عنوان مقاله:
Evaluation of cyclic behavior of shear links made of low yield point steel

محل انتشار:
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خلاصه مقاله:
Shear links are mainly designed to sustain inelastic deformation of eccentrically braced systems during severe earthquakes. Cyclic responses of five types of shear links made from different steel grades with yield strength ranging from ۰۱۰ to ۵۸۴ MPa, were investigated in this paper. Finite element method was utilized for modeling the links behavior and strength degradation caused by web and flange local buckling. Cyclic stress-strain curve was chosen for modeling the shear link behavior where two different approaches were chosen for investigation. The first approach was based on conventional design of shear links with stiffeners and the other one is based on utilization of shear links without any stiffeners which is made of low yield point steel. The results showed an improved performance of shear links made from LYP steel. This can be contributed to decreasing the web compactness ratio and excluding the undesired effects caused by stiffeners such as welding effects.

کلمات کلیدی:
Low yield point steel; Shear link; Finite element model; compactness ratio; Plastic rotation

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