Underground mining

Abramov V.A., Agafonov V.V. ESSENTIALITY OF ACCOUNTING FOR DEVELOPMENT OF A “MINI-MINE” IN THE “MINE-LONGWALL” ENGINEERING STRUCTURES AT THE MINE FIELD OPENING-UP OPTIMIZATION STAGE

It is substantiated that optimizing open-up of a mine field requires accounting for “mine-longwall” and “mine-stratum” engineering structures.

Key words: coal mine, opening-up, mine-longwall, mine-stratum, optimization, competition, panel.

Ermolovich E.A., Izmest’ev K.A. RESEARCH OF PHYSICOCHEMICAL PROPERTIES OF MINING WASTES AS COMPONENTS OF HARDENING STOWING MIXTURES

The results of studies of chemical and granulometric compositions, specific surface area and pore size of mining waste are given in the article. The possibility of their use in the backfilling composites is justified. Correlation dependence of the pore size from the average particle diameter of powder industrial waste is presented.

Key words: mining and metallurgical wastes, hardening backfilling mixtures.

Erneev R.Yu. JUSTIFICATION OF EXTRACTION PROCESS FLOWSHEETS FOR STEEPLY DIPPING COAL BEDS

Based on the geomechanical research, the author validates an extraction scheme with sublevel breaking of top coal with a curved face and partially extraction of roof coal, which improves mining safety and diminishes coal loss.

Key words: coal extraction, deposit, sublevel roadway, fault, rock pressure.

Skritsky V.A. SPONTANEOUS FIRE PREVENTION AND COAL EXTRACTION EFFECTIVIZATION IN HYDRAULIC SUBLEVEL BREAKING (HSB) OF STEEP COAL BEDS

The hydraulic sublevel breaking of steep coal without pillars will eliminate spontaneous combustion sources and their ingress in productive roadways from the earlier mined-out horizons.

Key words: coal, steep bed, spontaneous combustion source, abutment pressure, mechanical destruction of coal bed, hydraulic sublevel breaking.

Stradanchenko S.G., Maslennikov S.A., Shinkar D.I. ON THE DESIGN OF COMBINED KREP FROM REGULATED OPERATION

In the article the question of calculating the parameters of the combined reinforced concrete lining with adjustable mode of operation, proposed coefficient selection criterion serves the basic geometric and deformation characteristics of lining.

Key words: reinforced concrete lining, vertical shaft, rock pressure, hydrostatic pressure.

Tikhonov A.V., Agafonov V.V. ANALYSIS OF STRUCTURE OF COAL RESERVES AND LOSSES IN THE KUZNETSK COAL BASIN MINES

The article describes research findings about the structure and losses of coal along the horizontal and thickness of coal beds in terms of the Kuznetsk Coal Basin mines.

Key words: coal mine, reserves, losses, extraction coefficient.

Open cast

Kafidov N.G., Birkin M.G. ON THE DECREASE IN SALT PRODUCTION LOSS AT THE LAKE BASKUNCHAK

The authors recommend on salt production improvement and enhancement at the Lake Baskunchak.

Key words: salt production improvement, Lake Baskunchak.

Kulakov G.I. THE USE OF BACKGROUND ELECTROMAGNETIC RADIATION IN THE BUILDING STONE OPEN PIT MINING

The article analyzes background electromagnetic radiation in rocks over the area of construction, and in the blasted rock dumps.

Key words: rock fall control and forecasting, open pit mine, electromagnetic radiations, building stone, large-scale blasting.

Nazarkova E.Yu., Kosolapov A.I. ENHANCING EFFICIENCY OF UTILIZATION OF GOAFS IN CARBONATE OPEN PIT MINES NEAR RESIDENTIAL AREAS

The authors offer alternative technologies for carbonate deposits occurring close to residential areas and determine the value of each alternative depending on strength of rocks.

Key words: open pit mine, environment, open pit mining, carbonate rocks.

Mamaev Yu.A., Khrunina N.P. DETERMINATION OF ULTRASONIC RADIATION INTENSITY DAMPING DURING TREATMENT OF ALLUVIAL DEPOSITS
Based on the studies of physical mechanical properties of alluvial rocks, the authors have determined the sound absorption coefficient and distance at which the radiation intensity is half as much. The calculation data confirm workability of low ultrasonic frequencies in the direct treatment of a rock mass.

Key words: intensity, sound frequency, ultrasound velocity, absorption coefficient.

Mogilina V.A.  COMPARATIVE EFFICIENCY OF THE HYDROMECHANIZED DEVELOPMENT THE DEAD ROCKS OF COAL CUTS IN KUZBAS ................................. 66

In article the brief analysis of a state of the art of hydromechanization in the opencast mining of «CC-Kuzbassrazrezugol» is presented. Maintenance of highly effective work of the coal-mining enterprises can assist the hydromechanized development of dead rocks.

Key words: hydromechanization, coal cuts of Kuzbas, technical and economic parameters.

Skrynnik L.S., Mogilina V.A.  SUBSTANTIATION OF ECONOMIC EFFICIENCY OF THE BLASTING OF CHARGES FOR AIR GAPS AT THE BACHATSKY ......................... 68

In the article the justification of economic and environmental feasibility of charges for air in between at blasting overburden in Kuzbass at the mine «Bachatsky».

Key words: The coal mine, blasting overburden, charges for air gaps, economic and environmental feasibility.

Romashkin Yu.V.  FINISHING COAL RESERVES IN OPEN PIT MINES ...................................................... 70

The article considers issues of finishing coal reserves upon open cutting completion using deep coal bed mining complexes (DCMC). The accomplished research results are presented and the promising trends for the further analysis of the DCMC application are traced.

Key words: coal reserves finishing, deep coal bed mining complex, pillar width, coal loss, extraction efficiency.

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Vasilevskaia L.S., Chernishov I.V.  EVALUATION OF STRESSED STATE OF ROCKS IN BOREHOLES ................................................................................................................. 75

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Key words: stressed state, ultrasonic method, dumping of core samples.

Vdovin S.D., Lysenko P.Y., Prostiykov R.G., Tcherepetskaya E.B.  THEORETICAL ESTIMATION OF IMPERFECTION PARAMETER OF GEOMATERIALS BY LASER ULTRASONIC SPECTROSCOPY .................................................................................. 86

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Key words: erosion of the geomaterials, laser and ultrasonic spectroscopy.

Vinnikov V.A., Ermishkin V.A., Kirichenko I.V. GEOMATERIAL EXAMINATION OF THE DAMAGE IN RELATION TO THE SIZE OF ITS STRUCTURAL ELEMENTS ....... 90

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Key words: geomaterial, damage, size of structural elements, Hall-Petch dependence.

Voznesenskiy A.S., Shkuratnik V.L., Nabatov V.V., Kutkin Yu.O. USING ELECTROMAGNETIC RADIATION TESTING IN NEAR-CONTOUR AREA FOR ROCK MASS STABILITY ANALYSIS ................................................................................................................. 94

This article describes application of well logging passive electromagnetic radiation testing for gypsum deposit pillars stability estimation. Interpretation of results is based on computer simulation using finite element method.

Key words: rock mass stability analysis, pillars, deposits of gypsum, near-contour rock massive, electromagnetic radiation, well logging, results interpretation.

Gaisin R.M., Nabatov V.V., Dudchenko T.O. WATER CUT ZONES DYNAMICS INVESTIGATION USING ELECTRICAL RESISTIVITY TOMOGRAPHY SURVEYS ................................................................. 103

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Denisova E.V.  THE RESEARCH OF INFLUENCING PHYSICAL-MECHANICAL PROPERTIES OF GEOLOGICAL MEDIUM TO THE ACCURACY OF GEOPHYSICAL METHODS IN LOCATION OF UNDERGROUND OBJECTS ................................................................. 107

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Zakirov A.A., Ivanov R.O., Lysenko P.Y., Cherepetskaya E.B. CALCULATION OF ELASTIC WAVES PARAMETERS GENERATED BY LAZER ................................................. 110
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Kozyrev A.A., Rybin V.V., Konstantinou K.N., ASSESSMENT OF GEOMECHANICAL STATE OF THE 3AKOHTYPHOFO OF ROCKS IN THE BOARD CAREER COMPLEX INSTRUMENTAL METHODS ........................................................................................................... 113
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Nabatov V.V., Morozov P.A., Semenikhin A.N. LOCATING UNDERGROUND UTILITIES ON THE CONSTRUCTION SITE USING GROUND-PENETRATING RADAR WITH RESISTIVELY LOADED DIPOLES ................................................................. 120
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Shkuratnik V.I., Novikov E.A. ABOUT INFLUENCE OF ROCK SAMPLES SIZE ON THEIR THERMOACOUSTIC EMISSION ................................................................................................. 135
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Key words: thermoacoustic emission, linear dimensions, sample, rocks, the nature of emission.

Kozyrev A.A., Panin V.I. SYSTEM-WIDE PATTERNS IN MINING-AND-ENGINEERING SYSTEMS FOR THE PREDICTION AND PREVENTION OF MAN-CAUSED SEISMICITY. Some system-wide laws and regularities within the meaning of prediction and preventive measures of mining-induced seismicity are presented.
Key words: system-wide laws and regularities, geodynamic risks, mining-technical system.

Folker Shepe. SEISMIC APPROACH TO STUDYING GEOLOGICAL STRUCTURE OF COAL MEASURES AIDED BY THE SUMMIT II EX SYSTEM ......................................................................................................................... 145
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Hachay O.A., Khachay O.Yu. TO CONSTRUCTION OF NONLINEAR RESPONSE MASSIVE MODEL ON HEAVY EXPLOSION INFLUENCE .................................................... 155
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Key words: nonlinear model of rock mass response, modeling algorithm, mine seismic log, analysis of field data on rock mass exposure and response.

Shkuratnik V.I., Kormnoe A.A. ABOUT APPLICATION OF ELECTRO-CAPACITIVE TRANSDUCERS FOR ACOUSTIC EMISSION OBSERVATIONS NEAR MINE TUNNELS. Construction and technical characteristics of electro-capacitive transducers for acoustic emission logging observations near mine tunnels for its stability estimation are displayed. Possibility of detection of high deformation activity zones in rock mass is shown based on specific example.
Key words: acoustic emission, logging observations, electro-capacitive transducer, edge rock mass stability.

Geotechnology and peat production

Bolshakov M.A., Mikhailov A.A., Puchova O.V. IMPROVEMENTS OF REPAIRING TECHNOLOGY FOR RAISED PEAT FIELDS...................................................................................... 171
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Key words: technology, peat, repair, repairing schemes, technological areas, milling field.

Kanchenkov W.A., Puchova O.V., Chertkova E.Yu. OPERATIVE DETERMINATION OF MOLDED PEAT DISPERSITY ......................................................................................................................... 176
The research of peat mechanical processing at the time of molded peat product manufacturing for energy use was carried out. The explanation of processes occurring during the mechanical processing of raw peat was done.

**Key words:** peat, raw materials, processing, dispersion, specific surface area of drying, the critical shear stress, moisture content.

**Korolev I.O., Puchova O.V., Chertkova E.Yu.**

*The Influence of Technological Factors on Physical and Mechanical Characteristics of Raw Material in Technologies of Peat Deposits Development*

The results of peat mechanical processing which leads to structural and mechanical changes and also the physical-chemical properties changes of peat products are presented. The estimation of peat materials' physical-mechanical properties in the processes of dispersing and dehydration peat mass was made.

**Key words:** peat, processing, dispersion, drying, treatment, full moisture capacity, structure.

**Sekisov G.V., Trukhin Yu.N., Latkin A.S., Pashkevich R.I., Shulyupin A.I.**

*The Influence of Technological Factors on Physical and Mechanical Characteristics of Raw Material in Technologies of Peat Deposits Development*

**The enrichment of minerals**

**Avdonin G.I., Mikhhee E.Yu., Koltsov V.Yu., Klokhkova N.V., Olishhevsky P.E.**

*Assessment of the Magnesium Sulfate Concentration Effect on Nickel Leaching Indices*

The technique of carrying out analyses of nickel, magnesium, iron, cobalt and aluminum is offered.

**Key words:** concentration, magnesium sulfate, leaching, calibration chart, free acid.

**Arkhipov A.V., Zemtsovskaya E.V.**

*Principles and Practicable Methods of Preserving Tailings Utilizable as Technogeneous Raw Materials*

The authors describe feasible methods of modifying the existent tailing storage formation technologies with a view to preservation of the tailings and their subsequent quarrying.

**Key words:** tailings, tailings storages, tailings preservation, quarrying.

**Kozlov V.A.**

*Influence of Elemental Composition of Coal Ash on Combustor Performance*

The influence exerted by ash content, moisture and chemistry in coal on the coal combustion efficiency and combustor performance is considered in the article.

**Key words:** coal, ash content, basic and acid oxides, ash-fusion temperature, slagging, sediments in combustors.

**Lebedev I.F., Matveev A.I., Filippov V.E.**

*Technological Tests Pneumoseparatora PS-2000 as Part of a Modular Mobile Ore Treatment Plant (MMOTP) Under Conditions of Low Temperatures*

Technological testing equipment modular mobile settings (MMOTP) in particular pneumoseparatora, in freezing temperatures and high initial moisture on the field “Sentachan” set reasonable temperature ranges effectively pneumoseparatora.

**Key words:** pneumoseparator, air enrichment, a negative temperature.

**Matveev A.I., Leov E.S., Filippov V.E.**

*Study of the Influence of Cryogenic Training Ore Depending on Humidity (Ice Content) on the Efficiency of Crushing Ore, Carried out in a Crusher DCD-300, a Decrease of the Quality of Fragmentation with Increasing Moisture Content in the Ore-Zero Temperatures*

Results on the effect of cryogenic, preparation of ore, depending on the humidity (ice content) on the efficiency of crushing ore, carried out in a crusher DCD-300, a decrease of the quality of fragmentation with increasing moisture content in the ore-zeros temperatures.

**Key words:** crushing, temperature, humidity ore, size distribution.

**Mesyats S.P., Ostapenko S.P.**

*Investigation of Stockpiled Wastes State Using Thermodynamical Modeling with Biogeobarrier for Mineral Raw Materials Conservation*

There has been investigated the chemical weathering of ore dressing wastes after apatite-nepheline ore processing using thermodynamical method with and without biogeobarrier used.

**Key words:** mining-induced mineral raw materials, ore dressing wastes, chemical weathering.
Orehova N.N., Sabanova M.N., Zavaruhina E.A. **ZINC EXTRACTION**

PECULIARITIES BY FLOTATION OF ORE DEPOSIT «UBILEINOE»

Chief task selectivity rise of copper-zinc ore division process, it is topical problem at the present time. Improvement of technology copper-zinc deposit «Ubileinoe» extraction and parameters search, improvement of copper concentrate quality and zinc waste diminution provided, research of conformity to ore flotation with change of parameters: milling fineness, alkalinity of pulp, collector and depressor discharge.

Key words: flotation, copper-zinc ore, extraction, copper, zinc, division, selection.

Osipov D.A., Filippov V.E. **EXPERIMENTAL STUDY OF DEFORMATION OF THE PARTICLES IN THE MALLEABLE TS TROBEZHNOY MILL TSMVU-800**

This article presents the results of studies of fracture of geomaterials, particularly malleable particles in a centrifugal mill, counter strike TSMVU-800 with the use of lead bullets.

Key words: Crushing, disclosure, gold, ball mill, markers.

Salomatova S.I., Matveev A.I. **SEPARATION OF FINE MINERAL PARTICLES BY FLOTATION ON THE SURFACE OF A ROTATING FLUID**

The results of comparative tests of the flotation of real gold ore dressing products with the use of centrifugal flotation concentrate with a peripheral discharge.

Key words: mineral particles, surface water, rotating fluid, the centrifugal force, concentrate content.

Tedeev M.N. **ORE BODY RANKING BY MINING PARAMETERS WITH AIM AT THE UNDERGROUND BLOCK LEACHING APPLICABILITY ESTIMATE**

The author has searched for scientific and procedural principles to support implementation of underground block leaching in an ore body under extraction using two different stopping methods.

Key words: ore body, rock mass, payable ore.

Fedoseev S.M., Slepcova E.S., Matveev A.I. **COMPARATIVE ANALYSIS OF MAGNETIC LOCKS WITH DIFFERENT CONFIGURATIONS OF LINES OF FORCE FOR THE ENRICHMENT OF GOLD**

The comparative analysis of the efficiency of enrichment for improved magnetic gateway IGDS RAS using the formula of Hancock-Luik.

Key words: gateway, retraction coating, the magnetic field, magnetic minerals, small gold, thin gold, recovery efficiency.

**Physics of rocks and processes**

Malsky K.S. **METHODICAL OUTLINES FOR THE ANALYSIS OF GEODYNAMIC PROCESSES IN ROCK MASS USING VIBRATION-MEASURING APPARATUS**

The article is devoted to studying geodynamic processes in different areas in rocks using vibration-measuring apparatus.

Key words: vibration, vibration-measuring apparatus, calibrators, vibration level, check measurements, information acquisition, mechanical stress.

Mining machinery, equipment and transport

Sukmanov A.I., Zotov V.V., Kubrin S.S. **DEVELOPMENT OF THE METHOD OF THE MINING COAL-FACE MACHINES EVALUATION**

This paper describes a method of the mining coal-face machines evaluation based on the criteria that characterize the work of the main components, in order to prevent equipment failures.

Key words: mining equipment, equipment failure, monitoring.

Explosive works

Volchenko G.N. **INFLUENCE OF THE INDUCED AND GRAVITATION-TECTONIC STRESSES ON THE RESULTS OF ROCK FRAGMENTATION BY BLASTING**

Improvement of blasting efficiency in the nonuniformly stressed ore bodies exposed to coupled influence of the in situ gravitation-tectonic stresses and the abutment pressure-induced stresses is possible through implementation of low-energy rock failure mechanisms.

Key words: ore block, stresses, blasting schemes, tension zone, failure, caved rocks.

Klishin I.V. **SHORT-DELAY BLASTING SCHEMES AND DELAY INTERVALS IN STONE OPEN PIT MINING**

For quality fragmentation and blasthole cutting elimination, the author has substantiated optimized calculation-and-trial parameters of drilling-and-blasting.

Key words: open pit, rock mass, short-delay blasting schemes, explosive charge, detonator, delay interval, line of least resistance.

Downhole technology

Akelyan N.S., Beketov S.B. **RISK ANALYSIS IN THE IMPLEMENTATION OF GEOLOGICAL AND TECHNICAL MEASURES IN THE PERFORMANCE OF OIL AND GAS WELLS**
The article deals with risks associated with oil and gas projects and in particular the implementation of geological and technical measures for improving the productivity of oil and gas wells, is an example of risk assessment by building predictive models.

**Economy and ecology of nature management**

**Aleksandrov T.N., Prokhorov K.V.** COMPLEX TREATMENT OF ASH-DROSS MATERIAL OF POWER-STATION LIKE A SUPPLY FACTOR OF ENVIRONMENTAL SAFETY

Treatment of ash-dross material of power-station like aspect of environmental safety is researched. New object – anthropogenic bed silts are viewed. Intensification methods of extraction useful components are developed.

Key words: environmental safety, treatment, ash-dross material, magnetic concentrate.

**Ivko V.R.** STUDIES OF FOREST PRODUCTIVITY IN THE AREA OF MANY-YEARS RECLAMATION OF CEMENTED LIMESTONE QUARRIES OF THE SAVINSKOE QUARRY MANAGEMENT LTD WITHIN THE EUROCEMENT GROUP

The rise in the pine productivity has been determined in the areas of the carbonate rock quarry reclamation relative to the pine natural vegetation conditions.

Key words: forest recultivation of the land plot, mining technogenesis.

**Petrova T.A., Korelsky D.S.** DEVELOPMENT OF A METHOD TO REDUCE HAZARD GENERATED BY MINING AND PROCESSING WASTE PILES

The mining and processing waste ecological impact is evaluated, approaches to development of a procedure of integrated ecological monitoring and quantification of the waste-generated environmental effect are proposed, and the waste storage conservation method is developed.

Key words: mining and processing waste piles, monitoring, conservation method.


Given the lack of media saturation parameter model implemented in the course of solving some inverse problems for specific periods of changing hydrodynamic conditions.

Key words: groundwater, mathematical model, elimination of the mine pollution.

**Economy, management and planning**

**Volkovsky G.B., Granin I.V.** AGGLOMERATED COAL (HOT BRIQUETTES) PRODUCTION AND CONSUMPTION EFFICIENCY IN THE PUBLIC SERVICES

The authors discuss the assessment system for the briquette coal production and consumption efficiency, determine capital inputs and operating costs per production unit, and, finally, fix profit, payback period, level of profitability and the practicality of the briquette coal utilization.

Key words: coal as fuel, fuel resources, hot briquetting, hand preparation.

**Molev M.D., Molev A.M.** FUNCTIONAL AND COST ANALYSIS APPROACH TO THE BUSINESS MANAGEMENT DEVELOPMENT

The article considers business management development based on the functional and cost analysis and expounds the analysis procedure.

Key words: creative stage, management process, functional and cost analysis.

**Popov P.V., Kondratskiy A.A., Kornushkin G.A.** FORMS AND METHODS OF RUSSIAN COMPANIES INVESTING FOR GROWTH OF CAPITALIZATION

The article describes the main aspects of the securities in global financial markets from the perspective of classical portfolio theory. Investigated the most important aspects related changes in values of shares.

Key words: NIKKEI, FOREX, indices, shares, funds, portfolio.

**Popov P.V., Kondratskiy A.A., Kornushkin G.A.** CRITERION OPTIMIZATION OF RESOURCE INVESTMENT COMPANY BASED RESOURCE

The article describes the main aspects of the industry, taking into account limitations of existing models and optimization techniques dynamics of industrial enterprise as a whole.

Key words: the project, an enterprise performance model, the vector, the period.

**Popov P.V., Kondratskiy A.A., Kornushkin G.A.** APPLYING THE CRITERION OF DISTRIBUTION OF RETURNS IN INVESTMENT

The article describes the main aspects of the application of mathematical models to calculate the value of the assets in a variety of payment periods.

Key words: Shares, profitability, Gompertz, asymmetry, excess.

**Rodnova I.S.** GENERATION OF BUSINESS EXPENDITURES HIERARCHY

The article analyzes a business entity as a system that consumes and converts energy in the form of resources, describes expenditures that govern the output prime cost, and exemplify the business expenditures hierarchy generation.

Key words: expenditures, hierarchy, direct and embodied labor, dissipative system.
**Sapozhnikova L.Y.**  CRISIS AND COKING COAL OF KUZBASS

The influence of crisis on the competitiveness of coal of Kuzbass. Investigated factors reduce competitiveness and proposed measures to improve the competitiveness of coal of Kuzbass

**Key words:** competitiveness, coal market, price, cost.

**Selin I.V., Tsukerman V.A.**  MECHANISM OF COST MANAGEMENT AT A MINING-CHEMICAL ENTERPRISE

The work considers cost reduction at a big mining-chemical enterprise at an active participation of structural subdivisions, brigades and departments as well as various personnel categories.

**Key words:** mining-chemical enterprises, cost accounting, cost calculation, controlling, budgeting.

**Information technology and management**

**Kuznetsov Yu.N., Kiselev A.M.**  TO THE QUESTION OF AUTOMATED DESIGN OF TECHNOLOGICAL SCHEMES FOR THE TRANSITION OF GEOLOGICAL VIOLATIONS WITHIN THE BORDERS OF THE EXCAVATION SITES

This paper examined and coded for a further description of the formulas, the main and auxiliary classification geological and technological signs of movement disorders.

**Key words:** geological violation, the coal seam, parameter violations.

**Yudina M.G., Timasheff E.N.**  IMPROVEMENT OF PROJECT TRAINING ON THE EXAMPLE OF THE COURSE PROJECT ON «APPLIED MECHANICS»

The article discusses some aspects of the improvement of the project activities in higher education. As educational technologies reviewed the process of the educational design of the discipline of «Applied mechanics».

**Key words:** project activities, pedagogical technology, design objectives, design problems, possibilities of CAD system, a software module educational system.

**Works of young scientists and students**

**Vereshchagin V.S.**  TO THE ASSESSMENT OF THE SUSTAINABILITY OF THE ROCK MASS IN THE VICINITY OF EXTENSIVE MINING DEVELOPMENT, FIXED ANCHORS

Analysis of the methods used for calculating the loading to the protecting constructions has been fulfilled. The directions of their perfection based on the modern analytical and numerical methods have been suggested.

**Key words:** rock, the conditional zone of inelastic deformations.

**Laritcheva I.S.**  DIRECTIONS OF DEVELOPMENT OF THE ECOSYSTEM OF THE CITY IN MODERN CONDITIONS

In offered article problems of ecosystem at the city level are considered, the basic components of a city ecosystem are defined.

**Key words:** environment, use of natural resources, the architectural-planning activities.

**Krivoruchko E.V.**  IMPACT OF THE GLOBAL FINANCIAL CRISIS ON THE GOLD MARKET: INFLUENCE MODELING

Based on the analysis of the global financial crisis impact on the behavior of consumers, investors and authorities, scenarios of the crisis influence on the gold market have been modeled.

**Key words:** global financial crisis, gold market, recession.

**SUEK news**
Alexeev A.M. THE SENIOR TEACHER OF CHAIR OF UNDERGROUND MINING OF MINERAL DEPOSITS ................................................................................................... 382
It were done researches on definition of the sizes of zone of cracks at explosion works on Aykhal mine.

Key words: zone of cracks, explosion works, artificial pillars, tension.

Dmitriev A.A., Kolekko I.I. CYANIDE METHOD OF EXTRACTION A FINE GOLD FROM BLACK SAND TAILING OF PLACER MINING.................................................... 389
The reducing of fine gold in tailing is considered on placer mineral processing. Hydrometallurgical cyanide treatment is suggested for serving a gold bearing black sand. The process of percolation of cyanide solution was analyzed.

Key words: mineral processing, gold, fine gold, loss of gold, placer deposit, tailing, black sand, cyanide, leaching.

Kolganov V.F., Aksheev A.N., Zarovyuyev B.N. OPTIMIZATION OF THE CAREER PARAMETERS “BOTUOBINSKAYA” PIPE .............................................................. 393
Background information is presented for the formation of the ore body block model of “Botuobinskaia” pipe. On the basis of technical and economic indicators the optimal end-outline career field pipe “Botuobinskaya” were calculated, and corresponds to a depth of 580 m (elevation - 330 m).

Key words: deep careers, engineering, block model, geometric analysis, technical and economic indicators, best career path, stages of mining deposits.

Kurilko A.S., Popov V.I., Shubin G.V., Hikiforova A.D. PREDICTIVE ASSESSMENT OF THE DYNAMICS OF FRAGMENTED ROCK DESALINATION MINE SAFETY CUSHION “UDACHNIY”...................................................................................... 401
The calculation of flushing version of crushed rock mine safety cushion. The study shows that for seven summers a natural-governmental layer of sediment is washed completely protective pad to a depth of fifteen meters. This can lead to freezing of rocks cushion and reduce its mobility.

Key words: washing, diffusion, rocks.

Markov V.S., Labutin V.N. PERSPECTIVE USE DRILLING AND BLASTING PENETRATION UNDERGROUND MINES IN CONDITIONS POLAR REGION..................... 407
Based on the results experimental research of the combined process of destruction (spalling and cutting stroke) permanently frozen coarse rocks.

Key word: alluvial deposits, permafrost coarse rock; roadheader with the combined executive body, the scheme of destruction.

Done to study the depth of thawing pit wall “Botuobinskii” of heat insulation and albedo for different angles of slope and orientation of the pit wall

Key words: temperature field, permafrost rocks, the phase change, solar radiation, heat transfer.

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Kuznetsov Yu.N., Kiselev A.M. THE BASIC KINDS OF RISKS ARISING IN THE PROJECT DECISION-MAKING IN THE TRANSITION ZONES OF GEOLOGICAL DEFORMATION OF COAL SEAMS .......................................................................................................... 89