

RESOLUTION MEPC.332(76) (adopted on 17 June 2021)

AMENDMENTS TO THE 2018 GUIDELINES ON THE METHOD OF CALCULATION OF THE ATTAINED ENERGY EFFICIENCY DESIGN INDEX (EEDI) FOR NEW SHIPS (RESOLUTION MEPC.308(73), AS AMENDED BY RESOLUTION MEPC.322(74))

ANNEX 5

RESOLUTION MEPC.332(76)
(adopted on 17 June 2021)

**AMENDMENTS TO THE 2018 GUIDELINES ON THE METHOD OF CALCULATION OF
THE ATTAINED ENERGY EFFICIENCY DESIGN INDEX (EEDI) FOR NEW SHIPS
(RESOLUTION MEPC.308(73), AS AMENDED BY RESOLUTION MEPC.322(74))**

THE MARINE ENVIRONMENT PROTECTION COMMITTEE,

RECALLING article 38(a) of the Convention on the International Maritime Organization concerning the functions of the Marine Environment Protection Committee (the Committee) conferred upon it by international conventions for the prevention and control of marine pollution from ships,

RECALLING ALSO that, at its sixty-second session, it adopted, by resolution MEPC.203(62), *Amendments to the annex of the Protocol of 1997 to amend the International Convention for the Prevention of Pollution from Ships, 1973, as modified by the Protocol of 1978 relating thereto* (inclusion of regulations on energy efficiency for ships in MARPOL Annex VI),

NOTING that the aforementioned amendments to MARPOL Annex VI entered into force on 1 January 2013,

NOTING ALSO that regulation 22 (Attained Energy Efficiency Design Index (attained EEDI)) of MARPOL Annex VI, as amended, requires that the EEDI shall be calculated taking into account the guidelines developed by the Organization,

NOTING FURTHER the *2012 Guidelines on the method of calculation of the attained Energy Efficiency Design Index (EEDI) for new ships*, adopted at its sixty-third session by resolution MEPC.212(63), superseded by the *2014 Guidelines on the method of calculation of the attained Energy Efficiency Design Index (EEDI) for new ships* (resolution MEPC.245(66)), which were subsequently superseded by the *2018 Guidelines on the method of calculation of the attained Energy Efficiency Design Index (EEDI) for new ships* (resolution MEPC.308(73)),

NOTING that, at its seventy-fourth session, it adopted, by resolution MEPC.322(74), *Amendments to the 2018 Guidelines on the method of calculation of the attained Energy Efficiency Design Index (EEDI) for new ships*,

HAVING CONSIDERED, at its seventy-sixth session, proposed amendments to the *2018 Guidelines on the method of calculation of the attained Energy Efficiency Design Index (EEDI) for new ships* (resolution MEPC.308(73), as amended by resolution MEPC.322(74)),

1 ADOPTS amendments to the *2018 Guidelines on the method of calculation of the attained Energy Efficiency Design Index (EEDI) for new ships* (resolution MEPC.308(73), as amended by resolution MEPC.322(74)), as set out in the annex to the present resolution;

2 INVITES Administrations to take into account the aforementioned amendments when developing and enacting national laws which give force to, and implement provisions set forth in regulation 20 of MARPOL Annex VI, as amended;

MEPC 76/15/Add.21

Annex 5, page 2

3 REQUESTS the Parties to MARPOL Annex VI and other Member Governments to bring the amendments to the attention of shipowners, ship operators, shipbuilders, ship designers and any other interested parties;

4 AGREES to keep these Guidelines, as amended, under review, in light of experience gained with their implementation.

ANNEX

**AMENDMENTS TO THE 2018 GUIDELINES ON THE METHOD OF CALCULATION OF
THE ATTAINED ENERGY EFFICIENCY DESIGN INDEX (EEDI) FOR NEW SHIPS**

1 A new section 3 is added, as follows:

"3 Mandatory Reporting of Attained EEDI Values and Related Information

3.1 In accordance with regulation 22.3 of MARPOL Annex VI, for each ship subject to regulation 24, the Administration or any organization duly authorized by it shall report the required and attained EEDI values and relevant information taking into account these Guidelines via electronic communication.

3.2 Information to be reported are as follows:

- .1 applicable EEDI phase (e.g. Phase 1, Phase 2, etc.);
- .2 identification number (IMO Secretariat use only);
- .3 ship type;
- .4 common commercial size reference* (see Note (3) in appendix 5 to these Guidelines), if available;
- .5 DWT or GT (as appropriate);
- .6 year of delivery;
- .7 required EEDI value;
- .8 attained EEDI value;
- .9 dimensional parameters (length L_{pp} (m), breadth B_s (m), and draught (m));
- .10 V_{ref} (knots) and P_{ME} (kW);
- .11 use of innovative technologies (4th and 5th terms in the EEDI equation, if applicable);
- .12 short statement* describing the principal design elements or changes employed to achieve the attained EEDI (as appropriate), if available;
- .13 type of fuel used in the calculation of the attained EEDI, and for dual-fuel engines, the f_{DFgas} ratio; and
- .14 ice class designation (if applicable).

* Not subject to verification.

MEPC 76/15/Add.21

Annex 5, page 4

- 3.3 The information in paragraph 3.2 is not required to be reported for ships for which the required and attained EEDI values had been already reported to the Organization.
 - 3.4 A standardized reporting format for Mandatory Reporting of Attained EEDI Values and Related Information is presented in appendix 5."
- 2 A new appendix 5 is added, as follows:

"APPENDIX 5

STANDARD FORMAT TO SUBMIT EEDI INFORMATION TO BE INCLUDED IN THE EEDI DATABASE

IMO Number (1)	Type of ship (2)	Common commercial size (3)	Capacity (4)		Dimensional parameters			Year of delivery	Applicable phase	Required EEDI	Attained EEDI	Vref (knot) (9)	PME (kW) (10)	Type of fuel (11)	f _{DF} gas (12)	Ice class (13)	EEDI 4th term (Installation of innovative electrical technology)		EEDI 5th term (Installation of innovative mechanical technology)		Short statement as appropriate describing the principal design elements or changes employed to achieve the attained EEDI (15)		
			DWT	GT (5)	Lpp (m) (6)	Bs (m) (7)	Draught (m) (8)										Yes/No	Name, outline and means/ways of performance of technology (14)	Yes/No	Name, outline and means/ways of performance of technology (14)			

- Note:**
- (1) IMO number to be submitted for Secretariat use only.
 - (2) As defined in regulation 2 of MARPOL Annex VI.
 - (3) Common commercial size reference (TEU for containership, CEU (RT43) for ro-ro cargo ship (vehicle carrier), cubic meter for gas carrier and LNG carrier), if available, should be provided.
 - (4) The exact DWT or GT, as appropriate, should be provided. The Secretariat should round the DWT or GT data up to the nearest 500 when these data are subsequently provided to MEPC. (For containerships, 100% DWT should be provided while 70% of DWT should be used when calculating the EEDI value).
 - (5) GT should be provided for a cruise passenger ship having non-conventional propulsion as defined in regulations 2.2.11 and 2.2.19, respectively, of MARPOL Annex VI. Both DWT and GT should be provided for a ro-ro cargo ship (vehicle carrier) as defined in regulation 2.2.27 of MARPOL Annex VI.
 - (6) As defined in paragraph 2.2.13 of the *2018 Guidelines on the method of calculation of the attained Energy Efficiency Design Index (EEDI) for new ships* (resolution MEPC.308(73), as amended). The exact Lpp should be provided. The Secretariat will round the Lpp data up to the nearest 10 when these data are subsequently provided to MEPC.
 - (7) As defined in paragraph 2.2.16 of the *2018 Guidelines on the method of calculation of the attained Energy Efficiency Design Index (EEDI) for new ships* (resolution MEPC.308(73), as amended). The exact Bs should be provided. The Secretariat will round the Bs data up to the nearest 1 when these data are subsequently provided to MEPC.
 - (8) As defined in paragraph 2.2.15 of the *2018 Guidelines on the method of calculation of the attained Energy Efficiency Design Index (EEDI) for new ships* (resolution MEPC.308(73), as amended). The exact draught should be provided. The Secretariat will round the draught data up to the nearest 1 when these data are subsequently provided to MEPC.
 - (9) As defined in paragraph 2.2.2 of the *2018 Guidelines on the method of calculation of the attained Energy Efficiency Design Index (EEDI) for new ships* (resolution MEPC.308(73), as amended). The exact Vref should be provided. The Secretariat will round the Vref data up to the nearest 0.5 when these data are subsequently provided to MEPC.
 - (10) As defined in paragraph 2.2.5.1 of the *2018 Guidelines on the method of calculation of the attained Energy Efficiency Design Index (EEDI) for new ships* (resolution MEPC.308(73), as amended). The exact P_{ME} should be provided. The Secretariat will round the P_{ME} data up to the nearest 100 when these data are subsequently provided to MEPC.
 - (11) As defined in paragraph 2.2.1 of the *2018 Guidelines on the method of calculation of the attained Energy Efficiency Design Index (EEDI) for new ships* (resolution MEPC.308(73), as amended) or other (to be stated). In case of a ship equipped with a dual-fuel engine, type of "primary fuel" should be provided.
 - (12) As defined in paragraph 2.2.1 of the *2018 Guidelines on the method of calculation of the attained Energy Efficiency Design Index (EEDI) for new ships* (resolution MEPC.308 (73), as amended), if applicable.
 - (13) Ice class, which was used to calculate correction factors for ice-classed ships as defined in paragraphs 2.2.8.1 and 2.2.11.1 of the *2018 Guidelines on the method of calculation of the attained Energy Efficiency Design Index (EEDI) for new ships* (resolution MEPC.308(73), as amended), if applicable, should be provided.
 - (14) In the case that the innovative energy efficiency technologies are already included in the *2013 Guidance on treatment of innovative energy efficiency technologies for calculation and verification of the attained EEDI* (MEPC.1/Circ.815), the name of technology should be identified. Otherwise, name, outline and means/ways of performance of the technology should be identified.
 - (15) To assist the IMO in assessing relevant design trends, provide a short statement as appropriate, describing the principal design elements or changes employed to achieve the attained EEDI.

RESOLUTION MEPC.332(76) (adopted on 17 June 2021)

AMENDMENTS TO THE 2018 GUIDELINES ON THE METHOD OF CALCULATION OF THE ATTAINED ENERGY EFFICIENCY DESIGN INDEX (EEDI) FOR NEW SHIPS (RESOLUTION MEPC.308(73), AS AMENDED BY RESOLUTION MEPC.322(74))

ANNEX 6

UNIFIED INTERPRETATION TO REGULATION 2.23 OF MARPOL ANNEX VI

(update to the unified interpretation provided in paragraphs 1.2.3 and 1.2.4
of the annex to MEPC.1/Circ.795/Rev.4)

1 Definition of "new ship"

Regulation 2 *Definitions*

Regulation 2.23 reads as follows:

"*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."

Interpretation:

1.1 For the application of the definition "new ship" as specified in regulation 2.23 to each phase specified in table 1 of regulation 21, it should be interpreted as follows:

- .1 the date specified in regulation 2.23.1 should be replaced with the start date of each phase;
- .2 the date specified in regulation 2.23.2 should be replaced with the date six months after the start date of each phase; and
- .3 the date specified in regulation 2.23.3 should, for Phase 1, 2 and 3, be replaced with the date 48 months after the start date of each phase.

1.2 With the above interpretations, the required EEDI of each phase is applied to the following new ship which falls into one of the categories defined in regulations 2.25 to 2.31 and to which chapter 4 is applicable:

(.....)

- .3 the required EEDI of Phase 2 is applied to the following new ship:
 - .1 for ship types where Phase 2 ends on 31 March 2022*:
 - .1 the building contract of which is placed in Phase 2, and the delivery is before 1 April 2026; or

* Unified Interpretation is applicable when resolution MEPC.324(75) enters into force on 1 April 2022.

.2 the building contract of which is placed before Phase 2, and the delivery is on or after 1 January 2024 and before 1 April 2026; or

in the absence of a building contract:

.3 the keel of which is laid or which is at a similar stage of construction on or after 1 July 2020 and before 1 October 2022, and the delivery is before 1 April 2026; or

.4 the keel of which is laid or which is at a similar stage of construction before 1 July 2020, and the delivery is on or after 1 January 2024 and before 1 April 2026.

.2 for ship types where Phase 2 ends on 31 December 2024:

.1 the building contract of which is placed in Phase 2, and the delivery is before 1 January 2029; or

.2 the building contract of which is placed before Phase 2, and the delivery is on or after 1 January 2024 and before 1 January 2029; or

in the absence of a building contract:

.3 the keel of which is laid or which is at a similar stage of construction on or after 1 July 2020 and before 1 July 2025, and the delivery is before 1 January 2029; or

.4 the keel of which is laid or which is at a similar stage of construction before 1 July 2020, and the delivery is on or after 1 January 2024 and before 1 January 2029.

.4 the required EEDI of Phase 3 is applied to the following new ship:

.1 for ship types where Phase 3 commences with 1 April 2022 and onwards:

.1 the building contract of which is placed in Phase 3; or

.2 the building contract of which is placed before Phase 3, and the delivery is on or after 1 April 2026; or

in the absence of a building contract:

.3 the keel of which is laid or which is at a similar stage of construction on or after 1 October 2022; or

.4 the keel of which is laid or which is at a similar stage of construction before 1 October 2022 and the delivery of which is on or after 1 April 2026.

.2 for ship types where Phase 3 commences with 1 January 2025 and onwards:

- .1 the building contract of which is placed in Phase 3; or
- .2 the building contract of which is placed before Phase 3, and the delivery is on or after 1 January 2029; or

in the absence of a building contract:

- .3 the keel of which is laid or which is at a similar stage of construction on or after 1 July 2025; or
- .4 the keel of which is laid or which is at a similar stage of construction before 1 July 2025 and the delivery of which is on or after 1 January 2029.

(.....)

RESOLUTION MEPC.332(76) (adopted on 17 June 2021)

AMENDMENTS TO THE 2018 GUIDELINES ON THE METHOD OF CALCULATION OF THE ATTAINED ENERGY EFFICIENCY DESIGN INDEX (EEDI) FOR NEW SHIPS (RESOLUTION MEPC.308(73), AS AMENDED BY RESOLUTION MEPC.322(74))