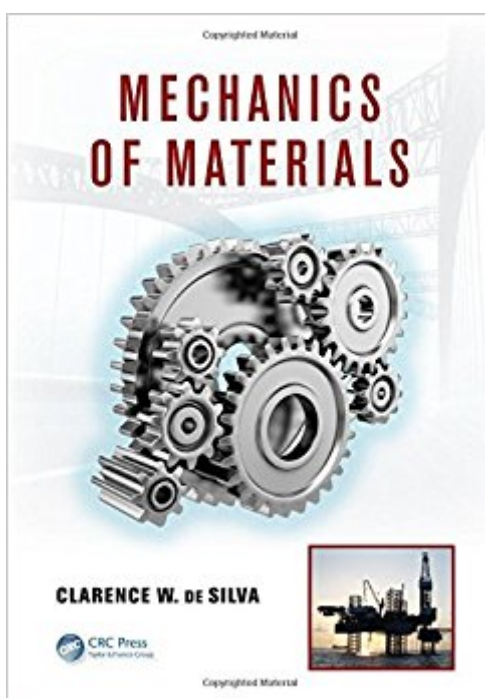The book was found

Mechanics Of Materials (Computational Mechanics And Applied Analysis)

Synopsis

A systematic presentation of theory, procedures, illustrative examples, and applications, Mechanics of Materials provides the basis for understanding structural mechanics in engineering systems such as buildings, bridges, vehicles, and machines. The book incorporates the fundamentals of the subject into analytical methods, modeling approaches, numerical methods, experimental procedures, numerical evaluation procedures, and design techniques. It introduces the fundamentals, and then moves on to more advanced concepts and applications. It discusses analytical methods using simple mathematics, examples and experimental techniques, and it includes a large number of worked examples and case studies that illustrate practical and real-world usage. In the beginning of each chapter, states and summarizes the objectives and approaches, and lists the main topics covered in the chapter Presents the key issues and formulas in a "Summary Sheet" at the end of each chapter Provides as appendices at the end of the book, useful reference data and advanced material that cannot be conveniently integrated into the main chapters Mechanics of Materials is a result of the author's experience in teaching an undergraduate course in mechanics of materials consisting of mechanical, manufacturing, materials, mining and mineral engineering students and in teaching other courses in statics, dynamics, modeling, vibration, instrumentation, testing, design, and control. This book is suitable for anyone with a basic engineering background. The practical considerations, design issues, and engineering techniques, and the snapshot-style presentation of advanced theory and concepts, makes this a useful reference for practicing professionals as well.

Book Information

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"On the basis of what I have seen so far, this would appear to be a book very well-suited to a first course in Mechanics of Materials (etc.). Topics are explained in an admirable degree of detail, which should make the book particularly student-friendly. The author brings a wealth of practical experience, with good examples from engineering practice."Ã¢â ¬â œÃ¢â ¬â œProfessor Roger T. Fenner, Department of Mechanical Engineering, Imperial College London, UK "I like the presentation style that each part starts with a concise itemized objective statement; then the basic knowledge is presented with both figures and concise descriptions and equations; after that, examples with learning objectives are given; finally a concise summary sheet is given. The selection of topics is very good."Ã¢â ¬â œÃ¢â ¬â œSimon X. Yang, University of Guelph, Ontario, Canada "Ã¢â ¬Â| very clear and the presentations are very easy to follow. Through the use of many examples in the specific application domains, such as automobiles, airplanes, robots, machine tools, engines, bridges, elevated guideways, and buildings, this book bridges the fundamental gap between the existing research literatures and educational texts and provides a comprehensive and authoritative introduction to the key concepts, difficulties and current developments of mechanics of materials. It will serve well both undergraduates and graduates as an outstanding text it pertains to, and in the meantime, it elegantly stands out many important research topics and issues on the modeling, analysis, simulation, design, operation, testing, and diagnosis of relevant engineering systems, which will be very helpful for engineers and researchers in these areas."Ã¢â ¬â ¢Peter X. Liu, Carleton University

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