TECHNICAL SPECIFICATION

ISO/TS 8100-21

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Lifts for the transport of persons and goods —

Part 21: Global safety parameters (GSPs) meeting the global essential safety requirements (GESRs)

Elévateurs pour le transport de personnes et d'objets —

Partie 21: Paramètres de securité repondant aux exigences essentielles de sécurité globale des ascenseurs

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Foreword

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The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www. iso. org/directives).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www. iso.org/patents).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT) see www. iso .org/iso/foreword. html.

This document was prepared by Technical Committee ISO/TC 178, *Lifts, escalators and moving walks*.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

A list of all parts in the ISO 8100 series can be found on the ISO/TC 178 website.

This first edition cancels and replaces ISO/TS 22559-2.

Introduction

This document was prepared in response to the need to set global safety parameters for lifts (elevators).

The objective of the ISO 8100 series is to:

a) define a common global level of safety for all people using, or associated with, lifts (elevators);

b) facilitate innovation of lifts (elevators) not designed according to existing local, national or regional safety standards, while maintaining equivalent levels of safety. If such innovations become state of the art, they can be integrated into the detailed local safety standard at a later date;

c) help remove trade barriers.

ISO 8100-20 establishes global essential safety requirements (GESRs) for lifts (elevators) by addressing hazards and risks that can be encountered on a lift (elevator). The GESRs, however, state only the safety objectives of a lift (elevator).

This document provides guidance and criteria for achieving conformance with safety requirements of GESRs by specifying global safety parameters (GSPs) for use and implementation, where applicable, in a lift (elevator) to eliminate hazards or mitigate safety risks addressed in the GESRs. However, GSPs are not mandatory.

Clause 4 describes the approach and methodology used in the development of this document. Clause 5 gives instructions for the use and implementation of GSPs. The GSPs are presented in Clause 6 in the sequence of GESRs in ISO 8100-20.

This document is a product safety standard in accordance with ISO/IEC Guide 51.

Lifts for the transport of persons and goods —

Part 21:
Global safety parameters (GSPs) meeting the global essential safety requirements (GESRs)

1 Scope

This document:

a) specifies global safety parameters (GSPs) for lifts (elevators), their components and their functions;

b) complements the system and methods specified in ISO 8100-20 for mitigating safety risks that can arise in the course of the operation and use of, or work on, lifts (elevators).

NOTE Hereinafter, the term "lift" is used instead of the term "elevator".

It is applicable to lifts that can:

a) be located in any permanent and fixed structure within or attached to a building, except lifts located in:

   1) private residences (single family units); or

   2) means of transport, e.g. ships;

b) have any:

   1) rated load, size of load-carrying unit (LCU) and speed; and

   2) travel distance and number of landings;

c) be affected by fire in the load-carrying unit, earthquakes, weather or floods;

d) be foreseeably misused (e.g. overloaded), but not vandalized.

This document does not specifically cover

a) all the needs of users with disabilities;[1)] or

b) risks arising from:

   1) work on lifts under construction, during testing, or during alterations and dismantling;

   2) use of lifts for firefighting and emergency evacuation;

   3) vandalism;

   4) fire outside the LCU;

   5) explosive atmosphere;

   6) transportation of dangerous goods.

1) Although the GESRs mentioned in this document have been identified and evaluated by risk assessment, not all disabilities or combinations of disabilities of users have necessarily been addressed.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 14798, *Lifts (elevators), escalators and moving walks — Risk assessment and reduction methodology*

ISO 22199, *Electromagnetic compatibility — Product family standard for lifts, escalators and moving walks — Emission*

ISO 22200, *Electromagnetic compatibility — Product family standard for lifts, escalators and moving walks — Immunity*

ISO 8100-20, *Safety requirements for lifts (elevators) — Part 1: Global essential safety requirements (GESRs)*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 14798 and the following apply.

— ISO Online browsing platform: available at https://www.iso.org/obp

— IEC Electropedia: available at http://www.electropedia.org/

3.1
authorized person
person with authorization to access restricted *lift* (3.8) areas [e.g. machinery spaces, lift *well (hoistway)* (3.5), pit and LCU top] and to work therein, for the purpose of inspecting, testing, repairing, and maintaining the lift or for rescuing users from a stalled *load-carrying unit (LCU)* (3.9)

[SOURCE: ISO 8100-20:2018, 3.1]

3.2
counterweight
mass that contributes traction in the case of a traction *lift* (3.8), or mass that saves energy by balancing all or part of the mass of the *LCU* (3.9) (car) and the *rated load* (3.15)

[SOURCE: ISO 8100-20:2018, 3.3]

3.3
door
landing (3.7) or *LCU* (3.9) mechanical device (including devices that partially or fully enclose the opening) used to secure an LCU or landing entrance

3.4
electromagnetic compatibility
EMC
degree of immunity to incident electromagnetic radiation and level of emitted electromagnetic radiation of electrical apparatuses

3.5
well (GB)
hoistway (US)
travel path(s) (3.19) of the *LCU* (3.9) and related equipment, plus the spaces below the lowest *landing* (3.7) and above the highest landing

3.6
enclosure
well enclosure (GB)
hoistway enclosure (US)
fixed structural elements that isolate the *well (hoistway)* (3.5) from all other areas or spaces