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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 Materials Investigation 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 Metal Aerodynamic 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 Prototyping
Production 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 PMMA
Chapter 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: Resource 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
