MULTISCALE MODELING OF DIAGONAL CRACKS IN CONCRETE BEAMS

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ABSTRACT

In the paper, a numerical simulation concerning diagonal crack propagation in concrete beams is presented. Two beams reinforced longitudinally but without shear reinforcement are considered during the Finite Element Method analysis. In particular, a fracture mechanics study has been used to simulate the crack evaluation in the beams. Numerical results are compared with the experimental data from the early tests performed by Słowik [1].

Keywords
Concrete beam, diagonal crack propagation, FEM-analysis