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

GB/T 30559.2-2017

**Energy performance of lifts, escalators and moving walks --
Part 2: Energy calculation and classification for lifts (elevators)**

Issued on: October 14, 2017

Implemented on: May 1, 2018

**Issued by: General Administration of Quality Supervision, Inspection and
Quarantine of the People's Republic of China, Standardization
Administration of the People's Republic of China**

Table of Contents

Foreword

Introduction

0.1 This part is formulated to meet the rapidly increasing demand for efficient energy use.

0.2 This section provides.

0.3 This section may provide guidance for the following parties involved.

1 Scope

2 Normative references

3 Terms and definitions

Foreword

GB/T 30559 "energy performance of elevators, escalators and moving walkways" includes the following sections.

--- Part 1. Energy measurement and verification;

--- Part 2. Elevator energy calculation and classification;

--- Part 3. Energy calculation and classification of escalators and moving walkways.

This section GB/T 30559 Part 2.

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

This section uses the translation method identical with ISO 25745-2:2015 "Elevators, escalators and moving walkways energy performance Part 2

Sub-elevator energy calculation and grading "(in English).

The documents of our country that are consistent with the corresponding international documents that are normative references in this section are as follows.

--- GB/T 30559.1-2014 energy performance of elevators, escalators and moving walkways - Part 1. Energy measurement and inspection

Card (ISO 25745-1:2012, IDT)

This section compared with ISO 25745-2:2015 made the following editorial changes.

--- Remove the introduction is not suitable for China's national conditions, as its existence or not does not affect the use of this section;

- In the introduction, an increase of clause number, in order to facilitate reference;
- In Chapter 4, an increase of the clause number for easy reference;
- Adjust the order of Appendix A and Appendix C to comply with the provisions of GB/T 1.1-2009;
- Modify Appendix C (Informative) Table C.1 "Typical buildings and use" and "typical rated speed" to suit our country

National conditions.

This part of the National Standardization Technical Committee elevator (SAC/TC196) and focal point.

This part of the drafting unit. KONE Elevator Co., Ltd., Shanghai Mitsubishi Elevator Co., Ltd., China Academy of Building Construction Mechanization Research

Research Branch, Shanghai Jiaotong University, Otis Electrical Elevator Co., Ltd., Schindler (China) Elevator Co., Ltd., Hitachi Elevator (China) Co., Ltd.

Division, Otis Elevator (China) Investment Co., Ltd., Conli Elevator Co., Ltd., Guangdong Special Equipment Inspection Institute, Shanghai Special Equipment

Supervision and Inspection Technology Research Institute, Yongda Elevator Equipment (China) Co., Ltd., Guangzhou Guangri Elevator Industry Co., Ltd., Southeast Elevator Co., Ltd.

Company, Shenzhen Special Equipment Safety Inspection Institute, Giant KONE Elevator Co., Ltd., Huasheng Fujitec Elevator Co., Ltd., Suzhou Dili Power

Ladder Co., Ltd., ThyssenKrupp Escalator (China) Co., Ltd., Mitsubishi Elevator Co., Ltd., Shenlong Elevator Co., Ltd.,

Ladder Group Co., Ltd., Shanghai Shida Electric Co., Ltd., the National Elevator Quality Supervision and Inspection Center, Danfoss automatic control management (on

Sea) Co., Ltd., Suzhou Monak Control Technology Co., Ltd., Guangzhou Ri-Bin Technology Development Co., Ltd., Hitachi Elevator (Guangzhou) escalators have

Limited, Shanghai Modern Elevator Manufacturing Co., Ltd.

0.2 This section provides.

- a) a method of estimating daily and annual energy consumption of elevators;
- b) Method of grading the energy performance of newly installed elevators, elevators or rebuilt elevators.

0.3 This section may provide guidance for the following parties involved.

- a) Building developers or owners who assess the energy consumption of various elevators;
- b) owners and service companies that make alterations to the elevator, including energy consumption reductions;
- c) elevator installation and maintenance unit;
- d) Consultants and architects involved in the specification of elevators;
- e) Inspectors and other third-party agencies that provide energy performance grading services.

0.4 The total energy consumption of an entire lifespan of an elevator includes the energy consumption required to manufacture, install, use and dispose of the product. However, this section

Points only consider the energy performance of using the elevator (running, idle and standby).

This section only consider the use of traction, hydraulic and forced lift, but also for the use of other technologies to provide reference elevator.

0.5 When evaluating the energy performance of an elevator using this section, the following assumptions are taken.

- a) All the components of the elevator are designed according to the routine engineering practice and calculation standard;
- b) All components have a reasonable mechanical, electrical structure;
- c) all components of the material composition has sufficient strength and the appropriate quality;
- d) All parts are free of defects;
- e) all parts are in good condition and working properly;
- f) The selection and installation of all components has taken into account the foreseeable environmental impacts and special working conditions.

Energy performance of elevators, escalators and moving walkways

Part 2. Energy calculation and classification of elevators

1 Scope

GB/T 30559 provisions of this section.

- a) A method of estimating energy consumption based on measured data, calculations or

simulations for a single hoisting, hydraulics and forcing

Estimated annual energy consumption of elevators;

b) Classification of energy performance of traction, hydraulic and forced-lift elevators based on a single new installation, in-service and retrofit.

This section applies to the rated speed greater than 0.15m/s passenger elevators and freight elevators, and only consider the use of the life cycle of the stage

The energy performance.

Note 1. For other types of elevators, such as debris elevators, this section can be used as a reference.

This section does not consider the following aspects that affect energy measurement, calculation, and simulation.

- a) hoistway lighting;
- b) car heating and cooling equipment;
- c) machine space lighting;
- d) heating, ventilating and air-conditioning installations in the machinery space;
- e) non-elevator display systems and security CCTV cameras;
- f) Non-elevator monitoring systems (eg, building management systems, etc.);
- g) the impact of elevator group control allocation on energy consumption;
- h) environmental conditions;
- i) Energy consumption at the power outlet;
- j) Elevator with fast-moving area.

Note 2. The fast-moving area does not necessarily affect the average car load but significantly affects the average operating distance.

2 Normative references

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

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

ISO 25745-1 Energy performance of elevators, escalators and moving walkways - Part 1. Energy measurement and verification (Energyper-