



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

GB/T 3222.2-2022

**Acoustics - Description, measurement and assessment of
environmental noise - Part 2: Determination of sound pressure
levels**

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Foreword

This document was drafted in accordance with the rules provided in GB/T 1.1-2020 Directives

for Standardization - Part 1: Rules for the Structure and Drafting of Standardizing Documents.

This document is Part 2 of GB/T 3222 Acoustics - Description, Measurement and Assessment

of Environmental Noise. GB/T 3222 has issued the following parts:

---Part 1: Basic Quantities and Assessment Procedures;

---Part 2: Determination of Sound Pressure Levels.

This document serves as a replacement of GB/T 3222.2-2009 Acoustics - Description,

Measurement and Assessment of Environmental Noise - Part 2: Determination of Environmental Noise Levels. In comparison with GB/T 3222.2-2009, the main technical changes are as follows:

- Terms and definitions are added from 8 to 16 (see Chapter 3);
- An introduction to the principle of measurement is added (see Chapter 6);
- The contents of "measurement procedures", "evaluation of measurement results" and "extrapolation to other locations" are modified (see Chapter 9, Chapter 10 and Chapter 11; Chapter 8, Chapter 9 and Chapter 10 of Version 2009).

This document equivalently adopts ISO 1996-2:2017 Acoustics - Description, Measurement and Assessment of Environmental Noise - Part 2: Determination of Sound Pressure Levels. Please be noted that certain content of this document may involve patents. The institution issuing this document does not undertake the responsibility of identifying these patents.

This document was proposed by Chinese Academy of Sciences.

This document shall be under the jurisdiction of National Technical Committee 17 on Acoustics

of Standardization Administration of China (SAC/TC 17).

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Co., Ltd.; Institute of Acoustics, Chinese Academy of Sciences; Tongji University; Zhejiang University of Science and Technology; Beijing Municipal Institute of Labor Protection; Research Institute of Highway Ministry of Transport; Shanghai Academy of Environmental Sciences; Hangzhou AHAI Intelligent Technology Co., Ltd.; Guangzhou Qijing Environmental

Protection Technology Co., Ltd.; National Institute of Metrology, China; Northwestern Polytechnical University; Shanghai Jiao Tong University; Zhejiang University; Changsha Aobang Environmental Protection Industry Co., Ltd.

1 Scope

This document describes how sound pressure levels intended as a basis for assessing environmental noise limits or comparison of scenarios in spatial studies can be determined.

Determination can be done by direct measurement and by extrapolation of measurement results

by means of calculation. This document is primarily intended to be used outdoors but some guidance is given for indoor measurements as well. It is flexible and to a large extent, the user

determines the measurement effort and, accordingly, the measurement uncertainty, which is

determined and reported in each case. Thus, no limits for allowable maximum uncertainty are

set up. Often, the measurement results are combined with calculations to correct for reference

operating or propagation conditions different from those during the actual measurement.

This document can be applied on all kinds of environmental noise sources, such as road and

rail traffic noise, aircraft noise and industrial noise.

2 Normative References

The contents of the following documents constitute indispensable clauses of this document through the normative references in this text. In terms of references with a specified date, only

versions with a specified date are applicable to this document. In terms of references without a

specified date, the latest version (including all the modifications) is applicable to this document.

GB/T 3222.1-2022 Acoustics - Description, Measurement and Assessment of Environmental

Noise - Part 1: Basic Quantities and Assessment Procedures (ISO 1996-1:2016, IDT)

ISO 1996-1 Acoustics - Description, Measurement and Assessment of Environmental Noise -

Part 1: Basic Quantities and Assessment Procedures

ISO 20906:2009/Amd 1:2013 Acoustics - Unattended Monitoring of Aircraft Sound in Vicinity

of Airports - Amendment 1