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Key words: technology, treatment works, protective pillars, blocks, a system developed-processing.


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Key words: placer, analytical method, gold, deposits, forecast resources, exploration, exploitation.

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Key words: qualitative and quantitative parameters, coal transportation, organisational and technological scheme.

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Key words: external, dump, form, way, motor transport, placing of rock, simulation, energetic characteristics, dynamics.

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Key words: hard ore, dispersion, deposit processing, cyanidation, autoclave, oxidation, evaporation, flotation, pulp, liner, extracting useful component.

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Key words: fire protection, fire resistance, air spray, fire safety, fire fighting.

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Key words: gold deposit, heap leaching at low temperatures, permafrost.

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Key words: modeling, leaching, thiosulphate, gold, batch.

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Key words: flotation, sulphides, sphalerite, pyrite, complexes.


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Key words: dispersion, flotation, carboxyl collectors, thermostatic modifier, carbonate-fluorite ores.

**Kozlov VA.** PROCESSES DEZATURATION IN DEHYDRATION OF COAL SLUDGE FILTERING CENTRIFUGES

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Key words: dehydration of coal, centrifugal force, dezaturation.
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Key words: tailing dump, ecosystem, useful components.

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Key words: air temperature, shaft, depth, oscillations, amplitude.

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Key words: coal, quality control, technological chain, South Yakutia.

Kallistova T.V. THE TECTONIC STRUCTURE IMPACT OF THE ARRAY ON ITS DEFORMATION PROPERTIES OF ENGINEERING BUILDING FOUNDATIONS

This article is an example of a problem solution of identifying the causes of bridge deformation associated with the lack of comprehensive engineering geological and geophysical studies on the design phase when in this case they founding the best place for buildings. Often objects state in the active zone of tectonic faults. Activities aimed for consolidating and restoring the impacts of geodynamic manifestations entails not only the economic costs but also it is a risk zone for objects using. Complex geophysical methods and geodetic parameters allow to solve the problem of choosing the most favourable place without any significant inhomogeneities and dangerous tectonic faults.

Key words: the complex of geophysical methods.

n practice, nowadays the lower limit of the sorting classes of the uranium ores enrichment with the help of automatic methods is 25 mm. The reduction of the limit of the sorting classes until the point +15 mm in the case of the separation with the help of radio metrical method has been laying out because of the insufficient sensitivity of the radio metrical devices for the class range –25+15 mm. For the determination of the possible technical parameters of the uranium ores enrichment of low classes according to the sensitivity of the devices there has been created an experimental stand on the bases of the ore separation set RSM–10.

This set consists of the separator UAS–50. The separator has been equipped with the measuring unit of a “relay” type with five detection units (DU) with scintillation crystals NaI(Tl) with the dimensions 63x63 mm for the achievement of the required sensitivity at the root allocation stage. On the example of the ores with the different enrichment rates in the fields of Elkonsky district there has been carried out the experimental separation of the class –25+15 mm with the assessment of the process parameters. As the result there has been determined, the necessary number of the detection units at the root allocation stage – three DU are for free-milling and mid-milling ores, four DU are for hard-milling ores.

Key words: uranium ores, Elkonsky district, sensitivity, a detection block, separation, a radio metrical method.

Mirenkov V.E., Krasnovsky A.A. DEFORMATION OF A CRACK-WEAKENED ROCK BLOCK

The article discusses a problem about wedging of a rock block with a crack that runs onto the boundary of the rock block. The authors derive singular integral equations that connect normal and shears stresses on elongation of a cut, simulating the crack, and discuss the numerical calculation results.

Key words: rock block, crack, surfaces, stresses, displacements, singular equations, boundary, contact, wedging.

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Key words: ice-rock filling, deforming of ice-rock material, relative offsets, workability.

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Key words: cross-section of a tunnel, measurement well, hydraulic fracturing, principal stresses, set of equations.


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Key words: georadar, permafrost, seasonally thaw layer, defrost.
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Key words: massif response, slow deformation waves, seismic mine catalogue, analyze of observed data, phase diagrams.

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Key words: massif response, slow deformation waves, seismic mine catalogue, analyze of observed data, phase diagrams.

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Key words: mining, local area network, database, computer technologies.

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Key words: sorption and desorption, deep sorbed in the coal, thermal coal, fire and explosions in coal mines.

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Key words: coal mining, aerodynamic modes, the program complex «Geomechanics», oxidative process.

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Key words: all-terrain vehicle, tracked mover, rubber track, metal hinged track, four-tracked.

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Key words: centrifugal mill of vertical type, grinding, dolomite, modes of testing.
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Key words: seismic waves, planimetric detonation.

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Key words: innovative entrepreneurship, government regulation, R & D, innovation development, innovation.


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Key words: classification of solid mineral resources and mineral reserves, international standards for public reporting, the NAEN Code.

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Key words: innovative entrepreneurship, innovation, entrepreneurship, innovation system, innovative products.

Ecology

Alexandrov A.V, Lipina L.N. TECHNOCENOUS INFLUENCE ON THE ATMOSPHERE IN OPERATIVE RANGE OF THE MINING ENTERPRISE........... 373

Algorithm for the evaluation of air pollution in the area of the mining companies using GIS technologies is given in the article, implementation of the algorithm is shown by the example of one of the mining enterprises is shown. Regularities for the forecast of dust distribution caused by area sources (tailings) are revealed. Zoning of area of influence of mining enterprise according complex index of atmosphere pollution (KIZA), the index is an integral characteristic.

Key words: assessment of pollution, the atmosphere, the GIS-technology, mining enterprise, a comprehensive index.

Popov E.M. TO THE QUESTION ON EKOLOGO-ECONOMIC CONSEQUENCES OF DEVELOPMENT OF THE TECHNOLOGICAL INDUSTRY BASED ON APPLICATION OF THE MOST WIDESPREAD NANOPART........... 380

Nanotechnology have given to the world many opening and inventions. Their application will allow to raise efficiency of economic activities of the person. But there are not enough the researches reflecting consequences of influence nanopart on the person. To reduce these blanks given article also is devoted attempts.

Key words: nanotechnology, nanotubes, air pollution.

Sokolov E.M., Sheinkman L.E., Dergunov D.V. MINIMIZATION OF ABATEMENT COSTS WATER BODIES IN THE ELIMINATION OF PHENOL MINING OF ENTERPRISES .................................................................................. 384

We consider the problem of finding the optimal level of consumption of specific chemical ingredients (hydrogen peroxide $\text{H}_2\text{O}_2$ and iron chloride (III) $\text{FeCl}_3$) when the minimum level of the specific unit cost of physical-chemical treatment of mine water from phenolic compounds, based on advanced oxidation processes.

Key words: mine water, phenol, ultraviolet radiation, hydrogen peroxide, chloride iron (III), optimal control, economic costs.

Mathematical modeling

Bryukhanov A.M., Koptikov V.P., Yuzhanin I.A., Evdokimova V.P. EFFICIENCY ASSESSMENT OF ADVANCE OVERWORKING OF SEAMS LIABLE TO GAS DYNAMIC PHENOMENA.......................................................... 391
Basic theses and mathematical models are presented for a statistical method of determining efficiency of advance overworking of seams liable to gas dynamic phenomena. Generalized estimation of the models is given in terms of geomechanical and physical processes they describe, as well as technical and economic assessment of the method.

Key words: protective overworking, gas dynamic phenomena, mathematical model, geomechanical and physical processes, assessment.

Tsvetkov A.B., Frjanov V.N. SYNTHESIS OF MODEL OF THE STRATIFIED MASSIF TAKING INTO ACCOUNT INTERACTION OF STRATUMS ON CONTACTS ..............................................................................................................

In paper the method of synthesis of a mathematical model of the stratified hills to which structural parts boundary value problems of the theory of elasticity with different physicomechanical parametres are put in correspondence is offered. Boundary value problems are synthesised in a mathematical model by means of a method of finite differences. The concept set forth above is implemented in the form of a complex of programs. Outcomes of numerical solution correspond to known analytical solution for an is horizontal-layered massif.

Key words: mathematical model, rock massif, coal stratum, deads, finite difference method, theory of elasticity selvage problem, synthesis, gravitation.

Higher mining education

Valuev A.M. INTELLIGENT MAN-MACHINE DIALOG AS A CONCEPTUAL FRAMEWORK FOR SPECIALIZED SOFTWARE PACKAGES..............................

The following principal features are proposed for intelligent implementation of interactive regime in systems for production processes modeling: the use of “external” model expressing a specialist viewpoint as well as optimization methods oriented to the entire model class and lingual means for directed search problems description. Some examples of this direction of development for surface mining modeling are presented.

Key words: intelligent software package, man-machine dialog, modeling, surface mining.

Preprints

Oganesyan N.K. DEVELOPMENT OF SCIENTIFIC APPROACHES TO A SUBSTANTIATION OF THE DESIGN DECISIONS AND FORMS OF DEVELOPMENT OF THE TECHNOLOGICAL SYSTEMS OF COAL MINES..............

Presented system of methodical recommendations, presented in the form of the methods of realization of the conceptual approach to the selection and justification of strategies for the development of technological systems of coal mines in the competitive conditions, which are the basis of increase of their technological and economic efficiency. Given the results of the implementation of the algorithm integrated assessment of the technological systems of coal mines, based on the principles of qualimetry and formation of the integral-detailed prototype of the coal companies with the target direction of development and realization of the industrial-technological aspects of the strategies and forms of development of mine Fund.

Key words: integral index, summarizing function, coefficient of importance, mine Fund.

Oganesyan N.K. ASSESSMENT THRESHOLDS AND LIMIT POINTS IN THE DEVELOPMENT OF TECHNOLOGIES OF A COAL MINE .........................

Set out the guidelines identify the stage of the need for changes in the technological scheme, which is proposed to be identified with the help of the evaluation thresholds and limit points in the development of the technology of mines (the
method of the critical limit point). Considered the major design decisions on reconstruction of technological system in Октябрьская ОЖС «SUEK-Kuzbass», which according to the results of the assessment of the status of mine Fund of Kuzbass requires forms of development in the form of reconstruction.

Key words: marginal point, the marginal income, coal mine.

Savenok O.V. DEVELOPMENT PRINCIPLE, METHODS AND TECHNOLOGY OF RESOURCES SAVING FOR OIL PRODUCING WITH PROVISION FOR COMPLEX FACTOR

For hard extraction oils resources saving has special, but in row of the events solving importance since production in these cases occurs under low profitability. In general sense all perspective equipment decision, methods and technologies, anyway, promote minimization a resource – natural, material, energy, financial and others. On the other hand, resources saving as independent direction in activity of the companies until has a scale of the system branch problem, and carries mainly secondary nature to questions of the production plan – a level of production, period and other. The Problem of resources saving for oil producing with complicated condition to exploitation until has a system decision. In ditto time, for present-day day is worked out some general approaches to problem of resources saving in oil and gas branch. The Problem of the production resources efficiency strategy of oil producing consists in shaping the system approach to collections factor.

Key words: resources saving, passing oil gas, complex power system, gas motor, system gas cogeneration, synthetic gas, petrochemical product, syntheses of methanol.

Deposited manuscripts