COMPARISON OF DIRECT DISPLACEMENT DESIGN AND PERFORMANCE BASED PLASTIC DESIGN FOR STEEL SMRF

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In recent years, there has been a great tendency toward performance-based seismic design of structures. In this connection, various methods have been developed among which Direct Displacement-Based Design and Performance Based Plastic Design can be enumerated. "Direct Displacement Based Design" method could be a rational alternative to traditional erroneous force-based seismic design of structures. The fundamental philosophy behind DDBD is that structures should be designed to achieve a specified performance level, defined by strain or drift limits, under a specified level of seismic intensity. Displacement is the key parameter of the DDBD method. "Performance-Based Plastic Design method has been recently evolved to achieve enhanced performance of earthquake resistant structures considering a per-selected yield mechanism and uniform target drift has been recently proposed Performance Based Plastic design depends on strong column- sway mechanisms, in which the pattern of failure is predetermined and the storey drifts and ductility demands were well within the target values.

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