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Information technology equipment – Safety - Part 23: Large data storage equipment

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Foreword

All the technical contents in this Part of GB 4943 are mandatory.

GB 4943 *Information technology equipment - Safety* is currently divided into 4 parts:

- Part 1: General requirements;
- Part 21: Remote power feed;
- Part 22: Outdoor installation equipment;
- Part 23: Large data storage equipment.

This Part is Part 23 of GB 4943.

This Part is drafted based on the provisions provided in GB/T 1.1-2009.

This Part uses translation method to equivalently adopt the international standard IEC 60950-23:2005 *Information technology equipment - Safety - Part 23: Large data storage equipment*.

The documents in our country which have consistent corresponding relationship with the national normative references in this Part are as follows:

- GB 4943.1-2011 *Information technology equipment – Safety - Part 1: General requirements* (IEC 60950-1:2005, MOD)
- GB 15092.1-2010 *Switches for appliances - Part 1: General requirements* (IEC 61058-1:2008, IDT)

This Part shall be used together with GB 4943.1-2011.

This Part makes the following editorial modifications:

a) Replace “,” which is used as decimal point with the decimal point “.”;

b) Modify the editorial error of IEC 60950-23:2005; change the 7.1 in line 19 of chapter 6 (corresponding to line 12 of chapter 6 in this Part) to 8.

This Part was proposed by Ministry of Industry and Information Technology of the People’s Republic of China.

This Part shall be under the jurisdiction of Electronic Fourth Research Institute of Industry and Information Technology Ministry.

Drafting organizations of this Part: Electronic Fifth Research Institute of Industry and Information Technology Ministry, Electronic Fourth Research Institute of Industry and

Information technology equipment – Safety - Part 23: Large data storage equipment

1 Scope

This Part of GB 4943 specifies the requirements for information technology equipment (ITE) with self contained data storage systems that contain hazardous moving parts. These data storage systems are typically large enough to permit a person to enter completely, however, the systems also include similar large equipment permitting complete limb or head access to the area containing hazardous moving parts. These requirements are additional to the relevant requirements in IEC 60950-1. The maximum three dimensional reach of a cartridge accessory assembly typically has a minimum motion envelop of 0.75 m^3 or more.

The equipment shall be installed in a RESTRICTED ACCESS LOCATION, such as a data centre. The exceptions for 2.1.3 and 4.5.4 noted in 1.2.7.3 of IEC 60950-1:2005 do not apply to this Part.

NOTE 1: An example of equipment covered by this scope is an automated information mass storage and retrieval system that uses integral hazardous moving parts for the handling of recorded media (for example, tape cartridges, tape cassettes, optical disks, etc.) and similar functions.

This standard is not applicable to equipment with non-self-contained hazardous moving parts, such as robotic equipment installed in an industrial environment.

NOTE 2: For standards related to robotic equipment in an industrial environment, see GB 5226.1, GB 5226.3 and GB 11291.1.

2 Normative references

The articles contained in the following documents have become part of this document when they are quoted herein. For the dated documents so quoted, all the modifications (including all corrections) or revisions made thereafter shall be applicable to this document.

GB/T 14048.14-2006 Low-voltage switchgear and controlgear - Part 5-5: Control circuit devices and switching elements - Electrical emergency stop device with mechanical latching function (IEC 60947-5-5:1997, IDT)

IEC 60950-1:2005 Information technology equipment - Safety - Part 1: General requirements

IEC 60073:2002 Basic and safety principles for man-machine interface, marking and identification - Coding principles for indicators and actuators

IEC 61058-1 Switches for appliances - Part 1: General requirements

3 Terms and definitions

For the purposes of this document, the terms and definitions given in IEC 60950-1 and the following apply.

3.1

work cell

space within the equipment of such size that a person may completely or partially (for example, entire limb or head) enter and where mechanical hazards may be present

NOTE: A WORK CELL may contain more than one compartment. A compartment can be used for either operational or service purposes.

4 Protection of persons in the work cell

During normal use, no hazards within the meaning of IEC 60950-1 shall be accessible at an outer ENCLOSURE of the equipment.

The equipment shall be provided with safeguards to reduce the risk of injury due to hazardous moving parts in the WORK CELL. For protection against other hazards, the WORK CELL shall be treated as an OPERATOR ACCESS AREA.

NOTE 1: Examples of safeguards include interlocks, barriers and awareness signals, together with designated procedures and training.

NOTE 2: The design should take into account the fact that some authorities may require installation of fire detection and extinguishing systems in WORK CELLs.

Access to a WORK CELL or any of its compartments shall be controlled by either of the following methods:

- Method 1 - No key or TOOL is needed to gain entry to the WORK CELL. Interlocks meeting the requirements of 2.8 of IEC 60950-1:2005 shall be provided to prevent access to the WORK CELL while power is available to the hazardous moving parts in that compartment. Power to the moving parts shall not be restored until the doors are closed and latched.

- Method 2 - A key or TOOL shall be used to gain and control access to the WORK CELL, and access to the WORK CELL shall be prevented while power is available

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