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

GB/T 43683.4-2025

**Guidance for installation procedures and tolerances of
hydroelectric machines - Part 4: Vertical Kaplan or propeller
turbines**

水轮发电机组安装程序与公差导则 第4部分：立式轴流转桨式或轴流定桨式水轮机

(English Translation)

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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 3 of GB/T 43683, "Installation Procedures and Tolerances Guidelines for Hydropower Generator Sets". GB/T 43683 has been published.

The following parts were included.

- Part 1: General Provisions;
- Part 2: Vertical Generator;
- Part 3: Vertical mixed-flow turbine or pump-turbine;
- Part 4: Vertical axial-flow propeller or axial-flow fixed-blade turbines.

This document is equivalent to IEC 63132-4:2020 "Hydrogen Generator Installation Procedures and Tolerances Guidelines - Part 4: Vertical Axial-Flow Propellers".

"Type or axial-flow fixed-blade turbine".

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 Hydropower Turbines (SAC/TC175).

Introduction

Hydropower construction holds a vital strategic position in my country's energy development and plays a crucial role in the national economy. With the market demand for hydropower development...

The requirements for generator sets to develop towards multiple models, high parameters, high efficiency and low consumption, safety and environmental protection are constantly increasing, and the country has clearly stated in the "14th Five-Year Plan" that...

The proposal calls for steadily advancing the construction of conventional hydropower projects while simultaneously accelerating the construction of pumped storage power stations. Therefore, it is necessary to adhere to existing standards and regulations.

Based on this, relevant research was conducted on the installation and inspection of hydro-generator units, and applicable methods for mixed-flow, axial-flow propeller, or axial-flow fixed-flow turbine generator sets were developed.

Installation and inspection standards and specifications for propeller, axial flow, and impulse turbine generator sets.

GB/T 43683, "Guidelines for Installation Procedures and Tolerances of Hydropower Generator Sets," is proposed to consist of the following parts.

---Part 1: General Provisions. The purpose is to specify the general technical requirements for the installation of hydro-generator units.

---Part 2: Vertical Generators. The purpose is to standardize the installation procedures and steps required for vertical generators.

---Part 3: Vertical Mixed-Flow Turbines or Pump-Turbines. The purpose is to standardize vertical mixed-flow turbines or pump-turbines.

Installation and step requirements.

---Part 4: Vertical Axial-Flow Propeller or Axial-Flow Fixed-Propeller Turbines. The purpose is to standardize vertical axial-flow propeller or axial-flow fixed-propeller turbines.

Installation procedures and steps for water turbines.

---Part 5: Bulb-type Axial-flow Hydropower Units. The purpose is to standardize the installation procedures and steps for bulb-type axial-flow hydropower units.

---Part 6: Vertical Impulse Turbines. The purpose is to standardize the installation procedures and steps required for vertical impulse turbines.

Hydropower Generator Set Installation Procedures and Tolerance Guidelines Part 4:
Vertical Axial Flow Propeller or Axial-flow fixed-blade turbine

1 Scope

This document provides general installation procedures and tolerance requirements for vertical axial-flow propeller or axial-flow fixed-blade turbines. Installation methods for the units.