

## **Electromagnetic Tuned Mass Damper Approach for Regenerative Suspension**

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**Abstract :** This study is aimed at exploring the possibility of energy recovery through the suppression of vibrations. The article describes design of electromagnetic dynamic damper. The magnetic part of the device performs the function of a tuned mass damper, thereby providing both energy regeneration and damping properties to the protected mass. According to the theory of tuned mass damper, equations of mathematical models were obtained. Then, under given properties of current system, amplitude frequency response was investigated. Therefore, main ideas and methods for further research were defined.

**Keywords :** electromagnetic damper, oscillations with two degrees of freedom, regeneration systems, tuned mass damper

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