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

GB/T 36271.1-2018

Power installations exceeding 1 kV a.c. -- Part 1: Common rules

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3.1 General definition

Foreword

GB/T 36271 "Communication of electricity facilities above 1kV" plan is divided into the following parts.

--- Part 1. General;

--- Part 2. DC.

This part is the first part of GB/T 36271.

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 use of IEC 61936-1.2010 AMD1.2014 "AC 1kV or above power facilities Part 1

Points. General Rules.

The technical differences between this part and IEC 61936-1.2010 AMD1.2014 and their reasons are as follows.

---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 References", and the specific adjustments are as follows.

- * Replace IEC 60071 with GB/T 311.1 modified to adopt international standards;
- * Replace IEC 60071-2 with GB/T 311.2-2013 modified to adopt international standards;
- * Replace IEC 60034-1 with GB/T 755 equivalent to the international standard;
- * Replace IEC 60076-11 with GB/T 1094.11 modified to international standards;
- * Replaced ISO .1996-1 with GB/T 3222.1 equivalent to the international standard;
- * Replace IEC 60079-0 with GB 3836.1 modified to adopt international standards;

- * Replace IEC 60079-10-1 with GB 3836.14 equivalent to the international standard;
- * Replace IEC 62271-200 with GB/T 3906 modified to adopt international standards;
- * Replace IEC 60529 with GB/T 4208 equivalent to the international standard;
- * Replace IEC 60617 database with GB/T 4728 (all parts) equivalent to international standards;
- * Replace IEC 61082-1 with GB/T 6988.1 equivalent to the international standard;
- * Replace IEC 62271-203 with GB/T 7674 modified to adopt international standards;
- * Replace IEC 62271-1 with GB/T 11022-2011 modified to adopt international standards;
- * Replace IEC /T S60479-1 with GB/T 13870.1-2008 equivalent to the international standard;
- * Replace IEC 60255 (all parts) with GB/T 14598 (all parts) equivalent to the international standard;
- * Replace IEC 60364 (all parts) with GB/T 16895 (all parts) equivalent to international standards;
- * Replace IEC 60060-1 with GB/T 16927.1 modified to adopt international standards;
- * Replace IEC 61140 with GB/T 17045 equivalent to the international standard;
- * Replace IEC 62271-202 with GB/T 17467 modified to international standards;
- * Replace IEC 60754-1 with GB/T 17650.1 equivalent to the international standard;
- * Replace IEC 60754-2 with GB/T 17650.2 equivalent to the international standard;
- * Replace IEC 61034-1 with GB/T 17651.1 equivalent to the international standard;
- * Replace IEC 60332 (all parts) with GB/T 18380 (all parts) equivalent to the international standard;
- * Replace IEC GUIDE107 with GB /Z 18509, which is not equivalent to the international standard;
- * Replace IEC 60331-21 with GB/T 19216.21 equivalent to the international standard;
- * Replace IEC 62305 (all parts) with GB/T 21714 (all parts) equivalent to the international standard;
- * Replace IEC 62305-4 with GB/T 21714.4 equivalent to the international standard;
- * Replace IEC /T S60815-1 with GB/T 26218.1 modified to adopt international standards;
- * Replace IEC 62271-303 with GB/T 28537 modified to adopt international standards;
- * Replace IEC 61230 with DL/T 879 equivalent to the international standard;

* With regard to noise requirements, ISO .1996-1 was replaced by GB 12348 and GB 3096.

--- Removed Appendix A of the international standard and merged the contents of Appendix A into Tables 1 and 2 according to the actual voltage level in China.

The standard Appendix B~Appendix E is adjusted accordingly to Appendix A~Appendix D of this part.

This part is proposed by the China Electricity Council.

This part is under the jurisdiction of the National High Voltage Electrical Safety Standardization Technical Committee (SAC/TC226).

This section drafted by. China Electric Power Research Institute, State Grid Corporation Huazhong Branch, China Power Engineering Consulting Group Zhongnan Power Design Institute Co., Ltd., State Grid Corporation.

1 Scope

This part of GB/T 36271 specifies the design and installation requirements for power facilities in AC systems with a nominal voltage above 1kV to guarantee investment.

The safety and normal operation of the facilities.

The power facilities in this section include.

- a) Substations, including railway-powered substations.
 - b) Power facilities on the column, poles, towers. switches and/or transformers located outside the enclosed electrical operating area.
 - c) one or more power plant facilities at a site. including generators, transformers and associated switchgear and electrical assistance systems
- System. Does not include electrical connections between power plants at different sites.
- d) Electrical systems of factories and mines or other industrial, agricultural, commercial, and public facilities.
 - e) Offshore platform power facilities such as offshore wind farms.

The power facility also includes the following equipment.

- Rotating motor;
- Switching equipment;
- Transformers and reactors;
- Inverter;

- cable;
- wiring system;
- Battery;
- capacitor;
- Grounding system;
- Buildings and walls in enclosed electrical operating areas;
- related protection, control and auxiliary systems;
- Large hollow reactor.

Note. In general, device standards take precedence over this section.

This section does not apply to the design and installation of the following facilities.

- overhead lines and underground cables between independent facilities;
- Electrified railway;
- Mining equipment and facilities;
- Fluorescent lighting facilities;
- IEC 60092 [34] (all parts) of the ship's facilities and the offshore facilities specified in GB/T 25444 [35] (all parts);
- Electrostatic devices, such as electrostatic precipitators and spray devices;
- Test site;
- Medical equipment, such as medical X-ray equipment.

This section does not apply to pre-installed switchgear and high-voltage/low-voltage prefabricated substation internal design.

This section does not apply to live working.

Low-voltage electrical facilities can be implemented in accordance with GB/T 16895.

2 Normative references

The following documents are indispensable for the application of this document. For dated references, only dated versions apply to this article.

Pieces. For undated references, the latest edition (including all amendments) applies to this document.

GB/T 311.1 Insulation coordination Part 1. Definitions, principles and rules (GB/T 311.1-2012, IEC 60071-1:2006,