

MR Damper와 Air Spring으로 탄성 지지된 방진계의 반능동제어 Semi-active Control of Vibration Isolation System Supported with MR Damper and Air Spring

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Abstract : Many equipments in semi-conductor product fields are sensitive to the vibration and need vibration isolation system. Recently, the transient vibration produced by the moving part in the equipment becomes a big obstacle to increase the product performance. Since the isolation system with high performance is supported with very flexible spring, this problem is more significant. In this paper, the semi-active vibration control method with MR damper in a parallel motion with air spring is used in order to regulate the transient vibration and maintain the isolation performance. According to the direction of exciting force, several vibration modes of rigid body with 6 degree of freedoms are considered.