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NATIONAL STANDARD OF THE PEOPLE'S REPUBLIC OF CHINA

GB/T 6881.2-2017

Acoustics -- Determination of sound power levels and sound energy levels of noise sources using sound pressure -- Engineering methods for small movable sources in reverberant fields -- Part 1: Comparison method for a hard-walled test room

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Foreword

GB/T 6881 "Acoustics sound pressure method to determine the noise source sound power level and sound energy level" consists of the following 3 parts.

--- GB/T 6881.1 Reverberation chamber precision method;

--- GB/T 6881.2 small movable sound source reverberation field hard wall test room comparison method;

--- GB/T 6881.3 reverb yard small movable sound source method dedicated reverberation test room method.

This section GB/T 6881 Part 2.

This section drafted in accordance with GB/T 1.1-2009 given rules.

This Part replaces GB/T 6881.2-2002 "Acoustics sound pressure method for the determination of noise source sound power level reverberant small medium-sized movable sound source

Engineering Law Part 1. Hard wall test room comparison method ", and GB/T 6881.2-2002 compared to the main technical content changes are as follows.

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

--- Increased sound energy level measurement methods (see 8.2);

--- Refine the content of measurement uncertainty, add the corresponding appendix (see Chapter 9 and Appendix C);

--- Refined benchmarks set requirements (see 4.1 and 4.2);

--- Increase the standard sound source and other equipment calibration requirements (see 5.2);

--- Added meteorological conditions related to the amendment (see Appendix A);

--- Added A-weighted sound energy level calculation (see Appendix B).

This section uses the translation method identical with ISO 3743-1.2010 "Acoustics sound pressure method for the determination of sound power level and sound energy level

Small movable sound reverb site - Part 1. Hardwall test room comparison method ".

The documents of our country that are consistent with the corresponding international documents that are normative references in this section are as follows.

Acoustics - Performance and calibration requirements of standard sound sources for the determination of sound power levels (ISO 6926-1).

1999, IDT);

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

Minute)].

This section is proposed by the Chinese Academy of Sciences.

This part of the National Acoustic Standardization Technical Committee (SAC/TC17) centralized.

This section is responsible for the drafting unit.Zhejiang University, Chinese Academy of Sciences Institute of Acoustics, Shenzhen Zhongya Electrical and Mechanical Industry Co., Ltd., Tongji University,

Beijing Institute of Labor Protection, China Institute of Metrology, Anhui Vocational and Technical College, Hefei University of Technology.

Introduction

This section corresponds to ISO 3740 [15] ~ ISO 3747 [21] GB/T 6881.1, GB/T 6881.2, GB/T 6881.3,

GB/T 3767, GB/T 3768 and GB/T 16538 series of one of the standards. This series of standards specifies the identification of machines, equipment and their components

The various methods of sound power level and sound energy level. According to the test to determine the sound power level or sound energy level and the choice of test equipment

Test Methods. GB/T 14367 [6] provides a general guide to the choice of method. GB/T

14367 [6], GB/T 6881.1 [3],

Only GB/T 6881.3 [4], GB/T 3767 [1], GB/T 6882 [5], GB/T 3768 [2] and GB/T 16538 [10]

General principles for the operation and installation of machines and equipment. It is necessary to establish test specifications for various types of sound sources in order to provide information on installation,

Load and operating conditions of the detailed requirements, get the conditions of sound power level or sound energy level.

GB/T 6881 This section gives the method is based on the measured noise source octave sound pressure level and calibration of the standard frequency doubler

Cheng sound pressure level comparison. The A-weighted sound power level or sound energy level can be calculated from the octave sound pressure level. This method applies to have a certain

Acoustic properties of small portable test equipment in the lab. Depending on the nature of the noise emitted by the source, the measured noise can be measured in the test chamber

Source sound power level or sound energy level. Due to the way in which they are operated and installed, this type of test chamber is not suitable for large fixed

equipment. In GB/T 16538 [10] describes how to use this method in the field to determine the sound power or acoustic energy level of a device or machine.

The method specified in this part of IEC 60388 allows the determination of the sound power level for each band and/or A-weighted sound power level.

The method given in this part of ISO 9001 GB/T 6881 meets Level 2 accuracy (Engineering level) as defined in ISO /Request more accurate

Degree, can refer to the appropriate part of GB/T 14367 [6] or GB/T 16404 [7] [9]. If you do not meet the relevant standards GB/T 6881 in this section

Then the other standard GB/T 6881 series or the appropriate part of GB/T 16404 [7] [9] may be used.

Acoustics sound pressure measurement of sound power level and noise source

Sound energy level reverberation field small mobile

Sound source engineering hard wall test room comparison method

1.1 Overview

This section GB/T 6881 specifies the noise source sound power level or sound energy level method. The method by measuring and comparing safety

The sound pressure level emitted by the sound source under test (machine or equipment) and the calibrated standard sound source in a hardwall test chamber of the specified characteristics is measured from the measured

The sound pressure level of the sound source is calculated as the octave sound power level of the sound source (or as a burst sound or sound energy level in the case of transient noise). A weighted sound power level

Or A-weighted sound energy level is calculated from octave band sound level.

1.2 noise and noise source type

This section applies to GB/T 19052-2003 defined in the various types of noise (steady-state, non-steady-state, ups and downs, Burst sound, etc.).

The sound source under test can be a device, a machine, a component or an accessory. The maximum size of the sound source to be measured is related to the size of the room used for acoustic measurements

(See 4.2).

1.3 test environment

This part of the measurement environment is a hard wall test chamber with specified acoustic characteristics.

1.4 Measurement Uncertainty

This section gives the octave band and A-weighted sound power level, the sound energy level of uncertainty. Uncertainty in line with GB/T 19052-

2 Normative references

The following documents for the application of this document is essential. 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.

Electroacoustics Octave and Fractional Octave Filters (IEC 61260.1995, IDT) GB/T 3241-2010

GB/T 3785.1-2010 Electroacoustic sound level meter Part 1. Specification (IEC 61672-1.2002, IDT)

GB/T 15173-2010 Electroacoustic sound calibrator (IEC 60942.2003, IDT)

GB/T 19052-2003 acoustic machinery and equipment emitted noise and noise testing