

USING LASER SCANNER GLS-1500 TOPCON FOR ENGINEERING-GEODETTIC RESEARCHES

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The article considers the technology of terrestrial laser scanning when running the engineering-geodesic surveys for the detailed examination of the coastal areas of the Krasnoyarsk water reservoir. Describes the features of the use of terrestrial laser scanner GLS-1500 TOPCON when performing engineering-geodesic works.

Keywords: terrestrial laser scanning, laser scanner GLS-1500 TOPCON, engineering and geodetic survey, detailed examination of coastal areas.

THE RELATIONSHIP OF GENESIS, MINERALOGICAL AND CHEMICAL COMPOSITIONS OF ZEOLITE TUFF WITH THEIR POZ- ZOLANIC ACTIVITY

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In article results of researches of the hydraulic activity of the natural zeolite tuff most fields of Siberia and the Far East as well as you revealed relationships with their origin and material composition.

Keywords: zeolitic tuff, clinoptilolite breed, the degree of realizaciy pozzolanic activity, hydraulic activity.

AT THE LOWEST COST TO COMPENSATION DOWNTIME

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In the article view the technique of placing vehicle fleet at excavations based on the criterion of minimum conditional of total expenses for compensation of downtimes of machines and objects.

Keywords: set-module vehicle fleet for excavations, expenses for indemnification for machine idle time and objects.

TOURIST MARATHON OF SOFTWARE ARCHITECTS TO MOUNTAIN ALTAI: NOTES ABOUT THE NATURE AND THE ARCHITECTURAL AND RECREATIONAL ENVIRONMENT

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The assessment of the architectural and recreational environment of an operating tourist route is given in article across mountain Altai, nature sanctuaries and outstanding historical and cultural monuments as objects of an attraction are allocated. Recommendations about improvement of the architectural environment and tourist service are provided.

Keywords: Altai region, architectural environment, natural landscapes, recreation, tourist marathon.

HERITAGE OF A.G. GABRICHEVSKIY AND PROBLEM OF PARAMETRIC MODELING OF ARCHITECTURAL OBJECT

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Diversification of architecture to industrial design in the modern practice of designing objects of mass construction industry revives the idea of optimizing the architectural decisions. Searching for «footholds» in this process returns theorists to the issues of design methodology. The article examines the categorical pair of «space and body» of the prominent Soviet historian and art theorist A.G. Gabrichevskiy as a prototype of the modern binary oppositions in the logic of the design process automation to solve the problems of the architectural object parametric modeling. The term «connection» as a function of the «body» is displayed to calculate the amount of estimated cost in function- spatial object model at an early stage search variant architectural design under a fixed budget.

Keywords: heritage of A.G. Gabrichevskiy, architectural object as an object of industrial design, parametric modeling of architectural object.

THE FEATURES OF MODERN INTERPRETATION OF THE ENVIRONMENTAL APPROACH IN ARCHITECTURE

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The article presents the results of studies of features of modern interpretation of the environmental approach in architecture from its origin to the present day.

Keywords: environment, environmental approach, context, contextualism, phenomenology, postmodernism.

CHOICE OF THE RATIONAL STRUCTURAL FORM OF METAL FARMS FROM STANDARD SERIES

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In this report we describe the use of software system PCMS on the example of a choice of the rational structural form of metal farms on the example of a warehouse.

Keywords: metal structures, software system, structural form.

ANALYSIS AND ASSESSMENT OF THE RESOURCE POTENTIAL FOR THE DEVELOPMENT OF CONSTRUCTION INDUSTRY OF ALTAI KRAI

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The problems of the construction industry of Altai Krai were considered, the modern state of production and consumption and projected needs were analyzed. Also the main components of the mineral resource base of the region were revealed. Prospective directions of development of the construction industry were identified on the basis of this analysis.

Keywords: construction industry, resource potential, production and consumption.

SILICATE BRICK OUT OF NON-HYDRATED HIGH-CALCIUM ASHES

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The possibility of obtaining a silica brick from a mixture of acidic ash and not pre-hydration high-calcium ash of thermal power station with sodium chloride solution and autoclaving is presented. For making rational mixtures providing the necessary strength, the optimization of the mixture on the basicity is required. A flow sheet of the bricks production is suggested.

Keywords: high-calcium ashes, acidic ashes from power station, sodium chloride, ashes-silicate brick.

ANALYSIS OF POSSIBLE DESIGNS OF THE WALLS USING STRAW BALES FOR THE CLIMATE CONDITIONS OF ALTAI REGION

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This paper presents a preliminary analysis of the possibility of using straw insulation in the climatic conditions of the Altai Territory. Necessary calculations of humidity regime of buildings and constructions carried out by modeling software package WUFI Pro ®.

Keywords: energy-efficient material, straw block.

THE LOGISTICAL ANALYSIS OF PROCESSES OF CRUSHING AND MIXING IN TECHNOLOGY OF PREPARATION OF BUILDING MATERIALS

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In work the joint analysis of processes of crushing of initial raw materials to an ultradisperse condition and mixing of materials in technology of preparation of concrete with the subsequent working out of basic logistical model is carried out.

The offered logistical model allows to detail the described processes and to plan ways of their optimization.

Keywords: crushing, carburetion, logistical models, parametres of crushing and mixing of materials.

WORKING OUT OF LAWS OF OPTIMISATION OF PROCESSES OF MECHANICAL CRUSHING OF MATERIALS IN BUILDING

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In work process of crushing of substance to fine-dispersed conditions is analyzed. Conditions of optimisation of process of a grinding of microparticles in spherical mills are defined. Comparative results of crushing of quartz sand in various devices are resulted. The mathematical model of process of crushing in spherical mills with exchange the device is described and conditions of optimisation of process are offered.

Keywords: Crushing, destruction, structure, deficiency, exchange the device, speed.

GROWTH WATER RESISTANCE OF GYPSUM BINDER SUBSTANCES

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Gypsum binders are not widely used in construction because of the low water resistance – softening factor is $0,3\div 0,5$. There are several ways to improve the water resistance of materials based on gypsum binders – is the production of materials of gypsum cement-pozzolanic binders and injection molding method using polycarboxylate giperplasticizer. Softening ratio in this case is $0,83\div 0,92$.

Keywords: gypsum binders, gypsum-cement-pozzolanic binders, polycarboxylate giperplasticizer, water resistance, the coefficient of softening, the method of preparation.

TEMPERATURE FIELD CALCULATION IN THE FROZEN SOIL IN ANNUAL PERIODS

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Presents the procedure and results of computer simulation of the temperature field in permafrost, test solved the problem of determining the depth of the active layer.

Keywords: permafrost, active layer, phase transitions, computer modeling.

REGIONAL ISSUES IN EDUCATIONAL PROGRAMS ARCHITECTURAL SCHOOLS OF THE SIBERIAN REGION

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The Siberian Federal District, occupying 30% of the country and its immense strategic resources, has only 5 schools of architecture. The value of the architectural professional activities in addressing the global challenges of the Siberian region in the context of the geopolitics of Russia is huge. Siberian architectural schools: Novosibirsk, Tomsk, Irkutsk, Krasnoyarsk and Altai always been a special relation to the regional component of the architecture of higher education. With the introduction of the GEF HPE-Generation III schools the opportunity to keep them relevant to the components of the educational programs.

This article analyzes the statutes (missions) architectural schools of the Siberian Federal District, in the context of a regional component (variable part) curriculum.

Keywords: architecture, education, regionalism, educational standards.

STUDY OF HEAT-SHIELDING PROPERTIES OF INSULATING COVER RE-THERM

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The article contains the results of experimental investigations of thermal characteristics of liquid coating Re-Therm. The measurements were conducted in laboratory-lab conditions and real walling.

Keywords: liquid insulation Re-Therm thermal conductivity, the degree of blackness.

THE COMPOSITION OF THE PRODUCTS OF HYDRATION HIGH ALUMINA CEMENT MADE OF SLAG PRODUCTION OF CHROMIUM

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Peculiarities of composition of hydration products minerals aluminates included in high alumina slag. It is shown that the basic hydration products aluminate phases retain the structural elements hydration minerals.

Keywords: high alumina slag, hydration products.

STATUS AND PROSPECTS OF PRODUCTION MULTICOMPONENT LITTLE CLINKER ASTRINGENTS

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Studied the effect mineral additives on the properties of various origins little clinker cements. It is shown that with the use of additives in the form of angry brown coal mining waste dolomite, sulfate-chemical production waste can be received little clinker composite cements.

Keywords: of brown coals of ash, cement clinker little, dolomite, sulfate chemical production wastes.

ANALYSIS OF ENERGY EFFICIENCY OF DISCONTINUOUS MODE OF HEATING BUILDINGS

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In the article the simplified mathematical model of the controlled process heating of buildings is proved. Optimal control law by discontinuous heating is obtained. It based on the proposed model and the principle of maximum L.S. Pontryagin. Recommendations on the conditions of effective use of discontinuous heating mode substantiated based on numerical experiments.

Keywords: discontinuous heating, heating supply management, mathematical model of thermal processes of the building.

THE ENERGY EFFICIENCY CLASS OF A NEW ACADEMIC BUILDING AT THE UNIVERSITY

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Defines a class of energy efficiency of the new educational building of the Technical University in the first year of operation on the basis of actual consumption. The project is defined as a class «с» – the normal, by the actual heat-as in «high». The reasons for the higher class of energy efficiency of the building.

Keywords: energy efficiency class, the building, the actual heat loss.

RESEARCH AND ANALYSIS OF MODERN METHODS ASSESSING THE VALUE OF RESIDENTIAL REAL ESTATE

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The article is devoted to the research and analysis of using modern estimation methods of residential real estate. There are also given the classical methods of evaluation and new algorithms. The concept of hierarchical structure and pricing models of residential real estate are described.

Keywords: residential real estate, estimation methods of residential real estate, hybrid expert system.

FEATURES AND POSSIBILITIES OF MODERN WAYS OF THE RECONSTRUCTION AND REPAIR OF UNDERGROUND GAS PIPELINES IN URBAN AREAS

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The paper presents a theoretical information about the features and possibilities of modern advanced methods of reconstruction and repair of underground gas pipelines in urban areas. There are also given the characteristics and recommendations for the using methods of trenchless technology to replace decrepit gas pipeline sections.

Keywords: gas pipeline, reconstruction and repair, trenchless technology.

RESEARCH AND ANALYSIS OF USING MODERN JET GEOTECHNOLOGIES FOR STRENGTHENING THE FOUNDATIONS OF THE BUILDINGS AND CONSTRUCTIONS SITUATED ON THE LOESS SOILS IN CONDITIONS OF THE WESTERN SIBERIA

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The article is devoted to the research and analysis of using modern jet geotechnologies for strengthening the foundations of the buildings and constructions situated on the loess soils in conditions of the western Siberia.

Also there are investigation and substantiation of the possibilities of using modern jet geotechnologies in the Altai region.

Keywords: the loess soils, injection methods of strengthening the soils, jet geotechnology, the choice of optimal technical and technological solutions.

THE EXPEDIENCY OF USE OF IMPREGNATING COMPOSITIONS TO PROTECT AND RESTORE ASPHALT CONCRETE PAVEMENT PROPERTIES OF HIGHWAYS

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Regular treatment of pavement restores properties of bitumen in asphalt-concrete and slows down the appearance of the pavement damage, allowing to postpone the repair time. Application of the impregnating composition helps to restore hydrophobicity of asphalt concrete pavement, reducing the harmful effects of moisture.

Keywords: improving resource durability, cracking, deformativity, asphalt concrete aging, impregnation, destructions, protective function, cutting, inspection, innovative method.

RESEARCH OF THE CONDENSED LOESSIAL SOIL AND INFLUENCE OF PHYSICOMECHANICAL CHARACTERISTICS ON PUCHINISTOSTI'S THEIR DEGREE

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Results of research of the condensed loessial soil are reflected in work. Schedules of change of vertical deformation of soil are provided at frost penetration depending on density of a skeleton of soil. Tables with strength characteristics and sizes of degree of a puchinistost of the condensed loessial soil are submitted. The purpose and research problems are stated. The direction for further experiments is chosen.

Keywords: the condensed loessial soil, frosty pucheniye, physicommechanical properties of loessial soil.

NATIONAL SELF-IDENTIFICATION IN THE ARCHITECTURAL IMAGE OF THE PERIOD OF MODERN CULTURAL HOMOGENIZATION

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The article raises the questions of the national character of architecture and importance of forming the cultural self-identification of the nation. The modern period of globalization erases the traditional borderlines in architecture which impacts the overall national awareness. The author shows the relevance of the problem through an analysis of the existing scientific work in the field of history of architecture, trends of professional community and analysis of large scale research of public opinion showing the need of forming one architectural concept to create the modern comfortable, safe, protected and expressed inhabitable environment as well as to protect the cultural heritage of the country.

Keywords: architectural environment, national architecture, history of architecture, cultural self-identification, globalization, cultural homogenization, stability of national culture.

CLASSIFICATION OF COASTAL RECREATIONAL COMPLEXES IN MOUNTAIN LANDSCAPES ON THE EXAMPLE OF MOUNTAIN ALTAI

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The author in article defines classification of coastal recreational complexes in mountain landscapes on the basis of the analysis of domestic and foreign experiment on the following criteria: placement in nature; placement of rather water objects; placement concerning the water area; functioning season; functional purpose, capacity, age of tourists; type of buildings and constructions entering a complex; comfort level; planning structure.

Keywords: classification, recreation complex, coastal areas, mountain Altai.

THE HORIZONTAL LOAD TEST OF MULTI-TURN SCREW PILES IN OF ALTAI REGIONS SANDY SOIL

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This article presents experimental - theoretical results of relation multi-turn screw piles and sub-grade and specification of graphic simulation of the piles working in the natural circumstances.

The article includes description of the field experiment according to the chosen method of testing and experimental equipment, it contains the results of tests and results are compared with calculations made with the help of computers.

Keywords: soil, multi-turn screw pile, modeling, full-scale experiment.

USING MULTI-BLADE SCREW PILES AS FOUNDATION OF NOISE SCREENS

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The article presents the results of calculations multi-blade screw piles as different designs foundations of noise screens considering wind loads and different types of soil conditions. The main object of the research is interaction of multi-blade screw piles with designs noise screens.

Keywords: noise screen, foundation, load, soil, multi-blade screw pile.

RELATIONSHIP OF STRENGTH AND PHASE COMPOSITION OF THE AUTOCLAVED LIME FLY-ASH STONE WITH HIGH BASICITY

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Phase composition of the stone with high basicity ($K_{basicity} = 1,5$) lime-fly ash or lime-fly ash-quartz compositions after autoclaving for 10-150 hours at 1.0 MPa isotherms presented gel phase C-A-S-H, alpha- hydrate phase C_2S or C_2SH (A) and tobermorite. Strength of the stone is always directly proportional to the content gel phase C-A-S-H and inversely proportional to the C_2SH (A) and tobermorite. With increasing time autoclaving content C_2SH (A) and tobermorite increases and gel phase – reduced, strength of the stone is reduced.

Keywords: lime- ash composition, strength of the stone, autoclaving, the connection with the phase composition.

INFLUENCE OF MINERAL MICROADDITIVES ON THE STRENGTH OF CEMENT

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Strength of the stone from the paste of normal density of mixed cements with addition silica (quartz, silica fume), corundum, calcium silicates (natural and artificial wollastonite, rankinite), calcium hydrosilicates (tobermorite, xonotlite), slags (coal, blastfurnace) are investigated. Shows dependence of the strength of a stone from the fineness of the mineral filler and the peculiarities of its structure.

Keywords: blended cements, mineral additives, interrelation strength, dispersion and structure.

FUNCTIONAL STRUCTURE OF AGRICULTURAL TRADE AND EXHIBITION COMPLEXES

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As part of this article describes the specifics of the functional composition ATVK and planning features of the functional blocks relationship, as well as through the process of major functional blocks with attendant synergy.

Keywords: ATVK functional composition, the composition of the master plan ATVK, the main functional blocks ATVK planning, product groups ATVK, ATVK building area indicators.

ERGONOMICS AS INTEGRAL PART OF ARCHITECTURAL AND DESIGN EDUCATION

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The attention is focused on importance of discipline «ergonomics» by preparation in higher education institutions of experts in the «architecture» and «design» directions. Results of the analysis of the organization of the environment surrounding the person from the point of view of the accounting of requirements of ergonomics are given. Experience of educational design on the basis of the made experiment is generalized.

Keywords: architecture, design, environment, ergonomics, education, experiment.

FRACTALS AND THEIR PARTICIPATION IN ARCHITECTURAL DESIGN

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The article is devoted to the topic of design in architecture and urban planning using the theoretical positions of fractal geometry. Fractal models and methods of use are considered in detail. The use of fractal structures is as effective on microhabitats design level (interior and its elements) as at higher levels, including urban design. The examples of educational experiment are presented. The conclusions about feasibility of using fractal algorithms in architectural morphogenesis are made.

Keywords: architectural design, architectural theory, fractal, technique, fractal architecture, fractal geometry.

DESIGN SCENARIOS INTERNATIONAL TOURIST ROUTE IN TRANSBOUNDARY AREAS OF GREATER ALTAI

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The article examines the spatial planning of recreation and tourism on the cross-border area of Greater Altai. Substantiated proposal for organizing multivariate trajectory international tourist route. Given project scenario.

Keywords: Big Altai, cross-border area, architectural and urban planning, international tourist route planning scenario.

IMPORTANCE OF COMPUTER TECHNOLOGY IN APPLICATIONS ORNAMENTAL L INTERPRETATIONS OF PAINTING AS PART OF EDUCATIONAL PROCESS OF PREPARATION OF ARCHITECTURE STUDENTS (FOR EXAMPLE, THE INSTITUTE FOR ARCHITECTURE AND DESIGN ALTSTU)

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In this Article, the fact is considered that in current circumstances the process of learning painting technology in architecture is changing drastically due to the development of computer technology, as exemplified by the Institute of Architecture and Design of the Altai State Technical University. It is shown that in the system of contemporary architectural education, taking into account the developing electronic technology, it is possible to forecast and develop new methods of interaction with computer technology and painting related to architectural design. Part of the work is dedicated to mastering and applying computer software in the course of creating ornamental interpretations of fine art paintings at the stage of training architects at higher educational institutions as exemplified by works of students of the Institute of Architecture and Design of the Altai State Technical University.

Keywords: painting, art, computer technology, architectural design, innovative activity, new education programs

THE CONCEPT OF PLACEMENT OF COUNTRY FARMS IN WESTERN SIBERIA

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In article features of placement of the country farms (CF) in various natural and agricultural zones of Western Siberia, taking into account the modern concept of rural moving in the region are considered. Five models of rural moving influencing town-planning placement and typology of country farms are revealed. Depending on a place in system of moving three types of farms are established. Schematic diagrams of placement of CF are offered.

Keywords: typology of country farms, natural and agricultural zones, rural moving, the territory zoning, the urbanized areas, the concept of placement, the placement scheme.

TO THE QUESTION ABOUT THE SCIENTIFIC STUDY OF THE PROPORTIONS IN ARCHITECTURE AND ART

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The paper explores the history of the hypothesis of the «Golden section», which many art historians and architectureweek perceived as a law of beauty and harmony. On the example of works V.P. Zubov provides a critical analysis of the main provisions of the hypothesis of the «Golden section».

Keywords: the hypothesis of the «Golden section», research V.P. Zubov.

STUDY OF THERMOTECHNICAL QUALITY OF EFFICIENCY TECHNOLOGIES OF FORMATION OF VERTICAL CYLINDRICAL CHANNELS IN THE OUTER MONOLITHIC EXCLAY CONCRETE WALLS

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The article presents research data of theoretical studies of changes temperature fields and the heat flux density in keramsit monolithic exterior wall with vertical cylindrical channels, swamping polystyrene concrete, depending on the geometry of these channels. Revealed influence of the shape of the channel on thermal protection characteristics of wall. Analysis of the results of the calculation of the heat flux density confirm the possibility of using calculation with inserts having a circular cross section, the vertical channels and also replace them into equal square cross section.

Keywords: temperature field , the heat flux density , technology, keramsit monolithic exterior wall, vertical cylindrical channels.

APPLICATION LOW-STRENGTH MASONRY MATERIALS IN THE PAVEMENT STRUCTURE

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The article presents the methodology and results of laboratory investigations to identify the most effective approach to use low-strength local stone materials for road construction. The author summarizes the scientific information available to the creative team of workers and technology faculty in carrying out research with KGKU «Altayavtodor» on the subject.

Keywords: stone material, soil, cement, the strength, supporting power, deformation, modulus of elasticity, efficiency.

COMPOSITE PORTLAND CEMENT FOR WINTER CONCRETING

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Possibility of use of high alumina slag as additives in production of composite sintered portland cement for winter concreting. The obtained results allow to recommend such cements for the manufacture of concrete mixtures stacked in winter conditions.

Keywords: composite portland cement, high alumina slag, concreting.

PROBLEMS OF MIXED-USE COMPLEX FORMATION FOR YOUTH

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Mixed-use complexes, as a phenomenon in the urban environment are taking a more significant position. In this connection it is necessary to rethink and change the requirements, standards and concepts to such types of buildings.

Keywords: mixed-use, complexes, modern city.

HIGHER SCHOOL OF ARCHITECTURE AND DESIGN PROBLEMS IN JAPAN AND RUSSIA

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Higher education in Japan extends to the whole population. The development is due to liberalization, reduction of government requirements for standards of education and the existence of universities.

Keywords: higher education, architecture, design, problems.

THE EVOLUTION OF MULTI-STOREY BUILDINGS IN THE LARGE SIBERIAN CITY (AT THE EXAMPLE OF NOVOSIBIRSK)

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This paper presents the analysis of historical tendency of multi-storey building construction in Novosibirsk. The study demonstrates the temporal evolution of multi-storey building concept influence of economic, social and technological conditions that the urban structure was formed under. The periodization of a multi-storey building development in Novosibirsk, based on the analysis of historical and archival materials from 1903 by 2013, was proposed.

Keywords: multi-storey building, Novosibirsk.

THE THEORETICAL MODEL OF THE ORGANIZATION OF THE ARCHITECTURAL ART ENVIRONMENTS OF ZOO

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This article contains model of the organization of the architectural art environment of zoos and the recommendation about formation of zoos in Siberia. The model consists of four levels: architectural plan of territory of a zoo, composite decisions, the equipment and subject filling, landscape design of the environment of a zoo. At the heart of modeling of the architectural art environment of zoos the conceptual idea formed from modular units lies.

Keywords: designing of zoos, modeling of zoos, model of the architectural art environment, the concept, the zoo concept.

ARCHITECT K. A. TON AND RUSSIAN ARCHITECTURE AND ART CULTURE 1830s – 1910s

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This article examines the role of the architect K.A. Ton as the practice of church architecture in the formation of the national direction of the Russian architectural and artistic culture of XIX – beginning of XX century in maintaining historical continuity in the work of Russian architects.

Keywords: russian orthodox church architecture, historical tradition, classicism, eclecticism, national style.

THE CRISIS OF THE DOMESTIC TOWN-PLANNING LEGISLATION

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«The national urban-planning doctrine of Russia», in its first edition, developed by scholars of RAASN (2002), in conditions of active lobbying of interests of business in the State Duma, was not able to become the basis for the development and adoption of Russian town-planning law – «Urban-planning code of the Russian Federation» (2004). The 10-year practice of the «Urban-planning code of the Russian Federation - 2004», which led to the crisis of the domestic urban-planning, ultimately exposed his inability to regulate processes of urban development in interests of city and its inhabitants. The destructive role of city planning act in terms of the liquidation of the system of state power in city planning in the process of its reforming has become a problem of national security.

Keywords: urban planning, urban law, environment of human life, public security.

USE OF RENEWABLE ENERGY TO IMPROVE HEATING SYSTEMS OF BUILDINGS IN SOUTHERN WEST SIBERIA

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On the basis of experience in the development and operation of power systems of two experimental evaluation of the effectiveness of buildings given passive and active heating systems using renewable energy resources in the climatic conditions of the south of Western Siberia.

Keywords: passive solar heating systems, the heat balance of the building, solar collectors, heat pump.

INVESTIGATION OF THE CONTACT STRESS STATE OF SOIL BED BENEATH A RIGID STAMP UNDER PLANE STAIN CONDITIONS

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Results of experimental study of the contact stress state of clayey soils beneath a rigid strip-type stamp as well as their comparative assessment with computation results with the use of linearly deformable and elasto-plastic soil models are presented.

Keywords: soil bed, contact stresses, analytical model.

URBAN DEVELOPMENT OF BUILT-UP TERRITORIES. PROBLEMS AND SOLUTIONS

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The problems which appear during the development of built-up territories are examined. The analysis of positive experience in their solutions is conducted. The suggestions about rising Barnaul's territory using efficiency are made.

Keywords: the development of built-up territories, renovation, tumbledown and emergency accommodation, settlement, developer, financing.

INFLUENCE OF HIGH-CALCIUM FLY ASHES ON PROPERTIES OF HIGH-MOBILE CONCRETE MIXES

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Influence of the content of fly ashes and its activity on deformation properties, strength characteristics and a water separation of high-mobile concrete mixes is established. Optimum compositions of concrete with application by high-calcium fly ashes of combined heat and power plant are as a result offered.

Keywords: high-mobile concrete mix, own deformations, thermal emission, high-calcium fly ashes.

EFFICIENCY OF INTRODUCTION OF SEASONAL RESTRICTION OF AXIAL LOADINGS ON HIGHWAYS OF THE ALTAI TERRITORY

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In work calculation of estimated economic effect at introduction of restriction of structure and intensity of movement of heavy-load transport during the adverse periods of year for the purpose of prevention of premature decrease in durability of road clothes and paving preservation in working order on the example of one of studied roads is presented.

Keywords: highways, wear of road clothes, researches of soil, restriction of transport loading.

FEATURES OF PROPERTIES OF NOT AUTOCLAVE ASH-BEARING GAS CONCRETE WITH CHEMICAL ADDITIVES

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In article results of research of properties of not autoclave gas concrete on the basis of the high-calcic evils of the combined heat and power plants received from burning of Kansko-Achinsk brown coals and chemical additives are stated. Features of a fazoobrazovaniye in cement and cindery systems with chloride and sulfate of sodium and its influence on properties of a material are considered.

Keywords: zolo-cement not autoclave cellular concrete, phase structure, properties.

FEATURES OF FORMATION OF PHASE COMPOSITION AND ITS IMPACT ON THE PROPERTIES OF AUTOCLAVED AERATED CONCRETE

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Results of use binding materials on a basis high calcium ashes of thermal power station from burning of Kansk-Achinsk brown coals in manufacture autoclave cellular concretes without lime are presented. The phase structure ash containing cellular concrete is investigated.

Keywords: high calcium fly ash, cement with the addition of ash, autoclaved aerated concrete, durability, X-ray phase analysis.

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Подписано в печать 1.05.2014. Формат 60*84 1\8. Печать-ХЕРОХ.
Усл.п.л. 28,36. Тираж 500 экз. Заказ 2014-368.
Отпечатано в типографии АлтГТУ им. Ползунова, г. Барнаул, пр-т Ленина, 46
Тел.: (8-3852) 29-09-48

Лицензия на полиграфическую деятельность
ПЛД №28-35 от 15.07.97 г.