



**TECHNICAL CIRCULAR No. 771 of 7<sup>th</sup> March 2023**

To	All Surveyors/Auditors. All flags
Title	<b>ATTAINED/REQUIRED EEDI &amp; EEXI</b>
Reference	MARPOL Annex VI

**ATTAINED EEDI (Energy Efficiency Design Index)**

.1 The attained Energy Efficiency Design Index (EEDI) is a measure of a ship's energy efficiency determined dividing the engine power by transport work. The CO<sub>2</sub> emission is computed from fuel consumption considering the carbon content of the fuel. The fuel consumption is based on the power used for propulsion and auxiliary power measured at defined design conditions. Whereas the transport work is estimated by the designed ship capacity multiplied by the ship's speed measured at the maximum summer load draught and at 75 per cent of the rated installed power in general and 83% of the rated installed propulsion power for LNG carriers having diesel electric or steam turbine propulsion systems.

.2 Under Regulation 22, the attained EEDI shall be calculated for:

- i. each new ship.
- ii. each new ship which has undergone a major conversion; and
- iii. each new and existing ship which has undergone a major conversion that is so extensive that the ship is regarded by the Administration as a newly constructed ship.

The attained EEDI value shall be specific to each ship and shall indicate the estimated performance of the ship in terms of energy efficiency and be accompanied by the EEDI technical file.

**REQUIRED EEDI (Energy Efficiency Design Index)**

The required EEDI Value for the ship is determined by applying a reduction factor to a corresponding reference line value calculated for the specific ship type and deadweight.

Under Regulation 24 required EEDI is applicable for:

- Each new ship except passenger ship (2.2.20),
- Each new ship except passenger ship (2.2.20) which has undergone a major conversion; and
- Each new ship except passenger ship (2.2.20) and existing ship which has undergone a major conversion that is so extensive that the ship is regarded by Administration as a newly constructed ship.

“Attained EEDI” shall be less than or equal to “Required EEDIE”.

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**ATTAINED/REQUIRED EEXI (Energy Efficiency Existing Ship Index)**

Under Regulation 23 & 25, the attained/required EEXI shall be calculated/verified for:

- Each ship.
- Each ship which has undergone a major conversion.

Which falls into one or more of the categories defined in Regulations 2.2.5, 2.2.7, 2.2.9, 2.2.11, 2.2.14 to 2.2.16, 2.2.22, and 2.2.26 to 2.2.29 of this Annex (Bulk Carrier, combination Carrier, Container Ship, Cruise Passenger Ship, Gas Carrier, General Cargo Ship, LNG Carrier, Refrigerated Cargo Carrier, Ro-Ro Cargo Ships, Ro-Ro Cargo Ship (Vehicle Carrier), Ro-Ro Passenger Ship, Tanker).

## REFERENCES:

- MARPOL Annex VI

ATTACHMENTS: No

Kindest Regards,

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