

Ассоциация технологов-машиностроителей
Севастопольский государственный университет
НИТУ «МИСиС»
МГТУ им. Н. Э. Баумана

**МЕЖДУНАРОДНАЯ НАУЧНО-ТЕХНИЧЕСКАЯ
КОНФЕРЕНЦИЯ
«СОВРЕМЕННЫЕ НАПРАВЛЕНИЯ И ПЕРСПЕКТИВЫ РАЗВИТИЯ
ТЕХНОЛОГИЙ ОБРАБОТКИ И ОБОРУДОВАНИЯ В
МАШИНОСТРОЕНИИ 2021»**

**3-й МЕЖДУНАРОДНЫЙ НАУЧНЫЙ СИМПОЗИУМ
ПЕРСПЕКТИВНЫЕ ТЕХНОЛОГИИ АЭРОКОСМИЧЕСКОЙ ТЕХНИКИ (ТАКТ-2021)**

***INTERNATIONAL CONFERENCE
ON MODERN TRENDS IN MANUFACTURING TECHNOLOGIES AND
EQUIPMENT 2021***

***INTERNATIONAL SCIENTIFIC SYMPOSIUM
ADVANCED AEROSPACE TECHNOLOGIES (ТАКТ-2021)***

*Севастополь
06 – 10 сентября 2021 г.*

*September 06-10, 2021
Sevastopol, Russia*

НАУЧНАЯ ПРОГРАММА

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ПЛЕНАРНОЕ ЗАСЕДАНИЕ

PLENARY SESSION

- 10:00 Открытие конференции (Opening ceremony):
Братан Сергей Михайлович. Приветственное слово председателя организационного комитета конференции. Информация о работе конференции
- 10:10 ПЛ-1 **Суслов А.Г., д.т.н., заслуженный деятель науки и техники РФ, проф. БГТУ (Брянский ГТУ), Петрешин Д.И., д.т.н., директор УНТИ БГТУ, Федонин О.Н., д.т.н., ректор БГТУ «Фундаментальные основы технологического обеспечения надежности изделий машиностроения»**
- 10:35 ПЛ-2 **Приходько В. М., чл.-кор. РАН, профессор МАДИ, Нигметзянов Р.И., к.т.н., МАДИ, Сундуков С.К., к.т.н., МАДИ, Фатюхин Д.С., д.т.н., доцент МАДИ**
«Современные направления ультразвуковой жидкостной обработки в машиностроении»
- 11:00 ПЛ-3 **Смоленцев В.П., д.т.н., проф., С.В. Ковалёв, к.т.н., Н.С. Поташникова, аспирант, Воронежский государственный технический университет**
«Технологические методы повышения ресурса наукоемких изделий»
- 11:25 ПЛ-4 **Демин В.А., д.т.н., проф. МГТУ имени Н.Э. Баумана, Ларин С.Н., д.т.н., зав. каф. ТулГУ «Современные направления и перспективы развития технологий обработки металла давлением в машиностроении»**
- 11:50 ПЛ-5 **Чигиринский Ю.Л., д.т.н., проф., зав. кафедрой "Технология машиностроения" ВолгГТУ, Ингеманссон А.Р., к.т.н., главный технолог ФНПЦ (Федеральный научно-производственный центр) "Титан-Баррикады".**
«Математические модели оперативного управления технологическими режимами лезвийной обработки»
- 12:15 **Общее фото** (на ступеньках перед главным входом) **Перерыв на обед**
- 13:15 ПЛ-6 **Носенко В.А., д.т.н., профессор, зав. кафедрой ВТО, Кузнецов С.П., Фетисов А.В. Волгоградский государственный технический университет**
«Обработываемость шлифованием сплавов на основе d-переходных металлов четвертого периода инструментом из кубического нитрида бора»
- 13:40 ПЛ-7 **Зубарев Ю.М., д.т.н., проф. СПб государственный морской технический университет, Приемышев А.В., к.т.н., доцент СПб политехнический университет Петра Великого**
«Повышение эффективности плоского глубинного шлифования»
- 14:05 ПЛ-8 **Киселев Е.С, д.т.н., проф., Илюшкин М.В. к.т.н., Савельев К.С., аспирант Ульяновский государственный технический университет**
«Исследования процессов резания заготовок из труднообрабатываемых материалов для математического моделирования цифровых двойников»
- 14:30 ПЛ-9 **Тимофеев А. Н., д.т.н., проф., первый заместитель генерального директора АО «Композит», г. Королев Московской обл.**
«Высокотемпературные композиционные материалы. Опыт АО «Композит»
- 14:55 ПЛ-10 **Гузева Татьяна Александровна, к.т.н., доцент, начальник управления образовательных стандартов и программ МГТУ им. Н.Э. Баумана.**
«Современные методы и технологии формирования образовательных программ в техническом университете»

СЕКЦИЯ № 1 (Section 1)
АДДИТИВНОЕ ПРОИЗВОДСТВО
 ADDITIVE MANUFACTURING

0332	Evgeniy V. Stepanov, Marek Schmidt, Dennis Bäcker and Anton V. Tumasov	Additive technologies in the production of vehicle rubber with sensory properties
0387	Andrei V. Malakhov	Influence of Curved Fibers on the Mechanical Behavior of Variable Stiffness Composites
0474	Maksim G. Allenov, Dmitrii G. Allenov, Oleg A. Belokurov and Bahtiyor D. Hasanov	The use of additive technologies in the study of the process of cross wedge rolling workpiece for the stamping of the crankshaft
0517	A.A. Kransutskaya, V.A. Funtikov, A.B. Syritskii and A.S. Komshin	Modern Trends in Measurement Assurance of Additive Manufacturing
0590	A. V. Bacheeva, R. S. Khmyrov, A. D. Korotkov, T. V. Tarasova and A. V. Gusarov	Amorphous-Crystalline Composite Microstructure Formation in Zr46Cu46Al8 Alloy at the Conditions of Selective Laser Melting
0713	E. A. Yatsenko, L. V. Klimova, B. M. Goltsman and D. A. Golovko	Prospects for the synthesis of silicate geopolymer materials based on ash and slag waste from thermal power plants in the Russian Arctic zone
0759	Anna Norman, Vladislav Smolentsev and Alexander Norman	Additive technology for forming channels with galvanic-mechanical coatings
0810	I. V. Shakirov, P. A. Kuznetsov, A. S. Zhukov, V. V. Bobyr, S. P. Bogdanov and N. A. Khristyuk	Effect of Heat Treatment on Structure of Austenitic Steels Fabricated by Laser Synthesis
0845	Сгонов Николай Михайлович	Аdditивное производство изделий из высокоэффективной керамики в промышленности
0855	A.A. Filippov	Determination of The Dependences of The Mechanical Characteristics of Heterogeneous Material on The Content of Nanoparticles by Instrumental Indentation
0883	Farniev Anton and Novikov Pavel	Research of the Accuracy of Internal Threads Formed by FDM Technology and Additionally Processed with Tapers
0891	Sergey Belousov	Modern technologies and materials for 3D printing used in agricultural modeling
0892	Sergey Belousov	Effect of temperature on shrinkage of the plastic during solid modeling method of fusing layerwise
0893	Sergey Belousov Anna Belousova	Technologies and materials for 3D printing in the design of working elements of machines and technological equipment

СЕКЦИЯ № 2 (Section 2)**ПЕРСПЕКТИВНЫЕ ТЕХНОЛОГИИ И ПРОЦЕССЫ ОБРАБОТКИ МАТЕРИАЛОВ.
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AND TOOLS**

0010	V Yu Lavrinenko and A O Polyakov	Development of Resource-Saving Technological Processes for Manufacturing Rings by the Compression Method
0025	E. V. Artamonov, A. M. Tveryakov and A. S. Shtin	Investigation of Electromagnetic Properties of Tool Hard Alloys under the Influence of High Temperatures
0026	E. V. Artamonov, A. M. Tveryakov, A. S. Shtin and A. I. Abuskaev	Maximum Operability of Replaceable Hard Alloy Plates during Steel Turning EI867-VD
0035	A. S. Serkov, V. B. Masyagin, L. B. Serkova and R. I. Bazhenov	Development the six-jaw self-centering geared scroll chuck
0036	Soler Y I and Kazimirov D Yu	A note on the change in the surface quality characteristics during flat grinding of titanium intermetallic with shape memory effect
0037	E.V. Artamonov, V.V. Kireev, and V.A. Zyryanov	Implementation of a group cutting scheme during processing of large-module gears with a prefabricated tool
0038	Gilovoi L.Y, Isaev A.V., Krutov A.V., Molodtsov V.V.	Simulating modular rolling guides elastic properties
0041	Igor Sedinin, Vladimir Makarov, Michael Pesin and Sergey Nikitin	Dispersion of flatness of the machined surface and optimization of cutting conditions when performing a real experiment of face milling of high-hardness steel
0049	Pishchukhin Alexandr	Metasystem approach to the choice of billet production technology in aircraft construction
0070	V. I. Odinokov, E. A. Dmitriev, A. I. Evstigneev, Ye. P. Ivankova and G. I. Usanov	Mathematical Modeling of Optimization Process for Shell Mold Material Physical Properties and Structure
0071	V. I. Odinokov, A. I. Evstigneev, E. A. Dmitriev, S. Yu. Aleksandrov and G. I. Usanov	Modeling of Molten Metal Flows in a Continuous-Casting Machine Mold at Free Rotation of the Floating Closed-Bottom Nozzle
0076	V.I. Galkin, A.R. Paltievich, E.V. Galkin	Analysis of compacting stress in fibrous composites elementary cell by mathematical modeling
0087	Julius Tchigirinsky, Nadezhda Gribanova, Alina Gontar, and Nataly Chigirinskaya	Multidimensional model of product quality formation
0092	Evgeniy Safronov and Andrey Nosko	Analysis of linear dimension accuracy of sheet metal bending
0093	Yu. Bagaiskov	Modeling of gear-hone teeth with consideration of elasticity, correction, and operational wear
0103	Ruslan Chkalov and Darya Chkalova	Methods of titanium carbide-based coatings laser synthesis

0104	Ruslan Chkalov and Darya Chkalova	Method of diamond-like coatings obtaining
0105	S. Yu. Syanov	Engineering Quality Support of the Surface Layer and Operational Properties of Machine Parts during the Process of Electroerosion
0109	Yacov Lieberman, Svetlana Lukinskikh, Ksenia Kulpina and Yana Sarvarova	To the question of the reasons for decrease in the durability of cutting tools with a diamond-like coating
0110	A. I. Ogorodnikov	Modeling local fracture on the surface of a brittle material during machining
0114	Andrey Averchenkov, Inna Koloshkina, and Sergey Sheptunov	Development and optimization of control programs for 2.5-coordinate milling of three-dimensional workpieces on CNC machines
0119	Dmitry Efremov, Alla Gerasimova, Nikita Kislykh, and Cristina Shaibel	Additive technology methods for manufacturing permanent magnets
0121	Dmitriy Podashev	Control of Deformation of Elastic Polymer-Abrasive Circles at Their Wear
0129	Antimonov A.M., Poljanskij S.N., Pushkareva N.B	Elaboration of the equipment and technology for cutting rolled round bars and pipes with the cyclic circular bending method
0131	Leonid Kondratenko, Lubov Mironova	Contact stresses during roller rolling of heat-exchange tubes
0132	L Mironova, R Nigay, E Nigay	Experimental study of the distribution of temperature fields in the butt contour of a welded joint made of carbon and high-alloy structural steels
0146	Alexander Ryazantsev, Anna Shirokozuhova and Sergey Kovalev	Application of Combined Processing Methods for High-Tech Products Manufacturing
0147	Alexander Ryazantsev, Sergey Yukhnevich and Viktor Visotskiy	Development of Technology for Producing Holes in Parts with Unpredictable Surface Fluctuations
0151	Victor Ovchinnikov, Lyudmila Andreeva, Gulnara Latypova and Irina Klimenko	Fatigue Resistance of 01420 S Alloy Welded Joints Made by Various welding methods
0153	Башарова А.А.	Технологические подходы к термомеханической обработке деталей из кварцевого стекла
0167	Evgeny Deryugin	Влияние технологии спекания нанопорошков на трещиностойкость тетрагонального диоксида циркония
0169	Tavaeva Anastasiia F., Petunin Aleksandr A., Polishchuk Efim G.	Application of Multi-Contour Cutting in Algorithms for Solving the Cutting Path Problem
0172	V. Terekhov, M. Khizhov, L. Mironova, V. Vinnikov	Some aspects of the experimental method for determining residual stresses in the circular grooves of body parts
0182	Kulnevich V. B., Malkova E.V.	Investigation of the pipe weld for brittle metal fracture

0189	Valery Erofeev, Irina Troyanovskaya, Andrey Ignatiev, Robert Sharafiev and Rustem Gilmanshin	Welding Mode Justification for a T-joint
0193	Tatyana Oskolkova, Sergey Yaresko, and Sergey Balakirov	Tribomechanical properties of the modified surface of alloys of the WC-Co system
0197	D. Yu. Dubrov	Use of Hidden Phase Transfer Heat for Temperature Stabilization in Technological Cutting Systems
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0202	E. S. Shemonaeva and A. V. Goncharov	Influence of Processing Modes on the Distribution of Wall Thickness During Cell Formation
0203	Maria Shalaeva and Yuri Loginov	Influence of recrystallization annealing modes on the mechanical properties of copper pipes after large plastic deformation
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0209	Vladimir G. Gusev, Elizabeth V. Sobolkova	Microgeometry of Surfaces Simultaneously Ground by Coarse-and Fine-grained Wheels with Different Heights Ratio
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0216	Ruslan Chkalov	Telecommunication network for controlling the processes of micro-sized structures topology formation
0238	V. V. Golovkin, O. M. Batishcheva and V. A. Papshev	Study on the ultrasonic vibration impact on the performance of taps when thread cutting in workpieces made of difficult-to-machine materials
0239	Nosov N.V., Grishin R.G., Ladyagin R.V., Rodionov V.A., Gordienko Ya.M.	Macroscopic model of an abrasive tool
0243	Alexey V. Rivkin, Alexandr N. Sobolev, Alexey Ja. Nekrasov and Michael O. Arbuzov	Researching of the influence of the cutting parameters of expanded polystyrene with a thermal tool on the form errors of the product
0249	Nikita Balobanov, Vyacheslav Demyentev, Sergey Makarov, Evgeny Suntsov and Alexander Korshunov	Multifunctional complex of thermomechanical calibration by screw compression
0253	Trukhanov K., Tsarkov A., Zybin I., Vichniakov A.	Tilt Angle Effect on Friction Stir Welding Conditions
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0266	Telegin Igor V., Telegin, Viktor V.	Physical modeling low-waste technological process of the round forging hot stamp

0267	Mikhail Burnashov, Anton Tryastsin, Yuriy Stepanov, and Vitaly Kuzin	Researches of the dynamics of cutting through of the material by a water-ice jet.
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0284	Demyentyev V.B., Shushkov A.A., Kim S.L., Romanko V.V.	Investigation of the relationship of the chemical, phase composition with the mechanical properties of the transition zone of the welded joint A182 + 321
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0315	Tatyana A. Tolmacheva, Vadim V. Kuts and Yuliya A. Malneva	Improving Productivity of Misaligned Boring of Hydraulic Cylinder Holes with a Rotating Cutter Block Based on Computer Simulation Results
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0319	Paramonov S. S. , Bulychyev V.V. , Ponomarev A.I. , Golubina S. A.	Research of Zinc Coated Steel Stamped Part and Steel Nut Projection Welding Process
0323	Grubka Roman M., Mikhaylov Alexander N., Petryaeva Irina A., Pichko Natalya S., Polyakova Larisa P.	Determination of the parameters of the trajectory of movement of a standard tool in multi-coordinate machining of spatially modified teeth of spur wheels with the copying technique
0326	Sergey Sundukov, Ravil Nigmatzyanov, Vyacheslav Prikhodko and Dmitriy Fatyukhin	Sequential treatment of steel surfaces by nitriding and ultrasonic hardening
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0347	Dmitriy S. Fatyukhin, Ravil I. Nigmatzyanov, Sergey K. Sundukov and Aleksandr V. Sukhov	Stages of cavitation erosion development on steel surfaces
0353	Frolenkova L.Yu., Tarapanov A.S., Selemenev M.F., Novikov A.D., Selemeneva E.M.	Efficiency of Application of Epilams when Protecting the Surface of Fast Cutting Tools
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0358	Konstantin Trukhanov, Julia Golovacheva, Pavel Ditkovskiy and Pavel Levko	Influence of preheating and postweld heat treatment on the structure and strength of the wire frame welded joint made of spring steel C62D
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0581	Сергеева И.В., Короткова Е.А., Колос Э.М., Мартинес Э.К.	Инновационный курс начертательной геометрии
0588	N A Fomenko, O V Burlachenko, A A Lyashenko, A A Suhov	Acoustic method for diagnosing microcracks of high-pressure hoses of hydraulic drive machines in operation
0617	Монахов В.А., Шейн Александр Иванович	Формирование матрицы влияния моментов рамы на основе графа расчётной схемы
0620	A N Korneichuk, S A Chugunov, Y G Litkovskaya and S V Bukharov	Features of Use of Polymeric Composite Materials Intended for Space Structures
0621	Dmitry A Kurasov	TO THE ISSUE OF CALCULATING THE PRODUCTIVITY OF PLANETARY ROTARY HYDRAULIC MACHINES PROMISING FOR USE IN TRANSPORT COMPLEX
0636	Polyanskov Yuri V., Zheleznov Oleg V., Blyumenshteyn Aleksey A., Sergeev Ilya A.	Automation of maintaining a smart reference book of tool setups for the development of control programs for CNC machine
0645	Oleg Drachev, Boris Gorshkov, Victor Tisenko and Natalia Samokhina	Improving the Accuracy of Low-Rigid Shaft Lathing in Self-Centering Steady
0650	I.M. Vinokurova, E.E. Khlopovskikh, L.B. Safonova and L.N. Zvyagina	Study of the Features of Heat and Mass Transfer in the Interelectrode Space During Electrochemical Processing of Metals for the Aerospace Industry
0651	Anna Klentak	Method Of Formation Of A Sequence Of Elements Of Technological Processes Of Foundry Production For The Priority Selection Conducted On Energy Saving Measures

0652	Anna Klentak	Methods for assessing heat energy losses through the building envelope, as well as methods for calculating the resistance to heat transfer of the building envelope
0661	Zinur Mukhametzyanov, Aleksey Rubtsov and Petr Kulakov	Methods of improving the safety of drilling works
0665 (IMM_062)	Еловенко	Mathematical model frictional ring joint of multilayer cylindrical structures
0674	Valeria Dmitrieva, Pavel Sizin, and Ilyas Avkhadiev	Selection of a multi-functional controller for the software and hardware complex of an automated control system for a thermal power plant
0675	Valeria Dmitrieva, Pavel Sizin, and Dmitry Dzyuin	The system of automatic control of fuel supply to the boiler at the thermal power plant
0685	Krotov K.V., Drozin A.Y., Zaikina E.N.	Schedule planning proceeding of transfer batches in Flexible Automated Lines while sets are forming and limits are recognized
0687	Denis Medvedev, and Konstantin Aksyonov	The development of a simulation model for assessing the CI/CD pipeline quality in the development of information systems based on a multi-agent approach
0688	Pavel Popov, Polina Bochkareva	Artificial neural network energy consumption forecasting system
0701	Aleksey Rubtsov, Zinur Mukhametzyanov, Petr Kulakov and Veronika Gracheva	Stress-deformed condition at different angle of scratch inclination on flat cover of hatch-blade
0730	Braginskii M.Ya., Tarakanov D.V., Tarakanova I.O., Khuchasheva N.A.	Equipment condition monitoring using computer vision
0731	Yakov Liberman, and Olga Lukashuk	Study on methods of adaptive vibration damping in mechanical systems
0735	Georgi M Martinov, Liliya I Martinova, and Nikolay N Fokin	Development of toolkit for formalizing the programming of canned cycles on CNC machine tools
0739	Chudakov O.I., Gorelov V.A.	Calculation and experimental method in analysis of a wheel efficiency in interacting with deformable supporting bases
0742	Mikhailov P G	Modeling of sensitive elements of capacitive measuring transducers taking into account the influence of the edge electrostatic effect
0744	Тараторкин И.А., Вязников М.В., Вязников А.М	Повышение подвижности гусеничных машин при криволинейном движении путём перераспределения потоков мощности
0747	Alexander Fominykh, Ilgiz Chinyayev, Alexander Telminov and Vladimir Astafiev	Development of a method for determining the specific pressures on the sealing fields of slide valves

0766	Muzafarov Eldar, and Chernyshev Konstantin	Optimization in Machine Manufacturing Technology
0768	Evgeniy Sarach, Alexander Tsipilev, Igor Smirnov	Control algorithm selection technique for vehicle robotic transmission in the urban cycle
0771	Старостин Н.Д., Шипачева Е.Н., Зайцев Я.А	Выявление рациональной схемы поуровневого приближения к минимальному маршруту
0773	Alexander Shein, Alexander Chumanov, Artem Malkov and Nikolay Laskov	New vibration dampers for buildings and structures
0783	Olga Shatalova, Ekaterina Kasatkina, and Valery Larionov	Multi-criteria optimization in solving the problem of expanding the production capacity of the production workshop
0789	Вдовин Р.А.	Особенности использования технологии быстрого прототипирования при изготовлении восковых моделей рабочих лопаток турбины ГТД
0796	Sibel Ahmedova	The importance of research and development in strengthening the enterprise competitiveness
0800	Dema R.R. Koldin A.V. Banshikov V.S., Murzabaev T.N., Amirov R.N., Suvorova E.V.	An experimental study of the thermal state of a steel billet during hot rolling
0802	Terentyev D.V., Platov S.I., Kharchenko M.V., Ogarkov N.N., Dema R.R., Suvorova E.V.	Determination of lubricant layer thickness with an allowance for oil absorption capacity of contacting surfaces
0805	Ofentse Monnanyana, Kapil Gupta	A Case Study on Implementation of 5S in a Manufacturing Plant to Improve Operational Effectiveness
0817	Pavel Vitliemov and Krasimir Markov	An approach for parametric assembly design of robotic grippers
0824	Yekimov Sergey, Mikhail Rudiuk, Anatoly Lastovka, Natalia Arseneva, Galija Aralbaeva	THE IMPACT OF SERVICE MAINTENANCE ON THE QUALITY INDICATOR OF MANUFACTURED PRODUCTS
0827	Marek Krynke, Dorota Klimecka-Tatar	Production costs management in process supported by external entities – process flow optimization
0828	Manuela Ingaldi, Krzysztof Knop	Influence of the modernity of the dosing machine on the stability of the packing process
0829	Robert Ulewicz, Krzysztof Mielczarek	Machine Operation Efficiency in the Production of Car Equipment
0839	Vladimir Fedyaev, Peter Lyudogovsky, and Maria Komkova	Estimation of the error in measuring the coordinates of vibrating objects using laser coordinate measuring systems. General Provisions
0856	M.Y. Serbinovskiy, M.P. Kurepin, A.A. Kolesnikov, and A.M. Serbinovskaya	3D Simulation in Automated System for Technical Condition Diagnostics and Power Plants Elements Strength and Resource Estimation

0857	Nekrasov Roman Yurievich	Mechanical processing thermal regulation
0858	Зубарев Ю.М., Вебер А.В., Богданов Е.В., Барсуков В.А.	Основные направления модернизации и развития предприятий судостроения
0860	Alexander Zverovshchikov	Assessment Of A Heterogeneous Environment
0862	Sergey Yekimov, Viktoriia Nianko, and Dmitriy Kucherenko	The activation of reengineering at the enterprises of the automotive industry of Ukraine
0864	Irina V Ershova, Aleksey V Ershov and Andrey V Klyuev	Determination of Priority Customers for Small and Medium-sized Machine-building Enterprises
0870	Mikhail Loktev	Functional Voxel Representation of the Voronoi Diagram as a Tool for Analyzing the Structure of Interparticle Space
0871	Kirill Selivanov, Andrey Vlasov and Lyudmila Zhuravleva	The influence of button panel interfaces on the efficiency of electronic device operation
0872	S. V. Rybalko, V. G. Rybalko, D. V. Novgorodov, A. Yu. Surkov and S. E. Chernykh	Using of High-strength Protective Coatings, Reducing the Risk of Initiation and Development of SCC Defects
0873	S.V. Rybalko, V.G. Rybalko, D.V. Novgorodov, A. Yu. Surkov and Ya.V. Gubanov	Recommendations For The Repair Of Gas Pipeline Sections Containing SCC Defects Up To 10% Of The Pipe Wall Depth
0875	Sibel Ahmedova	Clusters - an opportunity for innovative development and competitiveness of industrial enterprises in Bulgaria
0876	A.S.Shleenkov, S.A.Shleenkov, A.B.Pastukhov and Ya.V.Gubanov	Practical Implementation of the Algorithm for Processing Signals Obtained by Magnetic Flaw Detection of Rolled Steel
0877	A.S. Shleenkov, D.V. Novgorodov and V.O. Konovalchuk	Study Of Defects Of Longitudinal Welded Pipe
0878	V.G. Rybalko, D.V. Novgorodov, A. Yu. Surkov and E.A. Rogova	Fractographic Study Of Fatigue Failure Of A High-pressure Turbine Rotor Blade
0879	I .M. Vinokurova, E.E. Khlopovskikh, A.A. Boldyrev, A.A. Tychinina, L.B. Safonova	Study of Changes in Hydrodynamic Conditions in Electrochemical Systems
0880	Alexander Shumskiy and Vadim Donchenko	Analysis of The Main Methods For Assessing The Throughput of Controlled Intersections
0882	Ruslan Chkalov and Alena Kharkova	Interaction of Femtosecond Laser Radiation with a Liquid Medium at Different Pressures
0885	Sergey Grachev, Irina Trushkova	Reconstruction of ceramic dishes from the archaeological site of the East Pomor town Lalsk by using 3D modeling
0889	Yury Izvekoy, Alexander Anisimov, Evgeniya Puzankova, Irina Kinzina	Algorithm for quantitative evaluation of quality at iron and steel works

СЕКЦИЯ № 5 (Section 5)
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0022	Meleshko Alexey, Desnitsky Vasily, and Kotenko Igor	Approach to anomaly detection in self-organized decentralized wireless sensor network for air pollution monitoring
0102	Yaqub Hassan, A.M. Popov, R.M. Valiyev	The Exponential Law of Device Functioning in Mechanical Engineering
0184	Alexander Bokhonsky, Natalia Varminskaya, Tatyana Mozolevskaya	Reversibly Constructed New Optimal Controls For Translational Object Motion
0278	Luis F. Roque Vidal and Olga M. Ogorodnikova	Planning and design of robotic production
0293	Maksim Kubrikov, Mikhail Saramud, Angelina Petetskaya and Evgeniy Talay	Creation and Verification of Digital Twins in Cloud Production
0374	Гаврилова А.А., Матвеева Е.А., Салов А.Г.	Системный анализ и решение проблем энергоэффективности машиностроительного производства
0377	Evgeny Mityushov, Egor Zinovich, Maxim Kosulin	Kinematics of the maneuver of the multifunctional machine for metallurgical furnaces
0493	Kovalev Ilya, Nezmehdinov Ramil, Melikov Pavel, Sokolov Sergey	Research and development of food industry's three-dimensional printing
0501	Kovalev Ilya, Chervonnova Nadezda, Abdulov Ramir, Akram Al Khoury	Development of a synthesis method for CNC machine tools remote monitoring system by using Web components
0745	Mikhail Lemeshko, Aleksey Iliev and Valery Zibrov	Modeling the operation of an adaptive drilling machine. Statics and dynamics
0849	Semen A. Stupin and Olga M. Ogorodnikova	Bio-Inspired Design of a Gripper for Harvesting Robot

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ПРОБЛЕМЫ РАЗВИТИЯ ТРАНСПОРТА
 PROBLEMS OF TRANSPORT DEVELOPMENT

0005	Evgeniy Zhuchenko, Vladimir Chervonyuk	Disadvantages of modern gas turbine engine diagnostics systems and some prospects for their development
0039	E. V. Parsaev and I. A. Teterina	Improving Organization of Traffic in Small Towns
0067	Evgeni Toropov, Yuri Trusov, Pavel Moshkov and Valery Filatov	Preparation and carrying out tests of blind spot detection system
0068	Andrey Vashurin, Yuri Trusov, Evgeni Toropov, and Pavel Moshkov	Development of experimental fuel economy evaluation methodology for light commercial vehicle

0078	Olga Lebedeva, Julia Poltavskaya	Modeling urban freight demand based on the supply chain
0079	Marina Kripak, Olga Lebedeva, Julia Poltavskaya	Development of a system for the integration of vehicles and sensor devices in intelligent transport systems
0095	Ветрогон Александр Анатольевич, Крипак Марина Николаевна	Анализ целесообразности назначения приоритетных направлений движения в зоне кольцевого пересечения в зависимости от распределения транспортных потоков
0161	Alexander Bogoslavskiy, Verrel Mulia	Prerequisites for the Use of Gas-fueled Locomotives on Railways of the Island of Kalimantan
0183	Bogdanov A.V., Popova S.Yu, Zhitenko I.S, Belousov M.A.	Justification of Need to Reduce Number of Studs on Vehicle Tyres
0195	A V Popov, G A Chernova, M V Velikanova and N S Khvan	Investigation of the causes of premature failure of the suspension and brake system of buses " Volgabus»
0312	Svetlana Gubenko, Igor Ivanov, Dmitry Kononov, Igor Kiselev	Wear Of Railway Wheels Tread
0333	I A Yaitskov, A A Nazaretov, V.V. Kosarevsky	The development of measuring system for studying the dynamic processes of the main brake components in operation
0349	L.E. Kushchenko, S.V. Kushchenko, A.N. Novikov	A system for monitoring traffic parameters using intelligent transport systems
0418	Alexey Khomichev, Alexandr Volkov	Electromechanical transmission of skid steer loader
0419	Evgeny Parsaev, Irina Teterina, and Tagir Vagizov	Environmental Assessment of Urban Passenger Transport Operations
0480	Lvovich Igor, Preobrazhenskiy Andrey, Choporov Oleg, Ružický Eugen	Modeling and Optimization of Technical Processes in Transport Systems
0525	Andrey Puzakov	Analysis of diagnostic parameters of the vehicle's power supply system
0564	A G Shevtsova, V V Vasilieva, A G Burlutskaya, K V Levshina and E.M. Minaeva	Analysis of the accident rate of the constituent entities of the Russian Federation
0594	Kirill Evseev, Aleksey Dyakov, Roman Goncharov and Konstantin Chutkov	Determination of design solution for a 6x6 ATV with an electromechanical transmission
0595	Kirill Evseev, Aleksey Dyakov, Roman Goncharov and Konstantin Chutkov	Experimental research of 4x4 ATV motion along the curved trajectory at the test bench
0596	Kirill Evseev, Aleksey Dyakov, Roman Goncharov and Konstantin Chutkov	Selection of transmission and electrical motor parts for ATVs
0711	A.I. Taratorkin, I.A.Taratorkin, A.V. Belevich and I.A.Trusevich	Metod for Optimizing Dynamic and Vibroacoustic Load of Transport Vehicle Power Unit

0712	Alexey Taratorkin, Victor Derzhanskii, Sergey Abdulov, Alexander Taratorkin	Off-design Loading Modes of the Road Rollers of the Undercarriage of the Tracked Vehicle
0714	Derzhanskiy V.B., Taratorkin I.A., Volkov A.A., Yakovlev A.G.	Regularities of Interaction between a Caterpillar Drive and a Supporting Base
0788	Vladimir Rassokha and Ilgiz Khasanov	Improvement of Physical Wear Determination Methodology When Calculating Car Body Remanufacture
0790	Pavel Beresnev, Dmitry Zarubin, Dmitry Tyugin and Alexey Pinchin	Development Of A Blind Spot Monitoring System For Commercial Vehicles
0812	Sergey Vakulenko, Petr Kurenkov, Alexey Astafiev, Valentina Sadchikova and Jozef Gašparík	Vacuum Magneto-Levitational Transport Strategy of the Russian Federation
0813	Evgeniia Chebotareva, Victor Bogachev, Sergey Vakulenko, Petr Kurenkov and Jozef Majerčák	Improving safety of shunting operations at railway stations on the basis of the development of information tools and automation of technological processes
0814	Vladimir Belozеров, Irina Solop, Irina Seryapova, Alexey Astafiev and Jozef Majerčák	Challenges and methods for developing the productive capacity of rail transport
0853	Vladimir Zyryanov, Jiang Haiyan	Macroscopic fundamental diagram on urban network
0854	Alexandr Novikov, Anastasia Shevtsova	Prospects for reducing deaths on the roads of the Russian Federation
0863	Sergey Kondakov, Aleksey Malahovetsky, Olga Pavlovskaya and Ramil Zakirov	Simulation Model of the Curved Movement of a Tracked Vehicle With a Stepless Turning Mechanism
0867	Kirill Evseev, Aleksey Dyakov, Roman Goncharov, Konstantin Chutkov	Justification Of Technical Solutions For The Suspension System Of 4x4 ATV
0868	Kirill Evseev, Aleksey Dyakov, Roman Goncharov, Konstantin Chutkov	Substantiation Of Technical Solutions For Steering 4x4 ATV
0881	Sergey Yekimov, Viktoriia Nianko and Dmitriy Kucherenko3	Reengineering Of The Urban Public Transport System
0886	Pavel Beresnev, Dmitry Tyugin, Dmitry Porubov, Valery Filatov, and Artem Rodin	The Development of a Lane Departure Warning System Based on Neural Network Approach

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 AGRICULTURAL ENGINEERING

0018 (2002)	Alexander Serguntsov, Anton Marinets	Kinematics of the Rotary Working Body for Harrowing Crops
0042	Alexander Serguntsov, Stanislav Kozhevnikov	Improvement of Stubble Crop Processing with a Multi-Purpose Unit

0043	Alexander Serguntsov, and Leonid Alekseenko	Optimization of MFA parameters for harrowing crops with simultaneous fertilization
0044	Alexander Serguntsov and Sergey Lagoda	Justification of the coefficient of use of the working time of the unit change for harrowing winter crops with simultaneous top dressing
0046	Vladimir Konovalov	Tillage and Creation of Soil Structure in the Conditions of Krasnodar Territory
0062	Azamat E Bogus, Vladislav Stanin, and Alina Vyshebabina	Trends of grain pneumatic seeders development
0065	Azamat E Bogus, and Alina Vyshebabina	Economic justification of the efficiency of grain crops sowing with a pneumatic seeder with a centrifugal distribution system
0162	Elena Podolskaya, Svetlana Sviridova and Dzmitry Shakhrai	Improvement of the Regulatory Framework for Testing Agricultural Machinery
0316	Mudarisov F.A., Isaev Yu.M., Semashkin N.M., Semashkina A.I.	The analysis of grain quality using trace elements in the winter wheat cultivation technology
0320	Isaev Yu.M., Nekrashevich V.F., Semashkin N.M., Torzhenova T.V.	The theory of honey outflow from a honeycomb cell
0691	Marinchenko Tatiana E.	Promising preparations for the greening of agricultural production in Russia
0017 (2001)	I.I. Ognev, M.V. Pyataev, A.P. Zyryanov, I.G. Ognev	Justification for changing the geometry of the spring pin pickup surface of the grain crop pickup
0024	G.G. Maslov, E. M. Yudina, A. V. Palapin	The directions of effectiveness improvement of grain harvesters
0027	A. S. Averyanov, S. N. Vlasov, A. L. Khokhlov and A. A. Khokhlov	Evaluating the use of composite rapeseed and mineral diesel-fuel oil in automotive diesel engines and the effect of its heating on the operating conditions of fuel-injection equipment
0029	Lovchikov A.P., Ognev I.I.	TO THE DEVELOPMENT OF SIEVE COMBINATION OF THE COMBINE HARVESTER CLEANING SYSTEM
0030	Lovchikov A.P., Ognev I.I.	THEORETICAL BACKGROUND FOR COMBINATION OF SIEVES OF COMBINE HARVESTER CLEANING SYSTEM
0045	Vladimir Konovalov, Sergey Konovalov and Viktor Baradakov	Analysis Of Development Trends Of Disk Tillage Organs For Increasing The Degree Of Soil Crumbling
0047	Vladimir I. Konovalov and Sergey I. Konovalov	Influence of design and technological parameters of disk working bodies on the height of the crest of the bottom of the furrow
0048	Vladimir I. Konovalov, Sergey I. Konovalov and Viktor I. Baradakov	Kinematic analysis of a disk working body with a changing radius of curvature
0061	A. Yu. Popov	Influence of the vertical screw casing hole form on dosing parameters

0063	Azamat E Bogus, Vladislav Stanin, and Alina Vyshebabina	Analysis of designs of distribution systems of grain pneumatic seeders
0064	Azamat E Bogus, Alina Vyshebabina	Design scheme and operating principle of a centrifugal seed distributor of a pneumatic grain seeder
0090	Alexey Podzorov, Mikhail Chaplygin, Maria Podzorova, and Ivetta Varyan	Breeding trimmer. New technologies for the first and second stage of plant breeding
0174	Alexander S. Startsev, Evgeniy E. Demin, Alexander A. Kunshin, Galina E. Shardina and Evgeniy S. Nesterov	Comparative Evaluation Of The Threshing Machine Operation When Threshing Sunflower Heads With Polyurethane Beaterbars
0221	Nikolay Ayugin, Alexandr Morozov, Nikolay Semashkin, Vadim Zlobin and Maxim Ulyanov	Study of the influence of geometric knife parameters on specific work of feeds cutting
0245	Vinevskiy Yevgeniy I., Lopatin Vladislav S.	Assessment of competitiveness of domestic and foreign machines for planting seedlings
0263	Mikhail Konstantinov, Ivan Gluchkov, Vitaly Mukhamedov, Sergei Bazylo, and Sergei Drozdov	Promising areas for reducing energy costs indicators of soil tillage
0277	Mikhail Konstantinov, Ivan Gluchkov, Igor Gerasimenko, Igor Ognev and Tatiana Bedych	Justification of the parameters and operating modes of the fan of the device for collecting grain, which is part of the reaper designed for two-phase harvesting in a batch way
0279	Ivan Masienko, Sergei Shevchenko and Artem Vasilenko	Evaluation of Resources of a Part depending on its Renewal Density
0286	Oksana Sokolenko	Study of Dynamics of Lifting Technological Device Constituting a Part of Underground and Tower Hydroponic Units
0301	Valeriy Belovodskiy and Sergey Bukin	To the dynamics of vibrating machines with misaligned shaft connection in the drive transmission
0338	Evgeniy Asmankin, Yuriy Ushakov, Vladimir Shakhov, Ivan Kargaev, Elena Neifeld	Experience and prospects for the development of water pressure tanks
0340	Marina Ye. Belyshkina, Tamara P. Kobozeva and Mikhail G. Zagoruyko	Optimization of Soybeans Harvesting Agrotechnical Measures
0385	Maxim Sotnikov, Alexander Mishanin, Sergei Denisov and Alexander Yashin	Energy intensity reduction of grain contact drying functional
0421	Ivan Masiyenko, Sergey Shevchenko and Artyom Vasilenko	Analysis of engineering specifics of rice sowing machines

0422	Leonid Babitskiy, Vadim Moskalevich, and Aleksandr Belov	Substantiation of firing pin location on elastic strut of vibration shock cultivator hoe
0424	Иван Викторович Масиенко	Теоретические исследования конструктивных параметров элементов машин для разбросного посева риса
0437	Dmitriy Khort, Alexey Kutyrev, Igor Smirnov and Dmitriy Syrovatsky	Robotic device for identifying and picking apples
0463	Aleksandr Yashin, Pavel Sumenkov, Aleksandr Mishanin, and Maxim Sotnikov	Results of theoretical studies deflection of the working part teat tube of the milking machine
0472	Victor Petko, Ilmira Rakhimzhanova, Yuriy Ushakov, Maxim Fomin, Khristianovskaya Margarita	Methodology for determining optimal parameters of the valve float level regulator
0478	Semichev Stepan, Dmitriy Khort, Alexey Kutyrev, Rostislav Filippov	OPERATING MODES OF THE DEVICE FOR POSITIONING AGRICULTURAL IMPLEMENT IN THE UNIT
0567	S.A. Zenkov and P. Yu. Dryupin	Definition of the optimal temperature of the contact surface to combat soil freezing to the working bodies of earth-moving machines
0576	Dmitriy Kotov, Sergey Vdovkin, Maksim Sotnikov and Sabina Khairullina	Results of Computer Modeling of Process Flow Chart of Rotary-Scraper Sowing Device
0632	E.G. Aristov, N.N. Krakhovetsky, V.G. Selivanov, I.Ya. Paremsky, N.P. Mishurov	PROCESSES FOR RAPID TEST OF SPRAY DROP DISPERSED CHARACTERISTICS
0641	Н.П. Баловнев, Ю.И. Бровкина, Л.А. Дмитриева	Клиноременные передачи в сельхозмашиностроении
0659	Ivan Kireev, Zinaida Koval' and Michael Danilov	Application of slot liquid nozzles in a technical means for edge treatment of field
0690	Yu. M. Isaev, V. A. Zlobin, N. M. Semashkin, and N.P. Ayugin	Spiral screw as the working body of a conveyor
0694	Sergey A. Grashkov, Natalia A. Pivovar, Evgeny V. Ageev	X-ray spectral microanalysis of W-Ni-Fe heavy tungsten alloy particles used for the restoration of agricultural machinery parts
0695	Sergey A. Grashkov, Natalia A. Pivovar, Evgeny V. Ageev, Alexander Yu. Altukhov	Investigation of the sinterability of cobalt-chromium powders used for the restoration of agricultural machinery parts
0703	Leonid Babitskiy, Aleksandr Belov, and Vadim Moskalevich	Increasing the effectiveness of impact on the soil of cultivator working bodies
0707	Yulia Semenikhina, Sergey Kambulov, Dmitriy Podlesniy, и Andrey Boyko	Features of soil tillage during the cultivation of spring barley

0753	Evgeny Zykin, Vladimir Kurdyumov, Svetlana Lazutkina	Determining the energy efficiency of corn, sunflower and soybean cultivation with the use of ridge technology
0754	Evgeny Zykin, Vladimir Kurdyumov, Svetlana Lazutkina	Substantiation of the absolute velocity of the soil thrown by a spherical disc of the roller of a ridge roller planter
0755	Evgeny Zykin, Vladimir Kurdyumov, Svetlana Lazutkina	Theoretical substantiation of the angle of mounting a flat ridge-forming disc of a row crop cultivator
0756	Evgeny Zykin, Svetlana Lazutkina, Vladimir Ovchinnikov	Theoretical substantiation of the curvature radius and diameter of spherical discs of a combined tillage unit
0757	Evgeny Zykin, Svetlana Lazutkina	Theoretical substantiation of the distance between V-shaped sweeps on the frame of a combined tillage unit
0758	Evgeny Zykin, Svetlana Lazutkina	Theoretical substantiation of the curvature radius and diameter of spherical discs of a combined tillage unit
0776	Y.N. Stroganov, E.M. Pampura, and A.Y. Mikheev	Improving the stability of the straight-line movement of a tractor train by improving the trailer hitch
0894	Victor Rykov Sergey Kambulov Sergey Belousov	Justification of the applicability of a replaceable crawler unit for promising mobile power vehicles
0895	Igor Bozhko Victor Rykov Sergey Kambulov Sergey Belousov	Energy assessment of tillage working bodies
0896	Anna Belousova Sergey Belousov	On the issue of calculating the efficiency of investments in the introduction of new equipment and its new working bodies in the cultivation and processing of crop products
0897	Papusha S.K., Zhadko V.V., Kozhura F.A.	The process of ultra low-volume seed etching by an experimental device
0898	Papusha S.K., Zhadko V.V., Kozhura F.A.	Combined unit for the introduction of ultra-low-volume biological products with simultaneous embedding in the soil
0899	Sergey Belousov Alexander Tsymlal	Technical solution for complex layer-by-layer tillage with soil formation turnover
0900	Sergey Belousov Yury Khanin	Design for applying liquid concentrated fertilizers
0901	Papusha S.K. Domrin A.A.	Theoretical study of the process of separating the tobacco leaf from the stem
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