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An evaluation of overstrength factor of seismic designed low rise RC buildings

Abstract

This study investigates the overstrength factor of reinforced concrete frame designed according to EC2 and EC8. There are two families of building considered in this study, i.e: regular and irregular in elevation with setback. Each family are designed to gravity load only and designed to resist seismic load with medium ductility and high ductility class. Therefore, in total, there are 6 frame models are considered in this study. The nonlinear static analysis or push over analysis is used to evaluate the overstrength factor of the frame models. It is found that, the geometry and ductility supply of the frames effect the overstrength factor.

Keywords

Overstrength; Push over analysis; RC building