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GB/T 39571-2020

Wave energy resource assessment and characterization

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Table of Contents

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Foreword

This standard was drafted in accordance with the rules given in GB/T 1:1-2009:

This standard uses the redrafting method to modify and adopt IEC TS62600-101:2015 "Ocean Energy Wave Energy, Tidal Current Energy and Other Water Flow Energy"

Conversion Device Part 101: Wave Energy Resource Evaluation and Characterization:"

Compared with IEC TS62600-101:2015, this standard has many adjustments in structure: Appendix A lists this standard and IEC

TS62600-1:2015 chapter number comparison list:

Compared with IEC TS62600-101:2015, this standard has technical differences, and the

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clauses related to these differences have been passed on its outer page:

The vertical single line (|) of the margin position is marked, and a list of the corresponding technical differences and their reasons is given in Appendix B:

This standard has made the following editorial changes:

---Change the standard name to "Wave Energy Resource Assessment and Characterization";

---Added Appendix D "Sea Wave Model";

---Modified A:2, A:4 and Table A:1 in Appendix A of IEC TS62600-101:2015;

---Modified Appendix C "Long-term Uncertainty Calculation Example" in IEC TS62600-101:2015;

---Added Appendix F "Sample Wave Energy Resource Chart";

---Revised references:

This standard was proposed and managed by the National Ocean Energy Conversion Equipment Standardization Technical Committee (SAC/TC546):

Drafting organizations of this standard: National Ocean Technology Center, Hohai University, Guangzhou Institute of Energy Research, Chinese Academy of Sciences, China Power Engineering Corporation East China

Design and Research Institute Co:, Ltd:, National Ocean Standard Metrology Center, China Three Gorges Group Co:, Ltd:, Jimei University:

1 Scope

This standard specifies the assessment level and process of wave energy resources, data collection, numerical simulation, measurement-correlation-prediction method, data analysis and

Preparation of resource assessment technical report:

This standard is applicable to the assessment of wave energy resources in the three stages of site selection, feasibility study and design and development:

This standard does not apply to the assessment of wave energy resources under extreme sea conditions:

2 Normative references

The following documents are indispensable for the application of this document: For dated reference documents, only the dated version applies to this article

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Pieces: For undated references, the latest version (including all amendments) applies to this document:

GB/T 4883 Statistical processing and interpretation of data Judgment and processing of outliers in normal samples

GB 12327 Hydrographic Survey Specification

GB/T 27418 Measurement Uncertainty Evaluation and Expression (GB/T 27417-2017, ISO /IEC Guide98-3:2008, MOD)

JTS145 Port and Waterway Hydrological Code

ASMEV

tionincomputationalfluiddynamicsandheattransfer)

3 Terms and definitions

The following terms and definitions apply to this document:

3:1

Planning site selection reconnaissance

Investigation and evaluation of the quantity, quality, distribution and development and utilization of wave energy resources in the study area,

Preliminary comparison of points and their economics:

Note: Resource assessment for planning site selection is applicable to resource assessments in a wide range of sea areas, usually the first resource assessment in a certain area:

3:2

Feasibility study

To further investigate, survey, analyze, and compare the construction conditions of the proposed project, and study the technical feasibility, economic rationality, and construction necessity:

Note: The feasibility study resource evaluation is suitable for improving the accuracy of the resource evaluation for planning and site selection before the design and development resource evaluation:

3:3

Designanddevelopment

According to the total installed capacity of the project, a detailed engineering design plan is

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formulated:

Note: The design and development resource assessment is applicable to a small area of sea, usually the final and most detailed resource assessment of a specific project, usually including wave energy

Installation layout, building design, construction method and investment optimization work:

3:4

Measure-Correlate-Predict method; MCP

A method of establishing an association model between the short-term data of the measurement location and the data of the reference location to predict the long-term data of the measurement location:

Note: The measured location refers to the target location for resource assessment; the reference location refers to the location with long-term measured data:

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