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

GB/T 17248.3-2018

Replacing GB/T 17248.3-1999

**Acoustics -- Noise emitted by machinery and equipment -- Determination of
emission sound pressure levels at a workstation and at other specified positions
applying approximate environmental corrections**

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Foreword

GB/T 17248 "Noise emitted by acoustic machines and equipment" includes the following six parts.

---Guidelines for the use of basic standards for measuring sound pressure levels at work locations and other designated locations (GB/T 17248.1);

--- Approximate free-field measurement of the operating position and other specified positions of the sound pressure level can be ignored above a reflective surface (GB/T 17248.2);

---Approximate environmental correction to determine the sound pressure level of the working position and other specified locations (GB/T 17248.3);

--- Determine the sound pressure level of the working position and other specified positions by the sound power level (GB/T 17248.4);

---Accurate environmental correction to determine the sound pressure level of the working position and other specified locations (GB/T 17248.5);

--- Sound intensity method on-site measurement of working position and other specified locations to launch sound pressure level engineering method (GB/T 17248.6).

This part is the third part of GB/T 17248.

This part is drafted in accordance with the rules given in GB/T 1.1-2009.

This part replaces GB/T 17248.3-1999 "Noise working position and other specified position emission emitted by acoustic machines and equipment

Simple method of measuring the sound pressure level. Compared with GB/T 17248.3-1999, the main technical changes are as follows.

--- Added terms and definitions (see Chapter 3);

--- Added test methods with different accuracy (see Chapter 12);

--- The content of measurement uncertainty has been greatly supplemented (see Chapter 12 and Appendix C, Chapter 12 and Appendix C of the 1999 edition).

This section uses the translation method equivalent to ISO 11202:2010 "Acoustic machines and equipment emitted noise using approximate environmental correction

Determine the sound pressure level of the launch at the working position and other specified locations.

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

---GB/T 3241-2010 Electroacoustic octave and fractional octave filter (IEC 61260:1995, MOD)

---GB/T 3767-2016 Acoustic sound pressure method for the determination of noise source sound power level and sound energy level reflection surface above the approximate free field

Engineering method (ISO 3744:2010, IDT)

---GB/T 3768-2017 Acoustic sound pressure method for the determination of noise source sound power level and sound energy level using the envelope above the reflection surface

Simple method of measuring surface (ISO 3746:2010, IDT)

---GB/T 6379 (all parts) Accuracy of measurement methods and results (correctness and precision) [ISO 5725 (all parts)]

---GB/T 19052-2003 Noise and noise test specifications for acoustic machines and equipment - Guidelines for drafting and presentation (ISO 12001:1996, IDT)

This section has made the following editorial changes.

--- Change the word "9.5" in the second paragraph of A.2.2 to "10.4", the original text is incorrect (see A.2.2 in Appendix A);

--- Added note in Table B.1. It is recommended to use caution for individual parameters in the table (see Table B.1 in Appendix B).

This part was proposed by the Chinese Academy of Sciences.

This part is under the jurisdiction of the National Acoustic Standardization Technical Committee (SAC/TC17).

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Introduction

GB/T 17248 (corresponding to ISO 11200 [15] ~ ISO 11205 [19]) is a series of standards, this standard specifies measuring machines and equipment

Various methods of transmitting sound pressure levels in nearby working locations and other designated locations. How to select the test machine equipment to emit sound pressure level

The specific method, the first part of GB/T 17248 gives the guiding principle. This part is the third part of GB/T 17248, which specifies

A method of measuring the transmitted sound pressure level in the field at a working location near a machine or equipment and at other designated locations.

The measurement methods specified in this section differ from ISO 11201 [16] in that local environmental corrections are used. This part and

ISO 11204 [18] differs in that the directivity of the machine's acoustic radiation is measured using fewer points of measurement or even an approximation of additional measurements.

Determine the acoustic characteristics of the test room to determine whether the test environment requirements are met, and determine the sound pressure level using the acoustic characteristics of the test room.

The environmental impact of the measurement is corrected. The measurement results obtained by the method specified in this section are level 2 accuracy (engineering level) or level 3 accuracy (simple)

Easy level).

This section specifies two methods for local environmental correction.

The first method (see A.1) is based on the assumption that the sound pressure level at the working position or at the specified position is clear from these positions.

See the clear machine parts, the noise generated by the radiation under free-propagating conditions. Based on this assumption, it is only necessary to determine local environmental

corrections.

Sound pressure measurement at the working position and acoustic characterization of the room.

The second method (see A.2) is more general. It is not necessary to make assumptions about the directivity of the noise radiation or the position of the sound source, because of the noise radiation

Directivity is determined by an approximation that requires little additional measurement position. Determining the accuracy of the measurement results takes into account the approximation of this method

characteristic.

Usually the sound pressure level generated by a machine or equipment operating in a normal environment is less than or equal to the sound pressure level generated by the sound pressure level.

The effects of background noise and the effects of other reflected noise in addition to the ground reflections placed on the machine under test are excluded. For machines in the workshop

Determination or calculation of sound pressure level at the operator's position during operation, sound power level and sound pressure level (and information related to shop characteristics or reflections and

All noise from other sources or machines needs to be obtained. A calculation method for the sound pressure level near a machine operating separately in the workshop

See ISO /T R11690-3 [20], usually observed with a difference of 1dB ~ 5dB, in extreme cases the difference will be greater.

Noise emitted by acoustic machines and equipment

Approximate environmental correction to determine working position and other designations

Positional sound pressure level

1.1 Overview

This part of GB/T 17248 specifies the on-site measurement of the sound pressure level at the working position and other specified locations near the machine or equipment.

The method (see Appendix D for the principle of the method). The working position is the position of the operator, which can be located in the open space and the sound source is operated.

In the workshop, in the operating room fixedly connected to the measured sound source or