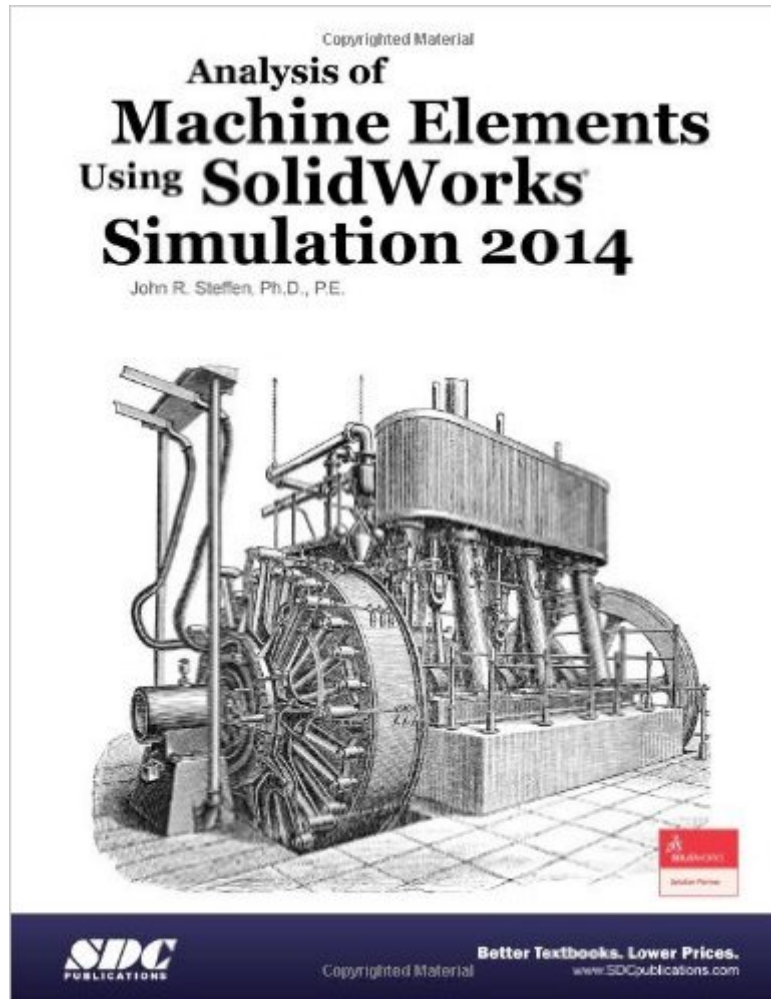# Analysis Of Machine Elements Using SolidWorks Simulation 2014

Synopsis

Analysis of Machine Elements Using SolidWorks Simulation 2014 is written primarily for first-time SolidWorks Simulation 2014 users who wish to understand finite element analysis capabilities applicable to stress analysis of mechanical elements. The focus of examples is on problems commonly found in an introductory, undergraduate, Design of Machine Elements or similarly named courses. In order to be compatible with most machine design textbooks, this text begins with problems that can be solved with a basic understanding of mechanics of materials. Problem types quickly migrate to include states of stress found in more specialized situations common to a design of mechanical elements course. Paralleling this progression of problem types, each chapter introduces new software concepts and capabilities. Many examples are accompanied by problem solutions based on use of classical equations for stress determination. Unlike many step-by-step user guides that only list a succession of steps, which if followed correctly lead to successful solution of a problem, this text attempts to provide insight into why each step is performed. This approach amplifies two fundamental tents of this text. The first is that a better understanding of course topics related to stress determination is realized when classical methods and finite element solutions are considered together. The second tenet is that finite element solutions should always be verified by checking, whether by classical stress equations or experimentation. Each chapter begins with a list of learning objectives related to specific capabilities of the SolidWorks Simulation program introduced in that chapter. Most software capabilities are repeated in subsequent examples so that users gain familiarity with their purpose and are capable of using them in future problems. All end-of-chapter problems are accompanied by evaluation "check sheets" to facilitate grading assignments. Table of Contents Introduction 1. Stress Analysis Using SolidWorks Simulation 2. Curved Beam Analysis 3. Stress Concentration Analysis 4. Thin and Thick Wall Pressure Vessels 5. Interference Fit Analysis 6. Contact Analysis 7. Bolted Joint Analysis 8. Design Optimization Appendix A Appendix B Index

Book Information

Perfect Paperback: 434 pages

Publisher: SDC Publications (May 14, 2014)

Language: English

ISBN-10: 1585038563

ISBN-13: 978-1585038565

Product Dimensions: 1 x 8.8 x 11.2 inches

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

Average Customer Review: 5.0 out of 5 starsÂ Â See all reviewsÂ (1 customer review)

Best Sellers Rank: #784,658 in Books (See Top 100 in Books)   #74 inÂ Books > Computers & Technology > Graphics & Design > CAD > Solidworks   #902 inÂ Books > Computers & Technology > Graphics & Design > Computer Modelling   #1246 inÂ Books > Arts & Photography > Architecture > Drafting & Presentation

Customer Reviews

Great book haven't finished it all but go get it.

Download to continue reading...

Analysis of Machine Elements Using SolidWorks Simulation 2014 Analysis of Machine Elements Using SOLIDWORKS Simulation 2016 Analysis of Machine Elements Using SOLIDWORKS Simulation 2015 Thermal Analysis with SOLIDWORKS Simulation 2016 and Flow Simulation 2016 Introduction to Finite Element Analysis Using SolidWorks Simulation 2014 Engineering Analysis with SolidWorks Simulation 2014 Vibration Analysis with SolidWorks Simulation 2014 Introduction to Finite Element Analysis Using SOLIDWORKS Simulation 2016 Introduction to Finite Element Analysis Using SOLIDWORKS Simulation 2015 Introduction to Finite Element Analysis Using SolidWorks Simulation 2013 An Introduction to SolidWorks Flow Simulation 2014 Engineering Analysis with SOLIDWORKS Simulation 2016 Engineering Analysis with SolidWorks Simulation 2013 Engineering Analysis with SOLIDWORKS Simulation 2015 Vibration Analysis with SOLIDWORKS Simulation 2015 Official Certified SolidWorks Professional (CSWP) Certification Guide with Video Instruction: SolidWorks 2012-2014 Official Guide to Certified SolidWorks Associate Exams - CSWA, CSDA, CSWSA-FEA (SolidWorks 2015, 2014, 2013, and 2012) Unsupervised Machine Learning in Python: Master Data Science and Machine Learning with Cluster Analysis, Gaussian Mixture Models, and Principal Components Analysis Atmospheric and Space Flight Dynamics: Modeling and Simulation with MATLABÃ Â® and SimulinkÃ Â® (Modeling and Simulation in Science, Engineering and Technology) Motion Simulation and Mechanism Design with SolidWorks Motion 2013

Dmca