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Collana	Advanced Materials Research, , 1662-8985 ; ; Volume 907
Disciplina	670.42
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Livello bibliografico	Monografia
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	WGP Congress 2012; Organizing Coomittee; Table of Contents; Chapter 1: Light Weight Construction; Accumulative Roll Bonding: Forming Behavior, Tailored Properties and Upscaling Approach; Full Exploitation of Lightweight Design Potentials by Generating Pronounced Compressive Residual Stress Fields with Hydraulic Autofrettage; Tailored Strips by Welding, Strip Profile Rolling and Twin Roll Casting; Bulletproof and Noise-Reducing Guards in Lightweight Design for Woodworking Machines; Modeling and Simulation of the Machining of Unidirectional CFRP CVD Coated Diamond Tools for the Machining of Lightweight MaterialsInvestigation of the Capability of Flux of Force Oriented Lattice Structures for Lightweight Design; CFRP-Aluminium Structures Realized by Laser Beam Joining Process; Chapter 2: Enabling Mass Production; Total Flexibility in Forming Technology by Servo Presses; Towards Mass Production of Smart Products by Forming Technologies; Highly Flexible Final Production Stages - Taking Advantages of Scale Effects by Reducing Internal Component Variants; Improving Efficiency in Robot Assisted Belt Grinding of High Performance Materials The Suitability of Analytical and Numerical Methods for Developing Clinching Processes with Thick Sheet MetalAerodynamic Part Feeding

Technology - Flexible High-Speed Part Provision for Mass Production;
Analysis of Socio-Technical Structures in Order to Increase the
Changeability of Producing Companies; Increasing Commonalities by
Designing Production-Oriented Modular Product Platforms; Chapter 3:
Medical and Micro Technology; Microstructuring of Surfaces for Bio-
Medical Applications; Design, Development and Realisation of an Active
Driven Knee-Prosthesis with Bevel Helical Gearbox
Development of a Manufacturing Process of Temporal Bone Surgery
Models Using Rapid PrototypingProduction of Patient-Individual Hip
Cups by Sheet Metal Forming; Simulation-Based Planning and Metal
Forming Adapted Design Method; Process Combination for the
Manufacturing of Deep Holes with Small Diameters; Machine Integrated
Measurement of Ultra Precision Machined Specular Non-Rotational
Symmetrical Surfaces; Work Space Surveillance of a Robot Assistance
System Using a ToF Camera
Application of CAD/CAM and Micro End Mills with 20 to 120 µm
Diameter for the Direct Machining of Microstructures in PMMAChapter
4: E-Mobility; Failure Mode Based Design and Optimization of the
Electrode Packaging Process for Large Scale Battery Cells; Flexible
Automation for the Production of Stators and Rotors of Electric
Vehicles; Contribution of Body Lightweight Design to the Environmental
Impact of Electric Vehicles; Potentials of Pulse Magnetic Forming and
Joining; Integrated Product and Process Model for Production System
Design and Quality Assurance for EV Battery Cells
Strategic Fit: Overview of Cost, Quality and Scalability Impact on the
Added Value Network in Electric Engine Production

Sommario/riassunto

Collection of selected, peer reviewed papers from the 2012 WGP
Congress, June 27-28, 2012, Berlin, Germany. The 39 papers are
grouped as follows: Chapter 1: Light Weight Construction, Chapter 2:
Enabling Mass Production, Chapter 3: Medical and Micro Technology,
Chapter 4: E-Mobility, Chapter 5: Ressource Efficiency The 39 selected
and peer reviewed papers cover light weight construction, enabling
mass production, medical and micro technology, electronic mobility,
and resource efficiency. Among the topics are investigating the
capability of flux-of-force oriented lattice structures for lightwei
