

## CONTENTS

|  |    |
|--|----|
| <b>INTRODUCTION</b> .....  | 1  |
| <b>CONTENTS</b> .....  | 2  |
| <b>USE OF STATISTICAL METHODS FOR QUALITY CONTROL</b><br>BLIZNYUKOV Sergey .....   | 5  |
| <b>THE INFLUENCE OF TEMPERATURE ON DEFORMABILITY OF MAGNESIUM ALLOYS<br/>MG-AL-ZN-MN</b><br>BRZYSKI Konrad .....                                       | 6  |
| <b>FE- CONTAINING INTERMETALLIC PHASES IN HYPOEUTECTIC SAND CAST AL-SI-MG<br/>ALLOYS</b><br>DYBOWSKI Bartłomiej, .....                                 | 7  |
| <b>INFLUENCE OF WASTE OF LEATHER TANNING ADDITION AND SINTERING<br/>PARAMETERS ON PHYSICAL PROPERTIES OF CERAMIC GRANULES</b><br>GODZIERZ Marcin ..... | 8  |
| <b>MICROSTRUCTURE AND PROPERTIES OF SINTERED MG-10GD-5Y-ZR MATRIX<br/>COMPOSITE REINFORCED WITH BORON NITRIDE PARTICLES</b><br>GRYC Adam.....          | 9  |
| <b>EVALUATION OF STAINLESS STEELS AND TITANIUM ALLOYS USED IN MEDICINE</b><br>HLINKA Josef .....   | 10 |
| <b>DEPOSITION OF AL<sub>2</sub>O<sub>3</sub> COATING ON THE FIRECLAY SUBSTRATE</b><br>JANÍKOVÁ Barbora.....  | 11 |
| <b>SURFACE TENSION OF STEELS</b><br>KALUP Aleš .....   | 12 |
| <b>THE INFLUENCE OF CASTING WALL THICKNESS ON MICROSTRUCTURE AND<br/>PROPERTIES OF ALSI5 ALLOY BEFORE AND AFTER HEAT TREATMENT</b><br>KAZEK Anna ..... | 13 |
| <b>MIROSTRUCTURE AND MECHANICAL PROPERTIES OF HR3C AFTER SERVICE</b><br>KLIMASZEWSKA Klaudia .....   | 14 |
| <b>MATERIALS RESEARCH OF WELDED JOINTS OF INNOVATIVE PIPES FOR TIGHT<br/>WALLS USED IN POWER INDUSTRY</b><br>KONIECZNA Natalia .....                   | 15 |
| <b>CASTING TECHNOLOGY OF MANUFACTURING OF METALLIC FOAMS WITH<br/>IRREGULAR CELL STRUCTURE</b><br>KROUPOVÁ Ivana .....                                 | 16 |

|   |    |
|---|----|
| <b>INFLUENCE OF HOMOGENIZATION ON SYNTHESIS OF <math>\text{SrSi}_2\text{O}_2\text{N}_2</math>: <math>\text{Eu}^{2+}</math> POWDERS VIA THE SOLID STATE METHOD</b> |    |
| KRZYWDA Paweł   | 17 |
| <b>HYDROGEN DIFFUSION CHARACTERISTICS IN THE TRIP 800 STEEL WITH HIGHER PHOSPHORUS CONTENT</b>  |    |
| KULOVÁ Tatána   | 18 |
| <b>EXPERIMENTAL AND EMPIRICAL EVALUATION OF HEAT TRANSFER COEFFICIENT IN SQUARE DUCT IN LAMINAR-TURBULENT TRANSIENT REGIME</b>                                    |    |
| MACHŮ Mario   | 19 |
| <b>VOLUME STABILITY OF WASTE FROM IRON AND STEEL MAKING</b>   |    |
| MAIEROVÁ Petra  | 20 |
| <b>NON-METALLIC INCLUSIONS ACTING AS POTENTIAL NUCLEI FOR ACICULAR FERRITE IN DIFFERENT STEEL GRADES</b>  |    |
| MAYERHOFER Alexander  | 21 |
| <b>MULTIWALLED CARBON NANOTUBES AS A REINFORCEMENT OF ALUMINUM BASED COMPOSITES, MANUFACTURED FOR TRIBOLOGICAL APPLICATIONS</b>                                   |    |
| MICZEK Aleksandra   | 22 |
| <b>MICROSTRUCTURE AND PROPERTIES OF AZ31B MAGNESIUM ALLOY AFTER HOT FORGING</b>   |    |
| MIGAS Damian  | 23 |
| <b>CONCRETES WITH IMPROVED RESISTANCE AGAINST SUDDEN TEMPERATURE CHANGE</b>   |    |
| MRÁZ David  | 24 |
| <b>DIRECT ELECTROCHEMICAL REDUCTION OF MAGNETITE IN SOLUTIONS OF <math>\text{NaOH} - \text{H}_2\text{O}</math> SYSTEM</b>   |    |
| NOVÁK Vlastimil   | 25 |
| <b>FLOW CURVE PREDICTION IN A WIDE RANGE OF THERMOMECHANICAL CONDITIONS OF 38MNV56 STEEL</b>  |    |
| OPĚLA Petr  | 26 |
| <b>MECHANICAL AND ELECTRICAL PROPERTIES OF THE LARGE-SIZED ALSI7MG SAND CASTING AFTER HEAT TREATMENT</b>  |    |
| POLOCZEK Łukasz   | 27 |
| <b>POSSIBILITIES OF THE USE OF METALLIC FOAMS</b>   |    |
| RADKOVSKÝ Filip   | 28 |

|   |    |
|---|----|
| <b>DEVELOPMENT OF ADVANCED MATERIALS FOR CENTRIFUGAL CASTING ROLLS</b><br>RUŠAJ Jakub.....  | 29 |
| <b>MANUFACTURING OF MANTELPIECE CLOCK INSPIRED BY CUBISM</b><br>SALVA Petr.....   | 30 |
| <b>COMPARISON OF AIR FLOW VELOCITY METERS BASED ON DIFFERENT PRINCIPLE<br/>AND EVALUATION OF THEIR CONFIDENTIALITY FOR PRACTICAL MEASUREMENT<br/>PURPOSES</b><br>MONIAKOVÁ Sylva.....   | 31 |
| <b>COMPARISON OF EXPERIMENTALLY DETERMINED AND CALCULATED LIQUIDUS<br/>AND SOLIDUS TEMPERATURES OF LARGE DIAMETER CONTINUOUSLY CAST STEEL</b><br>STROUHALOVÁ Michaela.....              | 32 |
| <b>TRANSFORMATION BEHAVIOR OF RETAINED AUSTENITE DURING TENSILE<br/>DEFORMATION IN FE-2MN-1.5SI-0.4C ALLOY</b><br>STRYCKOVA Stanislava .....  | 33 |
| <b>CAVITATION WEAR OF COBALT-NICKEL BASED COATINGS PTA DEPOSITED</b><br>SZALA Mirosław .....  | 34 |
| <b>INFLUENCE OF THE SECOND COLD ROLLING AND SLOW LABORATORY HEATING<br/>TO THE 620°C DURING HIGH TEMPERATURE ANNEALING ON PRECIPITATION IN<br/>GOES</b><br>VOLODARSKAJA Anastasia ..... | 35 |