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3.2.1 Continuity Equation; 3.2.2 Diffusion Equation in Terms of Mass Fraction; 3.2.3 Diffusion Equation in Terms of Mole Fraction; 3.3 Equation of Motion and Energy Equation; 3.3.1 The Equation of Motion (Navier-Stokes Equation); 3.3.2 The Energy Equation; 3.3.3 Governing Equations in Cylindrical and Spherical Coordinates; 3.4 Some Approximate Solutions of the Diffusion Equation; 3.4.1 Film Model [6]; 3.4.2 Penetration Model; 3.4.3 Surface Renewal Model; Example 3.1; Solution; 3.5 Physical Interpretation of Some Important Dimensionless Numbers  
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Sommario/riassunto

This didactic approach to the principles and modeling of mass transfer as it is needed in modern industrial processes is unique in combining a step-by-step introduction to all important fundamentals with the most recent applications. Based upon the renowned author's successful new modeling method as used for the O-18 process, the exemplary exercises included in the text are fact-proven, taken directly from existing chemical plants. Fascinating reading for chemists, graduate students, chemical and process engineers, as well as thermodynamics physicists.

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