

Energy harvesting using Regenerative Hybrid Electrodynamic Damper

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ABSTRACT

The Regenerative Hybrid Electrodynamic Damper (RHED) is one of the electromagnetic dampers which can effectively attenuate the vibration of structures. The main damping force of RHED is electromotive force. Specifically, the damping force of RHED can be divided into two factors: eddy-current damping force and coiled-type damping force. Furthermore, the induced electrical energy from coil can be used as power source of sensors required for structure monitoring. This study focuses on energy flow of RHED and increasing of electrical energy which can harvesting from RHED. Through the proposed circuit, the electrical energy generated by the damper was harvested and the harvesting energy was increased.

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