PD IEC TS 62600-300:2019

BSI Standards Publication

Marine energy — Wave, tidal and other water current converters

Part 300: Electricity producing river energy converters — Power performance assessment

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National foreword

This Published Document is the UK implementation of IEC TS 62600-300:2019.

The UK participation in its preparation was entrusted to Technical Committee PEL/114, Marine energy - Wave, tidal and other water current converters.

A list of organizations represented on this committee can be obtained on request to its secretary.

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FOREWORD

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Technical Specification are subject to review within three years of publication to decide whether they can be transformed into International Standards.

IEC TS 62600-300, which is a Technical Specification, has been prepared by IEC technical committee 114: Marine energy - Wave, tidal and other water current converters.

The text of this Technical Specification is based on the following documents:

Draft TS	Report on voting
114/284/DTS	114/300/RVDTS 114/300A/RVDTS

Full information on the voting for the approval of this Technical Specification can be found in the report on voting indicated in the above table.

A list of all parts in the IEC 62600 series, published under the general title *Marine energy - Wave, tidal and other water current converters*, can be found on the IEC website.

This document has been drafted in accordance with the ISO/IEC Directives, Part 2.

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

- transformed into an International standard,
- reconfirmed,
- withdrawn,
- replaced by a revised edition, or
- amended.

A bilingual version of this publication may be issued at a later date.

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MARINE ENERGY – WAVE, TIDAL AND OTHER WATER CURRENT CONVERTERS –

Part 300: Electricity producing river energy converters – Power performance assessment

1 Scope

This part of IEC 62600 provides:

- A systematic methodology for evaluating the power performance of river current energy converters (RECs) that produce electricity for utility scale and localized grids;
- A definition of river energy converter rated capacity and rated water speed;
- A methodology for the production of power curves for the river energy converters in consideration; and
- A framework for the reporting of results.

Exclusions from the scope of this document are as follows:

- RECs that provide forms of energy other than electrical energy unless the other form is an intermediary step that is converted into electricity by the river energy converter;
- Resource assessment, that will be addressed separately in the River Energy Resource Assessment Technical Specification;
- Scaling of any measured or derived results;
- Power quality issues;
- Any type of performance other than power and energy performance; and
- The combined effect of multiple river energy converter arrays.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

IEC 60041, *Field acceptance tests to determine the hydraulic performance of hydraulic turbines, storage pumps and pump-turbines*

IEC 60688:2012, *Electrical measuring transducers for converting A.C. and D.C. electrical quantities to analogue or digital signals*

IEC 61400-12-1:2005, *Wind turbines – Part 12-1: Power performance measurements of electricity–producing wind turbines*

IEC 61869-2, *Instrument transformers – Part 2: Additional requirements for current transformers*

IEC 61869-3, *Instrument transformers – Part 3: Additional requirements for inductive voltage transformers*