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Introduction; Conventional Theory (The Core Mass Velocity Equation, and Geometrical Consequences); Laminar Flow Analysis; Comparison of Compact Surfaces; Comparison of Conventional and Laminar Approaches; References; Chapter 5. Surface Types and Correlations; Introduction; Ducts; Plate- Fin Surfaces; Pressed Plate Type Surfaces; Plate and Shell Surfaces; Other Plate-Type Surfaces (Welded Plates etc.) Printed Circuit Heat Exchanger (PCHE) SurfacesReferences; Chapter 6. Thermal Design; Introduction; Form of specification; Basic Concepts and Initial Size Assessment; Details of the Design Process; Design for Two- Phase Flows; The design process; Thermal Design for Heat Exchanger Reactors; Mechanical Aspects of Design; References; Chapter 7. Compact Heat Exchangers In Practice; Installation; Commissioning; Operation; Maintenance; Design Approaches to Reduce Fouling; Fouling Factors; References; Appendices; 1. Nomenclature; 2. Conversion factors; 3. Software organisations and awareness groups 4. List of manufacturers5. Physical properties; Index

Sommario/riassunto

This book presents the ideas and industrial concepts in compact heat exchanger technology that have been developed in the last 10 years or so. Historically, the development and application of compact heat exchangers and their surfaces has taken place in a piecemeal fashion in a number of rather unrelated areas, principally those of the automotive and prime mover, aerospace, cryogenic and refrigeration sectors. Much detailed technology, familiar in one sector, progressed only slowly over the boundary into another sector. This compartmentalisation was a feature both of the user industries themse
