

عنوان مقاله:

Effect of Steel Plate Jacketing of Columns in Seismic Behavior of Concrete Beam-Column Connections

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خلاصه مقاله:

Design philosophy of having weak beam – strong column is recommended almost in all design codes. But in some cases, in prior buildings, this philosophy is ignored. In these structures, during major earthquakes, failure mechanism would begin from columns leading to sever damages. To avoid this event, column in the connection zone must be strengthened to conduct the plastic zone to the beams. There is several ways for strengthening concrete columns and one of the efficient ways is using steel plates surrounding column in the critical zone. In this paper, using steel plates for seismic upgrading of Concrete Beam-Column connections has been investigated numerically. Effect of plate thickness, length and beam-column dimensions is taken into account. Some empirical results are used to verify the finite element approach. Analyses are conducted with the use of some modeling methods including various geometrical models and material behaviors. The results from various methods are compared and the suitable model is proposed

کلمات کلیدی:

Finite Element Modeling, Concrete Damage Plasticity, Steel Plate Jacketing, Joints, Cyclic Behavior

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