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beds; 5.6 Desorption and regeneration of adsorbents; 5.7 Reduction in partial pressure; 5.8 Increase in temperature; 5.9 Displacement Fluid; References; Chapter 6. Design procedures; 6.1 Data requirements; 6.2 Stagewise contacting; 6.3 Differential continuous contacting; 6.4 Fixed beds; 6.5 Rigorous methods; 6.6 Constant pattern behaviour; 6.7 Short-cut and scoping methods; 6.8 Hydrodynamics; 6.9 Scale-up and pilot-plant studies; 6.10 Adsorption process design and simulation; References; Chapter 7. Selected adsorption processes 7.1 Introduction 7.2 Pressure swing adsorption (PSA) processes; 7.3 Commercial PSA processes; 7.4 Thermal swing adsorption (TSA) processes; 7.5 Commercial TSA processes; 7.6 Displacement purge cycles; 7.7 Continuous countercurrent adsorption separations; 7.8 Chromatographic processes; 7.9 Future developments; References; Chapter 8. The literature of adsorption; Nomenclature; Index Adsorption is of considerable industrial importance and is a major part Sommario/riassunto of many different processes throughout the chemical and process industries, including many reactions - chemical and bio-chemical, purification and filtration, gas and liquid processing and catalysis. Adsorption is a complex process and this makes the correct design and implementation of its operation all the more critical. The aim of this book is to provide all those involved in designing and running adsorption processes with a straightforward guide to the essentials of adsorption technology and design. It will t