

# CONSOLIDATED VERSION



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



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

INTERNATIONAL  
ELECTROTECHNICAL  
COMMISSION

ICS 27.140

ISBN 978-2-8322-6740-0

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

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

#### Part 1: Terminology

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**In this Redline version, a vertical line in the margin shows where the technical content is modified by amendment 1. Additions are in green text, deletions are in strikethrough red text. A separate Final version with all changes accepted is available in this publication.**

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

The committee has decided that the contents of this publication and its amendment will remain unchanged until the stability date indicated on the IEC web site under "<http://webstore.iec.ch>" in the data related to the specific publication. At this date, the publication will be

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## 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 glossary of terms for the sector was required. The aim of this Technical Specification is to present clear and consistent language that will aid the development of programs, projects, and future standards.

This Technical Specification lists the terms that the marine energy industry commonly 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.

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

## Part 1: Terminology

### 1 Scope

This part of IEC 62600 defines the terms relevant to ocean and marine renewable energy. For the purposes of this Technical Specification, sources of ocean and marine renewable energy are taken to include wave, tidal current, and other water current energy converters.

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

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

### 2 Terms and definitions

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

#### 2.1

##### **added mass**

extra mass associated with the additional force necessary to accelerate a body through a fluid compared to the same acceleration in a vacuum

NOTE 1 In general, added mass is a variable that depends on the state of the unsteady motion and is not a constant.

NOTE 2 In a viscous (real) fluid, the added mass would include kinetic energy of a fluid layer entrained by the accelerating body.

#### 2.2

##### **added mass at infinity**

limit of the mass corresponding to the added mass as the frequency tends to infinity

NOTE The value of added mass at infinity is normally necessary for time domain modelling of wave-body interaction.

#### 2.3

##### **added mass coefficient**

ratio between added mass and the mass of the water displaced by the submerged body

#### 2.4

##### **amplitude control**

method to obtain the optimum oscillatory motion amplitude to capture a maximum of wave energy

NOTE For a simple oscillating system, the object of amplitude control is to obtain a given oscillatory velocity amplitude that should be related with the wave excitation force.