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

GB/T 37328-2019

**Ships and marine technology - Vessel machinery operations in
polar waters - Guidelines**

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Table of Contents

Foreword

1 Scope

2 Normative references

3 Terms and definitions

4 Diesel operation in cold weather

4.1 General

4.2 Diesel engine start in cold weather

Foreword

This standard was drafted in accordance with the rules given in GB/T 1.1-2009.

This standard uses the translation method equivalent to ISO 18215:2015 "Guidelines for the Operation of Ships and Marine Technology in Polar Waters".

The documents of our country that have a consistent correspondence with the international documents referenced in this standard are as follows.

---GB 17411-2015 Marine fuel oil (ISO 8217:2012, MOD)

This standard is proposed and managed by the National Marine Ship Standardization Technical Committee (SAC/TC12).

This standard was drafted. China Shipbuilding Industry Comprehensive Technology and Economic Research Institute, China Shipbuilding Industry Corporation Seventh Eighteenth Institute.

1 Scope

This standard is intended for ship design and operation personnel (crews) before and during the operation of ships in extreme waters in polar waters.

And provide guidance on mechanical operation issues. This standard is the International Maritime Organization (IMO) "Operation Rules for Polar Waters" and International Classification Society.

The Association (IACS) Uniform Requirements (UR) "I" "Polar Level Ship Related Requirements" is supplemented. Although this standard mainly considers ships in polar waters

Operation, but the design and layout of the ship must consider the issues involved in the

construction of the ship or in the shipyard environment.

2 Normative references

The following documents are indispensable for the application of this document. For dated references, only the dated version applies to this article.

Pieces. For undated references, the latest edition (including all amendments) applies to this document.

ISO 8217 Petroleum Products Fuel (Class F) Marine Fuel Specification
[Petroleumproducts-Fuels(classF)-Speci-
Ficationsofmarinefuels]

3 Terms and definitions

The following terms and definitions apply to this document.

3.1

Cetane number cantenumber

The measure of the ignition quality of a diesel engine or the ability to ignite.

3.2

Cold filter point coldfilterpluggingpoint; CFPP

The minimum temperature of a given volume of diesel through a standard filter within a specified time.

4.1 General

The operator should review the diesel program to ensure that there is a special operating procedure during the cold season. Summer operating procedures in cold strips

Not applicable under the article. See Appendix A for other important logistics and operational measures during extreme cold weather.

4.2 Diesel engine start in cold weather

The diesel engine should be fully prepared to start at low temperatures. Insufficient battery capacity may not be enough to drive the starter motor to run fast enough or enough

For a long time, it is difficult to start a cold diesel engine. As the temperature becomes lower, the battery capacity also becomes lower. The energy of the battery at -17 ° C (0 ° F), only

This corresponds to 46% at 27 ° C (80 ° F). At -17 ° C (0 ° F), due to the cooling and

thickening of diesel fuel and the resistance of the internal moving parts of the diesel engine,

Diesel opportunities have become more difficult to start. In fact, diesel engines are hard to start about five times at -17°C than at 27°C . Coming in cold weather

Before testing, test weak or suspicious batteries should be loaded to identify potential problems (see Chapter 6 and Appendix B). If the battery needs to be replaced, it should

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