عنوان مقاله:
Improvement of Seismic Performance of Zipper Braced Frames by Using a New Distribution of Lateral Load Pattern

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خلاصه مقاله:
This paper proposes a new distribution of lateral loading pattern for designing zipper-braced frames using the uniform distribution of damage over the height of structures. Evaluation of the seismic behavior of zipper-braced frames shows that these structures have acceptable performance when compared with Inverted V braced frames. Although previous studies showed that utilizing these types of structures the formation of the soft-storey mechanism can be prevented, the structural capacity are not entirely exploited over the height of buildings. Based on the theory of uniform distribution of deformations, lateral resistant properties of a structure can be distributed over the height in such a way that they can exhibit more uniform deformation. In this study, two zipper-braced frames of 5 and 7 stories have been designed subjected to several ground motions. Using the theory of uniform damage distribution an optimization technique leading to more uniform damage distribution over the height of the structure is developed.

کلمات کلیدی:
Zipper braced frames, Uniform distribution of deformations, Lateral load pattern

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