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AIR POLLUTION AND ENERGY EFFICIENCY

Application of cubic capacity correction factor to tankers

Submitted by BIMCO, INTERTANKO, OCIMF and RINA

SUMMARY

Executive summary:	This document suggests that the cubic capacity correction factor should also apply to NLS tankers as defined in MARPOL Annex II, regulation 1.16.2 and to product carriers as defined in MARPOL Annex I, regulation 1.7
Strategic direction:	7.3
High-level action:	7.3.2
Planned output:	7.3.2.1
Action to be taken:	Paragraph 9
Related documents:	MEPC 62/6/13 and MEPC 63/4/11

Introduction

1 This document is submitted in accordance with the relaxed deadline mentioned in paragraph 9.1.14 of document MEPC 63/4/11 and in accordance with paragraph 6.15 of the Committee Guidelines (MSC-MEPC.1/Circ.4), and provides comments on the outcome of the second Intersessional Meeting of the Working Group on Energy Efficiency Measures for Ships (EE-WG 2).

2 At MEPC 62, the Committee agreed to include a cubic capacity correction factor for chemical tankers in the guidelines on the method of calculation of the EEDI (MEPC 62/24, paragraph 5.32.2). As requested by MEPC 62, EE-WG 2 has fine tuned the algorithm for determination of the cubic capacity correction factor, and MEPC 63 will consequently be invited to approve it.

3 However, during EE-WG 2, there were discussions on whether this cubic capacity correction factor should apply only to chemical tankers, as defined in MARPOL Annex II, regulation 1.16.1 or should it also apply to NLS tankers, as defined in MARPOL Annex II, regulation 1.16.2, and to oil product carriers, as defined in MARPOL Annex I, regulation 1.7.

4 The co-sponsors consider the reasons for adopting the cubic capacity correction factor for chemical tankers are equally applicable to the other two categories of tankers: high cubic capacity reported to their deadweight, carriage of cargoes with densities between 0.7 t/m^3 and 1.2 t/m^3 which requires additional structural strength and increased scantlings, full flexibility in cargo transportation with limited ballast legs and necessity of access to shallow ports which require designs with larger beams to maximize the carriage of high volume and very light cargoes such as jet fuel.

5 EE-WG 2 could not address these aspects in detail nor could it reach any conclusion because it was felt to be outside its terms of reference. The co-sponsors therefore request that the Committee consider the question raised at EE-WG 2 together with the information provided below and make a decision on this matter.

6 In order to assist the discussions, a statistical investigation on cubic capacity of some 5,400 tankers was conducted using a database called "Chem Index" published by Inge Steensland in Oslo. All ships used have their IMO number as identification. Tankers selected are between 3,000 DWT and 60,000 DWT and were built since 1990. The statistical results are presented in the tables below. In general, the R = DWT/cubic capacity ratio is almost identical for all three categories of tankers considered with individual examples for which, at same ship's deadweight, the cubic capacity of a chemical tanker could be smaller than the cubic capacity of a NLS tanker or even of a product carrier.

Type tanker	**Number of tankers**			
	3,000 – 9,999 DWT	**10,000 – 29,999 DWT**	**30,000 DWT+**	**Total**
Chemical	527	452	164	1,143
Chemical/Oil	584	620	851	2,055
Product	1,096	301	805	2,202
Total	**2,207**	**1,373**	**1,820**	**5,400**

Type tanker	**DWT / cubic capacity**			
	3,000 – 9,999 DWT	**10,000 – 29,999 DWT**	**30,000 DWT+**	**Total**
Chemical	0.932	0.907	0.907	0.918
Chemical/Oil	0.910	0.910	0.900	0.904
Product	0.920	0.870	0.880	0.900
Total	**0.926**	**0.906**	**0.893**	**0.905**

7 Chemical tankers usually transport liquids in bulk categorised under MARPOL Annex II but may also have an IOPP Certificate and can carry MARPOL Annex I cargoes. Therefore, chemical tankers as defined in MARPOL Annex II, regulation 1.16.1 do carry liquids in bulk which are usually transported by NLS tankers and product carriers. It is believed that the Committee's intention was that the EEDI requirements should apply equally to all ships and that such an application retains a level playing field for ships engaged in the same or overlapping trade. For this reason, the co-sponsors suggest that the Committee may wish to consider whether the application of the cubic correction factor to all tankers of a similar size which are certified to transport similar cargoes would be appropriate.

Conclusion

8 In consideration of the findings of this study, there is little to differentiate between the DWT/cubic capacity ratio in these vessel types. Therefore, the same reduction factor should be equally applied to NLS tankers as defined in MARPOL Annex II, regulation 1.16.2 and to product carriers as defined in MARPOL Annex I, regulation 1.7.

Action requested of the Committee

9 The Committee is invited to consider, when endorsing the formula for the calculation of the cubic capacity correction factor for chemical tankers, whether its application is strictly for chemical tankers as defined in MARPOL Annex II, regulation 1.16.1 or, should be extended to chemical tankers as defined in MARPOL Annex II, regulation 1.16.2 and to product carriers as defined in MARPOL Annex I, regulation 1.7 in order to maintain a level playing field between similar vessel types, and decide as appropriate.