

Structural Behavior Investigation Based on Adaptive Pushover Procedure

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چکیده :

Nonlinear static procedures are now widely used in engineering practice to predict seismic demands in building structures. Simplified versions of pushover methods based on invariant load patterns have limitations in terms of their inability to account for higher mode effects. In order to overcome the major drawbacks of these methods, researchers have recently been developed adaptive pushover procedures by which effect of higher modes are taken into account. In this paper, a displacement-based adaptive pushover method is developed in order to investigate structural behavior. In this method, a modification factor associated to each mode of interest is applied to the corresponding load vector. These vectors are updated proportional to the dynamic characteristic of structure in each step. In order to assess the accuracy of this method, the proposed methodology is applied to a braced frame building. The obtained results demonstrate that proposed procedure provides well estimation of important seismic demand parameters

کلید واژه : Nonlinear static analysis, adaptive pushover, higher-mode effects, seismic demands

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