ICS 47.020.20
CCS U44

NATIONAL STANDARD OF THE PEOPLE'S REPUBLIC OF CHINA

GB 11871-2009

Limits of airborne noise emitted by marine diesel engines

船用柴油机辐射的空气噪声限值

Issued on: March 9, 2009 **Implemented on: August 1, 2009**

**Issued by: General Administration of Quality Supervision, Inspection and Quarantine of the People's Republic of China;
Standardization Administration of China**

Table of Contents

Foreword

Chapter 3 of this standard are mandatory, the rest are recommended. This standard replaces GB 11871-1989 "marine diesel engines emitted airborne noise limits." The main technical differences between standard compared with GB 11871-1989 are as follows:

--- Noise limit is given by the table method to the formula, and the value is changed from the nearest whole number to the nearest decimal place;

--- For marine diesel engines emitted airborne noise limits have been fixed. The standard proposed by China Shipbuilding Industry Corporation. This standard by the National Standardization Technical Committee diesel marine machinery Technical Committee. This standard was drafted. China Shipbuilding Industry Corporation seventh eleven Institute. The main drafters of this standard. Hanyan Min, Zhu Zhenhai, Ji Wen, Herring, Tao Longhai. This standard replaces the standards previously issued as follows:

--- GB 11871-1989. Noise limits for marine diesel engine air radiation

1 Scope

China's mandatory national standard for the airborne noise limits of marine diesel engines. A ship's engine room is one of the loudest workplaces that people live in as well as work in: the crew's accommodation is in the same hull, and exposure continues through the off-watch hours, so the damage accumulates in a way that shore industrial exposure does not. Marine diesels are also among the largest reciprocating machines built, and their noise is dominated by the combustion impulse and the turbocharger rather than by anything that can be silenced downstream. The standard sets the permitted sound pressure levels measured at defined positions around the engine and specifies how the measurement is made, which matters because an engine room is a reverberant steel box where a careless measurement position can read many decibels out. It applies to marine diesel engines and is the basis on which engine rooms and accommodation are then designed.

This standard specifies the marine diesel engine air radiated noise in the bench when A sound power level limits. This standard applies to marine diesel engine test bed.

2 Normative references

The following documents contain provisions which, through reference in this standard and become the standard terms. For dated references, subsequent Amendments (not including errata content) or revisions do not apply to this standard, however, encourage the parties to the agreement are based on research Whether the latest versions of these documents. For undated reference documents, the latest versions apply to this standard. Air noise measurement method

GB/T 9911 marine diesel engine radiation

3 Noise limits

3.1 formula Marine diesel engine air radiated noise at rated power and rated speed A LW sound power level should be less than the formula (1) Calculated Numerical calculation results are accurate to one decimal place. LW = 10lg (like r · Pr) + C (1) Where. LW

--- air calibration conditions of radiation noise A sound power level limit in decibels [dB (A)]; R

--- like calibration value speed, in revolutions per minute (r/min); Pr

--- power calibration value, expressed in kilowatts (kW); C

--- constant decibels [dB (A)]. When Pr < 736kW, C = 62.0. When Pr>=736kW, C = 64.1 (Like r<=300r/min); or C = 63.0 (like r > 300r/min).

3.2 Measurement Methods This standard applies to the measurement method executed by GB/T 9911 law specified in the project. If the environmental conditions are not met the test of acoustic engineering Requirements law, agreed by both parties also executed according to GB/T 9911 stipulated quasi-engineering method, it should be described in the test report.