



ANALYZING SOME BEHAVIOR OF A CRACKED BEAM UNDER PRESSURE

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Received August 27, 2015

Abstract

In this paper, a simple cracked beam under vertical pressure is considered. Stress intensity factor, normal, and shear stresses (at the tip of the crack) are calculated with finite element software. Results are compared when there is contact between crack surfaces with different direction of pressure, and when there is no contact. Results show that stress intensity factors can be implemented for predicting the maximum stresses behavior of the beam.

Keywords and phrases: beam, crack, finite element, pressure, stress intensity factor.

