

## Evaluation on Effective Size and Hysteresis Characteristics of CHS Damper

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**Abstract :** This study aims to evaluate the effective size and hysteresis characteristics of Circular Hollow Steel (CHS) damper. CHS damper is among steel dampers which are used widely for seismic energy dissipation because they are easy to install, maintain and are low cost. CHS damper dissipates seismic energy through metallic deformation due to the geometrical elasticity of circular shape and fatigue resistance around connection part. After calculating the effective size, which is found to be height to diameter ratio of  $\sqrt{3}$  ("3"), nonlinear FE analyses were conducted to evaluate the hysteresis characteristics. To verify the analysis simulation quasi static loading was carried out and the result was compared and satisfactory result was obtained.

**Keywords :** SS400 steel, circular hollow steel damper, effective size, quasi static loading, FE analysis

**Conference Title :** ICCAE 2014 : International Conference on Civil Society and Architectural Engineering

**Conference Location :** Miami, United States

**Conference Dates :** March 10-11, 2014