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

GB/T 33629-2024

Replacing GB/T 33629-2017

Wind energy generation systems - Lightning protection

风能发电系统 雷电防护

(English Translation)

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References

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.

This document replaces GB/T 33629-2017 "Lightning protection for wind turbines". Compared with GB/T 33629-2017, except for the structure in addition to adjustments and editorial changes, the main technical changes are as follows.

--- Added a review of lightning exposure assessment (see 7.1);

- Changed the analysis of lightning strike frequency affecting a single or a group of wind turbines (see 7.2, 7.2 of the 2017 edition);
- Changed the lightning protection requirements for blades (see 8.2.2, 8.2.2 of the 2017 edition);
- Added requirements for bearing lightning strike test (see 8.4.2);
- Change the informative Appendix D to a normative appendix (see Appendix D, Appendix D of the 2017 edition).

This document is equivalent to IEC 61400-24:2019 "Wind energy generation systems Part 24: Lightning protection".

The following minimal editorial changes were made to this document.

- To coordinate with the existing standards, the document name is changed to. "Lightning Protection for Wind Power Generation Systems".

1 Scope

This document applies to lightning protection for wind turbines and wind power generation systems.

Record M.

This document specifies the lightning environment for wind turbines and the environmental application of risk assessment for wind turbines.

Requirements for blades, other structural components, and electrical and control systems subjected to direct and indirect lightning effects.

Suggested testing methods are given.

This document gives guidance on the use of relevant lightning protection, industrial electrical and electromagnetic compatibility standards, including how to Ground.

Guidance on personal safety is given in this document.

Guidelines for damage statistics and reporting are given in this document.

Normative references are used to compile lightning protection specifications for machinery, devices and electromagnetic compatibility (EMC) in low-voltage and high-voltage systems.

Use standard.

2 Normative references

The contents of the following documents constitute essential clauses of this document through normative references in this document.

For referenced documents without a date, only the latest version (including all amendments) applies to this document.

This document.

GB/T 21714.1-2015 Lightning protection Part 1: General (IEC 62305-1:2010, IDT) GB/T 21714.2-2015 Lightning protection Part 2: Risk management (IEC 62305-2:2010, IDT) GB/T 21714.3-2015 Lightning protection Part 3: Physical damage to buildings and life hazards (IEC 62305-3.

2010, IDT)

GB/T 21714.4-2015 Lightning protection Part 4: Electrical and electronic systems in buildings (IEC 62305-4:2010, IDT) IEC 60364-4-44 Low voltage electrical installations Part 4-44. Protection against voltage disturbances and electromagnetic disturbances (Low-voltage electrical installations-Part 4-44. Protection for safety-Protection against voltage Note. GB/T 16895.10-2021 Low voltage electrical installations Part 4-44. Safety protection against voltage disturbances and electromagnetic disturbances (IEC 60364-4-44.

2018, IDT)

IEC 60364-5-53 Low-voltage electrical installations Part 5-53. Selection and installation of electrical equipment - Safety, isolation, switching, control and equipment-Isolation, switching and control) Note. GB/T 16895.22-2022 Low voltage electrical installations Part 5-53. Selection and installation of electrical equipment for safety protection, isolation, switching, control Control and monitoring appliances (IEC 60364-5-53:2020, MOD) IEC 60364-5-54 Low-voltage electrical installations Part 5-54. Selection and installation of earthing arrangements, protective conductors and protection conductors for electrical equipment Note. GB/T 16895.3-2017 Low voltage electrical installations Part 5-54. Selection and installation of grounding configurations and protective conductors for electrical equipment (IEC 60364-5-54:2011, IDT)