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Key words: an adaptive frictional clutch, the bifunctional actuation device, exactitude of operation, load ability.

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Key words: oil shale, thermal treatment, kerogen conversion, liquid hydrocarbons.

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Key words: diamond processing method, surface roughness nanometer level.

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Key words: durability, shnekovy boring chisels, chemical heat treatment, hardening, hardness.

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Key words: elongated borehole charge, blastability of rocks, stemming size, blasted rock.

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Key words: expert method, MES (the method of evolutionary agreed solutions), iteration, expert evaluation, optimization of the process, competence, forecasting.

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Key words: procedure, capital costs, mining prime cost, uniform production blocks.

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- Sokolov I.V., Antipin Yu.G., Smirnov A.A., Nikitin I.V., Baranovsky K.V.** SELECTION OF A MINEFIELD OPENING-UP SCENARIO IN COMBINED MINING BASED ON ECONOMIC AND MATHEMATICAL MODELING..... **357**
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- Shurygin D.N.** DETERMINATION OF OPTIMAL SEMIVARIOGRAM MODEL ON THE BASIS OF THE METHOD OF THE GROUP ACCOUNT OF ARGUMENTS..... **371**
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Key words: geostatistics, variogram, model of variogram.
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- Zaurbekov S.A.** DETERMINISTIC GUIDED-DRILLING TECHNOLOGY TEST **374**
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Key words: hole drilling, geological conditions, flattening, drill hole path stabilization.
- Metallurgy**
- Chernykh S.V., Menushenkov V.P., Skorodumov S.V., Zhukov D.G., Vidmanov I.M.** EFFECT OF INTENSIVE PLASTIC TORSION ON THE STRUCTURE AND MAGNETIC PROPERTIES OF CAST ALLOY $Nd_{9,5}Fe_{84,5}B_6$ **381**
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affected specimen contains α -Fe, small amount of $Nd_2Fe_{14}B$ and amorphous material amount of which depends on degree of strain. Next annealing of the deformed specimen causes solidification of the amorphous material, and nano-composite structure $Nd_2Fe_{14}B/\alpha$ -Fe is generated as a result. Maximum coercive force and magnetic energy are reached on the specimen exposed to deformation at a rate of 20 hammer cycles on Bridgman anvil ($H_c = 4.5$ kOe and $(BH)_{max} = 166$ kJ/m³).

Key words: NdFeB; Intensive plastic torsion; Structure; Nano-composite $Nd_2Fe_{14}B/\alpha$ -Fe; Coercive force.

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Gulyaev E.S. DESCRIPTION OF GEOMETRIC PRECISION OF THREAD TRACER USING GENERALIZED COORDINATES..... **386**

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Key words: diamond market, risk management, investment project, risk assessment model.

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