



BULLETIN

SUKHOI STATE TECHNICAL UNIVERSITY OF GOMEL

SCIENTIFIC-PRACTICAL JOURNAL
HAS BEEN PUBLISHED SINCE MARCH 2000 2(85)' 2021

Editor-in-chief

A. V. PUTSIATA

Vice-editor

A. A. BOIKO

Executive secretary

A. S. RIABTSEVA

Editorial board:

O. D. Asenchik, M. N. Vereshagin, V. A. Golub,
N. V. Gruntovich, A. G. Gurko, N. P. Dragan, V. V. Kirienko,
V. A. Kovtun, V. P. Kudin, N. K. Myshkin, I. A. Murashko,
M. I. Mihailov, V. V. Muliak, A. A. Pankov,
E. N. Poddenezhny, V. D. Poroshin, B. V. Sorvirov,
A. V. Sychov, N. V. Sychova, S. I. Timoshin, A. S. Titlov,
P. A. Hilo, N. N. Himich, O. N. Shablovsky, V. M. Shapovalov,
A. P. Shevlyukov

Address of editorial board: Pr. Octabria, 48, 246746, Gomel, the Republic of Belarus
Tel./fax +375 232 214 373. E-mail: nich@gstu.by

CONTENT

Machine building and machine engineering

- Prudnikov A. P., Bodunova A. D. Distribution of forces between units planetary torus screw gear* 5
- Panteleenko F. I., Okovity V. A., Devoyno O. G., Okovity V. V., Astashinsky V. M., Uglov V. V. Formation and research multilayer composite plasma coatings* 15
- Mikhailov M. I., Lapko O. A. Analysis of properties of modified epoxy composites* 28
- Kovtun V. A., Korotkevich S. G., Baran I. A. Calculation for angular welded strength firefighter tank connections motor vehicles under variable voltages* 35
-

Materials Science

- Poddenezhny E. N., Drobyshevskaya N. E., Boiko A. A., Dobrodey A. O., Davydova O. V. Effect of synthesis method on morphology and structure of yttrium-aluminum garnet powders alloyed with cerium* 44
- Savchenko S. A., Vosnaya V. I., Astapenko I. V. Evaluation of the effectiveness of the regimeshomogenizing annealing of bearing steel grades at OJSC "BSW – management company of "BMC" holding"* 52
- Popov V. B. Analytical definition of traction load of tractor from the side of aggregated mounted plough* 62
-

| | |
|--|-----|
| Power Engineering | |
| <i>Rudak O. G. Investigation of mechanisms of initial heating of pine wood in unsaturated environment</i> | 69 |
| <i>Gruntovich N. V., Kapansky A. A., Pupin V. M., Safonov D. O., Fedorov O. V. Effect of operating engines for residual voltages of assemblies integrated station load</i> | 78 |
| Electrical Engineering and Electronics | |
| <i>Pervenyonok R. E., Sitsko A. L. Method of controlling power active filter based on adaptive filtrations</i> | 91 |
| <i>Doroshenko I. V., Pogulyaev M. N. Asynchronous Simulation Model Machines with Phase Rotor in Matlab Simulink</i> | 99 |
| <i>Pantelev S. V., Malashin A. N. Development of method for determination of inductive parameters of synchronous electric machine with multiphase fractional tooth winding</i> | 107 |
| Geology and development of oil and gas fields | |
| <i>Gorbachenko V. S. Development of sealing device wellhead polished rod sucker rod downhole pump</i> | 122 |
| Computer science, computing technics and management | |
| <i>Prokopenko D. V. Calculation methodology of rit-piles group by deformations in nonlinear-deformable soil base</i> | 130 |
| The chronicle of scientific life | 136 |

- 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).
- Published materials are reviewed.
- Authors' opinion does not necessarily the same as of editorial board.
- The reprinting of materials published in the journal is permitted only with the consent of both the author and publisher.
- Indexes for subscribing: for individuals – 00063
for legal parties – 000632