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Nota di contenuto	List of symbols -- 1. Engineering units and pressure in static fluids -- 1.1 Origins of engineering units -- 1.2 Concept of pressure -- 1.3 Measurement of pressure -- 1.4 Pressure in incompressible fluids -- 1.5 Buoyancy -- 1.6 Summary -- Problems -- 2. Momentum transport and laminar flow of Newtonian fluids -- 2.1 Introduction -- 2.2 Newton's lax of viscosity -- 2.3 Conservation of momentum in steady-state flow -- 2.4 Fluid flow between two flat parallel plates -- 2.5 Fluid flow down in inclined plane -- 2.6 Fluid flow in a vertical cylindrical tube -- 2.7 Capillary flowmeter -- 2.8 Fluid flow in an annulus -- 2.9 Mean residence time -- 2.10 Calculation of viscosity from the kinetic theory of gases -- 2.11 Viscosities of liquid metals -- 2.12 Summary -- Problems -- 3. Equations of continuity and conservation of momentum and fluid flow past submerged objects -- 3.1 Introduction -- 3.2 Equation of continuity -- 3.3 Conservation of momentum -- 3.4 Navier-Stokes equation for fluids of constant density and viscosity -- 3.5 Fluid flow over a horizontal flat plane -- 3.6 Approximate integral method in obtaining boundary layer thickness -- 3.7 Creeping flow past a sphere -- 3.8 Summary -- Problems --

4. Turbulent flow -- 4.1 Introduction -- 4.2 Graphical representation of fluid flow -- 4.3 Friction factor and turbulent flow in cylindrical pipes -- 4.4 Flow over a flat plate -- 4.5 Flow past a submerged sphere -- 4.6 Flow past a submerged cylinder -- 4.7 Flow through packed beds -- 4.8 Fluidized beds -- 4.9 Summary -- Problems --
5. Mechanical energy balance and its application to fluid flow -- 5.1 Introduction -- 5.2 Bernoulli's equation -- 5.3 Friction loss, Ef -- 5.4 Influence of bends, fittings, and changes in the pipe radius -- 5.5 Concept of head -- 5.6 Fluid flow in an open channel -- 5.7 Drainage from a vessel -- 5.8 Emptying a vessel by discharge through an orifice -- 5.9 Drainage of a vessel using a drainage tube -- 5.10 Emptying a vessel by drainage through a drainage tube -- 5.11 Bernoulli equation for flow of compressible fluids -- 5.12 Pilot tube -- 5.13 Orifice plate -- 5.14 Summary -- Problems --
6. Transport of heat by conduction -- 6.1 Introduction -- 6.2 Fourier's law and Newton's law -- 6.3 Conduction -- 6.4 Conduction in heat sources -- 6.5 Thermal conductivity and the kinetic theory of gases -- 6.6 General heat conduction equation -- 6.7 Conduction of heat at steady state in two dimensions -- 6.8 Summary -- Problems --
7. Transport of heat by convection -- 7.1 Introduction -- 7.2 Heat transfer by forced convection from a horizontal flat plate at a uniform constant temperature -- 7.3 Heat transfer from a horizontal flat plate with uniform heat flux along the plate -- 7.4 Heat transfer during fluid flow in cylindrical pipes -- 7.5 Energy balance in heat transfer by convection between a cylindrical pipe and a flowing fluid -- 7.6 Heat transfer by forced convection from horizontal cylinders -- 7.7 Heat transfer by forced convection from a sphere -- 7.8 General energy equation -- 7.9 Heat transfer from a vertical plate by natural convection -- 7.10 Heat transfer from cylinders by natural convection -- 7.11 Summary -- Problems --
8. Transient heat flow -- 8.1 Introduction -- 8.2 Lumped capacitance method; Newtonian cooling -- 8.3 Non-Newtonian cooling in semi-infinite systems -- 8.4 Non-Newtonian cooling in a one-dimensional finite systems -- 8.5 Non-Newtonian cooling in a two-dimensional finite systems -- 8.6 Solidification of metal castings -- 8.7 Summary -- Problems --
9. Heat transport by thermal radiation -- 9.1 Introduction -- 9.2 Intensity and emissive power -- 9.3 Blackbody radiation -- 9.4 Emissivity -- 9.5 Absorptivity, reflectivity, and transmissivity -- 9.6 Kirchhoff's law and the Hohlraum -- 9.7 Radiation exchange between surfaces -- 9.8 Radiation exchange between blackbodies -- 9.9 Radiation exchange between diffuse-gray surfaces -- 9.10 Electric analogy -- 9.11 Radiation shields -- 9.12 Reradiating surface -- 9.13 Heat transfer from a surface by convection and radiation -- 9.14 Summary -- Problems --
10. Mass transport by diffusion in the solid state -- 10.1 Introduction -- 10.2 Atomic diffusion as a random-walk process -- 10.3 Fick 's first law of diffusion -- 10.4 One-dimensional non-steady-state diffusion in a solid; Fick's second law of diffusion -- 10.5 Infinite diffusion couple -- 10.6 One-dimensional diffusion in a semi-infinite system involving a change of phase -- 10.7 Steady-state diffusion through a composite wall -- 10.8 Diffusion in substitutional solid solutions -- 10.9 Darken's analysis -- 10.10 Self-diffusion coefficient -- 10.11 Measurement of the interdifussion coefficient: Boltzmann-Matano analysis -- 10.12 Influence of temperature on the diffusion coefficient -- 10.13 Summary -- Problems --
11. Mass transport in fluids -- 11.1 Introduction -- 11.2 Mass and molar fluxes in a fluid -- 11.3 Equations of diffusion with convection in a binary mixture A-B -- 11.4 One-dimensional transport in a binary

mixture of ideal gases -- 11.5 Equimolar counterdiffusion -- 11.6 One-dimensional steady-state diffusion of gas A through stationary gas B -- 11.7 Sublimation of a sphere into a stationary gas -- 11.8 Film model -- 11.9 Catalytic surface reactions -- 11.10 Diffusion and chemical reaction in stagnant film -- 11.11 Mass transfer at large fluxes and large concentrations -- 11.12 Influence of mass transport on heat transfer in stagnant film -- 11.13 Diffusion into a falling film of liquid -- 11.14 Diffusion and the kinetic theory of gases -- 11.15 Mass transfer coefficient and concentration boundary layer on a flat plate -- 11.16 Approximate integral method -- 11.17 Mass transfer by free convection -- 11.18 Simultaneous heat and mass transfer: evaporate cooling -- 11.19 Chemical reaction and mass transfer: mixed control -- 11.20 Dissolution of pure metal A in liquid B: mixed control -- 11.21 Summary -- Problems --
12. Condensation and boiling -- 12.1 Introduction -- 12.2 Dimensionless parameters in boiling and condensation -- 12.3 Modes of boiling -- 12.4 Pool boiling correlations -- 12.5 Summary -- Problems --
Appendix A. Elementary and derived SI units and symbols -- Appendix B. Prefixes and symbols for multiples and submultiples of SI units -- Appendix C. Conversion from British and U.S. units to SI units -- Appendix D. Properties of solid metals -- Appendix E. Properties of nonmetallic solids -- Appendix F. Properties of gases at 1 Atm pressure -- Appendix G. Properties of saturated liquids -- Appendix H. Properties of liquid metals -- Recommended readings -- Answers to problems -- Index.

Sommario/riassunto

In their classic text, Transport Phenomena, Bird, Stewart. and Lightfoot state their opinion that the subject of transport phenomena should rank along with thermodynamics, mechanics, and electromagnetism as one of the "key engineering sciences." This thought was not shared by many traditional metallurgists, and diffusion in the solid state was the only aspect of transport phenomena included in many traditional university metallurgy curricula. However, as metallurgists transformed themselves into materials scientists and engineers, and the artificial barriers between the various engineering disciplines were lowered, the materials engineers began to see the truth in the opinion of Bird, Stewart, and Lightfoot. The major difference, however, between the first and this edition is that this edition contains an additional chapter, Chapter 12, titled "Boiling and Condensation." The material presented in this chapter is particularly important in view of the current interest in Renewal Energy Resources involving such devices as windmills and solar panels. Developments in this field require a thorough familiarity with the phenomena and mechanisms of boiling and condensation.