

Contents

Vol. 54, No. 1, 2018

A simultaneous English language translation of this journal is available from Pleiades Publishing, Ltd.
Distributed worldwide by Springer. *Journal of Mining Science* ISSN 1062-7391

Geomechanics

Effect of Pendulum Waves from Earthquakes on Gas-Dynamic Behavior of Coal Seams in Kuzbass

*V. N. Oparin, V. V. Adushkin, T. A. Kiryaeva, V. P. Potapov,
A. A. Cherepov, V. G. Tyukhrin, and A. V. Glumov* 1

Stress–Strain State of Rock Mass in the Zone of Tectonic Fractures in the Korobkov Iron Ore Deposit

*G. G. Kocharyan, S. R. Zolotukhin, E. V. Kalinin, L. L. Panas'yan,
and V. G. Spungin* 13

Using the Kaiser Effect in Composites for Stressed Rock Mass Control

P. V. Nikolenko, V. L. Shkuratnik, M. D. Chepur, and A. E. Koshelev 21

Relationship between Mine Working Cross Section and Damaged Rock Zone

V. E. Mirenkov 27

State of Access Roadways under Selvedges at Stratified Deposits

Yu. G. Feklistov and A. D. Golotvin† 34

Systems of Support for Junctions of Mine Shafts and Roadways in Salt Rocks

D. N. Alymenko, V. A. Solov'ev, V. N. Aptukov, and E. K. Kotlyar 40

Rock Failure

Effect of Geological and Geophysical Characteristics of Complex-Structure Ferruginous Quartzite Ore Bodies on Blasting and Processing Performance

V. N. Tyupin and V. N. Anisimov 48

Science of Mining Machines

Influence of DTH Hammer Impact Energy on Drilling-with-Casing System Performance

V. V. Timonin, S. E. Alekseev, V. N. Karpov, and E. M. Chernienkov 53

Processes in Linear Pulse Electromagnetic Motors of Downhole Vibration Generators

B. F. Simonov, A. O. Kordubailo, V. Yu. Neiman, and A. E. Polishchuk 61

Optimizing Cutting Width and Capacity of Shearer Loaders in Longwall Mining of Gently Dipping Coal Seams

A. A. Ordin and A. M. Nikol'sky 69

Mineral Mining Technology

Validation of Slopes of Access Roads in Deep Open Pit Mining

G. G. Sakantsev, V. I. Cheskidov, I. V. Zyryanov, and A. N. Akishev 77

Experimental Investigation of Underground Mining of High-Grade Quarts in Kyshtym Mine

*I. V. Sokolov, A. A. Smirnov, Yu. G. Antipin, K. V. Baranovsky, I. V. Nikitin,
and A. A. Rozhkov* 85

Well Production Enhancement Using an Underpump Stem Subjected to Load

A. M. Svalov 94

Mine Aerogasdynamics

Mine Ventilation Network Optimization Based on Airflow Asymptotic Calculation Method

Li Bing-Rui, Inoue Masahiro, and Shen Shi-Bao

99

Role of Gas Ventilation Pressure on the Stability of Airway Airflow in Underground Ventilation

Aitao Zhou and Kai Wang

111

Mineral Dressing

Application of New Composition of Reagents in Flotation of Silver-Bearing Tin Ore

T. N. Matveeva, V. A. Chanturia, A. O. Gapchich, and V. V. Getman

120

Combination Methods of Hematite–Braunite Ore Processing

M. A. Gurman and L. I. Shcherbak

126

Sulphuric-Acid Leaching of Ural Oxidized Nickel Ore with Sodium Sulfite and Fluoride Additives

A. M. Klyushnikov

141

Mining Ecology and Exploitation of the Earth's Bowels

Multi-Purpose Use of Caustobioliths of Carbonic Series Based on Innovative Coal Chemistry Technologies in the Far East of Russia

*A. P. Sorokin, I. F. Savchenko, L. P. Noskova, V. M. Kuz'minykh,
A. A. Konyushok, V. S. Rimkevich, and V. V. Krapiventsev*

147

Alunite Ore Development in the Amur Region

G. F. Sklyarova and Yu. A. Arkhipova

158

Economic Problems and Environmental Challenges in Ore Mining in Azerbaijan

Z. J. Efendieva and Ch. M. Khalifazade

166

Monitoring Systems in Mining

Multi-Functional Mine Shaft Alarm System

*S. K. Golushko, G. P. Cheido, R. A. Shakirov, S. R. Shakirov,
and D. O. Shevchenko*

173

Erratum

Erratum to “Energy-Based Volumetric Rock Destruction Criterion in the Rotary–Percussion Drilling Technology Improvement” [Journal of Mining Science, No. 6, Vol. 53 (2017)]

180
