1. Record Nr. UNINA9910143413803321

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Titolo	Microbiologically influenced corrosion [[electronic resource] /] / Brenda J. Little, Jason S. Lee
Pubbl/distr/stampa	Hoboken, N.J., : Wiley-Interscience, 2007
ISBN	1-280-82675-4 9786610826759 0-470-11245-X 0-470-11244-1
Descrizione fisica	1 online resource (295 p.)
Collana	Wiley series in corrosion
Classificazione	51.24
Altri autori (Persone)	LeeJason S
Disciplina	620.11223
Soggetti	Microbiologically influenced corrosion Materials - Microbiology Electronic books.
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Microbiologically Influenced Corrosion; Contents; Preface; 1. Biofilm Formation; Introduction; Biologically Active Environments; Biofilm Formation; Influence of Conditioning Films; Influence of the Substratum; Influence of the Electrolyte; Summary; References; 2. Causative Organisms and Possible Mechanisms; Introduction; Ennoblement; Concentration Cells; Oxygen Concentration Cells; Metal Concentration Cells; Reactions within Biofilms; Respiration/Photosynthesis; Sulfide Production; Iron; Copper; Silver; Other Metals; Acid Production; Ammonia Production; Metal Deposition; Manganese; Iron Metal ReductionMethane Production; Hydrogen Production; Dealloying; Inactivation of Corrosion Inhibitor; Alteration of Anion Ratios; Summary; References; 3. Diagnosing Microbiologically Influenced Corrosion; Introduction; Identification of Causative Organisms; Culture Techniques; Biochemical Assays; Cell Activity; Genetic Techniques; Microscopy; Light Microscopy; Epifluorescence Microscopy; Confocal Laser Scanning Microscopy; Atomic Force Microscopy; Electron Microscopy; Pit Morphology; Chemical Testing; Elemental Composition;

Mineralogical Fingerprints; Isotope Fractionation; Summary
References4. Electrochemical Techniques Applied to Microbiologically Influenced Corrosion; Introduction; Techniques Requiring no External Signal; Redox Potential; Open Circuit or Corrosion Potential, E(corr); Electrochemical Noise Analysis (ENA); Microsensors; Scanning Vibrating Electrode Techniques; Capacitance; Dual-Cell Technique; Techniques Requiring a Small External Signal; Polarization Resistance Technique; Electrochemical Impedance Spectroscopy; Large Signal Polarization; Concentric Ring Electrodes; Summary; References
5. Approaches for Monitoring Microbiologically Influenced CorrosionIntroduction; Coupon Holders; Zero Resistance Ammeter; Multitechnique Approaches; Electrochemical Noise Analysis; Electrochemical Impedance Spectroscopy; Summary; References; 6. Impact of Alloying Elements to Susceptibility of Microbiologically Influenced Corrosion; Introduction; Low Alloy Steel; Copper and Nickel Alloys; Stainless Steels; Aluminum and Aluminum Alloys; Titanium and Titanium Alloys; Antimicrobial Metals; Summary; References; 7. Design Features that Determine Microbiologically Influenced Corrosion; Introduction
Hydrotest ProceduresFlow; Summary; References; 8. Case Histories; Introduction; Generic Environments; Subterranean; External Pipeline Surfaces; Electric Cables; Atmospheric; Ship Holds; Aircraft; Wire Rope; Building Materials; Glass; Marine; Iron and Steel; Corrosion-resistant and Passive Alloys; Copper and Copper-Nickel Alloys; Titanium; Specific Environments; Water-Distribution and Storage Systems; Nuclear Waste Storage; Interim Wet Storage; Long-term Dry Storage; Environments with Hydrocarbons; Production; Transmission, Distribution, and Storage; Use; Ships; Power Generation
Paper Mill Industry

Sommario/riassunto

A multi-disciplinary, multi-industry overview of microbiologically influenced corrosion, with strategies for diagnosis and control or prevention Microbiologically Influenced Corrosion helps engineers and scientists understand and combat the costly failures that occur due to microbiologically influenced corrosion (MIC). This book combines recent findings from diverse disciplines into one comprehensive reference. Complete with case histories from a variety of environments, it covers:Biofilm formationCausative organisms, relating bacteria and fungi to corrosion mechani