

Contents

Part I Resources of the Coal Industry and Their Features

Technological Progress Having Impact on Coal Demand Growth	3
V.S. Litvinenko	
New Approaches to Creation of Low-temperature Compositions for Prevention of Coal Congealing.	17
Gushchin Alexey Alexeyevich, Ermakov Anatoliy Yurjevich and Miroshnikov Alexander Mikhailovich	
Various potential uses of coal from Apsatsky coalfield	23
Vladimir Artemiev and Sergey Silyutin	
Combined Chemical-beneficiation Processes of Valuable Components Extraction from Coal Burning Wastes	29
Valentin A. Chanturia, Anatoly A. Lavrinenko and Anatoly P. Sorokin	
Coal in the economy of Russia.	35
G.L. Krasniansky	
Desulphurization of high-sulfur coking coal by microwave irradiation assisted with alkali solution	41
Tao Xiuxiang, Yang Yancheng and Xu Ning	
Country report Mongolia	47
Helga Wittmers and Bayarmagnai Tsedenbaljir	
Indonesia economic output and employment impact of low rank coal utilization: An input output analysis.	53
Tri Winarno and C. Drebenstedt	
From Mining to Refining-Contribution of selective Mining to Value Chain optimisation	59
C. Drebenstedt	

Status of Coal Mining and Coal Preparation in Poland	67
Wiesław S. Blaschke, Józef Szafarczyk, Ireneusz Baic, Zofia Blaschke and Lidia Gawlik	
Further Developments in Washability Prediction Using CGA	73
B. Atkinson and A. Swanson	
New type of noble metal mineralization in the graphite formation of the Khanka terrane, Russian Southeast	79
A.I. Khanchuk	
 Part II Coal Preparation Plants Design	
Design of coal preparation plants: problems and solutions	87
Antipenko Lina Alexandrovna and Ermakov Anatoliy Yurievich	
Implementation of modern coal processing solutions in the project of “Elegest” coal preparation plant	95
Vadim A. Kozlov, Elena N. Chernysheva and Mikhail F. Pikalov	
Sludge Formation Coefficient for a Given Process Flow of a Coal Preparation Plant.	101
Aleksandr Danilovich Polulyakh, Andrey Sergeevich Buchatskiy and Sergey Aleksandrovich Vyrodov	
Criteria of Engineering Efficiency of Thickening Flowcharts	107
A.V. Bauman	
Sandwich Belt High Angle Conveyors Coal Mine to Prep Plant and Beyond–2016	111
Joseph A. Dos Santos	
The Role of Fine Coal Classification on Fine Coal Cleaning Circuit Performance.	119
Baojie Zhang and Paul Brodzik	
Technologies in Use for the Processing of Fine Coal	129
W. Erasmus, F. Bornman and J. de Korte	
Emergency Braking of Fast Running Coal Handling Gantry Hoists . . .	135
Stefan Vöth	
HiBar Steam Pressure Filtration of Coal Ultrafines-New Developments and Results	141
J. Hahn, R. Bott and T. Langeloh	
Coal Preparation Plant Design Requirements for 2050	147
C.J. Clarkson and C. Hillard	
Establishment and Operation of the Ravensworth North CHPP	155
Peter Walsh, Brad Garraway, Phillip Enderby and Andrew Swanson	

Coal Beneficiation: Initiatives Taken by Mahanadi Coalfields Limited (a Subsidiary of Coal India Limited)	163
P.K. Mishra, O.P. Mishra and K. Kusuma Kumari	
Dense Medium Baths and Drum Separators a Re-evaluation of Their Role in Modern Coal Preparation Plants	169
David Woodruff	
Development Trend of China's Coal Preparation Industry in Critical Process and Equipment.	175
Li Minghui, Li Zhiyong, Xu Sheng and Yao Kaixuan	
Part III Use of Quality Control, Automation and Computer Technologies in Coal Processing	
Models and Control Algorithms of Coal Washing Processes	183
K.G. Venger, L.P. Myshlyaev, S.A. Fairushin, I.V. Dostovalova, G.P. Sazykin and S.F. Kisilev	
Analytical Representation of Washability Curves with Application in the Simulation of Gravity Concentration Methods	191
Ivan Korolev and Vladimir I. Udovitskiy	
Elemental Management System (ElMan) Based on TNC + NIS Technology for on-Line Coal Analysis and Process Control	197
Tyurnikov Boris and Denisov Sergey	
Managing Efficiency from a Coal Mine/Preparation Plant Complex . . .	205
Michael Evans and Zavalishin Dmitry	
Probing the Preparation of Low-Rank Lignite and Non-Caking Coal	223
Zhen Zhang	
The Economic Impact Analysis of Coal Quality Management in China.	229
Xie Wenbo	
Optimal Utilization of Dense Medium Cyclones	235
E. Bekker	
The Importance of Coal Particle Characterization in Setting up a Dem Model for the Flow of Fine Coal Through a Hopper.	243
N. Naudé	
Simulation of washability and liberation information from photographs	249
H.C. Dorland, Q.P. Campbell, M. Le Roux, K. McMillan, M.I. Dorland, P. Erasmus and N. Wagner	

Online Washability: Comparison of Dual Parameter and Triple Parameter Analysis	255
Jan V.P. Bachmann, Helge Wurst, Michael Cipold and Claus Bachmann	
Real-world model based validation of blending bed simulation techniques	261
Michael P. Cipold, Pradyumn Kumar Shukla, Christian Autenrieth, Marvin Baral and Lukas Lihotzki	
Rapid Coal Analysis with the Online X-ray Elemental Analyzer OXEA®	267
Albert Klein, Sven Reuter and Andy Zein	
Technological Management in Coal Preparation on the Basis of Information Technologies	273
P.I. Pilov	
System Optimal Control of the Ball mill for the Preparation of the Pulverized Coal Mixture for Forced Draft	279
E.V. Tishchenko, A.V. Sadovoy, N.T. Tishchenko and B.D. Zhigaylo	
Radiometric Control Systems for Refuse Discharge in a Jig	285
Stanisław Cierpisz, Marek Kryca and Waldemar Sobierajski	
Optical analysis of the coal on belt distribution and its use in qualitative and quantitative measurements	291
Marek Kryca, Piotr Wojtas and Artur Kozłowski	
Optimisation and Control of Dense Medium Cyclone Circuits	297
M. O'Brien, B. Firth, P. Holtham, S. Hu, N. Scott and A. Burger	
Handling Data in Coal Quality Monitoring	303
Gary Wain, Kevin Corcoran, Chris Knight and Neil Jenkinson	
Part IV Analysis, Processing and Preparation of Coal Slimes and By-Products of Coal Preparation, Coal-Mining and Combustion	
Technogenic Coal Deposits: Actual Status and Processing Prospects	311
J.B. Rubinstein and B.I. Linev	
Physical-chemical grounds of producing valuable trace elements concentrates and preventing unfavorable toxic trace elements actions on the environment while coal processing	317
M. Ya. Shpirt and S.A. Epshtein	
Zeolite Synthesis as Potential Application of Coal Fly Ash	321
O.B. Kotova, D.A. Shushkov, E.L. Kotova, Yu. S. Simakova and E.V. Popova	

Coal Utilization in Thermal Power Plants. Influence of Coal Quality on Technical-economical and Ecological Indices	327
B.F. Reutov and G.A. Ryabov	
Technology of Fly Ash Recycling at Coal-Fired Power Plants	333
V.A. Arsentyev, S.V. Dmitriev, A.O. Mezenin and Y.L. Kotova	
The Development Of A Technological Complex For Utilization Of Fine Waste Coal PP “Tugnuyskaya”.	339
V.I. Murko, V.I. Karpenok, V.T. Fedyaev and S.A. Silyutin	
The Usage Of Boilers With A Vortex Furnace For Burning Enrichment Products And Deballasting Coal	345
V.I. Murko, E.M. Puzyryov, V.I. Karpenok, V.I. Fedyaev and M. P. Baranova	
Complex processing of ash and slag wastes from coal-fired CHP plants.	351
Sergey A. Prokopev, Valentin A. Chanturiya, Mikhail L. Bolotin, Maria Ye. Shulgina and Yevgeny S. Prokopev	
Implementation of Fine Screening Technology in Fine Coal Tailing Circuits.	357
Amit Jain and Baojie Zhang	
Problem Analysis and Optimization Test for Separation Process of Coal Slime Classifying Flotation	365
Zhou wei, Zhu Jinbo and Min Fanfei	
The Progress and Review of Fine Coal Pulp-mixing Technology	371
Sun Ya-wei, Zhou An-ning and Li Zhen	
Three-Product Teetered Bed Separator—A New Design for Coal Slime Separation	377
Dongxu Fu	
Technical and economic aspects of granulation of coal	383
Lieberwirth Holger and J. Lampke	
Perspectives of Use of Technogenic Raw Materials of the Metallurgical Enterprises as Weighting Compounds of Mineral Suspensions	391
Oliinyk Tatyana Anatoliyva, Mulyavko Valery Ivanovitch, Sklyar Ljudmila Vasilivna, Yehurnov Alexander Ivanovitch and Oliinyk Maksim Olegovitch	
Prospects for Raising the Calorific Value of Composite Water-Coal Fuel	397
A.I. Yehurnov, A.S. Makarov, D.P. Savitskiy and A.Y. Lobanov	

A Study of the Beneficiation of Coal Slurry Deposits to Obtain Quality Properties Which Would Make Them Usable Commercial Energy Products	403
Aleksander Lutyński, Wiesław S. Blaschke, Jan Szpyrka and Ireneusz Baic	
Methods of Increasing the Calorific Value of Fine Coal Waste	409
Jan J. Hyncar, Piotr Pasiowiec and Barbara Tora	
Ecological and Economic Aspects of the Management of Mining Waste in TAURON Mining S.A.	415
Andrzej Fraś, Rafał Przstaś and Barbara Tora	
The Impact of Sampling Errors on the Accuracy of Mass Balance in the Coal Enrichment Process.	421
Kaletka Tomasz, Budzyń Stanisław, Olkusiński Tadeusz, Tora Barbara, Szurlej Adam and Gradoń Włodzimierz	
Ash melting behaviour with respect to VM content of coal	427
Mehmet Bilen and Sait Kizgut	
Petrographic properties with respect to VM content of coal	433
Sait Kizgut and Mehmet Bilen	
Facing the Challenges of Ultrafine Coal Recovery	439
D.G. Osborne and K.J. Walton	
Online Slurry Particle Density Meter.	445
Noel Lambert, Nicholas Cox and Rod Nicholson	
Coal Hydrophobicity and the settling behaviour of coal fines tailings	451
K.M.P. Singh, G. Udayabhanu and T. Gouricharan	
Assessment of quarry of reopened mine Čáry based on the mining right of the Slovak Republic and European Union.	457
Matej Puzder and Michaela Koščová	
Evaluation and risk estimation by business with the earth's resources	463
Michal Cehlár	
 Part V Coal Deep Processing Technologies	
Efficiency of Low-grade Coal Processing During Metal Selective Extraction	471
V. Yu. Bazhin and A.A. Pyaterneva	

Technological researches of coal mining waste with its processing and utilization to build-up production of constructional concrete in the north	477
V.N. Zemlyanskiy, I.V. Kurta and A.V. Pasyнков	
New Approaches for Coal Oxidization Propensity Estimation	483
S.A. Epshtein, E.L. Kossovich, N.N. Dobryakova and L.A. Obvintseva	
Potentially valuable microelements in coal balance reserves of JSC SUEK mining units	489
Vladimir Rashevsky, Mikhail Shpirt, Vladimir Artemiev and Sergey Silyutin	
Perspectives of Complex Development of Coal Deposits	493
Y.F. Patrakov, B.A. Anfyorov, L.V. Kuznetsova, V.I. Klishin and S.M. Nikitenko	
Development of Technology for Producing Compound Coal Binder . . .	499
E.N. Marakushina, V.K. Frizorger and E.I. Andreykov	
Complex Technology of Underground Coal Gasification and Coal-Based Methane Recovery Using Geodynamic Zoning	505
Shabarov Arkady Nikolaevich, Tsirel Sergey Vadimovich and Goncharov Evgeniy Vladimirovich	
The technology of the oil shale processing to obtain products and semi-products for the chemical and metallurgical industries	513
Kondrasheva Natalia Konstantinovna, Saltykova Svetlana Nikolaevna and Nazarenko Maxim Yurievich	
Progress of Steam Coal Clean and Efficient Jigging Technology in China	519
Xiaoyu Yu, Haibo Yu and Chunhui Yu	
The Golden Decade of the Rapid Development of China's Coal Preparation Equipment	525
Pan Yongtai, Lang Jun, Liu Wenchang and Gong Qinggang	
Preparation of High-Strength Gasified Coke Used for DRI from Low Rank Coal	531
Xingxing Qiao, Yongfa Zhang, Ying Wang, Yuqiong Zhao, Yaling Sun, Yue Dong, Jiangning Jia and Xiuli Zhao	
Efficient & Rational Utilization of Low-Rank Coal Resource by Using Dadi New Type Coal Deep Processing Technology	537
Xiangsheng Gong and Shaolei Zhou	

Novel additives obtained from low grade biomasses for coke-making	543
Xianqing Zhu, Jin Ge, Shan Tong, Yaxin Gao, Chao Wu, Chaorui Chang, Xiaoyong Zhang, Xian Li and Hong Yao	
Study of Lignite Upgrading by Using a Pulsing Air Riser	549
Haifeng Wang, Yaqun He, Yuemin Zhao, Hao Hou, Xie Weining and Wang Shuai	
Low Relative Density Processing of Fine Coal	555
GJ de Korte	
Coal Underground Liquefaction as Alternative to Natural Oil Production	561
Chuluun Enkhbold, Alexander Brodt and Enkhbold Uyanga	
Diversification of Jsc “Shubarkol Komir” Production With Obtaining Products of Coal Deep Processing	567
V.S. Korshenko, S.P. Kim, S.V. Nechipurenko, S.A. Yefremov and M.K. Nauryzbayev	
Coal Gasification and Gas Obtaining for Synthesis of Motor Fuels	573
Bolat Toleukhanuly Yermagambet, Nuraly Sultanovich Becturganov, Marat Askenovich Nabiyeu, Nurken Uteuovich Nurgaliev and Zhanar Muratbekovna Kassenova	
Production of gasoline from coal based on the stf process	579
F. Baitalow, R. Stahlschmidt, P. Seifert, R. Pardemann, B. Meyer and J. Engelmann	
Environmentally friendly energy production technology based on water-coal fuel	587
Zygmunt Kowalski, Joanna Kulczycka, Lelek Lukasz, Anita Staroń and Marcin Banach	
Sudy of the Possible Use of Producer Gas of Coal Gasification as Fuel.	593
O.A. Dubovikov, V.N. Brichkin and D.A. Loginov	
Part VI Environmental Protection	
To the question of complex use of ashes and slag waste CHP plant	603
A.N. Shabarov, T.N. Aleksandrova and N.V. Nikolaeva	
Abandoned Coal Mines Influence on Atmosphere, Environmental Monitoring of Coal Mining and Processing Territories and Preventive Measures Resources Optimizing	609
Nikolai M. Kachurin, Sergey A. Vorobev and Pavel V. Vasilev	

New Progress of Coal Preparation Technology in China	615
Deng Xiaoyang	
Study on Multi-model roof safety warning based on decision fusion . . .	621
Hao Qinxia, Zhang Jinsuo and Jin Tiantian	
Experience of Warehousing of Watery and Jellied Waste of Coal Preparation	627
G. Reznichenko, A. Polulyakh, A. Korchevskiy and I. Ereemeev	
Mercury reduction in hard coal cleaning processes in Poland—the technology and the environmental impacts	633
Ireneusz Pyka, Krzysztof Wierzchowski and Barbara Białecka	
Modelling of coking coal preparation taking into account mercury content variability	639
Krzysztof Kurus and Barbara Białecka	
Technological and ecological aspects of briquettes production on the basis of coal wastes in Upper-Silesian Coal Basin.	645
Karolina Jąderko, Krzysztof Kurus and Barbara Białecka	
Selection of Parameters of the <i>Support Vector Machine</i> Method to the Problem of Subsidence Modelling Due to Drainage.	651
Wojciech T. Witkowski and Ryszard Hejmanowski	
Desulfurization of High Rank Coal (TKI-Husamlar, Mugla, Turkey) using Humic Acid	657
Oktay Bayat, Zehra Altınçelep and Seda Demirci	
Removal of Sulphur from Sorgun Yozgat Lignite Coal with HNO₃ Leaching.	663
Ercüment Bilger, Cemaliye Seflek and Seda Demirci	
Alternative storage of ashes to reduce the impacts to the environment	667
Daniel Šlosár and Matej Puzder	
Novel environmental management application for lignite	673
I. Gombkötő, T. Madarász, P. Szűcs, J. Lakatos and I. székely	
Part VII Dewatering, Drying and Briquetting of Coal	
Determination of Rational Parameters of Brown Coal Briquetting	683
A.V. Rasskazova and T.N. Alexandrova	
The analysis of process flowsheets and selection of equipment for coal fines dewatering	689
Vadim Novak	

Innovative Drying Technology “Chronos”. Deep Non-Thermal Dewatering of Coal And Mineral Fines	695
Kirill M. Kirillov, Elena N. Chernyshova and Vadim A. Kozlov	
Production of fuel briquettes from carbon containing materials.	701
Bazhin Vladimir Yuryevich and Kuskov Vadim Borisovich	
Parametric Optimization of Coal Concentrate Thermal Drying (in case of Elegest Mining and Processing Complex	707
Churin Andrei Sergeevich	
The Usage of flocculants for the Processes of Thickening and Dewatering of thin coal sludges	713
V.S. Frolov, L.N. Merkusheva, D.V. Frolov and A.V. Sidorov	
Granulating of coal fines using peat.	719
Mikhailov Aleksandr	
Development & Application of High Efficiency Thickener Without Moving Parts	727
Shuyan Zhao, Jimmy Yu, Xuewu Xu, Xiao Song, Liqin Ren and Chaodang Wu	
Gas heat carrier pyrolysis of low rank coal and associated heat transfer characteristics	735
Ying Wang, Yongfa Zhang, Xingxing Qiao, Yali Fu, Guoqiang Li, Xianglan Li and Mo Zhang	
Drying of coal fines assisted by ceramic sorbents	741
M.J. van Rensburg, M. Le Roux and Q.P. Campbell	
Coal product moisture control using stockpiles.	747
Quentin Campbell, Marco le Roux and Chané Espag	
Enhancement of High-frequency Screens Performance at Coal Slurry Dewatering	753
A.D. Polulyakh, I.V. Ereemeev and S.B. Chaplygin	
Statistical analysis of sedimentation process of mineral suspension with application of bioflocculation	759
Agnieszka Surowiak and Tomasz Niedoba	
New Control Head Design for Hyperbaric Disk Filter Gives Better Performance and Longer Life-Time	765
Rainer Raberger, Tamara Dmitriewa, Ernst Frohnwieser and Gernot Krammer	

Part VIII Gravity Concentration Methods

Experimental Research on Fine Coal Desulfurization by the Efficient Centrifugal Gravity Separator	773
Tao Yaojun, Zhu xiangnan and Song ao	
Process Features of Panji Coal Preparation Plant.	779
Yu Yu, Yong-wu Zhu, Hong-jun Yuan, Da-wei Wu, Yi-dong Yu and Xiang-rui Cheng	
Application of 3-Product Heavy Medium Cyclone in the Retrofit Project at Umlalazi Coal Preparation Plant in South Africa	785
Xue-qi Cui, Xu-wen Gong, Lei Zhang, Jia-jun Ge and Bao-dong Pan	
Application of Density Monitoring System Upgrading in SuanCiGou Coal Preparation Plant	791
Lang Jun	
Study on the Model System of Jig with Flexible Air Chamber and Pulsating Current Characteristics	797
Yunxiao Liu, Jingxuan Xie, Mingming Zhang and Yali Kuang	
Amenability of representative Greek lignite deposits to beneficiation. An overview.	803
Georgios N. Anastassakis	
Technological Evaluation of Work of Coal Preparation Plants	809
Fyodorov Andrey Vladimirovich, Dolbiyev Yuriy Nikolayevich and Polulyakh Aleksandr Danilovich	
TB3II-50 Technology of Middling Product Rewashing	815
V.G. Krasnik, Yu N. Filippenko and T.M. Shifigulin	
heavy-medium hydrocyclones as a substitute for jigging machines	821
C.A. Antonenko, D.P. Golik and K.F. Kitam	
Application of Heavy Medium Cyclone in the SILESIA Coal Preparation Plant	827
Bronisław Gaj, Zbysek Folwarczny and Władysław Borkowski	
Intensification the Sedimentation Process of Coal Suspension	833
Włodzimierz P. Kowalski, Marian Banaś, Krzysztof Kołodziejczyk and Tymoteusz Turlej	
Performance Evaluation Practices at Dense Medium Separation Circuits	839
E. Caner Orhan, Metin Can, Zeki Olgun and Ayşe Özer	

In-Plant Testing of Teetered Bed Separator in Omerler Washing Plant	849
Levent Ergun, Ataallah Bahrami, Mustafa Ziypak and Ayşe Özer	
Commercial Coal Preparation Plants Capability for the Removal of Trace Elements	855
Gülhan Özbayoğlu	
The Development of a new Low Cut Point Spiral for Fine Coal Processing	861
M.K. Palmer	
Circuits Incorporating New Low Cut Point Spirals	867
B. Narbutas, W. Mackinnon and A. Swanson	
Reviving Antiquated BATAC® Jigs in India through Technological Upgrades	873
Gurudas Mustafi and Monomit Nandy	
Effect of some operating variables on the performance of a 100 mm Heavy Medium Cyclone treating high ash Indian Coking Coal	879
Gopal Shankar Jha, K.M.K. Sinha and T. Gouri Charan	
Part IX Crushing, Grinding, Screening and Sizing Specification	
Mechanized Crushing & Screening Plant	887
A.Y. Ermakov and V.V. Senkus	
Technology of electromagnetic dynamic crushing and milling	891
Sergey Silyutin and Vladimir Artemiev	
Activation Grinding of Coal in Production of Low-Ash High-Purity Concentrates	895
T.S. Yusupov, A.P. Burdukov, Yu. B. Rubinshtein and S.A. Kondratiev	
Prospects of electric pulse technology for production coal-water fuel (CWF) and extracted from coal deposits of rare elements	903
Aleksandr S. Potokin	
Toothed screw crushers in the processes of coal beneficiation	907
A.I. Stepanenko	
Application of flip flow screen in Sihe Coal Preparation Plant	913
Guo Qingliang and Gong Gu	
Research on difficult-to-separate coal grinding-dissociation and flotation process	919
Liu Lijun, Yu Wei, Zhou Anning and Li Zhen	

Investigation of Energy Consumed Characterization of Mixture Grinding in the Ball-and-Race Mill.	925
Yaqun He, Weining Xie, Yong Yang, Hong Li, Shuai Wang and Hua Wei	
Advanced vibration technology innovations for coal screening	931
Marcus Wirtz	
Improved screening of coal and other difficult to screen bulk materials by means of LIWELL® screens	935
Stockhowe Andree and Panfilov Pavel	
A new approach for processing and agglomeration of low-rank coals for material usage.	941
Franz Fehse, Hans-Werner Schröder, Jens-Uwe Repke, Mathias Scheller, Matthias Spöttle and Ronald Kim	
Hydraulic Screening as Method of Rom Coal Machine Grades Preparation	947
Polulyakh Danil Alexandrovitch, Polulyakh Alexander Danilovitch, Pererva Andrey Yurjevitch and Shawarskiy Yaroslav Teodozievitch	
Empirical Relationships of HGI in terms of proximate analysis of coal	953
Serdar Yilmaz and Mehmet Bilen	
Sub 38 µm Wet Sizing with Sieves.	959
Noel Lambert, Nicholas Cox and Andrey Coffey	
Sulcis Coal Water Jet Assisted Comminution	965
Maria Caterina Tilocca, Marco Surracco, Enrico Maggio and Paolo Deiana	
Optimisation of operating costs due to the implementation of innovative technologies in coal preparation	971
Alfred Kalcher	
Part X Flotation	
Improvement of the Efficiency of Fine Coal Slimes Flotation.	979
Y.B. Rubinstein, B.I. Linev and E.K. Samoylova	
Efficient selection of flocculants-the key to success	985
A.M. Bulaeva	
Economic Benefits of a Deslime Flotation Circuit Using StackCell Technology at Patriot's Kanawha Eagle Coal Preparation Plant	991
Robert DeHart, Peter Bethell, Gerald Luttrell, Jaisen Kohmuench and Michael Mankosa	

Overview of Typical Coal Flotation Flowsheets in China's Coal Preparation Plants	997
Guangyuan Xie, Chao Ni, Jie Sha and Ling Wu	
Coal flotation improvement through hydrophobic flocculation induced by polyethylene oxide	1003
Yaoli Peng, Long Liang and Wencheng Xia	
A classification device capable of being integrated to flotation columns and its classification performance	1009
Yang Hong-li, Fan Min-qiang, Dong Lian-ping and Liu Ai-rong	
Latest Development in the Study of the XJM-S Flotation Machine	1015
Cheng Hongzhi, Liu Chunyan and Shi Huan	
The Magnification Principles of the FJCA Series Coal Jet Flotation Cells	1021
Wu Da-wei, Yan Rui-min, Wang Hai-yan and Yu Chao-fu	
Flotation of a Waterberg Coal using Release Analysis	1027
Christopher Anderson	
High end pneumatic flotation	1033
Lutz Markworth and Nikita Chevga	
Flotability Sludge From Coal Waste Technogenic Deposits of Ukraine	1039
Filippenko Yuri Nikolayevich and Fedosieieva Svetlana Olegovna	
Flotation of Polish Hard Coal in Saline Water	1045
Agnieszka Grabiec, Anna Młynarczykowska and Klaudia Tupek	
Vostochnaya Coal Washing Plant Improvements	1053
Dmitry Bojarskiy and Steve Frankland	
Three-parametr Phenomenological Coal Flotation Model	1059
Ljudmilla Bokányi	
"Forensic engineering science" to aid process control of flotation circuits when processing difficult-to-float coal blends.	1065
M.E. Holuszko, L. Gutierrez and J. Engwayu	
 Part XI Dry Coal Separation	
Perspectives of Reduced Water Consumption in Coal Cleaning.	1075
V.A. Arsentyev, L.A. Vaisberg, I.D. Ustinov and A.M. Gerasimov	
Dry destoning of coal based on XRT-separation method.	1083
I.V. Alushkin, V.B. Schipchin, I.G. Korneev and T.I. Eushina	

«SEPAIR» pneumatic separation complex for dry coal beneficiation . .	1089
Andrei Ivanovich Stepanenko	
Small Coal Dry Cleaning Jig	1095
Ren Shangjin, Sun He and Chen Jianzhong	
The Progress of the Pulsing Airflow Fluidized Bed for Separating the Fine Coal	1101
Zhang Yong, Duan Chenlong, Zhao Yuemin, Dong Liang and Cai Luhui	
Fine Coal Beneficiation with the Application of a Pulsing Air Dense Medium Fluidized Bed	1107
Yuemin Zhao, Liang Dong, Luhui Cai, Houkun Wang, Bo Zhang, Chenlong Duan and Zhenfu Luo	
The Application and Research on Before-Furnace Coal Desulfurization by ZM Dry Separator in Guizhou Tongzi Power Plant	1113
Gongmin Li, Xiaodong Yu and Zhifu Cui	
Dry Cleaning, an Affordable Separation Process for Deshaling Indian High Ash Thermal Coal	1119
Y.K. Xia, G.M. Li and Z.F. Cui	
Destoning of fine coal in a fluidized bed	1125
Marcole Roux, Quentin Campbell and Danie Langner	
Dry Allair® Washing Pilot Plant Test Results on Naryn Sukhait's Multi Layer Coal	1131
Gendeekhuu Davaatseren and Magsar Bazarragchaa	
Application of Vibration Pneumatic Separation	1137
A. Korchevskiy, O. Nazymko, G. Gordeev, K. Gumenyuk and A. Plastovets	
A Study of The Deshaling of Polish Hard Coal Using An Fgx Unit Type of Air Concentrating Table	1143
Wiesław S. Blaschke, Józef Szafarczyk, Ireneusz Baic and Wojciech Sobko	
Novel Dry Sorter for Coal Processing and Coal Recovery from Mine Originating Wastes	1149
Catus Moszko Joanna, Iwaszenko Sebastian, Bajerski Andrzej and Janoszek Tomasz	
Investigation of Dry Coal Beneficiation with Optical Sorter	1155
Ergin Gulcan, Ozcan Gulsoy, İlkey B. Çelik, Zeki Olgun and Selda Karaoğuz	

ArdeeSort–Next Generation Coal Dry Beneficiation Technology	1161
G.V. Ramana	

Coal Preparation in India: New Business Opportunities & Need for Dry Separation Technology	1167
V.K. Sinha, B.K. Dey and Pradip Kr Baranwal	

Dry Coal Preparation of Fine Particles by KAT Process.	1171
Jambal Davaasuren, Byoung-Gon Kim, Ju-Hyoung Lee, Gendeekhuu Davaatseren and Magsar Bazarragchaa	

Part XII Preparation and Processing of Carbonaceous Ores

Key issues for improving of carbonaceous ore beneficiation processes for the extraction of valuable components	1179
T.N. Aleksandrova and A.N. Shabarov	

A Cyclone for a Reason–Dense Medium Cyclone Efficiency	1185
Kenneth R.G. Tuckey, Ernst Bekker and Faan Bornmann	

Production of Shungite Concentrates–Multifunctional Fillers for Elastomers	1193
S.A. Yefremov, A.T. Kabulov, A.A. Atchabarova, R.R. Tokpayev, S. V. Nechipurenko and M.K. Nauryzbayev	

XVIII International Coal Preparation Congress

28 June—01 July 2016 Saint-Petersburg, Russia

Litvinenko, V. (Ed.)

2016, XXXVIII, 1196 p. 677 illus., 300 illus. in color. In 2
volumes, not available separately., Softcover

ISBN: 978-3-319-40942-9