

# **Abstract**

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## **Design and Performance of an Artificial Regular and Irregular Sea wave Simulator**

Wave energy is the most available energy associated in water seas and oceans. Simultaneously, the wave energy has consisted by two types of energies potential and kinetics energy. Therefore, many attempts have been applied to capture these energies. In the present work, a wave generator device has been designed and manufactured to simulate and generate the heaving motion of sea waves with different specification. A PC based electro-pneumatic control system was designed and implemented to individually control wave height and frequency to generate these regular and irregular waves.