



DYNAMIC CHARACTERISTICS OF SMALL BASE ISOLATION SYSTEM FOR EQUIPMENTS USING NEW DEVICE BASED ON FRICTION FORCE

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Volume: **Thematic Issue on Earthquakes**

Pages: **87-96**

Date: **October 2012**

Abstract:

A small base isolation system using a new device that used friction force was developed. In this paper, dynamic characteristics of the system were investigated by an experiment using artificial seismic wave. The bearing combination of three cases, four spherical metal bearings, two spherical metal and two marble plate bearings, four marble plate bearings, was done in the experiment. The peak acceleration amplitude and the root mean square amplitude on the base isolation system have decreased to 50-90 % and to 76-90 %, respectively, compared to the input wave. The best bearing combination of reduction rate was the combination of two marble plate and two spherical metal bearings. This system is useful to prevent overturning of equipments by seismic ground motion.

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