

CONTENTS

Volume Two

Introduction, 1

PART 5 CASE STUDIES, 3

- CS-101 Styrene Polymerization, 5
- 102 Cracking of Ethane to Produce Ethylene, 13
- 103 Quench Cooler, 32
- 104 Toluene Dealkylation, 36
- 105 Shift Conversion, 44
- 106 Ammonia Synthesis, 61
- 107 Sulfur Dioxide Oxidation, 86
- 108 Catalytic Reforming, 99
- 109 Ammonia Oxidation, 115
- 110 Phthalic Anhydride Production, 123
- 111 Steam Reforming, 133
- 112 Vinyl Chloride Polymerization, 139
- 113 Batch Hydrogenation of Cotton Seed Oil, 161
- 114 Hydrodesulfurization, 179

Appendixes

- A Frequently Used Constants and Factors, 185
- B Vessel Design and Costs, 187
- C Compressor Power and Costs, 198
- D Heat-Transfer Coefficients, Effective Conductivities and Diffusivities in Packed Beds, 206

- E Selected Sources of Data, 210
- F Tube-Side Heat Transfer Coefficient for Water, 212
- G Inert Catalyst-Bed Supports, 213

Nomenclature,* 215

Index, 237

* All nomenclature is defined in this section. It is also defined in the text at point of first use.