

INTERNATIONAL STANDARD

Electromechanical equipment guidance for small hydroelectric installations



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INTERNATIONAL ELECTROTECHNICAL COMMISSION

**Electromechanical equipment guidance for
small hydroelectric installations**

FOREWORD

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IEC 61116 has been prepared by IEC technical committee 4: Hydraulic turbines. It is an International Standard.

This second edition cancels and replaces the first edition published in 1992. This edition constitutes a technical revision.

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

- a) harmonization of scope with IEC 62006;
- b) introduction of new technical aspects;
- c) overall editorial revision.

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

Draft	Report on voting
4/510/CDV	4/521A/RVC

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.

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

- reconfirmed,
- withdrawn, or
- revised.

1 Scope

This document is used as a guidance that applies to hydroelectric installations containing impulse or reaction turbines with unit power up to about 15 MW and reference diameter of about 3 m. These figures do not represent absolute limits.

This document deals only with the direct relations between the purchaser or the consulting engineer and the supplier. It does not deal with civil works, administrative conditions or commercial conditions.

This document is intended to be used by all concerned in the installation of electromechanical equipment for small hydroelectric plants.

This document, based essentially on practical information, aims specifically at supplying the purchaser of the equipment with information which will assist him with the following:

- preparation of the call for tenders;
- evaluation of the tenders;
- contact with the supplier during the design and manufacture of the equipment;
- quality control during the manufacture and shop-testing;
- follow-up of site erection;
- commissioning;
- acceptance tests;
- operation and maintenance.

The document comprises the following:

- a) general requirements for the electromechanical equipment of small hydroelectric installations;
- b) technical specifications for the electromechanical equipment, excluding its dimensioning and standardization;
- c) requirements for acceptance, operation and maintenance.

Bearing in mind the type of installation considered, the relevant documents are intended to be as simple as possible but to satisfactorily define the particular operation conditions. Over-specification is harmful to the economy of the project.

This document does not cover the initial stage of investigations, that is to say the preliminary study and feasibility study. Neither does it deal with the economic study concerning the supply and demand of energy.

To conclude, the document does not replace the applicable engineering studies for the selection, design, manufacture, installation and testing of the equipment. It is intended only to make the purchaser aware of the important points and data to be furnished, specified and kept in due consideration in the construction of small hydroelectric plants.

2 Normative references

There are no normative references in this document.