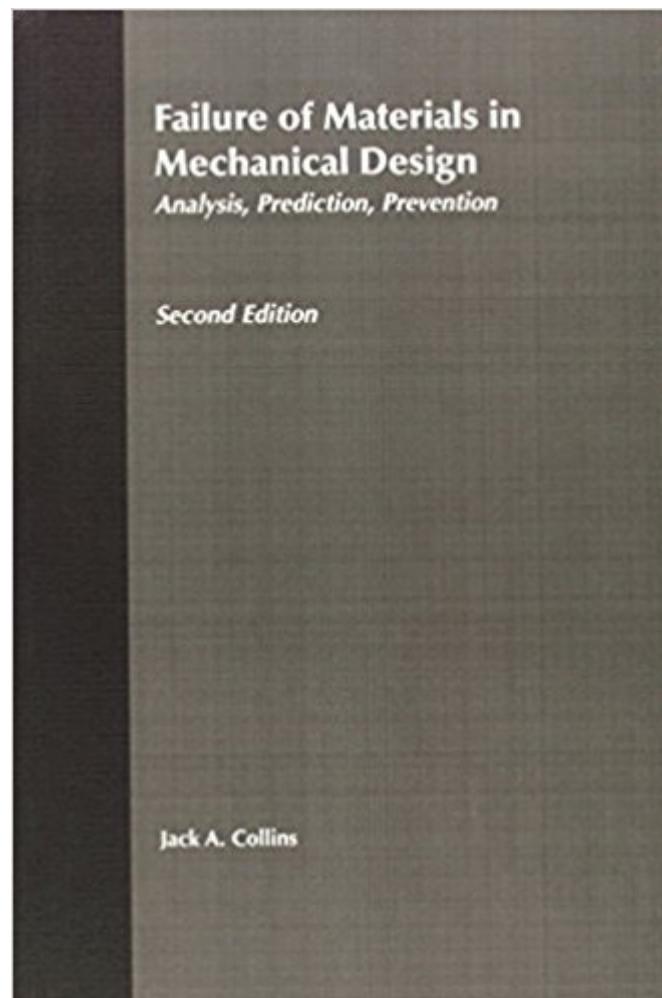




Ebook Directory
the best source of ebook

The book was found

Failure Of Materials In Mechanical Design: Analysis, Prediction, Prevention, 2nd Edition



Synopsis

Covers the basic principles of failure of metallic and non-metallic materials in mechanical design applications. Updated to include new developments on fracture mechanics, including both linear-elastic and elastic-plastic mechanics. Contains new material on strain and crack development and behavior. Emphasizes the potential for mechanical failure brought about by the stresses, strains and energy transfers in machine parts that result from the forces, deflections and energy inputs applied.

Book Information

Hardcover: 672 pages

Publisher: Wiley-Interscience; 2 edition (September 7, 1993)

Language: English

ISBN-10: 0471558915

ISBN-13: 978-0471558910

Product Dimensions: 6.4 x 1.4 x 9.6 inches

Shipping Weight: 2.2 pounds (View shipping rates and policies)

Average Customer Review: 4.5 out of 5 stars 5 customer reviews

Best Sellers Rank: #1,101,607 in Books (See Top 100 in Books) #33 in [Books > Engineering & Transportation > Engineering > Materials & Material Science > Fracture Mechanics](#) #98 in [Books > Engineering & Transportation > Engineering > Materials & Material Science > Strength of Materials](#) #1156 in [Books > Engineering & Transportation > Engineering > Materials & Material Science > Materials Science](#)

Customer Reviews

Covers the basic principles of failure of metallic and non-metallic materials in mechanical design applications. Updated to include new developments on fracture mechanics, including both linear-elastic and elastic-plastic mechanics. Contains new material on strain and crack development and behavior. Emphasizes the potential for mechanical failure brought about by the stresses, strains and energy transfers in machine parts that result from the forces, deflections and energy inputs applied.

Updated to include new developments in fracture mechanics, this new edition delivers the same clear, comprehensive coverage of the subject as its predecessor. Like its predecessor, *Failure of Materials in Mechanical Design, Second Edition* provides a comprehensive examination of every

method now being used to analyze, predict, and prevent such failures. It presents the basic principles of the science, and goes beyond the fundamentals to offer new insights on how to apply this theory to actual design applications. The new edition has been extensively revised and updated with state-of-the-art developments in fracture mechanics - plus all new material on crack development and behavior. It also features new problems and real-world examples. Topics include modes of mechanical failure, strength and deformation of engineering metals, combined stress theories of failure and their use in design, concepts of cumulative damage, life prediction and fracture control, high-cycle fatigue, fatigue testing procedures and statistical interpretations of data, shock and impact, fretting, buckling and instability, and more. As the leading book for advanced undergraduate and graduate courses on mechanical failure, *Failure of Materials in Mechanical Design, Second Edition* will continue to be an invaluable text and reference for mechanical engineers.

Really reccomand this book as a tool book

Great Book

Good addition to my library.

This book has a lot of information, no doubt about it. And you may find some things in it that you'll be hard-pressed to find elsewhere (such as non-linear damage theories, fretting, shock and impact, etc). However, the book is quite theoretical, and information is scattered over various chapters, sometimes making it difficult to find what you're looking for. And when you do find it, the information is often not presented in a precise and detailed manner, which is important whenever you attempt to extend theory to real-life problems. I found this to be the case with the strain-based fatigue discussion, and especially the fracture mechanics coverage, which is cursory at best. I recommend that you first check out Dowling's book ("*Mechanical Behavior of Materials*"). I have found it to be much more useful.

It is a very good book. Gives a broad explanation of failure considerations in the mechanical design process. It is complemented with examples that help to understand. It is a very technical book. Do not expect to pretty color pictures. Math is stated in a sequential way that can be undestood pretty easily. When disscussing a topic recalls some basics before touching partcular details. It is not an

introductory book. A book on mechanical of materials would be a excellent complement. Excellent as a reference.

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

Failure of Materials in Mechanical Design: Analysis, Prediction, Prevention, 2nd Edition Engineering Materials 3: Materials Failure Analysis: Case Studies and Design Implications (International Series on Materials Science and Technology) (v. 3) Crack Growth: Rates, Prediction, and Prevention (Mechanical Engineering Theory and Applications) Code Check Plumbing & Mechanical 4th Edition: An Illustrated Guide to the Plumbing and Mechanical Codes (Code Check Plumbing & Mechanical: An Illustrated Guide) IEC 60812 Ed. 2.0 b:2006, Second Edition: Analysis techniques for system reliability - Procedure for failure mode and effects analysis (FMEA) Shigley's Mechanical Engineering Design (McGraw-Hill Series in Mechanical Engineering) The Mechanical Design Process (Mcgraw-Hill Series in Mechanical Engineering) Geometric Dimensioning and Tolerancing for Mechanical Design 2/E (Mechanical Engineering) The Mechanical Design Process (Mechanical Engineering) Handbook of Materials Failure Analysis with Case Studies from the Oil and Gas Industry Failure Analysis of Engineering Materials Failure Analysis of Brittle Materials: Advances in Ceramics The Evolution of Technical Analysis: Financial Prediction from Babylonian Tablets to Bloomberg Terminals Superforecasting: The Art and Science of Prediction by Philip E. Tetlock and Dan Gardner | Key Takeaways, Analysis & Review Dynamic Prediction in Clinical Survival Analysis (Chapman & Hall/CRC Monographs on Statistics & Applied Probability) Composite Materials: Materials, Manufacturing, Analysis, Design and Repair Crime Prevention through Housing Design: Policy and Practice (Crime Prevention and Security Management) Mechanical Circulatory Support in End-Stage Heart Failure: A Practical Manual Guest Book: Luxury Design Cover - 8.25"x6" And 150 Pages For Sign In, Advice, Wishes, Comments, Prediction - For Event, Wedding, Birthday, Anniversary(Visitors Book): Guest Book (Volume 6) Fractography in Failure Analysis of Polymers (Plastics Design Library)

[Contact Us](#)

[DMCA](#)

[Privacy](#)

[FAQ & Help](#)