BUILDING AND ARCHITECTURE

Ata El-Kariem Shoeib Soliman

EXPERIMENTAL ANALYSIS ON THE SHEAR BEHAVIOUR OF R.C BEAMS USING DISCRETE GLASS FIBER

The possibility of sharing discrete glass fiber in concrete elements with traditional transverse reinforcement (stirrups) can significantly improve shear behavior of R.C concrete. This paper presents an experimental investigation carried out on reinforced concrete beams with discrete glass fiber mixed randomly with concrete. The studied parameters included stirrups spacing (50, 75, and 100 mm) and weight percent of discrete glass fiber (0.0%, 0.75%, and 1.5%). The tests were carried out under load control. The elastic behavior of beams at flexural zone was also investigated. Experimental results indicated that the shear strength of beams was significantly increased as the percentage of fiber increased. Additionally, approximately 30 percent increase in shear in shear strength of RC beams was obtained because of using glass fiber. Although, the number of cracks increased by using discrete fiber, they became finer.

Key word: *discrete glass fiber, shear strength, shear cracks*

Berezkina J. V.

TECHNOLOGICAL FEATURES OF THE PRODUCTION GAZOGIPS

The Methods of regulation of physicomechanical characteristics of gazogips's material have been investigated.

Key words*: gazogips, gypsum binder, sulfuric acid, wood sawdust, gasifier.*

Ivaschenko U.G., Kozlov N. A.

RESEARCH OF INFLUENCE COMPLEX ORGANICMINERAL THE MODIFIER ON PROCESSES OF STRUCTURIZATION AND КИНЕТИКУ THE SET OF DURABILITY OF CEMENT COMPOSITIONS

Possibility application of the synthesized mineral additive on wasps-nove of a waste of the industry, for reception quickly hardening and high-quality concrete is considered. The method of the roentgenoscopic analysis studies influence of mineral additives on processes of hydration of a cement stone.

Key words: *cement, durability, organicmineral additives, the modifier, microsilica, a cement dust, treacle, supersoftener, cement-sandy races-tvor.*

Klimenko V. G.

GYPSUM ANHYDRITE BINDING AGENTS

Impact of insoluble anhydrite on properties of various calcium sulphate phases is studied. Planning criteria and optimal compositions of multiphase gypsum systems for dry pack mortars are offered.

Key words*: multiphase gypsum systems, insoluble anhydrite, gypsum, pH of suspensions of gypsum heat treatment products, water polarization, hydrate water, strength.*

Loganina V. I., Kruglov A. N.

ON THE RELIABILITY OF CONTROL IN THE PRODUCTION OF CONCRETE

In this paper we assess the credibility of compliance technology of production of concrete products in view of errors of measuring devices. Found that even if all the measured values of le ¬ lie within acceptable limits, the actual values of the quality of pro duction may be outside the permitted limits.

Key words*: reliability of the control, the error measurement device, the probability, concrete products*

Bolotskykh N. N.

INFRARED HEATING OF INDASTRIAL PREMISES

The types, models and designs of modern infrared heaters, which are used for heating of industrial premises are described. Their classification is shown. The recommendations for the calculation and further expand the application of efficient infrared heating systems are given.

Key words: infrared heaters, radiant pipe, gas burner, radiant intensity.

Kaftajeva M. V.

PROBLEMS OF MANUFACTURE AND APPLICATION AUTOCLAVE OF CELLULAR CONCRETE

The paper studies questions related to the inadequacy of the advertised properties of aerated concretes and their real parameters, determines the reasons for the said inadequacy and suggests measures for their elimination.

Key words: *aerated concretes, autoclaving, dependence of strength on density, equilibrium and operational humidity.*

Vereshchaka V. V., Tamazov M. V., Dovjenko I. G.

FEATURES OF FIRING PROCESS OF THE VOLUMETRIC-PAINTED CERAMIC BRICK WITH APPLICATION OF HIGH-CALCIC SILICATE TECHNOGENIC RAW MATERIAL

In paper the basic regularity of change of properties of the ceramic samples received from compositions on the basis of combinations of loam, mixtures from refractory clay and high-calcic metallurgical slag are considered. Being based on results of the spent complex of the physical and chemical analyses executed on the modern high-precision equipment, the phase composition and structurization processes wall ceramics have been investigated, efficiency of application of a ferrous metallurgy waste for receive obverse products of light tones is estimated. In the conclusion the composition of the ceramic mass is resulted, allowing to production an obverse ceramic high-quality brick.

Key words*: obverse ceramic brick, metallurgical slag, loam, ceramic mass, refractory clay*

Mostafa, Osman

BEAVIOR OF R.C. BEAM IN SHEAR USING DISCRETE GLASS FIBER

This study is discuss the results of experimental results of reinforced concrete beams with discrete glass fiber mixed randomly with concrete. The main object of the study is to understand the behavior of reinforced concrete with span to depth ratio of 2.5 in shear. The beams were divided into two groups, the first group, have three tested specimens has span to depth ratio of 2.5 (shear span to depth ratio = 1) with fiber content of 0.0%, 0.75%, and 1.5% having the same vertical and horizontal steel reinforcement. The second group, with the same span to depth ratio, have three specimens with different vertical stirrups D4@100mm, D4@75mm, D4@50mm, to study the effect of increase the vertical shear reinforcement. The results indicated that the shear strength of beams was increased as the percentage of fiber increased. The number of cracks increased by using discrete fiber and became finer. Also, the crack propagation and modes may be changes with using fiber. From the tested results, it is concluded that the discrete glass fiber increases the ductility and capacity of beam, on the other side the increasing in the stirrups increased only capacity of beams. Comparing between the results of the beams with span to depth ratio equal of 4, and 2.5 with the same material is done.

Key word: *discrete glass fiber, span to depth ratio, shear cracks*

Strokova V. V., Cherevatova A. V., Pavlenko N. V., Miroshnikov E. V., Shapovalov N. A.

ESTIMATION OF EFFICIENCY OF APPLICATION OF NANOSTRUCTURAL COHESIVE WHEN PRODUCTION OF LIGHTWEIGHT CELLULAR COMPOSITES

The main principles of producing of foam concrete on the basis of nanostructural cohesive (NC) are described. The complex relation of the factors, determining phase structure and interphase interactions in mineralization foam system and resulting characteristics of foam concrete, depending on the specificity of the mechanism structurization for molding is presented.

The results of studies indicate the foam concrete on the basis of HB better than the existing analogues.

Key words: *nanostructural cohesive (NC), foam concrete, foam system.*

Lesovik V. S., Ageeva M. S., Denisovs J. V., Ivanov A. V.

USE COMPOSITE KNITTING FOR INCREASE OF DURABILITY OF THE STONE BLOCKS CONCRETE

Increase of physicomechanical indicators of the fine-grained concrete used for izgotov-lenija of a stone blocks concrete, is possible by creation of the optimized structure of a cement matrix at the expense of application of slag as a filler by manufacture composite vjazhushchih at their joint grinding.

Key words: *composite knitting, slag, a specific surface, terms shvatyva-nija, durability*

Klyuyev S. V., Lesovic R. V., Rubanov V. G.

CALCULATION OF BENT CONSTRUCTION REIFORCED BY COMPOSITE MATERIALS BASED

Acute questions of bent constructions reinforce by composite materials based on carbon fibre are considered in the article. Methods of bent construction calculation reinforced by composite materials based on carbon fibre are represented here.

Key words: *reinforcement, bent construction, carbon fibre*

Suleymanova L. A.

ALGORITHM OF RECEPTION OF THE POWER EFFECTIVE GAS CONCRETE WITH THE IMPROVED INDICATORS OF QUALITY

Power effective gas concretes on composite knitting with the improved indicators of quality (with average density 270 … 300 kg/m3, durability on compression 1,5…1,7 МПа, heat conductivity 0,078…0,08 Vt/m·° C) are received. Workings out are based on the general a principle and algorithm of reception of a gas concrete with demanded characteristics which will allow to reach an object in view on strictly scientific basis.
Keywords: *cellular concrete, a gas concrete, the composite knitting*

THE MECHANICAL EQUIPMENT AND MECHANICAL ENGINEERING

Fadin J. M.

CALCULATION OF ENERGY TRANSFERRED TO BALLMATERIAL LOADING BY AN INCLINED PARTITION IN A TRUMPET BALL MILL

In article analytical dependences of energy transferred ball material are presented loading to an inclined partition and definition of its minimum radius of a zone influence.
Key words: *a mill, a partition, an influence zone, mill calculation.*

Voronov V. P., Semikopenko I. A., Vyalykh S. V., Dyatlov E. I.

CALCULATION OF THE FIELD OF SPEED OF THE AIR STREAM IN THE PLANE, THE PERPENDICULAR AXIS OF THE WHIRLWIND.

In this paper we consider the counter-rotational movement of the two air streams. The mathematical dependences are received, allowing to define components of a vector of speed in a plane, a perpendicular axis of a whirlwind at turn of a vector of speed on a corner π *from the initial direction.*
Key words*: airflow, vortex, angle of rotation, velocity vector.*

Chalov V. A.

THEORETICAL BASIS OF CONSTRUCTIVE IMPROVEMENT CENTRIFUGAL DUST COLLECTOR

In the developed dust collectors are two ways to twist the flow of dusty gas are combined: rotation of the gas occurs as commonly as a result of a tangential inlet, and then an additional twist flow is created at the entrance to the exhaust pipe with a special blade torsional device.
Theoretically justified the possibility of creating centrifugal dust collector with an extra twist of the gas flow at the inlet to the exhaust pipe. It is established that the additional twist flow may exceed the principal, the resulting tangential inlet purified gas.
Key words*: cyclone, extra twist flow, exhaust nozzle, dust removal, the efficiency of deposition.*

Romanovich A. A.

DIRECTIONS OF PERFECTION OF TECHNICS AND TECHNOLOGY OF CRUSHING OF MATERIALS WITH ANISOTROPIC STRUCTURE

In the article conditions for the destruction of anisotropic material between the rollers of PVI with different profile are considered. Materials on the introduction of PVI with conical rollers in the industry are presented.
Key words*: crushing, a press-valkovyj the unit, are shaky, compression, destruction.*

ECONOMICS AND PLANT MANAGEMENT

Habibbylina L. R.

PROBLEMS OF INDEXATION OF TAX DEDUCTIONS FOR PHYSICAL PERSONS IN THE CONDITIONS OF INFLATIONARY PROCESSES

The present article considers the most important tendency in the reforming of citizen income taxation in industrialized countries, where the deductions and tax remissions, taken into account at the time of the taxation, tend to increase. The reforming proposals about natural person taxation in the Russian Federation are also empathized.

***Key words**: the tax, incomes of physical persons, inflation, salary, privileges, tax deductions.*

Yusupov K. N., Davletbaeva A. F.

MECHANISM FOR IDENTIFYING AREAS OF SUSTAINABLE DEVELOPMENT REGION IN THE RISK CONDITIONS

Designed the mechanism of phase-coherent detection zones for sustainable development of regions, based on which the calculation of integral index of socio-economic development of regions taking into account the risk indicators of regional development. Complex technique was tested carrying out multi-factor evaluation of the integral risk level of the Volga Federal District, taking into account the socio-economic development in the period 2000 - 2009 gg.

***Key words:** zone of sustainable development in the region, socio-economic development of the region, the risk of regional development.*

Trunova E. V.

INTEGRATED MANAGEMENT SYSTEM: EXPEDIENCE AND ORGANIZATIONAL ASPECTS

The correctly lined up management system is an important element of intellectual capital of company and promotes growth of its market value. In the article grounded, that realization of strategy is impossible without intercommunication of strategic management and business-process management. Such organizational aspects of administrative activity, as role conception of management, strategic office and process office, are observed.

***Key words**: development of company, strategic management, business-process management, integration, role conception of management, strategic office, process office.*

Vsyakih M. V.

CURRENT ISSUES IN THE TRANSITION TO INFLATION TARGETING

At the moment, the leadership of the country's goal of transition to an innovation economy. This requires adequate measures of the monetary authorities to control inflation, since at its current pace can not be fully can not be realized the potential of new production capacity, declining competitiveness of domestic products and the purchasing power within the state. One possible solution to this problem, advocates a gradual transition to inflation targeting.

***Keywords:** monetary policy, inflation, innovative economy, targeting, interest rate.*

Vaganova O. V.

MECHANISMS OF INNOVATIVE PRODUCTION INTENSIFICATION PROVIDING

The analysis of research investigation in theory of innovatics is done, where the number of gnoseological gaps is educed, and also author's definition of «innovative activity intensification» is given. The article is devoted to theoretic-methodological basis of innovative activity intensification, formation of system innovations classification with separation of three comprehension ways of its entity.

***Key words:** intensification, innovation, innovative process, innovative production.*

Ismagilov D. D.

MANAGEMENT IN REGIONAL CLUSTERS

The management question regional clusters is considered. The comparative analysis of function of management is carried out at planned and market economy. It is established that management in кластере is mixed

with participation of sphere of the state, a science, business and a society. It is defined that management at use clusters is better than the approach, than existing models of management.
Key words: *cluster,* management, efficiency, market economy.

Doroshenko Y. A., Antipov E. A.
ANALYSIS TOOLS OF INDUSTRIAL HOLDING STRATEGIC DEVELOPMENT
One of the strategic directions of economic growth is industrial holding development. In the article the analysis instruments of integrated structure strategic development, which base on the factors of external and internal environment are considered. The method of rating construction for analysis of holding strategic development and estimation rates are developed.
Key words: *industrial holding, strategy, analysis methods, external environment, internal environment, strategy development rating, method of rating estimation.*

Seliverstov Y. I.
THE INTELLECTUAL PROPERTY INSTITUTE DEVELOPMENT IN THE LIMITS OF STATE INNOVATION POLICY
One of key tendency of State innovation policy is intellectual property improvement. In article the interference of dynamic development of national innovation system and intellectual property Institute is shown. Actual problems of intellectual property turn in Russia are analyzed. Different aspects of State participation in its functioning are considered.
Key words: *intellectual property, national innovation system, government control, social and economic development.*

Shevelev A. A.
THE ROLE OF PRIVATE CAPITAL IN THE INVESTMENT FINANCING
Methodological approach to studying investments as an economic category has been stated. Stages of the investment process have been analyzed; classification criteria of an investment have been specified, and the content of the category "private capital" has been defined. The ownership of capital has been suggested as a new classification criterion. The necessity to increase the specific weight of private capital in the investment financing has been substantiated. The trends of improving investment management on basis of the ownership of capital have been described.
Key words: *investment, investment classification, investment process, capital, private capital, ownership of capital, investment quality, investment management on basis of private capital.*

Tkachenko G. A., Domojirova O. V.
FEATURES OF BUDGETING OF PROCESS A LOT OF REEFFICIENT MANUFACTURE
There is considered the technique of working out and acceptance of the budget of the enterprise on the basis of the process-focused management with application of the equation of interbranch balance. There is resulted the list of problems which dare at use of the given model.
Key words: *budgeting, business process, much reefficient manufacture, the equation of interbranch balance.*

Ryapuhina V. N.
SCIENTIFIC AND THEORETICAL BASES OF FORMING AND CALCULATING THE INNOVATIVE POTENTIAL OF THE REGION
The genesis of the innovation concept and innovative potential were examined; it was given the structure of the elements of the innovative potential of the region. The main approaches of appraisal the innovative potential of the region were highlighted: integrated or synthetic method, particular method, mixed method. There were described the most commonly used methods of economic appraisal of innovative potential of the region, their advantages and disadvantages. On the basis of the analysis of approaches and methods which are present at the modern scientific literature, the conclusions, concerning specificity and methods of an appraisal of innovative potential of region are drawn.
Key words: *innovation, innovative potential of the region, appraisal of the innovative potential of the region, integral method, the particular method, the cost-based method, the comparative method.*

Davletbaeva A.F

A MODEL OF THE DEVELOPMENT AND MANAGEMENT OF THE REGIONAL ECONOMY WITH RISK ACCOUNT

Explored the high differentiation of the risk of the Volga Federal District regions. It is established that the prevalence in the region of positive factors for the development characterizes makes risk-stability direction and helps reduce the risk of regional development, increases the potential for socio-economic development through the strengthening of stability and balance of social and economic processes. In turn, the predominance of negative factors in the region shows risk-dispose vector of the subject and contributes to the overall level of risk, reducing the potential socio-economic development of the region accompanied by decreasing the stability of the economy. Generated a model of the development and management of the regional economy by identifying risk-stability and risk-dispose vectors of economic development of the system.

Key words: *regional development, factors of the region development, risk-stability, risk-dispose, the risk of regional development, regional risk.*

Romanovich M. A., Rydichev A. A., Romanovich L. G.

VENTURE INVESTING IN INNOVATIVE COMPANIES ABROAD AND IN RUSSIA

Venture investing is an effective form of financing of innovation, so creating a venture capital networks through effective partnerships of small and large enterprises, financial institutions and the state - an important task of economic development of foreign countries and Russia.

The author considered the essence of venture capital: the specific features of venture capital investment, the benefits of the venture business and organizational forms of venture capital investment.

We analyze the positive experience of venture capital in innovative companies abroad and in Russia.

Key words: *innovative enterprises, venture investing, venture capital, risk capital financing, venture capital funds and business angels.*

CHEMICAL TECHNOLOGY ECOLOGY

Rybakova M. V., Barbanyagre V. D.

FEATURES OF THE WET GRINDING CLINKER HYDRATION PROCESS

The peculiarities of the process of hydration of clinker wet grinding. Established that the cement slurry of wet grinding process of hydration proceeds more rapidly with the formation of fine particulate mass with clearly defined boundaries of phases and microcrystalline ettringite, evenly distributed over the volume of the suspension.

Keywords: *clinker, grinding, slurry, hydration, a structure of cement stone.*

Ignatieva E.O., Garkushin I.K., Dvoryanova E.M.

ANALYSIS OF TERNARY SYSTEMS ARRAY MF-MBr-M2ЭO4 (M=Li, Na, K; Э=Cr, Mo, W) AND EXPERIMENTAL STUDY OF THE SYSTEM NaF-NaBr-Na_2WO_4

We have analyzed an array of three-component systems MF-MBr-M2ЭO4 (M=Li, Na, K; Э=Cr, Mo, W) in the series, by comparing changes of the liquidus. The series formed by replacing the element of a single group in Periodic System. We studied the changes in low-melting eutectic melting temperature. We also made the equation dependencies melting ternary eutectics in the ranks of the systems MF-MBr-M_2E_{O4} (M = Li, Na, K; E = Cr, Mo, W), depending on the ionic radius of the cation.

The three-component system NaF-NaBr-Na_2WO_4 has been studied by the differential thermal analysis. As a result we have defined melting point temperature, and the compositions ternary eutectic and peritectic mixture. We also have described the non and invariant equilibria.

Keywords: *The differential thermal analysis (DTA), phase equilibrium, T-x-diagram, eutectic.*

Kazin V. N., Sibrikov S. G., Kuzhin M.B.

UNCONVENTIONAL WAY OF SYNTHESIS OF NITRO-SUBSTITUTED BENZOPHENONES

It is shown that the interaction of 1,1,1-trichloro-2,2-bis (4-nitrophenyl)ethane, 1,1,1-trichloro-2,2-bis (3-nitrophenyl) ethane, 1,1,1-trichloro-2,2-bis(3-nitro-4-chlorophenyl) ethane and 1,1,1-trichloro-2,2-bis (3-

nitro-4-hydroxyphenyl)ethane with sodium nitrite in DMF are transformed trihloretan groups in starting compounds in the carbonyl.

***Keywords**: nitro-1,1,1-trichloro-2,2-diariletany, sodium nitrite, DMF, nitrobenzophenones, trihloretane group.*

Stadnichuk V. I., Bessmertnyi V. S., Dicunova L. M.

THE STUDY KINETICS OF SHAPING THE HYDROPHOBIC FILMS ON THE INTERNAL SURFACE OF CASTING CERAMIC MOLDS

The results experiments for study characteristic of solution, which form the thick hydrophobic film on surface of ceramic casting mold is show at article. The choose type of hydrophobic varnish and parameters solution. The forming defensive film is ward off to exclude the destruction of ceramic at time dissolution model.

***Key words:** hydrophobic film, varnish, ceramic mold, solvent, defensive composition.*

Chichvarin A.V., Igumenova T. I.

EFFECT OF HEAT AGING IN TERMS OF POLYBUTADIENE BINDER MODIFYING FULLERENS COMPOUND $C_{50} – C_{92}$

Annotation: the use of fullerens mix composition C50 – C92 in the capacity of antioxidant produce changes in the time of oxidation and polymer structurization of polibutadienes.

***Key words:** synthetic rubber, fullerene, infrared spectrum, oxidation, antioxidant.*

Alimativ B. A. Sadullaev H. M., Faizimatov U. B. , Hametov Z.

ENERGY CONSERVATION IN EXTRACTION INSTALLATION With PNEVMOPEREMESHIVANIEM LIQUIDS

In order to conserve energy in the extraction apparatus with barbotage extractor, fluid in the apparatus are invited to help with the energy of compressed gas

***Keywords:** extraction, pnevmoperemeshivanie, energy savings, bubble extractor*

Bedina V. I., Evtushenko E. I., Moreva I. Yu., Skiba A. A.

FEATURES OF TECHNOLOGY OF LOW SHRINK CERAMIC COMPOSITES

The given work is devoted to the receipt and research of ceramic composite materials with low shrinkage. As a matrix are used artificial ceramic binding materials of porcelain structure. The receipt technology of a filler from plastic masses is developed by a microgranulation method, the optimal grain-size structure of the filler is defined. The received ceramic composite possesses the raised physicomechanical characteristics.

***Keywords:** a ceramic composite, a matrix, artificial ceramic binding materials, a filler, a chamotte, grain-size structure, a shrinkage, a durability.*

Mishin D. A., Lyginina I. G., Rybakova M. V., Klunny A. I.

INCREASE OF EFFICIENCY OF ACTIONS OF SURFACETANT ADMIXTURE UNDER THE GRINDING OF PORTLAND CEMENT CLINKER

As a result of the research revealed that the efficiency of intensifiers grinding with grinding of clinker can be adjusted by providing prior controlled by contact between the crushed material and surfacetant admixture. The results of industrial tests for grinding of clinker with the use of the intensifier grinding "Litoplast 1I" shown.

***Keywords:** grinding, surfacetant admixture, specific surface arca, clinker.*

INFORMATION TECHNOLOGIES

Poluyanov V. P.

DEVELOPMENT SCENARIOS FOR SYNERGISTIC EFFECTS IN NATURAL AND HUMAN-INDUCED PROCESSES

The article deals with the problem scenarios synergistic effects of natural and technogene processes. Analyzed synergetic model scenario development and transformation of various natural hazards and man-

made processes accompanying the passage of power cycles. Detailing the synergistic effect of seismic tremors and obosluvlennyh of major landslides and avalanches.
Keywords: *synergistic effects, development, natural and technogene processes, ecology, disaster.*

KyznecovV. A., Ryazancev O. A., Trylev A. V.
NUMERICAL MODELLING OF BURNING AND HEAT EXCHANGE IN THE CEMENT ROTATING FURNACE
A mathematical model of combustion and heat transfer in cement rotating kilns, which contains up to 12 partial derivative differential equations, has been realized. Stable numerical solution algorithms were applied. Computational experiments revealed substantial buoyancy influence upon flame sizes and shape, discovered a tendency to some clinker overheating in wet-mode kilns.
Key words: *mathematical model, computing experiment, burning, cement clinker, rotary kiln, flame, radiative and convective heat transfer.*

Sinuk V. G., Polyakov V. M., Kamenev M. V.
OPTIMIZATION OF ONE CLASS OF FUZZY SYSTEM BASED ON ALGORITHMS OF DISCRETE AND UNINTERRUPTIBLE ANT COLONY
The article solves the problem of parametric optimization of singleton fuzzy system by means of discrete and indiscrete ant colony algorithms. Mathematical basis of these algorithms, their application during setting of fuzzy system parameters are described in the article. The analyzed algorithms are viewed as pseudocode. The results of computational experiments and resulted fuzzy inference surface are represented in the article. The article gives short analysis of influence of ant colony algorithms parameters on operating speed and output error with respect to parametric optimization of fuzzy system is given.
Key words: *parametric optimization, parameter setting, fuzzy system, singleton, ant colony, table of observations, solutions graph, membership function, archive solutions, Gaussian kernel, output error, approximation.*

Potapenko A. N., Shtifanov A. I., Potapenko T. A.
MATHEMATICAL MODELS OF LIGHTNING CONDUCTORS OF LIGHTNING PROTECTION SYSTEMS AND THE FEATURES OF SYSTEM OF MONITORING DISCHARGE OF THE ATMOSPHERIC ELECTRICITY
Mathematical models features of the elements lightning protection system in the form of distributed rod and wire lightning conductors for electropower system substations and monitoring system structures of an atmospheric electricity discharge are presented. Computing experiments with representation calculating results in the form of field intensity are executed at researches distributed lightning conductors on substation.
Keywords: *the lightning conductor, mathematical model, computing experiments, field intensity, monitoring system structure.*

Ledeneva T. M., Nguen Ngok Chui
CALCULATION OF SIMILARITY FUNCTION FOR FUZZY NUMBERS
The article considers an approach to fuzzy numbers comparison which is based on similarity function calculation and admits creating similarity matrix by other means in the fuzzy classification task, improving the quality of the solution.
Key words: *fuzzy number, membership functions, similarity functions*

ECOLOGY

Pendyurin E. A., Starostina I. V., Smolenskaya L. M.
INVESTIGATION OF SOIL AND ROCKS IN THE UNDERLYING JOBS SC «BELGOROD CEMENT» IN ORDER TO THEIR USE IN REMEDIATION
Studied and analyzed the possible ways of reclaiming waste pits. Experimental data on the properties of the soil and underlying rocks JSC «Belgorod cement» to recommend them as an anti-screen the material and the

filler to fill the available space excavation pit, with the technical phase of the waste reclamation site. Recommended the most appropriate species of trees and shrubs.

***Keywords**: quarry reclamation, drainage, overburden, loam, soil physical and chemical properties, mineralogical composition, tree and shrub vegetation.*

Zaryaeva E. V.

CONTRIBUTION OF REGIONAL STUDIES INTO THE PROBLEM OF HYGIENIC JUSTIFICATION MEASURES TO MINIMIZE THE RISK TO THE HEALTH OF THE POPULATION

The main directions of scientific research of a condition of environment and health of the population of the Voronezh region, carried out since 1998 and on present time in the Voronezh region with intense industrial impact on the environment, the relevance detection of zones of ecological risk for targeted prevention ecologically dependent diseases in the population.

***Key words:** socio-hygienic monitoring, health of the population, the quality of the environment.*

Fetisov D. D., Sverguzova S. V.

INFLUENCE OF OIL AND GAS COMPLEXES ON OBJECTS OF ENVIRONMENT

The article shows the impact of oil and gas facilities on the environment.
Its presents the dynamics of average and maximum annual rates of the rivers Ob, Poluj, Nadym, estimate of water bodies in oil and gas producing regions in the system of ecological well- being.

***Key words**: impact, rates of the rivers, oil and gas facilities.*

PROBLEMS OF HIGHER EDUCATION

Glagolev S. N., Shutenko A. I.

SOCIAL INTEGRATION OF CHILDREN WITH DISABILITIES AS HUMANITARIAN MISSION OF MODERN EDUCATION

The need for healthy development and socialization of children with disabilities requires a transition to the practice of integrated education in high school. The article highlights the social and pedagogical issues of the transition of the education system to this practice, a comparative analysis of domestic and Western experience of integrated education, examines existing models of integrating children with disabilities in the development of national education.

***Key words**: children with disabilities, humanization of education, inclusive education, models of integration.*

Zaritsky V. D.

QUINTET OF WIND INSTRUMENTS: ART AND PEDAGOGICS

The article deals with the place of wind esemble performing in education of wind instruments players. The different aspects of work with a chamber wind ensemble are considered as a special type of musician-pedagogical activity. The major points of development of the genre of wind instruments quintet are traced.

***Keywords:**wind instrument player, wind ensemble instruction, quintet, chamber wind ensemble*

SCIENCES AND HUMANITIES

Poluyanov V. P.

MAN'S RELATIONSHIP WITH THE PEOPLE AROUND HIM

The article deals with man's relationship with the people around him. It examines the existing approaches for the formation of human relationships with other people. Attempt to show the influence of life circumstances on people's attitudes to each other.

***Key words:** people, relationships, society, justice, courage, wisdom.*