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Code of practice of testing of pre-prototype devices of wave energy converters

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foreword

This document is in accordance with the provisions of GB/T 1.1-2020 "Guidelines for Standardization Work Part 1.Structure and Drafting Rules for Standardization Documents"

drafting.

This document is modified to adopt IEC TS62600-103.2018 "Ocean Energy Wave Energy, Tidal Energy and Other Current Energy Conversion Devices No.

Part 103.Guidelines for the Pre-development Stage of Wave Energy Conversion Devices, Recommended Practices and Procedures for Device Pre-Prototype Testing.

There are many technical differences between this document and IEC TS62600-103.2018, in the outer margins of the terms involved

Marked with a single vertical line (|). See Appendix A for a list of these technical differences and their causes.

The following editorial changes were made to this document.

--- Added references JTS145-2-2013, JTJ/T 234-2001;

---Modified the notes of 5.3.3 and 9.3.1.

Please note that some contents of this document may refer to patents. The issuing agency of this document assumes no responsibility for identifying patents.

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1 Scope

This document describes the most basic test procedure for the pre-prototype of the wave energy conversion device and its prerequisites, test objectives, definition, treatment test

The method of testing raw data is discussed, and suggestions for the selection of measurement sensors and data acquisition software packages are provided.

This document applies to the testing of subprototype-scale wave energy conversion devices (hereinafter referred to as "device"). This document is not intended for full scale prototypes

Testing of prototypes, bench testing of energy extraction systems and testing using mathematical models.

2 Normative references

The contents of the following documents constitute the essential provisions of this document through normative references in the text. Among them, dated references

For documents, only the version corresponding to the date is applicable to this document; for undated reference documents, the latest version (including all amendments) is

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applicable to

this document.

GB/T 33543.1 Marine Energy Terminology Part 1.General

GB/T 37551 Terminology of ocean energy wave energy, tidal current energy and other current energy conversion devices (GB/T 37551-2019,

IEC /T S62600-1.2011, MOD)

GB/T 39571 Evaluation and Characterization of Wave Energy Resources (GB/T 39571-2020, IEC /T S62600-101.2015, MOD)

GB /Z 40295 Evaluation of power generation performance of wave energy conversion devices (GB /Z 40295-2021, IEC /T S62600-100.2012,

MOD)

GB/T 41088 Design requirements for ocean energy systems (GB/T 41088-2021, IEC TS62600-2.2019, IDT)

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3.1 Terms and Definitions

GB/T 33543.1, GB/T 37551 and the following terms and definitions apply to this document.

3.1.1 Environmental terms

3.1.1.1

run seastate operationalseastate

Wave conditions when the unit is in generator mode.

3.1.1.2

storm conditionsstormconditions

According to the sea conditions described in the return period specified in GB/T 41088.

3.1.1.3

regular wave regularwave

A wave train containing only waves of a single frequency.

3.1.1.4

irregular wave irregularwave

A wave train that contains waves of different frequencies and is random.

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