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Filtration; Rapid Sand Filtration; Chemical Mixing, Flocculation, and Solids Contact Processes; Suggested Readings; Chapter 6. Advanced Membrane Technology for Wastewater Treatment; Introduction; Overview of Technology Case Study; Case Study Specifics Technology ApplicationMechanisms of Membrane Separations; Treatment of Hazardous Wastes; Features of the Hyperfiltration System; Process Economics; Detailed Process and Technology Description; Summary of Case Study Analytical Results; Closure; Chapter 7. Sludge Dewatering Operations; Introduction; Overview of Dewatering Technologies; Use of Drying Beds; Use of Vacuum Filtration; Use of Pressure Filtration; Use of Centrifugation; Alternative Mechanical Dewatering Techniques; Suggested Readings; Chapter 8. Industrial Wastewater Sources; Introduction; Paper and Allied Products Industry Wastes
Dairy Products Industry WastesTextile Industry Wastes; Pharmaceutical Industry Wastes; Leather Tanning and Finishing Industry Wastes; Petroleum Refining Industry Wastes; Food and Meat Packing Industry Wastes; Beverages Industry Wastes; Plastics and Synthetic Materials Industry Wastes; Blast Furnaces, Steel Works, and Rolling and Finishing Wastes; Organic Chemicals Industry Wastes; Metal Finishing Industry Wastes; Closure; Suggested Readings; Chapter 9. Filtration Equipment and Process Flow Sheets; Introduction; Index to Equipment and Flow Sheet Diagrams; Index

Sommario/riassunto

This book is a state-of-the-art review of liquid filtration in the chemical process and allied industries. Interpretations of the phenomenological observations of the hydrodynamics of filtration are given in the hopes of establishing more theoretical and generalized bases of design methodology. Specific design and selection criteria are reviewed, and typical industrial problems and their solutions are presented.Nicholas Cheremisinoff is known internationally as one of the foremost engineers with Exxon and as the author of numerous books, articles and periodical contributions. Most rec