

<<工程电磁场>>

图书基本信息

书名：<<工程电磁场>>

13位ISBN编号：9787302204077

10位ISBN编号：7302204071

出版时间：2009-9

出版时间：清华大学出版社

作者：（美）海特 等著

页数：502

版权说明：本站所提供下载的PDF图书仅提供预览和简介，请支持正版图书。

更多资源请访问：<http://www.tushu007.com>

<<工程电磁场>>

前言

“ Engineering Electromagnetics ” 是一本国际知名的经典教材。

作者W . H . Hayt . Jr . 教授曾任教于美国普度大学，曾任电气工程学院院长，获普度大学最佳教师称号；作者J . A . Buck为美国乔治亚理工学院电气与计算机工程系教授。

W.H . Hayt . Jr . 的第一版距今已50年。

两位作者合作编写的第6版于2001年出版，现在清华大学出版社引进出版的为本书的最新版本——第7版。

本书影印版在出版时，为了与国内高校教学要求相适应，删除了“传输线”（Transmission Lines）一章，其它内容与国内电气工程专业的教材基本一致。

本书基本概念讲述清晰，注重物理概念，淡化公式推导，强调自主学习，图文并茂，定理和重要公式彩色加重印刷；每章后面配有大量习题，几乎每章都有超过30道习题；并配有光盘，提供了一些场图、动画、问答测试题和关键内容的交互式学习。

本书文笔流畅，可读性好，其目的是使学生可以使用该教材进行独立学习。

因此，该书是电气工程和相关专业大学本科电磁场课程的理想教材或参考书，尤其适合作为双语教学或英文授课教材。

相对于国内同类教材，本书在内容上更加注重工程实用性内容，如：包含了不规则形状电极间的电容近似计算方法、磁路概念、铁磁材料的非线性、波导等内容；对拉普拉斯方程和泊松方程的求解讲述较系统，利用一章（第7章）内容，从一维方程求解过渡到二维分离变量法，进而介绍了差分法数值计算概念。

本书在内容上的另一明显特点是略去了一些中间环节的公式推导，加强了物理概念讲述。

<<工程电磁场>>

内容概要

本书特色： 本书是一本国际知名的经典教材，第一版出版距今已50余年。

本书基本概念讲述清晰，注重物理概念，淡化公式推导，强调自主学习，图文并茂；每章后面配有大量习题。

配书光盘提供了彩色场图、动画、问答测试题和关键内容的交互式学习，内容丰富，适于自学。

本书文笔流畅，可读性好，其目的是使学生可以使用该教材进行独立学习。

因此，该书是电气工程和相关专业大学本科电磁场课程的理想教材或参考书，尤其适合作为双语教学或英文授课教材。

作者简介

编者：(美国)海特(Hayt.W.H.) (美国)John A.BuckWilliam H. Hayt. Jr. (deceased) received his B.S. and M.S. degrees at PurdueUniversity and his Ph.D. from the University of Illinois. After spending four years inindustry, Professor Hayt joined the faculty of Purdue University, where he served asprofessor and head of the School of Electrical Engineering, and as professor emeritusafter retiring in 1986. Professor Hayt's professional society memberships includedEta Kappa Nu, Tau Beta Pi, Sigma Xi, Sigma Delta Chi, Fellow of IEEE, ASEE,and NAEB. While at Purdue, he received numerous teaching awards, including theuniversity's Best Teacher Award. He is also listed in Purdue's Book of Great Teachers,a permanent wall display in the Purdue Memorial Union, dedicated on April 23, 1999.The book bears the names of the inaugural group of 225 faculty members, past andpresent, who have devoted their lives to excellence in teaching and scholarship. Theywere chosen by their students and their peers as Purdue's finest educators.A native of Los Angeles, California, ,John A. Buck received his M.S. and Ph.D.degrees in Electrical Engineering from the University of California at Berkeley in1977 and 1982, and his B.S. in Engineering from UCLA in 1975. In 1982, he joinedthe faculty of the School of Electrical and Computer Engineering at Georgia Tech,where he has remained for the past 22 years. His research areas and publicationshave centered within the fields of ultrafast switching, nonlinear optics, and opticalfiber communications. He is the author of the graduate text Fundamentals of OpticalFibers (Wiley Interscience) , which is now in its second edition. When not glued tohis computer or confined to the lab, Dr. Buck enjoys music, hiking, and photography.

书籍目录

Preface Guided Tour Chapter 1 Vector Analysis 1.1 Scalars and Vectors 1.2 Vector Algebra 1.3 The Rectangular Coordinate System 1.4 Vector Components and Unit Vectors 1.5 The Vector Field 1.6 The Dot Product 1.7 The Cross Product 1.8 Other Coordinate Systems: Circular Cylindrical Coordinates 1.9 The Spherical Coordinate System References Chapter 1 Problems chapter 2 Coulomb's Law and Electric Field Intensity 2.1 The Experimental Law of Coulomb 2.2 Electric Field Intensity 2.3 Field Due to a Continuous Volume Charge Distribution 2.4 Field of a Line Charge 2.5 Field of a Sheet of Charge 2.6 Streamlines and Sketches of Fields References Chapter 2 Problems Chapter 3 Electric Flux Density, Gauss's Law, and Divergence 3.1 Electric Flux Density 3.2 Gauss's Law 3.3 Application of Gauss's Law: Some Symmetrical Charge Distributions 3.4 Application of Gauss's Law: Differential Volume Element 3.5 Divergence 3.6 Maxwell's First Equation (Electrostatics) 3.7 The Vector Operator ∇ and the Divergence Theorem References Chapter 3 Problems Chapter 4 Energy and Potential 4.1 Energy Expended in Moving a Point Charge in an Electric Field 4.2 The Line Integral 4.3 Definition of Potential Difference and Potential 4.4 The Potential Field of a Point Charge 4.5 The Potential Field of a System of Charges: Conservative Property 4.6 Potential Gradient 4.7 The Dipole 4.8 Energy Density in the Electrostatic Field References Chapter 4 Problems Chapter 5 Current and Conductors Chapter 6 Dielectric and Capacitance Chapter 7 Poisson's and Laplace's Equations Chapter 8 The Steady Magnetic Field Chapter 9 Magnetic Forces, Materials, and Inductance Chapter 10 Time-Varying Fields and Maxwell's Equations Chapter 11 The Uniform Plane Wave Chapter 12 The Uniform Plane Wave Chapter 13 Plane Wave Reflection and Dispersion Chapter 14 Guided Waves and Radiation Appendix A Vector Analysis Appendix B Units Appendix C Material Constants Appendix D Origins of the Complex Permittivity Appendix E Answers to Odd-Numbered Problems

<<工程电磁场>>

章节摘录

插图：

<<工程电磁场>>

版权说明

本站所提供下载的PDF图书仅提供预览和简介，请支持正版图书。

更多资源请访问:<http://www.tushu007.com>