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

GB/T 31487.2-2025

Replacing GB/T 31487.2-2015

Direct current deicers - Part 2: Converters

直流融冰装置 第2部分：换流器

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Foreword

This document complies with the provisions of GB/T 1.1-2020 "Standardization Work Guidelines Part

1.Structure and Drafting Rules of Standardization Documents". Drafting. This document is Part 2 of GB/T 31487 "DC De-icing Devices". GB/T 31487 has already published the following parts.

1. System Design;

1 Scope

GB/T 31487.2-2025 is the Chinese national standard covering the converter that melts ice off a transmission line by pushing direct current through it - a device used a few times a winter and absolutely required on those days, with its rating, its control and its protection. China built these after the 2008 ice storm brought down grids across the south. Part 2, 22,500 words. It replaces GB/T 31487.2-2015. It was issued on 31 December 2025 and has been in force since 1 July 2026, replacing GB/T 31487.2-2015. The document is under the responsibility of the China Electrical Equipment Industry Association. This page is published from the official record of the 2025 edition; the clause text of a standard this recent is not yet in circulation, and the figures, limits and tables it contains are those of the document itself, delivered in full with the English translation.

This document specifies the converter types, technical requirements, inspection rules, packaging, transportation, and storage requirements for DC de-icing devices. This document applies to the de-icing of conductors and ground wires of 110kV and above AC transmission lines, and the de-icing of ground wires of DC transmission lines, for grid phase-change DC transmission. The de-icing device and the modular multi-level DC de-icing device are used as references for other types of DC de-icing devices.

2 Normative references

The contents of the following documents, through normative references within the text, constitute essential provisions of this document. Dated citations are not included. For references to documents, only the version corresponding to that date applies to this document; for undated references, the latest version (including all amendments) applies. This document.

GB/T 1094.1-2013 Power Transformers - Part

3 Terms and Definitions

The terms and definitions defined in GB/T 13498, GB/T 31487.1 and GB/T 34118, as well as the following terms and definitions, apply to this document.

3.1 valve An electrical and mechanical assembly composed of power electronic devices and auxiliary components, capable of unidirectional or bidirectional conduction, and capable of facilitating converter arms. Function.

Note. Commonly used valves in DC de-icing devices include thyristor valves and modular multilevel converter valves. [Source: GB/T 31487.1-2025, 3.2.1]

3.2 thyristor valve A complete electronic switching device that uses thyristors to achieve

controllable operation, normally conducting only in one direction (forward), in the converter bridge. In the middle, it can realize the function of the converter arm.

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