

Table of contents

Zbigniew Burski, Hanna Krasowska-Kolodziej: Verification of energy consumption modelling in a vehicle under operating conditions of a transport company	3
Daniel Bury, Waldemar Izdebski, Jacek Skudlarski, Stanisław Zajac: The hierarchy of impact of technical and economic factors on farmers' dissatisfaction with orchard sprayers	9
Anna Ciupak, Bożena Gładyszewska, Dariusz Dziki: Change in strength of tomato fruit skin during ripening process	13
Michał Cupiał, Józef Kowalski, Anna Szeląg-Sikora: Assumptions for collecting information for a module concerning a machinery park of ecological farms in GEKKO programme	19
Kazimierz Dreszer, Ryszard Grzechowiak, Tadeusz Pawłowski, Jan Szczepaniak: The possibilities of using linear models in the automation of agricultural machinery driving	27
Dariusz Dziki, Justyna Tomiło, Renata Różyło, Janusz Laskowski, Urszula Gawlik-Dziki: Influence of moisture content on the mechanical properties and grinding energy requirements of dried quince (<i>Cydonia Oblonga</i> Miller)	35
Dariusz Dziki, Bożena Gładyszewska, Renata Różyło, Renata Polak, Stanisław Rudy, Andrzej Krzykowski: The size reduction theories of solid foods	41
Andrzej Gazda, Zdzisław Żółkiewicz: Thermal and physical properties of some refractory layers used in lost foam technology	47
Bożena Gładyszewska: Poisson's ratio of anisotropic biological media	53
Bożena Gładyszewska, Anna Ciupak, Dariusz Chocyk, Leszek Mościcki, Andrzej Rejak, Tomasz Oniszczyk: The anisotropic nature of the strain of biodegradable film produced from TPS starch	59
Tadeusz Głuski: Method for determining the ventilation air quantity in buildings for cattle on a base of CO ₂ concentration	63
Irena Izdebska-Szanda: The economical and ecological aspects of using the modified water-glass	67

Waldemar Izdebski, Jacek Skudlarski, Stanisław Zajac: Hierarchy of influence of modern technical solutions used in agricultural tractors on the effectiveness of their work	73
Waldemar Izdebski, Jacek Skudlarski, Stanisław Zajac: Impact of agricultural tractors advancement on productivity of selected machine units	77
Lech Jakliński, Dariusz Lodwik, Włodzimierz Malesa, Jerzy Wiktorski: The test stand calculations of the research station of sub-atmospheric pressure press with implementation of the finite element method	83
Arkadiusz Jamrozik, Wojciech Tutak: CFD Modeling of Complete Thermal Cycle of SI Engine	89
Ján Jobbágy, Ján Simoník, Marek Klimkiewicz, Roland Varga: Quality of operation of bauer rain-star 90/300 reel sprinkling machines in agrocoop imel sa agricultural company	95
Jacek Kapica: Entropy analysis of energy price movement	101
Stanisław Kokoszka: The use of production potential of vehicles on farms of different sizes	105
Andrzej Kornacki, Khachatur Kyureghyan, Szymon Ignaciuk: Application of akaike information criterion for the detection of outliers	111
Alina Kowalczyk-Juśko, Krzysztof Józwiakowski, Magdalena Gizińska, Janusz Zarajczyk: Jerusalem artichoke (<i>Helianthus Tuberosus</i> L.) as renewable energy raw material	117
Anna Kowalska, Wiktoria Sobczyk: Directions of the reclamation and development of wasteland	123
Andrzej Krzykowski, Dariusz Dziki, Renata Polak, Stanisław Rudy: Influence of heating plates temperature on freeze drying energy requirements and quality of dried vegetables	129
Waldemar Kurowski: Fourier transformation – an important tool in vibroacoustic diagnostics	133
Sławomir Kurpaska, Hubert Latała, Jarosław Knaga: Energy efficiency analysis of flat and vacuum solar collector systems	143
Sławomir Kurpaska, Hubert Latała: Energy efficiency of ground heat exchangers co-operating with a compressor heat pump	151
Khachatur Kyureghyan, Wiesław Piekarski: The analysis of oil balance in crank bearing	157
Barbara Maniak, Izabela Kuna-Broniowska, Wiesław Piekarski, Marek Szmigielski, Beata Zdybel, Agnieszka Sagan: The physicochemical evaluation of oils used for frying chips in the aspect of biofuel production	163
T. Oniszcuk, A. Wójtowicz, M. Mitrus, L. Mościcki, M. Combrzyński, A. Rejak, B. Gładyszewska: Biodegradation of TPS mouldings enriched with natural fillers	171
Zenon Pirowski, Marek Kranc, Jerzy Olszyński, Andrzej Gwiżdż, Marek Gościański: Cast agricultural tools for operation in soil	179
Zenon Pirowski, Marek Kranc, Jerzy Olszyński, Andrzej Gwiżdż, Marek Gościański: Performance testing of cast agricultural tools operating in soil	183
Zenon Pirowski, Marek Kranc, Jerzy Olszyński, Andrzej Gwiżdż: Testing ADI properties when used for cast agricultural tools operating in soil	189
Andrzej Rygałło: Modelling of the robot sensor system	195
Paweł Sobczak, Kazimierz Zawislak, Marian Panasiewicz, Jacek Mazur, Tomasz Oniszcuk: The quality of the mixing process depending on selected technical parameters	199

Anna Stankiewicz: An algorithm for identification of the relaxation spectrum of viscoelastic materials from discrete-time stress relaxation noise data	203
Anna Stankiewicz: Design scheme for the stress relaxation experiment for maxwell model identification	209
Anna Stankiewicz: On determination of the relaxation spectrum of viscoelastic materials from discrete-time stress relaxation data	217
Anna Stankiewicz: On measurement point-independent identification of maxwell model of viscoelastic materials	223
Anna Szelaĝ-Sikora, Michał Cupiał: Production and technical potential of farms united in the selected producer group	231
Marek Szmigielski, Wiesław Piekarski, Barbara Maniak, Dariusz Andrejko, Grzegorz Zajęc, Andrzej Masłowski, Agnieszka Sagan, Beata Biernacka: Effect of fried dishes assortment on chosen properties of post-frying soybean oils as raw material for production of engine biofuels	237
Marek Ścibisz, Piotr Makarski: Efficiency of the generating set with synchronous generator supplied with single-phase electricity receivers	245
Georgij Tajanowskij, Wojciech Tanas, Jurij Atamanov: Modelling of the diesel engine in researches of dynamics of machine tractor units	249
Renata Walczak: Quantitative time management methods in project management	257
Piotr Wanke: In-use investigations of the changes of lubricant properties in diesel engines	263
Grzegorz Wcisło, Maciej Strzelczyk: Application of chromatography to the analysis of quality of RME type biofuels obtained from pure, fresh rapeseed oil and from the waste (previously fried) oil of the same origin	269
Tadeusz Złoto, Konrad Kowalski: Oil pressure distribution in conical ring gaps	273
Tadeusz Złoto, Konrad Kowalski: Pressure distributions in oil film in the front gap of a hydrostatic thrust bearing	279
Tadeusz Złoto, Damian Sochacki: Impact of exploitation parameters on the hydrostatic relief of the cylinder block in an axial piston pump	285
Tadeusz Złoto, Piotr Stryjewski: Load of the kinematic pair piston-cylinder block in an axial piston pump	291
Andrzej Baliński: Effect of thermal conditioning of silica-sodium glass on the kinetics of zeta potential changes during soluble sodium silicate gelation	297
Ryszard Kulig, Stanisław Skonecki, Grzegorz Łysiak: The effect of binder addition on the parameters of compacted poplar wood sawdust	303
Józef Kowalczyk, Janusz Zarajczyk, Paweł Sobczak, Jacek Mazur, Stanisław Rudy, Dariusz Cycań, Mirosław Winiarczyk, Krzysztof Jadwisieńczyk, Katarzyna Zalewska: The usefulness of briquettes and pellets from selected plant materials for energy purposes	311
Sławomir Kurpaska, Hubert Latała: Analysis of the influence of variable insulating power of a storing tank on energy effects in the conversion system of solar radiation	315
Boris Pasaman and Viktor Zakharchuk: The Determination of the Parameters of a Ploughshare-Rotor Potato Digger	323

List of the Reviewers

1. Andrzej Ambrozik
2. Wołodymyr Didukh
3. Vasil Dmytriv
4. Kazimierz Dreszer
5. Dariusz Dziński
6. Mieczysław Dziubiński
7. Krzysztof Gołacki
8. Jerzy Grudziński
9. Oleg Kalakhan
10. Agnieszka Kaleta
11. Mykoła Kohut
12. Stanisław Kokoszka
13. Adam Koniuszy
14. Józef Kowalczyk
15. Sławomir Kurpaska
16. Elżbieta Kusińska
17. Andrzej Kusz
18. Dmytro Kuzenko
19. Kazimierz Lejda
20. Ryszard Lewkowicz
21. Andrzej Marciniak
22. Andrzej Marczuk
23. Jerzy Merkisz
24. Leszek Mościcki
25. Janusz Mystowski
26. Taras Shchur
27. Stanisław Sosnowski
28. Georgij Tajanowski
29. Wojciech Tanaś
30. Małgorzata Trojanowska
31. Janusz Wojdalski
32. Tadeusz Złoto
33. Daniela Żak