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3.11 Nomenclature; Chapter 4. Flow of fluids through granular beds and packed columns; 4.1 Introduction; 4.2 Flow of a single fluid through a granular bed
4.3 Dispersion4.4 Heat transfer in packed beds; 4.5 Packed columns; 4.6 Further reading; 4.7 References; 4.8 Nomenclature; Chapter 5. Sedimentation; 5.1 Introduction; 5.2 Sedimentation of Fine particles; 5.3 Sedimentation of coarse particles; 5.4 Further reading; 5.5 References; 5.6 Nomenclature; Chapter 6. Fluidisation; 6.1 Characteristics of fluidised systems; 6.2 Liquid-solids systems; 6.3 Gas-solids systems; 6.4 Gas-liquid-solids fluidised beds; 6.5 Heat transfer to a boundary surface; 6.6 Mass and heat transfer between fluid and particles; 6.7 Summary of the properties of fluidised beds
6.8 Applications of the fluidised solids technique6.9 Further reading; 6.10 References; 6.11 Nomenclature; Chapter 7. Liquid filtration; 7.1 Introduction; 7.2 Filtration theory; 7.3 Filtration practice; 7.4 Filtration equipment; 7.5 Further reading; 7.6 References; 7.7 Nomenclature; Chapter 8. Membrane separation processes; 8.1 Introduction; 8.2 Classification of membrane processes; 8.3 The nature of synthetic membranes; 8.4 General membrane equation; 8.5 Cross-flow microfitration; 8.6 Ultrafiltration; 8.7 Reverse osmosis; 8.8 Membrane modules and plant configuration; 8.9 Membrane fouling
8.10 Electrodialysis8.11 Reverse osmosis water treatment plant; 8.12 Pervaporation; 8.13 Liquid membranes; 8.14 Gas separations; 8.15 Further reading; 8.16 References; 8.17 Nomenclature; Chapter 9. Centrifugal separations; 9.1 Introduction; 9.2 Shape of the free surface of the liquid; 9.3 Centrifugal pressure; 9.4 Separation of immiscible liquids of different densities; 9.5 Sedimentation in a centrifugal field; 9.6 Filtration in a centrifuge; 9.7 Mechanical design; 9.8 Centrifugal equipment; 9.9 Further reading; 9.10 References; 9.11 Nomenclature; Chapter 10. Leaching; 10.1 Introduction
10.2 Mass transfer in leaching operations

Sommario/riassunto

Chemical Engineering Volume 2 covers the properties of particulate systems, including the character of individual particles and their behaviour in fluids. Sedimentation of particles, both singly and at high concentrations, flow in packed and fluidised beads and filtration are then examined.The latter part of the book deals with separation processes, such as distillation and gas absorption, which illustrate applications of the fundamental principles of mass transfer introduced in Chemical Engineering Volume 1. In conclusion, several techniques of growing importance - adsorption, ion ex