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NATIONAL STANDARD OF THE PEOPLE'S REPUBLIC OF CHINA

GB/T 41122-2021

Requirements for lifts used to assist in building evacuation

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foreword

This document is in accordance with the provisions of GB/T 1:1-2020 "Guidelines for Standardization Work Part 1: Structure and Drafting Rules of Standardization Documents"

drafted:

This document is revised and adopted ISO /T S18870:2014 "Elevator requirements for elevators used to assist the evacuation of people in buildings":

The technical differences between this document and ISO /T S18870:2014 and their reasons are as follows:

a) ISO 4190-5 in 4:8 and 4:9 was replaced by GB/T 30560 which was revised and adopted the international standard;

b) Chapter 3 adds references to GB/T 7024;

c) Modified the definition of term 3:2 "building equipment management system" to make it consistent with the current national standards in my country;

d) Modified the definition of the term 3:6 "fire" to make it consistent with the current national standard of our country;

e) Modified the definition of the term 3:8 "fire zone" to make it consistent with the current national standards in my country;

f) In the first row of 4:12:2, replace "main evacuation exit layer" with "main evacuation exit layer or alternate evacuation exit layer";

g) In the fourth paragraph of 4:12:10, replace "main evacuation exit layer" with "main evacuation exit layer or alternate evacuation exit layer":

The following editorial changes have been made to this document:

a) Amend the standard name to "Requirements for Elevators for Evacuation of Personnel in Auxiliary Buildings";

b) Deleted paragraphs 1 and 3 of the introduction of ISO /T S18870:2014, because they are not suitable for my country's national conditions and their existence is not relevant

The understanding and use of this document has no effect;

c) In 4:2, the reference to "see 4:5" is deleted;

d) The note in 4:6 is deleted, because its existence has no influence on the understanding and use of this document;

e) Replace "see 4:8" in A:8:6 with "see 4:5";

f) in the references, the corresponding international standards are replaced by national standards for ease of application;

g) In the references, GB 50016-2014, GB/T 5907:1-2014 and GB 50314-2015 were added as terms to

Source references:

Please note that some content of this document may be patented: The issuing agency of this document assumes no responsibility for identifying patents:

Introduction

0:1 This document originates from a feasibility study on the use of elevators for personnel evacuation: The research of GB /Z 28598 shows that if some

When specific functions are added to elevators and buildings, it is feasible to use elevators for personnel evacuation:

0:2 Since elevator technicians are not experts in architectural design and fire engineering, this document does not indicate whether it is applicable or permitted:

The use of elevators is permitted for evacuation of people within the building, it merely indicates the characteristics required by the person in charge to make decisions: This document does not define in detail

Characteristics of buildings that cooperate with elevators used for evacuation, the purpose of which is to make it clear to those involved in building design and fire engineering that they should solve

Issues related to the safe use of elevators:

0:3 There are many reasons why people in buildings need to be evacuated, such as fire, explosion, chemical or biological attack, flood, storm damage,

earthquake, etc: Not all of the above are related to every building, and there are other dangerous situations, but because the possibility of occurrence is extremely small, it can be ignored

slightly: It is up to the building designer to determine whether a particular hazard requires action:

For example, a small office building designed in a central urban area may be subject to explosion or chemical attack (terrorism): But this

Dangerous situations are unlikely to occur unless there is some special reason to make them vulnerable: In most cases, such events are

The risk is very low, so there is no need to deal with them:

0:4 For important buildings involving national security, the possibility of some form of attack will increase: It is necessary to consider buildings

effects caused by explosions in or around the building, or chemicals brought into the building (see Appendix A):

If the building is constructed in a non-seismically active area, it is not necessary to consider elevator evacuation measures under earthquake conditions:

If the building is located in the center of a large city and is a well-known landmark, then all possible events are necessary

consider:

0:5 Architectural designers need to determine through risk assessment or other methods which hazardous events need to be dealt with reasonably: After confirming,

GB /Z 28598 can be used to understand the elevator and building features required in each evacuation scenario:

0:6 One or more elevators allow for relatively easy evacuation of disabled persons in the building: In this case, the elevator can

whether it has a significant effect on reducing the overall evacuation time will depend on the size of the building and the number of elevators

And other factors:

0:7 This document specifies the requirements for elevators to address the common hazards that all users may face when using elevators for evacuation:

But even if elevators could play a role in routine evacuations, the practice could prove uneconomical: It is not advisable to use an elevator instead of an escape building

elevators or modifying the requirements for escape stairs, and in many building designs, the use of elevators instead of stairs may increase evacuation time: this document

The aim is to enable elevators to play an active role in assisting evacuation and increasing the efficiency of building evacuation schemes:

0:8 The content of this document includes various key issues that need to be addressed, and the items listed are in no particular order:

Requirements for elevators used to assist the evacuation of building occupants

1 Scope

This document specifies requirements for passenger elevators and freight elevators installed in buildings with comprehensive evacuation plans:

This document does not specify requirements for buildings as they are part of a comprehensive evacuation plan:

This document does not include the following:

--- Details of the building's evacuation plan;

--- a detailed description of the building features that reduce the risk or eliminate the hazard;

---The relevant special requirements of the state for buildings:

2 Normative references

The contents of the following documents constitute essential provisions of this document through normative references in the text: Among them, dated citations

documents, only the version corresponding to that date applies to this document; for undated references, the latest edition (including all amendments) applies to

this document:

GB/T 7024 Elevator, Escalator, Moving Walk Terminology

GB/T 30560 Elevator operating devices, signals and accessories (GB/T 30560-2014, ISO 4190-5:2006, MOD)

3 Terms and Definitions

The terms and definitions defined in GB/T 7024 and the following apply to this document:

3:1

Alternative evacuation exit floor; AEEF

An exit floor defined by the building designer that can be selected by the system or management for evacuation:

3:2

building management system; BMS