Abstrak

Indonesia as an archipelago has 17,508 islands with a long 81,290 km of coastline, which means that Indonesia has the potential of marine energy is very large, especially the ocean waves. Therefore, Indonesia needs to take a role in terms of research and development of energy from the ocean sea wave energy mainly, because this technology can potentially solve the problem of electrical energy as an archipelagic country, including providing electrical energy. This analysis utilizing ocean waves as the primary source to be converted into a power source using the Salter Duck pendulum. Wave conditions are analyzed on the wave height is 0.5m, 1m and 1.5m and the period of 4s, 6s, 8s. To convert wave energy using a pendulum with a mass of 5kg, 10kg, 15kg and 10kg and the pendulum arm of 0.6m, 0.8m, 1m, and 1.5m and the Salter Duck Draft of 1m, 1.5m and 2 m. The best results are obtained on the frequency of the Salter Duck 1/14.17 hz with mass 10Kg and the pendulum arm 1 m produce rotary power of 669.12 watts as input to the electric generator.

Keywords: Salter Duck, Wave Energy, Buoy, Madura Strait.
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