

Table of Contents

Preface and Committees

1. FORMING PROCESSES

A New Rigid Plastic Messless Method for Simulation of Bulk Metal Forming Processes M. Foroutan and M. Mortazavi	1
Scanning Path Planning in Laser Bending of Tube Based on Curvature X.Y. Wang, J. Wang, L.J. Wang, W.J. Xu and D.M. Guo	6
Investigation on Earing Behavior of AA 2024-T4 and AA 5754-O Aluminum Alloys M. Turkoz, M. Dilmeç and H.S. Halkacı	12
Numerical and Experimental Research on the Flexible Forming of Metal Sheet Using Magnetic-Driving Plasma Arc W.J. Xu, W.Q. Song, X.Y. Wang, J.B. Meng and L.J. Wang	18
Numerical Study of the Flow Forming Process of AISI 630 Stainless Steel S.M. Ebrahimi, S.A.A. Akbari Mousavi, M.S. Bayazidi and M. Mastoori	24
Finite Element Analysis and Die Design of Extrusion Processes of Radial-Finned Heat Sink D.C. Chen, J.M. Chen, M.W. Guo, C.H. Jao and W.J. Chen	30
Simulation and Fabrication of Automobile Parts in Semi-Solid Process H.H. Kim and C.G. Kang	36
The Effects of Cooling Slope Casting and Isothermal Treatment on Wear Behavior of A380 Alloy N. Saklakoğlu, S. Gencalp and Ş. Kasman	42
Mechanical Characterization Behavior of Boron Steel Sheet in Hot Press Forming Process with Cooling System S.H. An, K.Y. Kwon and C.G. Kang	48
Study on the Formability of Magnesium Alloy for Bearing Cover with Inner Cavity under Hot Forging H.L. Ho, S.H. Hsiang and P.T. Wang	54
Mathematical Modeling of Flow Behaviour of API-X70 during Hot Torsion Testing B. Mirzakhani	60
Microstructural Evolution of AZ91 Magnesium Alloy during Deformation and Heat Treatment J.Y. Li and J.X. Xie	66
Lateral Extrusion of Gear-Like Components with Radial Tooth Profile: Metal Flow Simulation and Analysis H. Haghighat and D. Almasi	72
Development of a Novel Rapid Manufacturing Process for Micro-Cylindrical Lens Array C.Y. Huang, K.C. Huang, J.C. Chen, K.S. Chang, S.F. Tseng and C.P. Chou	78
Experimental Investigation on the Instability of Al Sheet in Hydraulic Bulging Based on ESPI Y. Liu and Z.J. Wang	84
Effect of Hot Rolling Deformation on Superplastic Deformation Behavior of TiN_p/2014Al Composite H.E. Hu and L. Zhen	90
FE Simulation and Experimental Study of Tube Hydroforming Process for AA1050 Alloy at Various Temperatures H.M. Naeini, G.H. Liaghat, S.J. Hashemi Ghiri and S.M.H. Seyedkashi	96
Numerical and Experimental Study of Two-Layered Tube Forming by Hydroforming Process S.M.H. Seyedkashi, G.H. Liaghat, H.M. Naeini, S.M. Mahdavian and M. Hoseinpour Gollo	102
Size Effect on Micro Tensile Test of Copper Y.M. Huang and Y.M. Chang	108
Optimisation of Cruciform Test Specimen for Biaxial Tensile Testing of Sheet Metal P. Tiernan and A. Hannon	114

Innovative Tools and Tool Steels for the Blanking of Press-Hardened Ultra High-Strength Manganese-Boron Steels	
M. Hirsch, B. Krönauer, R. Golle, H. Hoffmann, M. Golle and G. Jesner	123
Rheological Characterization of Water Atomised Stainless Steel SS316L for Micro MIM	
M.H.I. Ibrahim, N. Muhamad and A.B. Sulong	129
Optimization of Micro Metal Injection Molding SS 316L for the Highest Green Strength by Using Taguchi Method	
M.H.I. Ibrahim, N. Muhamad, A.B. Sulong, K.R. Jamaludin, N.H. Mohamad Nor and S. Ahmad	135
Influence of Hot Extrusion Process on the Mechanical Behavior of AA6061/SIC Composites	
A. Pakdel, H. Farhangi and M. Emamy	141
An Evaluation on Processing of Metal Matrix Composites (Al₂O₃/AC8A) by Low-Pressure Infiltration	
K. Tulugan, H.J. Hwang, H.W. Rong and W.J. Park	149
Dynamic Model of Compaction Process of Metallic Powders	
K. Mohammadi and A. Darvizeh	155
Some Aspects of Deposition Parameters of RF Sputtered Ferromagnetic Film Germane to the Study of Magnetoresistive Sensing Devices	
P. Akhtar, T. Javid Ali and A. Aziz	160
An Elasto-Plastic Finite Element Analysis of the Radial Compression of Aluminium Tube between Rigid Plates	
T.C. Chen	166
Limit Analysis of Lateral Extrusion of Gear-Like Components with Radial Tooth Profile	
H. Haghighat and M. Bajelan	172
Axial Crushing of Grooved Thin-Walled Tubes Using Experiments and Finite Element Simulation	
S.E. Mirmohammadsadeghi, S.J. Hosseinipour and M. Bakhshi	178
Microstructure and Mechanical Properties of Twist Extruded Pure Aluminum Processed by Post-Rolling	
S. Ranjbar Bahadori, S.A.A. Akbari Mousavi and A.R. Shahab	183
Investigations about the Single Point Incremental Forming of Anisotropic Titanium Alloy Sheets	
G. Palumbo, M. Brandizzi, G. Cervelli and M. Fracchiolla	188
A 3-D Forming Prediction Method of Increase of Sheet Thickness during Drawing Process	
Y. Kotani, A. Watanabe, K. Nishiumura and H. Watari	194
Improvement of Local Decrease in Material Thickness of Fuel Supply Pipe	
N. Kamei, H. Watari, T. Hatano and Y. Kawamura	200
Effect of Addendum Parameters to the Formability of Aluminum AL 6303	
Afzeri, M.S. Shahdan and H.S. Qasim	206

2. CASTING, JOINING AND RELATED PROCESSES

Sn-Rich Phase Coarsening in Sn-Ag-Cu Solder Joint during Moderate Current Stressing	
N. Saud and A. Jalar	212
Temperature Distribution of Aluminum Alloys under Friction Stir Welding	
B.Y. Lin, P. Yuan and J.J. Liu	217
Effects of Operational Parameters and Heat Treatments on the Aluminum-Steel Explosively Welded Composite Plates	
S.A.A. Akbari Mousavi, A.A. Dashti and A. Halvae	223
Investigation of Joint Groove Geometry Effect on the Residual Stresses in Circumferentially Butt-Welded Steel Pipes by the FEM Simulation	
M. Foroutan, M.E. Aalami-Aleagha and S. Pirmoradi	229
A Comparison between Isothermal and Coupled Thermo-Mechanical FE Analyses of the Ring Rolling Process	
N. Anjami and A. Basti	235
The Effect of Cooling Rate on Mechanical Properties of 22MnB5 Steel Sheet during Hot Press Forming	
K.Y. Kwon, N.H. Kim and C.G. Kang	241
Debinding Process of a Starch-Based Binder in Metal Injection Moulding	
H. Abolhasani and N. Muhamad	248

Numerical Simulation of Welding Sequence Effect on Temperature Distribution, Residual Stresses and Distortions of T-Joint Fillet Welds N. Syahroni and M.I.P. Hidayat	254
Research on Multi-Steps Tube-Compression of Thin-Wall Parts with Variable Diameter by Viscous Pressure Forming Z.J. Wang, J.G. Li and H.L. Gong	260
Effect of Mould Runner and Coating on Graphite Nodule Characteristics and Hardness of Thin Wall Ductile Iron H. Jafari, M.H. Idris, A. Ourdjini, H.R. Bakhsheshi Rad, S.S. Khayat Ardestani and V. Ahmadshoar	266
Formation of Globular Microstructure in A380 Aluminum Alloy by Cooling Slope Casting N. Saklakoğlu, S. Gencalp, Ş. Kasman and İ.E. Saklakoğlu	272
Aluminium Metal Matrix Composite: Improving Wear Performance through Treatment M.A. Maleque, M.R. Karim and N. Yassin	278
Grain Growth Evaluation in HAZ of Welded Pipes Using Dimensionless Parameters and Optimum Pre-Exponential Constant for Seam Weld and Seamless Pipes M.E. Aalami-Aleagha and S. Rasaei	284
Orthogonal Array Technique for Optimizing the Sintering Parameter of the Metal Injection Molding (MIM) Compact: Best Flexure Strength K.R. Jamaludin, N. Muhamad, M.N.A. Rahman, S. Ahmad, M.H.I. Ibrahim and N.H.M. Nor	290
Effect of Pouring Temperature and Melt Treatment on Microstructure of Lost Foam Casting of AL-Si LM6 Alloy M. Karimian, A. Ourdjini, M.H. Idris, M. Bsher and A. Asmael	295
Quantitative Stereology for Roughness Morphology of Aluminum Alloy N.E. Salehudin, A. Jalar and A.R. Daud	301
Effect of Deformation Temperature on Deformation Behavior and Service Performance of 7050 Aluminum Alloy X.Y. Wang, H.E. Hu and J.C. Xia	305
Mathematical Modeling of Turbulent Fluid Flow and Mass Transfer in a Steel Continuous Casting Tundish N. Sharifi, S.H. Seyedein and M.R. Aboutalebi	311
On the Dependence of Microstructure-Sensitive Properties of Cast 2xxx Series Aluminium Alloy on Solidification Parameters M.O.H. Amuda, A.M. Oladoye, J.O. Agunsoye, O. Farombi and W. Subair	317
Design and Simulation on Cast Metal Matrix Composite by Investment Casting Taufik, S. Sulaiman, T.A. Abdullah and Sivarao	323
Analysis of Temperature Distribution on Warm Forming of Aluminum-Magnesium Alloy F. Ozturk and M.A. Arslan	329
An Investigation of Mechanical Non-Sinusoidal Oscillation of Continuous Casting Mold X.Z. Zhang, H.T. Zhu, A.K. Tieu, H.B. Xie, X.Z. Du, X.K. Li and C.X. Dou	337
A Novel Scheme for Weld Microstructure Control Using Cryogenic Cooling M.O.H. Amuda and S. Mridha	343
Residual Stress; the Effect of Pouring Temperature and Chemical Composition S. Norouzi and H. Farhangi	349
Effects of Cooling Condition on Hot Tearing during Investment Casting S. Norouzi and H. Farhangi	355
Influence of Process Parameters on Welding Quality during Lap Welding of Aluminum Sheets Using High Brightness Disk Laser C.H. Kim and D.C. Ahn	361
On-Line Empirical Models for Control of Bead Geometry in Robotic Arc Welding Process J.S. Son, I.S. Kim, H.H. Kim, H.H. Na and J.H. Lee	367
A Study on Magnetostrictive Sensor for Detecting the Weld Defects J.H. Seo, I.S. Kim, B.Y. Kang, J.Y. Shim, J.W. Jeong and J.S. Kim	373
A Study on Cooling Characteristics of AC4C and AC7A Casting Material for Manufacturing Tire Mold H.S. Yoon, H.D. Yang and Y.K. Oh	379
Investigation on Joint Strength of Dissimilar Resistance Spot Welds of Aluminum Alloy and Low Carbon Steel S.N. Mortazavi, P. Marashi, M. Pouranvari and M. Masoumi	384

Effect of Energy Input on Microstructure and Hardness of TIG Welded AISI 430-Ferritic Stainless Steel	
M.O.H. Amuda and S. Mridha	390
Effect of Work Piece Dimensions on Cost Effective Hybrid Rapid Casting Solution for Aluminium Alloy	
R. Singh and R. Singh	397
Design and Simulation on Compressor Metal Matrix Composite by Investment Casting	
Taufik, S. Sulaiman, T.A. Abdullah and Sivarao	403
The Effect of Heat Treatment Parameters on Microstructure and Toughness of Austempered Ductile Iron (ADI)	
A. Abedi, S.P.H. Marashi, K. Sohrabi, M. Marvastian and S.M.H. Mirbagheri	409
The Effects of Isothermal Temperature on the Microstructure of Semisolid A6070 Alloy Produced by SIMA Process	
M. Karshenas, M. Emamy and E. Fadaei	415
Laser Gas Assisted Nitriding and TiN Coating of Ti-6Al-4V Alloy	
O. Al-Mana, M.S.J. Hashmi and B.S. Yilbas	421
Structural Integrity of Spot-Welds Used for Auto-Body Fabrication	
K.K. Ray and G. Mukhopadhyay	427
An Investigation on Warpage Analysis in Plastic Injection Moulding	
A.B.M. Saifullah and S.H. Masood	433
Research on Crack Healing in Slab during Hot Rolling	
H.L. Yu and X. Liu	439

3. MATERIALS

Effect of Span Length on the Tensile Properties of Natural Fibers	
S. Biswas, Q. Ahsan, I. Verpoest and M. Hasan	445
Impact Strength of Carbon Reinforced Epoxy Composite at Different Temperatures	
T.A. Lenda and S. Mridha	451
Influence of Moisture Absorption on Impact Strength and Failure Behavior of Hybrid Jute-Carbon/ Epoxy Composite	
T.A. Lenda and S. Mridha	457
Studies on the Effects of the Potential Sweep Rates and pH on the Corrosion Rate of Polyaniline Coated Steel	
M.R. Mahmoudian, Y. Alias and W.J. Basirun	463
Preparation of Epoxy-Kenaf Nanocomposite Based on Montmorillonite	
A. Zuliahani, H.D. Rozman and G.S. Tay	469
Weldability and Toughness Evaluation of Ceramic Reinforced Steel Matrix Composites (TiB₂-RSMC)	
E. Bayraktar, F. Ayari, D. Katundi, J.P. Chevalier and F. Bonnet	475
A FEM Based Numerical-Experimental Study for Determining Strength Properties by Micro Indentation of a Metal Matrix Composite	
F. Ayari, E. Bayraktar and J.P. Chevalier	484
Numerical Study of Cracked Titanium Shell under Compression	
F. Ayari, A. Zghal and E. Bayraktar	490
Preparation and Microstructure of Nanocomposite Mg-3Al-Zn Alloy by HDDR Combined with Ball Milling	
H.F. Sun, W. Fang, Z.X. Yu and W.B. Fang	496
Influence of Heat Treatment on Properties of Hot Isostatically Pressed Turbine Blade Superalloy IN738	
S. Farahany, M. Aghaie-Khafri, A. Ourdjini and M.H. Idris	502
The Effect of Incorporating Lithium Fluoride on the Compressive Strength and Diametric Tensile Strength of Glass Ionomer Cement	
A.A. Mustafa, K.A.S. Al-Khateeb and A.F. Ismail	508
Influences and Properties of Various Activated Carbon and Carbon Black Filled in Epoxy Composite	
P. Firoozian, H.P.S. Abdul Khalil, M.A. Hazizan and A.M. Noor	513
Sm-Doped NiFe Thin Films: Structural and Magnetic Characterization	
A.A. Gandhi, I.Z. Rahman, M.V.K. Mousavi and M.A. Rahman	518

Microstructural and Magnetic Studies on Calcined Ni-Zn Ferrite Powders Prepared by Chemical Co-Precipitation Method I.Z. Rahman and T.T. Ahmed	524
Synthesis and Characterization of TTAB Coated Silver (Ag) Nanoparticles A. Monjarul, M. Harun and M. Islam	530
Growth of Carbon Nanomaterials on Granular Activated Carbon Y.B. Onundi, A. Al-Mamun, M.F.R. Al-Khatib and Y.M. Ahmed	535
Effects of Material Properties and Thickness of Die Attach on Warpage and Stresses of TSOP C.L. Chang, P.Y. Chen and M.H. Huang	542
Development of Vibration Suppression Devices from Smart Fluids M.M. Rashid, M.J.E. Salami, M. Raisuddin K. and R. Mozasser	548
An Influence of a Binder System to the Rheological Behavior of the SS316L Metal Injection Molding (MIM) Feedstock K.R. Jamaludin, N. Muhamad, H. Abolhasani, H. Murthadha and M.N.A. Rahman	554
Electrical Properties of Carbon Nanotubes-Based Epoxy Nanocomposites for High Electrical Conductive Plate H. Suherman, J. Sahari and A.B. Sulong	559
Effects of Type and Concentration of Initiator on Grafting of Acrylic Monomer onto Depolymerized Natural Rubber N. Prasertsopha, P. Chumsamrong and N. Suppakarn	565
Evaluation of Compressive Strength of Eggshell Hydroxyapatite W.M.A. Ibrahim and A.S. Mohamad Kasim	571
Compressive Strength of Rice Husk Filled Resin W.M.A. Ibrahim and S.Y. Kuek	576
Electronic and Positron Properties of Zinc-Blende MgTe, CdTe and their Alloy $Mg_{1-x}Cd_xTe$ Y. Al-Douri	580
Characterisation of Titanium Alloy Feedstock for Metal Injection Moulding Using Palm Stearin Binder System N.H. Mohamad Nor, N. Muhamad, K.R. Jamaludin, S. Ahmad and M.H.I. Ibrahim	586
Recovery of Zinc from the Final Slag of Steel's Galvanizing Process N. Dakhili, H. Razavizadeh, M.T. Salehi and S.H. Seyedein	592
Developing of Honeycomb Shaped Cordierite Ceramic from Indigenous Raw Materials and its Characterization S. Begum, H. Misran and A. Aminuddin	597
Crack Arrest Model for Transversely Cracked Piezoceramic Strip under Mechanical and Electrical Yielding R.R. Bhargava and S. Kumar	602
Determination of Uniaxial Flow Stress Curve Using Aero-Bulge Test for Very Thin Copper Sheet J. Kim, J. Suh, H. Hoffmann and R. Golle	608
Effect of Aluminum Nitride Addition on Dry Wear Properties of Al-11%Si Alloy Prepared by Stir Casting Process M.N. Wahab, M.J. Ghazali and A.R. Daud	614
Thermal Investigation of Aluminium – 11.8% Silicon (LM6) Reinforced SiO_2-Particles M. Sayuti, S. Suraya, S. Sulaiman, T.R. Vijayaram, M.K.A. Arifin and B.T.H.T. Baharudin	620
Effect of $AlCl_3$ Addition in Processing of TiAl-Al_2O_3 Nano-Composite via Mechanical Alloying S. Alamolhoda, S. Heshmati-Manesh, A. Ataie and A. Badiei	626
Effects of Polymer Loading on Tropical Wood Polymer Composite (WPC) M.S. Islam, S. Hamdan and M.R. Rahman	631
The Effects of Material Thickness and Deformation Speed on Springback Behavior of DP600 Steel S. Toros, S. Kilic and F. Ozturk	636
Influence of Filler Types on Mechanical Properties and Cure Characteristics of Natural Rubber Composites W. Wongsorat, N. Suppakarn and K. Jarukumjorn	646

Effect of Flame Retardant on Flame Retardancy and Mechanical Properties of Glass Fiber/Polypropylene Composites	652
R. Jeenchan, N. Suppakarn and K. Jarukumjorn	
FEA Based Fatigue Life Estimation of Automotive Component Correlated with Fatigue Data Editing Technique	657
N.A. Kadhim, S. Abdullah, A.K. Ariffin and S.M. Bedan	
Coefficient of Thermal Expansion Measurement of Metal Matrix Composites by Thermo Mechanical Analyser	663
B. Karthikeyan, S. Ramanathan and V. Ramakrishnan	
Specific Heat Capacity Measurement of Al / SiC_p Composites by Differential Scanning Calorimeter	669
B. Karthikeyan, S. Ramanathan and V. Ramakrishnan	
Evaluation of Mechanical Properties and Various Pile-Up of Plate-Type Polymer Using Nanoindenter	675
Y.N. Joung, C.G. Kang and S.M. Lee	
A Study on Delay Effect of Fatigue Life by Laser Welding Using Shot-Peening	681
H.W. Rong, H.J. Kim and W.J. Park	
Impact Properties of Natural Fiber Hybrid Reinforced Epoxy Composites	688
M. Jawaid, H.P.S. Abdul Khalil, A.H. Bhat and A. Abu Baker	
Finite Element Analysis and Comparison of Castellated and Cellular Beam	694
P.D. Pachpor, N.D. Mittal, L.M. Gupta and N.V. Deshpande	
Two-Dimensional Stresses in a Hollow FG Sphere with Heat Source	700
A.H. Mohazzab and M. Jabbari	
Fatigue Behavior and Damage Mechanism of a Cast Aluminum Alloy in Very High Cycle Regime	706
H.Q. Xue, E. Bayraktar and C. Bathias	
Ultra-Violet Radiationcured Composites Based on Unsaturated Polyester Resin Filled with MMT and Kenaf Bast Fiber	712
A.R. Rozyanty, H.D. Rozman and G.S. Tay	
Evaluation of Friction Welded Bi-Material Joint Strength Subjected to Impact Loads	719
H.S. Qasim and A.A. Kassim	
Controlled Potential Electrodeposition and Characterization of ZnTe Thin Films on Indium Tin Oxides	726
S.A. Mohamad, W.J. Basirun, Z.A. Ibrahim, A.K. Arof and M. Ebadi	
Structure Characterization of Electrodeposited Zinc Selenide Thin Films	732
S.A. Mohamad, W.J. Basirun, Z.A. Ibrahim, A.K. Arof and M. Ebadi	
Effects of High Energy Radiation on Mechanical Properties of PP/EPDM Nanocomposite	738
H. Anuar, S.B. Abd Razak, N.M. Kahar and N.A. Jamal	
Compatibilized PP/EPDM-Kenaf Fibre Composite Using Melt Blending Method	743
H. Anuar, N.A. Hassan and F. Mohd Fauzey	
Fabrication of CuSiC Composite by Powder Metallurgy Route	748
A.R.F. Azreen, A.G.E. Sutjipto and E.Y.T. Adesta	
Microstructure and Electrical Properties of AZO Films Prepared by RF Magnetron Sputtering	754
B. Jufriadi, A.G.E. Sutjipto, R. Othman and R. Muhida	
Egg Yolk as Pore Creating Agent to Produce Porous Tri-Calcium Phosphate for Bone Implant Application	760
A.R. Fariza, A. Zuraida and I. Sopyan	
The Effects of High Energy Radiation on the Tensile Properties of Rubber Toughened Nanocomposites	765
N.A. Jamal, H. Anuar and S.B.A. Razak	
Mould Filling and Pressure Distribution for Polymer Resins	771
A. Mohd, C. Hindle and W.A.Y. Yusoff	
Material Properties and Design Aspects of Folding Bicycle Frame	777
M.A. Maleque, M.S. Hossain and S. Dyuti	
Effects of Titanium Combined with Aluminium on the Electrochemical Properties and Efficiency of Mg-Mn Anodes	783
E. Fadaei, M. Emamy, C. Dehghanian and M. Karshenas	

Effects of Strontium and Calcium on the Microstructure and Grain Size of Cast AZ91 Magnesium Alloy	
A. Kiani, M. Emamy, E. Fadaei and S. Ghannadi	789
Nano Crystalline La Substituted Barium Hexaferrite Synthesized by Coprecipitation Method	
A. Ataie and S. Moslemi	795
Phase Formation during Reduction of Iron Sand with Soda Ash Flux Addition	
Pramusanto, H. Purwanto, Y. Dahlan and N. Saleh	801
Reduction of Sintering Temperature of Porous Tungsten Skeleton Used for Production of W-Cu Composites by Ultra High Compaction Pressure of Tungsten Powder	
A. Ghaderi Hamidi, H. Arabi and S. Rastegari	807
Failure Prediction in Drawing Processes of Mg Alloy Sheet by the FEM and Ductile Fracture Criterion	
S.W. Kim, Y.S. Lee and B.S. Kang	813
Mechanical Properties and Decay Resistance of Wood Polymer Composites (WPC)	
M.R. Rahman, S. Hamdan, M.S. Islam and M.S. Mondol	819
Influence of Cutting Parameters on Machinable Glass Ceramic Processed by End Milling	
M.M. Reddy, K.A. Abou-El-Hossein and A. Gorin	825
Experimental Investigation of Machining Parameters on Surface Roughness in Dry and Wet Wire-Electrical Discharge Machining	
S. Abdulkareem, A.A. Khan and Z.M. Zain	831
Temperature Effects on the Preparation of Multi-Walled Carbon Nanotubes by Floating Catalytic Chemical Vapor Deposition	
J. Cheng and X.P. Zou	837
Effects of Synthesis Parameters on the Preparation of Carbon Nanofibers by Ethanol Catalytic Combustion	
J. Cheng and X.P. Zou	843
Functionalized Conjugated Polymer/ZnO Nanocomposite: Synthesis and Characterization	
B. Gupta, A. Kumar, V. Sundar and R. Prakash	849
Cold Deposition of Zinc Sulfide Optical Waveguides Using Thermoelectric Device	
S. Salleh, H.N. Rutt, M.N. Dalimin and M.M. Salleh	856
Determination of the Constants of Zerilli-Armstrong Constitutive Relation Using Genetic Algorithm	
G.H. Majzoobi, S.F.Z. Khosroshahi and H.B. Mohammadloo	862
Characterizing Chicken Eggshell Reinforced Polypropylene (PP)	
Sivarao, M.R. Salleh, A. Kamely, A. Tajul and Taufik	871
Mechanical Properties Modification of Polyethylene (PE) for CaCO₃ Particulated Composites	
Sivarao, M.R. Salleh, A. Kamely, A. Tajul and Taufik	880
Machinability Improvement by Workpiece Preheating during End Milling AISI H13 Hardened Steel	
M. Suhaily, A.K.M. Nurul Amin and A.U. Patwari	888

4. MATERIALS REMOVAL PROCESSES

Machinability Improvement by Workpiece Preheating during End Milling AISI H13 Hardened Steel	
M. Suhaily, A.K.M. Nurul Amin, A.U. Patwari and N.A. Razak	894
Performance Evaluation of PCBN in End Milling of AISI D2 Hardened Steel under Room and Preheated Machining Conditions	
M.A. Lajis, A.K.M. Nurul Amin, A.N.M. Karim and T.L. Ginta	901
Multi-Criteria Optimization in End Milling of AISI D2 Hardened Steel Using Coated Carbide Inserts	
A.N.M. Karim, M.A. Lajis and A.K.M. Nurul Amin	907
Application of Ductile Fracture Criteria to Industrial Cutting Processes	
J. Petruška, J. Borkovec, J. Hulka and R. Foret	913
Principal Methods of Experimental Design and Statistical Analysis Used in Experimental Studies of Machining Processes	
M. Villeta, B. de Agustina, J.M. Sáenz de Pipaón and E.M. Rubio	919

Small Hole EDM by Current Dividing Based on Discharging Area X.Y. Wang, J.L. Li, Y.D. Liang, W.J. Xu and L.J. Wang	925
Analysis of the Machinability of Aluminium Alloys UNS A97050-T7 and UNS A92024-T3 during Short Dry Turning Tests B. de Agustina, A. Saa, M. Marcos Bárcena and E.M. Rubio	931
Analysis of the Vitrified CBN Wheels for the Performance of Grinding Hardened Steel S.Y. Luo, S.Q. Wu and F.J. Hsu	937
Prediction of Recycle Method Using Relevance Vector Machine M.M. Noor, K. Kadirgama, M.M. Rahman and M.A. Maleque	943
Pattern Recognition Method to Predict Recycling Strategy for Electronic Equipments M.M. Noor, K. Kadirgama, M.M. Rahman and M.A. Maleque	949
Current Research Trends on Dry, Near-Dry and Powder Mixed Electrical Discharge Machining M.A.R. Khan, M.M. Rahman, M.M. Noor, K. Kadirgama and M.A. Maleque	956
Performance of Nitrogen Gas as a Coolant in Machining of Titanium Z. Hamedon, T.T. Mon, S. Sharif, V.C. Venkatesh, A.R.M. Masri and E. Sue-Rynley	962
Study of Surface Roughness of Pieces of Magnesium UNS M11311 Obtained by Dry Turning Using ANOVA E.M. Rubio, J.M. Sáenz de Pipaón, M. Villeta and M.A. Sebastián	967
Tensile and Dynamic Mechanical Behavior of Thermoplastic Natural Rubber (TPNR) Nanocomposites Treated with Ultrasonic M.A. Tarawneh, S.H. Ahmad, S.Y. Yahya and R. Rashid	973
Optimization of Process Parameters on EDM Milling of Stainless Steel AISI 304 A.K.M. Asif Iqbal and A.A. Khan	979
Pareto Optimization of Electro Discharge Machining of Titanium Nitride-Aluminium Oxide Composite Material Using Genetic Algorithm S. Mitra, S. Sarkar, G. Paul, D. Bhaduri and S. Biswas	985
Sensing Tool Breakage in Face Milling by Support Vector Machine Y.W. Hsueh and C.Y. Yang	991
Optimization of Precision Grinding Parameters of Silicon for Surface Roughness Based on Taguchi Method A. Abdur-Rasheed and M. Konneh	997
New Approach in Cost Structuring of High Speed Hard Turning M.H.F. Al Hazza and E.Y.T. Adesta	1003
Tool Life in High Speed Turning with Negative Rake Angle E.Y.T. Adesta and M.H.F. Al Hazza	1009
Effect of Process Parameters on Abrasive Contamination during Water Abrasive Jet Machining of Mild Steel A. Mohd Ali, A.A. Khan and Y.A. Mohammad	1015
Experimental and FEM Study of Serrated Chip Formation in High Speed Turning Processes U. Umer, L.J. Xie, S.J. Askari, S.N. Danish and S.I. Butt	1021
Chemical Wet Etching of Silicon Wafers from a Mixture of Concentrated Acids M.R. Ismail and W.J. Basirun	1027
Application of FEM in Investigating Machining Performance H. Yanda, J.A. Ghani and C.H. Che Haron	1033
Numerical, Analytical and Experimental Study of Structural Properties of Cutting Tool in Endmilling Process M.M. Abootorabi Zarchi, H. Zoghi and M.R. Razfar	1039
Surface Integrity of AISI H13 in End Milling and Electrical Discharge Machining Process J.A. Ghani, G.Y. Goh and C.H. Che Haron	1044
Evaluation of PVD-Inserts Performance and Surface Integrity when Turning Ti-6Al-4V ELI under Dry Machining G.A. Ibrahim, C.H. Che Haron and J.A. Ghani	1050
Study of Micro-EDM of Tungsten Carbide with Workpiece Vibration M.P. Jahan, T. Saleh, M. Rahman and Y.S. Wong	1056
Chip Formation and Cutting Performance Investigation on Titanium Alloy Machining S.Y. Lin, Y.Y. Cheng and C.T. Chung	1062

Investigation on the Surface Finish, MRR and the Surface Damage during the EDM of Tungsten Carbide	
A.A. Khan, S. Abdulkareem, N.A.A. Abdul Ghani and D.S. Mohammad Ariffin	1073
Analysis of Diametrical Error of Machined Workpieces in Ultrasonic Vibration Assisted Turning	
H. Soleimanimehr, M.J. Nategh and S. Amini	1079
Cutting Force Analysis of on-Machine Fabricated PCD Tool during Glass Micro-Grinding	
A. Perveen, M.P. Jahan, Y.S. Wong and M. Rahman	1085
The Predictive Model of Surface Integrity in End-Mill Grinding for High-Speed Milling	
Y.C. Wang, C.H. Chen and B.Y. Lee	1091
Flank Wear Modeling in High Speed Hard Turning by Using Artificial Neural Network and Regression Analysis	
M.H.F. Al Hazza and E.Y.T. Adesta	1097
Machining Time Simulation in High Speed Hard Turning	
E.Y.T. Adesta and M.H.F. Al Hazza	1102
The Condition Monitoring of the Micro V-Grooving with a Single Crystal Diamond Tool Using the AE Technology	
S.H. Jang, H.W. Kwon, I.S. Kang, J.S. Kim and M.C. Kang	1107
Effects of Process Parameters on Surface Finish in Cylindrical Grinding	
P.K. Pal, A. Bandyopadhyay and R. Rudrapati	1118
Vibration in Traverse Cut Cylindrical Grinding - Experiments and Analysis	
R. Rudrapati, P.K. Pal and A. Bandyopadhyay	1124
Experimental Investigation during Finishing of Al/SiC-MMC's by Abrasive Flow Machining (AFM) Process	
H.S. Mali and A. Manna	1130
Performance of CBN and PCBN Tools on the Machining of Hard AISI 440C Martensitic Stainless Steel	
S. Thamizhmanii, R. Ahmad and S. Hasan	1137
Polishing Force Modification near the Boundary of a Part Surface	
H.Y. Tam, M. Hua and L. Zhang	1148
Improvement of Surface Roughness in End Milling of Ti6Al4V by Coupling RSM with Genetic Algorithm	
A.U. Patwari, A.K.M. Nurul Amin and S. Alam	1154
Statistical Approach for the Development of Tangential Cutting Force Model in End Milling of Ti6Al4V	
A.U. Patwari, A.K.M. Nurul Amin and W.F. Faris	1160
Surface Roughness Prediction in High Speed Flat End Milling of Ti-6Al- 4V and Optimization by Desirability Function of RSM	
S. Alam, A.K.M. Nurul Amin, M. Konneh and A.U. Patwari	1166
Chip Serration Frequency - The Primary Cause of Chatter during End Milling Operation	
A.U. Patwari, A.K.M. Nurul Amin, W.F. Faris, M. Azhari and S. Farahain	1174
Influence of Electrode Cooling on Recast Layers and Micro Crack in EDM of Titanium	
S. Abdulkareem, A.A. Khan and M. Konneh	1180
Investigation of the Machinability of Inconel 718 in Room Temperature and Preheated Conditions	
A.K.M. Nurul Amin, A. Fakhruzi Majed, M.K. Daud, A.U. Patwari and M.H. Ishtiyag	1187
Prediction of Surface Roughness in High Speed Machining of Inconel 718	
M. Suhaily, A.K.M. Nurul Amin and A.U. Patwari	1193
Influence of Electrode Cooling on Material Migration among the Electrodes during EDM of Titanium Alloy	
S. Abdulkareem, A.A. Khan and M. Konneh	1199
Influence of Electrode Profiles on Electrical Discharge Machining of Titanium	
Z.M. Zain, A.A. Khan and S. Abdulkareem	1205
The Effect of Tool Edge Geometry on Tool Performance and Surface Integrity in Turning Ti-6Al-4V Alloys	
Y. Burhanuddin, C.H. Che Haron and J.A. Ghani	1211

5. HIGH ENERGY BEAM REMOVAL PROCESS

A Study of Jet Characteristics of Plasma Arc under Transverse Alternating Magnetic Field J.B. Meng, W.J. Xu, J. Sun, X.Y. Wang and L.J. Wang	1222
Influence of Feed Rate on Surface Integrity of Titanium Alloy in High Speed Milling A. Daymi, M. Boujelbene, E. Bayraktar, A. Ben Amara and D. Katundi	1228
Hydrophobic Templates with Rough Patterns Fabricated by Laser Micromachining for Liquid Droplets Generation S.F. Tseng, K.C. Huang, D.Y. Chiang, M.F. Chen, S.Y. Hsiao, Y.S. Lin and C.P. Chou	1234
A Programmable System for Treatment of Alloy Steels at Cryogenic Temperatures F. Farhani and K.S. Niaki	1240
Multi-Sphere Mirror Design of YAG Laser Applied for Glass Substrate Cutting W.H. Wu, K.C. Huang and S.F. Tseng	1246
A Study on Thermal Fracture Processing Models Applied to Glass Substrate Cutting K.C. Huang, M.W. Hung, S.F. Tseng and C.H. Hwang	1252
The Effect of Scan Speed on Engraving Depth and Surface Roughness of AISI H13 Tool Steel Ş. Kasman and İ.E. Saklakoğlu	1258
Surface Roughness and Wear Behavior of Laser Machined AISI H13 Tool Steel Ş. Kasman and İ.E. Saklakoğlu	1264
CO₂ Laser - MIG Hybrid Welding of Titanium Alloy M. Brandizzi, A.A. Satriano and L. Tricarico	1270
Experimental Investigation on Fiber Laser Cutting of Ti6Al4V Thin Sheet L.D. Scintilla, D. Sorgente and L. Tricarico	1281
Laser Surface Melting of Austenitic Cr-Ni Stainless Steel D. Stavrev, T.D. Dikova, V. Shtarbakov and M. Milkov	1287

6. PRECESSION ENGINEERING AND NANO-TECHNOLOGY

Development of an Intelligent Auto-Turning Controller for Precision Machining S.M. Wang, H.J. Yu and S.C. Ouh	1293
Effects of Post Weld Ageing Heat Treatments on the Microstructure of 17-4PH GTA Welded Joints S.A.A. Akbari Mousavi and S.A.H. Hosein Abad	1300
Etching Rate of Machinable Glass Ceramic H.T. Ting, K.A. Abou-El-Hossein and H.B. Chua	1306
Measuring the Changes in InP Morphological and Electrical Specifications Caused by Oxygen Ion Implantation A.H. Ramezani, M.R. Hantezadeh, M. Ghoranneviss and A.H. Sari	1312
Experimental Investigation into Pulsed Nd:YAG Laser Micro-Turning of Engineering Ceramics G. Kibria, B. Sharma, B. Doloi and B. Bhattacharyya	1318
Effect of Electron Beam Bombarding of the Catalyst Layer on the Growth of Carbon Nanostructures by TCVD Method A. Mahmoodi, M. Ghoranneviss, D. Hanifteh, K. Mehrani and M. Rahbar Zareh	1324
Effect of Synthesis Temperature on Phase and Morphological Characteristics of Hydroxyapatite Nanoparticles R. Kazemzadeh, A. Behnamghader and S. Hesarakı	1329
Frequency Pulse Period and Duty Factor Effects on Electrochemical Micromachining (EMM) M. Malapati, A. Sarkar and B. Bhattacharyya	1334
The Effect of Microstructure on the Photocatalytic Properties of TiO₂ S. Khameneh Asl, M. Kianpour Rad, S.K. Sadrnezhad and M.R. Vaezi	1340
Investigation of Microholes Produced by Focused Ion Beam Micromachining N. Hajar and Y.A. Mohammad	1346
Fabrication of Silicon Nanopillar Sheet for Cell Culture Dish Y.A. Mohammad and N. Hajar	1352
Two Dimensional Quasi-Steady Molecular Statics Nanocutting Simulation for Cutting Copper Material with Point Defect Z.C. Lin and J.R. Ye	1357

Mechanochemical Reduction of MoO₃ Powder by Silicone to Synthesize Nanocrystalline MoSi₂	
H. Ramezanalizadeh and S. Heshmati-Manesh	1364
Synthesis and Characterization of Nano Hydroxyapatite	
S. Sarfraz, B. Naseem, S. Amin and M. Mujahid	1370
A Process Investigation for Micro-EDM Fabrication of through Holes in Thin Copper Sheets	
H.Y. Tam, W. Jiang and K.L. Chan	1376

7. SURFACE ENGINEERING

Influence of Magnetic Field on Corrosion Resistance and Microstructure of Electrodeposited Ni Coatings	
M. Ebadi, W.J. Basirun and Y. Alias	1383
Morphology and Mass Changes with Magnetic Field during the Electrodeposition of Ni-Co	
M. Ebadi, W.J. Basirun and Y. Alias	1389
Tribological Study of TiN Nano Structured Films Deposited on Plasma Nitrided H11 Steel by Pulsed DC PACVD	
M. Raoufi, S. Mirdamadi, F. Mahboubi, S. Ahangarani, M.S. Mahdipoor and H. Elmkhah	1395
Analysis of Microstructural Changes during Pulsed CO₂ Laser Surface Processing of AISI 316L Stainless Steel	
E. Chikarakara, S. Naher and D. Brabazon	1401
The High Temperature Fatigue Behavior of Inconel-738LC Material Deposited Thermal Barrier Coating	
J.H. Park, M.S. Ku, J.S. Kim, K.H. Lee, Y.S. Song and M.C. Kang	1409
Formation of TiN Dispersed Composite Layer on Steel Surfaces by Titanium Powder Preplacement and TIG Surface Melting Processes	
S. Mridha and S. Dyuti	1415
Effects of Processing Parameters on Microstructures and Properties of TIG Melted Surface Layer of Steel	
S. Mridha and S. Dyuti	1421
Wear Behavior of Modified Surface Layer Produced by TIG Melting of Preplaced Ti Powder in Nitrogen Environment	
S. Dyuti, S. Mridha and S.K. Shaha	1427
Formation of Ti-Al-N Dispersed Layer on Steel Surface by TIG Melting in a Reactive Environment	
S. Dyuti, S. Mridha and S.K. Shaha	1433
Tribological Characteristics of CVD Nanocrystalline Diamond Film Grown by Bias Enhanced Nucleation Process	
S.J. Askari	1439
Prediction Laser Sealed Advanced Ceramic Coatings Dimensions by Using Finite Element Model and Computational Method	
K.M. Adel, E.K. Ekhlās and S.H. Shaker	1444
Study on the Effect of Nano and Micro MoS₂ Powder in Micro-Electrical Discharge Machining	
G.S. Prihandana, T. Sriani, K. Prihandana, Y. Prihandana, M. Mahardika, M.H. Bin Abdul Shukor and K. Mitsui	1450
Particle Dynamics and Heat Transfer at Workpiece Surface in Heat Treatment Fluidised Beds	
W.M. Gao, L.X. Kong, F.H. She and P. Hodgson	1456
Electrodeposition of Tin Using Tin(II) Methanesulfonate from a Mixture of Ionic Liquid and Methane Sulfonic Acid	
Y.K. Kee, W.J. Basirun and K.H. Lee	1462
Characterization and Response Evaluation of Detonation-Gun Sprayed Alumina-Titania Ceramic Composite	
S. Raja Kumar, L. Vijayaraghavan and M.M. Mayuram	1468
Coating Produced by Deposition of Nanoparticles Blended Wires	
A. Al Askandarani, M.S.J. Hashmi and B.S. Yilbas	1476

HVOF Coating of Diamalloy 2002 and 4010 on Carbon Steel Sheets: Microstructure Examination	
Y.A. Al-Shehri, M.S.J. Hashmi and B.S. Yilbas	1482
Preparation of Carbon Fibres for Aluminium Composites	
R. Kozera, J. Bieliński, A. Broda, A. Boczkowska and K.J. Kurzydłowski	1487
Integral Approach and Numerical Improvement to Calculate Carbon Concentration Profiles in Carburising	
W.M. Gao, L.X. Kong and P. Hodgson	1494
Design and Manufacture of Vacuum Forming Moulds	
S. Naher and P. Derham	1500
TiO₂ Foam: Characterization and Cell Adhesion	
R. Hazan, S. Sreekantan, A.A. Khalil, I.M.S. Nordin and I. Mat	1506
The Effect of Black Powder Composition on the Erosion of Compressor's Impeller in Gas Transmission Line	
M. Saremi and M. Kazemi	1514
Oxidation and Corrosion Resistance of Nanocrystalline Copper Deposit Produced by Pulse Electrodeposition	
M. Saremi and M. Abouie	1519
Method, Technology and Equipment for in Depth Surface Hardening	
D. Stavrev and T.D. Dikova	1526
Surface Modification of Polystyrene Beads by UV/Ozone Treatment	
A.N. Yusilawati, M. Maizirwan, I. Sopyan, M.S. Hamzah, K.H. Ng and C.S. Wong	1532

8. COMPUTER AIDED ENGINEERING

Effects of Powder Synthesis Method on the Sinterability of Hydroxyapatite	
K.L. Aw, R. Tolouei, R. Singh, C.Y. Tan, W.H. Yeo, H. Kelvin, I. Sopyan and W.D. Teng	1538
Optimization of Multipass Turning Parameters by Genetic Algorithm	
N. Ahmad, T. Tanaka and Y. Saito	1545
Computer Aided Process Planning for Machining the Gears	
D. Byotra and R.K. Bhushan	1551
Modeling, Analysis and Fatigue Life Prediction of Lower Suspension Arm	
M.M. Rahman, M.M. Noor, K. Kadirgama, M.A. Maleque and R.A. Bakar	1557
Feasibility Study of CAD and CAM Technology in Garments Industries of Bangladesh	
L.M. Baral	1563
3D Modelling and Analysis Flow of Air Conditioner Outdoor Fan for Cost Reduction	
S.H. Choi and J.Y. Kim	1568
Numerical Simulation of Electromagnetic Stirring Effect on Flow Pattern of Metal Melt	
H. Namaki, S.H. Seyedein, M.R. Afshar Moghadam and R. Ghasemzadeh	1574
Effect of Draw Bead Height on Wall Features in Rectangular Deep-Drawing Process Using Finite Element Method	
S. Thipprakmas	1580
Building a Simulation Model for Prediction of Temperature Distribution in Laser Sealing Processing of Advanced Ceramic Coatings	
K.M. Adel, E.K. Ekhlas and J.G. Mariyam	1586
Comparative Study of the Strain Signal and the Edited Strain Signal	
S. Abdullah, N.B. Ismail, M.Z. Nuawi, C.K.E. Nizwan and M.F. Abdullah	1592
The Tredgold Method in Reverse Engineering to Check the Assembly of a Conical Spur Gear Using CAD	
F. Belarifi and E. Bayraktar	1598
Finite Element Simulation of Nosing of Tubular Circular Metallic Tubes Using Parallel Computing	
R.N. Khapre and P.K. Gupta	1604
Thread Forming of a Micro Screw for Storage Devices Using Finite Element Analysis	
H.W. Lee, J.H. Song, G.A. Lee, H.J. Lee and K.D. Park	1613
Geometric Modeling and Multi-Axis NC Machining for Custom-Made Femoral Stem	
J.N. Lee, R.S. Lee and K.Y. Chang	1619
Relation between Surface Roughness and Overlap Interval in Fused Deposition Modeling	
D.K. Ahn, J.H. Kweon, J.H. Choi and S.H. Lee	1625

Low Bit Rate Video Coding for Remote Desktop Operation of CNC Milling H. Al Qodri Maarif, T.S. Gunawan and Afzeri	1631
Effect of Moulding Sand Properties on Cost Effective Hybrid Rapid Casting Solution for Zinc Alloy R. Singh and T. Lal	1637
Virtual Simulation and Remote Desktop Interface for CNC Milling Operation Afzeri, A.G.E. Sutjipto, R. Muhida, M. Konneh and Darmawan	1643
Conceptual Design of Aluminium Metal Matrix Composite Brake Rotor System M.A. Maleque, M.M. Rahman and M.S. Hossain	1648
Finite Element Analysis of Tubular Ovality in Oil Well T. Pervez and S.Z. Qamar	1654
Application of Finite Element Method in Optimal Design of Flip-Chip Package Y.C. Lin and Y.C. Xia	1660

9. GREEN MANUFACTURING AND MANAGEMENT

A Quality Steps for a Sustainable Development: Case of Food Processing F. Yamina, B. Nouredine and M. Djebabra	1672
Reverse Engineering of Motorcycle Chain M.A. Maleque, M.M. Rahman and M.S. Hossain	1678
Determination of Arsenic (III) and Arsenic (V) Species by Preconcentration and Inductively Coupled Plasma Mass Spectrometry (ICP-MS) in Drinking Water Samples Analysis M.M. Rahman, A. Mohd Yusof, A.K.H. Wood and A. Shamsiah	1684
Speciation of Mercury in Environmental Water Samples with Seasonal Change M.M. Rahman and A. Mohd Yusof	1690
Environmental Diagnostic for a Sustainable Development A. Money and B. Nouredine	1696
A Fundamental Study of Vibration Assisted Machining A. Abdur-Rasheed	1702
Reconfigurability Approach in Manufacture of Moulds and Dies A.O. Oke, K.A. Abou-El-Hossein and N.J. Theron	1708

10. Others

A Material and Product Audit Method for Determining the Level of Quality S.A. Darestani, M.Y. Ismail, N. Ismail and R.M. Yusuff	1714
Application of Multi-Objective Genetic Algorithm (MOGA) for Design Optimization of Valve Timing at Various Engine Speeds A.K.M. Mohiuddin, M.A. Rahman and Y.H. Shin	1719
Fatigue Life Optimization of Steel by Thermomechanical Treatment with the Use of Physical Thermomechanical Simulator J. Džugan, Z. Nový and M. Sosnová	1725
Taguchi Method for the Determination of Optimised Sintering Parameters of Titanium Alloy Foams S. Ahmad, N. Muhamad, A. Muchtar, J. Sahari, K.R. Jamaludin, M.H.I. Ibrahim and N.H.M. Nor	1731
Mechanical Assessment of Dissimilar Diffusion Joints of CP-Ti to Stainless Steel M.R. Soltan Mohammadi and S.F. Kashani-Bozorg	1737
Behavior of Mortarless Wall Subjected to In-Plane Combine Loading N.A. Safiee, M.S. Jaafar and J. Noorzaei	1746
Bistable Characteristics of Liquid Crystal Devices with Patterned Alignment Films J. Bin Lias, M. Kimura and T. Akahane	1752
Resource Allocation, Batching and Dispatching in a Stochastic Flexible Job Shop U.M. Al-Turki, S. Arifusalam, M. El-Seliaman and M. Khan	1758
Thermodynamic and Kinetic Modelling Hydrogenation of Titanium Particles and Sheets W.Q. Li, J. Zhou and W.M. Gao	1764
A Study on Cooling Characteristics of Thermoelectric Cooling System Using Thermoelectric Materials H.D. Yang, H.S. Yoon and Y.K. Oh	1770

Investigation on Constant and Variable Feed Speeds Effects in Ring Rolling Process Using 3D FEM	
N. Anjami and A. Basti	1776
The Effect of Lithium on the Microstructure and Morphology of Fe-Rich Intermetallic Compounds in 360 Cast Alloy	
N. Nasiri, M. Emamy and M. Bigdeli	1782
Polishing Force Modification near the Boundary of a Part Surface	
H.Y. Tam, M. Hua and L. Zhang	1788
A Heuristic Solution of Multi-Item Single Level Capacitated Dynamic Lot-Sizing Problem with Setup Time	
S. Parveen and M.A. Akthar Hasin	1794
Statistical Wear Model for Adhesively Bonded Tools	
S.M. Darwish, A.M. Al Samhan and H.A. Helmy	1802
Study on Machining Characteristic of Aeronautical Material under Orthogonal Dry Cutting	
A. Ginting and M. Nouari	1812
Finite Element Method for Predicting the Cohesive Strength of DLC Film on 316L Stainless Steel by Four Point Bend Test and Validation with Experimental Results	
M.M. Morshed, S.M. Daniels and M.S.J. Hashmi	1823
Effect of Nano Silica on the Sinterability of Hydroxyapatite Dense Bodies	
R. Tolouei, C.Y. Tan, R. Singh, I. Sopyan and W.D. Teng	1832
Effects of Bismuth Oxide on the Properties of Calcium Phosphate Bioceramics	
W.H. Yeo, R. Singh, C.Y. Tan, K.L. Aw, R. Tolouei, H. Kelvin, I. Sopyan, W.D. Teng and E. Hoque	1839
Synthesis of High Fracture Toughness of Hydroxyapatite Bioceramics	
C.Y. Tan, R. Singh, R. Tolouei, I. Sopyan and W.D. Teng	1849
Sintering of Hydroxyapatite Ceramic Produced by Wet Chemical Method	
R. Singh, R. Tolouei, C.Y. Tan, K.L. Aw, W.H. Yeo, I. Sopyan and W.D. Teng	1856
Elucidating the Effects of Helical Passageways in Abrasive Flow Machining	
A.C. Wang, K.Y. Chen, K.C. Cheng and H.H. Chiu	1862
Characterization of Globular Microstructure in NMS Processed Aluminum A356 Alloy: The Role of Casting Size	
F. Akhlaghi and A.H.S. Farhood	1868
Effect of the SiC Content on the Tribological Properties of Hybrid Al/Gr/SiC Composites Processed by <i>In Situ</i> Powder Metallurgy (IPM) Method	
F. Akhlaghi and S. Mahdavi	1878
Characteristic Study on Micro Aspheric Surface Using Diamond Tool Cutting	
Y.T. Liu and W.C. Chang	1887
Erosive Wear of Glass Fiber and B₂O₃ Reinforced Epoxy Composites	
M. Bagci and H. Imrek	1893
Casting of Net Inserted Aluminum Alloy Composite Strip	
R. Nakamura, T. Haga, K. Takahashi, S. Kumai and H. Watari	1899
Roll Casting of Al-40%Sn-1%Cu Alloy Strip	
R. Nakamura, T. Haga, S. Kumai and H. Watari	1905
Strip Casting of 6061 and Recycled 6061 Alloy by an Unequal Diameter Twin Roll Caster	
T. Haga, H. Inui, R. Nakamura, S. Kumai and H. Watari	1911
A Study on the Tensile Property of Jute Yarns Using Weibull Distribution	
S.K. Shaha, S. Dyuti, Q. Ahsan and M. Hasan	1917
Effect of Alkali Treatment on Surface Morphology and Properties of Jute Yarns	
S.K. Shaha, S. Dyuti, Q. Ahsan and M. Hasan	1922
Wear Characteristics of Fe-C-Si and Fe-C-Al Cast Irons	
S.K. Shaha, M.M. Haque and A.A. Khan	1928
Study on the Microstructure and Properties of Fe-C-Si and Fe-C-Al Cast Irons	
S.K. Shaha, M.M. Haque and A.A. Khan	1933
Al-4.5 Cu-3.8 Fe <i>In Situ</i> Composites: Effect of Rolling on Microstructure and Wear Properties	
S.K. Shaha, A.S.W. Kurny, M. Hasan and S. Dyuti	1939

Laser Cutting of Thick Sheet Metal: Surface Plasma Characteristics and Cutting Quality Assessment B.S. Yilbas	1944
An Investigation on the Effect of Sonication Time and Dispersing Medium on the Mechanical Properties of MWCNT/Epoxy Nanocomposites A. Montazeri, A. Khavandi, J. Javadpour and A. Tcharkhtchi	1954
Response Surface Analysis of EDMED Surfaces of AISI D2 Steel M.K. Pradhan and C.K. Biswas	1960
HVOF Coating of Inconel 625 Blended with WC: Fracture Toughness Measurement Z.Y. Al-Taha, M.S.J. Hashmi and B.S. Yilbas	1972
Effects of Testing Temperature and Sliding Speed on the Wear Behavior of a Low Alloy Gas Nitrided Steel M. Emami, H.M. Ghasemi and J. Rassizadehghani	1982