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Nota di bibliografia	Includes bibliographical references at the end of each chapters and indexes.
Nota di contenuto	Advanced Engineering and Materials; Preface and Organizing Committee; Table of Contents; Chapter 1: Engineering Materials; Alternate Materials for Glass Fibre; Development of Mica-Based Glass-Ceramic with 4 Mol% of Fluorapatite; A Study on Nanosilver Adhesive for LED Light Application; Preparation and Adsorption Study of Gelatin/Activated Carbon Composite Bead Form; Precipitation Behavior and Magnetic Properties of Nanoscale Particles in a Cu-10 at% Ni-5 at% Co Alloy; Chapter 2: Technologies and Systems of Materials Processing The Experimental Analysis of Cold Pressed Joint Technology for Selected Sheet Metals Used in an Automotive Industry Analysis of Fracture Process and Common Defects in Casting Alloys EN43100 Manufactured by Die Casting Technology; Fabrication of the Electroplated CBN Wheel for Cylindrical Grinding with Abrasive Phylotactic Pattern; Investigation on Work Hardening Behavior of Nickel-Base Superalloy during Hot Working Process by EBSD; Cutting Performance of Coated High Speed Steel Hobs in Dry Hobbing

Preliminary Experimental Study on Effect of Cutting Fluid on Milled Surface Quality of Iron-Base Superalloy; Experiment Research of Coal's Spontaneous Combustion Characters; Disk Laser Welding of ZE 41 Magnesium Alloy; Disk Laser Welding of Copper to Stainless Steel; Application of a Ternary Zn-Based Solder Alloy for Joining of AZ31B Magnesium Alloy with Ultrasonic Support; Influence of Tool Design and Process Parameters on Friction Stir Weldability of AZ31B Magnesium Alloy; Optimization of Drilling Process Parameters for Minimizing Surface Roughness in Carbon-Carbon Composite Materials

Chapter 3: Building Materials and Technologies; Evaluation of Durability of Mineral Wool Products; Development of Mechanical Properties of Steel Fibers Reinforced High Strength Concrete; Parallel Heat Transfer Model of a Panel with Phase Change Material for Thermal Storage Applications Computed on Graphics Processing Units; Latent Heat Storage Plaster: Lab-Scale Experiment and Simulation; Analysis of Mechanical Properties of a Fibre Composite Containing Secondary Raw Materials

Quality Characterization of Iron Dust Exhaust Thermal as Alternative Ceramic Coating Raw Materials in a Brazilian Company; Accelerated and Natural Weathering of Wood-Polypropylene Composites Containing Pigments; Chapter 4: Designing and Researching of Machines and Mechanisms, Control and Automation; Eccentric Loading Condition Analysis of 1MN Dead Weight Force Standard Machine; Research on Wheel Loader Duty Cycle Test and Numerical Expression; A Comparing Study on Voltage Support Ability between STATCOM and Generator; Piezoelectric Optimum Placement via LQR Controller

Taihe Circuit, a Novel Circuit Topology for Conversion from Single-Phase to Three-Phase

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Sommario/riassunto

Collection of selected, peer reviewed papers from the 2014 3rd International Conference on Mechanical Engineering and Materials (ICMEM 2014), November 5-6, 2014, Singapore. The 46 papers are grouped as follows: Chapter 1: Engineering Materials; Chapter 2: Technologies and Systems of Materials Processing; Chapter 3: Building Materials and Technologies; Chapter 4: Designing and Researching of Machines and Mechanisms, Control and Automation; Chapter 5: Signal and Data Processing, Computer Algorithms; Chapter 6: Engineering Management in Industry

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