

Abstract

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Experimental Investigation of the Power Captured from Sea Wave using the Wave-Hunter System

The energy problem is strongly appeared in the last decades due to the rise in fossil fuel price and environmental impact of combustion. The world will need new energy supplies and an upgraded energy infrastructure to meet the growing demands for electric power and transportation fuels. For this situation, much clean energy is expected to blossom for satisfy the energy amount for this civilization, which is inflating. Wave energy is one of the green energy available annually and has enormous energy stored. However, the problem is that type of energy has not been effectively used so far. A new design is introduced to the wave energy conversion system to produce power from regular and irregular waves. The Wave Hunter system is a novel unidirectional mechanical transmission system. This system is called Wave Hunter. In this work, an experimental assessment is used to evaluate the efficiency of this system by using artificial wave. The results indicate to compatibility between the Wave Hunter and the floats. Furthermore, the results introduce the experimental evaluation of this system with an innovative float shape in water tank. Superior average efficiencies of the regular and irregular wave patterns are obtained as 28% and 38%, respectively.