

International Journal of Materials, Mechanics and Manufacturing

CONTENTS

Volume 6, Number 1, February 2018

• **Materials Science and Engineering**

- Overall Parameters Design and Optimization System for Gun and Bullet.....1
Zhifang Wei and Fang Wang
- Comparison of Shear Design Models for Reinforced Concrete Beams Strengthened with Inorganic Matrix
Composite Materials.....8
Christos G. Papakonstantinou and Dimitris Bekiaris
- An Experimental Study on Superplastic Hemispherical Forming of Aluminum Lithium 2195 Alloy.....15
Ho-Sung Lee, Jong-Hoon Yoon, and Joon-Tae Yoo
- Exfoliated Sodium Montmorillonite Reinforced Elastomeric Nanocomposites: Ablation, Thermal Transport /
Decomposition / Transitions and Mechanical Aspects.....19
Sadia Sagar Iqbal, Nadeem Iqbal, Tahir Jamil, and Arshad Bashir
- Effect of sub-Zero Treatment on Ageing of Aluminium Composite.....26
Ahmet Taşkesen, Sinan Aksöz, and A. Tamer Özdemir
- First-Principles Study of Segregation Behavior of Cr/Ti/Y at Grain Boundary in Vanadium..... 31
Shujuan Lee, Yong Yi, and Peng Bee
- Thermal Insulation from Construction Coating Mixed with Porous Calcium-containing Solid Waste.....37
Hsi-Chi Yang and Tsung-Pin Tsai
- Simulation of Motion of Micrometer Sized Droplets of Dielectric Water-based Paint under Air Flow and
Electric Field.....41
Wei-Wei Xu and Yong-Ming Zhang
- #### • **Mechanical Design-Manufacture and Automation**
- The Development of Control Systems Electromagnetic Lifting Installation.....45
*Altyn A. Aikeyeva, Bakhyt A. Zhautikov, Kanat M. Makhanov, Aigerim. R. Tanskozhanova, Perizat A.
Mukhtarova, and Arailym E. Ayubekova*
- Propeller Design Requirements for Quadcopters Utilizing Variable Pitch Propellers.....51
Ian R. McAndrew, Elena Navarro, and Ken Witcher
- Numerical and Experimental Research on Hydraulically Generated Noise of a Regenerative Automotive Fuel
Pump.....57
Ji-Fu Wang, Hui-Hua Feng, Yong-Xuan Huang, and Xiao-Long Mou
- Framework for Part Families Associated with Setup Sequence Based Similarity in Reconfigurable
Manufacturing System / Cellular Manufacturing System.....63
Muhammad Ali, Amer Baqai, Sajid Ullah Butt, and Syed Maaz Hasan

Identification of Process Parameters in Electromagnetic Pulse Welding and Their Utilisation to Expand the Process Window.....	69
<i>Pabst Christian and Groche Peter</i>	
Optimizing Gear Micro Geometry for Minimum Transmission Error When Considering Manufacturing Deviation.....	74
<i>Layue Zhao, Minggang Du, and Yang Yang</i>	
The Development of Numerical Control System of Vertical Rotary Forging Machine.....	78
<i>Jian Xiao and Chundong Zhu</i>	