1. Record Nr. UNICAMPANIAVAN0262924

Autore: Galeotto Marzio, umanista italiano

Titolo: Varia dottrina : (De doctrina promiscua) / Galeotto Marzio da Narni ; a cura di Mario Frezza

Pubbl/distr/stampa: Napoli, : Pironti e figli, 1949

Descrizione fisica: LI, 129 p. ; 20 cm

Lingua di pubblicazione: Italiano
Latino

Formato: Materiale a stampa

Livello bibliografico: Monografia

2. Record Nr. UNINA9911019744303321

Autore: Luyben William L

Titolo: Principles and case studies of simultaneous design / / William L. Luyben

Pubbl/distr/stampa: Hoboken, N.J., : John Wiley, c2011

ISBN: 9781283927581
1283927586
9781118001646
1118001648
9781118001653
1118001656

Descrizione fisica: 1 online resource (342 p.)

Disciplina: 660.2812
660/.2812

Soggetti: Chemical engineering
Engineering design

Lingua di pubblicazione: Inglese

Formato: Materiale a stampa

Livello bibliografico: Monografia

Note generali: Description based upon print version of record.

Nota di bibliografia: Includes bibliographical references and index.

Nota di contenuto	PRINCIPLES ANDCASE STUDIES OFSIMULTANEOUS DESIGN; PREFACE; 1 INTRODUCTION; 1.1 Overview; 1.2 History; 1.3 Books; 1.4 Tools; Reference Textbooks; 2 PRINCIPLES OF REACTOR DESIGN AND CONTROL; 2.1 Background; 2.2 Principles Derived from Chemistry; 2.2.1 Heat of Reaction; 2.2.2 Reversible and Irreversible Reactions; 2.2.3 Multiple Reactions; 2.3 Principles Derived from Phase of Reaction; 2.4 Determining Kinetic Parameters; 2.4.1 Thermodynamic Constraints; 2.4.2 Kinetic Parameters from Plant Data; 2.5 Principles of Reactor Heat Exchange; 2.5.1 Continuous Stirred-Tank Reactors 2.5.2 Tubular Reactors2.5.3 Feed-Effluent Heat Exchangers; 2.6 Heuristic Design of Reactor/Separation Processes; 2.6.1 Introduction; 2.6.2 Process Studied; 2.6.3 Economic Optimization; 2.6.4 Other Cases; 2.6.5 Real Example; 2.7 Conclusion; References; 3 PRINCIPLES OF DISTILLATION DESIGN AND CONTROL; 3.1 Principles of Economic Distillation Design; 3.1.1 Operating Pressure; 3.1.2 Heuristic Optimization; 3.1.3 Rigorous Optimization; 3.1.4 Feed Preheating and Intermediate Reboilers and Condensers; 3.1.5 Heat Integration; 3.2 Principles of Distillation Control; 3.2.1 Single-End Control 3.2.2 Dual-End Control3.2.3 Alternative Control Structures; 3.3 Conclusion; References; 4 PRINCIPLES OF PLANTWIDE CONTROL; 4.1 History; 4.2 Effects of Recycle; 4.2.1 Time Constants of Integrated Plant with Recycle; 4.2.2 Recycle Snowball Effect; 4.3 Management of Fresh Feed Streams; 4.3.1 Fundamentals; 4.3.2 Process with Two Recycles and Two Fresh Feeds; 4.4 Conclusion; 5 ECONOMIC BASIS; 5.1 Level of Accuracy; 5.2 Sizing Equipment; 5.2.1 Vessels; 5.2.2 Heat Exchangers; 5.2.3 Compressors; 5.2.4 Pumps, Valves, and Piping; 5.3 Equipment Capital Cost; 5.3.1 Vessels (diameter and length in meters) 5.3.2 Heat Exchangers (area in square meters)5.3.3 Compressors (work in horsepower); 5.4 Energy Costs; 5.5 Chemical Costs; References; 6 DESIGN AND CONTROL OF THE ACETONE PROCESS VIA DEHYDROGENATION OF ISOPROPANOL; 6.1 Process Description; 6.1.1 Reaction Kinetics; 6.1.2 Phase Equilibrium; 6.2 Turton Flowsheet; 6.2.1 Vaporizer; 6.2.2 Reactor; 6.2.3 Heat Exchangers, Flash Tank, and Absorber; 6.2.4 Acetone Column C1; 6.2.5 Water Column C2; 6.3 Revised Flowsheet; 6.3.1 Effect of Absorber Pressure; 6.3.2 Effect of Water Solvent and Absorber Stages; 6.3.3 Effect of Reactor Size 6.3.4 Optimum Distillation Design6.4 Economic Comparison; 6.5 Plantwide Control; 6.5.1 Control Structure; 6.5.2 Column Control Structure Selection; 6.5.3 Dynamic Performance Results; 6.6 Conclusion; References; 7 DESIGN AND CONTROL OF AN AUTO-REFRIGERATED ALKYLATION PROCESS; 7.1 Introduction; 7.2 Process Description; 7.2.1 Reaction Kinetics; 7.2.2 Phase Equilibrium; 7.2.3 Flowsheet; 7.2.4 Design Optimization Variables; 7.3 Design of Distillation Columns; 7.3.1 Depropanizer; 7.3.2 Deisobutanizer; 7.4 Economic Optimization of Entire Process; 7.4.1 Flowsheet Convergence; 7.4.2 Yield 7.4.3 Effect of Reactor Size
Sommario/riassunto	There are many comprehensive design books, but none of them provide a significant number of detailed economic design examples of typically complex industrial processes. Most of the current design books cover a wide variety of topics associated with process design. In addition to discussing flowsheet development and equipment design, these textbooks go into a lot of detail on engineering economics and other many peripheral subjects such as written and oral skills, ethics, ""green"" engineering and product design. This book presents general process design principles in a concise readable form th