

The book was found

Fatigue Of Structures And Materials



Synopsis

Fatigue of structures and materials covers a wide scope of different topics. The purpose of the present book is to explain these topics, to indicate how they can be analyzed, and how this can contribute to the designing of fatigue resistant structures and to prevent structural fatigue problems in service. Chapter 1 gives a general survey of the topic with brief comments on the significance of the aspects involved. This serves as a kind of a program for the following chapters. The central issues in this book are predictions of fatigue properties and designing against fatigue. These objectives cannot be realized without a physical and mechanical understanding of all relevant conditions. In Chapter 2 the book starts with basic concepts of what happens in the material of a structure under cyclic loads. It illustrates the large number of variables which can affect fatigue properties and it provides the essential background knowledge for subsequent chapters. Different subjects are presented in the following main parts: • Basic chapters on fatigue properties and predictions (Chapters 2–8) • Load spectra and fatigue under variable-amplitude loading (Chapters 9–11) • Fatigue tests and scatter (Chapters 12 and 13) • Special fatigue conditions (Chapters 14–17) • Fatigue of joints and structures (Chapters 18–20) • Fiber-metal laminates (Chapter 21) Each chapter presents a discussion of a specific subject.

Book Information

Hardcover: 623 pages

Publisher: Springer; 2nd edition (February 13, 2009)

Language: English

ISBN-10: 1402068077

ISBN-13: 978-1402068072

Product Dimensions: 6.1 x 1.4 x 9.2 inches

Shipping Weight: 2.8 pounds (View shipping rates and policies)

Average Customer Review: 4.7 out of 5 stars 9 customer reviews

Best Sellers Rank: #735,209 in Books (See Top 100 in Books) #26 in Books > Engineering & Transportation > Engineering > Materials & Material Science > Fracture Mechanics #79 in Books > Engineering & Transportation > Engineering > Materials & Material Science > Strength of Materials #158 in Books > Engineering & Transportation > Engineering > Industrial, Manufacturing & Operational Systems > Industrial Design > Products

Customer Reviews

This book *Fatigue of Structures and Materials* has won the TAA "Texty" Textbook Excellence Award

in 2010.

This book *Fatigue of Structures and Materials* has won the TAA Textbook Excellence Award in 2010.

I find this book is helpful and full of information on Fatigue. Schijve has an easy to read writing style. I first learned this from his paper, "Fatigue of Structures and Materials in the 20th Century and the State of the Art." This paper is practically a introduction to many of the chapters in the book. This book is worth having to mark-up and take notes. If you are interested in the extra materials, you can download them here: extras.springer.com then enter the ISBN: 978-1-4020-6807-2

This book is exactly what I was looking for because it lays great foundation for understanding fatigue failures, both macro and microscopically. Although I am still reading it, each chapter is a revelation. After conducting numerous failure investigations, I've realized that failure initiation and understanding it in great detail is key in developing a root cause. In my opinion, this book offers greater detail than most when describing what transpires in a material that is under fatigue loading. Concepts in this book can help strengthen your knowledge on crack initiation as applicable to all failures, not just fatigue.

Excellent for a clear understanding the fatigue phenomenon, the growth of cracks, the influences of surface condition and metallographic structure, and how to design to minimise fatigue.

better than expected.

Good reference book.

Jaap is well known in the fatigue community and this book is a great reference for all that work with fatigue.

I have been working for two years as structural engineer, and the knowledge of fatigue by most people was always suspicious for me. Unfortunately, I was dependant on people's knowledge to obtain mine and, by looking for many books and papers on internet, all I found about fatigue were precise formulas with no physical explanation of the phenomena. Although I was not a fatigue

specialist, I had always the conviction that this thema was much more experimental and microscophical-depandant then mathematical. This book proved to me all of that, and gave me a great insight of fatigue. Fatigue has became a very interesting topic for me since this book. The writing style of the author is also very pleasant, and we can read the book as if it was a romance. I got a job at huge aerospace company for fatigue because of this book. I hope you enjoy it.

Great reference! This is the book we used for my Fatigue and Damage Tolerance course. I read it before the class and it gave me a good insight on fatigue. This book offers a lot of practical examples and beautifully written explanations of the Fatigue phenomena. Although it is not a fracture mechanics book, it does cover some fracture mechancis concepts as well. Must have for all Stress Engineers.

[Download to continue reading...](#)

Adrenal Fatigue: Overcome Adrenal Fatigue Syndrome, Boost Energy Levels, and Reduce Stress (Adrenal Fatigue Syndrome, Reduce Stress, Adrenal Fatigue Diet, Adrenal Reset Diet Book 1)
Chronic Fatigue Syndrome And Your Emotions: How To Successfully Treat Chronic Fatigue Syndrome In The Natural Way-A Key For Recovery (Chronic Fatigue Syndrome, ... Syndrome Fibromyalgia, Lupus, Book 3)
Gut: The Key to Ultimate Health - SIBO, IBS & Fatigue (GAPS, Candida, Chronic Fatigue, Fibromyalgia, Adrenal Fatigue, SIBO, Parasites)
Fatigue of Structures and Materials
The Fatigue and Fibromyalgia Solution: The Essential Guide to Overcoming Chronic Fatigue and Fibromyalgia, Made Easy!
Fix Your Fatigue: The four step process to resolving chronic fatigue, achieving abundant energy and reclaiming your life!
Fatigue: Fight It with the Blood Type Diet: The Individualized Plan for Preventing and Treating the Conditions That Cause Fatigue
Adrenal Fatigue: Overcome Adrenal Fatigue Syndrome, Boost Energy Levels, and Reduce Stress
Hormone Diet: The Hormone Reset Diet, Balance Hormones, Recharging Health and Losing Weight Effortlessly! BONUS Hormone Reset Diet Recipes! (adrenal fatigue diet, adrenal fatigue, Adrenal Fatigue Cure Guide (Beat Chronic fatigue): Restoring your Hormones and Controlling Thyroidism
Adrenal Fatigue: Combat Adrenal Fatigue Syndrome Naturally and Boost Your Energy Levels for Good! Reset Your Natural Balance Now! (Reduce Stress, Boost Energy, Adreanl Reset Diet Book 1)
Adrenal Fatigue: Combat Adrenal Fatigue Syndrome Naturally and Boost Your Energy Levels for Good! Reset Your Natural Balance Now!
Insomnia: 84 Sleep Hacks To Fall Asleep Fast, Sleep Better and Have Sweet Dreams Without Sleeping Pills (Sleep Disorders, Sleep Apnea Snoring, Sleep Deprivation, ... Fatigue, Chronic Fatigue Syndrome Book 1)
Fracture and Fatigue of Welded Joints and Structures (Woodhead Publishing Series in Welding and Other Joining Technologies)

Fracture and Fatigue Control in Structures: Applications of Fracture Mechanics (Prentice-Hall International Series in Civil Engineering and Engineering Mechanics) Fracture and Fatigue Control in Structures: Applications of Fracture Mechanics (Astm Manual Series) Engineering Materials 3: Materials Failure Analysis: Case Studies and Design Implications (International Series on Materials Science and Technology) (v. 3) Design and Analysis of Composite Structures: With Applications to Aerospace Structures Java Software Structures: Designing and Using Data Structures (4th Edition) Mechanical Behavior of Materials: Engineering Methods for Deformation, Fracture, and Fatigue (2nd Edition)

[Contact Us](#)

[DMCA](#)

[Privacy](#)

[FAQ & Help](#)