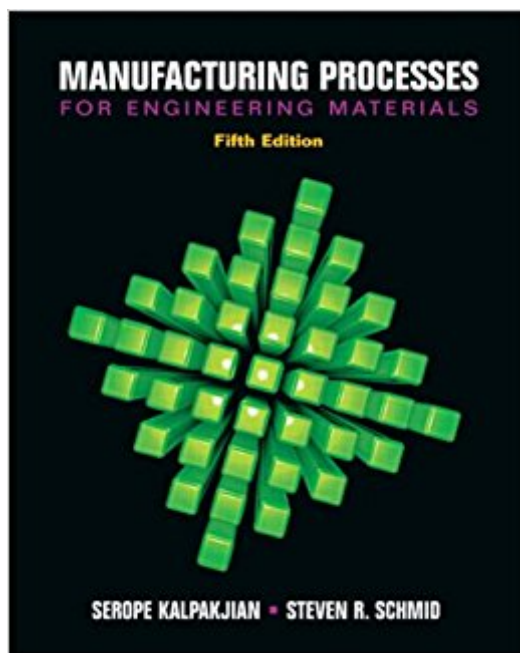


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# Manufacturing Processes For Engineering Materials (5th Edition)



## Synopsis

Well organized and clearly written, this book uses a sound analytical approach to explain manufacturing processes; it enables the reader to understand and appreciate the complex interrelationships between the diverse topics in this field. The book carefully presents the fundamentals of materials processing along with their relevant applications, so that the reader can clearly assess the capabilities, limitations, and potentials of manufacturing processes and their competitive aspects. Using real-world examples and well-wrought graphics, this book covers a multitude of topics, including the mechanical behavior of materials; the structure and manufacturing properties of metals; surfaces, dimensional characteristics, inspection, and quality assurance; metal-casting processes including heat treatment; bulk deformation processes; sheet-metal forming processes; material removal processes; polymers, reinforced plastics, rapid prototyping and rapid tooling; metal powders, ceramics, glasses, composites, and superconductors; joining and fastening processes; microelectronic and micromechanical devices; automation; computer-integrated systems; and product design. For manufacturing engineers, metallurgists, industrial designers, material handlers, product designers, and quality assurance managers.

## Book Information

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## Customer Reviews

Manufacturing Processes for Engineering Materials Â Fifth Edition Â Serope Kalpakjian and Steven R. Schmid Â Â Â This new edition of Manufacturing Processes for Engineering Materials continues its tradition of balanced and comprehensive coverage of relevant engineering

fundamentals, mathematical analysis, and traditional as well as advanced applications of manufacturing processes and operations. Updated and thoroughly edited for improved readability and clarity, this book is written mainly for students in mechanical, industrial, and metallurgical and materials engineering programs. The text continually emphasizes the important interactions among a wide variety of technical disciplines and the economics of manufacturing operations in an increasingly competitive global marketplace.

New and expanded topics in this edition include:

- Communications networks
- Design considerations in manufacturing
- Fabrication of micromechanical and microelectromechanical devices
- Holonic manufacturing systems
- Incremental forming
- Life-cycle engineering and sustainable manufacturing
- Mechanics of polymer processing
- Micromachining
- Nanomanufacturing and nanomaterials
- Rapid prototyping and rapid tooling
- Taguchi methods
- Web sites for information relevant to manufacturing

Numerous figures have been added or improved for enhanced graphic impact, the number of questions and problems has been increased by about twenty percent and answers to selected problems are provided, and the Bibliography at the end of each chapter has been thoroughly updated. The text now has a larger number of cross-references throughout to give students a perspective of the often complex interrelationships among materials, product design, and manufacturing processes and operations, and the numerous technical and economic factors involved in their selection.

While this book is a fantastic overview of all things materials and their many, many, many different methods of processing, the text is beyond dry when it comes to actual readability. A few weeks could have been set aside in the writing process to make the text far less formulaic and repetitive than it is currently, but that effort was obviously not made. However, it's impossible to fault a textbook for being dry, and that's the only reason the single star was docked. The descriptions of the manufacturing processes and their applications, on the other hand, were detailed and helpful, and the book is recommended in that regard.

The picture is of the English Edition. I received the international edition. False Advertising. There was also no mention of it being the international Edition in the Description. If I wanted the international Edition, I would have bought a cheaper one. I Spent more thinking I was getting what was advertised in the description and in the picture as this was what I needed for class. I paid more

money for something I could have gotten for \$20 because I wanted something that would best help me in class.

Decent book with a lot of information.

The book did not go in as much detail as my professor did, but that really is not that big of a problem. I plan on keeping this book since it is relatively cheap (cost-wise) and has a ton of useful information in it. I would definitely recommend this book as a shelf reference book (not to carry around since it is extremely heavy). Great book....I highly recommend picking it up if you are a materials scientist/engineer or have any overlapping field of study that concerns processing at all (every physical product requires processing).

Being a junior mechanical engineering student, this text is what's used for the lecture. I use this textbook a lot and it is very helpful: all of the processes are well explained, why they should/should not be used in situations. Also this book makes a good effort to take the raw material and mix with facts beyond just when to use a process to get you actually interested in manufacturing. For example how investment casting (aka lost wax process) allowed people to create intricate statues. Every week a quiz was given and studying for an hour with the book and notes helped me ace it every time. \*\*This semester I had expected that manufacturing would be the driest class; in fact this is one of the classes that I most enjoyed. I'm sure it was partly due because of my professor but this book certainly didn't hurt.

Excellent buy, thanks!

A good first primer for the material at hand. Much of the information in this book is in regards to machining, casting, and related topics such as roughness. The rest of the topics will get a paragraph or page. If you need deep information on a specific process additional texts are required.

This book is very frustrating to learn from. The chapters are assembled with no rhyme or reason with completely different topics covered in the same chapter. If you are going to do the review questions, plan on getting an additional reference such as Machinery's Handbook as this text lacks the tabulated values required to do the assigned problems. There are several misprints throughout the book as well.

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