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	Alloys; 4.4 Magnesium and Magnesium Alloys; 4.5 Nickel and Nickel Alloys; 4.6 Tin and Tin Alloys; 4.7 Zinc and Zinc Alloys; Chapter 5. Rarer Metals; 5.1 Beryllium; 5.2 Molybdenum; 5.3 Niobium; 5.4 Titanium and Zirconium; 5.5 Tantalum; 5.6 Uranium Chapter 6. The Noble Metals6 The Noble Metals; Chapter 7. High- Temperature Corrosion; 7.1 Environments; 7.2 The Oxidation Resistance of Low-Alloy Steels; 7.3 High-temperature Corrosion of Cast Iron; 7.4 High-Alloy Steels; 7.5 Nickel and its Alloys; 7.6 Thermodynamics of Gas-metal Systems; Chapter 8. Effect of Mechanical Factors on Corrosion; 8.1 Mechanisms of Stress-corrosion Cracking; 8.2 Stress-corrosion Cracking of Ferritic Steels; 8.3 Stress- corrosion Cracking of Stainless Steels; 8.4 Stress-corrosion Cracking of High-tensile Steels 8.5 Stress-corrosion Fatigue; 8.7 Fretting Corrosion; 8.8 Cavitation Damage; 8.9 Outline of Fracture Mechanics; 8.10 Stress-corrosion Test Methods; 8.10A Appendix-Stresses in Bent Specimens; Chapter 9. Electrochemistry and Metallurgy Relevant to Corrosion; 9.1 Outline of Electrochemistry; 9.1A Appendix-Outline of Chemical Thermodynamics; 9.1B Appendix-The Potential Difference at a Metal/Solution Interface; 9.2 Outline of Structural Metallurgy Relevant to Corrosion
Sommario/riassunto	Corrosion, Volume 1: Metal/Environment Reactions is concerned with the subject of corrosion, with emphasis on the control of the environmental interactions of metals and alloys used as materials of construction. Corrosion is treated as a synthesis of corrosion science and corrosion engineering. This volume is comprised of nine chapters; the first of which provides an overview of the principles of corrosion and oxidation, with emphasis on the electrochemical mechanism of corrosion and how the kinetics of cathodic and anodic partial reactions control the rate of overall corrosion reaction. Atten