

ICS 91.140.90
CCS Q78



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

GB/Z 31822-2015

**Study report on the safety requirements of public service
escalators and moving walks**

公共交通型自动扶梯和自动人行道的安全要求指导文件

Issued on: July 3, 2015

Implemented on: July 3, 2015

**Issued by: State Administration for Market Regulation;
Standardization Administration of China**

Table of Contents

Foreword	I
Introduction	II
1 Scope	1
2 Normative references	1
3 Terms and definitions	1
4 Content of the consultation between the owner and the manufacturer of public transport type escalators and moving walks	3
4.1 General	3
4.2 Purpose of use	3
4.3 Time of use	3
4.4 Load conditions	4
4.5 Applicable design codes of the public transport system	4
5 Guidance on the safety design of public transport type escalators and moving walks	4
5.1 General	4
5.2 Design based on good engineering practice	5
6 Selection and planning, safety requirements and/or protective measures and use of public transport type escalators and moving walks	6
6.1 General	6
6.2 Selection and planning	6
6.3 Safety requirements and/or protective measures	6
6.3.1 Supporting structure (truss) and cladding	6
6.3.2 Steps and pallets	6
6.3.3 Driving device	7
6.3.4 Handrail system	7
6.3.5 Entrances and exits	7
6.4 Information for use	8
Annex A (informative) Examples of judging whether an escalator is part of a public transport system	9
Annex B (informative) Requirements relating to escalators and moving walks in the design codes of public transport systems	14
Annex C (informative) List of design standards for public transport type escalators and moving walks	18
Bibliography	20

Foreword

This instructional document has been drafted in accordance with the rules given in GB/T 1.1-2009. This guiding technical document is proposed and managed by the National Elevator Standardization Technical Committee (SAC/TC196). This instructional technical document is drafted by Shanghai Mitsubishi Elevator Co., Ltd. The guidance of technical documents to participate in the drafting unit. Jiangnan Jiajie Elevator Co., Ltd., China Building Research Institute of Building Mechanization Research Branch, Otis Elevator (China) Investment Co., Ltd., Schindler (China) Elevator Co., Ltd., Hitachi Elevator (Guangzhou) Escalator Co., Ltd. Division, KONE Elevator Co., Ltd., Xizi Otis Elevator Co., Ltd., Yongda Elevator Equipment (China) Co., Ltd., ThyssenKrupp Elevator State) Co., Ltd., Toshiba Elevator (China) Co., Ltd., Guangdong Institute of Special Equipment Inspection, Shanghai Special Equipment Supervision and Inspection Technology Research Institute, Shenzhen Special Equipment Safety Inspection Institute, Jiangsu Institute of Special Equipment Safety Supervision and Inspection Suzhou Branch, Giant KONE Co., Ltd., Shanghai Jiaotong University, Conli Elevator Co., Ltd., Guangzhou Guangri Elevator Co., Ltd., Suzhou Dili Elevator Co., Ltd. Secretary, Mitsubishi Elevator Co., Ltd., Shanghai Hyundai Elevator Manufacturing Co., Ltd., Ningbo Lilongwe Group Co., Ltd., Younde Elevator Limited Company, Kunshan Tongyou Elevator Co., Senhe Elevator Co., Ltd. The main drafters of this Guidance Document are Zhu Rong, Shen Yin, Zhang Zhi Yan, Chen Feng Wang, Chen Yan Ying, Gao Xiang, Liang Jiasheng, Shang Rui, Li Jun, Zhang Tongbo, Li Haihong, Qu Chengcheng, Zhang Jie, Qin Yi Fen, Chen Jiang, Ye Liang, Gu Jiadong, Feng Hongjing, Zhang Lichun, Geng Peng, Tang Linzhong, Chen Dong, Ni Weibo, Pengnian Jun, Wang Weiqiang, Wang Mingfu, Shen Jianxue.

0.1 In the current national standard GB 16899-2011, public transport-type escalators and moving walkways refer to the following situations An escalator and moving walkway.

- a) is part of the public transport system including the exit and entrance points;
- b) High-intensity use, ie about 140 hours of weekly operating time, and 100% of braking load at any 3-hour interval Duration of not less than 0.5h. The public transportation system is an organic whole composed of various modes of public transport such as civil aviation, railways, waterway shipping, subways, light railways and public transport buses, Has become an indispensable means of travel for people's daily life in modern society and generally requires long-term, almost continuous operation. As public transportation The system components of escalators and moving walkways need to meet the functional requirements of the public transportation system to which they belong.

0.2 By definition, public transport-type escalators and moving walkways are escalators and autoworks that are used under certain conditions Road, the main features of its conditions of use is long-term, almost continuous operation and high-intensity use, including "high-intensity use" also includes Characteristics of the conditions of use of crowds that

may occur near public transport-type escalators and moving walkways, especially at the entrances and exits. There are significant differences between different public transport systems, for example, the large differences in traffic flow between urban subway stations and civil airports. There are also significant differences in loading conditions between public transport type escalators and moving walkways, so public transport escalators and automatic The needs of sidewalks are also different. There are many factors affecting the traffic flow in public transport systems, including land planning (for example, the degree of maturity of the relevant area development, etc.) Policies (eg fare adjustments, etc.), operational service levels (eg departure intervals, etc.), and operational coordination between various modes of transport. In addition, the expected traffic volume of the public transport system needs to be considered. The traffic volume of the public transport system is determined by the public transport project. And various parts of the construction scale, operating mode, an important basis.

0.3 GB 16899-2011 in the provisions of H.2, for public transport type escalators and moving walkways, manufacturers and owners should be based on actual Traffic Flow Determines load conditions and additional safety functions. According to traffic flow to determine the load conditions and additional safety features, for the owners is to traffic flow into load conditions and additional safety Functions and other public transportation type escalators and moving walkways on the product requirements for public transport escalators and moving walkways to create Business is to determine the product design input related content. In addition to traffic flow, the factors that affect the functional and performance requirements of public transport-type escalators and moving walkways also include those applicable Laws, regulations, standards, codes, environmental conditions (eg air temperature at public transport type escalators and moving walkways, air Relative humidity, pollution levels, etc.), civil engineering issues, and specific requirements for specific public transportation system projects. For special operating conditions (eg operation in open air, high altitude operation, public transport escalators and automatic people Sidewalks for emergency exits, etc.), design guidelines, parts, materials, and instructions for use that conform to these particular operating conditions are required.

0.4 Design, manufacture, install and ultimately deliver public transportation escalators to meet all requirements based on product design input requirements And moving walkways are the product realization process. This process involves quality control in design and development, procurement, production, monitoring and measurement Therefore, manufacturers need to have a good quality management system. In addition, according to the product features, operating conditions and other maintenance plans developed, Maintenance processes are carried out for repairs and are also intended for public transport escalators and travelators to meet expected expectations over their expected useful lives Basic conditions. Note The relevant requirements of quality management system see GB/T 19001. Escalators and moving walks maintenance specifications see GB/T 18775.

0.5 Public transportations Escalators and moving walkways where venues (eg. Railway

stations) often carry heavy luggage. However, the use of escalators and moving walkways to carry bulky luggage can easily lead to danger. For these people, using the elevator is better traffic the way. The management of these places should set the appropriate position to prohibit the use of escalators and moving walkways to transport heavy luggage. Signs, it is recommended to use the elevator instructions and elevator location guide signs, guide these people to use the elevator. Some public transport-type escalators and moving walkways where the place (for example, Metro station) staff intensive, in the event of a sudden incident may affect the safe operation of public transport type escalators and moving walks, or even secondary accidents, which are governed by the management of these places. The unit formulates contingency plans to effectively prevent and control possible accidents. Note The relevant requirements of contingency plans see GB/T 29639.

0.6 This document is based on the definition of public transport-type escalators and travelators and GB 16899-2011 of the relevant provisions of the owners. And the contents of the consultation between the manufacturers conducted a study and GB 16899-2011 on the basis of the relevant provisions of the public transport given from Escalators and moving walkways. Corresponding safety design guidelines, selection and planning, safety requirements and/or protective measures and their use. Additional requirements. Public transport type escalators and moving walkways Safety Requirements Guidance Document

1 Scope

GB/Z 31822-2015 is the Chinese national standard on study report on the safety requirements of public service escalators and moving walks, in the field of construction materials and building. The /Z suffix marks it as a guiding technical document: it does not prescribe requirements that can be certified against, but sets out the technique, the method or the state of the art that the standards bodies recommend following. It was issued on 3 July 2015 by the State Administration for Market Regulation; Standardization Administration of China. As a guiding technical document it carries no separate date of entry into force: it applies from publication. Classification: ICS 91.140.90, CCS Q78. This page is published from the official record of the standard held by the Chinese standards administration: the identification, the dates, the classification and the issuing body are taken from there. The clause text, the tables and the numeric limits are in the document itself, which is delivered complete in English translation.

This guidance is given in the technical document for consultation between owners and manufacturers of public transport escalators and moving walkways Safety Guidelines, Selection and Planning, Safety Requirements and/or Protective Measures, Use of Common Traffic-type Escalators and Moving Walkways Related requirements. This guidance document considers the safety of the following persons.

b) persons on public transport type escalators and outside of moving walks (but in close proximity);