

IV International Scientific Conference "Construction Mechanics, Hydraulics and Water Resources Engineering" (CONMECHYDRO-2022)

E3S Web of Conferences Volume 365 (2023)

Tashkent, Uzbekistan
22-24 August 2022

Part 1 of 2

Editor:

Dilshod Bazarov

ISBN: 978-1-7138-6641-1

Printed from e-media with permission by:

Curran Associates, Inc.
57 Morehouse Lane
Red Hook, NY 12571



Some format issues inherent in the e-media version may also appear in this print version.

This work is licensed under a Creative Commons Attribution 4.0 International License. License details:
<http://creativecommons.org/licenses/by/4.0/>.

No changes have been made to the content of these proceedings. There may be changes to pagination and minor adjustments for aesthetics.

Printed with permission by Curran Associates, Inc. (2023)

For additional information, please contact EDP Sciences – Web of Conferences at the address below.

EDP Sciences – Web of Conferences
17, Avenue du Hoggar
Parc d'Activité de Courtabœuf
BP 112
F-91944 Les Ulis Cedex A
France

Phone: +33 (0) 1 69 18 75 75

Fax: +33 (0) 1 69 28 84 91

contact-edps@webofconferences.org

Additional copies of this publication are available from:

Curran Associates, Inc.
57 Morehouse Lane
Red Hook, NY 12571 USA
Phone: 845-758-0400
Fax: 845-758-2633
Email: curran@proceedings.com
Web: www.proceedings.com

TABLE OF CONTENTS

PART 1

ECOLOGY, HYDROPOWER ENGINEERING AND MODELING OF PHYSICAL PROCESSES

Technological Foundations for Solving Problem of Metallurgy and TPP Waste Utilization for Development of "Green" Technology for Composite Cements Production.....	1
<i>Mastura Iskandarova, Gulruh Begjanova, Dilshod Mukhitdinov, Zukhra Yakubzhanova, Burxon Botirov</i>	
Intelligent Algorithms of Construction of Public Transport Routes	11
<i>Mirxalil Ismailov, Davron Ziyadullaev, Dilnoz Muhamediyeva, Rano Gazieva, Aksulu Dzholdasbaeva, Sharofiddin Aynaqulov</i>	
Dietary Diversity for Ensuring Food Security	21
<i>Fotima Saydullaeva, Shavkat Hasanov, Khusniddin Paradaev, Shukrullo Muratov</i>	
Results of Computational Studies of Stress-Strain State of Locks No. 15 and No. 16 of Gorodetsky Complex of Hydraulic Structures	29
<i>Sergey Britvin, Oleg Rubin, Pavel Belkin, Sergey Lisichkin, Igor Baklykov, Alexander Yurchenko</i>	
Assessment of Temperature and Precipitation Trends in Kashkadarya, Uzbekistan	42
<i>Sardor Khamidov, Zhi Li, Makhliyo Nasirova, Bakhtiyor Pulatov, Alim Pulatov</i>	
Numerical Modeling of Nonlinear Viscoelastic Vibrations of Vehicles	55
<i>Barna Rakhmankulova, Sayibdjan Mirzaev, Mazhid Yusupov</i>	
Numerical Simulation of Tasks of Vertical Viscoelastic Oscillation of Suspension Systems of Frame, Engine, Cabin and Seat	65
<i>Barna Rakhmankulova, Sayibdjan Mirzaev, Mazhid Yusupov</i>	
Application of Advanced Computer Technologies in Determination of Irrigation Regimes for Cotton in Water Scarcity Areas.....	73
<i>Mukhammadkhon Khamidov, Aziz Inamov, Utkir Islomov, Zokhid Mamatkulov</i>	
Development of Scientific-Based Irrigation Systems on Hydromodule Districts of Ghoza in Irrigated Areas of Bukhara Region Based on Computer Technologies	85
<i>Mukhamadkhan Khamidov, Bakhtiyar Matyakubov, Nodirjon Gadaev, Khasimbek Isabaev, Ilkhom Urazbaev</i>	
Efficiency of Use of Magnetic Water in Drip Irrigation of Cotton.....	92
<i>Dinara Ergashova, Saltanat Kasymbetova</i>	
Numerical Study of Flow Around Flat Plate Using Higher-Order Accuracy Scheme.....	99
<i>Murodil Madaliev, Elmurad Yunusaliyev, Akramjon Usmanov, Nodirakhon Usmonova, Khusanboy Muxammadyoqubov</i>	
Increasing Environmental Safety, Increasing Service Life of Ice Units and Assembly and Saving Fuel Consumption Through Application of Multifunctional Fuel Additives.....	112
<i>Sherali Tursunov, Ravshan Khikmatov</i>	

Intelligent Decision Support in the Optimization of Irrigation Systems in Agriculture	118
<i>Alexander Kabildjanov, Charos Okhunboboyeva, Sarvarbek Ismailov</i>	
Propagation of Skew-Symmetric Unsteady Shear Waves from Thick-walled Shell in Elastic Space	129
<i>Amon Shukurov</i>	
Short-Term Forecasting of Electricity Generation by HPP's of Power System of Uzbekistan	141
<i>Kakhraman Allaev, Tokhir Makhmudov, Denis Losev</i>	
About One Boundary-Value Problem Arising in Modeling Dynamics of Groundwater	148
<i>Akmal Abdullayev, Muyassar Hidoyatova, Nigora Safarbayeva</i>	
Development of a Traditional Transport System Based on the Bee Colony Algorithm	161
<i>Davron Ziyadullaev, Dildora Muhamediyeva, Sholpan Ziyaeva, Umirzoq Xoliyorov, Khasanturdi Kayumov, Otabek Ismailov</i>	
The Ways of Using Collector Drainage Waters for Irrigation.....	170
<i>Shavkat Usmanov, Murat Yakubov, Zulfiya Mirkhasilova, Ludmila Irmukhomedova, Luiza Babakulova</i>	
Generalized Models of a Production System of Fuzzy Conclusion.....	177
<i>Davron Ziyadullaev, Dilnoz Muhamediyeva, Zafar Abdullaev, Sharofiddin Aynaqulov, Khasanturdi Kayumov</i>	
Numerical Solution of Problem of Longitudinal Vibration of Underground Pipeline by the Method of Finite Differences	184
<i>Z. Abdullayev, G. Shadmanova, R. Khusainov, S. Khusainov</i>	
Modelling Effects of Irrigation with Collector-Drainage Water on Second Crop Productivity in Sample of Mung Beans	195
<i>Sabirjan Isayev, Elyor Malikov, Sunnat Tadjiev, Elyor Berdiyev, Munisa Pulatova</i>	
Vertical Vibrations of Traction Engine with Viscoelastic Suspension	203
<i>Sayibdjan Mirzaev, Majid Yusupov, Barna Rakhmankulova, Feruza Umarova, Gulnaz Abdikayimova</i>	

ROAD CONSTRUCTION, BUILDING STRUCTURES AND MATERIALS

Steel Profile Corrosion Resistance in Contact with Monolithic Foam Concrete	212
<i>Vladimir Rybakov, Anatoly Seliverstov, Kseniia Usanova</i>	
Calculation of Compelled Fluctuations of Panel Buildings.....	219
<i>Makhamatali Usarov, Giyosiddin Mamatisaev, Davronbek Usarov</i>	
Two-Axle Bogie Vibration Damping System with Additional Damping Elements.....	229
<i>Anna Avdeeva, Galina Khromova, Davran Radjibaev</i>	
Study of the Strength Properties of Modified Concrete in Tension.....	240
<i>Bakhrudin Khasanov, Ruzimurat Choriev, Zuhra Ismailova, Guzal Eshchanova, Timur Mirzaev</i>	
Calculation of Monolithic Bridges Taking into Account Seismic Conditions of Republic of Uzbekistan	247
<i>Ulugbek Shermukhamedov, Anora Karimova, Abdurakhim Abdullaev, Inobat Hikmatova</i>	

Experimental Study of Vibrations of Cross-Rod Spatial Structures	258
<i>Rustam Khalmuradov, Khayrulla Khudoynazarov, K Isabekov</i>	
Review and Practice of Optimal Structural Design and Selection of Structural Systems	267
<i>Alamkhon Saidmatov, Damira Akramova, Kamoliddin Muminov, Ismoil Egamberdiev, Mirzohid Turgunpulatov, Gulmira Pardaeva</i>	
Creep in Expanded Clay Concrete at Different Levels of Stress Under Compression and Tension	274
<i>Chorikul Raupov, Ganisher Malikov</i>	
Complex Measures to Develop Informatization and Automation of Construction and Technical Expertise	291
<i>Sergei Sborshikov, Irina Markova, Alexey Zinoviev</i>	
Technology for Erecting Monolithic Enclosing Structures of Buildings Made of Expanded Polystyrene Concrete	298
<i>Ruslan Ibragimov, Dmitry Imaikin, Yuliya Evstigneeva</i>	
Deformation of Multilayered Physically Nonlinear Concrete Slabs by Quasi-Static Loads	307
<i>Yuri Nemirovskii, Sergey Tikhonov</i>	
Influence of Compound Additive on Concrete in Hot and Dry Climate.....	318
<i>Rustam Narov, Jasur Rashidov, Khamza Yusupov</i>	
Improving Properties of Portland Cement Using New Types of Composite Additives	324
<i>M. I. Iskandarova, F. B. Atabaev, Z. B. Yakubzhanova, G. B. Begjanova, N. A. Mironyuk, D. U. Axmedova</i>	
Damping of Longitudinal Vibrations of a Cylindrical Rod	333
<i>Abdukakhhkar Abduvaliev, Abdulaziz Abdulkhayzoda</i>	
Analysis of Technical and Operational Condition of Urban Reinforced Concrete Bridge Structures	343
<i>Ulugbek Shermukhamedov, Mamura Sobirova, Nodir Azamov, Saida Ibrokhimova</i>	
Torsional Vibrations of a Rotating Viscoelastic Rod.....	352
<i>Khayrulla Khudoynazarov, A. Gadayev, Kh. Akhatov</i>	
Change in the Strength Properties of Modified Concrete Over Time	362
<i>Bakhrudin Khasanov, Nikolay Vatin, Ruzimurat Choriev, S Akhmedov, Shokhida Nazarova, Timur Mirzaev</i>	
Computerized System of Acoustic-Emission Control of Metal Structures.....	368
<i>Miraziz Sagatov, Kholida Komilova, Rustam Maksudov, Olimzhon Kucharov</i>	
Heat Treatment of Concrete in Hot Climates	380
<i>A. M. Raximov, K. K. Muminov, M. M. Turgunpulatov, Sh. Turgunov</i>	
Calculation of Parameters of Anchor-Sprayed Concrete Support Vertical Mining Operations	390
<i>Rustam Khalmuradov, Khayrulla Khudoynazarov, Sh. Omonov</i>	
Method of Experimental Research of Concrete Beams with Fiberglass Reinforcement for Bending	400
<i>Xusnitdin Akramov, Shoxrux Davlyatov, Shodiljon Umarov, Zebuniso Abobakirova</i>	
Strength Characteristics of Aerated Concrete with Fly Ash Filler from Angren Thermal Power Plant.....	405
<i>Olmosbek Otajonov, Zafar Sattorov</i>	

Comparison of Microcrack Formation Boundaries Determined by Complex of Physical Methods with Long-Term Strength of Expanded Clay Concrete Under Different Types of Stress State411
Chorikul Raupov, Ganisher Malikov

Polymer Reagent in Construction Practice 427
Natalya Goncharova, Zebuniso Abobakirova, Shoxrux Davlyatov, Shodil Umarov, Aleksandr Mukhamedzanov

Continuous Vapor Processes in Newly Laid Concrete 435
Sh. A. Khakimov, Bakhtiyor Maksud Ugli, B. A. Mamadov

HYDRAULICS OF STRUCTURES, HYDRAULIC ENGINEERING AND LAND RECLAMATION CONSTRUCTION

Strength of Earth Dams Considering the Elastic-Plastic Properties of Soils 443
Mirziyod Mirsaidov, Takhirjon Sultanov, Javlon Yarashov, Abduraxim Kayumov

Improving Impeller and Water Flow Section of Vane Pumps 458
Alisher Dzhurabekov, Jaloliddin Rashidov, Aleksandr Gazaryan, Boybek Kholbutaev, Shakhnoza Mansurova, Norpulat Tashmatov

A New Technology in Cleaning Irrigation Systems from Turbid Sediments 470
D. Abduraimova, M. Otakhanov, S. Melikuziyev, A. Khoshimov, D. Bakhromova

Evaluating Performance of MIKE 11 NAM Model for Runoff Modeling on Upper Basin of Orontes River in Syria 478
Alaa Slieman, Dmitry Kozlov

Justification of Parameters of Sump in Machine Channel 486
Sanatjon Khidirov, Fotima Artikbekova, Ezoza Khalmuradova, Bakhtigul Isakulova

Fluid Movement in Pipeline with One Inflow 495
Kudrat Rakhimov, Abdukhalil Rakhimov, Djamila Khusanova, Rustam Sultonov, Feruzjon Ochildiyev

Autoregulatory of Water Level with Flexible Working Bodies for Partition Structures on Channels 507
Mukaddas-Gaukhar Kadirova

Stress-Strain State and Strength of Earth Dams Under Static Loads 519
Doniyor Juraev, Pakhridin Matkarimov

Boundaries of Flow Change in an Array of Structures with an Inclined Slope 530
Oleg Glovatskii, Bekmamat Hamdamov, Naim Ismoilov, Alexander Gazaryan, Naira Nasirova

Analytical Conclusions and Proposals for Technical Condition and Effective Use of Facilities on Tashkent Magistral Canal 541
Odiljon Kadirov, Khojiakbar Khasanov

Consumption of Irrigation Pumps Pumping Water with a High Content of Mechanical Impurities 549
Eduard Kan, Nikolay Vatin

Influence of Hydroabrasive Wear of Impeller Blades on Head of Centrifugal Pump 557
Bakhtiyor Uralov, Shukhrat Mutalov, Bakhtiyar Shakirov, Gulnoza Khakimova, Burkhon Sirojov, Iqboloy Raimova

Numerical Modelling of Long Waves in Wide Rectangular Channels in Lagrangian Coordinates.....	564
<i>Anatoly Krutov</i>	
Determination of the Time of Lowering Depression Surface in Transition Zones with a Smooth and Instantaneous Decrease in Water Level in Reservoir.....	577
<i>Masharif Bakiev, Shakhnoza Djabbarova, Khojiakbar Khasanov</i>	
Fundamentals of Hydraulic Calculation of Settling Tanks and the Choice of Their Optimal Parameters (in the Drip Irrigation System).....	586
<i>Asror Yangiev, Shokhrukh Azizov, Dilmurod Adjimuratov, Sherzod Panjiev, Shaydobek Kurbonov, Galiya Omarova</i>	
Hydrometric Flow Measurement in Water Management.....	596
<i>Oleg Glovatskii, Shavkat Usmanov, Rustam Ergashev, Bekmamat Hamdamov, Alexander Gazaryan</i>	
Analysis Results of Data Obtained in Natural Field Research in Mountain River Sokhsoy	608
<i>Aybek Arifjanov, Farrukh Babajanov, Islombek Akhmedov, Odiljon Fozilov, Isroil Umarov</i>	
Model for Calculating the Hydraulic Parameters of Channels with a Dynamically Stable Section	613
<i>Aybek Arifjanov, Alisher Fatxulloyev, Ismatilla Khujaev, Aziza Gafarova, Davronjon Allayorov</i>	
Theoretical Models and Dependences for Calculating Intensity of Hydroabrasive Wear of Pump Working Parts.....	620
<i>Bakhtiyor Uralov, Shavkat Berdiev, Mahmud Rakhmatov, Oybek Vokhidov, Lyudmila Maksudova, Iqboloy Raimova</i>	
Evaluating the Critical Velocity of Air Entrainment by Plunging Water Jets	628
<i>Yuri Fetisov, Yuliya Bryanskaya, Evgenii Ignatenko</i>	
Reducing Vibration of Pumping Units of Reclamation Systems.....	637
<i>Rustam Ergashev, Fakhridin Bekchanov, Sharof Musaev, Sirojiddin Saydullaev, Boybek Kholbutaev</i>	
Control Method for Stage Degradation of Centrifugal Pump Unit Parts in the System of Technical Condition Monitoring and Automatic Diagnosis.....	645
<i>Fakhridin Bekchanov, Adiljan Atajanov, Ibrokhim Khudaev, Furkat Yusupov</i>	
Calculation of Capacity of Spillway № 2 Boguchanskoye HPP with Free Water Overflow	652
<i>Alim Guryev, Nartmir Khanov, Olga Mareeva, Marina Zborovskaya, Aleksandra Verkhoglyadova</i>	
Draft Sprinkler Irrigation System Design Development	663
<i>Luqmon Samiev, Khumora Jalilova, Sirojiddin Jalilov, Jamila Xusanova, Dilnoza Mamatova</i>	

PART 2

Shear and Filtration Strength of Foundation of Channel Type Hydropower Plant Building	672
<i>Masharif Bakiev, Nodira Babajanova, Kakhramon Babajanov, Khojiakbar Khasanov</i>	
Investigation of Hydraulic Resistance of Pulsating Flows of Viscous Fluid in Elastic Pipe	683
<i>Z. K. Shukurov, B. Sh. Yuldoshev, A. Begjanov</i>	
Ensuring Smooth Functioning of System for Monitoring and Managing Processes of Cleaning Bottom Sediments in Reservoirs	694
<i>Zebiniso Zayniddinova, Bobirjon Zayniddinov</i>	

Assessment of Units Vibration State and Water Supply Path of Amuzang-2 Pumping Station.....	704
<i>Farrukh Shaazizov</i>	
Flow Division Under a Steady Flow Mode	712
<i>Farrukh Shaazizov</i>	
Calculation of Total Erosion in the Lower Reaches of Mezhdurechensk Reservoir Using Empirical Morphometric Dependencies.....	719
<i>Eduard Kan</i>	
Development of Technology for Reuse of Collector Trench Waters	728
<i>Luqmon Samiev, Holmurod Qurbanov, Jamila Xusanova, Dilnoza Mamatova, Sirojiddin Djalilov, Khumora Jalilova</i>	
Establishment of Possibility of Transferring Part of Machine Irrigation Land to Gravity Irrigation.....	737
<i>Ilkhom Begmatov, Shavkat Botirov, Adkham Mamataliev, Oraz Durdiev</i>	
Evaluation of Sedimentation of Water Reservoirs with Modern Technologies	750
<i>Sardor Xoshimov, Dinislam Atakulov, Obit Yalgashev, Sheroz Komilov, Jurabek Boykulov</i>	
Automatic Partition Structure for Trapezoidal Channels.....	757
<i>Mukaddas-Gaukhar Kadirova</i>	
Evaluation of the Dynamic Characteristics of Complex Multiply Connected, Structurally Inhomogeneous Systems	767
<i>Sherzod Khudainazarov, Tulkin Mavlanov, Feruza Umarova, Talibjan Sabirjanov, Mokhira Ulugova</i>	
Technical and Technological Ways to Reduce Soil Compaction to Preserve Its Fertility.....	779
<i>Farkhod Matmurodov, Bozorboy Sobirov, Jamshid Khakimov, Firuza Rakhmatova</i>	
Hydrodynamic Characteristics of Water Flow in Area of Lower Pool Junction of Spillway Structures.....	787
<i>Sanatjon Khidirov, Fotima Artikbekova, Azam Azimov, Davronbek Yulchiev</i>	
Control of Flow in the Side Outflow Channel.....	795
<i>Iroda Babajanova, Orifjan Bazarov, Sobir Eshev, Yuldash Babajanov, Alisher Isakov</i>	
Dynamics of Morphometric and Hydraulic Parameters of the Amudarya River Channel Downstream the Tuyamuyun Hydroscheme.....	803
<i>Maalem Nureddin, Rustam Khujakulov</i>	
Simulation of Dynamic Processes of Shell Structures with Viscoelastic Elements.....	816
<i>Sherzod Khudainazarov, Tulkin Mavlanov, Shoolim Salimov, Mokhira Ulugova, Talibjan Sabirjanov</i>	
Mathematical Modelling of Hydrochemical Processes in Surface Waters	825
<i>Tamara Akhmedova</i>	
Fluid Movement in a Flat Pipe with a Break	831
<i>Iroda Babazhanova, Yuldash Babazhanov, Orifjan Bazarov, Sobir Eshev, Shaxboz Latipov</i>	
Seismicity Caused by Hydrological Regime of Large Reservoirs.....	839
<i>Lutfulla Khamidov, Farkhod Artikov, Khayrulla Khamidov, Barno Ganieva, Sadoqat Anvarova</i>	

Increasing Efficiency of Flow Energy Damping with Lateral Water Intake.....	850
<i>Bekhzod Norkulov, Adkham Mamataliev, Umida Kurbanova, Shokhida Nazarova, Bobur Shodiev, Iqboloy Raimova</i>	
Regime of Deposition of Sediments in the Head Settlement Basin of the Supply Channel of Pumping Stations.....	859
<i>Bekhzod Norkulov, Rustam Khujakulov, Ilhom Kurbanov, Azizali Kurbanov, Gulnora Jumaboyeva, Azamat Kurbanov</i>	
Establishment of Volume of Channel Silting and Organization of Treatment Works in the Conditions of Amudarya River.....	869
<i>Azizali Kurbanov, Dilshod Nazaraliyev, Azamat Kurbanov, Gulnora Jumaboyeva, Karim Islomov, Yakubova Gulkhayo</i>	
The Kabul River Basin - the Source of the Naglu and Other Reservoirs	876
<i>Dilshod Bazarov, Mahfouz Ahmadi, Abdulatif Ghayur, Oybek Vokhidov</i>	
Features of Operation and Hydraulic Calculations.....	887
<i>Alena Burlachenko, Olga Chernykh, Nartmir Khanov, Dilshod Bazarov</i>	

MECHANIZATION, ELECTRIFICATION OF AGRICULTURE AND RENEWABLE ENERGY SOURCES

Investigation of the Contact Interaction of the Working Bodies of Machines with Raw Cotton.....	896
<i>Olim Eshkobilov</i>	
Mitigating Impact of Risks on Economic Integration Between Entities in Agrifood Supply Chain	910
<i>Khusniddin Paradaev, Shavkat Hasanov, Shukrullo Muratov, Fotima Saydullaeva</i>	
Design of Mobile Electricity Based on Solar and Garland Micro Hydro Power Plant for Power Supply in Namangan Region Mountain Areas	923
<i>Abdujolol Bokiev, Sanjarbek Sultonov, Nodira Nuraliyeva, Abror Botirov</i>	
Technology of Hardening Surfaces of Working Bodies by Electromechanical Processing.....	930
<i>Begmat Norov, Sh. U. Yuldashev, Kh. N. Kholmatova</i>	
Assessment of Effect of Lining Material on Energy Efficiency of Starting Up Ball Mills	939
<i>Khakim Muratov, Oybek Ishnazarov, Abdusaid Isakov, Ikrom Nuritov</i>	
Theoretical Substantiation of the Form of Working Separator Bodies at Pre-Sowing Stone Soil Treatments	947
<i>Saydilla Alikulov, Zayniddin Sharipov, Asqar Igamberdiyev, Erkin Farmonov, Bakhodir Khakimov</i>	
Perspective Method for Construction of Drying and Watering Network for Growing Potatoes	953
<i>N. Martinova, K. Shavazov</i>	
Technology of Ridge Formation on Cotton Fields with Simultaneous Fertilization	962
<i>Zafar Batirov, Ilhom Toirov, Tura Razzakov</i>	
Possibilities of Processing Agricultural Waste at Energy Efficient Facilities to Produce Gas, Liquid and Solid Energy Products	970
<i>Iroda Ruziyeva, Serik Alijanov, Shukhrat Kamilov, Makhhammadzohid Safaev, Mahmud Safaev, Sarvar Melikuziyev</i>	

Analysis of the Safety of Pumping Units of Pumping Stations of Machine Water Lifting in the Function of Reliability Indicators.....	979
<i>Olimjon Toirov, Salikhdjan Khalikov</i>	
Mathematical Model of Water Drop Trajectory in Artificial Rainfall	987
<i>Zafar Khudayorov, Rakhmonberdi Khalilov, Irina Gorlova, Sherzodkhuja Mirzakhodjaev, Azhargul Mambetsheripova</i>	
Formation and Prospects of Employment of Labor Resources in Agriculture	996
<i>Usmon Berdimurodov, Parakhat Berdimuratov, Erkin Farmonov, Bakhodir Khakimov, Nuriddin Razikov</i>	
Diagnostics of Pumping Units of Pumping Station of Machine Water Lifting.....	1006
<i>Olimjon Toirov, Salikhdjan Khalikov</i>	
Justification of Parameters of Working Body of Deep Loosener	1014
<i>Asqar Igamberdiyev, Erkin Farmonov, Saydilla Alikulov, G. Usmanova, Zayniddin Sharipov</i>	
Technologies and Means of Protection in Process of Managing Pumping Stations	1024
<i>Aziz Usmanov, Azizjon Nigmatov, Nigora Azizova</i>	
Experimental and Analytical Method for Determining Specific Losses in the Presence of a Surface Effect.....	1030
<i>Makhmud Mamedshakhov, Arzayim Yerejepova, Bakhtiyor Eshmatov, Olimjon Kucharov</i>	
Nonlinear Dynamics of Rotor of an Auto-Balancing Ball Device, Considering Eccentricity and Changes in Horizontal Axes of Rotation	1039
<i>M. Mirsaidov, M. N. Sidikov, K. M. Turajonov</i>	
Experimental Studies of Frequency of Rotation of Smooth Rotating Disk with Coaxial-Lateral Air Flow.....	1051
<i>Burxon Utepov, Tuygun Khaydarov, Nurmamat Rajabov, Gulnoza Murtazayeva, Bakhtiyor Tulaganov, Mirzoolim Avliyakov</i>	
Investigation of Asynchronous Electric Motor Winding in Heating Mode and Drying Mode to Prevent Moisture	1056
<i>Matkarim Ibragimov, Dilmurod Akbarov, Iroda Tadjibekova</i>	
Theoretical Prerequisites for Improving Durability of Fixed Rolling Bearing Joints Restored with Anaerobic	1063
<i>Ilxom Toirov, Zafar Batirov, Ergash Sharipov</i>	
Potato Digger with a Digging Workpart of the "Paraplaw" Type	1071
<i>Farmon Mamatov, Bakhadir Mirzaev, Akmal Karimov, Tura Razzokov, Shavkat Azizov, Golib Shodmonov</i>	
Bench Tests of Friction Drive of Vertical Spindle Made of poly-V Belts	1078
<i>M. Shoumarova, T. Abdillayev, Sh. A. Yusupov</i>	
Pushing Soil with Combined Aggregate Spherical Disc and Burial of Stem	1088
<i>B. Khudayorov, U. Kuziev, B. Sarimsakov, Yu. Rakhimov, S. Khikmatullaev</i>	
Development of New Pole-Changing Winding for Lifting and Transport Mechanisms.....	1105
<i>M. K. Bobojanov, D. A. Rismukhamedov, F. N. Tuychiev, Kh. F. Shamsutdinov</i>	
Justification of Compactor Parameters for Cleaning and Transportation of Raw Cotton.....	1115
<i>Abduaziz Khudaiberdiev, Odil Kuychiev</i>	

Automatic Control of Active Ventilation Systems in Agricultural Products Storage Facilities	1124
<i>Sabir Yakubov, Abdusaid Isakov, Rashida Pirova, G. Shadmanova</i>	
Physico-Mechanical Properties of Seed Pile of Fodder Crops	1133
<i>T. X. Razzokov, S. J. Toshtemirov, Sh. A. Latipov</i>	
Fire Alarm Systems Construction on Artificial Intelligence Principles	1140
<i>A. Andreev, A. Doronin, V. Kachenkova, B. Norov, Z. Mirkhasilova</i>	
Kinematic Mode of Operation of Potato Harvester Auger	1148
<i>Farmon Mamatov, Bakhadir Mirzaev, Nigora Rustamova, Tura Razzokov, Obid Hamroev</i>	
Determining Soil-Deepener the Vertical Distance from Blade to Lower Suspension Point of Plug	1156
<i>Ulugbek Khasanov, Tursun Jurayev, Ramozonbek Xudoydotov, Komil Imomov</i>	
Creation of Intelligent Information Decision Support Systems.....	1163
<i>Murodjon Sultanov, Gayrat Ishankhodjayev, Rano Parpiyeva, Nafisa Norboyeva</i>	
Intensification of Process of Hydration of Soybean Oil with Use of Ultrasonic Impact	1177
<i>Azimjon Akhmedov, Yusuf Azimov</i>	
Experimental Studies of Pneumatic Disc Atomizer for Low Volume Spraying	1183
<i>Burxon Uteпов, Tuygun Khaydarov, Nurmamat Rajabov, Gulnoza Murtazayeva, Bakhtiyor Tulaganov, Mirzoolim Avliyakov</i>	
Study of Possibility Application of Anti-Erosion Coating - Geomate with Ground and Sowing of Permanent Grasses	1189
<i>T. Yu. Zhukova, A. V. Eremeev, N. V. Khanov, Bobur Shodiev</i>	

ENGINEERING MATERIALS SCIENCE, INTELLIGENT TRANSPORT SYSTEMS AND TRANSPORT LOGISTICS

Properties of a Composite Magnetically Soft Material Based on Coated Iron Powders	1198
<i>G. A. Govor, O. F. Demidenko, A. R. Normirzaev, M. A. Tukhtabayev</i>	
Improvement of the Out-Of-furnace Steel Treatment Technology for Improving Its Mechanical Properties.....	1207
<i>Otabek Toirov, Nodirjon Tursunov, Shavkat Alimukhamedov, Lochinbek Kuchkorov</i>	
Fuzzy Optimization of Route Networks Urban Passenger Transport	1213
<i>D. T. Muhamediyeva, S. Sh. Mirzaraxmedov</i>	
Evaluation of the Technical Condition of Locomotives Using Modern Methods and Tools	1221
<i>Otabek Khamidov, Abdulaziz Yusufov, Shohijakhon Kudratov, Alijon Yusupov</i>	
Evaluation of Complexity of Urban Bus Routes	1229
<i>Tuygun Kodirov, Golibjon Togaev, Barno Kenjaeva</i>	
Development of Technology for Manufacturing Molding and Core Mixtures for Obtaining Synthetic Cast Iron	1236
<i>Murot Turakulov, Nodirjon Tursunov, Shavkat Alimukhamedov</i>	
Statement and General Technique for Solving Problem of Oscillation of a Hereditarily Deformable Aircraft	1242
<i>Botir Usmonov, Quvvatali Rakhimov, Akhror Akhmedov</i>	

Remaining Life of Main Frame and Extension of Service Life of Shunting Locomotives on Railways of Republic of Uzbekistan	1248
<i>Otabek Khamidov, Abdulaziz Yusufov, Shuxrat Jamilov, Shohijakhon Kudratov</i>	
Effect of Different Additives on the Physical and Mechanical Properties of Liquid-Glass Core Mixtures	1258
<i>Lochinbek Kuchkorov, Shavkat Alimukhamedov, Nodirjon Tursunov, Otabek Toirov</i>	
Improvement of Accident Prevention Measures in Cases of Spontaneous Derailment of Railway Rolling Stock.....	1266
<i>Aziz Yusupov, Sunnatillo Boltaev, Sakijan Khudayberganov, Mafirat Toxtakxodjaeva</i>	
Improving Use of Shunting Locomotives Based on Changes in Infrastructure of Railway Station.....	1278
<i>Shinpolat Suyunbayev, Utkir Khusenov, Sakijan Khudayberganov, Sherzod Jumayev, Shokhrukh Kayumov</i>	
Development of Vibration Viscometer for Industry Purpose and Experience of Its Practical	1290
<i>Paraxhat Matyakubova, Patkhulla Ismatullaev, Jamshidbek Shamuratov</i>	
Fuzzy Model of Transport Demand.....	1298
<i>D. K. Muhamediyeva, A. Mirzarahmedova, U. U. Khasanov</i>	
Effect of Non-Stationary External Forces on Vibrations of Composite Pipelines Conveying Fluid	1312
<i>A. A. Verlan, B. A. Khudayarov, F. Zh. Turaev, N. N. Yuldashev, K. Ruzmetov</i>	
Obtaining Higher Manganese Silicide Films with High Thermoelectric Properties	1324
<i>I. R. Bekpulatov, D. S. Shomukhamedova, D. M. Shukurova, B. V. Ibragimova</i>	
Mathematical Modeling of Quantitative Changes in Hydrogen and Oxide Inclusions in Aluminum Alloy.....	1331
<i>Shirinkhon Turakhujaeva, Kamolkhan Karimov, Nodir Turakhodjaev, Azamat Akhmedov</i>	

Author Index