

## Analytical Evaluation on Structural Performance and Optimum Section of CHS Damper

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**Abstract :** This study aims to evaluate the effective size, section and structural 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 inexpensive. 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  $\sqrt{3}$ , nonlinear FE analyses were carried out to evaluate the structural characteristics and effective section (diameter-to-ratio).

**Keywords :** circular hollow steel damper, structural characteristics, effective size, effective section, large deformation, FE analysis

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