Asian Journal of Research in Social Sciences and Humanities
ISSN: 2249-7315 Vol. 11, Issue 11, November 2021 SJIF 2021 = 8.037
A peer reviewed journal

A STUDY ON WAVE ENERGY CONVERTER TECHNOLOGIES

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DOI:- 10.5958/2249-7315.2021.00260.4

ABSTRACT

Wave Energy Converters (WECs) are equipment that converts movable mechanical or electrical electric energy into kinetic and potential energy from a moving sea wave. Ocean waves are a vast, mostly unexplored energy resource, with significant potential for energy extraction. The necessity to fulfill renewable energy goals drives research in this field, although it is still in its infancy compared to other renewable energy technologies. This study discusses the current state of wave energy and assesses the device types that reflect current wave energy converter (WEC) technology, with a special emphasis on work being done in the UK. The potential power take-off systems are defined, and several control methods to improve the efficiency of point absorber-type WECs are considered. There is a lack of consensus on the optimal technique for collecting energy from waves, and although past innovation has mostly concentrated on the idea and design of the main interface, concerns about how to optimize the power train have arisen. The essay ends with some predictions for the future.

KEYWORDS: *Energy, Power Generation, Technology, Wave Energy, Wave Power.*

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