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

GB/T 38340-2019

**Small craft - Reciprocating internal combustion engines
exhaust emission measurement - Test-bed measurement of
gaseous and particulate exhaust emissions**

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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 18854..2015 "Measurement of gas and particulate emissions from small boat reciprocating internal combustion engines"

Test bench measurement.

The Chinese documents that have a consistent correspondence with the international documents referenced normatively in this standard are as follows.

--- GB/T 6379.1-2004 Accuracy of measurement methods and results (correctness and precision) Part 1. General principles and definitions

(ISO 5725-1..1994, IDT);

--- GB/T 6379.2-2004 Accuracy of measurement methods and results (correctness and precision) Part 2. Determine standard measurement

Basic method for repeatability and reproducibility of quantitative methods (ISO 5725-2..1994, IDT);

--- GB/T 19916-2005 Main data of small boats (ISO 8666..2002, IDT);

--- GB/T 21405-2008 Determination and measurement methods for engine power of reciprocating internal combustion engines Exhaust pollutant emission test

Additional requirements (ISO 14396..2002, IDT).

This standard was proposed and managed by the National Small Boat Standardization Technical Committee (SAC/TC241).

This standard was drafted. China Shipbuilding Industry Comprehensive Technical and Economic Research Institute, Guangdong Lianjie Biotechnology Co., Ltd.

1 Scope

This standard specifies the test bench measurement and evaluation methods for gas and particulate emissions under steady-state conditions of reciprocating internal combustion engines to determine each

Weighted value of exhaust pollutants. The various engine load and speed combinations reflect the different uses of the engine.

This standard applies to marine reciprocating internal combustion engines installed on small boats with a hull length of no more than 24m.

2 Normative references

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

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

GB/T 8190.1-2010 Emission measurement of reciprocating internal combustion engines-Part 1. Test bench measurement of gas and particulate emissions

(ISO 8178-1..2006, IDT)

GB/T 8190.6-2006 Emission measurement of reciprocating internal combustion engines-Part 6. Measurement results and test reports (ISO 8178-6.

2000, IDT)

GB/T 21404-2008 General requirements for determination and measurement of engine power of internal combustion engines (ISO 15550..2002, IDT)

ISO 5725-1 Accuracy of measurement methods and results (correctness and precision) Part 1. General principles and definitions [Accuracy

(truenessandprecision) ofmeasurémentmethodsandresults-Part 1. Generalprinciplesanddefini-tions]

ISO 5725-2 Accuracy of measurement methods and results (correctness and precision) Part 2. Determination of repeatability of standard measurement methods

Basic methods with reproducibility [Accuracy (truenessandprecision) ofmeasurémentmethodsandresults-

Part 2.

Basicmethodforthedeterminationofrepeatabilityandreproducibilityofastandardmeasure-mentmethod]

ISO 8666 Smallcraft-Principaldata

ISO 14396 Measurement and testing methods for engine power of reciprocating internal combustion engines

Recharge requirements

(Reciprocating internal combustion engines - Determination and method for the measurement of engine power - Additional requirements for exhaust emission tests in accordance with ISO 8178)

3 terms and definitions

The terms and definitions defined in ISO 8666 and the following apply to this document.

3.1

Particulate matter

Dilute the exhaust gas with clean filtered air so that the gas temperature measured immediately upstream of the main filter paper is greater than 315K (42 ° C) and not greater than

At 325K (52 ° C), the material collected on the specified filter medium.

Note 1. Particulate matter is mainly composed of carbon, condensed hydrocarbons, sulfates and bound water.

Note 2. Particulate matter as defined in this standard is essentially the same in composition and weight as particles or dust sampled from undiluted exhaust gas directly by hot filtration.

with. It has been proven that the measurement of particulate matter described in this standard is only effective for fuels with a sulfur content of less than 0.8%.