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Guide for installation procedures and tolerances of hydroelectric machines - Part 5: Bulb turbines and generators (IEC 63132-5:2023)

Leitfaden für Installations-Prozeduren und -Toleranzen von hydroelektrischen Maschinen - Teil 5 (IEC 63132-5:2023)

Lignes directrices des procédures et tolérances d'installation des machines hydroélectriques - Partie 5: Turbines bulbes et alternateurs (IEC 63132-5:2023)

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**Guidance for installation procedures and tolerances of
hydroelectric machines - Part 5: Bulb turbines and generators
(IEC 63132-5:2023)**

Lignes directrices des procédures et tolérances
d'installation des machines hydroélectriques - 5: Turbines et
alternateurs de type bulbe
(IEC 63132-5:2023)

Leitfaden für Installations-Prozeduren und -Toleranzen von
hydroelektrischen Maschinen - Teil 5
(IEC 63132-5:2023)

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Europäisches Komitee für Elektrotechnische Normung

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

EN IEC 63132-5:2023 (E)**European foreword**

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The following dates are fixed:

- latest date by which the document has to be implemented at national (dop) 2024-02-19 level by publication of an identical national standard or by endorsement
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IEC 63132-2 NOTE Approved as EN IEC 63132-2



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**Guidance for installation procedures and tolerances of hydroelectric machines –
Part 5: Bulb turbines and generators**

**Lignes directrices des procédures et tolérances d'installation des machines
hydroélectriques –
Partie 5: Turbines et alternateurs de type bulbe**

INTERNATIONAL
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INTERNATIONAL ELECTROTECHNICAL COMMISSION

**GUIDANCE FOR INSTALLATION PROCEDURES AND
TOLERANCES OF HYDROELECTRIC MACHINES –****Part 5: Bulb turbines and generators****FOREWORD**

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IEC 63132-5 has been prepared by IEC technical committee 4: Hydraulic turbines. It is an International Standard.

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Draft	Report on voting
4/456/FDIS	4/462/RVD

Full information on the voting for its approval can be found in the report on voting indicated in the above table.

The language used for the development of this International Standard is English.

This document was drafted in accordance with ISO/IEC Directives, Part 2, and developed in accordance with ISO/IEC Directives, Part 1 and ISO/IEC Directives, IEC Supplement, available at www.iec.ch/members_experts/refdocs. The main document types developed by IEC are described in greater detail at www.iec.ch/publications.

A list of all parts in the IEC 63132 series, published under the general title *Guidance for installation procedures and tolerances of hydroelectric machines*, can be found on the IEC website.

The committee has decided that the contents of this document will remain unchanged until the stability date indicated on the IEC website under webstore.iec.ch in the data related to the specific document. At this date, the document will be

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- withdrawn,
- replaced by a revised edition, or
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GUIDANCE FOR INSTALLATION PROCEDURES AND TOLERANCES OF HYDROELECTRIC MACHINES –

Part 5: Bulb turbines and generators

1 Scope

The purpose of this document is to establish, in a general way, suitable procedures and tolerances for the installation of bulb turbine and generator. This document presents a typical assembly and whenever the words “turbine” and “generator” are used in this part, it refers to bulb turbine and generator. There are many possible ways to assemble a unit. The size of the machine, the design of the machine, the layout of the powerhouse, the sequence of concreting or the delivery schedule of the components are some of the elements that could result in additional steps, or the elimination of some steps and/or assembly sequences.

It is understood that a publication of this type will be binding only if, and to the extent that, both contracting parties have agreed upon it.

The document excludes matters of purely commercial interest, except those inextricably bound up with the conduct of installation. It also excludes specifications of the civil works but this aspect of the work should be taken into consideration during the assembly of the units.

Wherever the document specifies that documents, drawings or information are supplied by a manufacturer (or by manufacturers), each individual manufacturer will furnish the appropriate information for their own supply only.

2 Normative references

There are no normative references in this document.

3 Terms and definitions

No terms and definitions are listed in this document.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- IEC Electropedia: available at <http://www.electropedia.org/>
- ISO Online browsing platform: available at <http://www.iso.org/obp>

4 Installation flowchart

4.1 Turbine and generator embedded parts

Figure 1 shows a generic installation flowchart for bulb turbine and generator embedded parts.

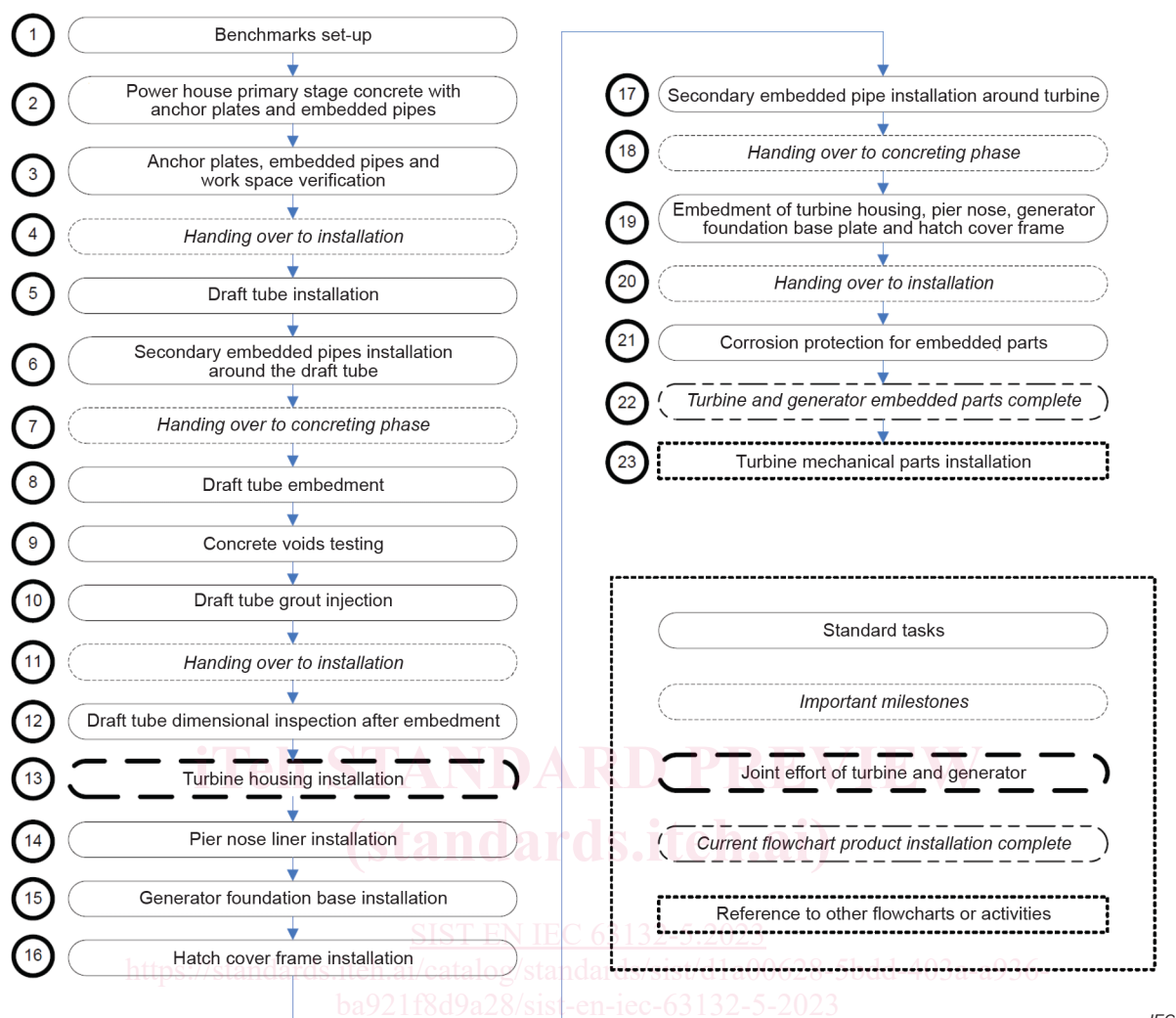


Figure 1 – Generic installation flowchart – Bulb turbine and generator embedded parts

4.2 Turbine and generator mechanical parts

Figure 2 shows generic installation flowchart for bulb turbine and generator mechanical parts.

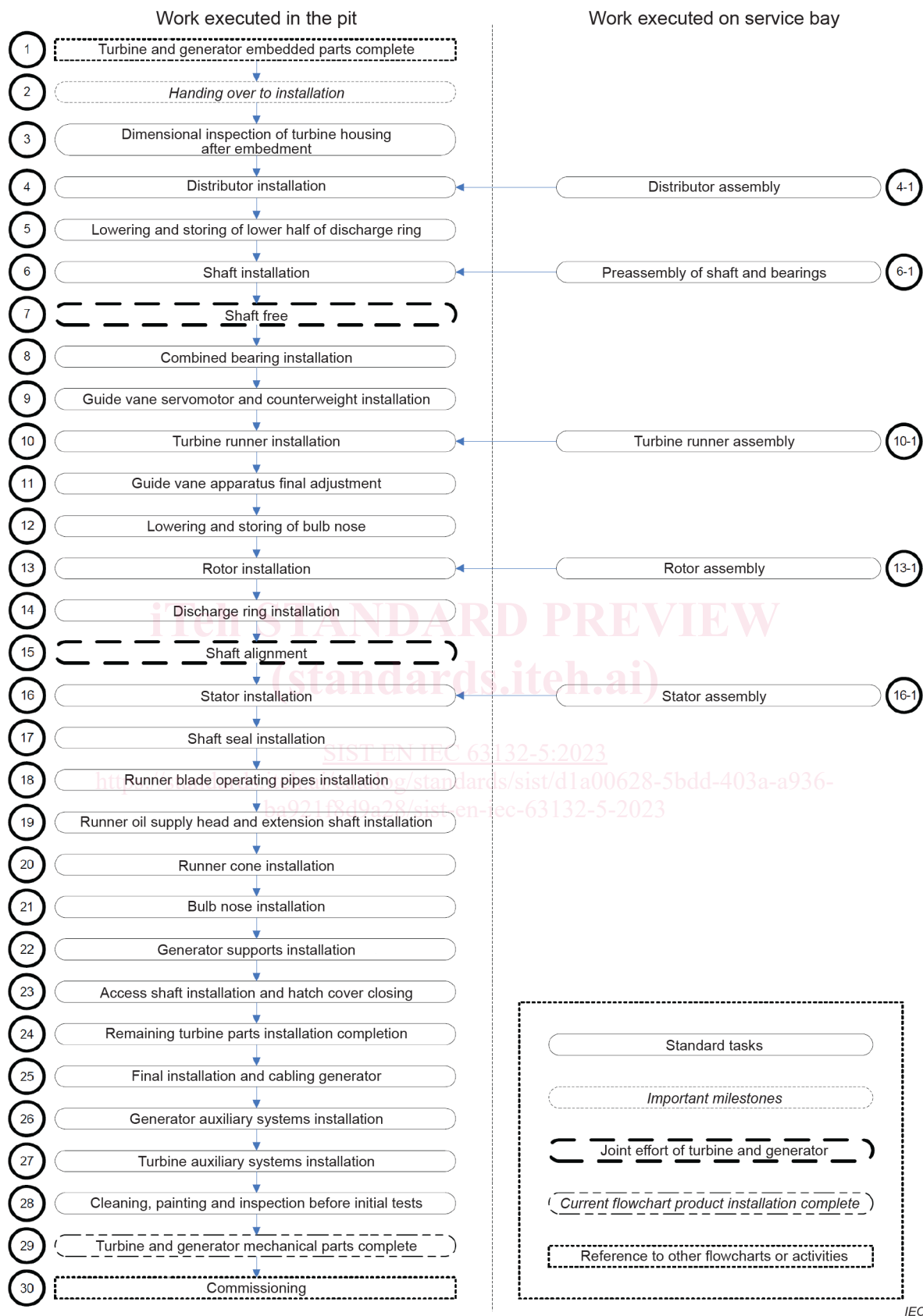


Figure 2 – Generic installation flowchart – Bulb turbine and generator mechanical parts