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

GB 17411-2026

Replacing GB 17411-2015

Marine fuels
(English Translation)

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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.

This document replaces GB 17411-2015 "Marine Fuel Oil". Compared with GB 17411-2015, the main differences are structural adjustments and editorial changes.

In addition, the main technological changes are as follows.

- a) A new chapter on "Terms and Definitions" has been added (see Chapter 3);
- b) The classification of marine fuel oils has been changed (see Chapter 4, Chapter 3 of the 2015 edition);
- c) The kinematic viscosity index of marine residual fuel oil has been changed (see Table 2, 2015 edition);
- d) The density specifications for marine fuel oil have been revised (see Tables 1, 2, and 3; Tables 1, 2, and 3 in the 2015 edition);
- e) The cetane index for inland waterway fuel oil has been changed (see Table 3, 2015 edition);
- f) Table 2);
- g) The chlorine content of marine distillate fuel oil and inland waterway fuel oil, as well as marine residual fuel oil, have been added.

The organic chlorine content items are shown in Tables 1, 2, and 3.

- h) The cold filter plugging point (CPP) of marine distillate fuel oil has been added (see Table 1);
- i) The pour point requirements for marine residual fuel oil have been revised (see Table 2, 2015 edition);
- j) The cleanliness and compatibility of marine residual fuel oil have been added (see Table

2);

k) The fatty acid methyl ester content of marine fuel oil has been added (see Tables 1, 2 and 3);

l) The test methods for kinematic viscosity, hydrogen sulfide, vanadium, sodium, aluminum, silicon, calcium, zinc, and phosphorus have been modified (see Tables 1, 2, and 3, 2015 edition).

(Tables 1, 2, and 3)

m) Added cold filter plugging point (CPP) batch inspection items for marine distillate fuel oils and the ex-factory cycle time for all marine fuel oil varieties.

Test items (see 6.1);

(n) The regulations for the marking, packaging, transportation, and storage of marine fuel oil have been changed (see Chapter 7, Chapter 6 of the 2015 edition);

o) Added regulations for the control of air pollutant emissions from oil transportation and oil storage facilities (see Chapter 7);

p) Added the determination of organochlorine compounds in fuel oil, and the cleanliness and compatibility test (spot test) of residual fuel oil (see Appendix H, Appendix 5).

Record L).

This document is modified to adopt ISO 8217:2024 "Fuels for marine use from petroleum products and products derived from synthetic and renewable feedstocks (Category F)".

Material specifications.

This document has undergone significant structural adjustments compared to ISO 8217:2024. A table comparing the structural numbering changes between the two documents is provided.

See Appendix A.

The following editorial changes have been made to this document.

---The standard name has been changed to "Marine Fuel Oil";

---The section on bio-based liquid fuels containing fatty acid methyl esters in Annex A (Informative) of ISO 8217:2024 has been removed;

---The composition of marine fuels in Annex B (informative) of ISO 8217:2024 has been removed;

---The content regarding "acid value" has been changed (see Annex C, Annex E of ISO 8217:2024);

---The content regarding "used lubricating oil" has been amended (see Annex D, Annex I of ISO 8217:2024);

---The characterization of marine residual fuels in Annex K (informative) of ISO 8217:2024 has been deleted;

---Added a "Classification and Industry-Common Names Comparison Table for Marine Fuel Oils" (see Appendix M).

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 National Energy Administration.

This document was first published in 1998, revised for the first time in 2012, revised for the second time in 2015, and this is the third revision.

Marine fuel oil

Warning---Marine fuel oil may pose hazards during production, storage, transportation, and use if appropriate precautions are not taken.

This document does not intend to offer advice on all safety issues related to marine fuel oil. Users are responsible for taking appropriate safety and health precautions.

Implement the measures and ensure they comply with relevant national laws and regulations.

1 Scope

This document specifies the classification and designation, requirements and test methods, inspection rules, marking, packaging, and transportation of marine fuel oil derived from petroleum.

Transportation, storage, delivery acceptance and safety.

Fuel oil for oil engines and other marine machinery.

Note: In this document, the term "petroleum" includes bituminous sands and shale oil.

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 190 Packaging Marks for Dangerous Goods

GB/T 260 Determination of water content in petroleum products by distillation (GB/T 260-2016, ISO 3733.1999, MOD)

GB/T 261 Determination of flash point - Binsky-Martin closed cup method (GB/T 261-2021, ISO 2719.2016, MOD)

GB/T 265 Petroleum Products - Determination of Kinematic Viscosity and Calculation of Dynamic Viscosity

GB/T 384 Determination of calorific value of hydrocarbon fuels - Oxygen bomb calorimeter method

GB/T 387 Determination of Sulfur Content in Dark-Colored Petroleum Products (Tube Furnace Method)

GB/T 508 Determination of Ash Content in Petroleum Products (GB/T 508-1985, ISO 6245.1982, MOD)

GB/T 1884 Laboratory Determination of Density of Crude Oil and Liquid Petroleum Products (Density Meter Method) (GB/T 1884-2000, eqv ISO

3675.1998)

GB/T 1885 Petroleum Measurement Tables (GB/T 1885-1998, ISO 91-2.1991, MOD)

GB/T 3535 Determination of Pour Point of Petroleum Products (GB/T 3535-2025, ISO 3016.2019, MOD)

GB/T 4016 Terminology for Petroleum Products

GB/T 4756 Manual Sampling Method for Petroleum Liquids (GB/T 4756-2015, ISO 3170.2004, MOD)

GB/T 7304 Determination of Acid Value of Petroleum Products by Potentiometric Titration

GB/T 11133 Determination of water content in petroleum products, lubricating oils and additives - Karl Fischer coulometric titration method

GB/T 11137 Determination of kinematic viscosity (countercurrent method) and calculation of dynamic viscosity of dark petroleum products

GB/T 11140 Determination of Sulfur Content in Petroleum Products - Wavelength Dispersive X-ray Fluorescence Spectrometry

GB/T 12575 Determination of Vanadium Content in Liquid Fuel Oils - Flameless Atomic Absorption Spectrometry

GB/T 17040 Determination of Sulfur Content in Petroleum and Petroleum Products - Energy Dispersive X-ray Fluorescence Spectrometry