DYNAMIC CHARACTERIZATION OF MAGNETO-RHEOLOGICAL ELASTOMERS UNDER COMPRESSIVE LOADINGS

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ABSTRACT

Magneto-Rheological Elastomers (MREs) are a class of smart materials whose elastic modulus or stiffness can be varied depending on the magnitude of an applied magnetic field. As controllable stiffness elements, MREs can offer innovative engineering solutions to various engineering challenges. This study focuses on the dynamic characteristics of MREs under compressive loadings. It presents the results of dynamic compression testing of MRE samples, and captures their dynamic response characteristics.

KEYWORDS: Elastomer, MRE, Stiffness