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

GB/T 31004.2-2014

**Acoustics -- Measurement of sound insulation in buildings and
of building elements using sound intensity -- Part 2: Field
measurements**

声学 建筑和建筑构件隔声声强法测量 第2部分：现场测量

(English Translation)

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Foreword

GB/T 31004 "Building acoustics and sound insulation of building elements sound intensity measurement" is divided into the following sections.

- Part 1. Laboratory measurements;
- Part 2. Field measurements;
- Part 3. Laboratory measurements of low frequencies.

This section GB/T Part of 231,004.

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

This section uses the translation method identical with 15186-2 ISO . section 2003 "Building acoustics and sound insulation of building elements sound intensity measurement 2 Score. field measurement. " this section proposed by the Chinese Academy of Sciences.

The acoustics in part by the National Standardization Technical Committee (SAC/TC17) centralized.

This section is drafted. South China University of Technology, China Academy of Building Research, Chinese Academy of Sciences Institute of Acoustics, Yunnan Institute.

1.1 Overview

GB/T 31004 provisions of this part of the Situ Measurement of Sound Intensity walls, floors, doors, windows and small building elements sound insulation performance.

The method is applicable to the case of the presence of flanking transmission field measurements can provide sound power data for diagnostic analysis of flanking transmission or measure the amount of lateral acoustic parameters.

GB/T 31004.1 for no or only minimal flanking transmission of laboratory measurements. This part can be used is not satisfied GB/T 31004.1 requirements for laboratory measurements. GB/T 31004.3 for low frequency measurements under laboratory conditions.

This section also describes the impact of flanking transmission using the prescribed method of measurement of sound insulation, as well as how to measure sound intensity.

- Insulation of a building element of field measurements and laboratory measurements suppressed flanking transmission (ie. GB/T 19889.3) comparison;
- Determining the contribution of each part of the sound insulation of building elements;
- Measuring one or more lateral sound propagation path of sound insulation (to validate predictive models, such as. EN12354-1).

The amount of airborne sound insulation values given in this method and frequency. These values can be converted into a single value according to GB/T 50121-2005 Volume, sound insulation performance of buildings and building components were evaluated.

1.2 Accuracy

When each individual measuring small or large building components, reproducibility of the method and GB/T 19889.10-2006 and GB/T 19889.4-2005 same, or even better than both.

Note 1: If you are using acoustic parameters specified in this method and the results measured by GB/T 19889 stipulated traditional reverberation chamber method of comparison, in both parties should Between law introducing a correction term to reflect the deviation between the two methods. That is given in Appendix A.

Note 2: The accuracy of this part and its relationship with the acoustic parameters measured according to GB/T 19889.3-2005 and GB/T 19889.4-2005 and other methods it is given in Appendix B.

Note 3: flanking transmission are discussed in Appendix C.

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 15173-2010 electric acoustic sound calibrator (IEC 60942:2003, IDT) GB/T 17561-1998 sound intensity measuring instrument with measurement of sound pressure microphone (IEC 61043:1993, IDT) GB/T 19889.3-2005 Acoustics Measurement of sound insulation buildings and building elements - Part 3. airborne sound insulation of building elements experiment Chamber measurements (ISO 140-3:1995, IDT) GB/T 19889.4-2005 Acoustics Measurement of sound insulation buildings and building elements - Part 4. airborne sound insulation between rooms site Measurement (ISO 140-4:1998, IDT) GB/T 19889.10-2006 buildings and building elements Acoustics Measurement of sound insulation - Part 10. Small airborne sound insulation of building elements Laboratory measurements (ISO 140-10:1991, IDT) ISO 717-1:1996 Acoustics Determination of sound construction and building elements Part 1. Airborne sound insulation (Acoustics-Rating