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

GB/T 44233.2-2024

**Safety requirements for secondary batteries and battery
installations - Part 2: Stationary batteries
(English Translation)**

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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 for standardization documents" Drafting is required.

This document is part 2 of GB/T 44233 "Safety requirements for installation of batteries and batteries". GB/T 44233 has been published the following sections.

--Part 2: Stationary batteries.

This document is modified to adopt IEC 62485-2:2010 "Safety requirements for installation of batteries and batteries Part 2: Stationary batteries".

Compared with IEC 62485-2:2010, this document has more structural adjustments. The structural number changes between the two documents are shown in the following table.

See Appendix A for the table.

The technical differences between this document and IEC 62485-2:2010 and their reasons are as follows.

-- Changed the "Scope" (see Chapter 1) to apply the expression method of my country's product standards, and deleted the inapplicable scope;

--Replaced IEC 60364-5-53 (see 4.3.1, 4.3.2) with the normative reference GB/T 16895.22-2022 to adapt to my country Technical conditions;

--Replaced IEC 60364-4-43 (see 4.3.1, 4.3.2) with the normative reference GB/T 16895.5-2012 to adapt to my country Technical conditions;

--Replaced IEC 60364-4-41 with the normative reference GB/T 16895.21-2020 [see 4.1.3.1, 4.1.3.2, 4.1.3.4, 4.1.4.2, 4.1.4.3, 6.2f), B.1, B.2, B.3] to adapt to my country's technical conditions;

--Replaced IEC 60364-5-54 (see 4.1.3.1) with the normative reference GB/T 16895.3-2017 to adapt to my country's technical standards.

Technical conditions;

- Replaced IEC 60529 (see 4.1.3.1, 4.1.2, 4.1.4.2, 4.1.4.3) with the normative reference GB/T 4208-2017 Adapt to my country's technical conditions;
- Replaced IEC 60664-1 (see 4.1.3.1) with the normative reference GB/T 16935.1-2023 to adapt to my country's technology condition;
- Replaced IEC 60896-11:2002 (see 8.4, 9.1) with the normative reference GB/T 13337.1-2011 to adapt to my country Technical conditions;
- Replaced IEC 60896-22:2004 with the normative reference GB/T 19638.1-2014 (see 4.3.1, 4.3.2, 4.3.4, 8.4, 9.1) to adapt to my country's technical conditions;
- Replaced IEC 60900 (see 4.3.2, 4.3.3) with the normative reference GB/T 18269-2008 to adapt to my country's technology condition;
- Replaced IEC 61140 (see 4.1.3.3) with the normative reference GB/T 17045-2020 to adapt to my country's technology condition;
- Replaced ISO 3864 (all parts) (see 8.1) with the normative reference GB/T 2893 (all parts) to adapt to my country's Technical conditions;
- Added reference to GB/T 2893.5 (see 8.1) to improve the reference to the standard;
- Replaced IEC/TR 60755 [see 4.1.3.1c), 4.1.3.2.2] with the normative reference GB/T 6829-2017 to adapt to our Technical conditions of the country;
- Changed the terms and definitions (see Chapter 3), revised them according to the terms and definitions in the Chinese standards, and deleted those that are not applicable to this standard.

Terms and definitions of the document;

- IEC 60950-1 (see 4.3.1.1 footnote 3) has been deleted;
- Change some of the original text into table notes (see Table 1 in 4.4.2) to facilitate the use of this document;
- Added precautions for valve-regulated batteries (see 5.1.1) to ensure personal safety;
- Deleted Chapter 12 of IEC 62485-2-2010 and added battery identification, packaging, transportation and storage (see 8.3) to adapt to this File usage;
- The nickel-cadmium battery section in the international original text has been deleted and is not applicable to this document (see Chapter 13 of IEC 62485-2:2010);
- Added technical requirements for battery inspection schedule (see 9.2), provided necessary test method requirements, and ensured the accuracy of the test.

Certainty;

--Added technical requirements for battery internal resistance detection (see 9.3), provided necessary detection method requirements, and ensured the accuracy of the test;

--Added technical requirements for battery-to-ground insulation resistance testing (see 9.4), provided necessary testing method requirements, and ensured the accuracy of the test.

Accuracy technology;

--Added technical requirements for battery connection resistance detection (see 9.5), provided necessary detection method requirements, and ensured the accuracy of the test.

Certainty;

--Added technical requirements for common battery fault handling methods (see 9.6) and optimized battery maintenance methods;

--Added Appendix B (Normative) and modified the main text into an appendix to facilitate the use of this document.

The following editorial changes were made to this document.

--Deleted the footnote in Appendix B;

--Added Appendix E (Informative) to sort out common battery failures and troubleshooting methods and optimize battery maintenance methods;

--Added references.

Introduction

In recent years, there have been more and more economic disputes caused by fires and explosions in computer rooms and data centers, which have also brought adverse social impacts.

It is necessary to standardize the installation safety regulations and form standards. Telecommunication base stations in America, Europe and other countries are installed in accordance with IEC 62485-2:2010.

The installation demand of Chinese companies and operators is greater than that of foreign countries, but there has been no safety standard for installation in China.

The workers operate according to their own experience, which poses a great safety hazard. The only current domestic standard is NB/T 42083-2016 "Power System "Technical Specifications for Safe Operation and Use of Fixed Lead-acid Batteries", which only provides relevant safety specifications for lead-acid batteries and is only applicable to electric Factory, the scope of use is limited, and other types of fixed batteries are not included.

GB/T 44233 "Safety requirements for installation of batteries and batteries" is planned to