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

GB/T 27763-2011

**Acoustics -- Measurement and parametric description of spatial
sound distribution curves in workrooms for evaluation of their
acoustical performance**

声学 评价工作间声学性能的空间声场分布曲线的测量方法及参量表述
(English Translation)

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Foreword

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

This standard was proposed by the Chinese Academy of Sciences.

This standard by the National Standardization Technical Committee of Acoustics (SAC/TC17) centralized.

This standard was drafted. Tongji University, Communication University of China.

Introduction

According to GB/T 17249.1, spatial sound field distribution within the workplace can be used to express a curve. This curve characterizes the sound pressure level Leaving a function of the distance between the sound source, the sound source sound power level is known, stable and point source emission is non-directional sound radiation. For the test Taking into account the room, this standard specifies the determination of the spatial sound field distribution curve and deriving two features of the method. Both feature quantity distance SPL space doubling of the amount of attenuation and sound pressure level than the amount.

Data obtained using this standard can be used in the following areas.

--- In terms of room acoustics noise control identification;

- Determine the appropriate machine and work positions in the room;
- Evaluation of the need for additional sound absorption in the room;
- Qualitative assessment room loaded barrier potential effects;
- When the predetermined position to operate the machine known emission values in the room, calculate the expected noise.

Acoustic performance evaluation workshop space sound field Methods of measurement and parameter distribution curve representation

1 Scope

This standard specifies a method for measuring a given workplace spatial sound field distribution curve. We present a method, based on the number of measurements for it is expressed in the workplace to determine the acoustic properties in terms of noise control two parameters. relative to the free-field sound pressure level of more than the amount from the doubling of the SPL attenuation.

This standard applies to any arbitrary shape and size of the workplace, as long as the number of microphone positions to meet the requirements of regression.

This standard does not apply to the sound quality evaluation about language exchanges or other psychological aspects.

2 Normative references

The following documents for the application of this document is essential. For dated references, only the dated version suitable for use herein Member. For undated references, the latest edition (including any amendments) applies to this document.

GB/T 3241 electro-acoustics octave and fractional octave filters (GB/T 3241-2010, IEC 61260:1995, MOD) Determination of sound power levels of noise sources reflecting plane free field engineering method GB/T 3767-1996 Acoustics sound pressure (Eqv ISO 3744:1994) GB/T 3785.1 electric acoustic sound level meters - Part 1. Specification (GB/T 3785.1-2010, IEC 61672-1:2002, IDT) 1) Standard sound source performance and calibration requirements (GB/T 4129-2003, ISO 6926 GB/T 4129 Acoustics for sound power level measured.

1999, IDT)

Determination of sound power levels of noise sources - Precision methods for reverberation rooms (GB/T 6881.1-2002 GB/T 6881.1 sound pressure, idt ISO 3741:1999) GB/T 6882 Determination of sound pressure of sound power levels of noise sources anechoic and semi-anechoic chamber Precision method (GB/T 6882-2008, ISO 3745:2003, IDT)

1) IEC 60651 and IEC 60804 merging revisions.

3 Terms and Definitions

The following terms and definitions apply to this document.

SPL sound pressure level L_p Number of sound source radiating sound pressure p and the square of the reference sound pressure ($p_0 = 20\mu\text{Pa}$) the ratio of the square base 10 multiplied by 10.

Note 1: The sound pressure level in decibels, dB.

Note 2: should indicate the frequency weighting or bandwidth and time weighting (S, F, or I, see GB/T 3785.1).

Sound power level L_W Number of sound source acoustic radiation power and the reference sound power ($P_0 = 10^{-12} \text{ W}$) ratio of base 10 multiplied by 10.