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GHG EMISSIONS FROM SHIPS
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Agenda item 2

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**CONSIDERATION OF ANY ISSUE ARISING FROM THE FINAL REPORT OF THE
CORRESPONDENCE GROUP ON CARBON INTENSITY REDUCTION**

**The critical need for adoption of an appropriate range of CII
correction factors and voyage adjustments**

Submitted by Malaysia, Panama, ICS, INTERTANKO and INTERCARGO

SUMMARY

Executive summary: This document comments on the report of the Correspondence Group on Carbon Intensity Reduction (MEPC 78/7/11), highlighting the need for further consideration of proposed correction factors and voyage adjustments, for use in the CII calculation mechanism. The co-sponsors fully support the development and implementation of the CII system without delay, however, without further adoption of key correction factors and voyage adjustments, the CII rating mechanism will not be fit for purpose. This is because it would unjustly or unreasonably impact on the individual ratings of efficient and well operated ships, simply because of fundamental flaws in the mechanism, which would not take into account matters which are outside of the control of the ship/shipowner. In this respect, the co-sponsors recommend that the five correction factors and voyage adjustments listed in paragraph 11 of this paper are prioritized for reconsideration at ISWG-GHG 12 and MEPC 78, and that provision should also be made for the remainder of the rejected factors and adjustments to be reconsidered during the first year of CII implementation.

Strategic direction, if applicable: 3

Output: 3.2

Action to be taken: Paragraphs 20

Related documents: MEPC 78/7/11

Background

1 MEPC 76 adopted amendments to MARPOL Annex VI to incorporate the CII rating mechanism. To further consider proposals for CII correction factors and voyage adjustments, otherwise known as the G5 guidelines, the Committee established a Correspondence Group which presented its report in document MEPC 78/7/11 (China et al.) to be considered first by ISWG-GHG 12. It is apparent from the report that 13 of the 23 proposed correction factors and voyage adjustments have been rejected. The factors and adjustments have been proposed to ensure that the CII rating mechanism is effective and realistic, and does not unjustly or unreasonably impact on the individual ratings of efficient and well operated ships, simply because of fundamental flaws in the mechanism which may not have taken into consideration factors which are outside of the control of the ship/shipowner. The rejection of so many needed correction factors will, in view of the co-sponsors, result in unreasonable CII values being calculated for individual ships, which do not truly reflect their carbon intensity, and making it unreasonably challenging, if not impossible for certain ships to meet the minimum required CII ratings. In the following sections, the co-sponsors highlight the principal concerns.

Rejected correction factors and voyage exclusions

Adverse weather

2 There is very significant variation in the meteorological/oceanic conditions that are experienced in the regions of the world. Navigating through bad weather can greatly increase a ship's fuel consumption, and adversely impact its CII rating. A ship's crew has no control over the weather, and it is unreasonable that a ship that is constrained to operate within a harsh metocean region, due to its charter, should receive a lower rating than for instance a sister-ship on a different charter, which results in it operating within a more benign metocean region.

3 The impact of the loss of the adverse weather adjustment will be greatest for ships on those routes that regularly see harsh metocean conditions, e.g. the North Atlantic. Altering course to avoid weather conditions may in fact increase CO₂ emissions due to the additional distances sailed.

4 Ships can also be unexpectedly caught in adverse weather, and should in those circumstances always prioritize safety of navigation. Without the adverse weather voyage adjustment being available to a ship's crew, and being conscious of the impact on CII ratings, it may result in hesitation to increase power. This in turn may result in an increased risk to ship safety, a possibility that must be avoided.

Waiting time

5 Two proposals relating to waiting time were rejected. Waiting time is often encountered due to port congestion and, at the time this submission was drafted, can amount to up to 20 or 40 days per voyage. This aspect is under the control of the port, not the ship's crew. Therefore, if a ship is unfortunate enough to encounter such delays it is obliged to go to anchor. In these circumstances fuel is consumed for generation of auxiliary power, but no distance is travelled, and hence there is an adverse impact on the ship's CII rating. Such waiting times may also have a knock-on effect on increased fuel consumption for the next voyage, as a ship may have a deadline to meet at the next port, and will be obliged to increase speed to arrive on time. Hull biofouling also increases whilst at anchor, and this in itself results in increased fuel consumption for subsequent voyages. Analysis performed has indicated that such waiting times can result in a ship's CII rating unreasonably dropping from C (without waiting time) to E (with waiting time). The same unreasonable effects on a ship's CII rating could also result from long periods in which the ship is not carrying out commercial activities, such as waiting for drydock or periods in warm lay-up.

Specific ship types or modes of operation

6 The following were all rejected:

- .1 The voyage adjustment for short voyages of less than 72 hours, applying to bulk carriers, tankers container ships and Ro-Ro vehicle carriers;
- .2 FC_{BOG}^1 (boil-off gas correction factor for LNG carriers);
- .3 $FC_{extra\ weight}$ (additional structural weight correction factor for self-unloading bulk carriers);
- .4 $FC_{electrical}$ cargo handling (additional electrical power correction factor with respect to bulk carriers or self-unloading bulk carriers).

7 All of these relate to types of ship or modes of operation which consume more fuel than the norm. Nevertheless, such ships and operations are essential to the marine transportation system, and regardless of the quality of the ship design or the efficiency of operation, will underperform under the CII rating system. The co-sponsors foresee unreasonable consequences that may result if the viability of such ships is unreasonably impacted, with no tangible benefit to the environment and possibly a negative impact.

8 For example, self-unloaders and geared bulk carriers enable large deep draft ships to serve shallow water ports by transshipment to smaller ships or barges. If such bulkers are unable to trade, it is likely that a larger number of smaller, shallower draft ships would be required to move the same cargo. Such smaller ships, are less fuel-efficient, and their substitution would lead to greater CO₂ emissions.

9 Without the implementation of the short-voyage adjustment, ships conducting such voyages will be assigned a poor CII rating and may need to withdraw from the specific trade. Without such ships, it will be likely that a modal shift from sea to land-based transportation will then occur. Noting that shipping is the most energy efficient mode of transportation, this would also represent a negative impact to the environment.

10 In this transition period, there is a general move both shoreside and afloat towards methane fuel because of its lower CO₂ emissions relative to traditional fuels. Significant numbers of LNG carriers are required to serve this vital need. However, through rejection of the FC_{BOG} correction factor, the co-sponsors fear investment in this ship type may be disincentivized, and distribution of this lower carbon fuel may be negatively impacted.

EEDI correction factors

11 During round 4 of the correspondence group, adoption of the following EEDI correction factors was rejected:

- .1 f_{cLNG}
- .2 f_{cRoPax}
- .3 f_{iCSR}

¹ Although FC_{BOG} was rejected, the co-sponsors note that $FC_{electrical}$ has been extended to LNG carriers and gas carriers, which at least covers one of the 4 methods of dealing with LNG Boil-Off Gas (BOG). The coordinators round 4 summary concluded that BOG management "is a complex issue that cannot be resolved within the timescale of this correspondence group". Hence the co-sponsors believe it is warranted to allow further consideration of this correction factor.

12 The reason stated was a lack of sufficient evidence being provided to support their use. However, from the co-sponsors perspective, the amount of work involved in responding to the correspondence group questionnaires was substantial, and for participants there was a tendency to focus effort where it was most needed. For these correction factors (which have already been adopted for EEDI), it was felt that little further justification was required. Hence, the co-sponsors believe it is too early to dismiss these and further consideration is warranted.

Scoring process

13 The co-sponsors would like to thank the Correspondence Group coordinators for their work. The amount of data and feedback they received was substantial and whilst maintaining their schedule they achieved a well-balanced and effective approach. Nevertheless, the co-sponsors query the scoring mechanism that was used between rounds 4 and 5. Scores were assigned to the responses to the TOR 3 questionnaire, and although many of the lower ranked correction factors and voyage adjustments mustered significant support, were still rejected. It appears that a threshold was adopted for acceptance, but it is unclear to the co-sponsors what was the rationale underpinning this.

14 The co-sponsors also highlight that the available duration for collation of the data and analyses to comprehensively support the 23 proposed correction factors and voyage adjustments was inappropriately short. Further rounds would have enabled the proponents to submit more data and comprehensively answer the concerns expressed in relation to the rejections.

Conclusions

15 The objective of the G5 guidelines is to provide an appropriate range of correction factors and voyage adjustments. Hence ensuring the CII calculation mechanism is effective and realistic, and does not unjustly or unreasonably impact on the individual ratings of efficient and well operated ships, simply because of fundamental flaws in the mechanism. The G5 guidelines should ensure a sufficiently robust CII rating system to go forward into the implementation period. The experience gained will then be used to fine tune the system. However, the co-sponsors are seriously concerned that the G5 guidelines are, as currently drafted, insufficient to comprehensively cover a high percentage of ship types and modes of operation. Key elements are excluded, including the adverse weather and waiting time adjustments. If these remain unaddressed, well designed and efficiently operated ships will be unfairly and unreasonably rated, possibly leading to ships being taken out of service prematurely. Charter rates and access to finance may also be adversely and unfairly affected at a time when shipowners are facing major decarbonization investment challenges.

16 If the supply of sufficient quantities of low- and zero-carbon fuels is unreasonably delayed, there is also a risk that certain ship types and operation of ships within certain regions of the world may be unable to meet the minimum required CII ratings, and hence their viability may be further eroded. The co-sponsors believe that such an outcome is inconsistent with the objective of decarbonization, as any resultant modal shift to road, rail and air would generate greater CO₂ emissions than shipping.

17 The co-sponsors recommend that the following are prioritized for reconsideration at ISWG-GHG 12 and MEPC 78

- .1 adverse weather voyage adjustment;
- .2 port waiting time;

- .3 adoption of a dedicated CII reference line for self-unloading bulk carriers;
- .4 application of FC_{Electrical} to LNG Carrier discharge pumps and vapour return compressors when relevant to cargo transfer; and
- .5 adoption of FC_{BOG} to LNG carriers.

18 The co-sponsors note at time of writing that detailed documents relating to these are planned for submission to ISWG-GHG 12 or MEPC 78. Each document includes data and justifications that could not be submitted within the timeframe of the Correspondence Group.

19 Provision should also be made for the remainder of the rejected factors and adjustments to be further considered during the first year of CII implementation. Hence, not delaying the implementation process.

Action requested of the Working Group

20 The Group is invited to consider the comments and proposals provided in this document, in particular from paragraph 17 to paragraph 19, and take action as appropriate.
