

Strength and Behaviour of Fibrous High-Strength Concrete columns

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Abstract

The behaviour of high-strength fiber reinforced concrete columns was observed with a testing program of 7 columns, loaded eccentrically. The theory was analyzed by modifying the stress block diagram of concrete. The experimental results show that using high-strength fiber reinforced concrete with fiber volume fraction of 1.0%, increased the column ultimate capacity up to 40% in addition to increasing its ductility and toughness, significantly. The proposed theoretical analysis gave a good estimation of experimental results.