

Experimental Investigation on Concrete Shear Crack Extension

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The special properties of concrete lead to difficulties of measuring shear strength of this material. Especially the characteristic of its tension resistance lower than shear resistance results in concrete mode-II fracture always occurs prior to the mode-III fracture. It is still a difficult job to achieve mode-II initiation propagation of concrete specimens. The studies presented about the mode-II fracture of concrete are very few. At present, most interests about this field primarily focus on four-point specimens and Brazilian disk specimens, but there are many debates about their results. This paper tries to present a detail investigation on these two specimens. The whole evolution process of crack initiation and propagation trajectory of two specimens are presented and discussed, and the values of the specimens are calculated.

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