

# Manufacturing Technology

Journal for Science, Research and Production

Volume VIII

December 2008

## Contents

|                                                                                                                                                              |           |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|
| <b>The Effect of Cooling Process on Residual Stresses in a Surface Layer of Ground Components .....</b>                                                      | <b>5</b>  |
| <i>Jan Jersák, Zdeněk Pala, Nikolaj Ganev</i>                                                                                                                |           |
| <b>High Speed Grinding Process .....</b>                                                                                                                     | <b>12</b> |
| <i>Imrich Lukovics; Ondřej Bílek</i>                                                                                                                         |           |
| <b>Defects that May Appear while Anodizing Selected Al-alloys .....</b>                                                                                      | <b>16</b> |
| <i>Štefan Michna, Silvia Kuśmierczak</i>                                                                                                                     |           |
| <b>Investigation of Influence of Grinding Parameters on Shape Errors and Surface Roughness of Holes ..</b>                                                   | <b>21</b> |
| <i>K. Wieczorowski, St. Legutko</i>                                                                                                                          |           |
| <b>The Effect of Grinding Fluid Nozzle Geometry on Jet Coherent Length .....</b>                                                                             | <b>25</b> |
| <i>M. N. Morgan, V. Baines-Jones</i>                                                                                                                         |           |
| <b>Accuracy Dimension Monitoring of Laser Process Cutting .....</b>                                                                                          | <b>31</b> |
| <i>Libuše Sýkorová, Imrich Lukovics</i>                                                                                                                      |           |
| <b>Investigation of Milled Surfaces of High-alloy Tool Steels in Respect to the Cutting Speed .....</b>                                                      | <b>35</b> |
| <i>Kamil Kolařík, Nikolaj Ganev, Zdenek Pala, Jaroslav Barcal, Totka Bakalova, Pavel Zeman</i>                                                               |           |
| <b>Surface Layer Properties of Titanium Alloys Ti6Al4V, Ti 7Al3,5Mo0,33Si after Milling and Grinding Operations and Their Influence on the Fatigue .....</b> | <b>40</b> |
| <i>Bumbálek Bohumil, Bumbalek Leoš</i>                                                                                                                       |           |
| <b>Elid Grinding of Sapphire-Experimental Approach .....</b>                                                                                                 | <b>46</b> |
| <i>Peidong Han, Ioan D. Marinescu</i>                                                                                                                        |           |
| <b>Application of Vortex Grinding Wheel for Grinding Ni-based Alloy EI 698 VD .....</b>                                                                      | <b>50</b> |
| <i>Neslušan Miroslav</i>                                                                                                                                     |           |
| <b>The Thermal State of the Workpiece Surface Layer during Productivity Grinding .....</b>                                                                   | <b>55</b> |
| <i>Marin Gostimirovic, Pavel Kovac</i>                                                                                                                       |           |
| <b>Modulus Proposal for a Multi Axes Grinding of Sculptured Surfaces .....</b>                                                                               | <b>61</b> |
| <i>Karel Janečka</i>                                                                                                                                         |           |
| <b>Design of High-Efficiency Bonds for Diamond Grinding Wheel .....</b>                                                                                      | <b>74</b> |
| <i>Alexej Popov</i>                                                                                                                                          |           |
| <b>Influence of a Tool Geometry on Surface Tension of a Workpiece .....</b>                                                                                  | <b>76</b> |
| <i>Ivan Mrkvica, Ryszard Konderla, Vladislav Ochodek</i>                                                                                                     |           |
| <b>Results of Technological Procedure Optimization of Hydraulic Cylinder Production .....</b>                                                                | <b>79</b> |
| <i>N. Náprstková, L. Růžicka</i>                                                                                                                             |           |

ISSN 1213248-9



9 771213 248008