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**NATIONAL STANDARD OF THE
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GB/T 46382-2025

Test methods for conductors for overhead transmission lines

架空输电线路用导线试验方法

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Foreword

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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 Electrical Equipment Industry Association. This document is under the jurisdiction of the National Technical Committee on Standardization of Bare Wires (SAC/TC422). This document was drafted by: Shanghai Cable Research Institute Co., Ltd., Shanghai Guolan Testing Co., Ltd., and State Grid Electric Power Engineering Research Institute. Limited Liability Company, Wuxi Jiangnan Cable Co., Ltd., Jiangsu Zhongtian Technology Co., Ltd., Far East Cable Co., Ltd., China Electric Power Research Institute Limited Liability Company, Anhui Yuce Cable Quality Inspection Technology Co., Ltd., Shanghai Zhongtian Aluminum Wire Co., Ltd., Jiangsu Hengtong Electric Power Special Conductor Co., Ltd. Yunnan Duobao Cable Group Co., Ltd., Jiangsu Tongguang Qiangneng Power Transmission Line Technology Co., Ltd., Guangdong Yuanguang Cable Industry Co., Ltd. Central South University, Sichuan Tianfu Jiangdong Technology Co., Ltd., Qingdao Hanlan Cable Co., Ltd., Hangzhou Cable Co., Ltd., Aerospace Electric Engineering Group Limited Liability Company, Guangzhou Xinxing Cable Industry Co., Ltd., TBEA Shandong Luneng Taishan Cable Co., Ltd., Guangdong Xinya Optoelectronic Cable Co., Ltd. Limited Liability Company, Henan Tongda Cable Co., Ltd., Huangshan Chuangxiang Technology Co., Ltd., Zhejiang Guanming Electric Power New Materials Co., Ltd., Hebei Xingtai Cable Co., Ltd., Gongyi Hengxing Metal Products Co., Ltd., Guizhou Yudie Electric Co., Ltd., Wuxi Huaneng Electric Cable Co., Ltd., Chongqing Taishan Cable Co., Ltd., Changzhou Tefa Huayin Wire and Cable Co., Ltd., Fujian Nanping Nanxian Power Cable Co., Ltd. The company, Shandong Chuanghui New Material Technology Co., Ltd., Yangtze Optical Fibre and Cable Joint Stock Limited Company, State Grid Liaoning Electric Power Co., Ltd., and China Southern Power Grid. Electric Power Research Institute Co., Ltd., Guangdong Power Grid Co., Ltd. Electric Power Research Institute, China Power Engineering Consulting Group East China Electric Power Design Institute Design Institute Co., Ltd., China Power Engineering Consulting Group South China Electric Power Design Institute Co., Ltd., China Power Engineering Consulting Group Southwest Electric Power Design Institute Institute

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1 Scope

GB/T 46382-2025 is the Chinese national standard covering testing an overhead conductor - the tensile strength and the stress-strain and creep behaviour that determine the sag in service, the DC resistance, the corrosion and the galvanising, and the mechanical tests on the individual wires and on the assembled conductor. At 20,000 words. First edition, under the China Electrical Equipment Industry Association. In force from 1 May 2026. Issued on 31 October 2025, it has been in force since 1 May 2026.

This document specifies the general test rules for the common test methods of conductors used in overhead transmission lines, and describes structural, dimensional, and mechanical performance tests. Methods for testing electrical performance and thermal performance. This document applies to the structure, dimensions, mechanical properties, and electrical properties of conductors (hereinafter referred to as stranded wires) used in overhead transmission lines. Gas and thermal performance testing. For specific overhead conductor products, select the test items specified in this document according to the relevant product standards. Choose the appropriate experimental method.

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 1179 Concentric Stranded Round Conductors

GB/T 1216 Outside Micrometer

GB/T 2314 General Technical Requirements for Power Fittings

GB/T 2317.2 Test methods for electrical fittings - Part

3 Terms and Definitions

The terms and definitions defined in GB/T 1179, GB/T 2900.51 and GB/T 20141, as well as the following terms and definitions, apply to this document.

3.1 The operating temperature at which the conductor can operate stably for a long time without significant performance degradation.