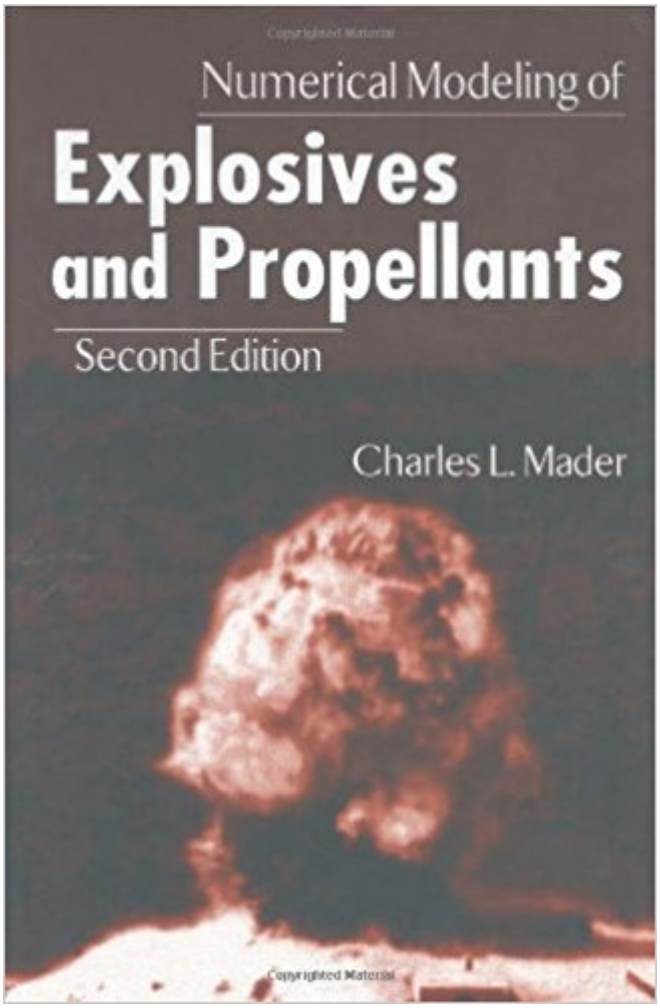
Numerical Modeling Of Explosives And Propellants, Second Edition



Synopsis

Charles Mader, a leading scientist who conducted theoretical research at Los Alamos National Laboratory for more than 30 years, sets a new standard with this reference on numerical modeling of explosives and propellants. This book updates and expands the information presented in the author's landmark work, Numerical Modeling of Detonations, published in 1979 and still in use today. Numerical Modeling of Explosives and Propellants incorporates the considerable changes the personal computer has brought to numerical modeling since the first book was published, and includes new three-dimensional modeling techniques and new information on propellant performance and vulnerability.Both an introduction to the physics and chemistry of explosives and propellants and a guide to numerical modeling of detonation and reactive fluid dynamics, Numerical Modeling of Explosives and Propellants offers scientists and engineers a complete picture of the current state of explosive and propellant technology and numerical modeling. The book is richly illustrated with figures that support the concepts, and filled with tables for quick access to precise data. The accompanying CD-ROM contains computer codes that are the national standard by which modeling is evaluated. Dynamic material properties data files and animation files are also included. There is no other book available today that offers this vital information.

Book Information

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Customer Reviews

This book is not for the faint of heart.It is a highly technical book and written only for thosewith experience in this field.The book does not start out with basic definitionsand is written for individuals who have professionalcredentials in this particular industry.Personally I look for a technical book to

begin withbasic theory and then build from there with orderlyprocedures and fully worked mathematical examples.The author is a good communicator, however if youare looking for basics in this field, it’s a littlesteep to try to start from this material.If your a professional already working withexplosives in a research facility you will find thisbook to be an excellent treatise.If like myself youonly have a passing interest and are looking forgeneral content, then this is not for you.I was looking for information regarding pressurerelief for dust explosions inside productionvessels and purchased this book by mistake.

ARRIVED ON TIME AS PROMISED. A COMPLICATED SUBJECT BUT A TEXT THAT ADEQUATELY COVERS THE MAIN ISSUES AND IS WRITTEN IN SIMPLE LANGUAGE ANYONE CAN UNDERSTAND.

The book does not give any worked examples.The mark of any good technical writer isshowing your work in detail, this bookleaves a lot to be desired.I am trying to return the book to.

This book truly is the ultimate text for anyone who is interested in the workings and chemistry of everyday explosive devices. Although it is recommended that the reader have a high ranking background in this type of field, I must say that as a 15 year old rocket science enthusiast I found that comprehending the material provided by this text was a relatively easy task. I believe that if the reader has a strong interest in this type of field and/or in chemistry in general and has little difficulty understanding general chem concepts, that this book is probably for you.However, I must confess that certain pieces of the work presented in this book are a little harder to understand than other sections. Such as the section that deals with fluid dynamics which I personely had a little more difficulty understanding. But, do not be intimidated for this is quite expected of the reader, any reader, even a scientist. One has to realise that this is a complicated field of interest, nevertheless, anybody who is dedicated to learning the science can understand it.To me, this book was of great practicality when conducting my own reasearch and development of slightly modernized model rocket engines. It also played a big role in my science fair project when I used some of the general concepts in the book to provide explanations of how my modernized engine designs were more efficient than conventional mass manufactured engines.All in all a great reference to have and cherish fit for anyone with an interest in the field of explosives, chemistry and physics.

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