BSI Standards Publication

Marine energy — Wave, tidal and other water current converters

Part 1: Vocabulary

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National foreword

This Published Document is the UK implementation of IEC TS 62600-1:2020. It supersedes PD IEC TS 62600-1:2011+A1:2019, which is withdrawn.

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.

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

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TECHNICAL SPECIFICATION

colour inside

Marine energy – Wave, tidal and other water current converters – Part 1: Vocabulary

INTERNATIONAL
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COMMISSION

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CONTENTS

INTERNATIONAL ELECTROTECHNICAL COMMISSION

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Part 1: Vocabulary

FOREWORD

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- the required support cannot be obtained for the publication of an International Standard, despite repeated efforts, or
- the subject is still under technical development or where, for any other reason, there is the future but no immediate possibility of an agreement on an International Standard.

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

IEC TS 62600-1 which is a Technical Specification, has been prepared by IEC technical committee 114: Marine energy – Wave, tidal and other water current converters.

This 2nd edition cancels and replaces the 1st edition published in 2011, and its Amendment 1, published in 2019. This edition constitutes a technical revision.

This edition includes the following significant technical changes from the previous edition:

a) Approximately 45 % of the original terms which were either not in use, used only in a glossary sense, or which are commonly understood and found in other references were removed.
b) Thirteen (13) terms considered more general than tidal were moved up from IEC TS 62600-200 and added.
c) Eight (8) terms that were added in Amendment 1 to IEC TS 62600-1 were incorporated alphabetically.
d) Six (6) additional new terms were added.

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

Draft TS	Report on voting
114/330/DTS	114/342/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.

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

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.

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

- reconfirmed,
- withdrawn,
- replaced by a revised edition, or
- amended.

IMPORTANT – The 'colour inside' logo on the cover page of this publication indicates that it contains colours which are considered to be useful for the correct understanding of its contents. Users should therefore print this document using a colour printer.

INTRODUCTION

This Technical Specification has been developed as a tool for the international marine energy community, to assist in creating clarity and understanding. The wave, tidal and water current energy industry has recently experienced a period of rapid growth and sector development. With this expansion, it became apparent that a document defining the terms used within the sector was required. The aim of this document is to present clear and consistent language that will aid the development of programs, projects, and future standards.

This document lists the terms that the marine energy industry uses. It is an evolving document that will change as new terms and symbols are added. The terminologies herein have been harmonized with IEC 60050 and other IEC documents as far as possible. The document does not constitute a full glossary of terms used in the marine energy community.

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

Part 1: Vocabulary

1 Scope

This part of IEC 62600 defines the terms relevant to marine energy. For the purposes of this document, sources of ocean and marine renewable energy are taken to include primarily devices that convert wave, tidal and other water current energy into electrical energy, although other conversion methods, systems and products are included.

Terms relating to conventional dam and tidal barrage, offshore wind, marine biomass, and salinity gradient energy conversion are not included in the scope of this document.

This document is intended to provide uniform terminology to facilitate communication between organizations and individuals in the marine energy industry and those who interact with them.

2 Normative references

There are no normative references in this document.

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

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

3.1
annual energy production
estimate of the total energy production of a device during a one-year period obtained by applying the device's power performance characteristics to a relevant energy resource characterization, assuming 100 % availability

Note 1 to entry: Actual annual energy production is unlikely to exceed this estimate.

[SOURCE: IEC 60050-415:1999, 415-05-09, modified – The definition has been revised to be generic by replacing "wind turbine generator system" by "device", and by replacing "the power curve to different reference wind speed frequency distributions at hub height" by "the device's power performance characteristics to a relevant energy resource characterization". For clarity, "obtained" has been added before "by applying". Note 1 to entry has been added.]

3.2
array
<in marine energy> one or more groups of marine energy converters

Note 1 to entry: Array spacing is dictated by hydrodynamic considerations and can be very closely packed so as to constitute a single platform or an arrangement of identical devices.