

عنوان مقاله:

The Effect of Panel Zone Behavior on the Ductile Response of Steel Moment-Resisting Frames

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خلاصه مقاله:

The seismic response of a moment-resisting frame depends on the characteristics of its main components, namely the columns, the beams and the connections. Panel zone is an influential member of a moment connection which if designed properly could contribute to the ductile behavior of special and intermediate moment frames when subjected to seismic loads. This zone is defined as the column web portion bounded by the beam continuity plates and the column flanges. One of the main goals of this paper is to investigate the effects of panel zone in analysis and on the behavior of the structure. Among several methods have already been developed to model a panel zone we selected two of them and investigated the impact of each model on the behavior of a structure. We used a nonlinear rotational spring for modeling the behavior of the panel zone. Finally, for two specific frames a comparison between results from different analytical models for the panel zone are presented.

کلمات کلیدی:

Panel Zone, Moment-Resisting frames, Ductile behavior, Deformation capacity

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