

BULLETIN

SUKHOI STATE TECHNICAL UNIVERSITY OF GOMEL

SCIENTIFIC-PRACTICAL JOURNAL HAS BEEN PUBLISHED SINCE MARCH 2000 1 (96)' 2024

Editor-in-Chief

A. V. PUTSIATA, Doctor of Engineering, Professor, Rector of Educational Institution "Sukhoi State Technical University of Gomel"

Deputy editor-in-chief

A. A. BOIKA, Doctor of Engineering, Professor (Gomel, Belarus) Responsible Secretary

A. S. RYABTSEVA

Editorial Address:

Pr. Octiabria, 48, 246746, Gomel, Republic of Belarus Tel./Fax +375 232 214 373 E-mail: nich@gstu.by

Editorial Board

Al-Areki Niyazi A. S., Doctor, Professor (Taiz, Yemen), O. D. Asenchik, Ph.D. in Physics and Mathematics, Associate Professor (Gomel, Belarus), M. N. Vereshchagin, Doctor of Engineering, Professor (Gomel, Belarus), V. A. Golub, Doctor of Economics, Professor (Gomel, Belarus), N. V. Gruntovich, Doctor of Engineering, Professor (Gomel, Belarus), A. G. Gurko, Doctor of Engineering, Professor (Kharkov, Ukraine), N. P. Dragun, Ph.D. in Economics, Associate Professor (Minsk, Belarus), V. V. Kirienko, Doctor of Social Science, Professor (Gomel, Belarus), V. A. Kovtun, Doctor of Engineering, Professor (Gomel, Belarus), V. P. Kudin, Doctor of Engineering, Professor (Gomel, Belarus), M. I. Mikhailov, Doctor of Engineering, Professor (Gomel, Belarus), V.V. Mulyak, Doctor of Engineering (Moscow, Russia), N. K. Myshkin, Academician of the National Academy of Sciences of Belarus, Doctor of Engineering, Professor (Gomel, Belarus), A. B. Nevzorova, Doctor of Engineering, Professor (Gomel, Belarus), A. V. Ovsyannik, Doctor of Engineering, Professor (Gomel, Belarus), E. N. Poddenezhny, Doctor of Chemistry, Associate Professor (Gomel, Belarus), V. D. Poroshin, Doctor of Geology and Mineralogy, Professor (Gomel, Belarus), A. S. Semenov, Doctor of Physics and Mathematics, Associate Professor (Mirny, Russia), S. A. Sultanova, Doctor of Engineering, Professor (Tashkent, Uzbekistan), A. V. Sychou, Ph.D. in Engineering, Associate Professor (Gomel, Belarus), N.V. Sycheva, Ph.D. in Economics, Associate Professor (Gomel, Belarus), S. I. Timoshin, Doctor of Physics and Mathematics, Professor (Gomel, Belarus), A. S. Titlov, Doctor of Engineering, Professor (Odessa, Ukraine), **P. A. Hilo**, Doctor of Physics and Mathematics, Professor (Gomel, Belarus), N. N. Khimich, Doctor of Engineering, Professor (St. Petersburg, Russia), O. N. Shablovsky, Doctor of Physics and Mathematics, Professor (Gomel, Belarus), V. M. Shapovalov, Doctor of Engineering, Professor (Gomel, Belarus), A. P. Shevlyukov, Doctor of Economics, Professor (Gomel, Belarus)

CONTENT

Mechanical Engineering and Machine Science

Shablovsky O. N., Kontsevoy I. A. Kinetic properties of a dendrite tip in a supercooled melt of pure metal

Bekirov E. L., Dzhemilov E. Sh., Selyametov R. U. Assessment of cutting fluids	
supplying method influence on contact processes when drilling stainless	
steel 12X18H10T	15
Seidaliev R. S., Kurmanov R. D., Fukala A. A., Dzhemilov E. Sh. Experimental	
research on cutting fluids and technological means influence on contact processes	
during face milling	23
Chernin R. I., Putsiata A. V., Kotsur I. L. Improvement of technologies for repair	
work and production of tension joints for wheel pair elements of railway rolling stock	29
Popov V. B. Features of analytical description of self-propelled mower KC-200	
aggregation mechanism	41
Materials Science	
Popkova Yu. I., Grigoriev A. Ya. Influence of steel characteristics on the corrosion	
resistance of tubing under carbon dioxide corrosion conditions	48
Nikityuk Yu. V., Bayevich G. A., Maximenko A. V., Aushev I. Yu. Optimization	
of parameters for pulsed laser cladding of 30XTCH2A steel via genetic algorithm	63
Nevzorova A. B., Romanenko V. V. Simulation modelling of the load-bearing capacity	
of composite wooden sleepers taking into account train load	72
Energy industry	
Kapansky A. A. Key directions and global practices of efficiency and reliability	
improvement of water supply	82
Geology and oil and gas fields development	
Poroshina A. D. Secondary changes in carbonate rocks of Nepa-Botuoba anteclise	
in the south of the Siberian platform and their impact on the reservoir properties	
of productive horizons	99

• Published materials are reviewed

• Indexes for subscribing: for individuals – 00063

for legal parties – 000632

[•] The journal is included in the Register of scientific journals of the Republic of Belarus for publishing the dissertations results on technical sciences – Mechanical Engineering, Material Sciences, Power Engineering (HAC RB order № 101 of 04.06.2005): on economics sciences – Economics and National Economy Management (HAC RB order № 26 of 02.02.2011) and in the Russian Scientific Citation Index (RSCI) database