

2. Deformation Affects the Performance of the Section Size of the Retrofitted Column

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APAT method has been developed and implemented for retrofitting columns of reinforced concrete rigid frame viaducts for railways. The deformability of the columns retrofitted using the APAT method was calculated using the results of reversed cyclic loading tests on reduced size models. However, size effects have been reported on columns that suffer bending fracture, and the deformability of a column has been mentioned to be smaller in larger models. Thus, a full-scale model of a column that was retrofitted using the APAT method was prepared and subjected to reversed cyclic loading tests to investigate the effects of cross sectional size on the deformability.

Key words : reinforced concrete rigid-framed viaduct, reversed cyclic loading tests, retrofitting, deformability, size effect