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**Sub: Regulations on energy efficiency for ships -
MARPOL Annex VI**

1.0 General

1.1 The IMO Marine Environment Protection Committee (MEPC) at its sixty-second session adopted amendments to MARPOL Annex VI, introducing a new Chapter 4. These amendments are intended to improve energy efficiency for ships through a set of technical performance standards, by making mandatory the Energy Efficiency Design Index (EEDI), for new ships, and the Ship Energy Efficiency Management Plan (SEEMP) for all ships. The text of the amendments is set forth under Resolution **MEPC.203(62)** (see **Engineering Circular No. 140 dated 24th November 2011**). These amendments shall enter into force on 1 January 2013.

1.2 For the purposes of Chapter 4, definitions for "New ship" and "Major Conversion" have been added to Regulation 2 as follows:

1.2.1 "New ship" means a ship:

.1 for which the building contract is placed on or after 1 January 2013;

or

.2 in the absence of a building contract, the keel of which is laid or which is at a similar stage of construction on or after 1 July 2013; or

.3 the delivery of which is on or after 1 July 2015.

1.2.2 "Major Conversion" means a conversion of a ship:

- .1 which substantially alters the dimensions, carrying capacity or engine power of the ship; or
- .2 which changes the type of the ship; or
- .3 the intent of which in the opinion of the Administration is substantially to prolong the life of the ship; or
- .4 which otherwise so alters the ship that, if it were a new ship, it would become subject to relevant provisions of the present Convention not applicable to it as an existing ship; or
- .5 which substantially alters the energy efficiency of the ship and includes any modifications that could cause the ship to exceed the applicable required EEDI as set out in Regulation 21.

1.3 The requirements of Regulations 20 and 21 of Annex VI presently do not apply to ships which have diesel-electric propulsion, turbine propulsion or hybrid propulsion systems.

2.0 Energy Efficiency Design Index (EEDI)

2.1 The purpose of the EEDI is to provide a basis for comparison of a ship's fuel-efficiency, expressed as carbon dioxide (CO₂) produced per transport work performed, in order to stimulate the development of more efficient ships in general and to establish the minimum efficiency of new ships depending on ship type and size.

2.2 Attained EEDI (Regulation 20)

2.2.1 The attained EEDI is defined as the EEDI value achieved by an individual ship in accordance with Regulation 20 of Chapter 4.

2.2.2 The attained EEDI shall be calculated for each new ship as defined in paragraph 1.2.1 (or existing ship which has undergone a major conversion so extensive that the ship is regarded as a newly constructed ship), which falls into one or more of the categories defined in Regulations 2.25 to 2.35 (Bulk carrier, Gas carrier,

Tanker, Container ship, General cargo ship, Refrigerated cargo carrier, Combination carrier, Passenger ship, Ro-ro cargo ship (vehicle carrier), Ro-ro cargo ship or Ro-ro passenger ship).

2.2.3 The attained EEDI value shall be calculated specific to each ship, in accordance with Resolution MEPC.212(63) – 2012, Guidelines on the Method of Calculation of the Attained Energy Efficiency Design Index (EEDI) for New Ships, and shall be verified by a Recognized Organization (RO) authorized by the Directorate General of Shipping as part of the survey and certification requirements described in section 4.0 below.

2.3 Required EEDI (Regulation 21)

2.3.1 The required EEDI is defined as the maximum value of attained EEDI that is allowed by Regulation 21 of Chapter 4 for the specific ship type and size (deadweight).

2.3.2 The attained EEDI for each new ship as defined in paragraph 1.2.1 above (or existing ship which has undergone a major conversion so extensive that the ship is regarded as a newly constructed ship), which falls into one of the categories defined in Regulations 2.25 to 2.31 (Bulk carrier, Gas carrier, Tanker, Container ship, General cargo ship, Refrigerated cargo carrier or Combination carrier), shall be less than or equal to the relevant required EEDI value for that ship.

2.3.3 The required EEDI value for the ship is determined by applying a reduction factor specified in Table 1 of Regulation 21 to the corresponding reference line value calculated in accordance with Regulation 21.3 for the specific ship type and deadweight. Regulation 21 is reproduced in **Appendix 1** of this M.S. Notice.

3.0 Ship Energy Efficiency Management Plan (SEEMP)

3.1 As of 1 January 2013, all ships of 400 gross tonnage and above shall keep on board a ship specific SEEMP, which may form part of the ship's Safety Management System (SMS). However, for **new ships**, the verification of the requirement to have SEEMP onboard shall take place during the initial survey before a ship is put in service, and for **existing**

ships, during the first intermediate or renewal survey of IAPP, which ever is first, on or after 1st January, 2013.

- 3.2 There is no requirement for the SEEMP to be approved by the Administration or its Recognized Organization. In accordance with Regulation 5.4, the survey for the issuance of the International Energy Efficiency (IEE) Certificate for existing ships shall only require a verification that the SEEMP is on board.
- 3.3 When developing the SEEMP, IMO Resolution **MEPC.213(63)** – ‘Guidelines for the Development of a Ship Energy Efficiency Management Plan (SEEMP)’ shall be taken into account.
- 3.4 While it is recommended to utilize the Energy Efficiency Operational Indicator (EEOI) calculated in accordance with IMO Circular **MEPC.1/Circ.684** – ‘Guidelines for Voluntary Use of the Ship Energy Efficiency Operational Indicator (EEOI)’ as a tool for monitoring the energy efficiency of a ship, other quantitative measures may be more appropriate for a specific ship type or trade, in which case other efficiency measurement tools can be utilized.

4.0 Survey and Certification

- 4.1 All ships of 400 gross tonnage and above shall be subject to the surveys as specified in Regulation 5.4.
- 4.2 Survey and Certification for EEDI are to be carried out taking into account Resolution **MEPC.214(63)** – ‘Guidelines on Survey and Certification of the Energy Efficiency Design Index (EEDI)’.
- 4.2 For existing ships, the verification of the requirement to have a SEEMP on board shall take place at the first intermediate or renewal survey on or after 1 January 2013, whichever is first.
- 4.3 An IEE Certificate shall be issued after completion of the relevant surveys referred to in paragraph 4.1 above.
- 4.4 All Recognized Organizations currently authorized for MARPOL Annex VI are authorized to carry out survey and certification on behalf of the Directorate General of shipping.

5.0 Applicability Waiver (Regulation 19.4)

- 5.1 In accordance with Regulation 19.4, the Administration may waive the

requirement for a ship from complying with the requirements of Regulations 20 and 21. Such waivers may only be considered for new ships up to four (4) years after the entry into force of these regulations, as stipulated in Regulation 19.5.

- 5.2 The Administration may consider any request for this waiver on a case-by-case basis, subject to application in writing by the ship owner/operator for each ship, demonstrating the basis for which the waiver is sought. If approved, the Administration shall forthwith communicate to the Organization about such waivers and the ROs performing the survey and certification services for the ship, shall ensure that such waiver is appropriately recorded in the Supplement to the IEE Certificate.
- 5.3 Consistent with international laws, any State may deny entry to ships that are not in compliance with Regulations 20 and 21, even if granted with such a waiver.
- 5.4 The Administration cannot anticipate which States may deny entry to ships that are granted the waiver. Therefore any ship owner/operator applying for such waiver may consider this uncertainty and any consequential impact or limitation on the trading capability for such a ship.
- 5.5 It should also be noted that the waiver is only in relation to Regulations 20 and 21, while, the SEEMP required under Regulation 22 shall be kept onboard and the surveys required for issuance of the IEE Certificate are still required to be undertaken, even for a ship to which a waiver has been granted.

This is issued with the approval of the Competent authority and comes into force from **1st January 2013**.


(AJITH SUKUMARAN)
E&SS cum DDG (Tech)

