Numerical predictions of U-notched sample failure based on a discrete energy argument - DTU Orbit (05/05/2019)

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Kodsi (2016) proposed a criterion for isotropic, linear elastic media in a brittle state applicable to both sharp and blunt notches. Fracture toughness and material strength are the only parameters required to operate the criterion. This paper provides a formulation of the criterion specific to blunt notches and further examines the capability of the criterion. Predictions are compared to significant experimental results from U-notched samples that were subject to mixed-mode fracture. Good agreement is demonstrated, justifying and substantiating the theory.

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