Contents

BUILDING AND ARCHITECTURE

ARCHITECTURE, URBAN PLANNING, DESIGN
V. K. Linov, S. A. Bolotin, L. N. Kondratieva. Architectural solutions at the reconstruction of industrial zones ...................................................... 13
T. V. Nezvitskaya. Approaches to preserving wooden religious temples in the XX–XXI centuries on the example of the Transfiguration Church of the Kizhi Pogost ...................................................................................... 20

BUILDING DESIGNS

G. I. Bely. Analytical-numerical method for calculating the stability of rod elements of lightweight steel structures ........................................ 39
A. E. Kabasevich. Stability of crane beam walls with fatigue cracks in the compressed belt zone ................................................................. 47
E. Yu. Kurilo, D. V. Nizhegorodtsev. Information modeling technologies at design of hydraulic facilities ...................................................... 54
S. V. Osyskov. Taking into consideration the progressive collapse of civil buildings in foreign and domestic standards ........................................ 72
V. M. Popov, M. G. Plyusnin. Experimental study of σ – ε diagrams of concrete under uniaxial compression and the influence of freezing and thawing cycles on the form of the diagrams .............. 80
A. G. Chernykh, Tran Quoc Phong. Analysis of the load bearing capacity of the connection with the use of self-drilling dowels in various models of elastic failure ...................................................................................... 89

STRUCTURAL MECHANICS AND CALCULATION OF STRUCTURES

R. N. Guzev, R. O. Kropov. Free nonlinear vibration of the cable with external damper ................................................................. 100

GEOENGINEERING

V. V. Konyushkov. Analysis of methods for analytical calculation of foundation settlement in time ................................................................. 106

TECHNOLOGY AND ORGANIZATION OF CONSTRUCTION

S. V. Bovtsev, A. V. Mishakova. The possibility of applying the program evaluation and review technique for construction project schedule management ........................................................................ 115
V. S. Gusev, Yu. V. Pukharenko. Main directions, specifics and prospects of architectural and construction design development in conditions of Northern latitudes ...................................................... 122
N. V. Rozantseva, A. F. Yudina. Technology for installation of a domed building with an internal wooden frame, using pneumatic formwork ........................................................................................................... 128
BUILDING MATERIALS AND PRODUCTS
E. V. Korolev, A. N. Grishina, A. V. Mikheev, V. A. Gladhikh.
Humidity deformation of concrete subjected to alkaline corrosion.
The process model.................................................................134

SANITARY ENGINEERING AND ECOLOGY
I. I. Ivanenko, E. Ya. Lapatina. Research of selection of microorganisms for decomposition of petroleum products with increased nitrogenase activity in laboratory bioreactor ..........144
T. F. Konoplev, S. N. Kiriukhin. Using the expert evaluation method in the system of scoring the management quality of energy saving and energy efficiency improvement of gas industry enterprises........150
N. M. Kryshkin. Determining the characteristics of a cellular humidifier depending on the depth of the irrigated nozzle by numerical modeling method....................................................161

TRANSPORT
A. M. Voytko. Methodology for substantiating the design parameters of a single-tube hydropneumatic shock absorber .........................166
V. N. Dobromirov, K. I. Fomin, U. N. Meike. Comparative evaluation of dump trucks with rigid and articulated frame in conditions of road construction production.................................................174
Ju. G. Kotkov. Quantumobile as a multi-environment vehicle ............182
E. V. Kurakina, S. V. Riazanov. Comprehensive analysis of accident rate and causes of complication of road traffic situation.........................189
K. K. Taysaev, A. V. Terent’ev. Analytical model for assessing the bus efficiency preservation factor ....................................................197
N. V. Holshev, A. A. Lavrenchenko, A. V. Prokhorov, D. N. Konovalov. The method of thermal calculation of automotive disc brake assemblies.......................................................203

ECONOMICS
V. V. Asaul, V. V. Krishnal, J. G. Petukhova. Implementation of national projects aimed at investing in infrastructure support for entrepreneurial activity: problems and prospects..................209
O. Yu. Bohkareva. Project financing of housing construction: domestic and foreign experience.........................................................219
S. A. Ershova, T. N. Orlovskaya, S. A. Shishelova. Organizational and legal features of forming integrated development programs in St. Petersburg.................................................................231
M. B. Laskin, A. A. Mir. Evaluation of market growth rates based on analysis of cadastral record-keeping in different periods..............239

CHRONICLE
Congratulations on your anniversary!...........................................257
Abstracts..................................................................................258
Submitting materials requirements.............................................274
Subscription rules.................................................................275