A Study on Behavior of Reinforced Concrete Exterior Beam-Column Joint: A Literature Review

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Abstract

The beam-column joint is defined as that part of the column within which the portion of the beam support rests into the column. A beam-column joint is known to be the utmost critical and weak zones in the moment resistance frame structure subject to earthquake loading. There are two main failures at the junction of the beam columns. They are i) joint shear failure and ii) inadequate reinforcement details due to anchorage failure that has occurred after strong earthquakes. The ultimate resistance capacity of beam-column joints depends directly on their actual behavior of materials such as concrete damage, steel plasticity, etc. This study of literature review specifically focuses on the general behavior of common types of beam-column joints with structural properties at the moment-resisting RC frames to realize the important principle of the beam-column joint for enhanced performance.

Keywords

- **Beam-column joint**
- **Exterior joint**
- **Seismic codes**
- **Joint shear**