

ICS 91.140.90

CCS Q 78



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

GB/T 31821-2015

Specification for the discard of the main parts of lifts

电梯主要部件报废技术条件

Issued on: July 3, 2015

Implemented on: February 1, 2016

**Issued by: General Administration of Quality Supervision, Inspection and
Quarantine;
Standardization Administration of the PRC**

Table of Contents

- 1 Scope
- 2 Normative references
- 3 Terms and Definitions
- 4 Scrapped technical conditions
 - 4.1 General
 - 4.2 Host Driver
 - 4.2.1 Motor
 - 4.2.2 gearbox
 - 4.2.3 Brakes
 - 4.2.4 traction sheave
 - 4.2.5 roll
 - 4.3 emergency rescue apparatus
 - 4.3.1 Manual brake release
 - 4.3.2 Manual winch
 - 4.3.3 The emergency power supply device
 - 4.3.4 hydraulic winch
 - 4.4 suspension means
 - 4.4.1 General
 - 4.4.2 hoisting rope suspension wire rope and hydraulic elevators
 - 4.4.3 Forced drive elevator rope
 - 4.4.4 flat composite hoisting steel
 - 4.4.5 Termination means
 - 4.4.6 pulley
 - 4.5 compensation means
 - 4.5.1 Compensation Chain (cable) and a guide means
 - 4.6.1 car frame
 - 4.7 pairs weight (balance weight)
 - 4.7.1 counterweight (counterweight) rack
 - 4.7.2 counterweight (counterweight) Block
 - 4.8 landing door and car door
 - 4.8.1 Mechanical strength
 - 4.8.2 door

- 4.8.3 landing doors Door
- 4.8.4 sill and bracket
- 4.8.5 guides and doors hanging mechanism
- 4.8.6 Door
- 4.9 access door, security door and hoistway door flaps
- 4.10 rails and guide shoe
 - 4.10.1 T-rail
 - 4.10.2 hollow guide
- 4.11.1 door lock device
- 4.11.2 entrance door protection device
- 4.11.3 governor and tensioning device
- 4.11.4 safety gear and pulling apparatus
- 4.11.5 overload device
- 4.11.6 Safety switch
- 4.11.7 uplink overspeed protection device
- 4.11.8 buffer
- 4.12 electrical control devices
 - 4.12.1 control cabinet
 - 4.12.2 trailing cable
- 4.13 encoder
- 4.14 hydraulic components
 - 4.14.1 hydraulic cylinder
 - 4.14.2 conduit
 - 4.14.3 pump station
 - 4.14.4 rupture valve
 - 4.14.5 filter

Foreword

This standard was drafted in accordance with GB/T 1.1-2009 given rules. This standard by the National Standardization Technical Committee elevator (SAC/TC196) and focal points. This standard is drafted by: Shanghai Institute of Special Equipment Inspection. Participated in the drafting of this Standard. China Academy of Building Research Construction Mechanization Research Branch, Shanghai Mitsubishi Elevator Co., Ltd., KONE electricity Ladder Co., Schindler (China) Elevator Co., Ltd., Hitachi Elevator (China) Co., Otis Elevator (China) Investment Co., Ltd., East South Elevator Co., Ltd. Yongda

Elevator Equipment (China) Co., Ltd., West Otis Elevator Co., Ltd., Guangdong Special Equipment Inspection Research Institute, Shenzhen Institute of Special Equipment Safety Inspection, Huasheng Fujitec Elevator Co., Ltd., Toshiba Elevator (China) Co., Ltd., Jiangnan Jia Czech Elevator Co., Ltd., ThyssenKrupp Elevator (Shanghai) Co., Ltd., Shenyang Brilliant Elevator Group Co., Ltd., Shanghai Jiaotong University, Jiangsu Institute of Special Equipment Safety Supervision and Inspection Branch, Suzhou, Guangzhou Elevator Industry Co., Canny Elevator Co. Shares The company, Giant Kone Elevator Co., Ltd., Ling Wang Elevator Co., Ltd., Suzhou Dili Austrian Elevator Co., Ltd. Elevator gifted Snyder, Shanghai Hyundai Elevator Co., Ltd., Senhe Elevator Co., Ltd., Suzhou Monarch Control Technology Co., Ltd., located in Suzhou Torin drive Preparation Co., Ltd., National Elevator Quality Supervision and Inspection Center, Tianjin Oreco Elevator Co., Ltd., West Elevator Group Co., Ltd. Li Ju Suzhou Elevator Co., Ltd., Hangzhou Theo Elevator Co., Ltd., Hebei Dongfang Fidelity Machinery Co., Ltd. Kunshan KOYO Elevator Co., Ningbo, Shanghai Mitsubishi Elevator Parts Co., Ltd., Ningbo of Lung Enterprise Group Co., Ltd., Suzhou Elevator Co., Ltd. Rhine. Drafters of this standard. Shu Wenhua, Ouyang Glands Chenfeng Wang, Gan Jing Ge, Li Feng, Zhu Baoqing, Sheyun Kui, Zhang Admiralty, Ma Yiping, Deng Qi, Wen Aimin, Li Chufeng, Wangding Cheng, Li Ruiyao, Xiesong Qing, Zhou Weidong, Zhang Shoulin, in Chunmei, Zhang Xiaofeng, Zheng Qu Fei, Hou Ying Hao, Zhang Jianhong, Li Xuerong, Yu Jianguo, Tang Lin Zhong, Xu Wenming, Xie Jin Peng, cattle ownership, Liuchun Kai, FANG Wen-Na, Liang Yanchang, Shen Yan, Feng Bin, Wang Chunguang, Song Liang, Jia Yan Hua, Wang Mingfu, Lin Bin, Peng Jun, Li Mingzhu.

0.1 The main components include a standard part of the safe operation of elevators affect larger parts, not including wearing parts, the use of new technologies In the elevator and the application of fewer components.

0.2 standard specifies the technical conditions of the elevator scrapped main components, unspecified judgment scrapped the program. After

0.3 floods, earthquakes, fires and other disasters, you may need to lift the overall safety assessment of the actual situation, determine its main components Scrapped technical conditions.

0.4 pairs of the quantitative criteria are not technical conditions, reference product maintenance manual.

0.5 elevator main parts scrapped achieve technical conditions specified in this standard, or reach retirement maintenance and technical conditions given in the specification, excellent Consider repair, such as after repair still does not meet the requirements or repair costs are too high to be considered scrapped. Elevator main parts scrapped technical conditions

1 Scope

China's national specification for when the main parts of a lift must be taken out of service -

the document a maintenance company, an inspector and a building owner argue over, because the question it answers is the one that costs money: is this component still serviceable, or must it be replaced. It specifies the technical conditions for the discard of the main parts of lifts, and it applies to the maintenance, the inspection and the modernisation of lifts in service. The parts it covers are the ones on which the safety of the installation rests: the suspension ropes and belts, with the wire breaks, the loss of diameter, the corrosion and the deformation that condemn them; the traction sheave and the diverter pulleys, with the groove wear that lets a rope slip; the brake, its linings and its springs; the guide rails and the guide shoes; the safety gear and the overspeed governor; the buffers; the car and counterweight frames and their fixings; the doors and their locks and operators, which is where most lift accidents actually happen; and the controller and the electrical components. For each the standard sets the measurable criterion at which the part is to be discarded rather than adjusted or repaired, together with how the measurement is to be made. The value of writing that down is that it converts a judgement into a check: a lift that has been in service for twenty years is not condemned by its age, and a rope with a single broken wire is not condemned at all, but a rope past the limit in this standard is, and nobody has to argue about it. Issued on 3 July 2015 and in force since 1 February 2016.

This standard specifies the traction and positive drive elevator, hydraulic elevator main parts scrapped technical conditions. This standard applies to the rated speed of not more than 6.0m/s of traction electric drive type and rated speed not greater than 0.63m/s Power drive Fixed compulsory passenger elevators and lifts, and a rated speed of not more than 1.0m/s hydraulic lift. For the rated speed greater than 6.0m/s of Traction electric drive passenger lifts and service lifts execution may refer to this standard. This standard does not apply to lifts. Special circumstances (such as apply to disabled persons, fire, potentially explosive atmosphere, extreme climate conditions, seismic conditions or transport hazardous Articles, etc.) used in elevators, in addition to the requirements of this standard should be determined in accordance with the relevant standards and technical conditions scrapped additional requirements.

2 Normative references

The following documents for the application of this document is essential. For dated references, only the dated version suitable for use herein Member. For undated references, the latest edition (including any amendments) applies to this document.

GB/T 5972-2009 crane wire rope maintenance, maintenance, installation, examination and discard

GB/T 7024 elevators, escalators, moving walkways term

GB 7588-2003 elevator manufacturing and installation of safety norms

GB 21240-2007 hydraulic elevator manufacturing and installation of safety norms