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**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

GB/T 46530-2025

**Grades and evaluation methods of carbon dioxide emission
intensity for commercial ships**

营运船舶二氧化碳排放强度等级及评定方法

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Foreword

This document complies with the provisions of GB/T 1.1-2020 "Standardization Work Guidelines Part

1.Structure and Drafting Rules of Standardization Documents". Drafting. Please note that some content in this document may involve patents. The issuing organization of this document assumes no responsibility for identifying patents. This document was proposed and is under the jurisdiction of the Ministry of Transport of the People's Republic of China. This document was drafted by the Water Transport Research Institute of the Ministry of Transport and Wuhan University of Technology. The main drafters of this document are. Li Jing, Chen Rongchang, Jia Yuanming, Zhang Zhida, He Weijian, Deng Hongmei, Zhou Yiying, Wang Zheng, Li Qingxiang, and Deng Jian. Guo Weitong, Lu Yilei, Liu Shaoyong. CO2 emission intensity levels of operating ships and evaluation methods

1 Scope

GB/T 46530-2025 is the Chinese national standard covering rating a ship on the CO2 it emits per tonne-mile - the data collected from the fuel consumption and the voyages, the correction for ship type and size, and the grades a vessel falls into, which is the domestic counterpart of the IMO carbon intensity rating. First edition, under the Ministry of Transport. In force from 1 May 2026. Issued on 31 October 2025, it has been in force since 1 May 2026.

This document specifies the classification of carbon dioxide emission intensity levels for operating vessels, the determination of classification boundaries, and the requirements for level assessment. This document applies to vessels of 400 gross tons or more intended for use in the domestic waterway transportation market, primarily powered by carbon-containing energy and employing conventional propulsion methods. CO2 emission intensity of domestic seagoing vessels using conventional propulsion, electric propulsion, or hybrid propulsion systems, as well as inland waterway vessels using conventional propulsion, electric propulsion, or hybrid propulsion systems. The rating is determined

according to Appendix A. Applicable vessel types and navigation areas are specified in Appendix A.

2 Normative references

The contents of the following documents, through normative references within the text, constitute essential provisions of this document. Dated citations are not included. For references to documents, only the version corresponding to that date applies to this document; for undated references, the latest version (including all amendments) applies. This document.

GB/T 30008 Baseline values for energy efficiency design index of energy-saving ships

GB/T 30009 Calculation Method for Ship Energy Efficiency Design Index

3 Terms and Definitions

The terms and definitions defined in GB/T 30008 and the following terms and definitions apply to this document.

3.1 The amount of carbon dioxide emitted per unit of fuel consumed by the main engine and related auxiliary engines of a ship at its design carrying capacity and predetermined speed.

Note. This is also the energy efficiency design index value achieved by the ship.

3.2 The maximum permissible carbon dioxide emission intensity of a ship at its design carrying capacity and predetermined speed.

Note. This is also the required energy efficiency design index value for ships.

3.3 Determine the index values for different carbon dioxide emission intensity levels of ships.

3.4 sample ship Ships selected from the overall ship dataset whose carbon dioxide emission intensity is below the limit.

3.5 The median CO₂ emission intensity of the sample ships.