Accepted Manuscript

Experimental and Numerical Investigation of the Hydrodynamic Performance of an Oscillating Water Column Wave Energy Converter

K. Rezanejad, C. Guedes Soares, I. López, R. Carballo

PII: S0960-1481(17)30003-4

DOI: 10.1016/j.renene.2017.01.003

Reference: RENE 8441

To appear in: Renewable Energy

Received Date: 23 May 2016

Revised Date: 30 December 2016

Accepted Date: 02 January 2017

Please cite this article as: K. Rezanejad, C. Guedes Soares, I. López, R. Carballo, Experimental and Numerical Investigation of the Hydrodynamic Performance of an Oscillating Water Column Wave Energy Converter, *Renewable Energy* (2017), doi: 10.1016/j.renene.2017.01.003

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.



Experimental and Numerical Investigation of the Hydrodynamic Performance of an Oscillating Water Column Wave Energy Converter

K. Rezanejad ¹, C. Guedes Soares ^{2*}, I. López ³ & R. Carballo ⁴

^{1,2} Centre for Marine Technology and Ocean Engineering (CENTEC), Instituto Superior

Técnico, Universidade de Lisboa, Av. Rovisco Pais, 1049-001 Lisboa, Portugal

^{3,4} Hydraulic Engineering Area, Universidade de Santiago de Compostela, Campus

Universitario s/n, 27002, Lugo, Spain

* Corresponding author e-mail: c.guedes.soares@centec.tecnico.ulisboa.pt

Highlights

The performance of an oscillating water column converter is investigated numerically and experimentally

The boundary integral equation method is implemented to solve the appropriate 2D boundary value problem

A comprehensive experimental campaign is carried out in both regular and irregular waves.

the efficiency is very sensitive to the variations in the turbine damping although the absolute maximum efficiency is less sensitive

influence of the wave height has less important than the other two parameters (turbine damping and incoming wave period)

Download English Version:

https://daneshyari.com/en/article/4926370

Download Persian Version:

https://daneshyari.com/article/4926370

Daneshyari.com