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Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Front Cover; Dedication; Chemical Process Equipment: Selection and Design; Copyright; Table of Contents; Preface to the Third Edition; Preface to the Second Edition; Preface to the First Edition; Contributors; 0 Rules of Thumb: Summary; Compressors and Vacuum Pumps; Conveyors for Particulate Solids; Cooling Towers; Crystallization From Solution; Disintegration; Distillation and Gas Absorption; Drivers and Power Recovery Equipment; Drying of Solids; Evaporators; Extraction, Liquid-Liquid; Filtration; Fluidization of Particles with Gases; Heat Exchangers; Insulation; Mixing and Agitation Particle Size EnlargementPiping; Pumps; Reactors; Refrigeration; Size Separation of Particles; Utilities: Common Specifications; Vessels (Drums); Vessels (Pressure); Vessels (Storage Tanks); Membrane Separations; Materials of Construction; Reference; Bibliography; 1 Introduction; 1.1. Process Design; 1.2. Equipment; Vendors' Questionnaires; Specification Forms; 1.3. Categories of Engineering Practice; 1.4. Sources of Information for Process Design; 1.5. Codes, Standards, and Recommended Practices; 1.6. Material and Energy Balances; 1.7. Economic Balance; 1.8. Design Safety Factors 1.9. Safety of Plant and Environment1.10. Steam and Power Supply; 1.11. Design Basis; Utilities; 1.12. Laboratory and Pilot Plant Work; Other Sources of Information; 1.1 Process Design; A. Books Essential to a Private Library; B. Other Books; C. Estimation of Properties; D. Equipment; E. Safety Aspects; 1.2 Process Equipment; A.Encyclopedias;

B. General Data Collections; C. Special Data Collections; 2 Flowsheets; 2.1. Block Flowsheets; 2.2. Process Flowsheets; 2.3. Process and Instrumentation Diagrams (P&ID); 2.4. Utility Flowsheets; 2.5. Drawing of Flowsheets; References; 3 Process Control
3.1. The Feedback Control Loop Overall Response Characteristics; Valve Characteristics; Process Characteristics; Measurement Characteristics; Controller Characteristics; 3.2. Control Loop Performance and Tuning Procedures; Closed-Loop Procedure; Open-Loop Procedure; Default Tuning; 3.3. Single Stream Control; Flow Control; Level Control; Pressure Control; 3.4. Unit Operation Control; Heat Exchangers Without Phase Change; Air Coolers and Cooling Towers; Heat Exchangers with Phase Change; Process Condensers; Process Vaporizers; Evaporators; Distillation Columns; Liquid-Liquid Extraction
Reactors Combustion; pH; Turbines and Compressors; Bibliography; 4 Drivers for Moving Equipment; 4.1. Motors; Induction; Synchronous; Direct Current; 4.2. Steam Turbines and Gas Expanders; 4.3. Combustion Gas Turbines and Engines; References; 5 Transfer of Solids; 5.1. Slurry Transport; 5.2. Pneumatic Conveying; Equipment; Operating Conditions; Power Consumption and Pressure Drop; 5.3. Mechanical Conveyors and Elevators; Properties of Materials Handled; Screw Conveyors; Flexible Screw Conveyors; Belt Conveyors; Bucket Elevators and Carriers; Continuous Flow Conveyor Elevators; 5.4. Chutes
5.5. Solids Feeders

Sommario/riassunto

Chemical Process Equipment is a results-oriented reference for engineers who specify, design, maintain or run chemical and process plants. This book delivers information on the selection, sizing and operation of process equipment in a format that enables quick and accurate decision making on standard process and equipment choices, saving time, improving productivity, and building understanding. Coverage emphasizes common real-world equipment design rather than experimental or esoteric and focuses on maximizing performance. Legacy reference for c
