

MR유체를 이용한 다방향 제진형 마운트의 응답특성

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Property of Multi-Direction Mount Using Magneto-Rheological Fluid

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Key Words : Mount, Squeeze Film Damper, Multi-Direction Mount, Magneto-Rheological Fluid, Variable Damping, Vibration Control,**Abstract** : This paper presents property of the squeeze mode type mount using Magneto-Rheological fluid (MR fluid). The mount can isolate multi-directional vibrations, and also effectively reduce the vibrations in a wide range of disturbance frequency by controlling the applied magnetic field. The shape of the mount is the same that of squeeze film damper. In the present work, the performance of this mount was experimentally investigated according to changing the magnetic field strength. Furthermore, properties of the mount using three kind of conventional oil were compared with those of the mount using MR fluid.

단일 진동체의 진동 흡진기 설계 기법

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Design of a Vibration Absorber for an Elastically Suspended Rigid Body

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Key Words : Center of Elasticity(탄성중심), Plane of Symmetry(대칭평면), Screw Theory(나선이론), Vibration Absorber(진동흡진기), Vibration Mode(진동모우드)**Abstract** : A new methodology is presented for the multi-degree-of-freedom vibration absorber for an elastically suspended rigid body with the planes of symmetry in general motion. Unlike the common single degree-of-freedom vibration absorber, the presented methodology makes use of both linear and rotational properties of the absorber. It is suggested that an absorber is designed separately for the in-plane and out-of-plane axes of vibration and combined the two cases for a six-degree-of-freedom absorber. The nine possible design methods are suggested for the six-degree-of-freedom absorber when an elastically suspended rigid body has one, two, or three planes of symmetry.