

## **EFFECT OF CONCRETE PARAMETERS ON LOCAL FRACTURE ENERGY OF CONCRETE**

[https://scholar.google.com/citations?user=NuNmfMwAAAAJ&hl=ar&oi=ao#d=gs\\_md\\_cita-d&u=%2Fcitations%3Fview\\_op%3Dview\\_citation%26hl%3Dar%26user%3DNuNmfMwAAAAJ%26citation\\_for\\_view%3DNuNmfMwAAAAJ%3Au5HHmVD\\_uO8C%26tzom%3D-120](https://scholar.google.com/citations?user=NuNmfMwAAAAJ&hl=ar&oi=ao#d=gs_md_cita-d&u=%2Fcitations%3Fview_op%3Dview_citation%26hl%3Dar%26user%3DNuNmfMwAAAAJ%26citation_for_view%3DNuNmfMwAAAAJ%3Au5HHmVD_uO8C%26tzom%3D-120)

### Abstract

Experimental observations and numerical simulations are compared with theoretical results based on RILEM recommendation [1]. The intention of this paper is to determine the influence of concrete parameters on local fracture energy and failure mode of concrete beams. Three-point-bending test on notched concrete beams have been performed using two most known methods available in literature for determining the failure mode dependent on fracture energy of concrete beams, taking in consideration the relationship between the applied load and the crack opening displacement during different loading stages. The existing fracture models for concrete and the testing methods for fracture energy are reviewed, some new results on relationship between failure mode from one side and fracture energy and size effect from the other side are presented, the value of critical fracture load has been checked during the crack propagation process, also it has been noticed that in both test and analytical model results, the critical fracture load disappears as the notch length increases and finally the results obtained were confronted with other results.