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Design of a Wave Energy Convertor, Pelamis, Using the Wave Characteristics of the Chabahar Site

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Abstract

A wave energy convertor, Pelamis, was conceptually designed based on the forces applied to the instrument according to the Airy wave theory. Turnings of the bending arms were transformed into horizontal movements of pistons in the hydraulic cylinders which resulted in the generation of alternating current (AC) electricity without variation in AC frequency, using hydraulic circuits. In this study, the optimal design of Pelamis for applications in Chabahar area was selected among several assumed alternatives which could provide 16 KW of electricity.

Keywords: *Wave Energy, Pelamis, Chabahar Bay, Renewable Energy.*