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	Portland Cement; 5.1 Introduction 5.2 Methods for the determination of clinker phase composition5.3 Polymorphism and phase equilibria of pure and doped cement clinker phases; 5.4 Minor components; 5.5 Kinetics of cement making; References and notes; Chapter 6. Hydration, Setting and Hardening of Portland Cement; 6.1 Introduction; 6.2 Hydration of pure clinker minerals; 6.3 Interactions in the hydration of clinker minerals; 6.4 Hydration of Portland cement; 6.5 Setting of Portland cement; 6.6 Hydrated Portland cement; 6.5 Setting of Portland cement; 6.8 Portland cement hydration at elevated temperature References and notes Chapter 7. Resistance of Concrete to Destructive Agencies; 7.1 Introduction; 7.2 Action of frost; 7.3 Thermal expansion and the durability of concrete; 7.4 Resistance to fire; 7.5 Electrolysis of concrete; 7.6 Action of sulfates; 7.7 Action of sea water; 7.8 Action of acids; 7.9 Action of mineral oils; 7.10 Action of gases on concrete; References and notes; Chapter 8. Physiochemical and Mechanical Properties of Portland Cements; 8.1 Introduction; 8.2 Heat of hydration; 8.3 Setting time; 8.4 Strength; 8.5 Instantaneous and time-dependent strains under load 8.6 Drying shrinkage8.7 Durability; References and notes; Chapter 9. The Production of Low-Energy Cements; 9.1 Introduction; 9.2 Gypsum plaster cements; 9.3 Blended cements; 9.4 Portland cements with improved reactivity; 9.5 Low-energy clinker production; 9.6 Alkali- activated slags and other aluminosilicates; 9.7 The future of cement production; References and notes; Chapter 10. Pozzolana and Pozzolanic Cements; 10.1 Pozzolanas; 10.2 Lime-pozzolana mixes; 10.3 Pozzolana-containing cements; 10.4 Mortars containing pozzolanas; 10.5 Concrete containing pozzolanas; 10.6 Durability References and notes
Sommario/riassunto	Lea's Chemistry of Cement and Concrete deals with the chemical and physical properties of cements and concretes and their relation to the practical problems that arise in manufacture and use. As such it is addressed not only to the chemist and those concerned with the science and technology of silicate materials, but also to those interested in the use of concrete in building and civil engineering construction. Much attention is given to the suitability of materials, to the conditions under which concrete can excel and those where it may deteriorate and to the precautionary or remedial measure