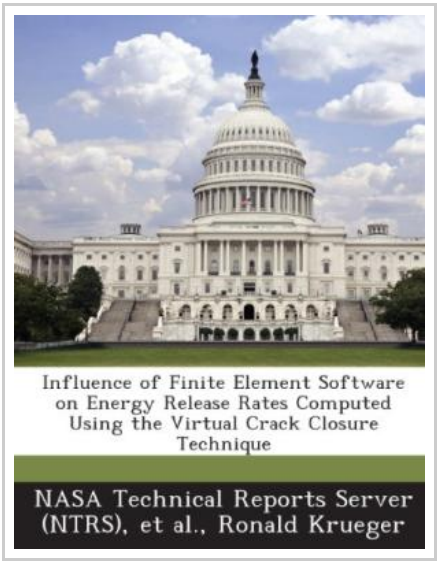

Influence of Finite Element Software on Energy Release Rates Computed Using the Virtual Crack Closure Technique

By Ronald Krueger

Bibliogov, United States, 2013. Paperback. Book Condition: New. 246 x 189 mm. Language: English . Brand New Book ***** Print on Demand *****.Strain energy release rates were computed along straight delamination fronts of Double Cantilever Beam, End-Notched Flexure and Single Leg Bending specimens using the Virtual Crack Closure Technique (VCCT). The results were based on finite element analyses using ABAQUS# and ANSYS# and were calculated from the finite element results using the same post-processing routine to assure a consistent procedure. Mixed-mode strain energy release rates obtained from post-processing finite element results were in good agreement for all element types used and all specimens modeled. Compared to previous studies, the models made of solid twenty-node hexahedral elements and solid eight-node incompatible mode elements yielded excellent results. For both codes, models made of standard brick elements and elements with reduced integration did not correctly capture the distribution of the energy release rate across the width of the specimens for the models chosen. The results suggested that element types with similar formulation yield matching results independent of the finite element software used. For comparison, mixed-mode strain energy release rates were also calculated within ABAQUS#/Standard using the VCCT for ABAQUS# add on. For all...

Reviews

Extensive guide! Its such a excellent read. This can be for anyone who statte that there was not a worth looking at. I am just effortlessly will get a satisfaction of looking at a written publication.

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This book will not be effortless to start on reading through but very exciting to learn. It is amongst the most remarkable book i have got go through. Once you begin to read the book, it is extremely difficult to leave it before concluding.

-- ***Dr. Easton Collier DVM***