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

GB/T 35850.2-2019

**Programmable electronic systems in safety-related applications
for lifts (elevators), escalators and moving walks -- Part 2:
Escalators and moving walks (PESSRAE)**

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1 Scope

1.4 This section.

1.5 This section does not contain.

2 Normative references

Foreword

GB/T 35850 "Application of programmable electronic systems related to elevators, escalators and moving walkways" is intended to be composed of the following three parts. composition.

--- Part 1. Elevator (PESSRAL);

--- Part 2. Escalators and moving walkways (PESSRAE);

--- Part 3. Life cycle guidelines (technical reports) for programmable electronic systems related to PESSRAL and PESSRAE.

This part is the second part of GB/T 35850.

This part is drafted in accordance with the rules given in GB/T 1.1-2009.

This section uses the redrafting method to modify the electrical requirements of ISO 8102-6.2019 "Elevators, escalators and moving walkways"

Part. Application of programmable electronic systems related to escalator and moving walkway safety (PESSRAE).

This section has the following adjustments in structure compared to ISO 8102-6.2019.

--- ISO 2102-6.2019 of the second paragraph of 1.3 corresponds to 1.4 of this part, and adjust the number of the subsequent chapter of Chapter 1;

--- Appendix 8 of ISO 8102-6.2019 corresponds to Appendix C of this part;

--- Appendix B of ISO 8102-6.2019 corresponds to Appendix A of this part.

The technical differences between this part and ISO 8102-6.2019 and their reasons are as follows.

--- In 1.4, added "a decision table that provides a reduced risk of applying PESSRAE";

---About the normative reference documents, this part has made technical adjustments to adapt to China's technical conditions, adjustments

The situation is reflected in Chapter 2, "Regulatory Citations", and the specific adjustments are as follows.

- * Replace IEC 61508-2 with GB/T 20438.2 equivalent to the international standard;
- * Replace IEC 61508-3 with GB/T 20438.3 equivalent to the international standard;
- * Replace IEC 61508-4 with GB/T 20438.4 equivalent to the international standard;
- * Replace IEC 61508-5 with GB/T 20438.5 equivalent to the international standard;
- * Removed ISO 22200;
- * Added GB/T 24808;
- * Replace IEC 62061 with GB 28526 equivalent to the international standard;

--- In order to better correspond to Table 6 in GB 16899-2011 and related content in EN115-1.2017, this part has been

Modified below.

- * In Table 1, the 17th, 19th, 20th, 21st, and 23rd items in ISO 8102-6.2019 are deleted. Item 24, in order to be consistent with GB 16899-2011 and EN115-1.2017;
- * In Table 1, items 20 and 21 have been added to be consistent with EN115-1.2017;
- * In Table 1, the name of the sixth safety function in ISO 8102-6.2019 is modified, and the first item and the second item are modified.

Functional description of the safety functions of item, item 4, item 6, item 7, item 11, and item 12, in order to comply with relevant national standards

be consistent;

- * In Table 2, items 17, 19, 20, 21, and 23 of ISO 8102-6.2019 are deleted. Item 24, in order to be consistent with Table 1;
- * In Table 2, items 20 and 21 have been added to be consistent with Table 1;
- * In Table 2, the name of the sixth security function in ISO 8102-6.2019 is modified to be consistent with Table 1.
- * In Table 2, the safety corresponding to "Check that the additional brake is not released" in the safety function column of the escalator and moving walkway
In the status request column, "Turn off the drive main unit and the working brake power supply" is changed from non-SIL related to SIL related to

The relevant standards are consistent;

* In the security status requirement column of Table 2, the SIL-related "blocking other maintenance control devices" is deleted.

"moved", deleted the non-SIL related "cut off the drive host and work brake power supply" "sound alarm", in order to

Quasi-consistent;

* In Table 2, the safety status requirements of items 3, 5, and 14 have been added with "manual reset" to comply with relevant standards.

Consistent

* In Table 2, the contents of the R comments have been modified to be consistent with the relevant standards.

This section also makes the following editorial changes compared to ISO 8102-6:2019.

---Modified the name of this section to be consistent with the series standard GB/T 35850.1-2018;

--- In Table 1, the 26th item in Table 1 of ISO 8102-6:2019 was changed to a table note to correspond to Table 2;

--- Adjusted the serial number of the escalator and moving walkway safety functions in Tables 1 and 2, and the serial number of the R notes in Table 2,

Easy to apply;

--- Added informative Appendix B;

--- Removed some of the references.

This part is proposed and managed by the National Elevator Standardization Technical Committee (SAC/TC196).

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Introduction

In recent years, systems containing electrical and electronic components have been used to perform safety functions in many fields. Computer-based system, generally

Classified as a programmable electronic system (PE system), it is increasingly used in many areas to perform safety functions. Safe and effective

The key to using computer system technology is that decision makers need to have sufficient guidance when making security decisions. In most cases, security

It is done by multiple protection systems that rely on multi-domain technologies such as mechanical, hydraulic, pneumatic, electrical, electronic, programmable electronics, and more. Therefore

What security policy should consider not only all components in a stand-alone system (such as sensors, control devices, and actuators), but also all uses

To form the safety-related components of a complete safety-related system.

This section describes programmable electronic components and programmable electronic systems for performing escalator and moving walkway safety functions.

The specific requirements of the system consisting of (PE systems). The purpose of this section is to control the safety of escalators and moving walkways.

The technical consistency, performance requirements and rationality of the subsystem (PESSRAE) are specified.

Risk analysis, terminology and technical solutions mainly refer to the GB/T 20438 series of standards. For each safety function in Table 1

The risk analysis determines the classification of the electrical safety functions of PESSRAE. Tables 1 and 2 give each electrical safety function separately

Safety integrity levels and functional requirements.