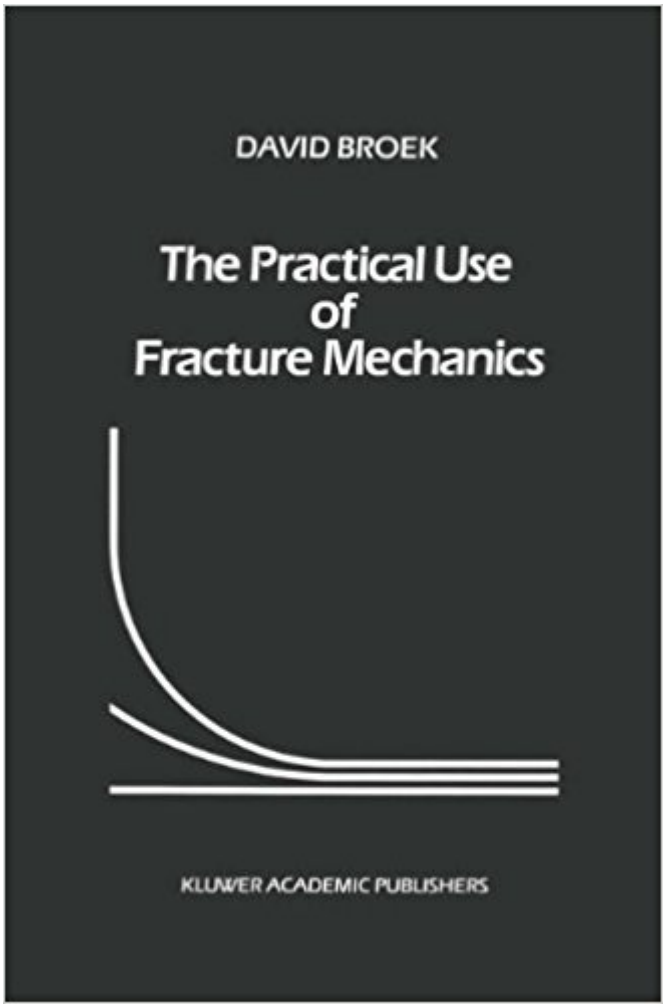
The Practical Use Of Fracture Mechanics



Synopsis

This book is about the use of fracture mechanics for the solution of practical problems; academic rigor is not at issue and dealt with only in as far as it improves insight and understanding; it often concerns secondary errors in engineering. Knowledge of (ignorance of) such basic input as loads and stresses in practical cases may cause errors far overshadowing those introduced by shortcomings of fracture mechanics and necessary approximations; this is amply demonstrated in the text. I have presented more than three dozen 40-hour courses on fracture mechanics and damage tolerance analysis, so that I have probably more experience in teaching the subject than anyone else. I learned more than the students, and became cognizant of difficulties and of the real concerns in applications. In particular I found, how a subject should be explained to appeal to the practicing engineer to demonstrate that his practical problem can indeed be solved with engineering methods. This experience is reflected in the presentaÃ Â- tions in this book. Sufficient background is provided for an understanding of the issues, but pragamatism prevails. Mathematics cannot be avoided, but they are presented in a way that appeals to insight and intuition, in lieu of formal derivations which would show but the mathematical skill of the writer.

Book Information

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Customer Reviews

It was 15 years a go that I got this book as a part of a lecture by Dr. Broek. Over the years I have come across many books on this subject. I have to admit that this book is one of the best

introductory material written on DTA. There are other books with probably additional data, however, what separates this book fom the rest, is Broek's ability to write in a coherent and easy to follow format.Unfortunately, since the book is not in print the price is a bit too steep for a new copy.Also try "Structural Life Assessment Methods" by "Liu" - sold through ASM.

Fracture and Fatigue Control in Structures: Applications of Fracture Mechanics (Prentice-Hall International Series in Civil Engineering and Engineering Mechanics) Probabilistic fracture mechanics and reliability (Engineering Applications of Fracture Mechanics) Fracture Mechanics of Concrete: Applications of Fracture Mechanics to Concrete, Rock and Other Quasi-Brittle Materials Fracture and Fatigue Control in Structures: Applications of Fracture Mechanics (Astm Manual Series) The Practical Use of Fracture Mechanics Dynamic Fracture Mechanics (Cambridge Monographs on Mechanics) Deformation and Fracture Mechanics of Engineering Materials Fracture Mechanics: Fundamentals and Applications, Fourth Edition Fracture Mechanics: Fundamentals and Applications, Third Edition By T. L. Anderson - Fracture Mechanics: Fundamentals and Applications, Third Edition (3rd Edition) (5/25/05) Principles of Fracture Mechanics Advanced Fracture Mechanics (Oxford Engineering Science Series) Fracture Mechanics Fracture Mechanics: Fundamentals and Applications, Second Edition Elementary engineering fracture mechanics Fracture Mechanics of Polymers (Ellis Horwood series in engineering science) Fracture Mechanics, Second Edition Fundamentals of Fracture Mechanics Fracture Mechanics of Metals, Composites, Welds, and Bolted Joints: Application of LEFM, EPFM, and FMDM Theory Deformation and Fracture Mechanics of Engineering Materials, 5th Edition