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Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references at the end of each chapters and indexes.
Nota di contenuto	Advances in Manufacturing Engineering; Preface; Table of Contents; Chapter 1: Innovative Materials and Materials Processing Technologies in Mechanical Engineering; The Concept of the System for Parameterization of Functionalized Membranes; Effect of Laser Welding Parameters of DUPLEX 2205 Steel Welds on Fatigue Life; Preliminary Assessment of the Influence of the Type of a Curing Agent upon Impact Loading of a Multi-Layered Composite; The Influence of UV Radiation upon the Properties of Fibre Reinforced Polymers; Application of an Integrated Database System for Processing Difficult Materials Dimensional Structure of Non-Metallic Inclusions in High-Grade Medium Carbon Steel Melted in an Electric Furnace and Subjected to DesulfurizationSynthesis and Thermal Characterization of Dysprosium Zirconate; The Use of Topology Optimization in Shaping the Strength of Castings; The Research on the Ablation Casting Technology for Aluminium Alloys; Mechanical Properties of AlSi9Mg Alloy with a

Sodium Modifier; Chapter 2: Novel Engineering Solutions in Surface Engineering; Modelling of Heat Flow in Bundles of Round Steel Bars Including the Formation of Scale Layer
Investigations on the Thermo-Mechanical Properties of CrN/CrCN Gradient Coatings Using a Thermo-Dilatometric MethodCorrosion Resistant Layers Produced in Vacuum Titanizing Process on a Low Carbon Steel Surface Coated Electrolytically with Cobalt; Diffusion Carbide Layers Produced on Tool Steel in Chromium Chloride Atmosphere at Low Pressure; The Influence of Thickness of Layers in the Multilayer Coating of the PN + AlCrTiNmultinano Hybrid Layer on Tribological Properties; The Effect of Al and Si Additions on the Resistance Properties of Magnetron-Deposited FeCrNi Coatings Prototype System for Plasma Film Surface ModificationChapter 3: Innovative Technologies for Research and Design of Machines and Mechanisms; Test Stand for Durability Tests of Rotating Elements of Office Chairs; Research Works on the Influence of Substituting the Refrigerant R22 with Propane (R290) on the Condition of the State of Sliding Surfaces Occurring in Piston Compressors; Innovative Design of a Longwall Shearer's Haulage System with Highly Loaded Components of a Tribological Pair Manufactured According to the Precise Casting Technology
The Innovative Design of Suspension Cast Components of Vehicles Made from High-Strength AlZnMgCu Alloy Resistant to an IED Type ThreatProblems of Producing Thin-Walled and Elastic Elements by Selective Laser Sintering; Methods of Prototyping Process Using Modern Additive Technologies; Chapter 4: Novel Methods for Measurement and Control in Technical Processes; X-Ray Tomography in the Diagnostics of Roller Bearing Rings; Robot Actions Planning Algorithms in Multi-Agent System; Quality Parameters in Wireless Distributed Control Systems
The Use of Thermography in Verification Tests of a Prototype Calorimeter Chamber

Sommario/riassunto

Collection of selected, peer reviewed papers from the Conference on Future Engineering, September 25-26, 2014, Korytnica, Poland. The 43 papers are grouped as follows: Chapter 1: Materials Synthesis and Preparation, Chapter 2: Material Properties, Characterisation and Application, Chapter 3: Composites and Ceramics, Chapter 4: Films and Coatings, Chapter 5: Cathode Materials Research, Chapter 6: Biomedical Material Research.