ICS 91.140.90
CCS Q 78

NATIONAL STANDARD OF THE PEOPLE'S REPUBLIC OF CHINA

GB/T 42623-2023

Planning and selection of passenger lifts to be installed in office, hotel and residential buildings

Issued on: May 23, 2023 **Implemented on: May 23, 2023**

Issued by: State Administration for Market Regulation, China National Standardization Administration

Table of Contents

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 for Standardization Documents"

drafting:

This document is modified to adopt ISO 8100-32:2020 "Elevators for carrying people and goods - Part 32: Installation in offices, hotels and residences

Configuration and Selection of Passenger Elevators for Buildings:

Compared with ISO 8100-32:2020, this document has made the following structural adjustments:

--- Added the clause numbers of the introduction, 5:1, 5:3, 5:4:3, 5:5, 6:1 and 6:2;

--- D:7 in Appendix D corresponds to the "example report" of D:6 in Appendix D of ISO 8100-32:2020;

---Change the suspended paragraph in Appendix E to E:1, and extend the number of subsequent clauses; E:6 corresponds to ISO 8100-32:2020 Appendix E

E:4 "Example Report":

The technical differences between this document and ISO 8100-32:2020 and their reasons

are as follows:

---Deleted special measures for people with disabilities to extend walking time [see 6:5:1d) in ISO 8100-32:2020], so that

Harmonized with 1:4h);

--- ISO 8100-30:2019 (see Chapter 3) is replaced by GB/T 7025:1-2023 with normative references, between the two documents

The degree of consistency is modified to suit my country's national conditions and improve operability;

--- Increased content of loading rate [(see 9:7d)], because this parameter is essential:

The following editorial changes have been made to this document:

---Change the name of the standard to "Configuration and Selection of Passenger Elevators Installed in Office, Hotel and Residential Buildings";

---Delete the contents of "elevators with a rated speed of 2:5m/s and higher" and "bicycles that passengers may carry" (see

Chapter 1 of ISO 8100-32:2020);

--- Deleted the informative reference to ISO 4190-5:2006 (see 3:3 of ISO 8100-32:2020);

---Deleted "different regions have different regulations on average weight" when selecting the rated load, and the selection of the effective area of the car

At the same time, the content of "the per capita area depends on the relevant national norms" (see 6:5:3 of ISO 8100-32:2020);

---Delete the description of "tperf is the execution time of a single floor (s)" and "N is the number of service floors above the entrance floor" (see ISO 8100-32:

7:1 of 2020);

--- Deleted the content of "Other values can be selected according to national specifications" in Appendix C (informative) (see ISO 8100-32:2020

C:2):

Introduction

0:1 Elevator configuration refers to the description of a group of elevators by the number of elevators, number of passengers, floors served, rated speed, and various other parameters: combine

Reasonable elevator configuration can usually provide good service to passengers at low cost in constructing building core space:

The elevator industry has previously relied on probability-based up-peak formulas to calculate run times and capacity: If an elevator is configured

The configuration is considered acceptable if the run interval and delivery capacity meet the recommended design criteria: This traditional upside peak analysis

It is still valid for relay-controlled elevators, and can also be used for evaluation of simple situations or preliminary estimation of more complex situations:

Some elevators today employ sophisticated traffic control systems based on computer programs: These control systems are difficult to describe by formula

However, computer simulation programs can be used for evaluation:

0:2 This document provides the following two methods for determining the appropriate elevator configuration:

a) Calculation method: adopt the traditional upward peak formula: The selection diagrams in Appendix C are based on calculation methods, which provide

A quick way to determine elevator configuration for simple cases: The run interval and conveying capacity determined by this method can be used to evaluate the elevator

configuration: It is recommended to use this method in simpler cases, or to initially determine the elevator configuration for further simulation:

analysis: The method is given in Chapter 7, and Appendix D gives a typical example of the use of the formula:

b) Simulation method: used to determine the service level of different traffic control systems (such as destination layer control): In complex situations or where it is necessary to obtain

Use this method when you need more information than run intervals and upstream peak capacity: Chapter 8 gives the

Methods, typical examples are given in Appendix E:

Both methods require building, passenger and elevator data, see Chapter 6: See Appendix F for its initial data sheet:

0:3 This document adopts the suggestion of ISO /T R11071-2: "Although the number of passengers and the load have always been regarded as the same parameter in safety regulations

However, when writing safety specifications in the future, it may be more meaningful if the load and the number of passengers can be treated differently: more passengers

When refers to the traffic conveying capacity, while the load refers to the maximum carrying capacity of the elevator that is directly related to safety: "

Therefore, this document distinguishes between the number of passengers and the load when selecting the rated load capacity and the effective area of the car (see 6:5:3

and Appendix A):

0:4 This document is intended to provide reference for the initial stage of construction projects, especially for elevator customers or building owners, architectural designers, engineering consultants

Consultants, building managers, elevator consultants, elevator contractors, building developers, general contractors and other interested parties:

0:5 This document takes into account some special needs, such as the accessibility of persons with disabilities (see 6:5:1):

Passengers installed in office, hotel and residential buildings

Elevator configuration and selection

1 Scope

1:1 This document applies to the traffic planning and selection of newly installed passenger elevators in office, hotel and residential buildings: The requirements and suggestions given

Suitable for both simple and complex elevator configurations:

This document provides guidance for selecting the most appropriate transport planning method, where applicable:

This document helps to determine the number of elevators and

configuration and its main parameters:

1:2 This document applies to the elevator types in Table 1:

Table 1 Elevator Types Based on GB/T 7025:1-2023

Category use

Class I elevators designed for transporting passengers

Class II is mainly designed for the transportation of passengers, but also for the transportation of goods:

Class VI Elevators specially designed to adapt to large traffic flow and frequent use

This document also applies if buildings with mixed uses can be assessed separately as office, hotel or residential buildings: This article

This document presents a standardized approach to elevator traffic planning: Other alternative methods may also be effective, but these are not covered in this document: