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GB/T 47132-2026

Technical specification for the heliostat field control system of solar power tower plants

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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 Solar Thermal Power Generation (SAC/TC 565). This document was drafted by: Zhejiang Kesheng Technology Co., Ltd., CGN Wind Power Co., Ltd., North China Electric Power University, and Zhejiang Zhongjing Software. Component Development Co., Ltd., Zhejiang Green Storage Technology Co., Ltd., China Datang Group Technology Innovation Co., Ltd., China Power Engineering Consulting Group West Beijing Electric Power Design Institute Co., Ltd., and CGN Solar Thermal Technology (Beijing) Co., Ltd. The main drafters of this document are. Xu Neng, Jin Jianxiang, Zhai Rongrong, Mi Xiaoling, Hu Yuchao, Hu Zhong, Wang Yina, Zhou Ye, Yin Hang, Zhang Yanan, and Zhang Haobin. Tang Hongfen, Zhao Xiong, Zhao Xiaohui, Zhuang Jie. Tower solar thermal power plant mirror field control system Technical Specifications

1 Scope

GB/T 47132-2026 is the Chinese national standard covering the system that aims thousands of mirrors at a receiver on a tower - the tracking accuracy each heliostat must hold, the aiming strategy that spreads the flux so the receiver is not destroyed, and the defocus that must happen within seconds if anything goes wrong. First edition, in force since 1 September 2026, and it belongs with the CSP carbon footprint standard GB/T 47651-2026. It was issued on 27 February 2026 and has been in force since 1 September 2026, as a first edition. This page is published from the official record of the 2026 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 general requirements, system architecture, technical requirements, packaging, and transportation of the mirror field control system for tower solar thermal power plants. The corresponding test methods are described for storage and handling. This document applies to the design, manufacture, testing, operation, maintenance, and overhaul of the mirror field control system for tower solar thermal power plants.

2 Normative references

The contents of the following documents, through normative references within the text, constitute essential provisions of this document. Dated citations are listed below. 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 191 Packaging and Storage Graphic Symbols

GB/T 5080.7 Verification Test Scheme for Failure Rate and Mean Time Between Failures under the Constant Failure Rate Assumption in Equipment Reliability Testing

GB/T 9813.3 General Specifications for Computers Part

3 Terms and Definitions

The terms and definitions defined in GB/T 40104 and GB/T 44222, as well as the following terms and definitions, apply to this document.

3.1 Heliostat field control system heliostat field control system A computer system for data acquisition, processing, control, and protection of heliostat fields in tower solar thermal power plants. [Source: GB/T 45310-2025, 3.5, with modifications]