

The evaluation of seismic hazard level of steel moment frames designed based on the 4th edition of 2800 standard

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ABSTRACT:

In method based on functions, the capacity and the seismic need of a structure must be carefully estimated. The Expand of usage of the nonlinear statistic analyzing method in designing structures have laid the foundation of a new idea in using non-linear dynamic analyzing. This method, known as incremental dynamic analysis, is a parametric method which was created recently for estimating structures' seismic functioning. This method includes applying one or several earthquake records that were measured to reach a certain PGA. Scale factor is selected somehow that responds and contains a wide range of structure's seismic behavior from linear range to dynamic collapse. New method paves a way for calculating seismic capacity in performance, including immediate occupancy, life safety, collapse prevention and global dynamic instability. Many researchers have been made in the field of behavior and formability of this system in structures and results in the dynamic and statistical analysis were considerable and for that reason, and valid codes approve the usage of this system.

Keywords:

Incremental dynamic analysis, immediate occupancy, collapse prevention, life safety, global dynamic instability