

ABSTRACTS APPROVED**(+80 abstracts approved as of March 10th, 2020)**

Represented Countries (21): Argentina, Australia, Brazil, Canada, Colombia, Chile, China, Germany, Greece, India, Italy, Israel, Namibia, New Caledonia, The Netherlands, Peru, Spain, South Africa, Sweden, United Kingdom and USA

Thickening and Filtration**(28)****(A01) Undrained Strength of Thickened Copper Tailings and Simplified Seismic Stability Analysis of Saturated Beach Slopes**

Daniela Puma, Sebastián Urbano and Esteban Sáez, Pontificia Universidad Católica de Chile; Carlos Ovalle, Polytechnique Montréal, Canada

(A08) Application of Full-Function Plate and Frame Filters in Tails Dewatering: A Case Study Approach

Gavin Maré and Stephan Opperman, ENPROTEC, South Africa

(A09) High production for filtered tailings and treated water

José Carlos Brum, Vinicius Vilela and Marcello Salvate, Maatec, Brazil, Italy and Latin America

(A10) High Capacity Dewatering Plants

Davide Cavalli, Idemilson Fritzke and Francesco Kaswalder, Aqseptence Group, Italy and Brazil

(A14) Evaluation of the Effect of a Novel Polymer on Dewaterability of High Clay Slimes

Eddie Quintana; A. Dowd, S. Muganda, C. Pender and R. Schroeter, SNF, Australia

(A16) Development and Testing of the World's Largest Capacity Tailings Filter Press

Todd Wisdom, Reuben Neumann and James Chaponnel, FLSmidth, USA

(A17) Testing the Filtration Performance of Tailings

Carlos Suárez, ArcelorMittal, Spain

(A18) Tailings Filtration: Past, Present and Future

Juan Luis Bouso, Eral, Chile

(A23) Holistic Paste System Design

Ashley Morcombe and Jeremy Palmer, Quattro Project Engineering, Australia

(A24) The impact of high salinity and seawater on aggregate structures in clay tailings flocculation

Ricardo Jeldres, Universidad de Antofagasta, Chile; Tony Yang, Allan Costine and Phillip Fawell, CSIRO Mineral Resources, Australia

(A26) Centrifuges: The Alternative Technology

Robert Klug, Flottweg SE, Germany and Nils Schwarz, Schwarz Global Consulting, South Africa

(A38) An Overview of Key Aspects in the Geotechnical Design of Thickened Tailings Deposits for South American Highlands

Oscar Meza and Gushiken Peceros, Anddes Asociados, Peru and Franklin Olaya, University of California, USA

(A42) Design Strategies and Geotechnical Considerations for Filter-Pressed Dry Stack Design

Ignacio Ezama, Mauro Sottile, Osvaldo Ledesma and Arcesio Lizcano, SRK Consulting, Argentina and Canada

(A44) Geotechnical Site Characterization of Thickened Bauxite Residue at Worsley Alumina, Western Australia

Peter DiDonna, South32 Worsley Alumina, Australia

(A48) Flow Process Modelling of Paste and Thickened Tailings

Paul Slatter, Sheridan College, Australia

(A53) Improvements in High Density Thickening

Fred Schoenbrunn, Francisco Reyes and Craig Gilbert, FLSmidth USA

(A66) Learnings from Dry Stacking Fine Grained Nickel Residue in the Tropics

Andrew J. Bodley, Hatch Pty Ltd, Australia; Claire Vaguener, Vale New Caledonia, New Caledonia

(A68) Tailings Filtration: Linking process performance with geotechnical outcomes

Ross de Kretser, Acclarium Tailings and Solid-Liquid Separations Consulting, Australia

(A70) OPEX and CAPEX Comparison - Vacuum vs. Pressure Filtration Dewatering of Tailings at 50,000 TPD or More and other Trade-off Study Considerations

Joe Milbourne, Euro Sun Mining, Canada; Colleen Crystal, SRK Canada, Canada

(A71) Filtered Tailings Systems Design – Optimizations from Dewatering Plant to Stack

Rachel Jansen Paterson & Cooke, USA Ltd; Colleen Crystal, SRK Canada, Canada

(A79) Evaluation of the Susceptibility of Filtered Iron Ore Tailings from the Iron Quadrangle (Brazil) to Liquefaction

Aline A. Marques, Stefânia C. Oliveira, Brahmani S. T. Paes and André L. M. Coelho, DF+ Engenharia Geotécnica e Recursos Hídricos Ltda., Geotechnical Engineering, Brazil

(A80) Evaluation and simulation of structuring zones in a filtered tailings stack

Stefânia C. Oliveira, Brahmani S. T. Paes, Aline A. Marques and André L. M. Coelho, DF+ Engenharia Geotécnica e Recursos Hídricos Ltda., Geotechnical Engineering, Brazil

(A83) Technical-economic assessment of secondary sedimentation process in copper sulphide tailings with the presence of clays, in continental and sea water

Catalina López-Espejo, Christian Ihle and Claudia Castillo, Advanced Mining Technology Center (AMTC), Universidad de Chile

(A90) Simulation of tailings filtration performance

Jason Palmer, Outotec Pty Ltd., Australia

(A91) Effect of the use of sea water in thickening parameters

Felipe Betancourt, R. Figueroa and M.V. Gutiérrez, Universidad de Concepción, Chile

(A95) Engineering challenges for filtered tailings storage facilities in Peru

Javier Mendoza, Jhoel Huanchi and Hernan Huayamares, Anddes Asociados, Perú

(A100) Influence of Soil Retention Curve In Closure Retention Model

Jose Riquelme and Andrés Torres, SRK Consulting SpA, Chile.

(A104) Engineer of Record role for a Thickened Tailings Impoundment

Silvana Dal Pozzo and Jaime Urquidi, Arcadis Chile SPA, Chile

Transportation**(6)****(A15) Inline Characterization of Mining Slurries by Ultrasonic Velocity Profile Technique (UVP)**

William Montes-Quiroz, Pamela Garrido and Cesar Moscoso, Centro de Investigación JRI, Chile

(A54) Design of Booster Stations for Paste Backfill and the Implementation at Hindustan Zinc's Rampura Agucha Mine

Chris Lee, Golder Associates Ltd, Canada; Sufal Mehrotra, Hindustan Zinc Limited, Rampura Agucha, India

(A85) Sandy Tailing Transport between Thickener and Filtration - Case Study

Maycon Silva Alves and Rafael Marques Araújo Barbosa, Vale S.A., Brazil

(A93) Paste and Thickened Tailings Transportation Design Aspects Overview

Sadeqh Javadi, Behnam Pirouz, ATC Williams, Australia; and Paul Slatter, Sheridan College Institute of Technology and Advanced Learning, Australia.

(A97) Design Review for a Distributed Tailings Deposition System

Ignacio Bazán, Paterson & Cooke (UK) Ltd. and Daniel Granström, AF-Industry AB, Sweden

(A98) Analysis of transport of Bingham plastic fluids in laminar state inside a rectangular Flume

Ignacio Lorie, Alejandro Vera, Claudio Larenas and Patricio Chacón, Arcadis Chile SPA, Chile

Rheology**(6)****(A02) Influence of Changing Grinding Cycle on Flow-Ability of the Cemented Paste Backfill (CPB): Change of Particle Size**

Aminhossein Safarizadeh and Abbas Taheri, The University of Adelaide, Australia

(A12) High-Density Slurry Pipeline Restart-ability Analysis of High Temperature Tailings

Joseph Matthys and Alan Rosewall, Paterson & Cooke, Australia; Peter Goosen, Paterson & Cooke Consulting Engineers, South Africa

(A37) Risk Reduction Assessment of TMF Due to Tailings Dewatering and Optimized Disposal Schemes: The Dam Breach Analysis Perspective

Abraham Figueroa, Tomas Errazuriz, Roberto León and Juan Carlos Torrejón, Wood, Chile

(A41) Bayer Residue Flocculation by Polymer Mixtures: Effects on Tailings Rheological Properties for Disposal

Bruna Trampus and Sílvia França, Center for Mineral Technology, CETEM, Brazil

(A59) Impact of Extreme Rheology in Mining Industry

Juan Rayo, JRI Ingenieria S.A, Chile

(A96) Tailings Rheology Variability Study and Tailings Parameter Correlations

David Romo, David Benavente, Paterson & Cooke Chile SPA and Andrés Palma, Codelco VP, Chile

Surface Disposal**(6)****(A13) Dewatering Polymer Application in an Iron Ore Tailings Dam**

Frederic Braga and Junio Pereira, Anglo American, Brazil; Raymond Guang, Golder, Canada; Jorge Davo, Basf, Brazil

(A25) Comparison between Linear and Central Distribution System for Thickened Tailings Stacking

Behnam Pirouz, Sadegh Javadi and Keith Seddon, ATC Williams, Australia

(A30) Integrating Site Conditions, Rate of Rise and Deposition Sequence to Beach Slope Estimations for High Thickened Tailings

Tomás Errazuriz and Alexis González, Wood, Chile

(A33) Modeling Flow and Deposition of Non-Newtonian Oil Sand Tailings to Optimize Storage and Reclamation

Benjamin Sheets and James Langseth, Barr Engineering Company, USA; Luca Sittoni, Deltares and Ecoshape, The Netherlands; Arno Talmon, Deltares and TU Delft, The Netherlands; John Swenson, University of Minnesota Duluth, USA

(A72) Effects of compaction on the seismic performance of filtered tailings deposits

Carolina Palma and Jean Paul Posch, SRK Consulting Chile SpA, Chile

Underground and Backfill**(10)****(A05) An Experimental Study on the Hindered Settling Properties of Backfill Tailings Particles**

Peng Xiaopeng, Yang Xiaocong and Guo Lijie, Beijing General Research Institute of Mining and Metallurgy and National Center for International Joint Research on Green Metal Mining, China

(A06) An Experimental Study on the Strength Distribution of Cemented Tailings Backfill

Chen Xinzhen, Yang Xiaocong, Peng Xiaopeng and Guo Lijie, Beijing General Research Institute of Mining and Metallurgy and National Center for International Joint Research on Green Metal Mining, China

(A21) Effective Borehole Management Strategy and Free-Fall Control through Design and Operation Methodology

Mark Griffiths and Jeremy Palmer, Quattro Project Engineering, Australia

(A27) Backfill Mix Optimisation at Olympias Mine

Mehmet Yumlu, Backfill Geotechnical Mining Consultants, Australia; Ourania Mousli and Vasileios Chatziefstratiou, Hellas Gold, Greece

(A28) Monotonic Triaxial Response of Early-age Cemented Paste Backfill

Amin Ghorbanpour and Reza Moghaddam, Golder Associates, USA and Canada

(A31) Automated Backfill Diverter Valves at Kirkland Lake Gold Fosterville Mine Improve Safety and Efficiency

Gary Trinker and Marc Carriere, Victaulic Co, USA and Canada; Russell Evans, Kirkland Lake Gold, Canada

(A46) Shaking Table Testing of the Sulphate-Induced Change in the Liquefaction Susceptibility of Cemented Paste Backfill

Mamadou Fall, University of Ottawa, Canada

(A64) Optimizing the Design of Cemented Paste Backfilled Stopes

Ryan L. Veenstra and Johannes J. Grobler, Tanami Operations, Newmont Goldcorp Australia

(A65) A Comparison of Cemented Paste Backfill Shotcrete Barricade Design Methods

Ryan L. Veenstra and Johannes J. Grobler, Tanami Operations, Newmont Goldcorp Australia; Xu Zhao, Andy Fourie, University of Western Australia, Australia

(A73) An investigation into the effect of new cementitious material and waste rock on the behavior of tailings backfill

Zhuen Ruan, Aixiang Wu, Yiming Wang, Shenghua Yin, Yong Wang and Hongjiang Wang, University of Science and Technology Beijing, China

Closure and Rehabilitation	(1)
-----------------------------------	------------

(A04) Central Thickened Discharge for TSF Closure

Bryan Ulrich and A. Rudy, Stantec Consulting Services, USA

Case Studies	(16)
---------------------	-------------

(A03) Application of Management Tailings Guidelines under the MAC Standards to Peruvian Tailings Dams

Hugo Muñoz, Anddes Asociados and the Pontifical Catholic University, Peru

(A11) On-line Viscosity Control Loop Implementation to Assist Gold Recovery Improvement

Joseph Matthys and Ricardo Bravo, Paterson & Cooke, Australia; Peter Goosen, Paterson & Cooke Consulting Engineers, South Africa

(A19) Technical and Economic Evaluation of Tailings Dewatering Circuits in the Largest Copper Mines

Cristian Zamorano, Fernanda Vera, Iván Sánchez, Sergio Ramírez and Cristian Garrido, Fluor, Chile

(A32) Commission and Operation Experiences of Two Thickened Tailings Facilities

Thord Wennberg and Anna Stalnacke, Luossavaara-Kiirunavaara AB, Sweden; Anders Sellgren, Lulea University of Technology, Sweden

(A35) Modernization of Chinalco Toromocho Copper Tailings Thickeners

Jerold Johnson and Javier Vizcarra, WesTech Engineering, USA and Peru

(A36) Paste Backfill for Underground Mine Rehabilitation: A Case Study

Sue Longo and Jon Taylor, Golder Associates, Canada

(A45) A Case Study Comparison of Best Available Technology (BAT) for the Stacking of Bauxite Residue: Accelerated Mechanical Consolidation (AMC) and Filtration & Dry Stacking (F&DS)

Justin Woolston, Life of Mine Engineering, Australia and Peter DiDonna, South32 Worsley Alumina, Australia

(A50) A Case History in Filtered Tailings in Southern Namibia

Veronique Daigle and Andrew Copeland, Knight Piésold, Namibia

(A55) Tailings Geotechnical Characterization from Cuiabá Mine to Support a Dry Stacking Disposal Design in Cuiabá Dam

Rodrigo Zorzal Velten, Walm Engenharia e Tecnologia Ambiental Ltda, Brazil and Márcio Fernando Masur Gomes, AngloGold Ashanti, Brazil

(A58) Integrated Disposal of Paste Backfill and Surface High-concentration Tailings Stacking at Chambishi Copper Mine

Aixiang Wu, Zhuen Ruan, Yiming Wang, Shaoyong Wang, Cuiping Li and Yong Wang, University of Science and Technology Beijing, China

(A60) Use of paste Fill on cycle at Turmalina Mine

Jessica Santana, Jaguar Mining Inc., Brazil

(A81) Static liquefaction evaluation of compacted iron tailings using field and laboratory tests

Douglas Deoclecio Tostes Firmo, Tadeu Marçal Miranda, Atila Geraldo Rochido dos Santos, VALE S.A, Brazil

(A84) Pressure Filter Feeding Methods - Case Study

Maycon Silva Alves and Rafael Marques Araújo Barbosa, Vale S.A., Brazil

(A86) Barometric Column Filtration vs. Filtrate Pump Filtration Comparison - Case Study

Maycon Silva Alves and Rafael Marques Araújo Barbosa, Vale S.A., Brazil

(A87) Geotechnical characterization for the analysis of static and dynamic liquefaction of old tailings

Orlando Huaña, Jorge Rosales and José del Castillo, Volcan Compañía Minera, Perú

(A101) Audit of the world's largest thickening system; Findings and recommendations for improvement

David Benavente, Daisy Aguilar, David Romo, Lars Martinson, Paterson & Cooke Chile SpA; Rodrigo Aravena, Julio Barraza, Minera Escondida Limitada, Chile

Emerging Issues and Technologies	(9)
---	------------

(A20) Experience with geotextile tubes in Mining Tailings Storage: Gran Colombia Gold Segovia

Boris García, Erwin Wolff, Juan Valderrama and Johanna Valbuena, Gran Colombia Gold Segovia, Colombia

(A43) The Application of Satellite InSAR in Calculating Tailings Consolidation across Inactive and Closed Facilities

Adam Thomas, Nathan Maganll and Hayley Larkin, CGG Services, United Kingdom and Jon Engels, Tailpro Consulting, Chile

(A51) Development of a New Large Calibration Chamber for Testing Thickened Tailings with the Cone Penetration Test

Juan Ayala, Andries Fourie and David Reid, The University of Western Australia

(A52) Terraflowing™ – an innovative and flexible method for tailings management

Nils Steward, Weir Minerals, Australia

(A69) “Dry-Stacking” of Potentially Acid Generating Tailings and Waste Rock

Colleen Crystal, Stephen Day, Michael Herrel, SRK Canada, Canada; Andrew Garvie SRK Australiasia, Australia

(A92) Real Time Monitoring of Infiltration and contamination from Paste Tailing Site

Aharon (Roni) Ran, Sensoil Innovation Ltd., Israel; Ofer Dahan, Zuckerberg Institute for Water Research, Ben-Gurion University of the Negev, Israel; and Nicolás Pérez, Nicolaides Industrial, Chile

(A99) Evaluation of the Effects of Climate Change on Water Infiltration on Thickened Tailings in the Atacama Region

Alonso Arriagada, José Riquelme and Tiaren García-Pérez, SRK Consulting SpA, Chile.

(A103) Surface cracking in thickened tailings: mechanisms and its influence on evaporation and water contents

Evelyn Arredondo, Víctor Araya and Gonzalo Suazo, Universidad Técnica Federico Santa María, Chile

(A105) Monitoring of Moisture Content in Paste Tailings using Hyperspectral Cameras

Monserrat Sánchez, Victor Araya and Gonzalo Suazo, Universidad Técnica Federico Santa María, Chile

ABSTRACT DISTRIBUTION

Mining Companies	(22)
<p>Anglo American, Brazil (1) AngloGold Ashanti, Brazil (1) ArcelorMittal, Spain (1) Codelco, Chile (1) Euro Sun Mining, Canada (1) Gran Colombia Gold Segovia, Colombia (1) Hellas Gold, Greece (1) Hindustan Zinc Limited, Rampura Agucha, India (1) Jaguar Mining Inc., Brazil (1) Kirkland Lake Gold, Canada (1) Luossavaara-Kiirunavaara AB, Sweden (1) Minera Escondida Limitada, Chile (1) Newmont Goldcorp Australia, Australia (2) South32 Worsley Alumina, Australia (2) Vale New Caledonia, New Caledonia (1) Vale S.A, Brazil (4) Volcan Compañía Minera, Perú (1)</p>	
Engineering and Consulting Companies	(32)
<p>Acclarium Tailings and Solid-Liquid Separations Consulting, Australia (1) Anddes Asociados, Peru (3) AF-Industry AB, Sweden (1) Arcadis Chile SPA, Chile (2) ATC Williams Pty Ltd, Australia (2) Backfill Geotechnical Mining Consultants, Australia Barr Engineering Company, USA (1) DF+ Engenharia Geotécnica e Recursos Hídricos Ltda., Geotechnical Engineering, Brazil (2) Eral, Chile (1) Fluor, Chile (1) Golder Associates, Canada/USA (2) Hatch Pty Ltd, Australia JRI Ingeniería S.A., Chile (1)</p>	

Life of Mine Engineering, Australia
 Paterson & Cooke, Ltd., Australia/South Africa/USA/Canada (3)
 Paterson & Cooke Chile SPA
 Quattro Project Engineering, Australia (1)
 Quattro Project Engineering, Australia (1)
 Schwarz Global Consulting, South Africa
 SRK Consulting Argentina and Canada (2)
 SRK Consulting Chile SpA, Chile (3)
 Stantec Consulting Services, USA (1)
 WesTech Engineering, USA and Peru (1)
 Wood, Chile (2)
 Walm Engenharia e Tecnologia Ambiental Ltda, Brazil (1)

Supplier Companies	(12)
---------------------------	-------------

Aqseptence Group, Italy and Brazil (1)
 Basf, Brazil
 CGG Services, United Kingdom (1)
 Ecoshape, The Netherlands
 ENPROTEC, South Africa (1)
 Flottweg, Germany (1)
 FLSmidth, USA (2)
 Maatec, Brazil, Italy and Latin America (1)
 Nicolaides Industrial, Chile
 Outotec Pty Ltd., Australia (1)
 Sensoil Innovation Ltd., Israel (1)
 SNF, Australia (1)
 Victaulic Co, USA and Canada
 Knight Piésold, Namibia (1)
 Weir Minerals (1)

Universities and Research Centers	(16)
--	-------------

Advanced Mining Technology Center (AMTC), Universidad de Chile (1)
 Beijing General Research Institute of Mining and Metallurgy, China (2)
 Center for Mineral Technology, CETEM, Brazil (1)
 Centro de Investigación JRI, Chile (1)
 CSIRO Mineral Resources, Australia (1)
 Deltares, The Netherlands
 Lulea University of Technology, Sweden
 National Center for International Joint Research on Green Metal Mining, China
 Polytechnique Montréal, Canada
 Pontificia Universidad Católica de Chile (1)
 Pontifical Catholic University, Peru
 Sheridan College Institute of Technology and Advanced Learning, Australia. (1)
 The University of Adelaide, Australia (1)
 TU Delft, The Netherlands
 Universidad de Antofagasta, Chile
 Universidad de Concepción, Chile (1)
 Universidad Técnica Federico Santa María, Chile (2)
 University of California, USA

University of Minnesota Duluth, USA

University of Ottawa, Canada (1)

University of Science and Technology Beijing, China (2)

The University of Western Australia (1)

Zuckerberg Institute for Water Research, Ben-Gurion University of the Negev, Israel