

عنوان مقاله:

USE OF FIBER REINFORCED CONCRETE FOR BEAM-COLUMN JOINTS IN SEISMIC REGIONS

محل انتشار:

دومین کنفرانس بین المللی زلزله شناسی و مهندسی زلزله (سال: 1374)

تعداد صفحات اصل مقاله: 7

نویسنده:

amir mirmiran - Assistant Professor, University of Central Florida, Orlando, Florida, USA

خلاصه مقاله:

In seismic-resistant buildings, one of the most critical areas of concern is the beam-column joint region. Since ۱۹۷۱, ACI has included special provisions for seismic design of reinforced concrete connections. The provisions are intended to accommodate energy dissipation and inelastic behavior in regions of high seismicity, while it is generally assumed that the main body of the code is sufficient for regions with moderate to low earthquake probability. Use of fiber reinforced concrete in beamcolumn joints has been suggested both as a means to reduce congestion of reinforcement and as a preventive measure which will introduce a safety factor for design faults in the case of an earthquake. The effect of synthetic fibers on the pull-out of re-bars from concrete is investigated at the University of Central Florida. The pull-out strength increases with the fiber ratio in the concrete mix. However, there exists a threshold after which the increase in fiber ratio would only decrease the workability of concrete without improving the bond strength. The paper provides a comprehensive review of the research projects on the use of steel and synthetic fibers in joints for seismic regions.

کلمات کلیدی:

لینک ثابت مقاله در پایگاه سیویلیکا:

<https://civilica.com/doc/1281429>

