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Vägledning för idrifttagning och drift av vattenturbiner, pumpturbiner och magasineringspumpar

Guidelines for commissioning and operation of hydraulic turbines, pump-turbines and storage pumps

Som svensk standard gäller europastandarden EN IEC 60545:2021. Den svenska standarden innehåller den officiella engelska språkversionen av EN IEC 60545:2021.

Nationellt förord

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Postadress: Box 1284, 164 29 KISTA
Telefon: 08 - 444 14 00.
E-post: sek@elstandard.se. Internet: www.elstandard.se

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Box 1284
164 29 Kista
Tel 08-444 14 00
www.elstandard.se

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English Version

**Guidelines for commissioning and operation of hydraulic
turbines, pump-turbines and storage pumps
(IEC 60545:2021)**

Lignes directrices pour la mise en service et l'exploitation
des turbines hydrauliques, des pompes-turbines et des
pompes d'accumulation
(IEC 60545:2021)

Richtlinien für die Inbetriebnahme und den Betrieb von
Wasserturbinen, Pumpturbinen und Speicherpumpen
(IEC 60545:2021)

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European Committee for Electrotechnical Standardization
Comité Européen de Normalisation Electrotechnique
Europäisches Komitee für Elektrotechnische Normung

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

European foreword

The text of document 4/407/FDIS, future edition 2 of IEC 60545, prepared by IEC/TC 4 “Hydraulic turbines” was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN IEC 60545:2021.

The following dates are fixed:

- latest date by which the document has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 2022-04-28
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2024-07-28

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The text of the International Standard IEC 60545:2021 was approved by CENELEC as a European Standard without any modification.

In the official version, for Bibliography, the following notes have to be added for the standards indicated:

| | | |
|--------------------|------|--|
| IEC 60041 | NOTE | Harmonized as EN 60041 |
| IEC 60204-1:2016 | NOTE | Harmonized as EN 60204-1:2018 (modified) |
| IEC 60308 | NOTE | Harmonized as EN 60308 |
| IEC 60609-1:2004 | NOTE | Harmonized as EN 60609-1:2005 (not modified) |
| IEC 62006 | NOTE | Harmonized as EN 62006 |
| IEC 62256:2017 | NOTE | Harmonized as EN 62256:2017 (not modified) |
| IEC 62364:2019 | NOTE | Harmonized as EN IEC 62364:2019 (not modified) |
| IEC 63132 (series) | NOTE | Harmonized as EN IEC 63132 (series) |

INTERNATIONAL STANDARD

NORME INTERNATIONALE



**Guidelines for commissioning and operation of hydraulic turbines,
pump-turbines and storage pumps**

**Lignes directrices pour la mise en service et l'exploitation des turbines
hydrauliques, des pompes-turbines et des pompes d'accumulation**

INTERNATIONAL
ELECTROTECHNICAL
COMMISSION

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INTERNATIONALE

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

**GUIDELINES FOR COMMISSIONING AND OPERATION OF HYDRAULIC
TURBINES, PUMP-TURBINES AND STORAGE PUMPS**

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International Standard IEC 60545 has been prepared by IEC technical committee 4: Hydraulic turbines.

This second edition cancels and replaces the first edition published in 1976 and the first edition of IEC 60805 published in 1985. This edition constitutes a technical revision.

This edition includes the following significant technical changes with respect to the previous edition:

- a) the focus is on the commissioning and operation of the hydraulic machine. Interfaces to the electric machine are mentioned only for a better understanding of the context;
- b) the definitions of tests for commissioning and adjustable speed are updated to state of the art;
- c) the record sheets 'measurements during erection' are excluded (see IEC 63132 (all parts));
- d) the maintenance is excluded (see IEC 62256).

The text of this International Standard is based on the following documents:

| | |
|------------|------------------|
| FDIS | Report on voting |
| 4/407/FDIS | 4/420/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/standardsdev/publications.

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GUIDELINES FOR COMMISSIONING AND OPERATION OF HYDRAULIC TURBINES, PUMP-TURBINES AND STORAGE PUMPS

1 Scope

The purpose of this document is to establish, in a general way, suitable procedures for commissioning and operation of hydraulic machines and associated equipment, and to indicate how such machines and equipment should be commissioned and operated.

Commissioning and operation of the associated equipment are not described in detail in this document but is considered in the commissioning and operation procedure as a separate step.

Machines of up to about 15 MW and reference diameters of about 3 m are generally covered by IEC 62006.

It is understood that a guideline of this type will be binding only if the contracting parties have agreed upon it.

The guidelines exclude matters of purely commercial interest, except those inextricably connected with the conduct of commissioning and operation.

The guidelines are not concerned with waterways, gates, drainage pumps, cooling-water equipment, generators, motor-generators, electrical equipment (e.g. circuit breakers, transformers) etc., except where they cannot be separated from the hydraulic machinery and its equipment.

Wherever the guidelines specify that documents, drawings or information are supplied by a supplier (or by suppliers), each individual supplier should furnish the appropriate information for its own supply only.

2 Normative references

There are no normative references in this document.