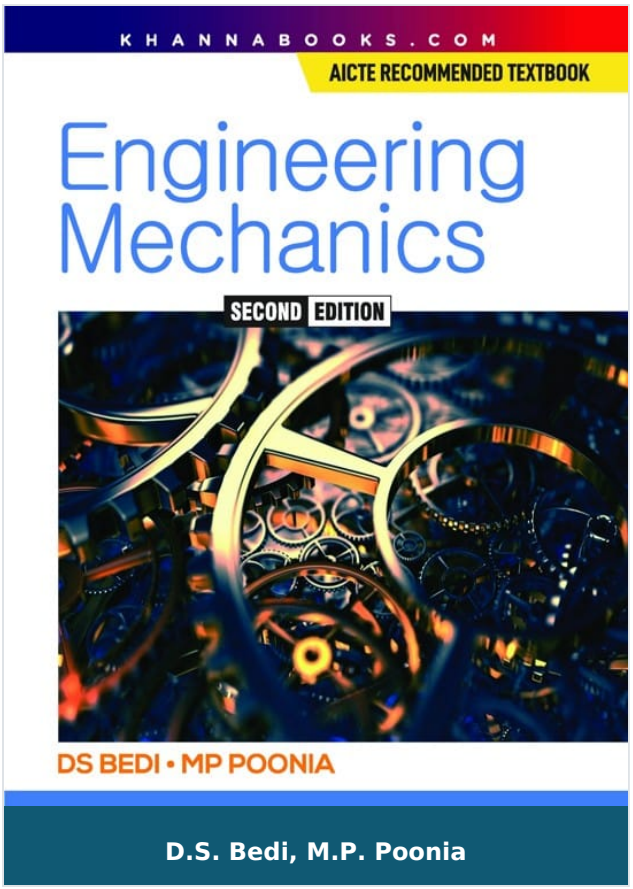

D.S. Bedi, M.P. Poonia

Engineering Mechanics

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- Kinematics of Rigid Body
- Kinetics of Rigid Bodies
- Simple Stress and Strain
- Elastic Constants, Complex Stresses and Strain Energy
- Pure Bending of Beams
- Torsion
- INDEX
- IMPORTANT MATHEMATICAL FORMULAE

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Dr. D.S. Bedi is one of the distinguished writers in India. He possesses a very excellent academic background. He had held various high positions viz. formerly Professor Emeritus at Department of Mechanical Engineering, Institute of Engineering and Technology (Punjab); Professor & Head, Dept. of Mechanical Engineering,Thapar Institute of Engineering & Technology (Punjab); Visiting Professor at Wayne State University, Detroit, MI (USA); Principal, Baba Banda Singh Bahadur Engineering College, (Punjab); Advisor-cum-Consultant at G.G.S. College of Modern Technology (Punjab); Director, Punjab College of Engineering; Technology, Punjab.

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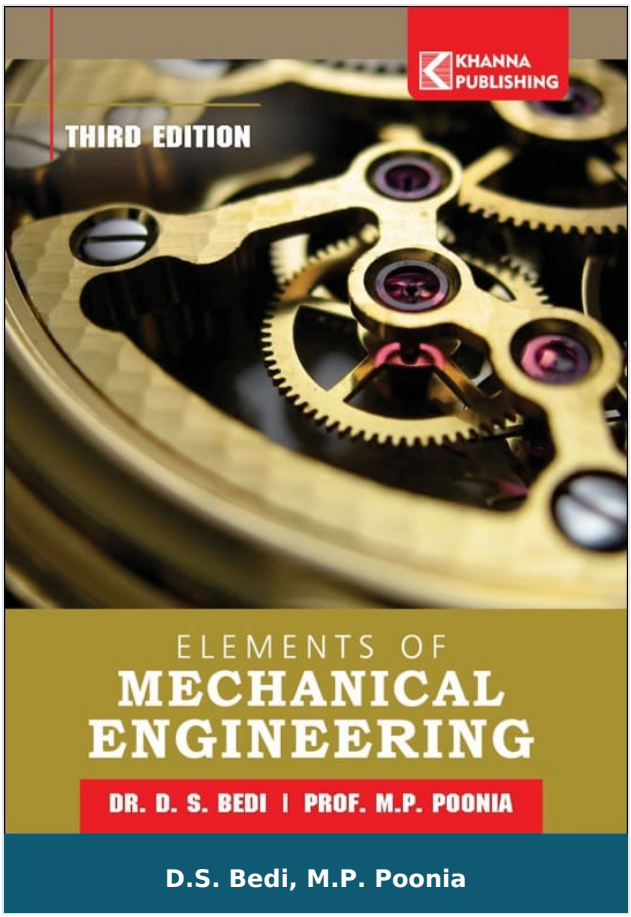

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The subject 'Elements of Mechanical Engineering' embraces 3 different fields of Mechanical Engineering, namely Thermodynamics, Strength of Materials and Theory of Machines.

The book is written in simple and easy to understand language. The authors have ingeniously brought in situations encountered by common man in his day-to-day life, so as to generate interest in the reader for the subject which otherwise leaves him high and dry.

In addition to this, every topic is supplemented with large no. of solved examples (more than 300 examples) which deals with every possible situation. At the end of each chapter, review questions have been added so that the students are made conversant with the type of compulsory questions they have to face in university exam. These are also followed by large no. of model problems.

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- Mechanisms and Machines
- Lifting Machines
- Concept of Mechanical Behavior of Engineering Materials
- Relation Between Elastic Constants
- Engineering Materials
- Centroid, Centre of Gravity, Second Movement of Area and Mass Movement of Inertia
- Index

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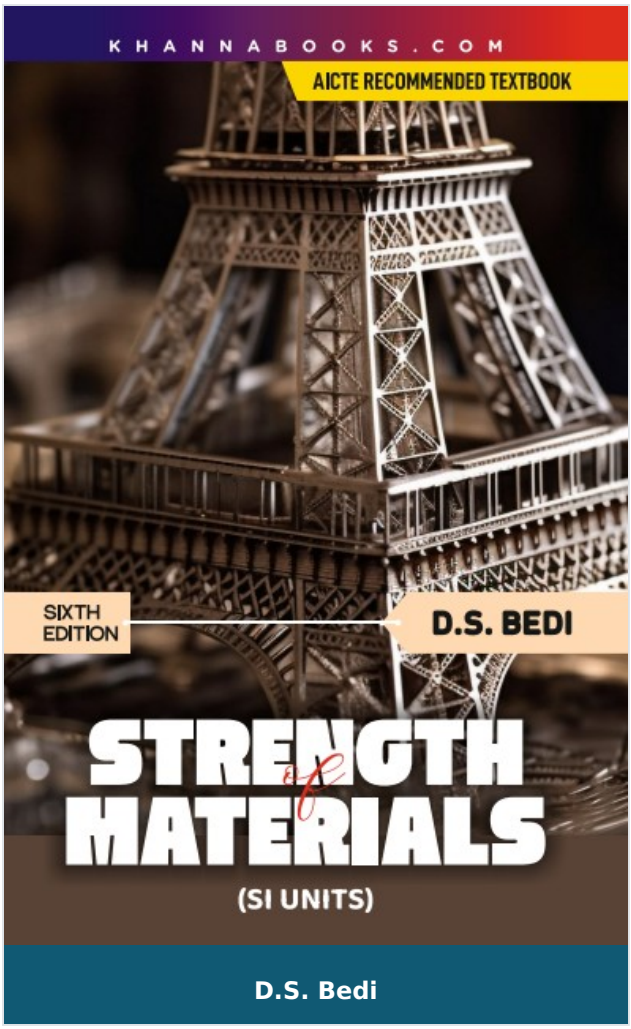

Strength of Materials

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Product Description

The sixth edition of the book has thoroughly been modified and enlarged to meet the revised syllabi of many universities and other professional examination like AMIE and above all to incorporate the suggestions received from the students and faculty a like. Additional problems on two-dimensional complex stress systems have been fully solved by both analytical and Mohr's circlem method so that the readers are made aware of the face that the sign shear stress on a particular plane has its one important role to play so as arrive at the correct result which otherwise is normally overlooked or even sometimes neglected. The term " bending Moment" and "twisting Moment" have been introduced as vector quantities in order to bring out the difference between them so that the reader can easily decipher each of them and proceed ahead to accomplish the associated objectives. The chapter on Thick Cylinders had been re-written to keep uniformity in sign convention of the stresses throughout the entire text. Further in this chapter the process of auto frettage of a thick cylinder has been introduced along with the "Simplified" theory of this process. The author has endeavored to familiarize the readers with the "Yield point phenomenon of low carbon steel". "quantitative definitions of ductility and malleability" and "Negative Possions Ratio" Which were hitherto not dealt with in most of the text on the subject. On the specific demand of the students almost all the chapter have been supplemented with objective type questions along with more number of worked examples.

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- Simple Stress and Strain
- Complex Stresses and Strains
- Shearing Force and Bending Moments in Beams
- Bending Stesses
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- Deflection and Beams
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- Springs
- Strain Energy and Deflection due to Shear and Bending
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- Plastic Theory of Bending
- Three Dimensional Stress System
- Torsion of Non-Circular Shafts
- Miscellaneous Problems
- Plastic Theory of Bending : Index
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