers

Submitted by France

1. Introduction

This paper deals with the problem of hypothetical oil outflow in relation to the definitions of:

- Deadweight (Annex I, Chapter I, Regulation 1, paragraph 22)
- Maximum volume of hypothetical oil outflow (Annex I, Chapter III, Regulation 24, paragraph 2).

2. Existing definitions

2.1 Deadweight

"Deadweight" (DW) means the difference between the displacement of a ship at summer load waterline and the light weight of the ship in metric tons.

2.2 Maximum volume of hypothetical oil outflow

Cargo tanks of oil tankers shall be of such size and arrangements that the hypothetical outflow O_c or O_s calculated in accordance with the provisions of Regulation 23 of this Annex anywhere in the

length of the ship does not exceed 30,000 cubic metres or 400 $\sqrt[3]{DW}$, whichever is the greater, but subject to a maximum of 40,000 cubic metres.

3. Application of these definitions to two types of ships

If we again take the vessels of 280,000 tons DWT and 410,000 tons DWT which are given as examples in document MP/CONF/C.2/WP.9, we may draw up the following recapitulatory table:

	280,000 t dwt		410,000 t dwt	
	"Conventional"	segregated ballast	"Conventional"	segregated ballast
Cargo Volume m^3	340,000	340,000	500,000	500,000
Depth m	28	32	29	39
Freeboard m "A"	6.2	6.5	7	7.3
Corresponding draught m	21.8	25.5	23	26.7
Corresponding displacement t	320,000	381,000	468,000	550,000
Ship in light condition t	40,000	48,000	58,000	68,000
Corresponding deadweight (DW)t	280,000	333,000	410,000	482,000
$400\sqrt[3]{DW}$	26,200	27,800	29,800	31,400
Volume hypothetical outflow m^3	30,000	30,000	30,000	31,400

For a vessel of 550,000 tons DWT, therefore, the corresponding values of hypothetical outflow would be the following:

conventional vessel = 32,700 m^3

segregated ballast vessel = 34,700 m^3

It can be seen from this table that the definition of hypothetical oil outflow in the draft Convention (see MP/CONF/4) a definition which is taken verbatim from Resolution A.246 (VII) applies without any possible ambiguity to conventional ships, without segregated ballast, as they were considered at that time.

On the other hand, the new generation of "segregated ballast" oil tankers may (with the special arrangements of scantlings and sub-divisions which allow for the attainment of freeboard "A" and if the text of the draft Convention is applied literally) lead to a greater theoretical deadweight for segregated ballast tankers, which gives a greater hypothetical volume of discharge the larger the ship is; and this is contrary to the aim of the Convention.

(4) Proposal to change the text of the Convention

It would seem more logical and more rational to define the volume of the hypothetical outflow directly on the basis of the actual volume allocated to the cargo and not on the basis of the deadweight. For the latter takes into account implicitly the density of the product carried which, however, may have theoretical values according to the interpretation, at which one may arrive, of the definitions given in the draft text of the Convention.

The definition of "deadweight" (DW) in Regulation 1 should, therefore, be replaced or complemented by a definition of "Volume of cargo" (V), in Regulation 1 and in Regulation 24 the formula $400 \sqrt[3]{DW}$ should be replaced by $K \sqrt[3]{V}$.

As the density of petroleum products normally carried is between 0.80 and 0.86 approximately the value of the coefficient K might be of the order of 380, which would give figures for volume of hypothetical outflow in agreement with the present values for conventional tankers with a cargo density of the order of 0.84/0.85.