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Descrizione fisica	1 online resource (263 p.)
Collana	Advanced materials research, , 1022-6680 ; ; volume 275
Altri autori (Persone)	FergusonGeorge
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Nota di bibliografia	Includes bibliographical references and indexes.
Nota di contenuto	Structural Integrity and Failure, SIF2011; Preface and Organizing Committee; Table of Contents; I. Fracture, Fatigue, Damage and Failure; An Artificial Neural Network Approach to Fatigue Crack Growth; Experimental Investigation of PMMA Fracture under Mixed-Modes I, II and III Loading; Modelling Fatigue Crack Growth near an Open Hole under Spectrum Loading Using a New Method for Elastic-Plastic Stress Calculation; Effects of Crack Size and Crack Face Interference on Shear Fatigue Crack Growth in a Bearing Steel; A Model for the Cyclic Behaviour of Steel under Earthquake Conditions Fatigue Strength of Ultrafine Grained Copper Treated by Post-ECAP Mild Annealing Experimental Study on Theory of Critical Distance Applied to the Prediction of Fatigue from Notches; Effects of Thermal Exposure on Microstructure and Mechanical Properties of Ni Based Superalloy GTD111; Effects of Replication on Measured S-N Curves of Metals; Fatigue Behavior of Weld-Repaired High Strength Low Alloy Steel; An Analysis of Fatigue Strength of Notched Components; Thermal Shock Properties of Ti(Al,O)/Al ₂ O ₃ and TiAl(O)/Al ₂ O ₃ Composite Coatings An Impregnation Technique for Crack Identification Following Uniaxial Tension Tests An Analysis of the Bonding Energy through Pull-Out Tests

for Aerated Concrete with Various Steel Strip Geometries; Low Cycle Fatigue Behavior of Ni-Base Superalloy IN738LC at Elevated Temperature; II. Structural Integrity & Failure Analysis; Study of Local Failure of a Multi-Plate Arch Bridge by Numerical Modeling; Assembly Deformation and Stresses of Compliant Structures; Fracture Strengths of Mg Alloy AZ31B-H24 Friction Stir Lap Welds
Effect of Tool Speeds during Friction Stir Lap Welding on Mode of Fracture and Fracture Strength of Al 6060-T5 Joints
Characteristics of Electron Beam Welded Ti & Ti Alloys; Microindentation of Microencapsulated Phase Change Materials; Light Emission from a Si Based ZnO Structure; Managing Potlife through Statistical Analysis; Stress and Vibration Analysis of Motor Back Plate in HDD; Aircraft Joints: the Interaction between Corrosion Protection and Structural Performance; Residual Strength Optimisation of a Vent Hole in an Aircraft Component Using a Heuristic Method
Influence of Heat Treatment on Fatigue Strength of Drawn Steel Tubes for Small-Sized Single Pass Boiler
The Microstructure and Mechanical Properties of Ni-Based Superalloy after Service Exposure in Gas Turbine; Degradation Characteristics of Inconel738LC with Thermal Exposure; Effects of High Temperature Deformation and Thermal Exposure on Microstructure and Mechanical Properties of Co-Based Superalloy; Optimum Design for Life Extension on the End Coupling of Aluminum Hot Rolling Process; Integrity Evaluation and Dynamic Behavior of Radioactive Material Transport Cask under Drop Impact
III. Bio and Nano-Materials

Sommario/riassunto

This special collection of 59 peer-reviewed papers covers topics related to the fracture and fatigue of all types of materials and structures, including biological tissues, metals, ceramics, polymers, composites and thin films. This wide range of coverage will make this work of interest to those studying almost any sort of material. Review from Book News Inc.: This volume collects 59 selected papers from the July 2010 International Conference on Structural Integrity and Failure, organized by the Australian Fracture Group and hosted at the School of Engineering at the U. of Auckland in New Zealand
