

Table of Contents

Preface and Organizing Committee

Surface Engineering/Coatings

Experimental Study on Laser Surface Cladding of Ni60 Alloy on AZ31B Magnesium Alloy Y.Q. Ge and W.X. Wang	3
Transparent Glass Window with Energy-Saving and Heat Insulation Capabilities C.M. Chen, S.Y. Chen, W.C. Chuang and J.Y. Shieh	10
Development and Experiment of Surface Engineering Technology on Mulberry Silk Brocade Fabrics S.C. Li, C.B. Tang, X. Wang and J.P. Shi	17
Cladding of Tantalum and Niobium on Titanium by Electron Beam, Injected in Atmosphere M.G. Golkovsky, T.V. Zhuravina, I.A. Bataev, A.A. Bataev, S.V. Veselov, V.A. Bataev and E.A. Prikhodko	23
The Research on Cylindrical Ultrasonic Rolling Machining Used for Strengthening Metal Surface W.R. Chen, Y. Ma and Z.F. Lou	28
Microstructure and Properties of Carbonitride Alloying Self-Shielded Wear-Resistant Coatings by HVAS Y. Deng, S.F. Yu, S.L. Xing and L.B. Huang	33
Investigation of Laser Parameters Influence of Direct-Part Marking Data Matrix Symbols on Aluminum Alloy H.D. Qiu, W.S. Bao, C.H. Lu and X.Y. Li	41
Curvature Testing the Residual Stresses in 3%TiO₂-Al₂O₃ Coatings by Thermal Spraying Technology F. Mei and M.F. Gong	48
Surface Properties of TiN Films on AZ 31 Magnesium Alloys Deposited by Magnetron Sputtering Technique X.R. Zhu, N.C. Bing, Z.L. Wei and Q.R. Chen	53
The Effect of Particle Concentration and Magnetic Field on Tribological Behavior of Magneto-Rheological Fluid W.L. Song, C.H. Lee, S.B. Choi and M.W. Cho	58
Application of Multi-Layer Composite Membrane in Tricone Bit Bearing Y.L. Qiu, S.B. Li, W. He and C.J. Han	62
Experimental Study on Hot Bending of 22MnB5 Steel R.Q. Guo, L. Ying, P. Hu, W. Guo, X.Q. Han and Z.H. Meng	66
Microstructure and Property of Cold Sprayed Copper Coating Y.L. Liu, Z. Bao and T.Y. Xiong	70
Tribological Properties of FeCrNi/CBN Composite Coating with Spraying High Velocity Arc C.X. Liu, J.H. Zhang and Z.F. Wang	74
Simulation of the Effect of Process Parameters on Particle Velocity in Cold Spray Using Laval Nozzle with Nine Holes C.S. Liu, Y.H. Jin and J.X. Zheng	78
Synthesis and Properties of Poly-Acrylate Emulsion Modified by Organ Silicone Y.X. Liu, Y.H. Lv, S. Zhang, F.J. Xu and B.S. Xu	82
Application of Taquchi Method in the Optimization of PTA Hardfacing Process H.S. Chen, J.N. Lee and H.K. Kung	86
A New Processing Way for Helicoid Reflective Mirror S.L. Hu, Y.J. Xie and X. Zhao	94
Effect of Working Current on Microstructure and Properties of Cylinder Hardened by Plasma Beam at Junction of the Hardening Traces L. Yang, Y.H. Qiang, F.S. Chen, Y. Gao and Y.T. Zhong	98

A Maya Geometry Slices Generation Method for Volumetric 3D Display H.E. Chen, H.W. He and Z.Y. He	102
Double Glow Plasma Hydrogen-Free Carburizing on the Surface of Purity Titanium L.N. Guo, J. Chen and J.D. Pan	108
Optical Sensitivity of Electrospun Fibers Containing Quinoxalines Derived with Metal Ion Chelating Agent C.K. Jang, C.J. Song, W. Yao, K.H. Jang and J.Y. Jaung	112
Softening Kinetics in Nb-Microalloyed TRIP Steels with Increased Mn Content A. Grajcar and R. Kuziak	119
Simulation Study on Anti-Reflective Effects for Different Submicron-Structures H.Y. Tsai, M.T. Lu and S.W. Luo	123
The Dynamics Analysis Based on Matlab for the Electro-Hydraulic Servo Drive Device X.P. Su, A.D. Guo, F.M. Yin, G.K. Nie and J.Y. Chen	127
Effect of Abrasive and Surfactant on Chemical Mechanical Polishing of Hard Disk Substrates S.L. Wang, Z.X. Li, L.B. Yang, L.B. Liu and Y. Tian	133
Study on Tribology Properties of Graphite/TiC/Ni-Base Alloy Composite Coating B. Cai, Y.F. Tan, H.Y. Ji, X.L. Wang, L. He and Q.F. Jing	137
Friction and Wear Properties of Laser Cladding Coatings under Boundary Lubrication Conditions X. Feng and Y.Q. Xia	143
Compare of Wear Properties and Analysis of Wear Mechanism about TC4 Alloy and P110 Tubing Steel in Dry Condition X.F. Yao, F.Q. Xie, G.X. Zhao, Y. Han and X.Q. Wu	147
Brush Plating Technology of LY11 Duralumin Alloy W.X. Zhang and J.X. Li	151
Preparation of Anti-Oxidation Coating on Billet Heating for Silicon Steel H.S. Chen, H.Z. Gu, Y.W. Zhang, X.L. Chen, G.T. Xu and G.F. Xue	155
Preparation and Study of Cr-Nanodiamond Composite Co-Deposition E.Z. Li, J.C. Li, D.X. Yang and W.L. Guo	160
Study on Electrospark Depositing & Welding Power Supply H.B. Han and Y.P. Guo	165
Effect of the Corona Discharge on ZnTe Film N. Ri and G.R. Li	171
Influence of Powder Type and Substrate Hardness on the Deposition Behavior of WC-17Co Particle in Cold Spraying H.T. Wang, G.C. Ji, X. Chen, Q.Y. Chen, X.B. Bai, G.B. Yang, F.G. Yang and B.H. Deng	176
Properties of Electrodeposited Ni-SiC Composite Coatings on MB8 Wrought Magnesium Alloys X.S. Li, L.M. Wang, Y. Yang, Y. Yang and H. Wu	181
Durability of Low Pressure Plasma Sprayed MoB/CoCr Coating on 310S Stainless Steel in Molten Al-12.07wt.%Si Alloy X. Chen, R.Y. Zhang and F. Li	187
An Interfacial Damping Model for Hard Coating Structure L.M. Yu and Y. Ma	191
Investigation of Laser Current Influence on Two-Dimensional Bar Code Contrast H.D. Qiu, C.H. Lu, W. Chen and J.M. Li	197
Surface Modification of Poly (<i>M-Phenylene isophthalamide</i>) Fibers and its Effect on the Mechanical Properties of Aramid Sheets H.F. Zhao and M.Y. Zhang	205
Influence of Hollow Cathode Electron Beam on TiAlN Films Prepared by Multi-Arc Ion Plating H. Wu, L. Song, Y.G. Sun and T. Chen	209
Study on Iridium Coating Produced by Double Glow Plasma Z.F. Chen, W.P. Wu, X.N. Cong and L.B. Wang	214
Improved Wear Resistance of Magnesium Alloy Irradiated by High-Intensity Pulsed Ion Beam at Lower Energy Density P. Li and T.X. Peng	219

Understanding the Enhancement of Coating's Thermal Cracking Resistance by Multiple Segmentation X.J. Chen and G.N. Chen	223
Influence of Additive on High Temperature Performance of Glaze T.F. Ma, H.X. Li, G.Q. Liu, J.B. Yu and W.G. Yang	231
The Microstructure of Ni/ZrO₂ Infiltrated Composite Layer X.M. Sun, J. Li, G.R. Yang, W.M. Song and Y. Ma	236
Effects of Hypophosphate Concentrations on the Characteristics of Micro-Arc Oxidation Coatings Formed on Biomedical NiTi Alloy J.L. Xu, J.M. Luo and F. Liu	240
Effect of Laser Cladding Technologies on Microstructure and Properties of Ni-Based WC Alloy Coatings H. Cheng, Z.G. Fang, X.R. Zhao, S. Dai and J. Yi	245
Effect of Atomic Oxygen Exposure on Si Implanted Siloxane Coatings in Low Earth Orbit Environment S.W. Duo, M.M. Song, T.Z. Liu and M.S. Li	249
Microstructure and Wear Behavior of SiC_p-Reinforced Magnesium Matrix Composite by Cold Spraying X.K. Suo, X.P. Guo, W.Y. LI, M.P. Planche, C. Zhang and H.L. Liao	253
Influence of Ultrasonic on the Microstructure and Properties of Electroless Plating Ni-Co-P Coating at Low Temperature H. Sun, X.F. Guo, K.G. Liu, H.F. Ma and L.M. Feng	259
Investigation into Tribological Properties of TD-Treated D2 Steel for Applications in Dry Machining of Aluminum Alloy L.L. Wang and X.Y. Nie	263
Studying on Rare Earth Aluminizing Process of GH4169 Superalloy J.M. Luo, J.L. Xu and L.P. Deng	267
A New Polyethylene Corrosion Protecting Coating with Ion Selectivity Y.H. Dong, K. Ren and Q. Zhou	273
Formation Mechanism of Nanostructure of HVOF Sprayed Nanostructured WC-17Co Coating G.Q. Gou, N. Huang, H. Chen, D. Li, Y. Liu, H. Ji, Y.H. Zhu, G.G. Wang and J.P. Yu	279
Improving the Performance of HVOF Sprayed WC-Co Coatings Using Statistical Design W.T. Wu, M.D. Jean and J.D. Lin	284
Synthesis and Characterization of Silicone-Modified Butyl Acrylate-Methyl Methacrylate Copolymer Latex Y. Han, X.W. Li, Z.G. Liu and H.X. Zhang	292
Microstructure and Properties of <i>In Situ</i> Synthesized Composite Coating by Tungsten Inert Gas Cladding L.P. Zhao, Z.D. Liu and B. Li	296
New Viscoelastic Magnetic Abrasive and its Surface Finishing Process W.H. Li and X.H. Li	300
Study on the Weldability of ZG30Cr06A Needling Material L. Yang, Y.H. Qiang, L.L. Zang, J. Wang and J. Meng	304

Modeling, Analysis and Simulation of Manufacturing Processes

Experimental Study on Seepage Model of Rubber-Plastic Porous Tube Q.D. Chen, C.Y. He and T. Meng	311
Angular Distortion Analysis on Multipassed Welding of Combined Joint Types Using Thermo-Elastic-Plastic FEM R.N.A. Lidam, Y.H.P. Manurung, M. Ridhwan, M.A.R. Ridzwan, M. Shahar S., M. Yusof Z., K.A. Sunhaji, T. Ghalib, E. Haruman and Y.C. Chan	315
Pre-Tensioning Fixture Development for Machining of Thin-Walled Components J.Y. He, Y. Wang and N. Gindy	319
Investigation on Weld Induced Distortion of Butt and T-Joints Using Thermo-Elastic-FEM and Experimental Study M.S. Sulaiman, Y.H.P. Manurung, M. Ridhwan, N.L. Robert, M.A.R. Ridzwan, E. Haruman, K.A. Sunhaji, T. Ghalib, M. Norasiah and Y.C. Chan	327

Simulation Investigation the Effect of Heating-Lines on Tensile Mechanical Properties of Sheet Metal after Laser Scanning W.J. Dan and W.G. Zhang	331
Research on Radio Frequency Wireless Communication Technology X.F. Shang, Z.J. Wang and C.G. Fan	337
Adaptive Neuro-Fuzzy Inference System Modelling of Surface Roughness in High Speed Turning of AISI P 20 Tool Steel B.D. Cui	341
A 3D Coupled Thermo-Mechanical FE Model for Friction Stir Welding of 7075 Aluminum Alloy Plate Z.H. Guo, G.Y. Zhao, L.M. Ke, L. Xing and S.F. Zhu	346
3D Finite Element Analysis of Marine Diesel Engine Connecting Rod B. Zheng, Y.Q. Liu, R.X. Liu and J. Meng	351
Numerical Simulation on Low-Speed Magnetic Flux Leakage Inspection to Heat Exchanger Pipes M. Zhang, L.J. Wang and C.F. Guo	355
A Novel Silicon-Based Packaging Platform for High-Efficiency LED Modules C. Wang, W.S. Lee and N.Y. Kim	359
Numerical Simulation of Filling Process in Vertical Centrifugal Casting Based on Projection-Level Set Method J. Zhang, J.X. Zhou, M.Y. Zhang, S.Y. Pang, D.M. Liao, Y.J. Yin and X. Shen	364
Numerical Simulation of Macrosegregation Formation in Binary Alloy Solidification Processing Based on Modified Projection Method W. Xu, J.X. Zhou, S.Y. Pang, D.M. Liao and Y.J. Yin	369
Output Feedback Assignability for Nonlinear Min-Max Systems H.Y. Wei, Z.X. Zhu, Y.G. Tao and W.D. Chen	374
Computer Simulation of Heat Treatment Process for Support Plate of Nuclear Reactor X. Liu, R. Mukai, X.H. Deng and D.Y. Ju	380
A Mathematical Model for the Generated Gear Tooth Surfaces of Spiral Bevel and Hypoid Gears X.C. Wu, J.T. Han and J.F. Wang	384
Instantaneous Cutting Force Model in High-Speed Milling Process with Gyroscopic Effect H.L. Zhou, W.X. Tang, Q.H. Song and H.W. Ju	389
Mathematical Model for Evaluating Roundness Errors by Maximum Inscribed Circle Method P. Liu and H.Y. Miao	393
Major Process Quality Control for Light Seal of Piston Ring Based on KPCA and Elman Neural Network J. Yang and Y.H. Deng	397
Experiment and Numerical Simulation of Extrudate Swell in the Polymer Extrusion Process M. Zhang, C.Z. Huang, G.W. Chen and Y.X. Jia	401
Numerical Simulation of Microstructure Evolution of TC6 Alloy Blade during Finish Forging G.X. Qi, R.B. Mei, F. Wang and L. Bao	405
Experiment on Hot Rolling Deformation Resistance of Aluminum Alloy and Mathematical Modeling C.S. Wang, H.X. Wang, J.B. Li and J. Zhang	409
Quality Diagnosis and Error Compensation Based on Integrated SPC/EPC in MMPs J. Feng and P.Y. Jiang	415
Effect of Wall Conditions on PVC-R Co-Rotating Conical Twin-Screw Extrusion Y.H. Cao and J.N. Chen	419
Finite Element Analysis of Effects of Preheating and Postweld Heat Treatment on Residual Stress in Pipe Welding H. Du, D.P. Wang, C.X. Liu and H. Zhang	428
A Quantitative Shape Control Strategy for Hot Tandem Mill D.C. Wang and H.M. Liu	432
Distributions and Influence Factors of Residual Stresses Induced by Oxygen Cutting Opening in Steel Structure Z.Y. Wei, Y.J. Liu and B. Zhou	437

Study on Metal Flowing Law for Isothermal Extrusion Deformation of AZ31 Magnesium Alloy X.B. Li and Z.M. Zhang	448
Numerical Simulation of the Tunnel Blasting Process in Weak Intercalated Layer C.M. Mu, Q. Zhang, Z.K. Liu and W.X. Li	452
Structural Design and Simulation of a Piezoelectric Peristaltic Pump Driven by Circumferential Traveling-Wave L. Liang, T.M. Zhang, X. Ma and L.L. Wen	457
Study on the Melting Time of Solid Pellets in Melt in a Co-Rotating Twin Screw Extruder C. Liang, K.S. Wang and B. Jiang	461
Study on Production Mechanism of End Concavity in Cross Wedge Rolling X.H. Wei and X.D. Shu	468
Analysis and Research of Mathematical-Physical Models on Simulation of Electrochemical Machining Y.Y. Ge, F.Y. Wang, A.M. Zhang and S.T. Zhuang	473
Process Research on Cold Rolling of Gully Ball Bearing Inner Ring L.T. Qi, B.S. Sun and X.D. Shu	477
Experiments and Simulation of Elastic-Plastic Deformation in Thin Wall Part Milling A.J. Tang and Z.Q. Liu	482
Analysis of the Granularity of Task Decomposition in Enterprise Alliance Based on System Dynamics X. Zhang	487
Effect of Sample Materials on the AFM Tip-Based Dynamic Ploughing Process Y.D. Yan, W.T. Liu, Z.J. Hu, X.S. Zhao and J.C. Yan	492
Study on Cutting Less-Teeth Gear with the Slotting Tool B.M. Wang, W. Cheng, Y.K. Zou and P. Li	497
Application of Collision and Interference Inspection Algorithm Based on Bounding Box in NC Machining Simulation J. Li, Y. Jiao and B.Y. Li	501
Influence of Initial Microstructure on Rheology of Al-Zn-Mg-Cu Alloy during Thermal Compression L. Xu, G.Z. Dai, X.M. Huang, J.W. Zhao and J. Han	506
Design and Simulation Analysis of Aircraft Dynamic System Q.M. Yan and J.J. Zhu	511
Models and Implementation of Integrated Process Planning and Scheduling L.H. Qiao and S.P. Lv	518
Influence of Processing Parameters of Warm Compaction on Green Density of Molybdenum Powder and Compact Defect Analysis J. Li and B.T. Yang	524
Finite Element Analysis on Structural Stress of 16×16 InSb IRFPA with Viscoelastic Underfill L.W. Zhang, J.C. Wang, Q. Yu and Q.D. Meng	530
Solutions for Deadlocked Problem of FMSs Using Theory of Regions Y.L. Pan and Y.S. Huang	535
Rolling Force in Hot Rolling of Large Rings M. Wang and C. Zhang	539
Research on Processing Technology and Cutting Parameter of the Spiral Surface of Screw Rotor X.W. Sun, G. Lv and K. Wang	543
Prediction of Fracture Force of Weld Line Based on Artificial Neural Networks P.F. Zhu, X.F. Sun, Y.J. Lu and H.T. Pan	547
ANSYS-Based Finite Element Analysis on Automotive Panel Drawing Die J.P. Wang, C.L. Liu, P. Lu and F.G. Ma	554
Research and Structure Realization of a New Cleaning Machine for Aluminum Package K. Tao, J. Liu, Y.T. Wang and T. Fang	558
Simulation Research on the Impact Mole System in Working State X.L. Yu	562

Buckling Analysis and Experiment of Fiber-Paper Honeycomb Sandwich Structure Composites	566
X.J. Yang, Q.S. Lan and Y.N. Zhong	
A Study on Storing Process of Thermoforming Using Finite Difference Method	571
Z.Z. Li, G.Y. Shen, X.Q. Wang, M.Q. Li and Y.D. Shen	
Optimal Heater Control in Thermoforming Preheating Using Approximate Function	576
Z.Z. Li, G.Y. Shen, M.Q. Li, X.Q. Wang and Y.D. Shen	
Experimental Study on Material Removal Rate for Engineering Ceramics Machining with Micro-Detonation of Striking Arc	581
B.G. Zhang, X.L. Tian, K.L. Lin, X.J. Tang and Y.T. Mao	
Effect of Material Parameters Wave on Sheet Metal Springback Using Orthogonal Design Simulation	585
L. Chen	
Influence Regularities of Axial Force of Cross Wedge Rolling Symmetric Shaft-Parts about Technical Parameters	589
X.D. Shu, B.S. Sun and M. Xiao	
Research on the Blank Design Method of Closed Rolling the High-Neck Flange	594
M. Xiao and X.D. Shu	
Design and Application of High-Speed Variable Pitch End Mill Based on Milling Stability	599
Q.H. Song and X. Ai	
Estimation of Friction Coefficient Related to Squeal in Cutting	603
Y.J. Luo and Z.Y. Gao	
Study on Mechanical Mechanism of ARB Process Based on Randomness	609
G.Z. Zhang and J.J. Fu	
Numerical Simulation of Solidification by SPH in Sand Cast Process	614
Y. He, Z.Y. Zhou, W.J. Cao and D.Z. Yang	
DOE-Based Numerical Investigation on Factors Affecting Temperature Field during Line Heating	620
Z.H. Yao, L. Gao, M. Xiao and L. Yang	
Simulation of Temperature Field during the Laser Sintering Process of Nano-Hydroxyapatite Powder	626
C. Shuai, P. Feng, C. Gao, Y. Zhou and S.P. Peng	
An Optimum-Curved Die-Profile for Investment Casting of Turbo Blades	630
Y.W. Dong, D.H. Zhang, K. Bu and Y.Q. Dou	
Numerical Analysis of the Workpiece Velocity in Electromagnetic Forming Process	634
L. Qiu, Y.L. Lv, C.X. Jiang, X.T. Han and L. Li	
The Research of Shock Wave Attenuation Test of UHMWPE-PUF Composite by PVDF Piezoelectric Sensor	639
J.F. Cai, J.Z. Yi and T.P. Li	
Investigation of Die Wear during Fine-Blanking Process of a Kind of Automobile Synchronizer Slipper by FEM and Experiments	643
F. Yin, H.J. Mao, L. Hua and Z.Q. Gu	
Finite Element Analysis of Vehicle Engine Connection Rod under Mechanical Load	653
L.Z. Wen, Z.W. Guan, J.F. Song and Y. Chen	
Optimal Design of Triangle Fastening Screw Thread's Turn Number	657
J.M. Chen, M. Zhang and J. Deng	
Numerical Simulation of Temperature Field and Experimental Verification during Micro-Detonation of Arc Strike Machining	661
X.L. Tian, K.L. Lin, B.G. Zhang and C.F. Xue	
A New Single Step Full Discrete Scheme for a Semilinear Second Order Hyperbolic Equation	667
K. Deng	

Materials Processing Technology

Finite Element Analysis of High - Pressure Grinding Mill	675
Y. Liu and J.S. Li	

Theoretical Analysis of Blood Alcohol Detection Based on Raman Spectroscopy Y. Li, S. Wang, X.L. Wang, W.K. Ma and J. Liu	682
Effect of Condenser Temperature and Speed on one A/C System C.J. Pan and Y.D. Tang	686
Foundry Technology of the Pressure Board Steel Casting Based on Proportional Solidification Theory D.C. Yang	691
Research on the Shrinkage Cavity Defect of the Extruded Boss in Fine Blanking Process J. Lan, Y. Zhang, C.P. Song and L. Hua	695
Indirect Hot Stamping of Boron Steel 22MnB5 for an Upper B-Pillar J.Y. Min, J.P. Lin, L.J. Xin and J.Y. Li	703
Research on the Mechanism of Interface Strengthening for Ti₃Al/TC11 Dual Alloy Y.Y. Liu, Z.K. Yao, H.Z. Guo and F.L. Wu	709
Viscous Behaviours of Feedstocks for Micro MIM Z.Q. Cheng, C. Quinard, X.J. Kong, T. Barriere, B.S. Liu and J.C. Gelin	713
The Innovation and Application of the Piercing Process inside of Parts Y.P. Zhang, G.Z. Wei and L.M. Xu	719
Stainless Steel Lining High Pressure Reactors Were Tested and Manufactured by Hydraulic Pressure Expanding Method H.H. Chen	723
Velocity and Current Density Evaluation of Combined Plasma Arc for High Temperature Materials Processing by Computational Simulation X.J. Dong, J.B. Meng, Z.M. Yin and C.N. Ma	728
Study on the Formability and its Geometric Factors of Seamed Tube Hydroforming X.F. Chen, Z.Q. Yu and S.H. Li	733
Experimental Study on Sintering Parameters in Selective Laser Sintering for ABS Q.G. Chen and J.C. Zhang	738
Physical Properties of Primary Slurry for Titanium Investment Casting E.T. Zhao, F.T. Kong and Y. Chen	742
Research Status of Warm Stamping Forming Technology at Domestic and International M. Deng, Y.Q. Wu and L. Lv	747
Surface Effect Mechanism Analysis for Vibrational Rotary Forging R.H. Zhang, N.Y. Zhu and G.P. Cai	753
The Influence of Process Parameters on the Branch Height for Air Handling Unit H.D. Wen, X.T. Xiao, L.G. Tan, K. Zhang and Y. Chen	759
Preliminary Study on Prediction Model of Forming Tubular Bulge Height for a Thick-Plate D. Liu, X.T. Xiao, Y.J. Liao and Z.R. Zhang	763
FVM Simulation of the Effect of Preventing Ring Structure on Continuous Extrusion Process L. Chen, B.Y. Song and X.D. Luan	767
Comparative Study of Creep and Stress Relaxation Behavior for 7055 Aluminum Alloy L.H. Zhan, Y.G. Li, M.H. Huang and J.G. Lin	772
Effects of Extrusion Process on Microstructure of Aluminum Profiles with Different Wall Thickness Sections J.Z. Ma, D.H. Mao, J.B. Li and H.Z. Wang	778
Study on Spinning of Pentagonal Cross-Section Hollow-Part Based on Orthogonal Experiment Design Q.X. Xia, Y.P. Wang, N. Yuan and X.Q. Cheng	783
Effect of the Process Parameter on as-Cast 30Cr2Ni4MoV Steel Soundness during Cogging H.P. An, J.S. Liu and J.G. Wu	789
Experimental Research on Connection of Pipe and Rod by Electromagnetic Impulse F. Feng, S.Y. Huang, J.H. Hu, F.Y. Gao and C.P. Song	794
Analysis of the Simulation Movement in Cigarette Packaging Machine Pusher Device J.J. Cao, X.H. Tian and L. Li	801
Study on Microstructure Evolution of TA1 during Plane Compression and its Similarity to Power Spinning Y. Chen, W.C. Xu, D. Shan and B. Guo	805

Kinematics Analysis and Numerical Method for Multi-Link Suspension M.W. Lu and W.Q. Zhao	810
Auto-Body Panel Springback Analysis Using Yoshida-Uemori Model K.K. Hu, X.Q. Peng, J. Chen, H.S. Lu and J. Zhang	815
Constitutive Model of Supper-Alloy IN625 Based on Extrusion Test Z.T. Wang, S.H. Zhang, M. Cheng and D.F. Li	819
Extraction of Niobium from the Bayan Obo Tailings by “Flotation—Microwave Magnetic Roasting—Magnetic Separation” L. Wang, J. Li, B.W. Li and J. Wang	823
Mechanism and Experimental Investigation on Silicon Wafer Hybrid Polishing by Ultrasonic-Elliptic-Vibration Chemical-Mechanical W.P. Yang, Y.B. Wu and H.F. Yang	829
Exploration on Shape of Profiles Determined by Chord Angle Control Method L. Ling and Y.S. Zeng	837
Quick Plastic Forming Behavior of AZ91 Magnesium Alloy Sheet G. Wang, Z.P. Zhang, C.B. Liu and X. Sheng	842

Mechanical Behavior & Fracture

The Durability Life Prediction of Recycled Concrete under Chlorate Environment A.J. Chen, J. Wang, Z.F. Ge and M. Wu	849
The Evaluation of Machinability of Inconel-718 and AISI4340 S.H. Chen, S.C. Su, P.C. Chang, S.Y. Chou and K.K. Shieh	853
Hardening Behaviours Prediction of TRIP Steels with Pre-Strain W.J. Dan, W.G. Zhang and S.H. Li	857
Development of a Novel Deployment Hinge Mechanism for a Spacecraft Using Axiomatic Design J.W. Jeong, Y.I. Yoo, J.J. Lee, J.H. Lim, K.W. Kim and D.S. Hwang	863
Dislocation Distribution Function of the Mode III Dynamic Crack Subjected to Moving Unit Step Load from a Point Y.T. Wang, N.C. Lü, J.K. Zheng and J. Cheng	872
Mechanical Properties Analysis of Combined Structure of Suspension Platform of Suspended Access Equipment X.J. Zheng, Z. Lu, M.D. Liu and H. Zhang	877
Simultaneous Application of Coda Waves Interferometry (CWI) and Nonlinear Resonance (NR) to Detect Damage in Polymer Concrete S. Toumi, M. Bentahar, C. Mechri, F. Boubenider and R. El Guerjouma	883
An Orthogonal Experimental Analysis of Electrical Discharge Machining of Particle Reinforced Metal Matrix Composites with Concavo-Convex Electrode J.W. Liu, G.X. Chen, T.M. Yue, Z.N. Guo and Z.Y. Wan	890
Refined Numerical Simulation and Experimental Investigation on Arc Welded Joints of 6061 Aluminum Alloy Q. Liu, J.B. Li and Z.J. Zong	894
Turning Process Modeling and Cutting Force Investigation Based on Finite Element Analysis and Cutting Experiments Y. Cao, H. Chen and H.X. Zhao	900
Study on the Relationships between Edge Distance and the Failure Process of Edge Chipping for Engineering Ceramics X.J. Tang, X.L. Tian, B.G. Zhang and K.L. Lin	904
Study on Cutting Force and Cutting Temperature of Coated Carbide Turning Inserts with 3D Chip-Breaker Y. He, M. Xiao, H. Ni, Y.C. Bian and M. Wang	909
Changes in Elastic and Viscoelastic Properties of Poly(Methyl methacrylate) by Physical Aging W.B. Luo, C.H. Wang, X. Liu and Q. Shen	914
Corrosion Behavior of Twin-Wire Metal Inert Gas Arc Welds in 7A52 Al Alloy Plate X.W. Zhai, F.R. Chen, R.L. Jia and X.D. Wang	918

Mechanism and Experimental Research on Copper and Copper Alloy's Manual SHS Welding Technology	923
L.F. Qu, W.T. Xin, Y.S. Wu and S. Wang	
Study on Microstructure and Properties of 5A06 Aluminum Alloy Welded Joint by Deep Cryogenic Treatment	927
S. Gao, Z.S. Wu, P.F. Jin and J.J. Wang	
Seam Tracking Monitoring Based on Keyhole Features during High-Power Fiber Laser Welding	932
X.D. Gao, L. Mo and S. Katayama	
Spatter Feature Recognition during High-Power Disk Laser Welding	937
D.Y. You, X.D. Gao and S. Katayama	
Elucidation of Welding Stability Based on Keyhole Configuration during High-Power Fiber Laser Welding	941
X.D. Gao, Q. Wen and S. Katayama	
High Cycle Fatigue Behavior of MB8 Magnesium Alloy	945
Y. Yang, H. Wu and X.S. Li	
Analysis of Characteristics of Mg Alloy Welded Joint by Laser Welding	949
H.J. Xiu, J. Liu, J.H. Dong and P. Xu	
Study on Procedure of Bonding-FSSW Hybrid Joints of AZ31 Magnesium Alloy	953
C.G. Ding, Y.Q. Ni, C.J. Guo, G.F. Quan and J.P. Ge	
Diffusion Bonding of 3Y-TZP and SUS440 by Using of Ti-Cu Powder/Sheet	957
D.Y. Ju and M. Zhao	
Progressive Failure Study of Discrete-Source Damage in Stiffened Composite Panels	963
L. Liang, P.R. Jia and G.Q. Jiao	
Interface Structure of Be/HR-1Stainless Steel by Vacuum Diffusion Bonding	968
H. Li, S.Q. Zhou and J.L. Kong	
Experimental and Numerical Studies of the Stress Concentration Factor for Tubular KK-Joints under Axial Loads	972
Y.T. Zhang, S.C. Jin and Y.H. Yang	
Effect of Process Parameters on Welding Variables during Linear Friction Welding of Ti-6Al-4V Alloy	979
T.J. Ma, X. Chen and W.Y. Li	
Analysis of the Swelling Effect in Single-Point Diamond Turning	984
Q.L. Zhao, J.Y. Chen and J. Luo	
The Study of High Strength Bolt Preload with Hydraulic Tensioner Installation	988
T.N. Guo, G. Li, L.G. Cai and Z.L. Wang	
Study on Screw Drill Wear when Drilling a New Stainless Steel X02Cr18Ni10MoTiN and Accompanying Phenomena in the Cutting Zone	995
J. Jurko and A. Panda	
Sheet Metal Forming Limit Prediction with Maximum Thickness Reduction Ratio	999
J.S. Chen and J. Chen	
Kalman Filtering for Seam Tracking in Master-Slave Robot Remote Welding System	1005
H.T. Chen, H.C. Li, H.M. Gao and L. Wu	
Experimental Study of Plastic Flow during Linear Friction Welding by Physical Simulation Method	1009
Y.J. Wang, Y. Zhang, X.C. Yuan, G.D. Wen, T.J. Ma and D.L. Gao	
Research of High Efficiency Combined Wire Electrochemical Machining Technology and its Application	1015
H. Wu, S.H. Xiao, Q.G. Li and Y.J. Zhang	
Technics Experiment Study on PcBN Cutting Tool Dry Turning Austenitic Stainless Steel AISI 301	1020
Y.H. Jia	
Experimental Study on GMAW with Strip Electrode	1025
S.M. Zheng and H.M. Gao	
An Adaptive Memetic Algorithm for Packing Problems of Irregular Shapes	1029
Y.Y. Zhou, Y.Q. Rao, G.J. Zhang and C.Y. Zhang	
Numerical Simulation of Residual Stresses in Single Pass Butt-Weld of Dissimilar Pipe Joint during the Fusion Welding Process	1034
M.K. Sun, D.S. Zhao and Y.J. Liu	

Effects of Different Solder Alloys on Reliability of 3D PLUS Solder Joint N. Bao, C.J. Wang, L. Zhu and S.G. Song	1038
Virtual Prototype Modeling and Dynamics Analysis of a Large-Scale Wind Turbine's Gearbox G.Y. Hu and W.L. Sun	1043
High Speed CO₂ Arc Welding Based on Constant Power Control H.M. Chen	1048
Analysis of Stress Concentration for Curvilinear Holes by Complex Variable Function Method H. Li, G.L. Li and D.L. Qiu	1052
Investigation of Machining OCr18Ni9 Stainless Steel under Spraying Liquid Nitrogen Q.C. Wang and W.H. Ba	1056
Calculation Method of the Cracking Resistance of Simply Supported Reactive Powder Concrete Plate L. Zhang and R. Gao	1060
The Simulation Analysis of Friction Effect on Cutting Process S.J. Li, X.H. Wan, Z.W. Dong and Y. Yuan	1065
Numerical Simulation of Dispersed Phase Flow in a Tube Considering Bubbles Erosion and Cl⁻ Ions Concentration Effects S.Y. Chen, J.J. Mao and W.Q. Wang	1069
Characteristics of Thermo-Electromotive Force, Electric Current and Electric Resistance in Intermittent Cutting Process by Face Milling M. Murata, S. Kurokawa, O. Ohnishi, T. Doi and M. Uneda	1075
Study on Tensile Magnetic Memory Characteristics of Demagnetization 16Mn and Q235 Steel F.Y. Yu	1079
Friction and Wear Behavior of SiC_p/Cu Composite Prepared by Powder Injection Molding J.M. Yang, Y.Q. He, H.Q. Li, B. Qiao and J.S. Chen	1083
Stress Corrosion Cracking of SPV50Q Steel in H₂S-Containing Sour Environment F.Y. Kong, G.J. Hu and X. Li	1087
Three-Dimensional Pattern Design of Processing Draft J.Q. Lv, K.L. Tian, Y.J. Hu and H. Gao	1092
Research on the Failure Mechanism of Flash Welded Rail Y.H. Zhu, H. Chen, Z.Y. Zhu, C.P. Ma, L.J. Wang, G.G. Wang and J.P. Yu	1100
Experimental Research on Ultrasonic Vibration Deep Hole Honing of Titanium Alloy H.B. Zhao and Y.F. Nan	1107
Preparation of Water-Based No-Clean Flux for High Temperature Lead-Free Solder Z.F. Hao, Q.Q. Wu, M. Sun, J. Yu, Y.P. Guo and Y. Rao	1112
Design and Research on the Refitment of Deep-Hole Machine Tool H.B. Zhao and X. Chen	1117
Anisotropy of Deformation Behavior of AZ31 Magnesium Alloy Sheets Y.Q. Cheng and Z.H. Chen	1121
Fault Feature Extraction Based on Improved EEMD and Hilbert Transform P.G. Hou, Q. Zhou and Z.D. Wang	1126
Study on Material Removal in Electrorheological Fluid-Assisted Polishing L. Zhang, Y.W. Zhao and Z. Yang	1131
Analysis of Forming Mechanism of Thermal Damages on Friction Surfaces of Brake Disc Z.Y. Yang, Z.Q. Li, Y. Chen and J.M. Han	1135
Study on Wear Properties and Mechanisms of Coated Carbide Tools in Dry Turning of 300M Steel Z.Y. Zhang, X. Ai, Z.Q. Liu and M. Wang	1142
Numerical Analysis of Stress Field for Simulating Pressure Vessel Nozzles J.H. Cui	1146
Experimental Research on Compound and Efficient Powerful Milling Process of Blisk P.B. Zhao and Y.Y. Shi	1150
Constitutive Equation for V-5Cr-5Ti at High Temperatures Measured Using the SHPB Technique W.J. Hu, R.Z. Xie, X.C. Huang and Y.X. Yan	1154

Influence of δ Phase Content on Hot Deformation Behavior of Ni-Based Superalloy IN718 H.Y. Zhang, S.H. Zhang and M. Cheng	1159
Effect of Welding Thermal Cycle on the Microstructure and Mechanical Properties in Multi-Pass Submerged-Arc Welding Z.Y. Chen, Y.L. Ma and S.Q. Xing	1163
Experimental Study on Ball End Mill in Glass Machining at High Speed Z. Wei, J.H. Jia, M.L. Gu, C. Zuo and X.Z. Jin	1167
Simulation of the High-Speed Milling Temperature of Titanium Alloy Ti - 6Al - 4V X.C. Huang, C.F. Yao, D.H. Zhang and J.X. Ren	1171
Analysis and Experimental Research on Chemical Mechanical Polishing Flow Field H. Zhou and Z.G. Zuo	1176
Microstructure and Mechanical Property of GH4169 Joints by Vacuum Diffusion Bonding Z.R. Li, B. Liu, X.L. Zhang and J.C. Feng	1180
Microstructure and Mechanical Property of the ZrB₂-Based Ultra-High-Temperature Ceramic Composites Brazed Joint Z.R. Li, G.D. Wu, Z.Z. Wang and J.C. Feng	1184
New Chip Flow Angle Prediction to Investigate the Effects of Ratio of the Cutting Edge Lengths on Chip Flow Using Sharp Corner Tools Q.M. Wang and H.L. Lin	1189
Study on Three-Point Bending Mechanical Performance of Thin-Walled Super Alloy Honeycomb Sandwich with Penetrable Defects K. Yang, L.W. Liu, K.P. Yu and X.H. Kong	1203
Piecing Failure Analysis of Drill Pipe Upset F.P. Li, Y.G. Liu and W. Yong	1210
Influence of Slagging Elements on Manual SHS Welding of Low-Carbon Steel Z.Z. Li, W.T. Xin, F.Q. Han and L.F. Qu	1214
Based on ANSYS Planetary Gear Ransmission Design Analysis H.M. Huang	1218
A New Research of Laser Welding Coaxial Protection Nozzle Z.G. Xu, R.H. Zhou and H.Y. Gan	1222

Material Design of Computer Aided

Approximation of Coupling Mode and Fitting Alignment in Planar Light Waveguide Packaging B. Yang and J.A. Duan	1229
Application of Genetic Algorithm on the Layout of Rectangular H.M. Cai, H.B. Liu and T.T. Xing	1234
Temperature Numerical Simulation of Laser Penetration Welding Based on Calculated Keyhole Profile Y.J. Yin, J.X. Zhou and T. Chen	1238
Vector Calculation for Tool Envelope Surface in Five-Axis NC Machining Y.S. Zhou, X.J. Yang and Z.Z.C. Chen	1242
The Improvement of the Interlock Arm on Ejection Seat Based on the ANSYS J.H. Yang, Y. Xu, J.J. Luo and B.D. Hou	1246
The Finite Element Simulation and Analysis of Polymer Tube Coextrusion Process M. Zhang, G.Q. Yuan, S. Sun and Y.X. Jia	1250
Synthesis Error Analysis of NC Manufacturing and Error Prediction Modelling Based on BP Neural Network Technology H. Fan, H. Li, D.H. Si, Y.J. Xue, G.F. Wang and J.S. Li	1254
The Application of FEA in High-Speed Cutting Tool L.Q. Ji and K. Liu	1258
Thermodynamic Modeling of the Mg-Ni-La-Cu System X.H. An, Q. Li and J.Y. Zhang	1262
Constitutive Equations for Graphene Based on Anisotropic Theory S.H. Ban, A.P. Hu, X.D. Jiang and X.Y. Li	1268

Observation of Polypropylene (PP) Melt Flow on Macro and Micro Cavities during Filling Phase of Injection Molding M. Azuddin, Z. Taha and I.A. Choudhury	1273
Ant Colony Algorithm: an Application of Design Self-Balancing Torsion Bar Z.Q. Huang	1278
Warpage and Structural Analysis of Automotive Trim Based on FFD and CAE in Plastic Injection Molding W. Guo, H.J. Mao and Q. Xu	1282
The Design and Implementation of a CAD/CAE Integrated System for Plastic Injection Molding Q. Li, L. Dai, Z.G. Huang and H.M. Zhou	1287
Theoretical Research of Aspheric Testing by Using the Digital Moiré Patterns Base on the Sub-Region Splicing Method Y.C. Man and X.J. Zhang	1295
The Parameters Optimization of Rheology Stress Model for Aluminum Based on GA X.B. Liu and W.K. Yan	1300
Multi-Parameter Design and Simulation of Composite Microstructure J.C. Li, X.D. Li and J. Sheng	1306

Tooling/Testing and Evaluation of Materials

Solving the Two-Objective Shop Scheduling Problem in MTO Manufacturing Systems by a Novel Genetic Algorithm L.L. Yao, H.B. Shi, C. Liu and Z.H. Han	1315
A Performance Evaluation of Printing RFID Tags L. Xu and H.M. Huang	1321
An Estimation of Resonant Frequency of a Curving RFID Tag L. Xu and H.M. Huang	1325
Micro-Scale Abrasive Wear of Soft Materials P. Chen, J. Wan and H. Chen	1330
Study on the Corrosion Behavior of Two Kinds of Tubing at Different Temperatures X.H. Zhao, Y. Han, F.G. Li, Z.Q. Bai and B. Wei	1335
Study on the Relationship between Plastic Viscosity and Tack Value of Picking Liquid Y.G. Yang and F.P. Liu	1342
Experimental Research on the Viscosity of Polymer Melts Filling through Micro Channels B. Xu, Y.B. Lu, G.M. Li and S. Xue	1346
Study on the Relation between Ink Tack Value and Wavers Velocity Y.G. Yang	1350
Modeling for Ink Permeability and Calculating the Penetration Depth inside Paper Y.G. Yang	1354
The Effects of Ink Viscosity on the Ink Permeability inside Newsprint and Offset Paper Y.G. Yang and F.P. Liu	1359
The Influences of Printing Conditions and Paper Properties on Wet Picking/Repellence of Offset Paper Y.G. Yang	1363
Study on Residual Strength of Pipe with Single Hemisphere Bottom Defect Using FEM Analysis Z.Z. Yang, D.X. Liu and X.H. Zhang	1367
Study on Full-Field Stress Analysis for Composite Material Structure Using Lock-in Thermography J.Y. Liu, X. Liu and Y. Wang	1372
Comparative Experimental Analysis of Different Bending Methods for the Mechanical Characterization of Materials with Previous Loading History (<i>Stress-Strain Curves</i>) D. Torres Franco, G. Urriolagoitia-Sosa, G. Urriolagoitia-Calderón, L.H. Hernandez Gomez, B. Romero Angeles and V.F. Cedeño Verduzco	1377
Anti-Friction Mechanism of FeS Layer as Solid Lubrication Composite Coating Produced by Low-Temperature Ion Sulfurization Y. Zang, C.H. Hu and Y.L. Qiao	1383

Effect of Modulation Frequency on Detecting Metal Materials with Microcracks Based on Ultrasound Infrared Lock-in Thermography Q.J. Tang, J.Y. Liu and Y. Wang	1387
Research on Oil Monitoring of Heavy Vehicles Based on Information Entropy Theory X.G. Liu, Z.G. Li and Z.L. Wang	1391
Design and Lubricating Property Research on Radial Supporting Bearing of Marine Main Thrust Bearing J.H. Zhou, R.G. Chen and D.Z. Li	1396
Research on the Tack Value of Offset Printing Ink Y.G. Yang	1401
The Influence of Humid Environment on Fatigue Property of Pre-Corroded 7XXX Aluminum Alloy L. Hui, S. Zhou, L. Xu, S.H. Ma, Y. Wang and Y.Y. Zhang	1406
Influence of Milling Process on Internal Stress Measurement in Thick Plate S.M. Li, K. Liao and P.Y. Luo	1411
Abrasive Wear Property of Stellite190 Welding Coatings for Drill Tools Y.F. Tan, X.L. Wang, Y.Q. Tu, H. Tan, C.H. Zhou and L. He	1415
Research on Cutting-Tooth Outline Distortion of Internal Helical Gearing Machine Tool Y.X. Liu and S.Z. Wu	1420
Evaluation of Rheological Measurement of Polymer Blends Melts in Torque Rheometer G. Jin, X.L. Zhao and M.M. Wang	1424
Creep Testing and Visco-Elastic Behaviour Reseach on Carbon Cathodes during Aluminum Electrolysis Q.S. Liu, H.F. Tang and H. Fang	1430
Establish Sorptive Test System and Validation of the Reduction Indoor HCHO Concentrations by Building Material in Taiwan C.M. Chiang, K.C. Huang, C.C. Lee and C.C. Chen	1435
Imaging Analysis of Image Plane Digital Holography Y.Z. Zhang, D.Y. Wang, Z.W. Zhou and S.Q. Tao	1439
Kinematics Analysis and Numerical Method of Mcpherson Suspension M.W. Lu and W.Q. Zhao	1444
Study of Effect of Ce-Rich Mixed Rare Earth on Corrosivity of New 5XXX Series Aluminium Alloys H. Shen, H. Liang, W.D. Yang, B.X. Liu, T.S. Li and G.C. Yao	1449

Thermal Engineering Theory and Applications

Preparation of Biodiesel from Tung Oil Catalyzed by Sulfonic-Functional Brønsted Acidic Ionic Liquids J.H. Zhou, Y.J. Lu, B.H. Huang, Y.P. Huo and K. Zhang	1459
Analysis of Used Lubricant Engine Oil: SAE20W50 M. Amoura and F. Haddad	1463
Experimental Application of Salt Slurry in Talimu Unsaturated Brine-Based Drilling Fluid of Carboniferous System L.J. Zhou, J.M. Feng, J.J. Lei and J.W. Yuan	1467
The Numerical Simulation of Air-Cooled Plate-Fin Heat Exchanger X. Jiang, J.H. Bao, Y. Yu and M.X. Gu	1472
Research on the Physical Characteristics in Maize Deep-Bed Drying Process Y. Zhang, C.Y. Li, Z.W. Mai, F.Y. Xu and L. Xu	1478
Theoretical and Experimental Study on Nondestructive Pulse Phase Infrared Thermography Testing Technology Q.J. Tang, J.Y. Liu and Y. Wang	1483
Investigation in the Effect of Gravity on the Droplet Removal in the Flow Channel of PEMFC Z.M. Wan, J.H. Wan, J. Liu, X. Chen and K.L. Su	1487
Power Consumption Saving of Chiller Water System for Semiconductor Factory in Taiwan C.L. Chen and Y.C. Chang	1492

Research on Corn Drying Process under Temperature Gradient Z.W. Mai, C.Y. Li, Y. Zhang, F.Y. Xu and Y.L. Lu	1502
Research on Algorithm of Geometric Constraint Solving in Declaring Family of Object Modeling X.G. Liu and L.J. Sun	1507

CAM/CAE

Study on Methods for Calculating Tool Position Error Distribution during 5-Axis Machining of Sculptured Surfaces R.F. Xu and Z.T. Chen	1517
Five-Axis Flank Milling Method of Plane Double Enveloping Hourglass Worm L. Zhong, Q.Z. Bi, Y.H. Wang and H. Ding	1523
Free Modal Analysis and Experimental Verification of a Diesel Engine's Connecting Rod S.Z. Jiang and W.B. Yan	1533
The Effect of Fabric Weave Structure and Component Ratio on Pore Size Distribution J.F. Di, X.X. He, H.J. Qi and W.Q. Du	1537
Research and Development of Woodworking Curved Jaw CAM L.J. Chen, X.J. Zou, B.B. Chen and J. Li	1542
6-Axis Hybrid NC Belt-Grinding Machine for Heavy Blade Z.H. Liu, X.K. Yuan and D.L. Song	1546
Effects of Tube Stiffness and Tubesheet Thickness on the Thermal Stress of the Tubes and Tubesheet H.F. Li, C.F. Qian and X.D. Yu	1552
Geometric Modeling and Five-Axis NC Machining for Centrifugal Impeller J.N. Lee, H.S. Chen and H.K. Kung	1556
Wavelet-Based Multiresolution NURBS Curve Fairing A.M. Li, W. Guo, H.B. Tian and F.R. Kou	1562
The Geometry and Topology Information Extraction of Workpiece and Manufacturing Feature Recognition Based on VC++ J. Li and X.J. Zou	1566
Research on Automatic Segmentation Methods of Multi-Beam Waterjet Cutting Process Drawings H.K. Yang, D. Zhao, J.L. Guo, J. Zhang and B. Chen	1571
Research on Parametric Modeling Technology of Marine Propeller S.W. Zhang, L. Xu, X.F. Fang and C.L. Liu	1576
Thermal Stress Analysis of Water-Cooling Brake Disc Based on 3D Thermo-Mechanical Coupling Model W.X. Tang, Y.D. Cai, C. Cheng and Q.Y. Huang	1581
Development of Five-Axis Machine Tool Cutting Simulation System with Nonorthogonal Linear Axis C.H. She, K.S. Li and Y.H. Tsai	1587
Buffer-Induced Design and Dynamic Response of Wheel Loader ROPS X.J. Yu and M.Y. Yao	1591
Research about Numerical Control Machining of STL Files Based on Fagor CNC System C. Wang, Y. Yao, Q.S. Zhao and Q.X. Hu	1597
Dynamic Simulation of 2K-H Differential Gear Train with Time-Varying Meshing Stiffness Y.C. Ma, Y. Wang, J.S. Ma and H.P. Liu	1603
Analysis of Engineering Change Based on Product Development Network Z.W. Gong, H.C. Yang, R. Mo and T. Chen	1607
The Automatic Process Design of Cutting Dosages of Mastercam J.F. Gou and Y. Jiang	1612
Resource Selection and Optimization in Manufacturing Grid Based on Genetic Algorithm J.Z. Fu, P. Mei and X.N. Shen	1616
The Development and Research of Special Postprocessor for DMU125FD Machining Center L. Zhang and Y. Zhang	1620
Development for Post-Processing System of 5-Axis CNC Machines L.L. Lv and J.F. Ni	1624

Analysis of Leaf Spring's Damping Characteristic Based on Nonlinear Finite Element C.L. Fan and S.M. Li	1628
Key Technology of 5-Axis NC Programming and High-Speed Milling for Integral Impellers Based on the General Software UG J.M. Xiao and C.M. Zhao	1633
Contour Offset Approach to Generate Tool Path for Polyhedral Surfaces Machining J.T. Xu, X.K. Zhang and S.K. Wang	1638
The System Design of Graphics Library of Fixture Element Based on .NET G.Q. Zhu	1642
Research on the Data Modeling of PDM Based on SmarTeam Z.H. Yuan, Z.J. Wang and H.W. Li	1647
Study on NC Machine Tool Select Incremental Value Programming and Select Absolute Value Programming of Machining Accuracy T.B. Huang	1652
Development of Direct Slicing Software of Three-Dimensional Model Based on Pro/E G.M. Fu, C.J. Chen and S. Gao	1661
Computer Methods in Design and Identification of Powder Metallurgy Materials I. Pokorska	1666
Superconvergence of the Space-Time Continuous Finite Elements with Interpolated Coefficients for Semilinear Parabolic Problems Z.G. Xiong, G.R. Chen and X.L. Wang	1670
Modeling and Simulation on Fluid Dynamic Depth-Setting TUV Based on FLUENT G.H. Xu, X. Shen and K. Yu	1676
Quality Control Mode of Injection Parts Molding Based on CAE Technology J.H. Dong	1682

High-Speed/Precision Machining and Inspection Technology

A Novel Measurement System to Evaluate the Six Geometric Errors of Rotary Table K.I. Lee, A.G. Nanda Kumar and S.H. Yang	1691
Application of MECHATROLINK-II Fieldbus in Multi-Axis Embedded CNC System W.Q. Gao, C.T. Qing, Z.H. Hu and Z.Y. Huang	1695
Study on the Spindle Error Test and Analysis System of Numerical Control Machine Tools Y.M. Zhang, Q.W. Liu, S. Zhong and J.L. Han	1702
Parameter Determination of Multiple Probes Scanning Method for Profile Measurement X. Chen, G.Q. Ding, L.H. Lei and Y. Li	1707
Strength and Fatigue Analyses on Rotor in High Speed MU Traction Motor under Different Operating States Y.M. Jiang, Y.H. Zhang, Y.F. He, H.Y. Xiang and J.C. Cao	1713
Study on Dynamic Accuracy of CNC in Aviation Part L. Du, W. Wang, Z.Y. Song and J.X. Ding	1717
The Effects of Curvature Radius on Cutting Force and Stability during End Milling W.Z. Liu, Q. Liu, G. Gao and X. Yan	1721
Wire Electrical Discharge Machining (<i>Wire EDM</i>) Cutting of Flexures for a Rotary Flexural Bearing Fabrication H.P. Luo, Z.X. Zhou, Y.J. Zhang and Z.N. Guo	1727
Tool Path Optimization Based on the Constrains of Radial Cutting Depth in High Speed Milling K.Z. Li and S.X. Wu	1734
Study on Material Removal Mechanism of Silicon Nitride during ELID Ultraprecision Grinding W.D. Jin	1740
The Optimized Design of Strains Transducer Elastic Component with Double Cantilever Beam Y.F. Yan	1746
Study on High-Precision Computer-Controlled Aspheric Surface Processing Techniques C. Zhang, P. Wang and Y.L. Chen	1750

Monitoring of Tool Wear in Rotary Ultrasonic Machining of Advanced Ceramics L.P. Liu, B. Lin and F.Z. Fang	1754
Thermal Analysis and Optimization Design on Spindle Bearing of GSCK200A CNC Lathe L.P. Liu and G.H. Deng	1760
Mechanical Design of New Type Ceramic Polishing Machine W. Liu, C. Yan, S.W. Zheng and H.F. Tong	1764
New Digital Differential Analyzer Linear Interpolation Program and Error Analysis X.Y. Fan, Y.H. Guo, S.C. Li and X.P. Su	1769
Study on Machining Deformation Errors in Spiral Finish Milling of Thin-Walled Blades W.W. Liu, P. Chen, X.J. Gao, C.W. Shan and M. Wan	1773
Study on Precision Machining Titanium Alloy Thin-Walled Parts M.H. Wang, Z.H. Liu and W. Wang	1778
The Analysis of Effects of Curvature Attribute on Interference in Freeform Surface Blade NC Machining M.H. Wang, X.P. Li and Y. Sun	1783
Experimental Study on High-Speed Milling of Aluminum Alloy 2A70 F.Y. Yu, M.J. Feng, M.J. Dai and H.J. Sun	1788
Design and Analysis of a Miniaturization Nanoindentation and Scratch Device H. Huang, H.W. Zhao, J. Yang, S.G. Wan, J. Mi, C.L. Shi, Y.K. Yuan, Z.C. Ma and Z.J. Yang	1792

Micro-Machining Technology

Using Micro-Pressing Method to Fabricate Bragg Grating on D-Shaped Optical Fiber C.W. Hsu, F.T. Weng and C.T. Ho	1799
Study of Micro-Tool Wear Based on Finite Element Method J.F. Zhang, Y.D. Gong, Y.M. Liu, J. Cheng and X.L. Wen	1806
Development of Micro EDM with Directly Mounted APA 400MML Actuator as Tool Feed Mechanism S. Mahendran, I. Fazli and S. Thinesh Chander	1811
Research on the Forming Mechanism of Micro-Moulds Based on Laminated Slip-Welding of Ultrathin Stainless Steel Foils B. Xu, X.Y. Wu, F. Luo, C.L. Du and X.Q. Sun	1818
Research of the Detection of Apple Sugar Conten Based on Machine Vision and near Infrared Spectroscopy N.T. Fu, K. Zhao, M. Zhao and Y. Xiong	1823
Force-Pose Nonlinear Mapping Algorithm for Assembling Micro-Mechanical System X. Ye, Z.J. Zhang and X.F. Zhang	1829
Microfabrication of Sandwich Micro-Transformers J. Yunas and Y.M. Burhanuddin	1836
Development and Experimental Study of MWEDM Prototype R.N. Huang, Y.J. Lou and Z.X. Li	1841
Experimental Research of Electrochemical Mechanical Polishing (ECMP) for Micro Tool Electrode S. Guo, Z.N. Guo, H.P. Luo and W.C. Gu	1846
A Study on Surface Generation along Nominal Cutting Direction in Elliptical Vibration Cutting X.Q. Zhang, A.S. Kumar and M. Rahman	1851
Dimensionning and Simulation of a Pilot Plant for Solar Hydrogen Production Y. Kerboua Ziari, L. Ziani and A. Benzaoui	1857

Laser Processing Technology

Study on Assembly Cost Based on Product Concurrent Design Q.L. Zeng, L.M. Cao and X.W. Wang	1863
Effect of Y₂O₃ Addition on the Microstructure and Corrosion Behaviour of Laser Cladding of Al Powder on ZM5 Magnesium Alloys C.J. Chen, Q. Cao, X. Xu and M. Zhang	1867

Microstructure and Fatigue Properties of Aero Aluminum Alloy Repaired by Laser Melt Casting	
C.L. Lu, F.Y. Hu, X.R. Huang, D.X. Yi, A.Y. Cui, B. Hu and P.F. Fu	1871
Analysis the Dynamic Strain of AM60 Magnesium Alloy by Means of a Single Laser Shock Processing	
A.X. Feng, G.F. Nie, F. Shi, C.C. Xu, H.Y. Sun, P.C. Zhou and J.W. Wang	1876
Surface Channel Hot-Carrier Effect on CLC n-TFTs	
M.C. Wang and H.C. Yang	1881
Single Femtosecond Laser Pulse Irradiation of Silicon on Different Crystallographic Facet Planes	
L.T. Qi	1885
Study of Effect on Tensile Stress Test from Distortion of Fibre Laser Welded Ti6Al4V Using FEA	
Y. Fan, P.H. Shipway, G. Tansley and Z. Chen	1889
Influence of Light Leakage from Q-Switched Laser on Laser-Induced Shock Wave	
Y.X. Ye, Z. Wu and H.B. Guan	1895
Effect of Laser Surface Modification and Tempering Process on Microstructure and Hardness Profiles of Roll Materials	
G.Z. Huang, Z.H. Li and J.Y. Tang	1900
Impact of Ni-2 Laser Cladding Coating on the Repeated Impact of the Dynamic Response	
L.L. Shen, S.H. Shi, G.Y. Fu and L. Liu	1906
High Resolution ITO Lithography Using Excimer Laser for Flat-Panel Display Fabrication	
X.X. Wang, J.Y. Zhou, L. Lei, Q.H. Lin, Y. Shi and L.H. Mei	1910
Study on a New Way of Aligning the Focal Plane for the Laser projection Image System	
Y. Shi, J.Y. Zhou, L. Lei, Q.H. Lin, X.X. Wang and L.H. Mei	1914
Instability Effect on CLC nTFTs with Positive-Bias Temperature Stress	
M.C. Wang and H.C. Yang	1918
Probing Drain Current with Vertical and Horizontal Electrical Fields under Temperature Stress on CLC TFTs	
M.C. Wang and H.C. Yang	1922
Surface-Channel Drain-Avalanche Hot-Carrier Effect under Temperature Variation on CLC TFTs	
M.C. Wang and H.C. Yang	1926
Ablation Threshold of Sapphire by Pulsed Green Laser in Nanosecond Regime	
X.Z. Xie, F.M. Huang, X. Wei, W. Hu, Q.L. Ren and X.R. Yuan	1930
Effect of Coaxial Powder Nozzle Design Parameters and the Gas Flow on the Powder Gathering Characteristics	
A.F. Zhang, W. Fu, D.C. Li, Z.L. Lu, G.X. Zhu and Q.P. Lu	1935
Experimental Assessment of Roughness Changes in the Cutting Surface and Microhardness Changes of the Material S 355 J2 G3 after Being Cut by Non-Conventional Technologies	
J. Maščenik and S. Gaspar	1944
Mechanical Seal Face Texturing by the Acousto-Optic Q-Switched Pulsed Nd:YAG Laser	
Y. Xie, S.F. Suo, Y.J. Li, F.J. Ge and Y.M. Wang	1948
Research on Fatigue Fracture Defect of 23CrNi3Mo Drill Steel	
B. Huang, Y.Z. Liu, L.Y. Zhou, G.W. Li and D. Zhang	1955
Thermal Analysis of Laser Irradiation of Fused Silica	
P. Yao, Y.D. Gong, S.X. Yuan, T.F. Zhou, J.W. Yan and T. Kuriyagawa	1960
Numerical Simulation on Similarity of Thermal-Mechanical Effects of Thin-Walled Pressure Vessel Irradiated by Laser	
Y.H. Wang, F. Liu, X.H. Zhang and S. Ding	1965

Bionic Mechanisms and Bio-Manufacturing

Construction of a New Genetic Engineering Bacterium for Preparation of Superoxide Dismutase with High Productivity	
Y. Zhao, Y. Li and R.Q. Li	1973
Study on Method of Determination Plastic Work Conversion into Thermal Coefficient	
H.B. Li and S.C. Xu	1977

Modal Analysis of Ball Screw Based on ANSYS Software Q.K. Yuan, Y.N. Du, Y. Ding and T.L. Wang	1981
Algorithm Research of Pattern Recognition for Process Control of Electrospinning D.L. Liu, C.J. Jing, Y.Y. Liu and Q.X. Hu	1987
Architectural Design of Bionic Structure and Biomimetic Materials H.J. Huang, Z. Wu and L.H.Z. Zhi	1991
Study on Feature Extraction Method for Tooth Surface Based on Snake Model S.X. Zheng, J. Li and Q.F. Sun	1995

Digital Manufacture and Management

Dynamical Adjustment of Cash Holdings in Operations Management	2003
Quantitative Modeling of the Capacitated Multi-Level Production-Inventory Problem in Petroleum Industry G.L. Liu, J. Zhao and W. Wang	2008
A Framework of Conflict Management System for the Virtual Manufacturing Environment S. Liu	2012
Optimal Policies for Crude Oil Purchasing G.L. Liu, J. Zhao and W. Wang	2019
Study on the Balancing and Improving of Assembling Line for a Type of Scanner Shell W.X. Yao	2023
Knowledge-Integration Model for Networked Manufacturing J.J. Liu, W.H. Liao, Y. Guo and W.B. Wang	2027
Community Structure in Service-Oriented Enterprises Collaboration Network F.Q. Zhang and P.Y. Jiang	2033
How to Realize the Heterogeneous Data Sharing through Grid Technology H.B. Wang and Z.W. Wang	2037
Research on SOA-Based Decision-Making Support of VE Establishing T.R. Zhang, Y.Y. Chen, T.B. Yu, J.J. Li and W.S. Wang	2042
Research on the ITOC Based Solutions for Ship-Piping Jobshop Scheduling R. Li, Y.J. Liu and K. Hamada	2046
Service Rate Optimization of Manufacturing Cell Based on Cost Models Y.Y. Zhang, C. Su, Y. Shang and Z.X. Li	2055
Constructing a Transportation Service Platform through Integrating GPS and Optimized Dispatching Mechanism H.E. Chueh, C.Y. Kao and C.S. Fahn	2060
Three Dimensional Point Clouds Watermarking Algorithm Based on Sphere Degenerated Octree J.X. Liu, H.G. Cui and X. Dai	2064
Research on Jobshop Scheduling Problem with Energy Consumption J.H. Wang and W.T. Gong	2071
An Improved Palmer-Based Heuristic for Two-Stage Flexible Flow Shop with Group Constraint Z.T. Li, Q.X. Chen and N. Mao	2076
Reconstructing NC Program-Based Geometrical Error Compensation for Heavy-Duty NC Machine Tool Y. Lu, J.G. Li, D. Gao and F. Zhou	2082
Nondestructive Testing of Wood-Plastics Structural Plates with Stiffener G.W. Yu	2087
Kinematic Analysis and Optimum Design of Double Wishbone Independent Suspension Based on Adams\View Y. Wang, J.Q. Gao and E. Chen	2091
Study on Technology of Suffocated Polystyrene Spheres with Bigger Particle Size X.X. Xu, Z. Hong, Y.P. Yu and Y.W. Zhang	2096
Design and Analysis on Greedy Algorithm Based on Distribution Center Location C. Liu	2100

Managing Change in Lean Manufacturing Implementation N. Norani, B. Md Deros, D. Abd Wahab and M.N. Ab Rahman	2105
An AHP Application for Solar Power Systems Selection C.W. Chang, H.E. Chueh and H. Lin	2112
Modeling Analysis and Simulation Control Mechanism of Resource Ability Occupation C.X. Shao, A.M. Wang, H.W. Chen and H.L. Yuan	2116
Optimal Co-Design of Control Algorithm and Bandwidth Scheduling for Networked Control Systems R. Chen	2124
A Rough Set Based Knowledge Discovery Model and its Application in Virtual Assembly C.L. Li and R.Y. Zhao	2132
Research on the Weight Control Technique in the Manufacturing of Offshore Engineering Structure J. Wang, Y.J. Liu, Y.J. Li, R. Li and Y.P. Deng	2140
Research and Development for Makeup Object Model Agent Layer about XML Standard of Profession Field H. Gu	2152
Research on Preventative Maintenance of Key Equipment in Discrete Manufacturing Enterprise MES H.Q. Li	2158
A Research on Remanufacturing Products Quality Control Y. Liu, B.S. Xu, P.J. Shi and B.H. Liu	2162
Developing a Selection Model for the Solar Power System C.W. Chang, C.S. Liu and C.Y. Huang	2168
Reinforcement Learning Based Job Shop Scheduling with Machine Choice C. Wang, H.B. Zhang, J. Guo and L. Chen	2172
Research on Technology of Process-Oriented Virtual Assembly Modeling for Product Information Z.J. Liu, J.J. Wan and P. Wang	2177
Optimal Transportation Solution to International Project Logistics Based on Decision Network Planning H.L. Yang, Y.F. Ji, H. Cao and L.L. Wang	2185
Artificial Bee Colony Algorithm for Traveling Salesman Problem W.H. Li, W.J. Li, Y. Yang, H.Q. Liao, J.L. Li and X.P. Zheng	2191
Architecture of Remanufacturing Systematic Engineering X.D. Jing, B.S. Xu and G.Q. Zhang	2197
Power Line Carrier Detection System Based on Virtual Instrument M. Yu, X.Y. Jin, C.G. Xu and Y. Zhang	2205
A New Optimized Cutting Method Based on Group Technology in the Structural Member Manufacturing D.Z. Qi, Y.Q. Rao, N.Y. Sun and Q. Chen	2210
Conceptual Queries Based on Knowledge for E-Commerce J.K. Xu, H.L. Sun, X.Y. Song and Y.H. Wang	2215
Research on Power Line Carrier Communication Quality Evaluation M. Yu, C.G. Xu, X.Y. Jin and Y. Zhang	2221
Synthesis and Luminescent Properties of New Oligofluorene Derivatives Containing Various Comonomers X.D. Hu, S.H. Wang and Z.X. Hou	2227
A Gravity-Like Mechanism for Car Sequencing Problem with Multistage Sequencing Buffer D.Y. Yu, S.Q. Zhang, X.Y. Shao, S.Q. Liu and Y.H. Tian	2232
Study on the Screening Efficiency for the Probability Screen Q. Tang and Y.J. Huang	2238
Progressive Damage and Failure Analysis of Fiber-Reinforced Laminated Composites Containing a Hole B.M. Zhang and L. Zhao	2243
Research on CAD Model Data Conversion for RP Technology D.G. Cai and T.R. Zhou	2253

A Framework for Correlation Relationship Mining of Cloud Service in Cloud Manufacturing System	2259
H. Guo, L. Zhang and F. Tao	
Research of Coal Mine Gas Monitoring System Based on Technology Fusion of Wireless Sensor Network and 3DGIS	2263
X.Y. Wan, H. Yang, L.H. Sun, H.M. Tian and Z.F. Huang	
Research on the Variable Leads Transmission Mechanism Meshing Surfaces	2268
W. Zhang, X. Shi and D.B. Li	
Study on Balance Points of Bucket Brigade Lines with Return Velocities	2273
J. Song, B.X. Zhang and Y.Y. Guan	
Workgroup-Based Manpower Planning for Multi-Type Staff Collaboration	2278
Z.H. Liang, Q.X. Chen and N. Mao	
Study on Nano-Scaled Precipitate in the Process of Cold-Rolled Production Based on CSP Technology	2282
H. Sun	
The Application of DELMIA in ARJ21 Aircraft Central Wing Assembly Simulation	2287
H.J. Liu, X.Y. Tong, S.L. Lv and Q.M. Fan	
Realization of DFM in Mold Design & Manufacturing	2293
W.R. Jong and P.J. Lai	
Application of Grey Relational Analysis Based on Distance Analysis in the Location of Automobile Distribution Center	2301
K.Q. Zhou, D.D. Guo, B. Xie and B.J. Wang	
Study on the Design of Layout of an Automobile Factory Based on SLP	2306
K.Q. Zhou, X. Li, B. Xie and C.X. Yao	
Evolutionary Game on the Utility Decision of the Duopoly Retailers' Marketing Objectives	2312
R.B. Xiao, R.W. Yu and L.L. Zhu	
Practice of CSFs for the Pre-Development Process in New Product Innovation Processes at SMEs: Questionnaire Development	2318
N.H. Abu, B. Md Deros, D. Abd Wahab and M.N. Ab Rahman	
Study of Manufacturing Leadtime Calculation Based on Virtual Manufacturing Technology	2324
C. Yuan and Y. Li	
The Application of 3D Design in the Design of Submarine Self-Propelled Model	2329
R.J. Liu, C.R. Xiao and W.Z. Zhang	
Experimental Droplet Formation of Magnetostrictive Inkjet Head to the Change of Driving Waveform	2334
J.H. Yoo, Y.W. Park, K.H. Yoon and E.J. Yoo	
Study on the Decrease of Harmful Substance in Paper-Process Reconstituted Tobacco Sheet	2338
L. Wang, Y.B. Wen, D.P. Sun, Y. Mao and Y.J. Yao	
Research on Manufacturing Supply Chain Information Platform Architecture Based on Internet of Things	2344
Z.W. Sun, W.F. Li, W. Song and P. Jiang	
Shaking Moment Optimum Balancing of Planar Mechanisms	2348
E. Bao, X.Y. Ang and D.Y. Liu	
A Single Machine Scheduling Problem with Earliness and Tardiness Penalties Using Memetic Algorithm	2353
P. Kaweegitbundit	
Extracting the Rules of KPIs for Equipment Management Based on Rough Set Theory	2358
J.W. Wang and C.H. Cheng	

The Internet of Things

A Review on Development and Trend of Intelligent Maintenance System	2365
Y.H. Ao	
Decomposition of T^2 Signal for Multivariate Assembly Process Control Using Bayesian Network	2370
Y.H. Liu and Y. Yang	

Real-Time Vibration Control of Steel Strip Immersed in Fluid for a Continuous Hot-Dip Galvanizing Line	
J. Li, Y.H. Yan, X.H. Guo and Y.Q. Wang	2375
Study of Force Measurement in Honing	
Y.X. Hou, Q. Wang, Q. Feng and C.Z. Ren	2381
Collar TEOS Integrity of Deep Trench DRAM Capacitor with a Vertical Parasitic NMOSFET	
M.C. Wang and H.C. Yang	2385
Study on Measurement of Polymer Orientation Degree Base on SVM	
Y. Wang, W.G. Lin, H. Xu and T. Liu	2389
The Detection Method for Surface Quality of Parts Based on PCA and Wavelet Transform	
X. Ning, L.P. Ning, B.F. Yang, F. Tian and X.H. Mao	2394
Development of Analysis System for the Process of Piston's Production	
X.B. Wang and X.M. Song	2398
Quality Management Process Continuous Improvement Based on Workflow Mining	
L. Chen, Q. Liu and X.H. Li	2402
Jet Performance Testing of High-Pressure Waterjet Descaling Nozzles	
F. Ma, Y. Li and Z.M. Song	2408
Innovative Design of Adjustable Gauge Block in Measurement of Planeness	
S.Q. Zhang, J. Hua and W. Xu	2414
Design and Development of Quality Information System for Electronic Ballast Based on Parameter Testing	
X.Y. Zou, B.R. Wang, Q. Hu and W.K. Lu	2419
Architecture of RFID Spatio-Temporal Data Management	
Y.H. Wang, H.L. Sun and J.K. Xu	2425
Effect of Weld Metal Hardening Property on Deformation Behavior and Crack Driving Force of Mismatched Welded Joint	
L.Y. Xiong and Y.H. Zhang	2429
The Research of Production Process Statistical Steady-State Based on the Hypothesis Test	
W.Z. Wang	2433
Research on Materials Tracking in Toy Production Based on the Internet of Things	
Y.L. Cao, W.F. Li and W. Song	2439
Research on Quality Control of Clearance between Gears in Mesh Based on the Box-Cox Transformation	
W.H. Shi, C.L. Chen and J.T. Niu	2443
To Promote Entrepreneurial Education in Art Colleges with the Development of Creative Industries	
X. Wang and Y. Meng	2449
Research on Real-Time Synthetic Error Compensation Principle for CNC Machine Tool	
G.W. Cui, J. Lu, Y.F. Gu, D. Gao, H.C. Wang and C.C. Li	2454
Parameter Optimization of the Sheet Metal Shearing Process in the Manufacturing of Leaf Spring Assembly Using the Grey Taguchi Method and Simulated Annealing Algorithm	
G. Gopalaramasubramanian and V.S. Senthil Kumar	2458
Design and Implementation of Height Detection of the Cotton Top-Cutting	
Y. Xu, X.P. Gou and J.P. Zhou	2464
A Blending Control Aircraft Assembly Quality Method Using Key Assembly Characteristic	
J.H. Liu, T.H. Wang and C. Zou	2469
Probing Active-Area Shift with Improved Kelvin Measurement for Trench DRAM	
M.C. Wang and H.C. Yang	2474
A Study on t Chart for Short-Run and Mixed Model Productions	
K. Gu, X.Z. Jia and H.L. You	2478
Support Vector Data Description Based Multivariate Cumulative Sum Control Chart	
S.G. He and C.Y. Zhang	2482
Design of Medical Wireless Sensor Network	
Y. Sun, S.H. Ye and Y. Ye	2486
The Study on RFID Middleware for Real-Time Monitoring in Manufacturing	
Y.B. Fu, P.Y. Jiang and Y. Li	2491

Design of Stable Image Platform on Airborne Camera Y.X. Qian, L.B. Yang, F.R. Hu and X.T. Hong	2495
Stress Analysis of the Working Device of Multi-Functional Excavator S.X. Qin and Y.L. Li	2499
Modified Double EWMA Approach for Mixed Product Run-to-Run CMP Process Control A.C. Lee, T.W. Kuo and Z.L. Lee	2504
Research on a New Technique of No Mark Overprint Y. Wang, F.F. Ren and C. Zhang	2512
A Method of Speech Segregation in Noisy Environment C.Q. Li, L.Y. Sun and J.J. Li	2518
An Improving Approach for 6σ-Based Multi-Process Machining Environment G.H. Zhou, B. Wang, Z.D. Xiao and P.Y. Jiang	2524

Other Related Topics

Processing Effect of Injection Molded Nanoparticle/Polymer Composites on their Resistivity H.H. Wu, Y.F. Cheng, A.Y. Jiang and B.F. Zhang	2531
Modeling and Analysis of End of Life Vehicles Recovery: an Enhanced IDEF0 Methodology (Part I) Y. Wang, M. Chen, J.Q. Gao and E. Chen	2539
Modeling and Analysis of End of Life Vehicles Recovery: An Enhanced IDEF0 Methodology (Part II) Y. Wang, M. Chen, J.Q. Gao and E. Chen	2543
Development of Acoustic System of Hexahedral Sapphire Abrasive Shock Machining Y.D. Zhang, Z.J. Teng and S. Dai	2547
Error Analysis and Control of Standard Mast Section Used in Mast-Climbing Work Platform K. Zhang, Y.Z. Long, J.P. Chen and X.Z. Huang	2552
$n^2 2_n (n=0(\text{mod}2))$ Y.G. Zheng and Y.M. Chang	2556
Flow Stress Behavior of the Normalized and Tempered as-Cast 42CrMo Steel during Hot Deformation H.P. Qi, Y.T. Li, J. Fu and Z.Q. Liu	2560
Tribo-Electrochemical Performance of Copper ECMP in Mixed Phosphate Electrolyte W.J. Zhai and Y.Z. Yang	2565
Interval Analysis Method of Fault Tree Based on Convex Model Y.M. Xiong, J. Li, S.L. Li and Z.P. Yang	2569