

A Permanent-Magnet Linear Generator Wave Energy Converter for Low Power Ocean Sensors

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Abstract

Renewable energy sources are becoming increasingly important due to their low environmental impact and limitless nature. This thesis explores the design of a 250 mW permanent magnet linear generator wave energy converter to power ocean sensors. While many wave energy converters exist, this is a unique application because the wave energy device is neither at the surface nor at the seafloor and is a low power application. The permanent magnet linear generator detailed in this thesis would enable the continuous operation of ocean mixing sensors with minimal maintenance and intervention.

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