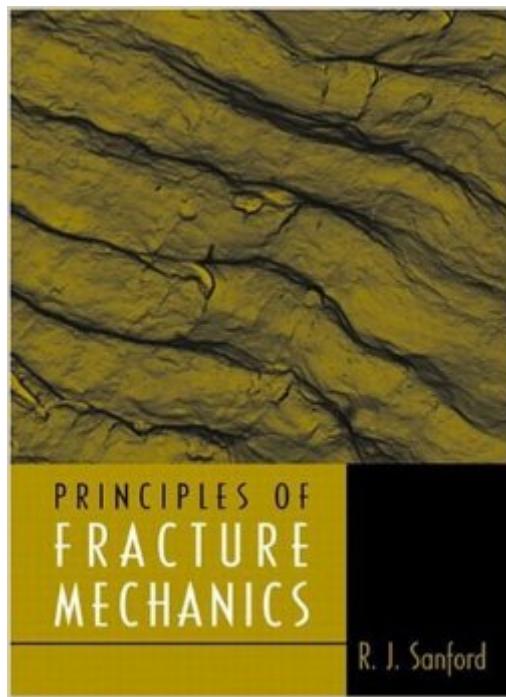


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# Principles Of Fracture Mechanics



## **Synopsis**

The book is a self-contained manual on the mechanics aspects of the theory of brittle fracture and fatigue. It includes a guided introduction to the linear theory of elasticity with pivotal results for the circular hole, the elliptical hole and the wedge leading up to the general problem of bodies containing cracks. Typical chapters include problems which extend the mathematical developments presented in the book, applications problems requiring numerical and/or graphic responses, and essay/literature study questions. Additionally, more comprehensive exercises requiring integration of the knowledge throughout the book are included as an appendix. For professionals in fields of engineering mechanics and design.

## **Book Information**

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Average Customer Review: 5.0 out of 5 starsÂ  See all reviewsÂ (4 customer reviews)

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## **Customer Reviews**

"Principles of Fracture Mechanics" is the most concise yet complete survey on the equations and history of fracture mechanics I have found. Professor Sanford does an excellent job explaining how complex analysis is used to derive many of the equations governing the fracture of metals, without bogging the reader down in the mathematical details. I found the book to be enlightening. After reading it, I also found myself wishing I could have taken a course in fracture mechanics from Professor Sanford when I was in college.

Alright, I've haven't read the final book. I do have an unfinished version that Professor Sanford distributed when I took this class from him at the U of Maryland. The initial version was excellent. I

had tried to slog through other presentations on fracture mechanics and had gotten lost in the details. Rather than just presenting the stress intensity factor and other concepts, he gave a good historical development of just where these quantities came from and why anyone would or should use them to predict time to failure.

This is a very good book for an introduction towards Fracture Mechanics. The explanations are quite clear and author presents some straightforward derivations of many of the important concepts (derivation of the stress intensity factor,  $K$ , for example). I highly recommend this book to anyone looking at 'breaking' in to this field.

good sale

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