

# FYI...New Books for Gear Engineers

*Encyclopedic Dictionary of Gears and Gearing* by David W. South & Richard H. Ewert. McGraw-Hill, 1995. In the front of this book is a Chinese proverb, "The beginning of wisdom is to call things by their right name." If that's the case, then this book is the beginning of gear wisdom. It contains some 400 pages of gear terminology from "A<sub>cm</sub>," the temperature of phase changes at equilibrium, to "zone of action," plus separate appendices of nomenclature for grinding, gaging, hobs, shaving cutters and milling cutters. The explanations are clear and concise, the charts useful and the diagrams revealing. Whether you speak fluent "gearing" or are a novice in the field, this is a useful reference book.

*Gear Geometry and Applied Theory* by Faydor L. Litvin, Prentice-Hall, 1994. Dr. Litvin is one of the important gear geometricians working in the United States today, and this book is a compilation of his years of experience in the field. It gives the mathematics for computer calculation of all the types of gears used in industry, including some of the most complex worms, hypoids and helicoids. The book also includes chapters on overwire measurements, generation of surfaces with CNC machines and coordinate measurements. An expansion on and complement to his earlier NASA publication, *The Theory of Gearing*, (1989), this is an important book for all gear designers. In his foreword to the book, Darle Dudley calls it "indispensable."

*The Handbook of Practical Gear Design* by Darle W. Dudley, Technomic Publishing Co., 1994. This is not a new book, but it belongs on

every gear designer's shelf. If you've never seen this book or if your own copy has begun to disintegrate with use or has migrated to an unknown bookshelf, help is on the way. Technomic Publishing Co., Inc., of Lancaster, PA, has acquired the copyright and is now the exclusive distributor of this classic, which covers all you need to know about designing gears, from preliminary considerations to the kinds and causes of gear failures and special design problems.

*Heat Treating: Equipment and Processes*, ASM International, 1994. This book contains the proceedings of the 1994 International Heat Treating Conference. Eighty papers, covering every aspect of heat treating from furnaces and power sources to environmental considerations, are reproduced. If you need to keep track of where research and development in heat treating are heading, this is a good place to start.

*Heat Treatment in Fluidized Bed Furnaces* by R. W. Reynoldson, ASM International, 1994. Fluidized bed heat treating is becoming more and more popular today. This book combines theory with practical solutions to questions arising from this process. It is a good introduction to this heat treating technique. (Note: See p. 30 for an excerpt from this book.)

## SOURCES:

ASM International  
1-216-338-5151

McGraw-Hill  
1-800-2MCGRAW

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