

ICS 13.160
CCS Z 32



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

GB/T 13441.2-2008

**Mechanical vibration and shock -- Evaluation of human
exposure to whole-body vibration -- Part 2: Vibration in
buildings (1Hz to 80Hz)**

机械振动与冲击 人体暴露于全身振动的评价 第2部分：建筑物内的振动（1Hz～80Hz）

(English Translation)

Issued on: September 27, 2008

Implemented on: May 1, 2009

Issued by: Standardization Administration of China

Table of Contents

Preface
Introduction
1 Scope
2 Normative references
3 Terms and definitions
Building vibration measurement 4
5 Human response to vibration of the building
Appendix A (normative) frequency weighting value W_m mathematical definition
Annex B (informative) Guide to collect data about the human response to vibration of the building
Reference

Foreword

GB/T 13441 "Mechanical vibration and shock of human exposure to whole-body vibration evaluation" is divided into four parts.

- Part 1. General requirements;
- Part 2. Vibration in buildings (1Hz ~ 80Hz);
- Part 4. Evaluation Guide vibration and rotational motion on the fixed rail transportation system in the passenger and crew comfort impacts;
- Part 5. Impact Evaluation Methods include multiple vibration.

This section GB/T 13441 Part 2.

This part identical with ISO 2631-2:2003 "Mechanical vibration and impact evaluation of human exposure to whole body vibration - Part 2. Building Vibration inside buildings (1Hz ~ 80Hz) "(in English).

For ease of use, this section made the following editorial changes.

- With "this Part" instead of "ISO 2631 in this section";
- With a decimal point as a decimal symbol instead of ", ". ", ";
- To ISO 2631-2:2003 references other international standards, have been adopted as the equivalent of a standard, instead of using our standard correspondence International standards, while others direct reference to international standards.

Appendix A of this section is normative appendix, Appendix B is an informative annex.

This part of the National mechanical vibration, shock and condition monitoring Standardization Technical Committee (SAC/TC53) and focal points.

This section drafted by. China Academy of Railway Sciences, Beijing Institute of Technology.

Introduction

Structure of human exposure to vibration in buildings, occupants can perceive and affect them in many ways. More important it is to live Comfort and quality of life of those who will be lowered.

For vibration on human comfort in buildings and annoyance evaluation of the impact of the priority use of vibration total weight. By giving the building the suitability of a location indication to indicate characteristics of people in the building location or place, with the value of the appropriate frequency weighting obtained.

This section is intended to encourage the adoption of a unified data collection method for building human vibration response.

GB/T 13441.2-2008/ISO 2631-2:2003 Mechanical vibration and shock human exposure to body Vibration in the building. evaluation of vibration - Part 2 (1H ~ 80H z z)

1 Scope

GB/T this section deals with the comfort of the occupants T 13441 and worries associated buildings exposed to the human body vibration and shock, Regulation Set the measurement and evaluation methods, including measurement direction and measurement position determination. Defined in the applicable frequency range of 1Hz ~ 80Hz frequency Meter weights W_m , in this frequency range without a clear position within the building occupants.

Note 1: If the occupants a clear position, can be applied GB/T 13441.1 given frequency weighting value W_m .

Although the building is usually for a pilot study it is very effective, but at the design stage of the building into the existing building or impossible Under the circumstances, the concept contained in this section shall be equally applicable to the building. In these cases, you must use some method of building vibration ring it should be forecast.

Structural damage to the building situation may exist, this section does not provide guidance, see relevant content GB/T 14124. In addition, this section not for human health and safety evaluation of the influence.

This section does not allow vibration predetermined value.

Note 2: Before you gather more information related to this section, it is not yet given allowable vibration guide values.

Frequency weighting given value W_m mathematical definition in Appendix A, is given in Appendix B to complain about building vibration data mining Set guidelines.

2 Normative references

The following documents contain provisions which, through reference GB/T 13441 in this section constitute provisions of this section. For dated reference documents Member, all subsequent amendments (not including errata content) or revisions do not apply to this section, however, encouraged to reach under this section Parties to research agreement to use the latest versions of these documents. For undated reference documents, the latest versions apply to this section.

GB/T 13441.1-2007 Mechanical vibration and shock of human exposure to whole body vibration evaluation - Part 1. General requirements (ISO 2631-1:1997, IDT) ISO 8041 for vibration measuring instruments IEC 61260:1995 electric acoustic octave and fractional octave filters

3 Terms and Definitions

The following terms and definitions apply to this part of the GB/T 13441 of.

Including surveys, measurement, processing, sorting, description, classification and a series of activities related to data presentation.

Static structure for human habitation or other activities, including offices, factories, hospitals, schools and day-care centers.

From the start and end time of the day to determine the vibration source activity cycle or duration of action.

GB/T 13441.2-2008/ISO 2631-2:2003