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

GB/T 13399-2025

Replacing GB/T 13399-2012

Technical specification for safety monitoring of steam turbine

汽轮机安全监视技术规范

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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 supersedes GB/T 13399-2012 "Technical Conditions for Safety Monitoring Devices of Steam Turbines" and is consistent with GB/T 13399-2012. Compared to previous versions, aside from structural adjustments and editorial changes, the main technical changes are as follows:

- a) A new chapter on "Terms and Definitions" and the terms and definitions for "Static Speed Error" and "Dynamic Speed Error" have been added (see Chapter 3);
- b) The contents of the turbine safety monitoring instruments have been added (see 4.2);
- c) The content of the turbine safety monitoring project has been changed (see 4.3, 3.2.2 of the.2012 version), and the main shaft eccentricity measuring device has been removed [see...]. The.2012 version 3.2.2e) added over-limit protection for time-related changes in rated parameters [see 4.3n];
- d) The composition and categories of the turbine safety monitoring devices have been changed (see 4.4, 3.3 of the.2012 edition);
- e) Added power switching requirements (see 4.5.1);
- f) The operating temperature range of the instrument has been changed (see 4.5.2, 3.4.2 in the.2012 version);
- g) The monitoring items for emergency shutdown procedures have been changed, from the time limit between the occurrence of the signal and the output of the monitoring device (see

4.5.7,.2012). Version 3.4.7);

h) Added technical requirements for instruments or sensors (see 4.5.9);

i) The technical requirements for the speed measuring device have been changed (see 5.1,

1 Scope

GB/T 13399-2025 is the Chinese national standard on technical specification for safety monitoring of steam turbine, in the field of energy and heat transfer engineering. The /T suffix marks it as a recommended standard: it is not compulsory by itself, but it becomes binding as soon as a contract, a tender or a customer specification calls it up - which in practice is how most foreign buyers meet it. It was issued on 2 December 2025 by the State Administration for Market Regulation; Standardization Administration of China, and has been in force since 1 July 2026. Classification: ICS 27.040, CCS K54. This page is published from the official record of the standard held by the Chinese standards administration: the identification, the dates, the classification and the issuing body are taken from there. The clause text, the tables and the numeric limits are in the document itself, which is delivered complete in English translation.

This document specifies the technical requirements, packaging, shipping, transportation, and factory documentation requirements for safety monitoring of stationary power generation turbines, and describes... Corresponding experimental methods. This document applies to the design, selection, and factory commissioning of safety monitoring devices for stationary power generation steam turbines (hereinafter referred to as "steam turbines"). For testing purposes, the design, selection, and factory commissioning of other types of steam turbine safety monitoring devices should refer to this guide.

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 3047.1 Basic Dimensions of Panels, Shelves and Cabinets in Height Increments of 20mm

GB/T 5578 Standard for Stationary Steam Turbines for Power Generation

GB/T 6075.1 Mechanical vibration - Measurement and evaluation of machine vibration on non-rotating parts - Part

3 Terms and Definitions

The following terms and definitions apply to this document.

3.1 Speed static error Measurement error when the steam turbine is at a fixed speed.

3.2 Speed dynamic error Measurement errors during the variable speed process of a steam turbine.

4 General Rules

4.1 Function of Steam Turbine Safety Monitoring Device The turbine safety monitoring device should be able to work in conjunction with the turbine control system, protection system, and other devices to ensure the safe and reliable operation of the turbine. During turbine startup, operation, and shutdown, this device should be able to indicate the values of the turbine's main safety monitoring parameters; if parameters exceed limits during operation, it should... It should be able to issue alarm or shutdown signals, and some monitoring devices should be able to provide survey and/or computer interface signals.

4.2 Contents of Steam Turbine Safety Monitoring Instruments The safety monitoring instruments required for steam turbines shall comply with the provisions of GB/T 5578. They generally include the following items, which, during use, shall be determined according to...