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

Report of the Working Group on Segregated Ballast

A Working Group consisting of delegations of Canada, Denmark, France, Greece, Japan, Liberia, the Netherlands, Norway, Sweden, the Union of Soviet Socialist Republics, the United Kingdom and the United States of America, and observers from ICS, IACS, OCIMF, under the Chairmanship of Mr. N. Bell (UK), revised Regulation 13 of Annex I in the light of the Committee's instructions, and arrived at the following conclusions:

Minimum Quantity of Segregated Ballast

1. The Working Group was asked to evolve or decide on a formula which would lay down minimum requirements for segregated ballast for oil tankers (which includes combination carriers) of 70,000 tons deadweight and above.

In considering the problem the Working Group took account of the discussion that has already taken place in the Committee as well as proposals by Argentina, France, Japan, Netherlands, Norway, the United States and OCIMF in the papers submitted to the Committee. The Working Group decided that:

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- (a) the criteria used in a formula should be as unrestrictive as possible on the design of tankers;
- (b) the parameters used should be capable of clear definition and the formula should be unambiguous in its application;
- (c) the amount of segregated ballast corresponding to this formula should ensure that the ship may operate safely throughout most ballast voyages without recourse to the use of oil tanks for water ballast.

2. After a full discussion which took note of footnote 35 to Regulation 13, the Group decided that the use of loaded displacement, deadweight, load draft or depth in a formula is not strictly relevant in the determination of ballast conditions. On the other hand the Group agreed that formulae based on length would least inhibit future design and furthermore ship motions are most influenced by length of ship.

It was finally decided that a formula of the type proposed by Argentina, USA and OCIMF more nearly meets criteria (a) and (b) of paragraph 1 and finalizing the coefficients in the formula to meet requirements laid down in (c) of paragraph 1 the Group took into account operational data supplied by OCIMF, Norway, USSR and theoretical studies and model tests carried out by the Netherlands, France, USA and other technical data.

The coefficients chosen for the formula should produce safe ballast operation with segregated ballast only, in 90% of all ballast voyages. This assessment was based on review of available weather, model and actual ship data, showing that:

- (a) On typical long ballast voyages reviewed (North Europe - Middle East), as well as in the North Atlantic, there is only about 10% probability of wind force exceeding 7-8 Beaufort;

- (b) Model data and limited large tanker experience shows satisfactory operation in 8 Beaufort for ballast conditions conforming to those produced by the proposed formula.

The proposed formula, agreed by a substantial majority of the Group, is given in the revised text of Regulation 13 in Annex.

Definition of Deadweight

3. By creating a cut-out point in this Regulation using deadweight it is obvious that the definition of this quantity becomes critical. After a long discussion the Group decided to recommend using the deadweight as defined in Regulation 1(22) of MP/CONF/C.2/WP.21. The proposal to use the deadweight corresponding to minimum geometric freeboard was not adopted.

Referring to the use of deadweight in Regulation 24 the Group would point out that in this context it has been the practice to use the deadweight corresponding to the assigned freeboard and it could create unfortunate anomalies on vessels built and under construction, especially in the case of sister ships, if this interpretation were now changed.

Other Matters

4. The case of ships on a restricted service (reference footnote 31, Regulation 13) was discussed and some delegations were of the opinion that concessions from the ballast requirements might be appropriate subject to the satisfaction of the Administration. This view was not well supported by the Group.

5. The proposal to fit seals on the valves for ballast water pipes to cargo oil tanks (footnote 36, Regulation 13) was considered by the Group who sympathized with the intent but thought the scheme would be impracticable to operate.

ANNEX

Regulation 13

Segregated Ballast Oil Tankers

(1) Every new oil tanker of 70,000 tons deadweight and above shall be provided with segregated ballast tanks and shall comply with the requirements of this Regulation.

(2) The capacity of the segregated ballast tanks shall be so determined that the ship may operate safely on ballast voyages having regard to its draught, freeboard, stability and manoeuvrability without recourse to the use of oil tanks for water ballast except as provided for in paragraph (3) of this Regulation. For this purpose the minimum capacity of segregated ballast shall be such that in the ballast conditions at any part of the voyage, including the condition consisting of lightweight plus segregated ballast only, the ship's draughts and trim can meet each of the following requirements:

(a) the moulded draught amidships (dm) in metres shall not be less than:

$$dm = 2.0 + 0.02 L,$$

(b) the draughts at the forward and after perpendiculars shall correspond to those determined by the draught amidships (dm), as specified in sub-paragraph (a) of this paragraph, in association with the trim by the stern of not greater than 0.015 L,

(c) in any case the draught at the after perpendicular shall not be less than that which is necessary to obtain full immersion of the propeller(s).

(3) In no case water ballast shall be carried in oil tanks except in weather conditions so severe that, in the opinion of the Master, it is necessary to carry additional water ballast in oil tanks for the safety of the ship. Such additional ballast water shall be processed and disposed of in accordance with the requirements of Regulation 15 of this Annex, and entry shall be made in the Oil Record Book referred to in Regulation 21 of this Annex.

(4) Any oil tanker which is not required to comply with paragraph (1) of this Regulation may however be qualified as a segregated ballast tanker provided that it complies fully with the requirements of paragraph (2) of this Regulation.
