

**REDUCTION OF SEISMIC RESPONSE OF HOUSES
USING OIL DAMPERS**

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Abstract:

The destruction of houses during earthquake has been recorded all over the world. Reduction of seismic response of houses is important for their protection during shaking of ground. Two different shapes of oil dampers (spherical and cylindrical) are proposed in this paper for two story houses, which are general in Japan. Oil damper is connected to the ceiling of the first floor and the foundation. The effectiveness of the dampers is examined experimentally. It is concluded that the peak of the frequency response function of the first vibration mode decreases and the damping ratio increases when the dampers are used. The effectiveness of the dampers is examined through computer simulation. The maximum response of each floor decreases when the dampers are used.

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