

**Аддитивные технологии**

1198	Ivan Shakirov, Pavel Kuznetsov, Vitaliy Bobyr', Anton Zukov, Irina Nikitina	Creating an element of the reactor vessel internals of the VVER by directed energy deposition (DED) methods
0089	Dmitrii Shatagin, Yuri Kabaldin, Maksim Anosov, Pavel Colchin	Intelligent diagnostics and control of 3D printing processes by electric arc surfacing of workpieces made of cold-resistant materials on a CNC machine using machine learning approaches and neuromorphic calculations
0113	L V Sedykh, S V Albul, D B Efremov and M A Sukhorukova	Application of additive technologies for manufacturing a wear-resistant steel pipe outlet
0141	A V Balyakin, R A Vdovin and R R Kyarimov	Study of FDM technology applications in the casting production of GTE details
0249	A A Voznesenskaya, D A Kochuev, A S Raznoschikov, R V Chkalov	Formation of aluminum alloy parts with working internal cavities by selective laser melting
0399	S V Kovalev, A I Portnykh, V Y Aslamova	Research of Ti-6Al-4V titanium alloy welded joints made by electron beam welding, designed for operation in cryogenic conditions
0430	S A Egorov, T V Tarasova, S M Terekhina	Production technology for polymeric composite materials by additive manufacturing methods
0497	P A Podrabinnik, R S Khmyrov, A D Korotkov, A E Shtanko, A V Gusarov	Investigation of processes occurring above laser exposed area during powder bed fusion by optical diagnostics
1142	Daniil Klimyuk, Mikhail Serezhkin, Andrey Plokhikh	Application of 3D Printing in Sheet Metal Forming
1233	A A Shumkov, T R Ablyaz, K R Muratov and S S Sidhu	Prediction of the properties of photopolymer prototypes
1251	Ozan Can Ozaner, Gokhan Dursun, Guray Akbulut	Effects of Wire-EDM Parameters on the Surface Integrity and Mechanical Characteristics of Additively Manufactured Inconel 939

**Моделирование технических систем. CAD/CAM/CAE – технологии**

0243	O V Anikeeva, A G Ivakhnenko and M L Storubev	Analysis of industrial performance in terms of achieving quality goals
0275	S V Lukina, V V Makarov, M F Dobrolyubova and M V Krutyakova	Formation and selection methodology of digital transformations programs for an industrial enterprise using machine learning algorithms
0314	Sergey G Glech, Yuriy E Obzherin, Sergey N Fedorenko	Reliability Analysis of Technological Cell With Start-up Device

0409	A Inozemtsev, A Dubrovskaya, K Dongauzer	Deformations and casting defects depending on the gating system for gas turbine engine castings
0511	Osipov K., Krugovoy A., Novikov V	Applicability of statistical modelling in problems of cardiopulmonary resuscitation device's state control
0043	G B Burdo and A N Bolotov	Models of intelligent CAD in engineering divisions with training elements
0051	E.A. Abidova, A.E. Dembitsky, A.A. Lapkis, A.V. Chernov	Synthesis of Control Systems for Complex Technical Objects
0146	R A Rzaev, A U Dzhalmukhambetov, O Yu Dergunova and L E Semenova	Mathematical modeling of changes in temperature distribution during friction stir welding in massive samples
0151	Andrey A. Cherepashkov, Valeriy N. Voronin, Anastasiya G. Sharaukhova	Target training of technologists in a virtual enterprise environment
0313	Yuriy E Obzherin, Mikhail M Nikitin and Stanislav M Sidorov	Hidden Markov Model of the Control System Latent Failures of Technological Cell
0357	A.S. Baranov и A.S. Pavlyuk	System for dynamic synthesis of differential equations of mobile machines motion
0448	Pavlov P.Yu., Polyanskov Yu.V., Zheleznov O.V., Sidorova A.I.	Using skeleton geometry of parts and assembly units of aviation pipeline for digital shadow realization
0449	Yu.V. Polyanskov, M.N. Yardaeva, S.V. Lipatova and I.V. Lutoshkin	Digital enterprise comprehensive evaluation
0004	Andreeva L.I., Krasnikova T.I.	On the necessity of organizational transformations in the system of repairing the mining equipment
0045	S V Karpushkin, M N Krasnyanskiy, E N Malygin and V G Mokrozub	Determination of maximum productivity the technological system of multi-product chemical plant
0046	S V Karpushkin, V G Mokrozub, E N Malygin and S V Karpov	Decision-making support when determining the heating systems parameters for hydraulic presses
0074	I Yu Trushkova S P Grachev, A L Flaksman and A A Prigarin	Expanding the field of applied research of CAD / CAM / CAE technologies through ethnographic museology
0075	I Yu Trushkova, S P Grachev, A L Flaksman and A A Prigarin	CAD-technologies in archaeological reconstructions: scientific and educational experience of Vyatka State University
0091	S I Kanyukov, A V Konovalov and O Ju Muizemnek	A knowledge base model of the computer-aided design system for solids of revolution press-forging
0101	Artem Obukhov, Mikhail Krasnyanskiy, Maxim Nikolyyukin	Mathematical modeling and optimization of adaptive information system

0112	R M Khusainov, R R Mindiyarov, B I Petrovetskiy	Solving optimization problems in the design of fixtures for flexible manufacturing systems
0118	L Mironova, R Nigay and E Nigay	About one method of modeling high-gradient temperature fields in the welding of shell structures made of carbon and high-alloy structural steels
0119	D L Rakov	Design and modeling of new technologies with advanced morphological approach as CAI method
0133	D M Korosteleva, A A Samsonov, P S Solov'ev and S I Solov'ev	Finite difference approximation of eigenvibrations of a bar with oscillator
0134	A A Samsonov, D M Korosteleva, P S Solov'ev and S I Solov'ev	Eigenvibrations of a beam with two mechanical resonators attached to the ends
0145	R A Rzaev, A U Dzhalmukhambetov, A S Ismukhambetova and I M Derzhavin	Dynamics of temperature distribution during friction stir welding of butt joints of copper and aluminum
0149	A.M. Antonov, V.I. Erofeev, A.O. Malkhanov	Excitation of waves by a high-speed source moving along the border gradient-elastic half-space
0150	V.I. Erofeev, E.E. Lisenkova, A.O. Malkhanov, I.S. Tsarev	Dynamics of the beam laying on the elastic basis of the Pasternak model carrying the moving constant load
0170	Evgenij Kudryavcev, Dipotet Mollinedo	Modeling and calculations of mechanical characteristics of transport means
0173	Denis Dedov, Alexey Arkhipov, Alexander Sidorchuk	A mathematical model for the selection of visualization system components in training complexes
0175	E A Danilova, T V Antropova, A A Skotnikova and S V Borodulina	CAD-technology is a tool for teaching bachelor students industrial technology
0190	Alexander Kharitonov, Elena Busigina, Olga Nikitina and Ygor Maslennikov	Simulation of operation of a flow sensor of variable pressure differential
0193	V V Telegin and I V Telegin	A study of the cultivator suspension's strength based on its solid model in Autodesk Inventor Professional
0221	K. V. Cherkasov, S. A. Meshkov, M. O. Makeev, V. D. Shashurin	Impact of technological errors of design parameters of broadband radio signals mixer based on resonant-tunneling diode on its electrical characteristics
0241	A V Meleshko, V A Desnitsky and I V Kotenko	Modelling attacks in self-organizing wireless sensor networks of smart cities
0248	L.E. Kushchenko, S.V. Kushchenko, A.N. Novikov and I.A. Novikov	Modeling traffic streams on a road network section

0261	Galina Volkova, Tatyana Turbeeva, Oleg Grigoriev, Alexandr Sobolev, Ruslan Dikov	Application of cognitive technologies for modeling of design and technological knowledge and automation of design activities
0277	S V Lukina, V M Makarov, S A Ovchinnikov and O E Zimovets	Sampling method for evaluation and control of industrial product quality
0293	D V Moiseev	Implementation of a probabilistic subtractor based on a probabilistic adder
0298	A D Semenov, A V Volkov and N I Shchipakina	Operational control algorithm of parameters of high-pressure sodium lamps based on a statistical time series model
0311	L B Matusov	On regularization and vector optimization of machine design variables
0312	S.N. Dolmatov, P.G. Kolesnikov	The use of CAD when designing forest machines
0325	A. Nazaryev and P. Bochkarev	Implementation of an enlarged block of design procedures for the analysis of requirements for the assembly of high-precision products
0338	O M Ogorodnikova, S V Yeltsin and S V Martynenko	Reconstruction of thermo-physical properties to improve material database for casting simulation
0340	A V Skatkov, A A Bryukhovetskiy and D V Moiseev	A model for detecting vulnerabilities in UMV interfaces, based on probabilistic automata
0347	A V Tolok, M A Loktev, A A Sycheva	Building a space for an analytic function that describes a spline curve
0362	S N Grigoriev, V A Dolgov, A A Leonov	Improving simulation adequacy of production processes by jointly applying the planned and situational reservation logic of jobs in the machine parts manufacturing batch
0363	S N Grigoriev, V A Dolgov, P A Nikishechkin and N V Dolgov	Information model of production and logistics systems of machine-building enterprises as the basis for the development and maintenance of their digital twins
0455	Dmitry Kurasov	Calculation and design of mechanical transmissions with the help of various computer-aided design in conditions of educational process
0462	L.V. Shipulin, S.A. Pavlov and E.V. Nesteruk	CALCULATION OF THE COMPLEX OF VIRTUAL SURFACE ROUGHNESS PARAMETERS OBTAINED IN THE SIMULATION GEOMETRIC GRINDING MODEL
0510	Aleksandr Limar, Aleksey Babushkin, Ludmila Kinash, Aleksey Malykov, Kirill Naginaev	Study of feedwater regenerative heating operating modes at reduced loads of a turbogenerator by 300 MW power unit capacity
0516	Alexander S. Geyda	Probabilistic graph-theoretic models for dynamic and information capability problems research

0518	O V Filipovich, A I Balakin and N A Balakina	Model of selective assembly process of rod-piston group parts of internal combustion engines
0519	Peschansky Aleksey, Aleksander Kharchenko, Elmar Yagyaev	Multi-operation machine with tool redundancy as a two-component recoverable system with instantly replenished time reserve
1114	R M Khusainov, A R Sabirov, E R Ziangirova	Study of vertical milling machine layout in terms of rigidity

**Инновационные материалы. Упрочняющие технологии и покрытия**

0098	S.V. Vodopyanova, G.G. Mingazova, R.E. Fomina and R.S. Sayfullin	The role of dispersed phase in the formation of Ni – CEC
1188	Baraz V.R., Gerasimov S.S., Gruzdeva I.A.	Structural characteristics of a copper-nickel alloy obtained by selective laser smelting
1039	Ivan Safronov, Alexander Ushakov	EFFECT OF SIMULTANEOUS IMPROVEMENT OF PLASTICITY AND MICROHARDNESS OF AN AMORPHOUS-NANOCRYSTALLINE MATERIAL BASED ON Co, AS A RESULT OF LASER PROCESSING OF NANOSECOND DURATION
0491	Y Z Vassilyeva, A Y Pak, T Y Yakich and G Y Mamontov	Morphology features of molybdenum carbide synthesized by DC arc discharge plasma in air
0492	A Y Pak, A A Gumovskaya	Synthesis of submicron titanium carbide in a direct current arc discharge plasma by a vacuumless method
0493	R S Martynov, Y Z Vassilyeva and G Y Mamontov	Analysis of boron carbide powder by high resolution transmission electron microscopy
0057	S V Fedorov, I I Sazanov, D V Igonov and A R Seitkulov	Effect of hydro-jet treatment on the adhesion of the PVD coating to the carbide substrate as a method for pretreatment of the surface
0092	V V Belov, P V Kuliaev and A A Artemiev	Optimization of granulometric composition of mineral part of fine-grained concrete modified by ultrasound
0136	A V Ulyanova, M O Senina, D O Lemeshev	Dense ceramics based on magnesium aluminate spinel with the addition of gallium oxide
0282	D G Sergeev, E A Marinin, N I Marinina, and M D Durseneva	The choice of pulse laser radiation modes for hardening a metal cutting saw
0425	E R Galimov, N Ya Galimova, P B Shibaev and V M Samoylov	Comparative study of structural properties of syntactic carbon foams made using different process approaches
0426	E R Galimov, V L Fedyaev, P B Shibaev and V M Samoylov	Influence of the composition and synthesis technology on the structure of syntactic carbon foams

0428	E M Martynov, O.S. Zhelezkov	Searching for a rational schedule of a burnishing process with superim-position of ultrasonic vibrations
0453	A R Valeeva, A R Gimranova, E M Gottlieb and E R Galimov	Anti-friction epoxy coatings modified with rice husk
1015	Borodulin A. S., Kallinikov A. N., Storozhuk I. P., Alekseev V. M., Tereshkov A.G.	Heat-resistant constructional materials based on thermoplastic polysulfones
1028	Elena Chekalova, Andrej Zhuravlev	Improving the durability of titanium alloy products through a combined hardening technology
1055	Konstantin Kurashkin, Vasily Mishakin	Study of relationship between damage and amount of $\alpha'$ -martensite in AISI 321 steel after low-cycle fatigue
1088	E.A. Yatsenko, V.A. Smoliiy, B.M. Goltsman and D.A. Golovko	Foam Glass Based on Russian Far East Raw Materials and its Use in Mechanical Engineering
1108	A.V. Ryabova, E.A. Yatsenko, L.V. Klimova, A. Yu. Fanda	Development of a weld enamel technology for the installation of steel pipelines with an internal silicate-enamel coating
1148	Anna Churakova, Elina Kayumova, Nikita Tolstov	Microstructure evolution, formation of Ti <sub>3</sub> Ni <sub>4</sub> nanoparticles and nanotwins (001)B19' and interrelation with mechanical properties in the Ti-50.7 at. % Ni alloy during multiple martensitic transformations and subsequent aging
1181	Rida Gallyamova, Vladimir Dokichev, Rustam Safiullin, Fanil Musin	The effect of the concentration of water in the silica sol-gel solution on the formation of an oxide film on the surface of carbon fibers
1208	A.V. Gonchar, O.V. Andreeva, M.S. Anosov	Study of fatigue failure of construction steels by using modern methods of digital processing of microstructural images
1214	Viktor Kuzmin, Igor Gulyaev, Dmitriy Sergachev , Sergey Vashchenko, Lysakov A.V., Palagushkin B.V.	Supersonic air-plasma spraying of carbide ceramic coatings
1221	Yurov V.Y., Ashkinazi E.E., Zavedeev E.V., Martyanov A.K., Antonova I.A., Ralchenko V.G.	Optical diagnostics of microwave plasma in process of micro / nanocrystalline diamond deposition on hard alloy tools
1224	Ashkinazi E.E., Ryzhkov S.G., Martyanov A.K., Bolshakov A.P., Sergeichev K.F., Shevchenko M.Y., Khomich A.A., Sovyk D.N., Ralchenko V.G.	Temperature stabilization of WC-Co cutting inserts with feedback to IR pyrometer upon growth of multilayer diamond coatings by microwave plasma chemical vapor deposition
1249	Plesovskikh A.Y., Krylova S.E., Oplesnin S.P., Kurnoskin I.A.	Import-substituting technology for manufacturing parts of the oil and gas industry with the application of tungsten based wearresistant coatings

1268	Просунцов П.В., Прахеева А.А.	Проектирование тепловой изоляции космических аппаратов на основе углеродных материалов с открытой пористостью
1191	Крылова Светлана Евгеньевна, Оплеснин Сергей Петрович	Технология повышения износостойкости деталей оборудования нефтегазодобывающей отрасли с использованием газопорошковой лазерной наплавки
0460	M K Usarov and G I Mamatisaev	Calculation on seismic resistance of box-shaped structures of large-panel buildings
0474	K G Pugin	Influence of quality indicators of the surface of mineral particles on the properties of asphalt concrete
0482	B E Eddin, A J Ali, J M Hadi and E N Tugolukov	Investigation of the Influence of Adding MWCNTS to an Alkyd-Urethane Coating on the Thermal Conductivity Coefficient of the Coating
1004	Mikhail Kotelnikov, Aleksey Shchenyatsky, Anna Basharova	Analysis of the Processing Simulation Results and the Stress-Strain Behaviour of Low-Stiffness Brittle Workpieces
1005	Aleksey Shchenyatsky, Anna Basharova, Mikhail Kotelnikov	Stress-Strain Behaviour as a Factor Constraining the Processing Conditions for Low-Stiffness Brittle Workpieces
1013	Nelyub V.	Method for production carbon plastics with multifunctional properties
1020	Andrey V. Brover, Galina I. Brover, Olga B. Moysova	Transformation of the structure and properties of materials at laser-acoustic processing
0026	Ekaterina Kosenko, Natalia Baurova, and Vladimir Zorin	Quality control of parts which were manufactured from polymeric composite materials with hybrid matrix with the application of method of infrared thermography
0062	Anatoly A. Asheichik, Mohammad Reza Bahrami, and Daniil K. Zorin	Research of frost-resistant rubber for seals
0103	I.G. Zhikhareva, V.V. Schmidt, D.V. Denisenko	THE ROLE OF NANOSTRUCTURE FORMING MECHANISM IN THE PRODUCTION OF UNIVERSAL FUNCTIONAL COATINGS WITH FE-NI, CO-MN, NI-CR ALLOYS
0104	V.V. Schmidt, I.G. Zhikhareva, D.V. Denisenko	PREDICTION OF PHASE COMPOSITION AND ANTICORROSIVE PROPERTIES OF ZN-NI-CO ALLOYS
0130	S D Sayfullayev, D B Efremov and Yu S Tarasov	Effect of the Step in the Blow Channel of a Blast Furnace Tuyere on Improving Natural Gas Combustion
0137	V A Dubrovsky, A Yu Amelicheva, E S Kalmykov	Research of electric resistance surfacing (welding-on) of cylindrical steel and cast iron samples with low-carbon low-alloyed filler wire
0142	G.S. Zhukova, Z.R. Radjabov and G.V. Boykova	FEATURES OF THE STRUCTURE OF INTERFACIAL LAYERS IN POLYMER COMPOSITES

0147	E A Kozlovskaya, M O Senina and D O Lemeshev	Production of dense ceramics based on magnesium aluminate spinel with an evaporating additive
0153	E V Ageev, A S Pereverzev and V L Selyutin	Study of the particle size distribution of electroerosive materials obtained from waste alloys based on W-Ni-Fe in lighting kerosene
0154	E V Ageev, A S Pereverzev and V L Selyutin	Study of the morphology and elemental composition of electroerosive materials, obtained from waste based on W-Ni-Fe alloy in lighting kerosene
0157	H Ahmad, A A Markina, M V Porotnikov and F Ahmad	A review of carbon fiber materials in automotive industry
0181	A V Vyboishchik, M Yu Popov	Contemporary Methods of Production of Titania
0203	V V Bulychev and S A Golubina	Thermodynamic substantiation of the conditions of metal adhesion in dry friction
0212	I N Tsareva, O B Berdnik, E N Razov and M V Maximov	The study of high-temperature stability of the thermoprotective coating made of zirconium dioxide
0213	I N Tsareva, O B Berdnik, L A Krivina and M V Maksimov	The study of high-temperature stability of the heat-resisting intermetallide coating
0223	A Yu Rodichev, A V Gorin, S V Kolpakova and M A Tokmakova	The influence of surface preparation methods on the adhesion of film antifriction coatings
0231	R.A. Abirov, B.E. Khusanov, D.A. Sagdullaeva	Numerical modeling of the problem of indentation of elastic and elastic-plastic massive bodies
0235	V V Ovchinnikov, E V Luk'yanenko, I A Kurbatova and S V Yakutina	Investigation of the effect of the treatment of the surface of VT6 alloy on the penetration depth of implantable ions
0236	E V Luk'yanenko, I A Kurbatova and S V Yakutina	Physico-mechanical properties of VT6 titanium alloy after combined treatment
0237	V V Ovchinnikov, N V Uchevatkina	Investigation of the effect of ion implantation on the structure of the surface layer of VT20 titanium alloy
0240	I.N. Shcherbakov	BASIC CONCEPT OF TRIBOCRYSTALOCHEMISTRY OF COMPOSITION ANTIFRICTION COATINGS
0242	L S Shibryaeva, M V Podzorova, Yu V Tertyshnaya and M E Chaplygin	Agricultural materials based on eco-friendly polymers
0266	Vasilii Kostin, Sergey Orlov, Vladimir Kochetkov and Natalya Sokolova	Investigation of the resistance of protective coatings to fouling by the mollusk <i>Dreissena polymorpha</i>
0289	Petr Ogar, Elena Ugryumova, Denis Gorokhov, Artem Zhuk	Influence of the characteristics of hardenable material on elastoplastic flattening of spherical asperities



0301	R A Bikulov	Theoretical methods for calculating the structure and properties of cast iron based on Fe-C-Al systems
0302	R A Bikulov	Analysis of the properties of castings obtained by direct synthesis based on iron-containing industrial waste engineering
0303	Rinat Bikulov	Experimental determination of interaction parameters in materials Fe-C-Al systems
0318	Isotov A.I., Isotov S.A.	Evaluation of the effectiveness of using solid lubricants to reduce the wear of the brushes of electric AC machines
0319	A M Gazizov, E V Popova, O V Kuznetsova and A A Akhmadullin	Method of increasing the fire resistance of wood
0353	S V Skvortsova, V S Spector, S M Sarychev, A A Orlov	Influence of surface structures on torque of VT6 alloy cortical screws
0368	E Inshakova, A Inshakova and A Goncharov	Engineered nanomaterials for energy sector: market trends, modern applications and future prospects
0378	A I Panchenko, I Ya Kharchenko and M Mirzojan	Soil strengthening using fine composite binder based on carbide slurry
0413	M M Skripalenko, O A Kobelev, S D Sayfullayev	Burnout resistance assessment of air tuyere in blast furnace
0419	E.V. Ageeva, S.V. Khardikov, A. N. Novikov	X-ray spectral microanalysis of X13 steel powders obtained by electroerosive dispersion
0424	Yu S Tarasov, O A Kobelev, S D Sayfullayev	Improving the heat insulation efficiency of the blast furnace tuyere
0435	V I Loganina, Al Saedi Bassam Shareef Deneef	Resistance to peeling of coatings based on dry calcareous mortar with an additive based on amorphous aluminosilicates
0442	M N Nagorkin, V P Fyodorov, E V Kovalyova	Optical properties of component surfaces processed by surface plastic deformation methods
0443	E.V. Ageeva, S.V. Khardikov, A.Yu. Altukhov, A.N. Novikov	The quality study of composite galvanic coatings, obtained using electroerosive powders
0461	M K Usarov, G T Ayubov, D M Usarov	Continual model and dynamic calculation of buildings under seismic impacts
0463	I E Permyakova, E N Blinova and A A Dmitrievskii	Mechanical behavior and crystallization features of amorphous alloys based on cobalt and iron after annealing
1001	V I Loganina	The influence of the hereditary factor on the change in the quality of the appearance of protective and decorative coatings

1012	PyiPhyo Maung, Phone Thant Kyaw and G V Malysheva	Optimization of technological modes for moulding composites using vacuum infusion technology
1024	Jacek Sitko, Witold Biały, Ivanova T.N	Analysis of impact the refining technology on the mechanical strength cast steel
1029	F. V. Vodolazskiy, S. M. Illarionova, Kosmatskiy Ya.I. , N. A. Barannikova	Cross-sectional structure and properties of shell-billet of PT-7M titanium alloy after expanding
1033	Mai Xuan Dung, Y.A. Puchkov, S.L. Berezina	Influence of uphill quenching on residual stresses and properties of alloy D16
1034	Aleksandr Nazarko, Roman Plomodyalo	Optimization of Cast Rods' Composition for Corrosion-Resistant Facing of Sealing Surfaces of Clamp Seal Urea Service Valves
1038	Anatoly A. Asheichik, Mohammad Reza Bahrami, Daniil K. Zorin	Antifriction lubricant for vacuum
1045	Anatoliy Venediktov, Roman Sokolov, Ilya Kokorin, Maksim Kuzmin	The role of diffusion in the aging process of electrolytic iron
1047	Natalya Volgina, Aleksander Shulgin, Svetlana Khlamkova	Possibilities of Diagnosis of Stress Corrosion Cracking of Main Gas Pipelines From the Point of View of Microbiology
1048	Romanenko Igor, Petrovnina Irina, Pint Eduard, Romanenko Maria	THE ROLE OF THE COMPOSITE MODIFIER IN THE STABILIZATION OF THE SOIL BASE
1050	A.D. NOVIKOV, M.F. SELEMENEV, L.Y. FROLENKOVA, A.S. TARAPANOV	Prediction of the stability of nanocoatings of tool working surfaces
1059	Ekaterina Dmitrieva, Ekaterina Potapova	Effect of heat-treated polymineral clays on the properties of Portland cement paste
1065	M.A. Gervasyev, M.A. Filippov, Y.A. Skladyuk, I.V. Fidirko	Effect of Structure of high-carbon alloys on their wear resistance
1066	V. G. Shmorgun, A. I. Bogdanov, V. P. Kulevich	The oxidation behaviour of layered Al-Ni coating at high-temperature heating
1069	Alexander Bolotov, Olga Novikova, Vladislav Novikov	Adhesive wear in a magnetic field
1075	Valentin Ushkov, Oleg Figovsky, Grigor Nalbandyan	Performance of the materials used for repair of reinforced concrete structures of communication conduits
1077	Chiadighikaobi Paschal Chimeremeze, Tarka Rilwan Olakunbi	Economic Evaluation of Expanded Clay Basalt Fiber Concrete in Nigeria Structural Construction

1079	E.V. Zenkov	Investigation of the stress-strain state of racks of light steel thin-walled structures by the method of digital image correlation
1082	G.V. Dmitrienko, D.V. Yastrebov, E.V. Seltsov	Radio wave phase method for polymer materials testing
1085	Mikhailov S.B., Sharapova V.A., Mikhailova N.A.	Dilatogram Interpretation for 15Kh13N2MFB Steel Samples
1092	Vera Berezovskaya, Ksenija Mamchits, Svetlana Estimirova	Formation of the structure of high-nitrogen duplex steel in the process of heat treatment
1095	Sergey I. Koryagin, Nikolay L. Velikanov, Oleg V. Sharkov	Effect of polymer coating on stress concentration of sheet element with a hole
1098	S M Gorbatyuk, S D Sayfullayev, O A Kobelev, M A Suhorukova	Choice of Thermal Insulation for Burnout Protection of a Blast Furnace Blast Tuyere
1103	Natalya Antonova	INFLUENCE OF RHEOLOGY AND ACTIVATION ENERGY ON THE STRUCTURE OF PROTECTIVE COATINGS FORMED FROM CMC SUSPENSIONS WITH AL POWDER
1106	V.I. Treskova, O.T. Shipina, M.R. Garaeva	Investigation of composite material obtained by structural modification of cellulose with azonol
1117	Anna Shirokozuhova, Alexander Ryazantsev, Vasily Gritsyuk	Study of the Strength Characteristics of Filtering Elements Made by Electron-Beam and Electroerosion Perforation Methods
1118	Vladimir Gavrish, Natalya Cherkashina, Tatyana Chayka, Georgy Baranov	Radioprotective properties of composite materials
1119	Vladimir Gavrish, Tatyana Chayka, Georgy Baranov, Olga Gavrish	Investigation of the influence of nanomodifying additives on the strength properties of concrete
1120	Alexander Vyboishchik, Mikhail Popov	Production of deep-coloured pigments from non-ferrous raw materials
1129	Ignatova A.M.a, Kuznetsov D.A.a, Ignatov M.N.	MATHEMATICAL METHODS FOR MORPHOLOGICAL DESCRIPTION OF PARTICLES OF THE SOLID COMPONENT OF WELDING AEROSOLS
1130	Latypov R.A., Bulychev V.V., Latypova G.R., Paramonov S.S.	Dislocation model of the formation of a welded joint in cold welding
1132	Nikolai Vetkasov, Leonid Khudobin, Valeriy Sapunov, Sergey Varlamov	Obtaining, microstructure and microhardness of carbon-doped aluminomatrix composites
1140	I. N. Odintsev	Investigation of elastic properties of composite materials with use of ESPI
1143	V. Konovalova	The effect of temperature on the corrosion rate of iron-carbon alloys

1144	Nikolay Merentsov, Alexander Persidskiy, Vitaliy Lebedev, Alexander Golovanchikov	Elastically deformable packing materials based on the waste of metalworking machines and hydrodynamic adjustment of contact blocks in mass-exchange apparatuses
1145	Victor Ovchinnikov, Elena Luk'yanenko, Svetlana Yakutina	The effect of laser irradiation of the surface of VT6 titanium alloy on its microstructure, roughness and friction coefficient
1146	Nikolay Merentsov, Alexander Persidskiy, Vitaliy Lebedev, Alexander Golovanchikov	Calibration of technological parameters of adjustable elastically deformable blocks of packed materials in mass exchange apparatuses
1147	Victor Ovchinnikov, Irina Kurbatova, Nadezda Uchevatkina	Determination of the effect of surface treatment on the physicomechanical properties of a titanium alloy
1149	H H Valiev, K N Astakhov, A Ja Minaev, G V Stepanov	Deformation and strength properties of silicone magnetoactive elastomers
1154	Romanenko Igor, Fadin Alexey, Petrovnina Irina, Romanenko Maria	INFLUENCE OF FINE QUARTZ SAND FACTION ON THE PROPERTIES OF COMPOSITE MATERIAL
1179	Petr Ogar, Elena Ugryumova, Ivan Koryakyn	The influence of the mechanical properties of copper at elevated temperatures on the tightness of the sealing joint
1199	Alsu Yusupova, Rezida Ahmetova, Linara Baraeva, Lenar Shafigullin	Investigation of the activating effect of metal chlorides (Al, Zn, Ti, Fe) in the reactions of surface functional groups of amorphous silicon dioxide
1200	Alsu Yusupova, Linara Baraeva, Galina Medvedeva, Aleksandr Bobryshev	Technology and properties of high-strength sulfur concrete modified with organometallophosphate compounds
1202	Evgeniy Eremin, Alexander Losev, Sergey Borodikhin, Ivan Ponomarev, Arina Matalasova	Heat resistance of the metal deposited by flux-cored wire 10G7M3S2AFTYu
1210	S. Y. Zhachkin, N. A. Penkov, R. V. Belyaev, M.V. Kirgintsev	Thermophysical parameters of the process to obtain the required microgeometry of composite electroplating coatings based on chromium
1218	E.P. Shalunov, Yu.O. Vladimirova	Heat - and wear-resistant composite material based on copper powder for heavy duty friction pairs
1223	Anton Pilipenko, Oleg Rubtsov, Igor Bessonov, Ekaterina Bobrova, Boris Efimov	Evaluation of the effectiveness of thermal insulation based on foamed polyethylene
1236	Evgeny Ageev, Rashit Latipov and Ekaterina Ageeva	X-ray diffraction analysis of powders, obtained by electroerosive dispersion of a W-Ni-Fe alloy

1237	Evgeny Ageev and Artur Sysoev	Granulometric composition of powders, obtained by electroerosive dispersion of high-chromium steel in kerosene
1239	S M Gorbatyuk, A N Pashkov, I G Morozova, O N Chicheneva	Technologies for applying Ni-Au coatings to heat sinks of SiAl metal matrix composite material
1246	Valery Alisin	The effect of high temperatures on the mechanical data of zirconia-based ceramics
1247	D.N. Klimenko, N. Y. Yurchenko, N.D. Stepanov, S.V. Zhrebtsov	Prediction of strength characteristics of high-entropy alloys Al-CrNb-Ti-V-Zr systems
1248	Ekaterina Ageeva, Rashit Latipov and Alexandr Altukhov	Dimensional characteristics of wear-resistant electroerosive titanium-tungsten-cobalt powders for galvanic coatings
1253	Natalia Romanova, Lenar Shafigullin, Friel Akhmetov, Gulnaz Shafigullina	Study of the quality of parts made from unplasticized polyvinyl chlorid
1257	Y.Khattab and S. E. Alexandrov	Luminescent MoS <sub>2</sub> nanoparticles for optoelectronics applications
1258	Y.Khattab and S. E. Alexandrov	Morphological study of MOCVD MoS <sub>2</sub> films "effect of substrate's position"
1259	A.A. Tomchuk, L.F. Muradimova, S.O. Shirshikov, M.V. Zheleznyi, M.A. Libman, V.P. Filippova, M.F. Khairullin	Influence of severe plastic deformations in the bridgman anvil on lattice parameters and microhardness of ferromagnetic metals
1263	Ivan Korchunov, Ekaterina Potapova	Phase composition of CO <sub>2</sub> -hardened cement in the presence of chloride ions
1265	Zhesfina Blednova, Petr Rusinov	Deformation Behavior of a Surface Composition of Materials with Shape Memory Effect in the Conditions of Multi-Factor Impacts
1271	Vladimir Tabakov, Aleksey Chikhranov, Yana Dolzhenko, Evgeny Zykin	Study of the influence of deposition conditions on the structural parameters and mechanical properties of coatings based on niobium nitride
1272	Denis Davydov, Nataliya Kazantseva, Igor Ezhov, Evgeniya Popova	Effect of alloying on the $\gamma$ - $\gamma'$ microstructure of W-free Co-based superalloys

**Машиноведение и детали машин**

0207	A.V. Yurkevich, A.V. Tereshin and V.A. Soldatkin	The Blagonravov Continuously Variable Transmission: Importance of Internal Force Functions for Torque Transforming
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0208	A.V. Tereshin, A.V. Yurkevich and V.A. Soldatkin	The Blagonravov continuously variable transmission: computational model of oscillation generator loading
0209	V.A. Soldatkin, A.V. Yurkevich and A.V. Tereshin	Blagonravov Continuously Variable Transmission: Computational Model of Load Distribution over Elements of Control System
0420	A D Ezhov, L V Bykov and N S Golikov	Assessment Of The Influence Of Contact Surface Roughness On Thermal Conductivity
0030	A N Bolotov and G B Burdo	Friction surface destruction in a magnetic field
0257	I E Agureev, M Yu Elagin, D V Pavlov and R N Khmelev	Studies of the process of heating air in the inlet pipe for starting a diesel engine at low temperatures
0447	Mohammad Reza Bahrami	Modeling of non-contact atomic force microscope with two-term excitations
0475	V N Shinkin	To question about moment at elasticoplastic bending
1122	Kemal Emurlaev, Tatiana Gerasimenko, Daulet Abdimazhan	Nondestructive evaluation of material state near the friction interface under dry sliding
0023	Vladislav Smolentsev, Vasiliy Gritsuk, Andrei Mandrykin	Active cooling systems for the hot zone of heat engines
0037	R S Bolshakov and I S Sitov	The estimation of dynamical condition of vibration technological machines at joint action of two external disturbances
0040	S A Kuznetsov	Linear Theory of the Structure of Mechanisms
0064	S.E. Lyuminarsky, I.E. Lyuminarsky and E.S. Lyuminarskaya	FEATURES OF DETERMINING THE EFFICIENCY OF THE CAM WAVE GENERATOR OF THE WAVE GEAR
0073	V E Kondratenko, L V Sedykh and R Y Surkova	Effective design features of rotor shafts
0076	V. S. Zhernakov, V. P. Pavlov and V. M. Kudoyarova	Longitudinal Impact of Straight Rod against Elastic Support
0084	Yu.A. Izvekov, V.V. Dubrovsky, A.A. Stupak	Probability calculation applied to potential failure zones of the bridge girder of metallurgical crane
0100	A.L. Nosko, E.V. Safronov, P.V. Boslovyak	Optimization of a simulation model of the picking process using ABC analysis on the example of automated storage systems
0115	Yu Bagaiskov	Influence of elastic deformation of gear hone teeth on machined gear accuracy
0144	V Lapshin and D Kobzov	The effect of impact velocity on rebound height after impact interaction
0178	N K Kuznetsov, I A Iov, A A Iov, E S Dolgih	Development and research of elastic-damping device with variable stiffness

0229	Y G Kabaldin, A A Khlybov, M S Anosov and D A Shatagin	Damage assessment of materials at low temperatures using the parameter of the fractal dimension of the microstructure
0230	B A Tsarfin	Modeling elastic deformations of the rotary dividing table faceplate under the action of the workpiece weight
0232	I Ya Lvovich, Ya E Lvovich, A P Preobrazhenskiy, O N Choporov	Modeling Maintenance of the Machine-Building Complex
0238	V V Galkin, G N Gavrilov, S V Ivanov and A V Bratuknin	The issue of low resistance of punches when heading of sunk screw made of ferrite-pearlite steels
0244	M V Erpalov and D A Pavlov	The influence of the hardening curve of a material on the results of torsion tests of notched specimens
0252	A N Gots, V S Klevtsov	Causes of cracks on the edges of the combustion chamber of the diesel engine piston
0254	Olga Nazarova, Aleksey Chikhranov, Yana Dolzhenko and Anna Shagarova	Analysis of engineering mechanics problems solved by descriptive geometry methods
0288	P M Ogar, D B Gorokhov, E V Ugryumova	Elastic punching of material during flattening of a spherical asperity and restoration of the imprint in unloading
0322	A Seregin and A Kravtsov	Involute Teeth with Variable Base Diameter
0328	P.Y. Konovalov, Y.P. Bulavin, I.V. Volkov and I.A. Yaitskov	Analysis of the pneumatic actuator of traction machines sand feeding system when the sand-air mixture flows out
0329	Y.P. Bulavin, P.Y. Konovalov, I.V. Volkov and O.N. Bessarabova	Improving the pneumatic actuator of the locomotive sand feeding system by increasing the outlet flow velocity
0336	S A Zenkov, D Lkhanag	Kinematic parameters of the device for cleaning the excavator bucket
0337	N A Fomenko, O V Burlachenko and A A Lyashenko	Hydraulic shock suppression mechanism of the hydraulic drive
0342	Boldasov D D, Komshin A S, Potapov K G, Syritskii A B	Phasechronometric performance data processing for lathe operation parameters monitoring
0351	K.S. Sultanov, B.E. Khusanov, B.B. Rikhsieva	Stress waves in a cylindrical body interacting with external medium
0367	Valeev S.I., Kharlamov I.E.	OPERATION OF PROCESS EQUIPMENT WITH CRACK-LIKE DEFECTS
0370	K G Potapov, E V Tumakova, O V Ummanova	The computational models of measurement parameters for electromechanical energy systems with the application of neurodiagnostics

0379	A V Eliseev, N K Kuznetsov, S V Eliseev and Q T Vuong	Non-traditional approaches to the problems of forming the structure of the vibration field of technological machines
0381	A I Nizhegorodov, A N Gavrilin and B B Moyzes	Analysis of structures, properties and basic indicators of two-row axial piston hydraulic machines with an inclined cylinders block
0386	K R Crawford, N W Mitiukov, E L Busygina, and M Y Alies	Internal ballistics of smoothbore guns
0387	M Y Alies, K G Volkov, N W Mitiukov, and E L Busygina	Simulation modelling of the pumping station with a high-speed motor
0388	Yu I Brovkina, A N Sobolev and A Ya Nekrasov	The formation of errors caused by temperature processes in mechanisms built on the principles of parallel kinematics
0390	A Ya Nekrasov, A N Sobolev, M O Arbuzov and A V Rivkin	To the question of the distribution of the workload between the teeth of chain gear sprockets
0397	A.M Pishchukhin, G.F. Akhmedyanova	Research of sparing technologies of tunneling
0405	Dmitry Kurasov	Selection of displacement coefficients in external and internal involute gearing of planetary rotor hydraulic machine
0423	E A Tchufistov and O E Tchufistov	Simulation of satellite bearings loading in planetary cycloid gear
0431	V Lapshin and E Zenkov	An algorithm for controlling the visco-elasto-plastic model for studying shock interaction processes
0444	L K Generalov, O A Galkovskii	Evaluation of tribotechnical parameters of polymer compounds used in machine tool construction
0446	V.I. Lalabekov, V.Y. Obolenskiy, Y.G. Obolenskiy, S.L. Samsonovich	Study of a throttle work-fluid flow regulations characteristics of the electro hydraulic actuator under aerodynamic load
0464	A V Kirichek, S V Barinov, A V Yashin	Improving the mechanical and operational characteristics of aluminum alloys by multi-contact deformation treatme
0496	Daniel Chelopo, Kapil Gupta	Structural Analysis on Mild-steel and Aluminium Brake Disk for Application on Belt Conveyor
0508	V L Fedyayev, M Kh Faskhutdinov, I N Sidorov	Compression of a porous cylindrical body
1071	A Ja Minaev, Ju V Korovkin, H H Valiev, G V Stepanov	Vibration and impact properties of magnetorheological elastomers



1083	Alexey Rivkin, Alexey Nekrasov, Alexandr Sobolev, Michael Arbusov	Rationalization of load distribution in multi-pair gearing based on a discrete contact model
1128	Ignatova A.M., Yudin M.V., Ignatov M.N.	Fluorine-Containing Cast Mica Crystalline Materials Based on Natural Raw Materials for Lining Magnesium Electrolyzers

**Механизация, автоматизация и робототехника**

0421	Sergey L. Novokshenov, Svetlana N. Yatsenko, Eduard H. Milushev and Pavel B. Shibaev	Questions process simulation of metal forming
0067	Yury Nikitin	BLDC motor identification based on optimal control model in the state space
0194	Abdulov S.V., Derzhanskiy V.B. , Yakovlev A.G.	Implementation of the prototype control algorithm for an unmanned tracked vehicle
0218	T G Kormin and J-D B Tsumbu	Cycloidal reducer with rotation external ring gear
0316	R.V. Faizullin and S. Hering	Cointegration analysis method for fault detection based on sensor data
0350	D A Tokarev, A A Kabanov	Tracking system for the position of the patient of the surgical robotic complex
0364	M V Vartanov and A S Vlasov	Technological quality maintenance of finishing robotic machining in mechanical engineering
0437	A.I. Sidorova, O.V. Zhelezov, Yu.V. Polyanskov, P.Yu. Pavlov	Improving the quality of planning due to automated generation of a normative card based on digital technological processes
1110	Yury Nikitin	Diagnostics of BLDC motor winding based on a model approach in the state space
0011	Pavlovskaya O.O, Zemlyansky Yu.M., Kondakov S.V., Podzhivotova I.A.	Reliability assessment of the stepless rotation mechanism of an industrial tractor with a tracking control system
0017	Igor Blinkov, Oleg Blinkov	Effectiveness of introducing innovative solutions in machine-building as a factor of competitive immunity of the enterprise
0025	N V Dyorina, V S Velikanov, K S Dyorina	Identification of failure patterns of excavator equipment failures considering the control factor
0068	A V Romanov, A V Shchenyatsky, A V Petrov	Hydropress assembling automation of interference fits with steel and titanium parts

0083	Yu I Zhdanova and V V Moshkin	Method of optimization synthesis of parameters of actuating system of anthropomorphic gripper with adaptive control
0096	Pishchukhin A.M.	Process Quality Assessment
0143	A Yu Melnikov, M A Sholokhov and D S Buzorina	Improving the algorithm for selecting welding mode parameters under the impact of boundary conditions of the workpiece
0161	V V Papin, R V Bezuglov, E M Dyakonov and D A Shaforost	The engine-recoverer of secondary energy thermal sources based on a Curie point effect for magnetic materials
0188	E A Muravyova	Development of a control system for cleaning pyrolysis fraction from acetylene compounds based on a neural network
0189	M I Sharipov	Development of neural network for control production process in oil and gas fields
0191	E A Muravyova and A O Yurasov	Control of a deaerator using a neural network based on a PID controller
0201	K Yu Trukhanov, V V Bulychov and M I Shatalov	Experimental Study of Welding Torch Positioning Parameters Influence on Overlap Joint Formation
0295	Loktev D.A., Kapitanov A.V., Egorov S.B., Moklyachenko A.V.	CONFIRMATION OF THE REPRODUCIBILITY OF THE MEASUREMENT PROCESS BY EVALUATING THE MEASUREMENT UNCERTAINTY IN ACCORDANCE WITH THE INDUSTRY STANDARD
0307	D V Lobanov, M V Kuptsov, V Yu Skeebea	Automation of composite materials products process preparation
0324	V Kramar, A Kabanov, O Kramar, A Putin	Modeling and testing of control system for an underwater dual-arm robot
0326	E V Krechetova, A B Syritsky, A S Komshin	Investigation of the dependence of the quality control of the adhesive joint on the capacitance of the joint for various types of dielectric
0330	Ponomarev K.S., Feofanov A.N., Grishina T.G.	ORGANIZATION OF A MODULAR INFORMATION PRESENTATION TO VERIFY MEASURING INSTRUMENTS IN A MODERN ENTERPRISE
0331	Shutikov M.A., Feofanov A.N., Ponomarev K.S.	Introducing a quality factor into the MES system when calculating machinery production schedule together with measuring equipment
0332	R L Pushkov, L I Martinova and S V Evstafieva	Extending functionality of the control system using MTConnect data collection standard
0333	D S Solovjev, I A Solovjeva and V V Konkina	Development of a control system with fuzzy tuning of values for the actuation setpoint

0352	M.S. Ostapenko and Z.A. Kalimullina	OPTIMIZATION OF MEASURING INSTRUMENTS' COMPOSITION AT THE ENTERPRISE
0372	P A Nikishechkin, I A Kovalev, O V Kazaryan, N S Grigorev	Practical aspects of constructing a specialized control system for compact machines
0375	Mikhailov P G, Ualiyev Zh, Kabdoldina A, Sokolov A V	Control and optimization of technological processes for forming nanoscale films for sensitive sensor elements
0376	P G Mikhailov, O V Ermilina, D A Budagovsky and L Basarbay	Frequency-current control. Modeling. Optimization
0418	E Reshetnikova, P Ju Bochkarev	Production process improvement of manufacture by generation efficient control-and-measuring tool's kit
0427	Konstantin Aksyonov, Hambardzum Ayvazyan and Olga Aksyonova	Application of multi-agent approach to development of the petrol dispatching system of gas stations network
0432	Anna Antonova and Konstantin Aksyonov	Simulation of the steelmaking process using collision avoiding cranes moving models
0433	M A Lemeshko, V A Zibrov and S E Bashnyak	Simulation of adaptive drill machines with hydraulic drive
0434	M A Lemeshko, V A Zibrov and I G Deyneka	Concept of robotic investigational study
0438	Olga Aksyonova, Polina Ziomkovskaya and Wang Kai	Development of a process resource balancing method based on integration of network planning and multi-agent approach
0441	Eduard L. Grekov, Evgeny S. Shelikhov	Mathematical support of walking robots-tetrapods movement algorithms
0445	Stepan Medvedev, Konstantin Aksyonov	Development of a method and decision support system for distributing orders of a machine-building enterprise
0488	Pavel Vitliemov and Krasimir Markov	Hybrid device for automatic assembly
0504	Busygin A.M.	SELF-ADJUSTING DIFFERENTIAL ROTARY FEEDING SYSTEM OF THE DRILLING RIG
1254	B.V. Kargin, V.V. Zhivaeva, P.N. Bukin	Pressing tubes with conical-stepped needles computer simulating

**Общие проблемы машиностроения**

0469	V N Shinkin	About form of elastic flexible tube
0501	A N Korneichuk, S A Chugunov and Y G Litkovskaya	Fiberglass Honeycomb Fillers for Space Technology

1269	Ашихмина Е.Р., Просунцов П.В.	Numerical simulation and experimental validation of effective thermal conductivity coefficient of hexagonal aramid honeycomb used in wing skin of tourist class reusable spaceplane
0494	Anton Yuriev, Vasiliy Kormyshev, Alexander Glezer, Victor Gromov, Yurii Ivanov, Alexander Semin	Gradients in rails at long-term operation
0038	V.I. Filatov, A.M. Popov and R.M. Valiyev	Tracking of small-sized air objects
0039	V.I. Filatov, A.M. Popov and R.M. Valiev	Communication channel management system in mechanical engineering
0049	A D Bardovsky, L M Valeeva and I I Basyrov	A plant with a rotary jet grinder to produce small fractions of mineral raw material
0050	Yu N Zatsarinnaya and D I Amirov	New equipment for cleaning solar panels
0061	L A Prokudina, M P Vikhirev	Simulation of unstable liquid film flow in heat and mass transfer processes of film equipment
0081	Valeev S.I.	INVESTIGATION OF CYLINDRICAL HYDROCYCLONE FOR EMULSION SEPARATION
0094	O A Lebedeva and J O Poltavskaya	Multimodal transport network freight routing algorithms in optimization models
0095	I M Kulakova, O A Lebedeva, J O Poltavskaya	Solving the problem of determining the optimal location of the logistics center, taking into account cost minimization
0097	Gulnara F. Akhmedyanova	Application of OLAP-technology in decision support system for enterprise management
0106	A E Gamberg, T E Dashkova, I V Ershov and T N Vernova	Centralized procurement as a financing tool for innovation and technology entrepreneurship
0107	M A Prilutskaya, A D Murukina, L M Tipner and N A Kalinina	Diversification instruments for machine-building enterprises
0109	E Y Kuznetsova, N A Amosov, O O Podoliak and M A Zykova	Peculiarities of the foreign manufactures cars recycling in Russia
0110	S G Baranchikova, I V Ershova, A V Klyuev and E V Cherepanova	Optimization of the production plan taking according to the customers' strategic importance
0111	T A Mineeva, N A Kuznetcova, O S Norkina and E V Popova	Improve business process efficiency by value engineering
0172	Artem Obukhov, Alexandr Siukhin, Denis Dedov	Structural and mathematical models of software and hardware platform of the training complex
0176	P V Lekomtsev	Prediction of residual life of complex electromechanical systems based on small training samples

0183	V.I. Potapov, V.V. Suskin, S.V. Filatkin	Principle of constructing flat designs of electronic circuit diagrams considering forbidden figures
0184	R R Sharapov	Influence of design and technological parameters on the efficiency of the granular filter
0186	P. V. Lekomtsev	Discrete model of hybrid stepper motor by optimal state space control
0197	S Y Matalasov, E Y Kuznetsova and O O Podoliak	Improvement of the workers labour rationing and motivation methodology for the manufacturing shop
0200	M G Naumova, I G Morozova and Kh. B. Aliev	Creating a project for modernizing the feeding balls device to a ball mill using 3D modeling
0211	L A Krivina, Y P Tarasenko, Y K Levanov and S V Kirikov	Gas-dynamic spraying, as a method of the component recovery in the power engineering industry
0219	A V Bolotin, A V Ershov, Yu N Markova and L L Kalinina	Investment behaviour of machine-building enterprises and the capital cost
0253	O V Novoselova and A S Sidorov	Integration of descriptions of infological model representations at automation of design tasks
0268	Oleg Kazak, Ilya Starodumov	Simulation of the electromagnetic processes in a metallurgical furnace with two bottom electrodes
0269	Oleg Kazak, Ilya Starodumov	Simulation of electromagnetic parameters in a laboratory installation
0279	R M Askhatov, N F Kashapov, R N Kashapov and V Yu Chebakova	Numerical Modelling of Spatial Distributions of the pH Value and Electric Field in a Liquid Electrode
0299	Dmitriy Moiseev and Lidiya Lukina	Development of a method for automatic compensation of energy dependence of the sensitivity
0300	Sibel Ahmedova	Technology transfer as a factor in improving the competitiveness of industrial enterprises
0335	A A Belyaeva, K B Evseev	Snow movers overview
0339	I A Kovalev, D Yu Kvashnin, N Yu Chervonnova and A N Nikich	Application of agile methodology at industrial manufacturing as part of the Industry 4.0
0371	V V Salnikov and Y V Frantsuzova	MEASURING THE ENERGY EFFICIENCY OF WORKPLACE LIGHTING IN INDUSTRIAL ENTERPRISES
0406	V E Kondratenko, V V Devyatiarova, S V Albul and L M Valeeva	Method of calculating volumetric scaffold of monolithic slab formwork
0407	V E Kondratenko, V V Devyatiarova, S V Albul and D S Kartyshev	Improving methodology for calculating scaffolding formwork of monolithic slabs in building constructions
0412	V A Romakin	Routing of fluidic circuits using skeletons of polygonal figures

0458	M Yu Livshits, I D Igonin, P A Sevastyanov, A A Khapalina	Comparative analysis of adaptive systems for automatic stabilization of the water level in the drum boiler
0459	A V Rubtsov, P A Kulakov and K S Arkhipova	Modeling of the stressed-deformed state of the apparatus under pressure at corrosion
0465	D I Mendeleev, G E Marin, Yu Ya Galitskii, M V Savina	Assessment of the effect of humidity of air-cooled in the absorption refrigeration machine on the operation of an energy gas turbine
0471	K G Pugin	Improving the reliability of hydraulic systems of technological machines
0483	Sibel Ahmedova	Research into the use of digital technologies in business organisations across the North Eastern Region (NER)
0524	Elena Levchenko, Nikolay Pokintelitsa	Basic principles for describing the process of vibratory with an external source of dynamic impact
0182	Alexey Khomichev, Alexandr Volkov	Improving the layout of skid steer loader
0520	S V Reznik, D V Reut and M S Shustilova	Comparison of geostationary and low-orbit "round dance" satellite communication systems
1156	Kustov A. I., Derkachev I.S., Miguel I. A., Kulakov M. A.	Analysis of the impact of defect systems in subsurface layers on the properties of solid-state materials using AMD-methods
1157	Alexander Kustov, Viacheslav Zelenev, Irina Miguel, Mikhail Kulakov	Estimation of the optimal parameters of technological processes for processing materials using acoustic waves in the gigahertz range
1187	Keropyan A.M.	Application of non-contact technologies for measuring roughness of interacting surfaces when monitoring friction coefficient
2024	A.V. Bogdanov, S.Yu. Popova	THE EFFECTIVENESS EVALUATION OF LABOR SAFETY ACTIVITIES USING DRIVER'S WORKPLACE AS AN EXAMPLE
2031	Ivan Masienko, Artem Vasilenko and Lyudmila Eranova	THEORETICAL STUDY OF THE FORCED OSCILLATION EFFECT ON SUBSOIL TILLAGE

**Сельскохозяйственное машиностроение и технологии**

0055	Belousov Sergey Vitalievich	Methods and means of concentrated fertilizers application
0401	Sergey V. Belousov	TO THE QUESTION OF THE VALUE OF SHARPENING OF THE CORNERS OF WORKING BODIES OF AGRICULTURAL MACHINES. JUSTIFICATION. INFLUENCE ON THE QUALITY OF WORK

0417	Belousov Sergey V., Anna I. Belousova	Mathematical processing of experimental data of the agricultural working body
2002	Belousova Anna Igorevna, Donchenko Lyudmila Vladimirovna	The study of fractional composition of pectin substances in vegetables and technical means of its obtaining
2003	Anna Igorevna Belousova, Donchenko Lyudmila Vladimirovna	ASSESSMENT OF QUALITY AND SAFETY INDICATORS OF BEVERAGES MADE FROM VEGETABLE RAW MATERIALS
2004	Rykov Viktor Borisovich, Kambulov Sergey Ivanovich, Trubilin Evgeny Ivanovich	EVALUATION OF THE "TRACTOR-PLOW" SYSTEM USING STATISTICAL MODEL
2005	Rykov Viktor Borisovich, Kambulov Sergey Ivanovich, Trubilin Evgeny Ivanovich	SYSTEM OF ENERGY CRITERIA IN THE JUSTIFICATION OF TECHNICAL UNITS FOR FIELD PRODUCTION
2006	Moiseev Victor Vasilievich, Moiseev Arkady Viktorovich	Organizational and economic aspects of selection and seed production of the South of Russia
2007	Moiseev Victor Vasilievich, Moiseev Arkady Viktorovich	Implementation of the motivation and incentive models of employees of the LLC "Rucheek" of Krasnodar Territory
2008	Belousov Sergey Vitalyevich, Filippov Dmitry Alexandrovich	Introduction of fertilizers to the field surface
2009	Sergey Vitalievich Belousov, Sergey Yurievich Onikienko, Darya Mikhailovna Klinova	On the problem of nightshade vegetables harvesting in conditions of limited land use and protected ground
2026	Sergey Konstantinovich Papusha, Nikolay Andreevich Nikitenko, Zhadko Valeria Vitalevna	PARAMETERS OF THE KNIFE-DRUM TYPE DEVICE FOR SEPARATING SWEET CORN COBS
2027	Sergey Konstantinovich Papusha, Dmitry Alexandrovich Kotov, Zhadko Valeria Vitalevna	TECHNOLOGICAL FEATURES OF A COMBINED SOIL PROCESSING MACHINE AND SPRAYER
2028	Evgeny Ivanovich Vinevsky, Vladimir Konstantinovich Papusha, Nikolay Andreevich Nikitenko	ASSESSMENT OF THE COMPETITIVENESS OF DOMESTIC AND FOREIGN COMBINE HARVESTERS
2029	Svetlana M. Borisova, Sergey K. Papusha, Vladimir K. Papusha	A DEVICE FOR HARVESTING AND UTILIZATION OF NON-GRAIN PART OF CROP AND FERTILIZATION
2030	Svetlana M. Borisova, Sergey K. Papusha, Evgeny M. Sivovalov	THE PROCESS OF ULTRA LOW-VOLUME SEED ETCHING WITH AN EXPERIMENTAL DEVICE
2065	Svoykin F.V. Sokolova V.A., Korolko N.S. Shoshin A.O.	Constructive solutions to improve cable haulers for development of hard-to-reach cutting areas

2090	Belousov Sergey Vitalievich, Evgeny Ermanekosovich Samurganov	On the problem of interaction of the tillage working body with the soil
2098	Mikhail Vasiliev, Sergey Vasiliev, and Alexey Vasiliev	APPLICATION OF PROFILOGRAPH FOR EVALUATION OF MECHANICAL TILLAGE OF SLOPE LANDS
0135	Yu V Tertyshnaya, A N Skorokhodova, L S Shibryeva and A S Ivanitskikh	Nonwoven polylactide fibers: properties and application
0228	Borzilov Yu.P., Yerovenko V.N., Misirov D.N. and Semergey S.V.	Method for Determining Dynamic Coefficient of Friction of Bodies
2055	Leonid Babitskiy, Vadim Moskalevich, and Aleksandr Belov	Results of research of working bodies with increased reliability of tillage and sowing machines
2058	Ilnur Madyshev, Vitaly Kharkov, and Andrey Dmitriev	Cooling efficiency of filler unit in non-chemical cooling tower with advanced contact surface
2093	I.Y. Paremsky, V.F. Fedorenko, E.G. Aristov, V.G. Selivanov and N.N. Krakhovetsky	Technology and technical means for the quantitative assessment of dispersed characteristics of spray equipment for chemical plant protection
2089	Mudarisov F.A., Kostin V.I., Isaev Yu.M., Semashkina A.I., Semashkin N.M., Sadygova M.K.	Protein quality of winter wheat depending on the dressing with sulfur-containing nitrogen fertilizers applied in early spring
2097	M. A. Abdelhamid, Yu. A. Sudnik, H. J. Alshinayyin , and Fatma Shaaban	Chlorophyll fluorescence for classification of tomato fruits by their maturity stage
2100	Lyudmila Zhichkina, Vladimir Nosov, Kirill Zhichkin, Vyacheslav Zhenzhebir, Yury Abramov and Mira Alborova	Pesticide monitoring of agricultural soil pollution
0122	S A Zenkov, D Lkhanag	Use of repair-recovery compositions for reducing the adhesion of soils to working bodies of machines
0158	A.V. Lavrov, V.G.Shevtsov, V.A.Zubina, V.G.Khamuev	Improving the methodology for assessing the level of localization of production of agricultural mobile energy devices
0202	S A Golubina and V N Sidorov	Development of methods for increasing the technical and economic efficiency of the application of hardening technologies for flat working bodies of tillage machines
0205	Ivan Sharonov, Vladimir Kurdyumov, Yuri Isaev, Viktor Kurushin	The optimisation of the cylinder-spiral soil-cultivating roller
0225	Evgeny Zykin, Vladimir Kurdyumov, Svetlana Lazutkina, and Sergey Albutov	The experimental determination of the diameter of a flat disk in a ridge seeder



0226	Svetlana Lazutkina, Evgeny Zykin	Theoretical and experimental substantiation of the amplitude and source of oscillations on a container of an acoustic butter churn
0260	R A Filippov, D O Khort, A I Kuttyrev	Automated device for the differential application of herbicides in the near-trunk zone of fruit
0513	Evgeny Zykin, Svetlana Lazutkina	The theoretical substantiation of the roller diameter of a versatile tillage implement
1042	Mikhail Konstantinov, Sergey Drozdov, Vitaly Mukhamedov, Beket Nuralin and Manarbek Galiev	Investigation of the force effect of the vibrating working body of the slitter on the soil
2001	Alexander Petrovich Lovchikov, Igor Igorevich Ognev	THEORETICAL BACKGROUND FOR THE DEVELOPMENT OF STATIONARY PROCESS OF GRAIN MASS THRESHING WITH A COMBINE HARVESTER
2010	Vladimir Ivanovich Konovalov and Sergey Ivanovich Konovalov	Analysis of the directions of the development of mechanization units for processing the near-trunk area in the garden
2011	Vladimir Ivanovich Konovalov	Justification of design parameters of a disk working body with a changing radius of curvature
2012	Vasiliy Kapustin, Kirill Nemtinov, Yulia Nemtinova , and Vladimir Nemtinov	DECISION SUPPORT SYSTEM FOR TECHNOLOGICAL MAINTENANCE OF SEEDING MACHINES
2013	Mikhail Konstantinov, Ivan Gluchkov, Alexander Nesvat, Igor Gerasimenko and Igor Ognev	Features of snow retention and counteraction to wind erosion of soils due to high stubble residues formed by a reaper designed for two-phase harvesting by batch method
2014	Bogus Azamat Eduardovich	Investigation of the kinematics of seed movement in the centrifugal distributor of a pneumatic seeder
2015	Bogus Azamat Eduardovich	Analytical study of uneven distribution of seeds by a centrifugal distributor
2018	N M Belous, Yu E Kisel, G V Guryanov and L M Markaryants	Enhancement of Wear Resistance of Mulcher Teeth with the Help of Electrochemical Coats
2019	Alexander Serguntsov and Viktoria Serguntsova	ALGORITHM OF ENGINEERING CALCULATION OF STABILITY OF A MULTIFUNCTIONAL UNIT
2020	Alexander Serguntsov and Victoria Serguntsova	Optimization of parameters and operating modes of the rotary working body for harrowing agricultural crops
2022	M.G. Zagoruyko, M.Ye. Chaplygin, S.A. Davydova	Diversification of lentil production
2023	V.I. Skorlyakov, A.N. Nazarov and D.A. Petukhov	A new way to unload combine harvesters at the field edge

2025	Olga Milashkina, and Vadim Zlobin	Improving quality of ac electric power supply of autonomous power sources using in agriculture
2032	Ivan Masienko, Artem Vasilenko and Sergey Schevchenko	Patent analysis of design features of non-cereal crop choppers
2035	Aleksandr Sergeevich Averyanov, Stanislav Nikolaevich Vlasov, Evgeniy Gennadyevich Rotanov, Anton Alekseevich Khokhlov	MODERNIZATION OF HIGH PRESSURE FUEL PUMP FOR OPERATION ON MIXED RAPESEED-MINERAL FUEL
2036	Igor Igorevich Ognev, Anton Pavlovich Zyryanov, Maksim Vyacheslavovich Pyataev, Aleksandr Aleksandrovich Gulyarenko	Influence of parameters of a pneumatic grain seeder distributor on the uniform distribution of seeds
2038	Mikhail Chaplygin, Aliksey Podzorov, Mariya Podzorova, and Aigerim Alchimbayeva	Modern approaches to technology of cultivation of corn
2039	Sergey Popov, Dmitry Komissarov, Alexander Lavrov, Anatoly Gulyaev, Davydov Valery	Design features of agricultural transporting technological device equipped with agrophilic wheel mower
2040	Alexander Lavrov, Anatoly Gulyaev, Sergey Popov, Dmitry Komissarov, Davydov Valery	Initial requirements for agricultural universal block-modular energy device of traction class 0.6
2041	A. Yu. Popov, Noureldin Sharaby, V.V. Zhurba, E.A. Chaika	Analysis of the preparation technology of a row seeder for work
2042	Dmitrii Kotov, Igor Nenashev, Sergei Vdovkin, and Nikolai Kryuchin	Development and substantiation of main design portable operating table parameters for small animals
2043	Vasiliy Kostin, Vladimir Kochetkov, Natalya Sokolova and Ivan Vasenev	Common Reed as a Renewable Energy Resource for Pellet Production
2045	V V Kondratenko, L V Sedykh, A Mirzakarimov and A Aleksakhin	Static analysis and strength calculation of drive shaft of large-scale cone crusher
2046	A.B. Baragunov, E.A. Kushaeva, M.M. Hamokov, A.V. Sagatelian	Proposal of an alternative technology for dairy farming in the North Caucasus
2053	Evgeny Zykin, Vladimir Kurdyumov , Sergey Albutov, and Oleg Dmitriev	Modeling of the sowing process of row crops in laboratory conditions
2054	Evgeny Zykin, Vladimir Kurdyumov, Svetlana Lazutkina, and Oleg Dmitriev	Process modeling of the first inter-rowcultivation in laboratory conditions

2056	Victor Khamuev, Maksim Moskovskiy, Hoang Ngia Dat	The technological aspect of soybean seed separation
2059	D O Khort, A I Kutyrev, R A Filippov, R V Vershinin	Device for robotic picking of strawberries
2063	Tatiana E. Marinchenko	Greening of agricultural production is the main vector of development of the Russian agricultural sector
2064	A B Letopolsky, P A Korchagin, I A Teterina and A I Demidenko	Trencher equipment
2067	Dmitriy Khort, Igor Smirnov, Alexey Kutyrev	Development of an automated weather complex for managing agricultural technologies in horticulture
2068	Stepan Semichev, Igor Smirnov, Rostislav Filippov, Alexey Kutyrev	Automated attachment device for controlling position of agricultural implements in an aggregate
2070	Aleksandr Kirjanen, Oleg Malafeyev, Irina Zaitseva, Aleksandr Kovshov, Dmitry Kolesov	Dynamics of competitive interaction between two mining enterprises and one processing: existence and stability of the equilibrium point
2073	Isaev Yu.M., Nekrashevich V.F., Semashkin N.M., and Zlobin V.A.	The motion of particles in coaxially-arranged cylinders
2075	Litvinov M.A., Adamyan A.A., Hoang Ngnia Dat	Technical support in seed production of agricultural plants
2076	Dorokhov Aleksey, Maksim Moskovskiy, Borzenko Sergey, Hoang Ngia Dat	Justification main characteristics of separation wheat grains for isolation biological valuable seeds
2077	Sergey Zhukov, Vladimir Belyakov, and Vladimir Makarov	Study of the characteristics of soil surfaces as roads for agricultural robotic complexes
2078	V E Zinurov, A V Dmitriev, M A Ruzanova and O S Dmitrieva	Classification of bulk material from the gas flow in a device with coaxially arranged pipes
2081	M.A Mirzaev, A.I Dyshekov, I.G Smirnov	Influence of intensity of illumination on weed recognition algorithm
2082	A.I. Dyshakov, M.A. Mirzaev, I.G. Smirnov	Development of microprocessor control system of robotic platform for weed vegetation control
2084	Dmitriy Khort, Alexander Shutenko, Rostislav Filippov, Stepan Semichev	Automated stand for the study of injectors made of polymer materials for hydraulic weed destruction
2096	Andrey Udalov, Zoya Udalova	THE ANALYSIS OF FOREIGN ECONOMIC ACTIVITY OF AGRICULTURAL PRODUCERS OF THE SOUTHERN FEDERAL DISTRICT
2099	Mirolim Aripov, Sherzod Mamatov, and Sadriddin Turobjonov	Studying the application of dielectric pretreatment before drying

2104	Munir Gafin	Hydrothermal treatment of sunflower seeds in grain washing machines with spiral screw devices
2106	Andrey Pavlushin, Sergey Sutyagin, Galina Karpenko, and Vadim Artemiev	Research of a machine with a belt conveyor for drying grain
2107	Dmitry Polenov	Automated Pipeline Design Algorithm with Adaptive Irrigation of Agricultural Facilities
2096-1	Ksenia Burtseva and Aleksandr Alekseev	Prospects for the implementation of the risk management department in agricultural organizations of Russia and their interaction with the accounting system
2103 Г	Azat Gabdrakhmanov, Alexander Tsoi	Increased germination of barley and wheat using cold plasma

**Перспективные технологии и процессы обработки материалов. Оборудование и инструмент**

0018	Nosov N.V., Balakirov S.N.	TECHNOLOGY OF EXTENDING OPERATIONAL LIFE OF MULTIFACETED DISPOSABLE PLATES
0506	Ruslan Dzhemalyadinov, Vladimir Skakun, Eldar Vaniev <sup>1</sup> and Ilimdar Abdulkerimov	Features of the influence of process media of plant origin on power characteristics during cutting and quality of the processed surface
0514	Eshreb Dzhemilov, Alper Uysal	Improving the accuracy of deep hole machining by diamond honing process in 41Cr4 steel parts
1153	N.I. Pasko, A.V. Antsev, V.Yu. Antsev	Resource management of a cutting tool in case of its reuse
1169	Leonid Vainer, Uriy Gamolya	Analysis and modeling of workpieces' kinematic in the process of two-sided face grinding
0035	A M Antimonov and N B Pushkareva	The locking equipment strength problem in water supply systems at the high-rise buildings upper floors
0128	D I Vershinin, I N Khusainov, N A Makarov	The synthesis of Li <sub>2</sub> ZnTi <sub>3</sub> O <sub>8</sub> and Li <sub>2</sub> Zn <sub>3</sub> Ti <sub>4</sub> O <sub>12</sub> powders for Low Temperature Cofired Ceramic (LTCC) production
0132	I. I. Aksyutin, A.V. Rasskazin	Ceramics on the basis of zinc orthostannate
0196	V A Ratmanov, G N Gavrilov, E A Marinin, A S Beltukov, and K V Razheva	The use of laser radiation for cutting of blind grooves and small-sized through cuts in thin-walled cylindrical bodies
0296	Ervin Umerov	Application of System Approach to Drilling Process Simulating
0382	B B Morozov, F A Nasonov and S V Bukharov	Development of the algorithm for modelling autoclave curing conditions and calculation of temperature fields into elements of sandwich structures

0383	F A Nasonov, A O Akulinin, B B Morozov, U A Popova and A A Filatov	Experimental production of samples and prototype parts from titanium-polymer composite material
0391	Karim R. Muratov, Evgeniy A. Gashev, Timur R. Ablyaz, Sarabjeet S. Sidhu	Formation of the roughness during honing with raster kinematics of the tool
0392	E S Shlykov, T R Ablyaz, K R Muratov, S S Sidhu	Studying the process of electric discharge machining of products obtained by powder laser welding
0398	Zhelezkov O. S., Kharchenko M. V., Martynov E. M., Suvorova E.V.	The energy-power parameters of the semi-enclosed heading of the rod-shaped hardware
0408	M S Shalaeva, Y N Loginov	Flow capacity of the capillary copper tube as its figure of merit
0454	A.A. Sychugov	Monitoring and diagnostics of technological processes with the possibility of dynamic selection of variables
0499	E.E. Deryugin, N.A. Narkevich, I.A. Danilenko, Z. Shmauder	Inelastic deformation of ceramics based on zirconium dioxide
1021	I.Y. Semenova, V.Y. Lavrinenko	The method of definition of parameters of reinforced polyurethanes
1031	Igor Parashchuk, Igor Kotenko	Target functions of the conceptual model for adaptive monitoring of integrated security in material processing systems
1057	Andrey Balyakin, Evgeny Goncharov	Investigation of the process of waterjet processing of samples obtained by SLM
1061	A.S. Stavysenko, R.S. Chuikov, S.S. Chuikov, V.I. Plekhanov, M.V. Minuchova, V.V. Marfitsyn	The study of the elastic constants of tool hard alloys by laser interferometry
1062	R.S. Chuikov, A.S. Stavysenko, S.S. Chuikov, V.I. Plekhanov, M.V. Minuchova, V.V. Marfitsyn	Estimation of the maximum working temperature of the tool hard alloy VK8 through its toughness
1063	V. A.Pogonishev, N.M. Belous, V. E. Torikov, I. A. Mokshin, A. A. Boiko	Tribotechnical characteristics of composite coatings deposited by spraying
1081	Sergey Timofeev, Andrey Savilov, Alexey Pyatykh	Studies on the effect of cutter wear on cutting dynamics when turning
1133	Pavel Shalamov, Marina Pivtsaeva, Anastasiya Chvanova, Artur Shamgunov	Use of combined tools to reduce axial force during thermal drilling
1139	Novikov V.F., Sokolov R.A., Muratov K.R., Venediktov A.N.	DETERMINATION OF INFLUENCE OF GRAIN SIZE FACTOR ON THE CORROSION SPEED OF STRUCTURAL STEEL

1141	Pavel V Shalamov, Anastasiya Y Chvanova 1, Marina S Pivtsoeva, Artur E Shamgunov	Study of geometrical parameters of flanged edges of holes formed by thermal drilling with a combined tool
1171	O.V. Akimovaa, R.D. Svetogorov	Hydrogen treatment of diffusion filter-membranes
1193	Kharis Rakhimyanov, Svetlana Vasilevskaya, Konstantin Rakhimyanov	Controlling the Forming of Deep Holes of a Small Diameter by Mixed Piercing Based on a System Analysis of the Processes in the Inter-Electrode Gap
1203	Vitaliy Korotkov	Influence of various types of spherocorundum on the performance of grinding wheels
1204	A.N. Korotkov, L.P. Korotkova, S.V. Laschinina	Influence of production technology on the structure and properties of powder high-speed steels
1212	M.Yu. Zakharchenko, Andrei V. Kochetkov, Petr M. Salov, Oleg V. Zakharov	New System of Functional Parameters for Surface Texture Analysis
1232	Timur R. Ablyaz, Sarabjeet S. Sidhu, Evgeny S. Shlykov, Karim R. Muratov	Influence of discharge energy on the properties steel alloy after EDM
1250	Alexandr Dobrinski, Aleksandr Dudarev	Intelligent automated drilling in the laminate composites and hybrid materials
1266	Elmar Yagyaev	Stabilization of Processing Quality Parameters at Cylindrical External Grinding by Control of the Rotational Frequency of the Grinding Wheel
0523	Leonid Shron, Vladimir Bogutsky	On the question of improving the finishing operations of processing precise holes in the hulls of ship machinery
1018	A.A. Pasyukov, S.N. Larin, G.V. Panfilov	Mathematical model of pipe extrusion under conditions of viscoplasticity
1019	S.N. Larin, A.A. Pasyukov, M.V. Larina	Analysis of the material flow in combined extrusion of steel bar stocks with a conical tool
1036	Alexey Rivkin, Alexey Nekrasov, Alexandr Sobolev, Michael Arbusov	The features of the gears profile forming by the electrical discharge machining
0006	O Yu Erenkov, I Ya Lopushanskii and D O Yavorskii	Efficiency of applying advanced electromagnetic pulse processing when turning polymer composite materials
0007	O Yu Erenkov, I Ya Lopushanskii and D O Yavorski	The parameters values choice for the preliminary thermo mechanical effects on polymeric materials before machining
0009	D.P. Salova, N.V. Nosov, P.M. Salov	Modeling of an equal-wear shape of grinding wheel when working with longitudinal feed
0010	V Nemtinov, M Matrochin, Y Nemtinova and A Krylov	Analysis of design solutions for galvanizing of small parts of ferrous metals in bulk

0021	Polyanchikova M.Yu., Nosenko V.A., Kozhevnikova A.A.	Heat treatment effect on structural and elastic characteristics of a single-component abrasive tool
0024	V. Smolentsev, O. Kirillov and Y. Kotukov	Combined multi-electrode piercing of holes in hard-to-process materials
0027	Alexander Konoplin, Natalia Baurova and Sergei Abrakov	Visualization models of technological heredity in mechanical engineering
0034	T.N. Ivanova, Witold Biały, Katarzyna Mido	Study of physical and mechanical properties of steel during grinding and sharpening
0044	I P Nikitina, C V Kamenev and A N Polyakov	Manual measurements of cutting tools on a coordinate measuring machine
0047	Vladimir Gusev	Unbalances formation of the textured wheel at preparation to grinding process
0052	A F Denisenko, L Y Podkruglyak	Heat model of a spindle support of a precession metal cutting machine
0053	D P Salova , A F Denisenko, P M Salov , R G Grishin	Efficiency of the continuous editing process grinding circles
0069	A.V.Bobrowski, O.I Drachev., I.V. Turbin, V.E. Epishkin	Thermal strengthening treatment of low-rigid lead screws
0070	A.V. Bobrovsky, O.I. Drachev, V.E. Epishkin	IMPROVING LATHE DYNAMICS BY WORKPIECE - SUPPORT SUBSYSTEM CONTROL
0071	A.V. BOBROWSKII, O.I. DRACHEV, V.N. TISENKO	IMPROVING THE ACCURACY OF AXISYMMETRIC PARTS BY APPLYING CONTROLLED HEAT TREATMENT
0072	N.A. Zemlyanushnov, N.Y. Zemlyanushnova	To the definition of stress-strain state of springs during recovering when hardened
0077	V. ABLAZOV, O. DRACHEV, V. TISENKO	Fuzzy control under uncertainty in machine building
0080	O Zhed, M Kozochkin and K Kazymaeva	Perfection of the methodology for calculating the keyway broach through the experimental data of photomechanics
0086	D. Podashev	Study of possibility to process the edges of the parts on the robot
0087	Yu. Dimov, D. Podashev	The wheels for final processing of parts
0090	D A Pavlov, M V Erpalov	The Investigation of lengthwise rolling on a stub mandrel by the use of a computer simulation
0114	M K Reshetnikov, O Y Davidenko, V V Shpilev and M Y Zakharchenko	Mathematical model of allowance removal at nonabrasive processing of bearing details
0116	Yu Bagaiskov	Dependence of abrasive tool wear-resistance on abrasive grain microstrength

0120	D L Rakov	Analysis and synthesis of ecological installations for recycling waste polyurethane foams
0123	Alexander Ryazantsev, Anna Shirokozuhova, Irina Evchenko	Development of a sophisticated tool for processing parts with an involute profile
0124	A N Unyanin and P R Finageev	Numerical simulation of turning contact temperatures with varying material yield strength and tool wear
0127	Masar Alsigar, Pavel Pereverzev, Aziz Almawash and Mohamed Alkadhim	An approach to complex model ECGA for the stable and unstable grinding conditions
0148	Alexey A Zhdanov, A L Plotnikov, O A Kursin, A A Kozhevnikova	The problem of the solution formalizing of determining the error of turning due to elastic deformations of the technological system
0152	K N Solomonov, L I Tishchuk, S N Lezhnev, E A Listrov	Simulation of upsetting process using kinematic schemes of metal flow
0156	O N Gvozdeva, A V Shalin, A S Stepushin and A V Ovchinnikov	Influence of concentration-time parameters on nitride coatings formation on VT6 titanium alloy and their stability during subsequent treatment
0160	E.V. Artamonov, V.V. Kireev, and V.A. Zyryanov	Application of the group scheme of cutting when processing coarse-grain cogwheels
0164	N.M. Antonova, E.Yu. Khaustova, Nebrat A.A., A.S. Puzanova	RAPID ASSESSMENT OF ADHESION OF PAINT COATINGS BY DIGITAL IMAGE ANALYSIS
0169	I S Boldyrev, D I Topolov	Twist drilling SPH simulation for thrust force and torque prediction
0171	E.V. Artamonov, A.M. Tveryakov, A.S. Shtin	DETERMINATION OF CONDITIONS ENSURING MAXIMUM OPERABILITY OF REPLACEABLE HARD-ALLOY CUTTING PLATES DURING BLADE PROCESSING
0174	Julio L Tchigirinsky, A A Greshnikov, S I Kormilitsin, and A A Zhdanov	Analysis of the algorithms of the movement of forming during planetary boring and milling on CNC machines
0180	Mikhail Popov	Prospects for the application of rotary cutting tools
0204	V N Tyshkevich, A V Sarazov and S V Orlov	Simulation of maximum elastic deformations during flat grinding of low-rigidity prismatic workpieces
0239	P L Zhilin, G N Gavrilov, A D Ryabtsev and E O Bazhenov	The problem of capsule manufacturing for hot isostatic pressing
0247	Akintseva A.V., Pereverzev P.P., Prokhorov A.V., Kononov S.N.	Unified approach to developing analytical models of different grinding processes based on basic cutting process model
0265	E. S. Trubachev, K. V. Bogdanov, T. A. Pushkareva	Cutting of worm, spiroid and bevel gearwheel teeth by means of running-in cutter head



0272	S V Samchenko, M A Abramov, E S Egorov	Studying the processes of early structure formation of a modified cement paste
0306	Predein V.V., Komarov O.N. Zhilin S.G.	STRUCTURE AND PROPERTIES CONTROL OF CARBON ALLOYS CAST BLANKS PRODUCED BY ALUMINOTHERMIC METHOD WITH FOLLOWING HEAT TREATMENT
0334	A S Komshin, K G Potapov, A B Syritsky, A E Fomin	Monitoring system of hydro and wind power equipment based on intelligent measuring complexes and Neurodiagnostics
0345	A Mitrofanov, K Parsheva, V Nosenko	Simulation of an Artificial Neural Network for Predicting Temperature and Cutting Force during Grinding Using CAMQL
0346	I.A. Volkov, D. D. Primak, R.L. Artykh, R. I. Bazhenov	Development the assembly sequence mathematical modeling method of precision axisymmetric products based on the graph incidence matrix
0354	M O Sinita, A S Komshin	Development of a control system for large-sized products to improve product quality in mechanical engineering
0361	Phyo Wai Aung, Oleg Tatarnikov and Naing Lin Aung	Approach to optimization of composite aircraft wing structure
0366	M.S. Ostapenko, E.V. Loginova	CURRENT ISSUES OF THE QUALITY MANAGEMENT SYSTEM IN MECHANICAL ENGINEERING
0369	V P Mikhailov, Tun Lin Aung, A V Kazakov, A A Kopylov	The technology of printed circuit board microdrilling
0389	Vyacheslav Shuvaev	Information technology of ultrasonic assembly and pressing of joints
0396	S.N. Grigoriev, V.A. Grechishnikov, M.A. Volosova, X. Jiang, P.M. Pivkin	Investigation of Technological Parameters for Machining Toroidal Section of Solid Ceramic End Mills
0415	Alexey Stolbovsky	Statistical Analysis of Grain Structure Evolution at Heating of Nb Subjected to Cryogenic HPT
0452	E A Zvyagina, A N Tkachenko, E M. Selemeneva and A A Cherepenko	Theoretical determination of effective drilling modes with epilamited tool
0456	V A Nosenko and A A Aleksandrov	Determination of the maximum grain width in fractions of grinding powders obtained by screening on test sieves
0466	S I Platov ,V A Nekt, V N Urtsev, K B Maslennikov	Investigation of the structural state of pipe steel during thermo mechanical processing
0467	M K Reshetnikov, O Y Davidenko, V V Shpilev and M Y Zakharchenko	Research accuracy of final formation profile of rolling ball bearings by various methods.

0477	S M Belskiy, V A Pimenov and A N Shkarin	Analysis of geometrical parameters of hot-rolled rolling
0479	S M Belskiy, V A Pimenov and A N Shkarin	Profiles' classifier of hot-rolled rolling
0481	Legkiy N.M.	Reducing the effect of centrifugal forces on the clamping force in the new design of a three-jaw lathe chuck
0484	Nguyen Duy Canh, Nguyen Van Canh, Pham Xuan Hong, Nguyen Ngoc Hue, Tran Dinh Duy	Surface quality of high-speed cutting plates in flat grinding by new abrasive wheels of "Saint-Gobain Abrasive" company
0485	V.V. Zhivaeva, M. E. Koval, V. A. Kapitonov	Use of high-intensity acoustic field exposure during the preparation of emulsion type drilling mud
0489	S I Agapov, Y I Sidyakin and S N Olshtynsky	Tool Performance Under Ultrasonic Reaming
0490	S A Kurguzov, E Suvorova, E V Shestopalov, I A Krasnoperova	The Influence of Rolling on the Variation of Unevenness Parameters of the Treated Surface
0495	Cristina Anghel, Kapil Gupta, TC Jen	Effect of Laser Beam Cutting Parameters on Productivity and Dimensional Accuracy of Miniature Spur Gears of Stainless Steel
0505	Viktoriya N. Mosiyuk, Sergei V. Bukharov and Aleksey A. Baranov	Manufacture of Molding Tooling Based on TEIS-53 Heat-Resistant Resin
0509	V L Fedyaev, E R Galimov, A V Belyaev and L V Sirotkina	Melting dynamics of electrodes, additive materials in welding
0512	Elena Yatsun, Oksana Zubkova and Ivan Karnaukhov	Selection and design of tools for finishing machining of seal grooves of hydraulic cylinders
0521	Vladimir Bogutsky, Leonid Shron	Building a model of the process of grinding screws for ball-screw transmission
0522	Ekaterina Vladetskaya, Stanislav Roshchupkin	Equipment for improving the quality of finishing processing in floating workshops
1009	Irina Troyanovskaya	Selection of Interference-fit Tolerance when Rolling Thin-wall Bushings
1011	Igor A. Pinahin, Michael A.Yagmurov, Svetlana S. Vrublevskaya, Maria A. Shpack	THE EFFECT OF VOLUMETRIC PULSED LASER HARDENING OF CARBIDE CUTTING TOOLS ON THE METAL CUTTING EFFICIENCY
1016	V.I. Odinokova, E.A. Dmitrieva, A.I. Evstigneeva, A.V. Sviridova, E.P. Ivankova	Modelling Selection of Structure and Properties of Monolayer Electrophoretic Shell Molds during Investment Casting
1017	V.I. Odinokova, E.A. Dmitrieva, A.I. Evstigneeva, S.A. Kuznetsov	Development of new designs of casting and forging module assemblies

1022	A.O.Polyakov, V.Y. Lavrinenko, I.Y. Semenov	Development of the design technique of technological processes for manufacturing of ring-shaped parts by compression
1025	Ivanova T.N., Muzyemnek A.Yu., Jacek Sitko, Witold Biały	Kinematics of the grinding process
1030	S.D. Smetanin, V.G. Shalamov	Optimization of Parameters for Obtaining Discontinuous Chips by Rotary Milling
1037	Efremov Dmitry, Gerasimova Alla	Shotblasting Process for Surface Hardening
1041	V.V. Golovkin, O.M. Batishcheva, V.A. Papshev	Ultrasonic vibration-assisted thread cutting technology
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