Abstract

Oscillating water column, is a technique to transform wave energy into electrical energy by utilizing ocean wave oscillations. In this study discussed how your model Oscillating water column for the conversion of wave energy into electrical energy and also calculate the efficiency of the power generated by Oscillating water column. In this study also discussed the shape and size of the Oscillating water column in order to obtain optimal power efficiency. Modeling and numerical simulation carried out using matlab to look for oscillations in a chamber against time. To complete oscillation equation in the form of second order differential equations used Runge-Kutta 4th order method for the system. This research resulted in a numerical simulation of the efficiency of the oscillating water column. Power efficiency Oscillating Water Colum obtained up to 52% on a simulated scenario.

Keyword: *Oscillating Water Column, ocean energy conversion, OWC numerical simulation, numerical simulations, Runge-Kutta 4^{th} order.*