عنوان مقاله:

Evaluation of cyclic behavior of shear links made of low yield point steel

محل انتشار:

پنجمین کنفرانس ملی و اولین کنفرانس بین المللی سازه و فولاد (سال: 1393)

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خلاصه مقاله:

Shear links are mainly designed to sustain inelastic deformation ofeccentrically braced systems during severe earthquakes. Cyclicresponses of five types of shear links made from different steel gradeswith yield strength ranging MPa, were investigated inthis paper. Finite element method was utilized for modeling the linksbehavior ۴۸۵ to ۱۰۰ from and strength degradation caused by web and flange localbuckling. Cyclic stress-strain curve was chosen for modeling the shearlink behavior where two different approaches were chosen forinvestigation. The first approach was based on conventional design ofshear links with stiffeners and the other one is based on utilization ofshear links without any stiffeners which is made of low yield point steel.The results showed an improved performance of shear links made fromLYP steel. This can be contributed to decreasing the web compactionratio and excluding the undesired effects caused by stiffeners such aswelding effects.

کلمات کلیدی:

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