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

GB/T 43683.3-2025

**Guidance for installation procedures and tolerances of
hydroelectric machines - Part 3: Vertical Francis turbines or
pump-turbines**

水轮发电机组安装程序与公差导则 第3部分：立式混流式水轮机或水泵水轮机
(English Translation)

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Table of Contents

Preface

Introduction

1 Scope

2 Normative references

3 Terms and Definitions

4 Installation Flowchart

4.1 Embedded components of turbine

4.2 Turbine body parts

5 Installation Step

5.1 Embedded components of turbine

5.1.1 Step 1.Measurement reference setting

5.1.2 Step 2.Installation of main pre-buried pipelines and tailwater pipe lining foundation

5.1.3 Step 3.Pre-embedded tailwater pipe lining foundation

5.1.4 Step 4.Confirmation of tailwater pipe lining foundation and installation area

5.1.5 Step 5.Handover to Installation

5.1.6 Step 6.Installation of tailwater pipe lining support

5.1.7 Step 7.Installation of tailwater pipe lining

5.1.8 Step 8.Installation of pre-buried pipes around the tailwater pipe lining

5.1.9 Step 9.Handover to Concrete Pouring Phase

5.1.10 Step 10.Burying the tailwater pipe lining

5.1.11 Step 11.Concrete void inspection

5.1.12 Step 12.Draft tube lining grouting

5.1.13 Step 13.Hand over to installation

5.1.14 Step 14.Dimensional inspection of tailwater pipe after installation

5.1.15 Step 15.Install the seat ring and volute support

5.1.16 Step 16.Seat ring installation

5.1.17 Step 17.Volute Installation

5.1.18 Step 18.Pit lining and/or servomotor base plate installation

5.1.19 Step 19.Install the embedded pipe around the volute

5.1.20 Step 20.Volute hydrostatic test

5.1.21 Step 21.Handover to Concrete Placement Stage

5.1.22 Step 22.Pour to the generator layer

- 5.1.23 Step 23.Grouting of the remaining embedded components of the turbine
- 5.1.24 Step 24.Hand over to installation
- 5.1.25 Step 25.Check the volute dimensions after concrete pouring
- 5.1.26 Step 26.Anti-corrosion of embedded components
- 5.1.27 Step 27.Turbine embedded components completed
- 5.1.28 Step 28.Installation of turbine body components
- 5.2 Turbine body parts
 - 5.2.1 Step 1.Complete the embedded components of the turbine
 - 5.2.2 Step 2.Seat ring processing (if necessary)
 - 5.2.3 Step 3.Installation of tailwater cone
 - 5.2.4 Step 4.Bottom ring installation
 - 5.2.5 Step 5.Turbine runner installation
 - 5.2.6 Step 6.Turbine shaft installation
 - 5.2.7 Step 7.Connecting the turbine runner and main shaft
 - 5.2.8 Step 8.Guide vane installation
 - 5.2.9 Step 9.Top cover installation
 - 5.2.10 Step 10.Spindle seal assembly
 - 5.2.11 Step 11.Guide bearing seat assembly
 - 5.2.12 Step 12.Control Ring Installation
 - 5.2.13 Step 13.Servo Installation
 - 5.2.14 Step 14.Install the guide vane arm and connecting rod
 - 5.2.15 Step 15.The turbine shaft is in a free state
 - 5.2.16 Step 16.Generator Installation
 - 5.2.17 Step 17.Connect the turbine and generator shaft
 - 5.2.18 Step 18.Axis Adjustment
 - 5.2.19 Step 19.Final installation of the spindle seal
 - 5.2.20 Step 20.Turbine guide bearing assembly and adjustment
 - 5.2.21 Step 21.Final adjustment of the guide vane operating mechanism
 - 5.2.22 Step 22.Installation of the remaining components of the turbine is completed
 - 5.2.23 Step 23.Cleaning, coating and inspection before first test
 - 5.2.24 Step 24.Turbine body parts completed
 - 5.2.25 Step 25.Debugging
- Reference

Foreword

This document is in accordance with the provisions of GB/T 1.1-2020 "Guidelines for standardization work Part 1: Structure and drafting rules for standardization documents" Drafting.

This document is Part 3 of GB/T 43683 "Guidelines for installation procedures and tolerances of hydro-generator sets". GB/T 43683 has been published.

The following sections.

- Part 1: General provisions;
- Part 2: Vertical generators;
- Part 3: Vertical Francis turbine or pump turbine.

This document is equivalent to IEC 63132-3:2020 "Hydrogenerator Installation Procedures and Tolerance Guidelines Part 3: Vertical Francis Water Generator Sets" turbine or pump-turbine.

Introduction

Hydropower construction has an important strategic position in my country's energy development and plays an important role in the national economy.

The requirements for the development of motor groups 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 it is proposed to steadily promote the construction of conventional hydropower projects and accelerate the construction of pumped storage power stations.

On this basis, the relevant installation and inspection of the turbine generator set are studied accordingly, and the relevant installation and inspection of the turbine generator set are developed, which is suitable for the mixed flow, axial flow propeller or axial flow constant flow turbine.

Installation, inspection standards and specifications for propeller-type, bulb-type and impulse-type hydro-turbine generator sets.

GB/T 43683 "Guidelines for installation procedures and tolerances of hydro-generator sets" is intended to consist of six parts.

- Part 1: General. The purpose is to specify the general technical requirements for the installation of hydro-generator sets.
- Part 2: Vertical generator. The purpose is to standardize the installation procedures and step requirements of vertical generators.

--- Part 3: Vertical Francis turbine or pump turbine. The purpose is to standardize vertical Francis turbine or pump turbine Installation procedures and step requirements.

--- Part 4: Vertical axial flow propeller or axial flow fixed blade turbine. The purpose is to standardize vertical axial flow propeller or axial flow fixed blade turbine Turbine installation procedures and step requirements.

--- Part 5: Bulb tubular hydropower unit. The purpose is to standardize the installation procedures and step requirements of bulb tubular hydropower units.

--- Part 6: Vertical Pelton turbine. The purpose is to standardize the installation procedures and step requirements for vertical Pelton turbines.

Installation procedures and tolerance guidelines for hydro-generator sets Part 3: Vertical Francis turbine or pump turbine

1 Scope

This document gives the general installation procedures and tolerance requirements for vertical Francis turbines or pump turbines.

This document describes a general installation process. In this document, "turbine" refers to a vertical Francis turbine or pump turbine.

The size of the components, the design of the unit, the layout of the power plant or the lead time of the components may result in the addition of additional steps, the elimination of certain steps and/or Changes in installation order.

This document is binding only if both parties agree to it.

This document is not intended for purely commercial purposes unless it is inextricably linked to unit installation.

Different standards may specify different tolerances. The tolerances in this document are based on common practice and experience.

Regardless of whether this document specifies that the manufacturer shall provide documents, drawings or information, each manufacturer shall provide the necessary Related information.

2 Normative references

This document has no normative references.

3 Terms and Definitions

There are no terms or definitions that require definition in this document.