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# NATIONAL STANDARD OF THE PEOPLE'S REPUBLIC OF CHINA

# GB/T 24474.1-2020

Replacing GB/T 24474-2009

## Measurement of ride quality - Part 1: Lifts (elevators)

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## Foreword

GB/T 24474 "Measurement of Passenger Transport Quality" is divided into the following two parts.

---Part 1.Elevator;

---Part 2.Escalators and moving walks.

This part is Part 1 of GB/T 24474.

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

This part replaces GB/T 24474-2009 "Elevator Ride Quality Measurement". Compared with GB/T 24474-2009, except for editorial changes

In addition, the main technical content changes are as follows.

---Updated normative reference documents (see Chapter 2, Chapter 2 of the.2009 edition);

--- Deleted the definition of sound in the term (see 3.10 in the.2009 edition);

---Modified the definition of sound pressure level in terms (see 3.10, 3.11 of the.2009 edition);

---Modified the standards cited for the characteristics of measuring instruments (see Table 1, Table 1 of the.2009 edition);

---Added the provisions that should be noted in the test report under the presence of external sound sources (see 6.1.1).

This section uses the redrafting method to modify and adopt ISO 18738-1.2012 "Ride Quality Measurement Part 1.Elevator".

The technical differences between this part and ISO 18738-1.2012 and the reasons are as follows.

---Regarding normative reference documents, this section has made adjustments with technical differences to adapt to my country's technical conditions and adjustments.

The situation is collectively reflected in Chapter 2 "Normative Reference Documents", and the specific adjustments are as follows.

* Replace ISO 2041 with GB/T 2298, which is equivalent to the international standard (see Chapter 3);

* Replace IEC 61672-1 (see Chapter 3, Table 1, 4.5) with GB/T 3785.1 equivalent to the international standard;

* Replace IEC 61672-2 (see Chapter 3, 4.6.4) with GB/T 3785.2 equivalent to the international standard;

* Replace ISO 5805 with GB/T 15619, which is equivalent to adopting international standards (see Chapter 3);

* Replace ISO 8041 with GB/T 23716 equivalent to the international standard (see Table 1,

4.3.1, 4.3.2, 4.4, 4.6.2,

4.6.3);

* Replace ISO /IEC Guide98-3 (see 6.5) with GB/T 27418 which is modified to adopt international standards.

--- The definition of the term 3.10 "sound pressure level" has been modified so that Part 1 and Part 2 of this series of standards are harmonized.

This section has made the following editorial changes.

--- Deleted the content in the introduction that is not suitable for my country's national conditions, because its existence does not affect the use of this section;

---Added the statement of applicability of this part in Chapter 1 "Scope";

--- In the 3.11 equivalent sound pressure level, "Fast" is changed to "F (Fast)" to be consistent with GB/T 3785.1-2010;

--- In Table 1, the "Fast" in the "Time Weighting" column of the "Sound" column is changed to "F (Fast)" in order to be consistent with GB/T 3785.1-2010

To; modify the unit symbol "dB(A)" to "dB" to meet the relevant requirements of GB/T 3102.7-1993;

---Added the sub-clause numbers of 4.3 and 6.5 for easy application;

---In the references, the corresponding international standards are replaced by national standards for ease of application.

This part is proposed and managed by the National Elevator Standardization Technical Committee (SAC/TC196).

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## Introduction

0.1 The purpose of this part of GB/T 24474 is to encourage the entire industry to define, measure, and measure the vibration and noise signals that constitute the quality of elevator transportation.

The processing and presentation are unified.

The purpose of unification is to reduce the difference in elevator ride quality measurement results caused by the difference in signal acquisition and quantification methods, so that

Elevator users benefit.

0.2 This section is mainly used to provide guidance to groups interested in the following aspects.

a) Improve the manufacturing specifications and calibration methods of the instrument;

b) The scope of the elevator transportation quality and technical indicators is stipulated in the contract;

c) Measure the elevator transportation quality according to national standards.

0.3 This section aims to propose such a method for measuring the quality of elevator transportation.

a) It is easy to understand by people who have no professional knowledge in noise and vibration analysis;

b) It is closely related to the human body's response to ensure that it can more truly reflect the human body's feelings;