

## **Shaking table test for effect of interaction between light-weight equipment and structural wall**

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### **ABSTRACT**

In Korea where high-frequency earthquakes with magnitude 5.8 has occurred, it is necessary to reevaluate seismic performance of nuclear power plant structures and installed equipment. In the seismic performance evaluation of equipment installed in the nuclear power plant building, uncoupled analysis is performed in most case. However, many studies have reported that the response acceleration results are different due to the interaction of structures and equipment<sup>2)3)4)</sup>. Also, ASEC 4-16<sup>1)</sup> suggest standards for performing coupled analysis.

In order to verify the structure-equipment interaction, shaking table test was conducted for reinforced concrete squat walls with low aspect ratio and light-weight equipment models on the top slab of RC wall. The test variables were types of earthquakes and natural frequency of walls and equipment model. Experimental results and analytical results were analyzed to propose a damping ratio reduction factor that reflects the structure-equipment interaction that can be applied in the uncoupled analysis of the equipment installed in the structure.

### **REFERENCES**

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