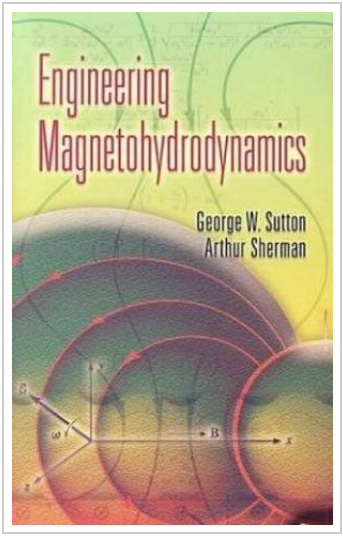

Engineering Magnetohydrodynamics (Paperback)

By George W. Sutton, Arthur Sherman

Dover Publications Inc., United States, 2006. Paperback. Condition: New. Language: English . Brand New Book. Suitable for advanced undergraduates and graduate students in engineering, this text introduces the concepts of plasma physics and magnetohydrodynamics from a physical viewpoint. The first section of the three-part treatment deals mainly with the properties of ionized gases in magnetic and electric fields, essentially following the microscopic viewpoint. An introduction surveys the concepts of ionized gases and plasmas, together with a variety of magnetohydrodynamic regimes. A review of electromagnetic field theory follows, including motion of an individual charged particle and derivations of drift motions and adiabatic invariants. Additional topics include kinetic theory, derivation of electrical conductivity, development of statistical mechanics, radiation from plasma, and plasma wave motion. Part II addresses the macroscopic motion of electrically conducting compressible fluids: magnetohydrodynamic approximations; description of macroscopic fluid motions; magnetohydrodynamic channel flow; methods of estimating channel-flow behavior; and treatment of magnetohydrodynamic boundary layers. Part III draws upon the material developed in previous sections to explore applications of magnetohydrodynamics. The text concludes with a series of problems that reinforce the teachings of all three parts.

Reviews

This is an incredible book that I have ever read through. It can be rally exciting throgh reading through time period. I discovered this publication from my i and dad recommended this pdf to find out.

-- ***Friedrich Lynch DDS***

Good electronic book and valuable one. Of course, it is actually perform, still an interesting and amazing literature. You may like how the author publish this pdf.

-- ***Lisette Schimmel***