

MARINE ENVIRONMENT PROTECTION  
COMMITTEE  
63rd session  
Agenda item 4

MEPC 63/4/16  
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## **AIR POLLUTION AND ENERGY EFFICIENCY**

### **Comments on the proposed amendments to the draft Guidelines on Survey and Certification of the EEDI**

**Submitted by the International Chamber for Shipping (ICS)**

#### **SUMMARY**

*Executive summary:* This document comments on the report of the second Intersessional Meeting of the Working Group on Energy Efficiency Measures for Ships and suggests textual amendments to improve the clarity of the text and the consistency of the verification process

*Strategic direction:* 7.3

*High-level action:* 7.3.2

*Planned output:* 7.3.2.1

*Action to be taken:* Paragraph 4

*Related document:* MEPC 63/4/11

#### **Background**

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 offers comments on the outcome of the second Intersessional Meeting of the Working Group on Energy Efficiency Measures for Ships (EE-WG 2). In particular, comments are provided on the "Draft 2012 Guidelines on Survey and Certification of the Energy Efficiency Design Index" (MEPC 63/4/11, annex 3).

2 ICS has considered the draft Guidelines contained in annex 3 of document MEPC 63/4/11 and suggests that some minor amendments to the text would be beneficial in improving the clarity of the text and the consistency of the verification process. Particular reference is made to the text on the use of Computational Fluid Dynamics (CFD) calculations.

3 In the annex to this document, suggestions are made for amendments to the text of the draft Guidelines along with an explanation of the rationale for the proposed amendments. The paragraph numbers quoted in the annex to this document are those of document MEPC 64/4/11, annex 3.

**Action requested of the Committee**

4 The Committee is invited to consider the proposals and supporting rationales contained in the annex, and decide as appropriate.

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## ANNEX

### AMENDMENTS TO THE DRAFT 2012 GUIDELINES ON SURVEY AND CERTIFICATION OF THE ENERGY EFFICIENCY DESIGN INDEX (MEPC 63/4/11, ANNEX 3)

"2.4 *Tank test* means model towing tests, model self-propulsion tests and model propeller open water tests. Numerical calculations may be accepted as ~~equivalent to model propeller open water tests~~ or used to complement the tank tests conducted (e.g. to evaluate the effect of additional hull features such as fins, etc. on ship's performance), with approval of the verifier."

*Rationale: Numerical calculations by use of Computational Fluid Dynamics – CFD – cannot replace a tank test. Firstly, CFD is not a uniform standard and different CFD software may produce very different results. Currently CFD is not sufficiently mature to replace a physical tank test of a model. CFD is an excellent tool for refining a defined model and for trim optimization, etc. CFD should only be allowed in cases where the full scale speed trials are carried out in the full load EEDI condition.*

"4.2.5 For ships to which regulation 4 of MARPOL Annex VI applies, the power curves used for the preliminary verification at the design stage should be based on reliable results of tank test. A tank test for an individual ship may be omitted based on technical justifications such as availability of the results of tank tests for ships of the same/~~similar~~ type. In addition, omission of tank tests is acceptable for a ship for which sea trials will be carried under the condition as specified in paragraph 2.2 of the EEDI Calculation Guidelines, upon agreement of the shipowner and shipbuilder and with approval of the verifier. For ensuring the quality of tank tests, ITTC quality system should be taken into account. Model tank test should be witnessed by the verifier."

*Rationale: It should only be permitted to omit the tank test if data for a ship of the same type is available. A similar type may, for example, have a different stern form or bulbous bow which could give a very different result.*

"4.2.7 Additional information that the verifier may request the submitter to provide directly to it includes but not limited to:

...

- .6 reasons for exempting a tank test, if applicable; this should include lines and tank test results of the ships of the same/~~similar~~ type, and the comparison of the principal particulars of such ships and the ship in question."

*Rationale: As for 4.2.5 only the same type should be allowed, not a similar type, unless sea trial in the full load EEDI condition is carried out.*

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