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<<有限元方法>>

图书基本信息

书名：<<有限元方法>>

13位ISBN编号：9787506292566

10位ISBN编号：7506292564

出版时间：2008-12

出版时间：世界图书出版公司

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页数：435

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前言

The major part of this book has been derived by updating the third volume of the fifth edition. However, it now contains three new chapters and also major improvements in the existing ones. Its objective is to separate the fluid dynamics formulations and applications from those of solid mechanics and thus to reach perhaps a different interest group.It is our intention that the present text could be used by investigators familiar with the finite element method in general terms and introduce them to the subject of fluid dynamics. It can thus in many ways stand alone. Although the finite element discretization is briefly covered here, many of the general finite element procedures may not be familiar to a reader introduced to the finite element method through different texts and therefore we advise that this volume be used in conjunction with the text on 'The Finite Element Method: Its Basis and Fundamentals' by Zienkiewicz, Taylor and Zhu to which we make frequent reference.

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内容概要

这是一套在国际上颇具权威性的经典著作（共三卷）,由有限元法的创始人Zienkiewicz教授和美国加州大学Taylor教授合作撰写,初版于1967年,多次修订再版,深受力学界和工程界科技人员的欢迎。
本套书的特点是理论可靠，内容全面，既有基础理论，又有其具体应用。

第2卷目次：固体力学和非线性的一般问题；Galerkin近似方法；非线性代数方程的解；非弹性和非线性材料；几何非线性问题—有限变形；有限性变的材料构成；约束处理；伪刚性体和刚柔性体；离散元方法；一维结构力学问题；板弯曲近似：薄（Kirchhoff）板和C1连续性要求；
厚Reissner-Mindlin 板—不可简缩的和混合公式；作为扁平单元的壳；轴对称壳；作为三维分析的特殊情形的壳—Reissner-Mindlin假定；半解析有限元法—正交函数的利用和‘有限带’法；非线性结构问题—大位移和失稳；多尺度模型；有限元分析的计算机程序。

读者对象：计算力学、力学、土木、水利、机械、航天航空等领域的专家、教授、工程技术人员和研究生。

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