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Altri autori (Persone)	Tsotsas Evangelos Mujumdar A. S
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Nota di contenuto	Modern Drying Technology Volume- 1; Contents; Series Preface; Preface of Volume 1; List of Contributors; Recommended Notation; EFCE Working Party on Drying: Address List; 1 Comprehensive Drying Models based on Volume Averaging: Background, Application and Perspective; 1.1 Microscopic Foundations of the Macroscopic Formulation; 1.2 The Macroscopic Set of Equations; 1.3 Physical Phenomena Embedded in the Equations; 1.3.1 Low-temperature Convective Drying; 1.3.1.1 The Constant Drying Rate Period; 1.3.1.2 The Decreasing Drying Rate Period 1.3.2 Drying at High Temperature: The Effect of Internal Pressure on Mass Transfer 1.4 Computational Strategy to Solve the Comprehensive Set of Macroscopic Equations; 1.4.1 The Control-volume Finite-element (CV-FE) Discretization Procedure; 1.4.2 Evaluation of the Tensor Terms at the CV Face; 1.4.3 Solution of the Nonlinear System; 1.4.3.1 Outer (Nonlinear) Iterations; 1.4.3.2 Construction of the Jacobian; 1.4.3.3 Inner (Linearized System) Iterations; 1.5 Possibilities Offered by this

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1.5.1.1 Test 1: Superheated Steam 1.5.1.2 Tests 2 and 3: Moist Air, Soft and Severe Conditions; 1.5.2 Typical Drying Behavior of Softwood: Difference Between Sapwood and Heartwood; 1.6 Possibilities Offered by this Modeling Approach: Less-common Drying Configurations; 1.6.1 Drying with Volumetric Heating; 1.6.2 The Concept of Identity Drying Card (IDC); 1.6.3 Drying of Highly Deformable Materials; 1.7 Homogenization as a Way to Supply the Code with Physical Parameters; 1.8 The Multiscale Approach; 1.8.1 Limitations of the Macroscopic Formulation  
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2.4.2 Coordination Number

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### Sommario/riassunto

This five-volume handbook provides a comprehensive overview of all important aspects of modern drying technology, including only advanced results. Volume 1 deals with computational tools at different scales, including homogenized, pore network and continuous thermo-mechanical models, computational fluid dynamics and population balances, as well as process systems simulation tools. High-level, cutting-edge results on a mandatory industrial process.

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