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Nota di contenuto	Advances in Abrasive Technology XVII; Preface, Committees and Sponsors; Table of Contents; Chapter 1: Abrasive Machining; On the Profile and Microstructure Variations of Grinding-Induced Hardening Layer in A Cylindrical Workpiece; Study on Grinding Force Distribution on Cup Type Electroplated Diamond Wheel in Face Grinding of Cemented Carbide; Investigations on Belt Grinding of GH4169 Nickel-Based Superalloy; Basic Study on High Efficiency Ultra-Precision Grinding of the Optical Glass Lens; Studies on Grinding Conditions Affecting the Quality of Soft Magnetic Powder Cores Effect of Coolant Supplied through Grinding Wheel on Residual Stress of Grinding Surface Multi-Hole Drilling Method by Abrasive Blasting for CFRP and Composite Materials: Investigation of a Processing Model Based on Abrasive Erosion Phenomenon; A Controllable Material Removal Strategy Considering Force-Geometry Model in Marine Propeller Five-Axis Belt Grinding; Form Accuracy of Internal Grinding of Small and Deep Holes with Coolant Supplied from Inner Side of Grinding Wheel; An Experimental Study on Grinding Fir-Tree Root Forms Using Vitrified CBN Wheels

Deformation and Removal Characteristics of Multilayered Thin Film Structures in Nanoscratching and Diamond Lapping; Influence of Work Speed on Surface Quality with Rapid Rotation Mirror-Like Surface Grinding; Estimation of Grinding Cycle Time Taking into Account Specific Grinding Force; Study on the Shape Error in the Cylindrical Traverse Grinding of a Workpiece with High Aspect Ratio; Research on Material Removal Mechanism of Single Grit Cutting Based on FEM Simulation; A Preliminary Study of Surface Integrity and Wheel Wear in the Grinding of Multilayered Thin Film Structures

Experiment Research on ZrO₂ Engineering Ceramics with Abrasive Belt Grinding; Research on Grinding of Silicon Particles Reinforced Aluminum Matrix Composites with High Volume Fraction; Investigation of Grinding Characteristics of Cemented Carbides YL10.2 and YF06; Optimization of Grinding Conditions in Non-Axisymmetric Aspherical Grinding; Study on the Grinding Machinability of 9Mn2V under Different Heat Treatment Processes; Study on Force Characteristics of Ultrasonic Vibration-Assisted Sawing Ceramics with Diamond Blade; Chapter 2: Surface Quality

Investigation of Glass Polishing Motion Based on Micro-Oscillating Pressing Force with a Compact Robot and Fine Diamond Stone; Development of Non-Destructive Inspection System for Grinding Burn-in-Process Detection of Grinding Burn; Feature Extraction Based 3D Model Registration for Surface Finish Quality Evaluation; Dry Sliding Wear Behaviour of Full Pearlite Obtained by Cladding Low Carbon Steel to Hypoeutectoid Steel; Material Properties of a New PCD Made of Boron Doped Diamond Particles; Dynamic Friction Polishing of Diamond Utilizing High Reactive Metallic Tools

Evaluation and ANN-Based Prediction on Functional Parameters of Surface Roughness in Precision Grinding of Cast Iron

Sommario/riassunto

Collection of selected, peer reviewed papers from the 17 th International Symposium on Advances in Abrasive Technology (ISAAT 2014), September 22-25, 2014, Hawaii, USA. The 138 papers are grouped as follows: Chapter 1: Abrasive Machining, Chapter 2: Surface Quality, Chapter 3: Brittle Material Machining, Chapter 4: Grinding Wheel, Chapter 5: High Efficiency Machining, Chapter 6: Cutting Technology, Chapter 7: Tribology in Manufacturing, Chapter 8: Micro/Nano Machining, Chapter 9: Finishing/Lapping/Polishing, Chapter 10: System Development, Chapter 11: Monitoring & Analysis, Chapter 12: Metrology
