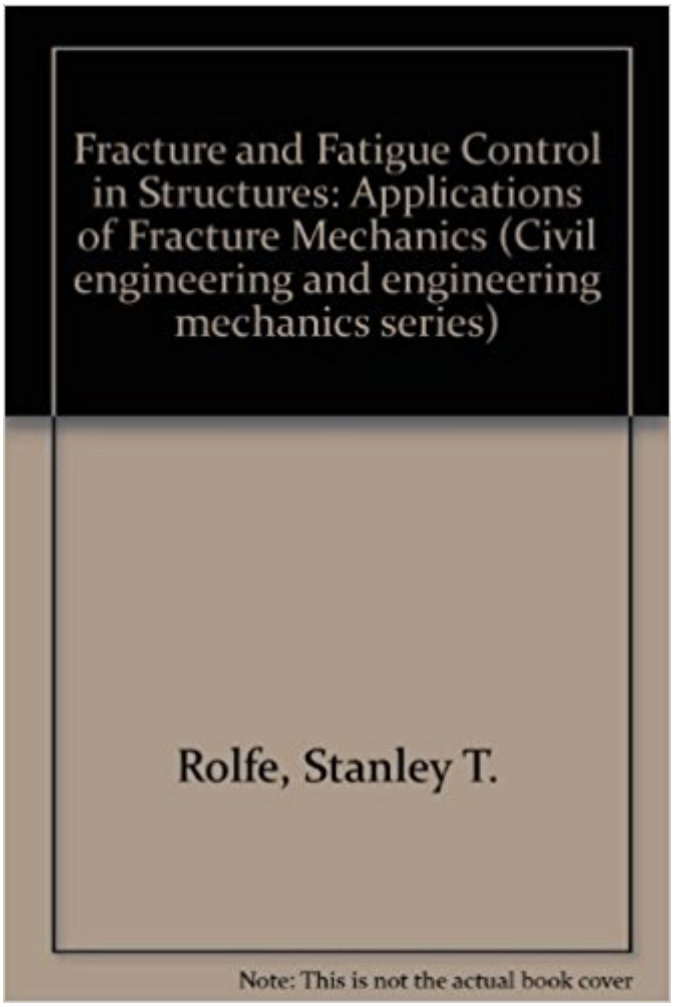
Fracture And Fatigue Control In Structures: Applications Of Fracture Mechanics



Synopsis

The field of Fracture Mechanics has become the primary approach to controlling fracture and fatigue failures in structures of all types. This book introduces the field of fracture mechanics from an applications viewpoint. It focuses on fitness for service, or life extension, of existing structures as well as provides case studies to allow the practicing professional engineer or student to see the applications of fracture mechanics directly to various types of structures. Fracture and Fatigue Control in Structures will serve as an introduction to the field of fracture mechanics to practicing engineers, as well as seniors of beginning graduate students. This field has become increasingly important to the engineering community. In recent years, structural failures and the desire for increased safety and reliability of structures have led to the development of various fracture and fatigue criteria for many types of structures, including bridges, planes, pipelines, ships, buildings, pressure vessels, and nuclear pressure vessels.Dr. John Barsom is a consultant in the area of fracture mechanics, failure analysis, and accident reconstruction. He retired from USX as Research Fellow and Chief of the Materials Behavior Division.Dr. Stanley Rolfe is the Albert P. Learned Professor of Engineering at the University of Kansas and has for the past 30 years taught and conducted research on the fracture and fatigue behavior of materials. --This text refers to an out of print or unavailable edition of this title.

Book Information

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Customer Reviews

This book is very good at showing how basic fracture mechanics can be used to understand real fatigue and fracture problems in construction grade steels. The down side to this book is that the

authors tend to promote their point of view and give little attention to other points of view. For example the authors spend numerous pages on their CVN to fracture toughness prediction method, yet give the master curve method only a few sentences, and ignore most of the other 20 some CVN to fracture toughness prediction methods that can be found in the literature. The reader might want to also keep in mind the most of the information in this book is based on late 1980's technology in the U.S. construction steel industry.Mechanical and aerospace fatigue/fracture engineers will probably not find much useful information in this book.

The book has great technical development and case studies demonstrating the mechanics of fatigue and fracture failure. It is an essential resource for recognizing fatigue and fracture details and how to mitigate them.

Excellent for practical engenieers that face fracture mechanics problems and need to solve it very quickly. Tons of experimental data and estimations from simple-->cheaper test to get important proprieties as Klc. Very general book covers a lot of subjects as weldings, inspections routines and many others briefly.

Eating,Diet,Boost Metabolism) Fatigue: Fight It with the Blood Type Diet: The Individualized Plan for Preventing and Treating the Conditions That Cause Fatigue Adrenal Fatigue Diet: Adrenal Fatigue Treatment with the Hormonal Balance and Top 50 Easy to Do Recipes Fatigue Design Techniques: Vol. I - High-Cycle Fatigue (Volume 1) Fracture Mechanics: Fundamentals and Applications, Second Edition Fracture Mechanics: Fundamentals and Applications, Third Edition Starting Out with Java: From Control Structures through Data Structures (2nd Edition) (Gaddis Series) Starting Out with Java: From Control Structures through Data Structures (3rd Edition) Design and Analysis of Composite Structures: With Applications to Aerospace Structures Fatigue of Structures and Materials Finnie’s Notes on Fracture Mechanics: Fundamental and Practical Lessons