TR IEC/TS 62600-10 : 2020

IEC/TS 62600-10:2015, IDT

(ICS 27.140)

TECHNICAL REFERENCE

Marine energy – Wave, tidal and other water current converters

– Part 10 : Assessment of mooring system for marine energy converters (MECs)

Singapore Standards Council

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Published by Enterprise Singapore

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ISBN 978-981-49-2529-7

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First published, 2020

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CONTENTS

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National Foreword

This Technical Reference (TR) was prepared by the Working Group on Marine Energy set up by the Technical Committee on Power System and Utilisation under the purview of EESC.

This TR is identical with IEC/TS 62600-10:2015, "Marine energy – Wave, tidal and other water current converters – Part 10: Assessment of mooring system for marine energy converters (MECs)", published by the International Electrotechnical Commission.

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

Part 10: Assessment of mooring system for marine energy converters (MECs)

FOREWORD

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IEC TS 62600-10, which is a technical specification, has been prepared by IEC technical committee 114: Marine energy – Wave, tidal and other water current converters.

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The text of this technical specification is based on the following documents:

Enquiry draft	Report on voting
114/140/DTS	114/150A/RVC

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

The committee has decided that the contents of this publication will remain unchanged until the stability date indicated on the IEC website 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 defines rules and assessment procedures for the design, installation and maintenance of mooring system with respect to technical requirements for floating marine energy converters.

The proposed work will aim to bring together expert knowledge from the marine energy power and offshore engineering industries in order to formulate a guideline specification of the design, installation and maintenance requirements for mooring system of floating MECs.

In addition to safety and ocean environmental requirements, this technical specification focuses on the strength requirements of mooring systems for MECs.

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

Part 10: Assessment of mooring system for marine energy converters (MECs)

1 Scope

The purpose of this Technical Specification is to provide uniform methodologies for the design and assessment of mooring systems for floating MECs (as defined in TC114 scope). It is intended to be applied at various stages, from mooring system assessment to design, installation and maintenance of floating MEC plants.

This technical specification is applicable to mooring systems for floating MEC units of any size or type in any open water conditions. Some aspects of the mooring system design process are more detailed in existing and well-established mooring standards. The intent of this technical specification is to highlight the different requirements of MECs and not duplicate existing standards or processes.

While requirements for anchor holding capacity are indicated, detailed geotechnical analysis and design of anchors are beyond the scope of this technical specification.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

IEC TS 62600-1, *Marine energy – Wave, tidal and other water current converters – Part 1: Terminology*

ISO 17776:2000, *Petroleum and natural gas industries – Offshore production installations – Guidelines on tools and techniques for hazard identification and risk assessment*

ISO 19901-1:2005, *Petroleum and natural gas industries – Specific requirements for offshore structures – Part 1: Metocean design and operating considerations*

ISO 19901-7:2013, *Petroleum and natural gas industries – Specific requirements for offshore structures – Part 7: Stationkeeping systems for floating offshore structures and mobile offshore units*

API RP 2SK, *Design and Analysis of Station keeping Systems for Floating Structures*, 3rd Edition, October 2005

API RP 2I**,** *In-Service Inspection of Mooring Hardware for Floating Structures*, 3rd Edition, 2008

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