

RECEIVED PAPERS

(73 papers as of May 24)

Represented Countries (17): Australia, Brazil, Canada, Chile, China, Finland, France, Germany, Mexico, Netherlands, Peru, South Africa, Spain, Switzerland, Turkey, United Kingdom and USA

GEOMET: Applied Mineralogy

(3 papers)

(A05) Use of Micro-XRF for Mineralogical Characterization Purposes in West Sossego Deposit: Vale Base Metals

Camila Torres, Giseli Ramos, Axel Torres and Marcos Alvim, Vale Base Metals, Brazil

(A25) Characterization of Cobalt in Pyrite in El Teniente, an Automated Mineralogy Approach

Felipe Martínez, SGS, Chile and Carolina Becerra, El Teniente Division, Codelco, Chile

(A52) Influence of Actinolite on Iron Recovery in Sinter Feed Production, Los Colorados Mine, Chile

Paulina Salgado, Esme Tristram and Gerardo Saavedra, Mina Los Colorados, Compañía Minera del Pacífico, Chile

GEOMET: Case Studies and Industrial Practices

(4 papers)

(A06) A Case Study on the Application of Geometallurgy in a Zinc-lead Mine

Bruna Costa, Kawina Araujo and Fernando Villanova, Nexa Resources, Brazil; Jorge Renzo, Lucas Pereira, Pedro Casagrande and Douglas Mazzinghy, Federal University of Minas Gerais, Brazil

(A09) Evaluation of High and Low Chrome Balls Wearing in Grinding Process and its Impact on Flotation in Salobo Mine Plant

Olegário Júnior, Ana Silveira and Jorge Arce, Vale Base Metals, Brazil

(A15) Copper concentrate quality traceability in Salobo Mine

Ricardo Nunes Melo, Suellen Ferreira, Mário Freitas, André Menezes and Jorge Arce, Vale Base Metals, Brazil

(A29) HIGmill OPEX optimization at Ero Brazil's Concentrator

Alline Ferreira da Cunha, Camila Lira da Cunha Andrade and Mateus Gomes Silva, Ero Brazil; Andres Paz, Swiss Tower Mills Minerals, Australia; Johan Steyn, Baikun Wang and Hanqing Li, King's Beads, China

GEOMET: Geometallurgical Characterization and Modelling

(11 papers)

(A08) Reconciliation of Copper Metallurgical Recovery, Comparing of Long- and Short-Term Models in Salobo Deposit

Giseli Ramos, Lucas Almeida, Cleive Ribeiro, Camila Torres, Axel Torres and Marcos Alvim, Vale Base Metals, Brazil; Elisabeth Fonseca, Center for Mineral Development, Vale, Brazil

(A11) Metallurgical and Mineralogical Characterization of Ore Stockpiles at Bingham Canyon Mine

Michael Kassela and Laura Hughes, Rio Tinto, USA

(A17) Ore Characterization of Underground High Grade Skarn Ore Blended with Open Pit Ore Using Drill Core Flotation Testwork from the Bingham Canyon Mine

Stanton Nelson and Isaac Boadi Rio Tinto Kennecott, USA

(A23) A Holistic Review of Geometallurgical Modelling Techniques: Current Practices and Emerging Trends

Christian Yepez, Angelina Anani and Sefiu Adewuyi, University of Arizona, USA

(A27) Drilling Energy of Blast Holes and its Geostatistical Relationship to Predict Rock Hardness

Carlos Cisterna, Matías Alzamora and Francisco Rojas, Caserones, Lundin Mining, Chile

(A28) Occurrence of Cobalt and its Association with Iron Mineralization in the Bronce Sur Deposit, Pleito District, Atacama Region

Cassandra Contreras, Helmholtz Institut Freiberg for Resource Technology, Germany and Osvaldo Gómez, Compañía Minera del Pacífico, Chile

(A31) Review and Upgrade of the Geometallurgy of Mina Justa, Marcona, Peru

Julio Castro, Hector Malaga and Andy Spelucin, MarCobre, Peru

(A43) Comminution Circuit Definition and Throughput Modeling Using Gaussian Sequential Simulation

Sergio García, Felipe Bernal and Johny Bonilla, Norte Abierto, Chile

(A44) Improving the understanding of Cerro Casale Deposit from Speciation Department

Sergio García and Felipe Bernal, Norte Abierto, Chile

(A61) Semi-Supervised Learning Model for Recognizing Geometallurgical Domains Based on Self-Organizing Maps: Case Study in a Porphyry Copper Mine

Daniel Baeza and Andrés Rivera, GEA, Chile; Mauricio Garrido, Minera Antucoya, Antofagasta Minerals, Chile and Brian Townley, Department of Geology and Advanced Mining Technology Center, Universidad de Chile

(A67) Determination of geometallurgical domains using multiple indicator kriging

Carlos Chinchay and Rossio Garcia, Datamine, Peru

GEOMET: Testing and Prediction of Process Performance: Crushing, Grinding, Flotation, Leaching, Sedimentation

(3 papers)

(A01) Exploring the Challenges of Marked Ball Wear Tests in Grinding Media Product Development: A Case Study

Paul Shelley and Hamid Pourasiabi, Molycop, USA

(A42) Standardization of Flotation Testwork Information according with Variability Samples Requirements

Sergio García, Norte Abierto, Chile

(A48) Advancing Orebody Knowledge with High-Resolution Rock Strength Measurement using the Minpraxis Tester

Gonzalo Pizarro and Bern Klein, Norman B. Keevil Institute of Mining Engineering, University of British Columbia, Canada; Stefan Nadolski, Minpraxis Solutions, Canada

GEOMET: Mineral sampling

(1 paper)

(A53) Sampling Strategies: A Methodological Approach for Representative Sample Selection

Nicolás Vercellino and Osvaldo Gómez, Compañía Minera del Pacífico, Chile and Israel Solís, Universidad de Chile

GEOMET: Technology and software for data analysis and geometallurgy development

(3 papers)

(A07) Exploratory Data Analysis for Geometallurgy: Tools Applied on a Zinc-Lead Mine Case Study

Bruna Costa, Thiago Nunes and Fernando Tartarotti, Nexa Resources, Brazil; Gustavo Oliveira, Fernando Brandão, Claudio Schneider, Pedro Campos and Douglas Mazzinghy, Federal University of Minas Gerais, Brazil

(A22) Standardizing Geometallurgical Tools for Enhanced Mining Operations at Newmont

Ben Odegard, Newmont, USA

(A51) Sensitivity and Risk Analysis in Resource Estimation with Automated Workflows

Julian Ortiz, Camborne School of Mines, University of Exeter, United Kingdom and Advanced Predictive Modeling Technology, Canada and Sebastian Avalos, Advanced Predictive Modeling Technology, Canada

GEOMET: Production planning and scheduling

(1 paper)

(A72) Environmental Impact Reduction through Life Cycle Assessment incorporation into Mine Planning

Victor Balboa, José Ojeda, Giovana García and Dennis Vega, Sustainable Mineral Institute International Centre of Excellence, University of Queensland, Chile

PROCEMIN: Automatic Control, Expert Systems and Data Analysis

(7 papers)

(A10) Estimating Recovery Losses Due to Coarse Material using CYCLONEtrac PST Technology and Machine Learning

Rodrigo Bruna, Alejandro Ramos, Robert Maron and Alejandro Jaque, Cidra Minerals Processing, Chile and USA

(A14) Advanced Process Control System Applied for Different Types of ore Fed to the Concentrator Plant

Marinka Silva and Pablo Bustos, Ministro Hales Division, Codelco, Chile; Leonardo Andrades, GPTA, Codelco, Chile; Sebastián Pulgar, Kairos Mining, Chile

(A21) Advanced Process Control System: Total Fill Level Control in SAG mill

Rafaela Andretta, Gonzalo Iriarte and Juan Fernando Morales, Andritz, Chile

(A30) Iron Ore Flotation Monitoring Integrating Operational Variables and Froth Image Analysis

Tiago Caixeta, Cássio Costa and Neymayer Lima, Vale, Brazil; Thiago Euzébio, Helmholtz-Zentrum Dresden-Rossendorf, Germany and Antônio Peres, Federal University of Minas Gerais, Brazil

(A36) Optimization and Control in Grinding with Digital Twin at Minera Los Pelambres

Robert von Loebenstein, Andritz, Chile

(A70) Stretching the Limits: Very Large GMDs in Mining

Vanesa García, Jesus Perez, Maarten van de Vijfeijken, Roland von Kaenel, Daniel Bermudez and David Casado, ABB, Chile, Spain and Switzerland

(A74) SAG Digital Twin: Strategy for Throughput Optimization

César Moscoso, ME Elecmetal, Chile and Alvaro Rendón, ECN Automation, Mexico

PROCEMIN: Conminution: Crushing, Grinding, SAG, HPGR

(5 papers)

(A03) The Effect of Grinding Operating Stability on Flotation Recovery

Percy Madrid, JKTech Pty, Australia

(A12) Relationship between the Number of Tested Samples and the Estimation of SAG Milling Capacity Variability

Leonardo Lara and Marcos Bueno, Geopyörä Oy, Finland; Homero Delboni, University of São Paulo, Brazil

(A46) A Comparative Study Between HPGR and SAG Alternatives for a New Conminution Project

Alessio Arata and Alejandro Martínez, RMES Analytics, Chile; Matías Raby and Marcelo Figueroa, The Boston Consulting Group, Chile

(A60) Installation, Operational Analysis and Opportunities from Vibration-based Instrument on SAG Mill

Joshua Morales, Eduardo Nunez and Ignacio Molina, Molycop, Chile and Martín Pino, Anglo American, Chile

(A65) Increased Processing Capacity in SAG Mills using Pre-Crushing with Sizer

Ignacio Tapia and Pablo Fuenzalida, MMD Mineral Sizing, Chile

PROCEMIN: Flotation: Fundamentals, Reagents and Industrial Applications

(13 papers)

(A02) Reagents Modification in División Ministro Hales Concentrator Plant

Andrés Soto, Ministro Hales Division, Codelco, Chile

(A13) Evolution of Reagents in Salobo

Ernani Delano, Olegario Júnior, Rafael Oliveira, Ana Lidia, Rosiane Aquino, Renan Sousa, Antônio Fernandes and Sebastião Adenilson, Vale Base Metals, Brazil

(A20) On the Fundamentals of Electroflotation of Itabiritic Iron ore Fines using a Green Surfactant

Carolina Simões, Ronald Rojas, Matheus Silva, Antonio Merma, Marcelo Camarate and Mauricio Torem, Department of Chemical and Materials Engineering, PUC of Rio de Janeiro and Flavia Silvas, Vale Institute of Technology, Brazil

(A38) Optimizing Bubble Size Distributions in Highly Concentrated Flotation Applications

Sebastian Maaß, SOPAT GmbH, Germany; Robert Panckow, Department of Process Engineering, Berlin Institute of Technology, Germany; Kerstin Eckert, Department of Mineral Processing, Helmholtz Institute Freiberg for Resource Technology, Germany and Jenni Sweet, Anglo American, South Africa

(A41) An AFM Image Study of the Adsorption of Collectors on Chalcocite

Jinhong Zhang, Department of Mining and Geological Engineering, University of Arizona, USA

(A45) Innovative Flotation Strategies for the Treatment of Altered Cu-Mo Minerals

Marco Orellana, Innova-met Ingeniería, Chile and Rodrigo Giménez, Nouryon Chemicals, Chile

(A55) Effect of Catalyzed MBS on Low-Grade Copper Sulfide Flotation in Seawater

Felipe Varela, Daniel Salgado and Mario Cornejo, Molycop, Chile

(A56) Novel Alternatives to Improve Copper Recovery for Low Floatability Ores and Presence of Clays

Patricio Zarate, Miguel Arends and Fabiola Rojas, Clariant, Chile

(A57) On the Definition of Flotation Times to Estimate Potential Recoveries and Average Flotation Rates

Alex Esteban and Luis Vinnett, D. of Chemical and Environmental Engineering, U. Técnica Federico Santa María, Chile; Francisca Justel, D. of Metallurgical and Materials Engineering, U. Técnica Federico Santa María, Chile and Kristian Waters, D. of Mining and Materials Engineering, McGill University, Canada

(A66) Innovative Methodology for Classifying and Selecting Flotation Collectors Using Metallurgical and Statistical Analysis

Cristian Saavedra, Patricio Zarate, Michael Mallea and Wagner Silva, Clariant, Chile and USA

(A68) Assessment of Novel Frother Chemistry, Syensqo Transfoamer™, for Flotation Processes

Juan P. Vergara, Miguel Maldonado and I. Ramos, Department of Metallurgical Engineering, Universidad de Santiago de Chile; J. Martínez, Department of Earth Science & Engineering, Imperial College London, United Kingdom; N. Miranda, Minera Caserones, Lundin Mining, Chile and R. Rubio, Syensqo, Cytac, Chile

(A69) Novel Frothers for Coarse Particle Recovery and Efficient Cleaner Operations

Tarun Bhambhani, Connor McMillan, Esau Arinatwe, Ricardo Rubio and Carmina Quintanar, Syensqo, Chile and USA

(A71) Flotation of Quartz and Hematite Using Mixed Fatty Acid Collectors of Vegetable Origin

Matheus Silva, Carolina Simões, Ronald Rojas, Rodrigo Souza and Mauricio Torem, D. of Chemical and Materials Engineering, P. Catholic University of Rio de Janeiro, Brazil and Flavia Silvas, Vale Institute of Technology, Brazil

PROCEMIN: New Processing Technologies

(7 papers)

(A04) Representative, Real Time Conveyed Flow Elemental Measurement for Process Improvement

Henry Kurth and Claudio Ramon, Scantech International Pty, Australia

(A19) Flotation of Coarse Particles from Antofagasta Region in a Novel Flotation Device

Cagri Emer, Risto Aho, Manuel Barrueto, Marly de Avila Carvalho and Antti Rinne, Metso, Turkey, Finland and Chile

(A33) The Flowsheet of the Future: Optimizing Energy Efficiency and Minimizing Water Usage

Fisher Wang and Evgeny Zhmarin, Swiss Tower Mills Minerals, Switzerland; Erich Dohm and Drew Hobert, Eriez Flotation, USA; Serhat Onol, Weir Minerals, Netherlands and Alejandro Tapia, Swiss Tower Mills Minerals, Chile

(A34) Dry Grinding of Ores with the Vertical Roller Mill

Caroline Woywadt and André Cruz, Gebr. Pfeiffer, Germany and Brazil

(A39) Limiting Fine Copper Losses in the Tailings: Examples with the Concorde Cell

Alejandro Yáñez, Nathalie Kupka, Manuel Barrueto and Antti Rinne, Metso Finland and Chile

(A59) Recovery of Coarse Copper Sulphides Particles with Low Liberation and Complex Mineralogical Associations using HydroFloat®

Matías Zanetta-Aroca, Maximiliano Caro, Felipe Valdés, Arnoldo Ávila and Maximiliano Meléndez, Eriez, Chile

(A64) Full Dry Iron Ore Comminution and Beneficiation Circuit with HPGR and Air Classifiers

Renato Oliveira and Serhat Onol, Weir Minerals, Netherlands

PROCEMIN: Modeling, design, optimization and control of mineral processes

(6 papers)

(A32) Gamma Function Applied to Mineral Processing

Alex Rey, Metallurgical Consultant, Chile

(A35) Using a Process Simulation Tool during the Complete Life of a Mining Project: Applications

Manuel González, Caspeo, France

(A40) Operational Performance Increase Through Innovative Jaw Crusher Current Control

Robson Duarte, Alexandre Fonseca, Kaike Albuquerque and Arley Silva, Vale, Brazil; Saulo Matos, Universidade de São Paulo, Brazil and Thomas Pinto, Instituto Tecnológico Vale and Universidad Federal de Minas Gerais, Brazil

(A58) Ero Copper Caraiba taking the lead: Brazil's first Jameson Cell and Latin America's first Rougher Scalper Jameson Cell

Admar Lage and Mateus Gomes, Ero Copper, Brazil; Ryan Jones and Christian Pasten, Glencore Technology, Australia and Chile

(A62) The Mixing Effect on Scale-Up Factor of Jameson Cells

Matías Benítez, Paulina Vallejos, Juan Yianatos and Luis Vinnett, Department of Chemical and Environmental Engineering, Universidad Técnica Federico Santa María, Chile

(A73) Low Cost/High Reward Plant Optimization

Kathy Adams, Adam House and Bernardo Baqueiro, Paterson and Cooke, USA

PROCEMIN: Solid-liquid separation and tailings retreatment

(6 papers)

(A18) Electrochemical Recovery of Critical Raw Materials from Tailings in the RAWMINA Project

Guillermo Pozo, Carmen del Rio, Cecilia Agustín, Javier Antoñanzas and Enrique Ipiñazar, Tecnalia, Spain

(A24) ROXIA TP16 gives Outstanding Performance at Metal Refinery

Matti Luoma, Roxia, Finland

(A26) Use of "Contacted Water" in Concentrator Plants Generated from Tailings Pond Water and Fresh Seawater

Juan P. Lagos, Soniángela Pérez and Rafael Venegas, Wood PLC, Chile

(A49) Radflow Feedwell: New Step on Thickening

Alex Krassnokutski, Krassno Consulting, South Africa; Malcolm Gillespie, Roytec Global, South Africa and Diego Rubio, Roytec Global, Chile

(A54) Demystifying Tailings Flocculation: Examining Some Assumptions and Misconceptions

Claudia Castillo, Independent consultant, Chile; Phillip Fawell and Chris Solnordal, CSIRO Mineral Resources, Australia and Heather Kaminsky, Northern Alberta Institute of Technology, Canada

(A63) CIL Cyanidation Tailings Filtration Plant for Dry Stacking

Fernando Zeballos and Félix Vargas, Compañía de Minas Buenaventura, Peru

PROCEMIN: Processing of precious metals, industrial and ferrous minerals

(1 paper)

(A37) A Study of the Impact of Acid Mist Suppressant on the Physical Property of Copper EW Solution

Jinhong Zhang, Therese Roa, Jiayue He and Nathalie Risso, Department of Mining and Geological Engineering, University of Arizona, USA

PROCEMIN: Minerals economy and material recycling

(1 paper)

(A47) Ceramic Foams from Mine Tailings and Slag: A Mechanism for Reducing the Environmental Impact

Cristian Salazar, Romina Murga and Daniel Zuluaga, Universidad de Talca, Chile and Lina Uribe, Departamento de Ingeniería Civil de Minas, Universidad de Talca and CRHIAM, Universidad de Concepción, Chile

PROCEMIN: Operation and plant management

(1 paper)

(A50) Nightshift GPS Failures Avoidance on Bridges, Stackers and Bucket wheels, due to Scintillation

Gabriel Ibarra, Geocom, Chile

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Mining Companies

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 Lunding Mining, Caserones, Chile (2)
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The Boston Consulting Group, Chile
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CiDRA Minerals Processing, Chile and USA (1)
Clariant, Chile and USA (2)
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ME Elecmetal, Chile (1)
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SOPAT GmbH, Germany
Swiss Tower Mills Minerals, Australia, Switzerland and Chile (1)
Syensqo, Cytec, Chile and USA (1)
Weir Minerals, Netherlands (1)

Universities and Research Centers

(13 papers)

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Center for Mineral Development, Vale, Brazil
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Federal University of Minas Gerais, Brazil

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McGill University, Canada
Northern Alberta Institute of Technology, Canada
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