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

GB/T 17249.3-2012

**Acoustics -- Recommended practice for the design of low-noise
workplaces containing machinery -- Part 3: Sound propagation
and noise prediction in workrooms**

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Foreword

GB/T 17249 "low - noise workplaces Design Guide" is divided into three parts.

Part 1. Noise control programs;

Part 2. Noise control measures;

Part 3. Sound propagation and noise prediction within the workplace.

This section is part 3 GB/T 17249 in.

Rules in this section in accordance with GB/T 1.1-2009 given draft.

This part identical with ISO /TR11690-3.1997 (E) "low - noise workplaces Design Guide
Part 3 work

Sound propagation and noise within the inter-prediction. "

This section made editorial changes.

This section proposed by the Chinese Academy of Sciences.

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

This section is drafted. Nanjing University Institute of Acoustics, Institute of Acoustics,
Chinese Academy of Sciences, Beijing Labor Protection Science Research Institute, Tongji

University, Hefei University of Technology, long Shaao Bang Industrial Co., Ltd. of
environmental protection.

Introduction

All relevant departments for this section relates to workplace noise control and low noise in
the workplace designed using its purpose is.

--- All relevant departments to understand the current state of the art workshop sound
propagation and noise prediction aspects;

--- Assist the relevant departments to communicate in a common technical framework;

--- Promoting hope to achieve understanding of noise control requirements.

This section provides a sound source within the workplace (such as the machine is running) and launch contact between the SPL position work. Hereby,

Noise emission values of machinery suppliers and require a low noise values irradiation machine users can exchange information.

A further object of this section is to assess the acoustic performance within the workplace.

These tasks are described by determining the amount of sound propagation within the workplace to contact each other.

This section presents the noise prediction method within the workplace, and presents a framework for noise prediction, noise prediction method by which the various

According to different parameters can provide the level of detail to divide.

Low acoustic noise in the workplace Design Guide

Part 3. Sound propagation within the workplace

And noise prediction

1 Scope

This part of this standard specifies a sound propagation prediction methods and workplace sound pressure levels and noise exposure within the workplace.

Noise prediction scheme is described in detail and the environment against the physical phenomena and modeling methods (the input parameters, calculated) of the Environment

Closely related. This section summarizes the relationship, described the noise prediction method, and provides the use of noise prediction noise in the workplace

Recommendation sound control. Appendix A ~ Appendix E gives an example of the application of noise prediction methods.

2 Normative references

The following documents for the application of this document is essential. For dated references, only the dated edition applies to this article

Member. For undated references, the latest edition (including any amendments) applies to this document.

GB/T 17249.1-1998 low acoustic noise design guidelines workplace noise control programs (ISO 11690-1.1996,

EQV)

Note. The specific standard interior sound field distribution curve measured see GB/T

27763-2011.

3 Terms and Definitions

GB/T 17249.1-1998 defined terms and definitions apply to this document.

Fundamentals 4 indoor sound propagation

4.1 describes the amount of sound propagation

Fundamentals of workplace noise prediction is to predict the non-directional sound pressure level distribution point sound source. The distribution and the following factors related.

- Interior shape and volume;
- Each surface of indoor sound absorption;
- Interior arrangement.

Space sound field distribution curve of the room (see GB/T 17249.1-1998 in 3.4.11 and Figures 1 and 2) expressed its acoustic energy distribution

Results within a given distance, the sound field spatial information distribution curve contains two parameters can be summarized as follows (see GB/T 17249.1-1998 3.4.12 and 3.4.13).

- SPL distance doubling the amount of space attenuation (DL2)
- With respect to the free-field sound pressure level than the amount of attenuation (DLf)

Spatial sound field distribution curves of these two parameters are used to describe the acoustic characteristics of a room. If DLf lower, DL2 higher by

Given the smaller the sound pressure level generated by the sound source (see GB/T 17249.2-2005 6.3) Appendix D describes how to use sound field distribution

Curve describes the acoustic characteristics of a room.