

Numerical Investigation of the Jacketing Method of Reinforced Concrete Column

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Abstract : The first intent of this study is to develop a finite element model that can predict correctly the behavior of the reinforced concrete column. Second aim is to use the finite element model to investigate and evaluate the effect of the strengthening method by jacketing of the reinforced concrete column, by considering different interface contact between the old and the new concrete. Four models were evaluated, one by considering perfect contact, the other three models by using friction coefficient of 0.1, 0.3 and 0.5. The simulation was carried out by using Abaqus software. The obtained results show that the jacketing reinforcement led to significant increase of the global performance of the behavior of the simulated reinforced concrete column.

Keywords : strengthening, jacketing, reinforced concrete column, Abaqus, simulation

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