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THE FORMATION OF LIVING ENVIRONMENT  
2021**

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**Organized by:**

Moscow State University of Civil Engineering (National Research University)

**Main Topics:**

- Modern Building Materials
- Reliability of Buildings and Constructions and Safety in Construction
- Modelling and Mechanics of Building Structures
- Engineering and Smart Systems in Construction
- Global Environmental Challenges

**Conference Chairman:**

Prof. Pavel Akimov (Professor, DSc, Rector of Moscow State University of Civil Engineering)



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## KEYNOTE SPEAKERS

- **Prof. Borislav Hristov**  
*Dr.-Ing, Professor, Department of Engineering Sciences, University of Applied Sciences (HTW Berlin), Germany*
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*DSc, Professor, Moscow State University of Civil Engineering, Russia*
- **Dr. Anton Sheboldasov**  
*PhD, Development Director, OJSC «Bonolit - Construction solutions», Russia*



## SECTION 1: MODERN BUILDING MATERIALS

Authors	Title of report
April, 22	
Tatiana Bobyleva and Alexey Shamaev	Viscoelastic vibrations of a layered composite with internal friction
Tatiana Bobyleva and Alexey Shamaev	Vibration damping problems for some models of viscous fluids
Galina Safina	Calculation of retention profiles in porous medium
Nguyen Duc Vinh Quang, Olga Aleksandrova, and Boris Bulgakov	Mechanical and durability properties of high-performance concrete in corrosive medium of Vietnam
Elena Gotlib, Dilyara Sadykova, Ekaterina Yamaleeva and Alla Sokolova	Modification of polyvinylchloride by the silicates on the base of rice husk
Irina Stepina, Marc Sodomon, Vyacheslav Semenov, Elizaveta Dorzhieva and Irina Titova	Modifying Heracleum Sosnowskyi Stems with Monoethanolamine(N→B)-trihydroxyborate for Manufacturing Biopositive Building Materials
Irina Susoeva, Tatiana Vakhnina, Andrey Titunin and Yuri Grunin	Water resistance of thermal insulation composites with cellulose-containing filler
Sergey Pulyaev and Ivan Pulyaev	Considering the temperature factor of hardening concrete in the construction of transport infrastructure facilities



<b>Authors</b>	<b>Title of report</b>
Baxauatdin Kalbaev, Gulzar Utegenova, A.T. Ilyasov and Mikhail Gandjuntsev	Modified high-strength concrete with the addition of CONPLAST SP430
Muhammet Salihov, Evgeniy Veyukov, Ekaterina Lomakina and Lidia Malyanova	Bitumen aging on the surface of crushed limestone at high temperatures
Yulia Sokolova, Marina Akulova, Vyacheslav Polyakov, Alla Sokolova and Igor Polyakov	Complex additives for concretes on the base of caprolactam
T.V. Zommer, E.V. Tkach, S.N. Chernyshev and V.L. Zommer	Disposal of fly ash in the production of ash-concrete within the coal-watercoal cluster
Andrei Leshkanov, Lev Dobshits and Sergey Anisimov	Phase content of plasticized cement systems in the early stages of heat-moisture treatment
Trong-Chuc Nguyen, Van-Quang Nguyen, Nikolay Aniskin, Ba-Thang Phung and Quoc-Long Hoang	Building a nomogram to predict maximum temperature in mass concrete at an early age
Vyacheslav Medvedev	Plasticizer type influence on HCP radiation resistance
Lenar Shafigullin, Natalya Romanova, Gulnaz Shafigullina and Yulia Sokolova	Influence of the Expandable Graphite on the Thermal properties of a Rigid Polyurethane Foam for construction
Evgeniya Tkach and Maxim Bichaev	Properties of Epoxy Composites with Halloysite Nanotubes Subjected to Tensile Testing
Vyacheslav Semenov, Igor Bessonov, Ekaterina Zinovieva and Elizaveta Mednikova	Isolation systems for structures on pile supports





<b>Authors</b>	<b>Title of report</b>
Anna Grishina and Evgenij Korolev	Chemical composition of nanomodified cement stone
Gennadiy Ovcharenko and Ekaterina Ibe	The effect of added high-iron slag on the frost resistance of cement compositions
Tang Van Lam, Pham Van Ngan and Nguyen Dac Binh Minh	Effect of liquid-to-alumino-silicate material ratio and rice husk ash content on the properties of fly ash and rice husk ash-based geopolymer concrete
<b>April, 23</b>	
Vladimir Buz'ko, Igor Shamray, Alexander Goryachko, Sergei Udodov and Anatoly Abashin	Electromagnetic characteristics of biosilica from rice husk
Vasilii Plevkov, Artem Ustinov, Andrei Plyaskin, Victor Bunkov and Yulia Silman	Composite forming by the method of prestressing of carbon unidirectional tape
Vladimir Shcherbakov, Valentina Pomogaeva, Tatyana Shukina, Konstantin Chizhik and Victor Bazhenov	Improving the efficiency of anaerobic disposal of organic waste
Oksana Larsen, Viktoria Shvetsova, Ekaterina Patsenko and Artyom Polozov	Properties of sand concrete with recycled tyre polymer fibers
Vladislav Danilov and Alexander Erofeev	Thermal fluctuation constants of PVC elements of different cross-sections
Ivan Vedyakov, Vladimir Vaskalov, Nikolay Maliavski and Mikhail Vedyakov	Highly Efficient Glass Ceramic Thermal Insulation



<b>Authors</b>	<b>Title of report</b>
Aleksandr Smirnov, Lev Dobshits and Sergey Anisimov	Influence of superplasticizer and silica fume on the structure formation and properties of cement stone
Natalya Fomina, Vadim Khozin, Aleksandr Strakhov and Artur Ismagilov	Shredding of polyethylene terephthalate waste
Mukhamad-Basir Kodzoev, Sergey Isachenko, Olimjon Rasulov and Maria Kaddo	Heat-efficient ceramic products based on modified rice straw
Zhumabek Omarov, Gulnara Zhukenova, Leonid Bulyga and Murat Beisembaev	Prospects for the use of sandwich panels in the construction industry of Kazakhstan
Olga Miryuk	Cellular structure formation of composite materials
Yuriy Yurkin, Amadeo Benavent-climent, Pavel Kovtonyuk, Darya Varankina and Irina Voloskova	Mechanical properties of butyl rubber composites with microspheres under cyclic loading
Yuri Ivaschenko, Maria Kochergina, Irina Pavlova and Natalya Fomina	Integrated modifying zinc-containing additive for construction silicate compositions
Andrey Askadskii, Tatiana Zhdanova, Ilia Andreev, Sergei Matseevich and Tatiana Matseevich	Connection of water permeability with a number of physical properties of polymers
Elena Pokrovskaya	Longevity enhancement of wooden civil structures
Tomasz Kowalik and Andrzej Ubysz	Effect of the addition of waste basalt fibers on concrete shrinkage



## SECTION 2: RELIABILITY OF BUILDINGS AND CONSTRUCTIONS AND SAFETY IN CONSTRUCTION

Authors	Title of report
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Ashot Tamrazyan and Anatoliy Alekseytsev	The efficiency of varying parameters when optimizing reinforced concrete structures
Ashot Tamrazyan and Anatoliy Alekseytsev	Optimization of reinforced concrete structures: importance of design detail level
Aleksandr Perunov and Aleksey Baulin	Systematic monitoring of the deformed state of long-length reinforced concrete structures with an assessment of their reliability
Sergey Rytov, Ilya Iovlev and Tatyana Rytova,	Experience in the design and operation of retaining walls of overpasses of the Central Ring Road on the base with soil improvement by vibro stone columns
Nguyen Quoc Toan, Nguyen Thi Tuyet Dung and Nguyễn Thị Mỹ Hạnh	3D-BIM and 4D-BIM Models in Construction Safety Management
Vladimir Mondrus and Anastasia Karakozova	The transition processes in describing the oscillations of flexible high-rise structures
Vigneshkumar Chellappa and Urmi Ravindra Salve	Understanding the fall-related safety issues in concrete formwork
Anatoly Zemlyansky, Alexander Zhukov and Daria Bulavina	Modern systems for monitoring the stress-strain state of hazardous power generating facilities



<b>Authors</b>	<b>Title of report</b>
Evgeny Gvozdev	Visualization and diagnostics of reliability of the object with changing the functioning conditions
Nikolay Ivanov and Maksim Gnevanov	The use of "big data" in the organization of repair and construction works to ensure OTR
Nadezhda Chiganova	Correlation characteristics assessment of construction products reliability parameters
Aleksandr Parfenenko and Artem Komrakov	The problem of rationing escape routes in pre-trial detention centers
Ekaterina Ibe, Shibaeva Galina, Svyatoslav Mironov and Danil Litvin	Problems of thermal protection of two-layer external walls with hinged facade systems
Sinenko Sergey, Julia Yakupova and Satiadzhiev Hakim	Safety of objects of the urban environment during construction work
Valery Lyublinskiy and Andrzej Ubysz	Stress-strain state panel buildings and welded butt joints
Aleksandr Shuvalov, Igor Gorbunov and Mikhail Kovalev	Anchorage strength and ductility in shear tests
Natalya Vetrova, Elmar Mennanov, Tatyana Ivanenko, Anastasia Gaysarova and Emran Mennanov	Algorithm for selecting the structures of coastal protection construction to ensure environmentally safe condition of the coastal urbanized recreational areas
Muhtar Apsemetov, Nurzhan Madanbekov and Tologon Muktarov	Determination of the own forms of vibration of the span of beam bridges on elastic supporting parts



<b>Authors</b>	<b>Title of report</b>
I Dergacheva, S Klimov, G Khamdamova, Qudratjon Raximov and Tursunoy Apakhujayeva	Mudflow hazard in the foothill and mountainous regions of Uzbekistan
Andrey Korgin, Valentin Ermakov , Laith Zeyd Kilani, Danila Koknaev and Artem Golovkin	The development of adequate finite element models of load-bearing structures coating "Vnukovo-1 airport complex" to solve the problems of monitoring their technical condition
Vitalii Sidorov, Duc Anh Le and Evgeny Sobolev	Comparative calculation of piles taking into account seismic impacts (example in Ho Chi Minh City)
Alexander Danilov and Olga Tusnina	Non-disruptive method to decrease stresses in the web of the crane beam
Alexey Plotnikov and Mikhail Ivanov	Changes in the stiffness of load-bearing elements of a high-rise building and inclinometer data based on finite element analysis
Natalia Fedorova, Michael Medyankin, Sergey Fedorov and Sergey Savin	Experimental and theoretical studies of the concrete static-dynamic stress-strain curves
Evgeny Radkevich and Olga Vasil'Eva	Simulation of Vibration Combustion
Azarij Lapidus, Vadim Fedoseev, Alexander Sokolov, Julia Ostryakova and Vladimir Voronov	Improving the efficiency of design and construction work on the creation and use of heat supply systems based on heat pumps in low-rise construction
A. Arifjanov, L. Samiev, I. Ahmedkhodjaeva, K. Rakhimov and Sh.Sobirov	Calculation of filtration process in channels



<b>Authors</b>	<b>Title of report</b>
Mikhail Rabinovich and Anastasia Alekseeva	Determination of stress-strain properties of thawing soils in oedometer
Nikolai Aniskin, Alexey Shaytanov, Mikhail Shaytanov and Sergei Khokhotva	Low-cement content gravity dam as an alternative for Pskem HPP
<b>April, 23</b>	
Alla Katanina, Oleg Kornev, Aleksandr Shuvalov and Eugenia Sokolova	Influence of welding on aluminium alloy AW6082-T6 strength
Oleg Glovatskiy, Rustam Ergashev, Jaloliddin Rashidov, Naira Nasyrova and Boybek Kholbutaev	Experimental and theoretical studies of pumps of irrigation pumping stations
Dilshod Bazarov, Irina Markova, Sanatjon Khidirov, Oybek Vokhidov, Farokhiddin Uljaev and Ikboloy Raimova	Coastal and deep deformations of the riverbed in the area of a damless water intake
Dilbar Abduraimova, Makhsud Otaxonov, Elza Tursunova, Davron Allayorov and Sarvar Melikuziyev	Deformation in open collector drainage systems
Oleg Simakov	The use of FRP of increased thickness for strengthening structures
Dmitry Chunyuk, Serafima Selviyan and Artem Selviyan	Analysis of the application efficiency of the slab-pile foundation using the example of a two-layer base
Andrey Istomin and Maksim Kudryavtsev	Strength of cast-in-place slabs for rectangular cross-section columns punching



<b>Authors</b>	<b>Title of report</b>
Dilshod Bazarov, Bekhzod Norkulov, Oybek Vokhidov, Fotima Artikbekova, Bobur Shodiev and Ikboloy Raimova	Regulation of the flow in the area of the damless water intake
Viktor Yarkin and Nataliia Lobacheva	Determination of subsidence of base with intensive soaking of subsidence soil
Anatoliy Goncharov	Selection of the optimal value of compressive stress in concrete under adverse external impacts
Aleksandr Konstantinov, Aleksei Verkhovsky, Ivan Aksenov and Aleksei Krutov	Criteria for climatic applicability of modern window types
Andrey Morozenko and Alexey Shashkov	Labor costs management in the large-block construction of NPP
Vyacheslav Gorev and Evgeniya Chelekova	Internal explosion. Pressure peaks
Sobir Eshev, Isroil Gaimnazarov, Shakhboz Latipov, Nurbek Mamatov, Feruz Sobirov and Iroda Rayimova	The beginning of the movement of bottom sediments in an unsteady flow
Alexey Glushkov, Vyacheslav Glushkov and Ilya Glushkov	Features of the construction of buildings in karst areas
Natalia Korsun and Daria Prostakishina	Modeling thin-walled elements with regard to steel hardening
Dimitry Korolchenko and Younes Halloul	Stability of fire barriers in tank farms in case of destruction of vertical tanks
Evgeny Lebed	Analysis of the stress state of the ribbed-ring metal dome under different methods of installation



<b>Authors</b>	<b>Title of report</b>
Sergey Sborshikov, Roman Vvedenskiy and Irina Markova	Development of methods of operational and production management of construction of nuclear facilities
Vyacheslav Gorev and Evgeniya Chelekova	Assessment of structural bearing capacity in case of internal explosion
Denis Konin	Calculations of compressed rods considering experiments over last 100 years
Armen Ter-Martirosyan and Ahmad Othman	Simulation of effects the degree of water-saturation on stress-strain state
Bakiev Masharif, Shakhnoza Djabbarova and Khojiakbar Khasanov	Unsteady filtration under maximal draw-off velocities of Tupolang water reservoir
Armen Ter-Martirosyan, Artur Manukyan and Lyubov Ermoshina	Experience of determining the parameters of the elastoviscoplastic soil model
Igor Gorbunov and Vladimir Kakusha	Behavior of concrete beams reinforced with FRP during bending
Tiep Duc Pham, Nang Duc Bui, Quang Trong Vu, Huan Thanh Duong and Hieu Chi Phan	Mitigating effect of embankment to adjacent pipe with CDM columns
Igor Rudnev, Viktor Zhadanov and Vladimir Garipov	Validation of the calculation of a wooden column with a support unit on glued steel plates
Andrey Vasilkin and Gulnaz Zhaparalieva	Metal intensity of structural roof slab under different supporting conditions





## SECTION 3: MODELLING AND MECHANICS OF BUILDING STRUCTURES

Authors	Title of report
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Vladimir Andreev and Mikhail Maksimov	Elastic-plastic equilibrium of a hollow ball made of inhomogeneous ideal-plastic material
Aleksander Makarov, Sergey Kalinovsky, Natalia Ermilova and Alexey Churakov	Optimal ratio of spans of continuous bridges
Aleksander Makarov, Sergey Kalinovsky and Natalia Ermilova	Dynamic reduction in the calculation of bridge structures
Vadim Akhmetov	Numerical and asymptotic flow stability analysis of vortex structures
Anastasia Karakozova	On the passage of a wave along a rod
Lyudmila Frishter	Assessments of solutions of the uniform elastic boundary value problem in the tip area of a boundary wedge-shape notch
Stepan Cheremnykh	Computer programs developing for solving problems of cylindrical shells stability
Mirziyod Mirsaidov, Mukhammadbobur Boytemirov and Fakhridin Yuldashev	Estimation of the vibration waves level at different distances
Mirziyod Mirsaidov, Olimjon Dusmatov and Muradjon Khodjabekov	Mode shapes of transverse vibrations of rod protected from vibrations in kinematic excitations



<b>Authors</b>	<b>Title of report</b>
Petr Shishkov and Yuriy Gustov	Conformal Efficiency Factors of Friction Pairs in Construction Machinery
Nikolay Tishkov and Anatoliy Stepanenko	Features for calculating beams with a thin transverse corrugated web plate considering bending-twisting forces
Vladimir Mavzovin and Igor Ovchinnikov	Design of circular flexible plates under of corrosion wear
Alexander Ginzburg and Ilia Tyurin	Automated identification of construction works and structural elements at an early stage of investment and construction projects' implementation
Ilya Ovchinnikov and Vladimir Mavzovin	Modeling the stress-strain state of a circular plate subject to general corrosion according to various models
Evgeny Sobolev and Vitalii Sidorov	Pile and elastic-plastic soil mass interaction
Aybek Arifjanov, Luqmon Samiev, Shodiyor Yusupov, Djamila Khusanova, Zokhidjon Abdulkhaev and Suhrob Tadjiboyev	Groundwater Level Analyse In Urgench City With Using Modflow Modeling And Forecasting System
Oleg Emel'yanov	Regularities of formation of residual stresses in the fatigue crack tip
Vu Thi Bich Quyen and Dao Ngoc Tien	Nonlinear dynamic analysis of truss with initial member length imperfection subjected to impulsive load using mixed finite element method
Izmail Kantarzhi and Alexander Gogin	Optimal scale modeling of surf zone waves



<b>Authors</b>	<b>Title of report</b>
Evgeniy Shchurov and Alexander Tusnin	Features of numerical modeling of CFRP steel bars
Alexandre Danilov and Ivan Kalugin	The concept of bearing capacity distribution in the supports of arches
Yana Makzhanova	Force combinations inducing lateral torsional buckling
Maksim Zubritskiy, Oleg Ushakov, Linar Sabitov and Karina Nabiullina	Seismic resistance estimation of multistory steel frames under ductility level earthquake impact by nonlinear static method
Oleg Kumpyak, Zaur Galyautdinov, Daud Galyautdinov and Tatiana Rakhimova	Dynamic Analysis of Reinforced Concrete Beams on Yielding Supports
Andrei Plyaskin, Nikolai Belov, Nikolai Yugov, Emil Useinov and Marina Savintceva	Modeling of high-speed interaction of composite barrier and steel striker
Sergey Erokhin and Sergey Shashkin	Modeling of foundation slabs of buildings on complex foundations
Galina Kravchenko, Elena Trufanova and Lyubov Pudanova	Information modeling of wind flows for object of parametrical architecture
Filipp Sergeyev and Fyodor Kiselyov	Iterative refinement of the boundary condition in the numerical solution of the thermoelasticity problem
Tagibek Gadzhibekov	Pochhammer – Chree wave dispersion in hollow cylinders
Alexander Sak	Parsing with graph convolutional networks and clustering



Authors	Title of report
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Zaven Ter-Martirosyan and Viktor Bakhmisov	Boundary conditions for the problem of moisture transport in concrete
Thanh Binh Pham and Ngoc Quang Vu	Effectiveness of fluid viscous damper for steel frame building subjected to earthquake load
Alexander Ibragimov, Ekaterina Zinoveva, Stanislav Rosinsky and Lyubov Gnedina	Prefabricated steel structures with a corrugated web (Part 2. Load-bearing capacity of a steel beam with a profiled sheet web)
Tulkin Mavlanov, Sherzod Khudainazarov and Feruza Umarova	Evaluation of the dynamic behavior of multi-connected shell structures
Viktor Tolstikov and Yara Waheeb Youssef	Impact of weak construction seams on the bearing capacity of a CVC-RCC combined dam
Mikhail Sainov	Assessment of embankment dam slope stability with consideration of its stress state
Zaven Ter-Martirosyan and Aleksander Akuletskii	Interaction of long piles with a multilayer soil mass, taking into account the elastic and rheological properties
Sherzod Khudainazarov and Burkhon Donayev	Propagation of a spherical wave in elastoplastic medium with complex equations of state
Trung Duc Tran, Anh Tuan Le and Dinh Huong Vu	Identification vibration characteristics of structures by Operational Modal Analysis (OMA) technique



<b>Authors</b>	<b>Title of report</b>
Izmail Kantarzhi and Aleksandr Anshakov	Interactive numerical model of hydrometeorologic factors in Kola Bay
Maria Samsonova, Elvira Semenova, Christina Kotova and Leonid Salogub	Additional heat loss of jamb in enclosing structures
Aleksandr Dudchenko, Daniel Dias and Sergey Kuznetsov	Pile rows for protection from surface waves
Aleksandr Gulkanov, Konstantin Modestov and Sergey Usikov	Solution of Thermal Conductivity Problem of a Finite Dimensions Plate with Two Heat Sources
Yuri Nemirovskii and Sergey Tikhonov	Longitudinal-transverse bending of physically nonlinear rods by quasi-static loads and mass forces
Victor Orlov and Magomedysuf Gasanov	Research of a third-order nonlinear differential equation in the vicinity of a moving singular point for a complex plane
Serdar Yazyev, Vladimir Andreev and Leysan Akhtyamova	The stress-strain state of reinforced concrete arches with a view of concrete viscoelasticity
Sergey Gridnev, Igor Podlesnykh, Aleksandr Rezunov and Rinat Mukhtarov	Comparative statement analysis of span structures with a reinforced concrete and orthotropic plate under the exposure of solar radiation
Andrey Andreev, Temirkhan Aleroev, Mohammad Khasambiev and Hedi Aleroeva	Differential Equations with Fractional Derivatives for Studying an Oscillator with Viscoelastic Damping



## SECTION 4: ENGINEERING AND SMART SYSTEMS IN CONSTRUCTION

Authors	Title of report
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Andrei Melekhin	Development of engineering calculator for heating systems
Oleg Primin and Grigory Gromov	Reliability and environmental safety of water and sewer pipelines
Vladimir Orlov and Sergey Zotkin	Formation of harmful volatile substances in sewage systems and their neutralization
Vladimir Orlov and Sergey Zotkin	Influence of the temperature factor on the hydraulic resistance of pressure pipes
Vladislava Volkova and Viktor Golovin	Macrokinetic model of biochemical oxidation
Alexandr Konikov and Nikolay Garyaev	Comprehensive use of IT solutions to monitor the state of construction sites
Yuliya Ryltseva	Design and construction of underwater pipelines crossings
Borislav Hristov	Influence of the longitudinal inclination on the speed on highways
Elena Gusakova and Aleksandr Pavlov	Contractual relations of participants in the life cycle of a construction project
Adham Giyasov and Saidmuhammad Mirzoev	Innovative facade systems for buildings in hot climate conditions



<b>Authors</b>	<b>Title of report</b>
Alexander Svintsov, Evgeniy Alekseev, Svetlana Shambina, Roman Fediuk and Vladislav Fominov	Reliability of water fittings in operating conditions
Evgeny Alekseev and Svetlana Shambina	Coagulation of waste water from the point of view of physic-chemical interactions
Svetlana Shilkina	Application of the Energy Service Contract to Improve Energy Efficiency in Use of Resources in the Housing and Utility Complex
Alexander Eremkin and Inna Ponomareva	Theoretical and experimental substantiation of the system of local removal of harmful substances during the combustion of candles in the worship hall of Orthodox churches and cathedrals
Andrey Semenov	Determination of the patch cords lengths distribution physical layer of the modern automation systems of smart city and smart home by the Monte Carlo method
Tatiana Davydova, Alla Turchenko, Irina Spivak and Tatyana Dubrovskaya	Customer Engagement as the Basis for Technology Decisions in a Smart City
Stanislav Chicherin, Andrey Zhuikov, Mikhail Kolosov, Lyazzat Junussova, Madina Aliyarova and Aliya Yelemanova	Specifying DHW heat demand profiles according to operational data: enhancing quality of a DH system model



<b>Authors</b>	<b>Title of report</b>
Anastasya Frolova and Elena Malyavina	The influence of the climatic features of the construction area on the level of economical-efficient thermal protection of the office buildings
Vasily Zharov and Nikolai Komarov	Concept of the service-digital approach to the management of engineering systems of buildings
Samvel Sargsyan and Anna Tsap	Air temperature stratification when flowing between rooms
Andrey Alyoshintsev, Natalia Mokrova and Alexander Sak	Control modules in the "Intelligent building" system
Kuttubek Isakov, Amanbek Altybaev, Alik Beishenaliev, Arstanbek Chopoev and Anarbek Matisakov	The methods for determining the bucket parameters of a bulldozer-loader with transforming working equipment
Evgeny Orlov	Space-planning solutions of the Quaker meetings house in Russia
Liudmila Volgina and Anastasiia Romanova	Application of ejectors for two-phase flows
Dmitriy Kosorukov and Andrey Aksenov	Use of condensing economizers with developed surfaces to improve the energy efficiency of conventional gas-fired heat generators in boilers
Dmitrii Khlopitsyn and Andrey Rymarov	Heat recovery by means of a ventilation unit
Andrey Rymarov, Pavel Havanov and Dmitri Titkov	Formation of local temperature regime in the room: personal ventilation system





Authors	Title of report
Erkin Boronbaev, Berikbay Unaspekov, Aigul Abdylbaeva, Kamoliddin Holmatov and Nurbubu Zhyrgalbaeva	Buildings enclosures coupling by its energy efficiency, seismic resistance and microclimate
Zhanna Govorova, Uliana Rudich and Oleg Govorov	Pre-ammonization in the preparation of chromaticity water for drinking purposes
Viktor Zhila and Aleksey Klochko	Method of determining the optimal version of the piezometer of gas distribution networks of medium and high pressure
Viktor Zhila and Aleksey Klochko	The economic effect of the implementation of the differential pressure in the gas distribution
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Elena Malyavina and Olga Malikova	Impact of design parameters of outdoor air on the energy performance of air conditioning systems
Luis Guillermo Dipotet Mollinedo	Construction machine scrubbing water management
Elena Korol, Natalia Shushunova, Maria Nikitina and Tatiana Shushunova	Modular greening technologies for buildings
Lidiya Giryva, Ekaterina Zorenko, Nikita Ulianov, Dmitriy Egorov and Aleksey Nechepurenko	Organizational and technological computer-aided process of real estate management
Elena Gogina and Olga Ogneva	Comparison of methods for calculating biological wastewater treatment



<b>Authors</b>	<b>Title of report</b>
Victoria Fomicheva, Anna Zanina and Anton Radaev	Determination of optimal values for the technical characteristics of construction machinery unit with application of fractional linear programming
Alexey Andrianov	Pitting corrosion of galvanized pipes in hot water supply systems
Alexander Konikov	A new approach to designing automated systems using the example of the building's SCS
Ekaterina Dmitrieva	Digitalization of the housing and communal services: development prospects
Elena Kitaytseva	Verification of heat supply system telemetry data
Angelina Rybakova	A study of aspects of structural design based on application of complete modular units
Nikolai Bolshakov, Anastasiya Plyako, Alberto Celani and Liliya Azhimova	Digital Asset in the System of Real Estate Management
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<b>Authors</b>	<b>Title of report</b>
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Anna Babushkina, Marina Petrochenko, Anna Kukina and Natalia Astafieva	Optimizing parking lot design by Generative design approach
Yousif Saeed, Esam Aziz and Leonid Zelentsov	Technology Role in Safety Management of Iraqi Construction Projects
Igor Engovatov and Zhanna Kovalenko	Algorithm for constructing an organizational and technological model for dismantling NPP buildings
Pavel Oleinik	Assessment of the manufacturability of construction products in the renovation zone
Oktyabr Rakhimov, Sobir Eshev, Mahmud Rakhmatov, Istam Saidov, Furkat Boymurodov and Iroda Rayimova	Improved pump for transporting liquid feed mixtures through pipes on farms
Evgenii Ignatenko and Yulia Bryanskaya	Velocity distribution in a turbulent flow
Kseniia Nazarova and Kirill Eremin	Energy efficient technologies for reconstruction in Russia
Alexey Kochev, Mikhail Sokolov and Kirill Lushin	Air exchange calculation in traditional buildings of orthodox churches in Russia
Zhanna Govorova, Olga Zubareva, Vasilii Semenovych, Ekaterina Muraveva and Olga Yankovskaya	Justification of modernization of groundwater treatment station



<b>Authors</b>	<b>Title of report</b>
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Akymbek Abdykalykov, Erkin Boronbaev, Ulukbek Begaliev, Kamoliddin Holmatov and Nurbubu Zhyrgalbaeva	Building wall corner structures, its microclimate and seismic resistance
Vadim Undozerov	Spring diagrams for the visualization of construction project dynamics
Nikolay Garyaev and Fadi Ayoub	Using of building information modeling for existing buildings assessment
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Sharafatdin Narbayev, Sarvar Abdurahmanov, Olimjon Allanazarov, Albina Talgatovna and Ilhomjon Aslanov	Modernization of telecommunication networks on the basis of studying demographic processes using GIS
Marat Kuzhin	Research of organizational and technological features of construction using modeling
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<b>Authors</b>	<b>Title of report</b>
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Vladimir Skel	Oscillation of gear mechanisms of construction machines
Olga Baranova	Open data formats in building information modeling
Nadezhda Sevryugina and Pavel Kapyrin	Triad model: simulation - functional tensometry - information database in the assessment of the reliability of technological machines
Alexander Smirnov, Kantemir Tsabolov, Liliya Ineshina and Elena Gogina	Using biogas as an energy source
Nikolay Makisha	Specific cost modelling for secondary treatment of wastewater



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Anastasia Repeva	Informal settlements in Baghdad city
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Velenka Herbez and Alevtina Balakina	Clusters as a new management system of the Skadar Lake in Montenegro
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Adham Giyasov and Dmitry Kim	Simulation of aeration of buildings erected on complex terrain
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Vasiliy Stoikov, Violetta Gassiy, Veronika Panaseykina and Elena Belyaeva	Green investment in construction sector in Russia: trends and analysis
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Natalia Bakaeva, Maria Suvorova, Roman Sheps, and Alexandra Kormina	Adaptation techniques of an urban planning due to climate change
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Elena Pesotskaya, Larisa Selyutina and Boris Kuznetsov	Improving the Competitiveness of Enterprises Operating in the Construction Services Market



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Svetlana Buryachenko, Zahar Voronin, Iana Karachentseva, Alexander Kuzmenkov and Oksana Popova	Factors influencing the rating of low-rise wooden houses as "green" buildings
Svetlana Sheina, Murtadha Muhsin and Lidiya Giryа	Application technology solar thermal power plant in Al-Kut
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<b>Authors</b>	<b>Title of report</b>
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Tatiana Ovsiannikova, Olga Rabtsevich and Irina Yugova	Assessment of the Dominant Trends in the Housing Construction Market in Russia
Khasieva Mariya	The historical aspects of polycentric urban development on the example of Barcelona
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Natalia Shchepkina	Methodological basis for the development of the rating system for assessing the energy efficiency of the industrial facilities
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Elena Nidziy	Methodology for assessment and risk management of the investment and construction project
Sergey Mezentsev	Ecology of Moscow urban agglomeration: problems and the ways of solving



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Maxim Poleshchuk and Inna Klimenko	Perspective tourism development on the european coast Russia
Maria Bovsunovskaya	Development of a cost controlling system for an investment and construction project
Ieva Cataldo, Nerija Banaitienė and Audrius Banaitis	Developing of Sustainable Supply Chain Management Indicators in Construction
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Violetta Politi	Identification of the level of innovativeness of a complex major construction project
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Violetta Politi	Development of organizational and economic instruments for enhancing the innovation process in major construction



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Tatiana Meshcheryakova	Formation of an approach to assessing the energy efficiency class of an industrial facility
Ihsan Ali Husien, Leonid Zelentsov, and Ahmed Adel Naji	COVID-19: Key global impacts on the construction industry and proposed coping strategies



NOTES:

