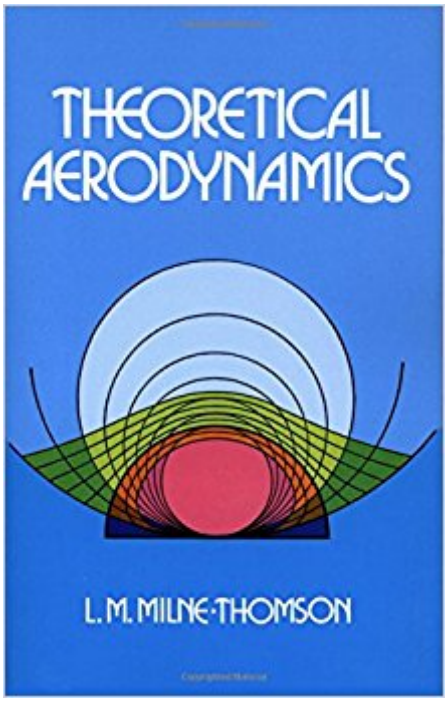
Theoretical Aerodynamics (Dover Books On Aeronautical Engineering)



Synopsis

A classic in its field, this university text and reference book has long been one of the basic works. This is the complete reprinting of the revised (1966) edition which brings the subject up to date, including a complete and probably unique chapter on conical flow round sweptback wings.After two introductory chapters on the simplifying assumptions demanded for the study and a final chapter on vectors, the author treats the material in four fairly well-defined parts: (1) two-dimensional aerofoils (two-dimensional motion, rectilinear vortices, the circular cylinder as an aerofoil, Joukowski's transformation, theory of two-dimensional aerofoils, and thin aerofoils); (2) three-dimensional aerofoils (induced velocity, aerofoils of finite aspect ratio, the lifting line theory, lifting surface theory, propellers, and wind tunnel corrections); (3) subsonic and supersonic flow (subsonic flow, supersonic flow, supersonic sweptback and delta wings); and, (4) the aircraft as a whole (simple flight problems, moments, and stability). The treatment is founded on complex variable and vector methods, both of which are explained in the self-contained text. A wealth of problems, illustrations, and cross-references add to the book's value both as a text and a reference. The only prerequisite is a knowledge of the elements of the differential and integral calculus.

Book Information

Series: Dover Books on Aeronautical Engineering

Paperback: 464 pages

Publisher: Dover Publications; Revised, Enlarg edition (February 17, 2011)

Language: English

ISBN-10: 048661980X

ISBN-13: 978-0486619804

Product Dimensions: 5.4 x 0.9 x 8.5 inches

Shipping Weight: 1.1 pounds (View shipping rates and policies)

Average Customer Review: 4.3 out of 5 stars 9 customer reviews

Best Sellers Rank: #681,709 in Books (See Top 100 in Books) #58 inÃ Â Books > Engineering & Transportation > Engineering > Aerospace > Aerodynamics #382 inÃ Â Books > Textbooks > Engineering > Aeronautical Engineering #684 inÃ Â Books > Textbooks > Science & Mathematics > Mechanics

Customer Reviews

The late L. M. Milne-Thompson was Emeritus Professor of Applied Mathematics at the University of Arizona and Emeritus Professor of Mathematics in the Royal Naval College. He also taught at

Brown University, The University of Wisconsin, and the universities of Rome, Queensland, Calgary, and Otago.

I purchased this book in hopes that it went a little more in detail about lift with reference to Complex Potential Flow, it covers the basics yet it does not actually show the derivation and assumes the reader is already familiar with the "Blasius Integral?" During my Adv. Fluid Mechanics course in the past we covered a great deal on Lift and Complex Potential Flow, the book author takes unnecessary shortcuts leaving the reader searching for which component is lift and how, which is not stated in some of the text.

as advertised

Excellent.

Good quality, book was in good condition! Packaging was a little weird but it did the job just fine. word.

I bought this book in 1979 along with Newman’s Marine Hydrodynamics when I first tried to understand propellers, especially surface-piercing propellers used in boat racing. The two books complement each other. M-T is very strong on all the math needed for doing lift and drag on a foil of infinite aspect ratio using complex functions. Newman’s approach is more like Landau-Lifshitz. Bothnare very good, both should be studied by anyone who want s to understand lift and drag on a foil. I’m working through M-T systematically in order to recall what I’ve forgotten since 1979. Another very good book, heavy on the practical aspects but not short on math, isB. W. McCormick’s ’Aerodynamics, ...’. Hydrodynamics of Ship Propellers by Breslin and andersen is also very thorough.

Milne’s book provides an excellent introduction to the study of inviscid airflow using potential theory. The text begins with 2D airfoil analysis via complex transformation techniques (conformal mapping). It then progresses to 3D finite wing theory using lifting line and lifting surface theory. It concludes with chapters on wind tunnel corrections, propellers, swept wings (sub and supersonic flow), and basic stability theory. A reference book dealing with conformal mapping and complex numbers may be helpful. For this I easily recommend another 5-star book, "Complex Variables and the Laplace

Transform for Engineers" by Wilbur R. Lepage.

I am an aeronautical engineering graduate and have been working in the aviation industry for over 20 years after graduation. I have read this book and found it to be a good reference book.This is a good basic textbook for those studying aerodynamics at undergraduate level. The author does a commendable job of clearly explaining the aerodynamic concepts which provide a good foundation on this subject for engineers.

I am an aeronautical engineering graduate and have been working in the aviation industry for over 20 years after graduation. I have read this book and found it to be a good reference book.This is a good basic textbook for those studying aerodynamics at undergraduate level. The author does a commendable job of clearly explaining the aerodynamic concepts which provide a good foundation on this subject for engineers.

Sixth Edition Aerodynamics For Engineering Students, 6Th Edition