

Simple vibration control system for shear structures under earthquakes

by

Takeo TANIDA^{*1} and Yoji SHIMAZAKI^{*2}

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Abstract

Conventional vibration control methods have problems that they are too complex and that they increase their costs of manufacturing and maintenance. In this research we propose a simple vibration-controlled flexible structure in which highly damping rubbers are inserted between two rigid frames, which incline toward each other. These structures are modeled to a system that has two degrees of freedom. Experiments involving two conditions, in which vibration is controlled and not controlled, are conducted. Under these conditions, the effectiveness of these structures for several earthquakes is demonstrated. Numerical analyses have also performed to make sure the effectiveness obtained by the experiments.

Keywords: Vibration Control, Earthquakes, Highly Damping Rubber, Shear Structure

*1 Graduate Student, Course of Civil Engineering

*2 Professor, Department of Civil Engineering