

<<国外名校名著>>

图书基本信息

书名：<<国外名校名著>>

13位ISBN编号：9787122031921

10位ISBN编号：7122031926

出版时间：2008-9

出版时间：化学工业出版社

作者：麦克凯布

页数：535

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>

<<国外名校名著>>

内容概要

本书是在美国著名教材《Unit Operations of Chemical Engineering》的基础上，按照我国化工原理教学大纲要求改编而成的，重点介绍化工单元操作的基本原理、典型设备结构特性及其计算。

根据知识点之间的关系，本书在内容编排上力求逻辑严谨，同时兼顾工程实用性。

本书主要内容包括：流体流动、流体输送、非均相体系的流动和非均相混合物的分离、传热、蒸发、扩散原理及相间质量传递、平衡关系和平衡级、气体吸收、蒸馏，浸提和萃取、物料的干燥、板式塔和填料塔的设计等，每章末均附有习题。

本书可作为高等院校化学工程与工艺专业及制药工程、生物工程。

过程装备与控制、环境工程、食品与轻化工等相关专业的化工原理双语教材，也可作为外资企业的培训教材，及相关科学研究人员、企业管理者和技术人员的参考书。

## 书籍目录

Introduction Definitions and Principles 0.1 Unit Operations 0.2 Unit Systems 0.2.1 Physical Quantities 0.2.2 SI Units 0.2.3 CGS Units 0.2.4 FPS Engineering Units 0.2.5 Gas Constant 0.2.6 Conversion of Units 0.2.7 Units and Equations 0.3 Dimensional Analysis Problems

Chapter 1 Fluid Flow 1.1 Fluid Statics and Its Application 1.1.1 Nature of Fluids 1.1.2 Hydrostatic Equilibrium 1.1.3 Applications of Fluid Statics 1.2 Fluid Flow Phenomena 1.2.1 Newton ' s Law and Viscosity of Fluids 1.2.2 Rheological Properties of Fluids 1.2.3 Types of Fluid Flow and Reynolds Number 1.2.4 Boundary Layers 1.3 Basic Equations of Fluid Flow 1.3.1 Measures of Flow 1.3.2 Mass Balance in a Flowing Fluid; Continuity 1.3.3 Overall Energy Balance for Steady-state Flow System 1.3.4 Overall Mechanical Energy Balance for Steady-state Flow System 1.3.5 Discussion on the Overall Mechanical Energy Balance Equation 1.3.6 Macroscopic Momentum Balances 1.4 Incompressible Flow in Pipes and Channels 1.4.1 Shear Stress and Skin Friction in Pipes 1.4.2 Laminar Flow in Pipes and Channels 1.4.3 Turbulent Flow in Pipes and Channels 1.4.4 Friction from Changes in Velocity or Direction 1.5 Pipe Flow Systems 1.5.1 Single Pipes 1.5.2 Multiple Pipe Systems 1.6 Metering of Fluids 1.6.1 Insertion Meters 1.6.2 Full-Bore Meters Problems

Chapter 2 Transportation of Fluids 2.1 Pipe, Fittings, and Valves 2.1.1 Pipe and Tubing 2.1.2 Valves 2.2 Pumps 2.2.1 Developed Head 2.2.2 Suction Lift and Cavitation of Pumps 2.2.3 Positive-Displacement Pumps 2.2.4 Centrifugal Pumps 2.2.5 Multistage Centrifugal Pumps 2.2.6 Pump Priming 2.2.7 Pump Selection 2.3 Fans, Blowers, and Compressors 2.3.1 Fans 2.3.2 Blowers and Compressors 2.3.3 Vacuum pumps 2.3.4 Comparison of Devices for Moving Fluids Problems

Chapter 3 Heterogeneous Flow and Separation

Chapter 4 Heat Transfer and Its Applications

Chapter 5 Evaporation

Chapter 6 Principles of Diffusion and Mass Transfer Between Phases

Chapter 7 Equilibrium Relations and Equilibrium- Stage Operations

Chapter 8 Gas Absorption

Chapter 9 Distillation

Chapter 10 Leaching and Extraction

Chapter 11 Drying of Process Materials

Chapter 12 Tray and Packed Tower Design

Appendix

编辑推荐

《国外名校名著·化学工程单元操作(英文改编版)》由化学工业出版社出版。

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>