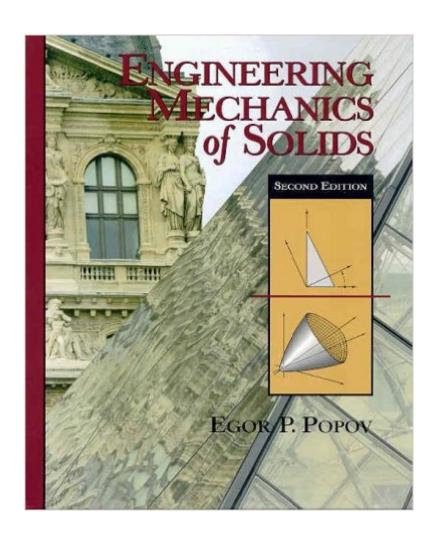
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# Engineering Mechanics Of Solids (2nd Edition)





## **Synopsis**

This book presents a comprehensive, cross-referenced examination of engineering mechanics of solids. Traditional topics are supplemented by several newly-emerging disciplines, such as the probabilistic basis for structural analysis, and matrix methods. Although retaining its character as a complete traditional book on mechanics of solids with advanced overtones from the first edition, the second edition of Engineering Mechanics of Solids has been significantly revised. The book reflects an emphasis on the SI system of units and presents a simpler approach for calculations of axial stress that provides a more obvious, intuitive approach. It also now includes a greater number of chapters as well as an expanded chapter on Mechanical Properties of Materials and introduces a number of avant-garde topics. Among these topics are an advanced analytic expression for cyclic loading and a novel failure surface for brittle material. An essential reference book for civil, mechanical, and aeronautical engineers.

### **Book Information**

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#### Customer Reviews

This book makes a difficult subject even more difficult. While the definitions and general information are good enough, the derivations seem to be very complicated, esoteric, and confusing. This may be appropriate for graduate level (although many of these techniques are obsolete in view of FE analysis) but this book bills itself, and is used mainly for undergraduate deformable mechanics classes. There seem to be a number of mistakes in the book as well. Professors should probably not use this book for an undergraduate level course--find something newer. Undergrads will

probably need to get some sort of supplementary outline material that will simplify things.

I used this book for a college course last semester and was very displeased with it. It seems like the book was rushed to print, because there are many errors. Figures are improperly dimensioned or do not reflect the information of the problem statement. At least once the book refers to a stress as a force. There are misprinteed equations within the text. For example, in one case a 3 was printed instead of an "E". In another case a "y" was printed indstead of gamma. Some of the practice problem answers given in the back of the book are incorrect. In the tables listing the dimensions and properties of American standard steel W-shapes, the columns for web thickness, flange thickness and flange width are mislabeled. In the table giving useful properties of areas, the moment of inertia for a thin tube is incorrect as is the location of the centroid of half of a thin tube. One of the less serious, but more glaring errors occurs in chapter twelve. The chapter is titled "Yield and Fructure Criteria" instead of "Yield and Fracture Criteria". This incorrect title is repeated on every page of the chapter. This reveals the quality of editing for this edition of Popov's book.

This book takes a simple topic and makes it impossible to learn and follow along. Problems at the end of the chapter ask you to solve for things that are not even covered in the book. If your teacher is using this book I feel bad for you. Try to buy another book to learn from, and get the homework problems assigned from a friend.

The concept of the book is good. The content is comprehensive, and Popov does seem to have made an effort to write the book for students. However, the book has just too many errors and typos! A page reference is missing from the Table of Contents, for example. The chapter entitled "Yield and Fructure Criteria," misspelling "Fracture" as "Fructure" in big letters, really annoyed me. This book would be near perfect if not for all the errors. I bought the book as a reference but returned it a week later after coming across the mistakes. The book is just edited very, very sloppily. A third edition with these mistakes remedied would be great, but Popov is old and I don't see him doing a 3rd edition. That's a pity.

This book suffers from several major deficiencies. First, it is inherently difficult to follow. The format is designed in such a way that you have to constantly refer back and forth between pages to get all the information you need for an example or derivation. The other thing is the examples are not clear. You find yourself solving the example again because the method isn't clear. In this way, I find the

book extremely frustrating. Even after the problems with the contents, the book has errors. Lots and lots of errors. Just look on the inside front cover. "Principal Elastiac Equations"? I checked the dictionary, and I don't know what elastiac is. Or Ch. 12: "Yield and Fructure Criteria"? Is that a new term for the fracture of fructose? Finding all the errors is kind of fun, so if you're into that, get this book. Otherwise, look elsewhere.

I "grow up" with this book (at the Univ) it's a best sellers in Costa Rica's Engineering field. The one I bought was in a great shape!!!

This is an excellent and a serious book for the inquiring and educated minds searching for the truth about mechanics of solids.

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