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6.3 Combustion Chemistry6.4 Practical Stoichiometry; 6.5 Adiabatic Flame Temperature; 6.6 Types of Fuels Used in Rotary Kilns; 6.7 Coal Types, Ranking, and Analysis; 6.8 Petroleum Coke Combustion; 6.9 Scrap Tire Combustion; 6.10 Pulverized Fuel (Coal/Coke) Firing in Kilns; 6.11 Pulverized Fuel Delivery and Firing Systems; 6.12 Estimation of Combustion Air Requirement; 6.13 Reaction Kinetics of Carbon Particles; 6.14 Fuel Oil Firing; 6.15 Combustion Modeling; 6.16 Flow Visualization Modeling (Acid-Alkali Modeling); 6.17 Mathematical Modeling Including CFD
6.18 Gas-Phase Conservation Equations Used in CFD Modeling

Sommario/riassunto

Rotary Kilns-rotating industrial drying ovens-are used for a wide variety of applications including processing raw minerals and feedstocks as well as heat-treating hazardous wastes. They are particularly critical in the manufacture of Portland cement. Their design and operation is critical to their efficient usage, which if done incorrectly can result in improperly treated materials and excessive, high fuel costs. This professional reference book will be the first comprehensive book in many years that treats all engineering aspects of rotary kilns, including a thorough grounding in the therm