SEISMIC DESIGN OF STEEL MOMENT RESISTING FRAMES

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Volume: XI
No: 1
Pages: 29-38
Date: January 2014

Abstract:
The paper addresses philosophical concepts on the seismic design criteria of moment resisting steel frames. The ductility approach that is based on the capacity design rules adopted by the modern seismic codes is illustrated. The effectiveness of seismic provisions for the design of moment resisting steel frames as given in the codes is assessed. Emphasis is made on the response modification factor, overstrength factor, strong column weak beam philosophy, cross section limitation, second order effects and interstorey drift limitations. The applicability and the effects of such rules on the overall performance of rigid steel frames are presented. Furthermore, the pros and cons of the use of steel moment resisting frames are also given. The paper also presents information about the design criteria of steel frames.

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