Shear Strength Estimation of Seismic Retrofitted RC Column by Extended Wing Walls

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Abstract
The objective of this paper is to estimate shear strength of seismic retrofitted RC column by extended wing walls connected by post-installed anchors. The experimental variables are vertical joint anchor ratio, shear reinforcement ratio in the column and wing walls. An evaluation method for the shear strength of seismic retrofitted RC column by extended wing walls is proposed based on arch–truss method. The calculated shear strength by this method is correlated with the experimental shear strength than the other previous methods. That result also show that the shear strength and initial stiffness of seismic retrofitted RC column by extended wing walls is higher according to increasing vertical joint anchor ratio.