



BULLETIN

SUKHOI STATE TECHNICAL UNIVERSITY OF GOMEL

SCIENTIFIC-PRACTICAL JOURNAL 4 (99)' 2024
HAS BEEN PUBLISHED SINCE MARCH 2000

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)

CONTENT

Mechanical Engineering and Machine Science

<i>Mihailov M. I. Modeling the kinematics of a mobile articulated wheeled robot motion</i>	5
<i>Seidaliev R. S., Fukala A. A., Temindarov I. E. Reasoning for the selection of wheels characteristics for grinding cold rolling rolls</i>	13

Materials Science

<i>Poddenezhnyi E. N., Drobyshevskaya N. E., Boika A. A., Yrbanovich V. S., Grigoriev S. V. Features of thermochemical synthesis of nanocrystalline powders of lanthanum-alloyed erbium oxide</i>	19
<i>Uhartseva I. Yu., Bobrysheva S. N., Seliukov I. V. Problems of household polymer waste disposal: technology and ecology. Part I. Recycling and biodegradation (review)</i>	28
<i>Usova V. N. Features of melting and crystallization in mixtures of polyethylene terephthalate and aliphatic polyketone</i>	43

Energy Industry

<i>Ovsyannik A. V. Hydrodynamics and heat transfer during the flow of a condensate film along a vertical surface</i>	50
<i>Ovsyannik A. V., Kluchinskiy V. P. Heat exchange during condensation of pure ozone-friendly refrigerant R404A on longitudinally finned horizontal pipes</i>	58
<i>Shiroglazova N. V. Methods of increasing the efficiency of cooling towers</i>	70
<i>Kiselevich V. V. Optimization of individual heat supply system with an electric boiler</i>	78
<i>Trifonov A. G., Khodko A. S. Nuclear energy today</i>	88
<i>Kozlov A. V., Tilichenko M. P. Circuit implementation of frequency regulation of rotation speed of asynchronous electric motor rotors</i>	99

Geology and oil and gas fields development

<i>Serebrennikov A. V., Bocharov N. V., Tkachev V. M. On some ways to increase the efficiency of well drilling (on the example of oil fields of the Republic of Belarus)</i>	105
<i>Gorbachenko V. S., Demianenko N. A., Lopushko M. A. Thermal effect of hot water processing on asphalt-resin-paraffin deposits</i>	119

- 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
- Published materials are reviewed
- Indexes for subscribing: for individuals – 00063
for legal parties – 000632