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

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Fuel cell modules

燃料电池 模块

(English Translation)

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Foreword

This Standard was drafted in accordance with the rules given in GB/T 1.1-2009.

This Standard uses redrafting method to modify and adopt IEC 62282-2

Ed.2.2012 "Fuel cell technologies Part 2.Fuel cell modules".

This Standard is technically consistent with IEC 62282-2.2012.The modifications are as follows.

- deleted the foreword and introduction of IEC 62282-2.2012, added the foreword of this Standard;
- for the normative references, all Chinese standards that correspond to IEC (or ISO) standards are replaced by Chinese standards;
- the safety standard in this Standard incorporated Chinese specific safety requirements, added "5.10 Insulation (static) test" in Clause 5 "Type tests".

This Standard was proposed by China Electrical Appliance Industry Association.

This Standard shall be under the jurisdiction of National Technical Committee on Fuel Cell and Flow Battery of Standardization Administration of China (SAC/TC 342).

The drafting organizations of this Standard. Xinyuan Power Co., Ltd., Machinery Industry Beijing Institute of Electrotechnics and Economics,

Shanghai Shenli Technology Co., Ltd., Wuhan Yintai Technology Fuel Cell Co., Ltd., Ningbo Baite Measurement & Control Technology Co., Ltd., Wuhan University of Technology, Dalian Institute of Chemical Physics, Chinese Academy of Sciences, Shanghai Panye Hydrogen Energy Technology Co., Ltd., Tsinghua University, Tongji University, Kunshan Institute of Innovation, Nanjing University, Shenzhen Huachen Detection Technology Co., Ltd., etc.

Main drafters of this Standard. Hou Zhongjun, Li Xiaonan, Tian Chaohe, Zhang Ruogu, Qi Zhigang, Huang Ping, Yan Xiqiang, Chen Chen, Pan Mu, Yi Baolian, Dong Hui, Hou Ming, Pei Pucheng, Hou Yongping, Lu Chenyu, Gu Jun, Zhu Ping, etc.

Fuel cell modules

1 Scope

This Standard provides the minimum requirements for safety and performance of fuel cell modules and applies to fuel cell modules with the following electrolyte chemistry.

2 Normative references

The following referenced documents are indispensable for the application 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.

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

(related to cells/stacks) preliminary step that is required to properly operate a fuel cell module (3.8) and that is realized following a protocol specified by the manufacturer

assembly incorporating one or more fuel cell stacks and other main and, if applicable, additional components, which is intended to be integrated into a

power system

4 Requirements

The fuel cell module shall be designed in accordance with a risk assessment performed by the fuel cell module manufacturer. All parts shall be

The fuel cell module shall be designed in such a way that it withstands all normal operating conditions as defined by the manufacturer's specification without any damage. Abnormal operating conditions shall be covered according to 4.1.

5 Type tests

The fuel cell module shall be subject to the shock and vibration test limits stated in the manufacturer's documentation.

This test is only applicable for enclosed systems, with integrated safety ventilation and purging processes, where the operating temperature is below the auto-ignition temperature of the combustible gas.

6 Routine tests

Dielectric strength tests shall be performed on all production units after assembly.

Dielectric strength tests shall be performed as described in 5.9 with a test duration of 1 s at a normal temperature.

7 Markings and instructions

If connections can be interchanged and result in unsafe conditions, they shall be identified. Polarity of the electrical connections and grounding, if applicable, shall be indicated.

The information necessary for system integration, installation, operation and maintenance of the fuel cell module shall be supplied in the form of drawings, diagrams, charts, tables and instructions.

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