

عنوان مقاله:

SEISMIC PERFORMANCE OF MOMENT-RESISTING STEEL STRUCTURES WITH SLIT-FRICTION HYBRID DAMPER

محل انتشار:

هشتمین کنفرانس بین المللی زلزله شناسی و مهندسی زلزله (سال: 1398)

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نویسندگان:

Azadeh Khoshkroodi - *Ph.D. Student, Department of Structural Engineering, Azad University, Zanjan, Iran*

Hossein Parvini Sani - *Associate Professor, Department of Structural Engineering, Azad University, Tehran, Iran*

خلاصه مقاله:

Nowadays, slit dampers and friction dampers are mostly used to reduce the damage of structures during the earthquakes. In this study new dissipation system called slit-friction hybrid damper (SFHD) is introduced as the combination of these dampers that can be used in a lateral load resisting system to improve the seismic performance of the steel structures. Accordingly, 5 and 10 stories of steel structures are considered where the SFHD is added to the system as a brace. Using seven pairs of far field acceleration records, these models were analyzed based on non-linear static analysis and nonlinear dynamic analysis. According to the result, by adding the SFHD, increased stiffness by 17% in retrofitted structures so, force –displacement of curve, decreases by 20% in push over analysis. Also, displacement in time history analysis up to 55% reduces in average. The possibility of collapse decreases about 57% .in structures including the SFHD in comparison with original structures

کلمات کلیدی:

Earthquake, Seismic Analysis, Non-linear Analysis, Steel Frame

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