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

GB/T 46895-2025

**Test method for artificial transient short-circuit tests on high
voltage transmission lines**

高压输电线路人工瞬时短路试验方法

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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. Please note that some content in this document may involve patents. The issuing organization of this document assumes no responsibility for identifying patents. This document was proposed by the China Electricity Council. This document is under the jurisdiction of the National Technical Committee on Standardization of Short-Circuit Current Calculation (SAC/TC424). This document was drafted by: China Electric Power Research Institute Co., Ltd., State Grid Corporation of China, and Envision Energy Co., Ltd. The main drafters of this document are: Pang Guangheng, Li Xinnian, Wang Dongyang, Han Bin, Lei Xiao, Lin Shaobo, Luan Kedong, Yang Shangjin, Liu Shicheng, and Li Wenfeng. Li Yalou, Xu Ruiwen, He Yuwen, Zhao Zhihua, Chen Chenxi, Xie Guoping, Hu Tao, Yang Limin, Huang Weibao, Li Decai, Sun Jiaan, Wang Shijie, Wu Shuchen Yang Pengcheng, Du Xiaolei, Wang Jing, Liu Chong, Wang Weiwei, Liu Lin, Wu Yani, Li Yueting, Zhang Xiaoli, Li Xiaoxiao, Fu Xiaobei, Su Yu, Zhang Yantao, Zhang Yuhong Wang Hongfu, Zhang Zhiqiang, Li Rimin, Zhang Xin, Zhao Dan, Duan Xiangying, Pan Bingru. Artificial transient short-circuit test method for high-voltage transmission lines

1 Scope

GB/T 46895-2025 is the Chinese national standard covering deliberately short-circuiting a live transmission line to see what happens - the way protection, reclosing and the line itself are proved before a system is trusted, with the safety, the instrumentation and the

conditions under which such a test may be run. First edition. It was issued on 31 December 2025 and has been in force since 1 July 2026, as a first edition. 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 test classification, test conditions, and test records for artificial transient short-circuit tests on high-voltage transmission lines, and describes the test records for DC transmission lines. Test methods for instantaneous short circuits in single-phase, two-phase, and three-phase AC transmission lines. This document applies to AC transmission lines with voltage levels of 35kV and above, and DC transmission lines with voltage levels of ± 100 kV and above. Line short-circuit test.

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 2900.1 Basic Terminology for Electrical Engineering

GB/T 2900.73 Electrical Engineering Terminology Part

73.Grounding and Protection Against Electric Shock

GB/T 13498 Terminology for High Voltage Direct Current Transmission

GB/T 15544.1 Short-circuit current calculation for three-phase AC systems - Part

3 Terms and Definitions

The terms and conditions defined in GB/T 2900.1, GB/T 2900.73, GB/T 13498, GB/T 15544.1, GB 26859 and GB 38755 The definition applies to this document.

4 General Requirements

4.1 A test plan and emergency response plan should be prepared before conducting a manual instantaneous short-circuit test on a high-voltage transmission line.

4.2 Test personnel should be familiar with the working principle of the test equipment, the test procedures and safety regulations, and be able to use the test equipment correctly.

4.3 An application should be submitted to the relevant dispatching authority before any artificial instantaneous short-circuit test is conducted on a high-voltage transmission line. The test shall be carried out only after approval.

4.4 Test records shall be made after the test is completed, and the contents of the records shall comply with the provisions of Appendix A.

5. Test Classification Artificial transient short-circuit tests on high-voltage transmission lines are divided into the following three categories.

- a) DC line single-pole/AC line single-phase instantaneous short-circuit test to ground;
- b) Instantaneous non-ground short-circuit test of two phases of AC line;
- c) Three-phase instantaneous short-circuit test of AC line.