

عنوان مقاله:

Evaluation of the Effect of Nonlinear Behavior of Gusset plate of HSS Diagonal Brace on the Performance of Steel Frame Under Cyclic Loading

محل انتشار:

دومین کنفرانس ملی زلزله (سال: 1394)

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خلاصه مقاله:

Recently the usage of concentrically braced frames (CBFs) are common for lateral-load resisting system in seismic design. In CBFs the braces are connected to the beam and column by gusset plate connection. Recent researches show that the seismic behavior of CBFs can be improved by considering yielding in the gusset plate in the performance levels. This study has indicated that buckling capacity of CBFs under a cyclic loading can be promoted by considering the behavior of gusset plate through designing its thickness and observe the free bending line and thickness of edge stiffener by the commercial finite element software Abaqus. At first the finite element and experimental result have been verified, Finally it will show the CBFs performance depends on gusset plate connections. The results indicated that increasing the thickness of gusset plate has the most effect on tolerable load of frame and promote stiffness and performance of braced frame.

کلمات کلیدی:

Concentrically braced framed (CBF), Gusset plate connections, Buckling capacity, cyclic loading, finite element method

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