Conference Agenda

44th Conference and Exhibition ICSOBA 2026

Date: Sunday, 15/Nov/2026

12:00pm - 6:00pm **IAI's Bauxite & Alumina Committee Meeting**
By invitation only

7:30pm - 10:00pm **Welcome Cocktail**

Date: Monday, 16/Nov/2026

9:00am - 9:50am **Conference Opening**
Location: **GBR-3+4**
Conference Opening
Host Sponsor Welcome

9:50am - 10:20am **Participant Group Photo**
Location: **GBR-3+4**
Further Information on the Session

10:20am - 10:50am **Coffee Break**

10:50am - 12:20pm **Keynote Session A**
Location: **GBR-3+4**
Chair: **Sergey Akhmetov**
Co-chair: **Bernard Allais**

10:50am - 11:10am

KN01 - Aluminium Industry at the Crossroads – Growth, Sustainability, and Innovation
Satish Pai, Vilas Tathavadkar
Hindalco Industries Ltd, India

11:10am - 11:35am

KN02 - Navigating Geopolitical Turmoil While Staying the Course on Sustainability
Jonathan Grant
International Aluminium Institute (IAI), United Kingdom

11:35am - 12:00pm

KN03 - Decarbonisation of the Aluminium Industry—Status of Progress in 2026
Jerome Lucaes
Fast Forward Zero, Switzerland

12:20pm - 1:20pm **Lunch**

1:20pm - 3:00pm

BX-1: Bauxite Session 1

Location: **Bipar&Hampi**
Chair: **Anthony John Canfell**
Co-chair: **Andrey Panov**

Bauxite - Geometallurgy

1:20pm - 1:45pm

BX04 - Delivering Value Through Active Geometallurgy

Michael Zieba
Rio Tinto, Australia

1:45pm - 2:10pm

BX05 - Textural, Physicochemical and Mineralogical Integration Applied to the Geometallurgy of Porto Trombetas Bauxites

Felipe Antonialli[1], Rafael dos Santos Macedo[2], Guilherme José de Carvalho Pereira[1], Maurício Bergerman[3], Carina Ulsen[2]
1: MRN - Mineração Rio do Norte, Porto Trombetas, Brazil; 2: LCT - Universidade de São Paulo,; 3: LTM - Universidade de São Paulo, Brazil

2:10pm - 2:35pm

BX06 - Textural Geometallurgy of Porto Trombetas Bauxite – Integrating Geological Variability and Beneficiation Performance

Felipe Antonialli[1], Rodrigo César Teixeira de Gouvêa[3], Antonio Edilson Souza do Nascimento Junior[1], Cleyton de Carvalho Carneiro[3], Rafael dos Santos Macedo[2], Carina Ulsen[2]
1: MRN - Mineração Rio do Norte, Porto Trombetas, Brazil; 2: LCT - Universidade de São Paulo; 3: InTRA - Universidade de São Paulo, Brazil

2:35pm - 3:00pm

BX07 - Alternative Beneficiation Route of Monte Branco Low-Grade Bauxite - Assessing Quality Gains and ESG Impacts

Gerson Oliveira, Antônio Nascimento Junior, Maurélio Santos, Luiz Carlos Brito, Wellington Moreira
Mineração Rio do Norte, Brazil

3:00pm - 3:30pm

Coffee Break

EL-1: Electrodes Session 1

Location: **GBR-2**
Chair: **Houshang Darvishi Alamdari**
Co-chair: **Francesco Carlos Baccalà**

1:20pm - 1:45pm

EL01 - Strategies for Reducing the CO2 Footprint and Environmental Impact of CPC Production

Les Edwards[1], Pankaj Verma[2], Mahadasu Satyanarayana[2], Thavidisetti Venkata Naga Mahesh[2], Sunkreddy Kishore Reddy[2], Julia Skarbnik[3]
1: Rain Carbon Inc., United States of America; 2: Rain CII Carbon (Vizag) Limited, India; 3: Rain Carbon Germany GmbH

1:45pm - 2:10pm

EL02 - Improvement in Anode Quality Through Collaboration and In-House Process Optimization

Amit Bhardwaj, Anamit Deb Gupta, Mukul Modak, Rafiqul Mirza
HINDALCO INDUSTRIES LTD, India

2:10pm - 2:35pm

EL03 - Baked Anode Quality Improvement Through Optimization of Green Anode Plant Process Parameters

Abdulla Habib, Taleb Al Ansari, Rajesh Garg, Nitin Yadav, Hisham Buhazza, Prakash Mishra
Aluminium Bahrain, ALBA, Bahrain

2:35pm - 3:00pm

EL04 - Visualizing Anode Densification via Transparent Vibro-Compactor

Amir Kafaei[1,2], Simon Laliberté-Riverin[3,2], Carl Duchesne[1,2], Houshang Darvishi Alamdari[3,2], Seyed Mohammad Taghavi[1,2]
1: Department of Chemical Engineering, Université Laval, Québec, QC, Canada, G1V 0A6; 2: Aluminium Research Center (REGAL), Québec, Canada; 3: Department of Mining, Metallurgical, and Materials Engineering, Université Laval, Québec, QC, Canada, G1V 0A6

AL-1: Aluminium Electrolysis Session 1

Location: **GBR-3**
Chair: **Sasikumar Srinivasan**
Co-chair: **Vinko Potocnik**

1:20pm - 1:45pm

AL01 - Commissioning and Performance of the Pilot Booster Section at Mahan Aluminium Smelter

Sasikumar Srinivasan[1], Abhishek Gautam[1], Vinay Tiwari[1], Rajan Bajpai[1], Devendra Pathe[1], Gaurav Verma[1], Senthil Nath[1], Amit Jha[2], Vilas Tathavadkar[2], Venkannababu Thalagani[3]
1: Hindalco Industries Ltd, Mahan Aluminium, Singrauli, India; 2: Hindalco Industries Ltd, Mumbai, India; 3: Aditya Birla Science and Technology Company (P) Ltd, Navi Mumbai, Maharashtra, India

1:45pm - 2:10pm

AL02 - DX+ Ultra Technology at 490 kA in EGA Eagle Pilot Section Innovation Hub

Sajid Hussain, Maitha Faraj, Nadia Ahli, Asmaa Ali Alhosani, Abdalla Alzarooni
EGA, United Arab Emirates

2:10pm - 2:35pm

AL04 - Alba Reduction Line 4 Outage and Safe Recovery

Rakesh Shrivastava, Mohamed Edrabooh, Hassan Almohri, Vasantha Kumar Rangasamy, Mohd Zainal
ALBA, Bahrain

2:35pm - 3:00pm

AL05 - Operational Resilience of Aluminium Reduction Cells During Recurrent Amperage Reductions

Alok Singh, Pramod Kumar, Rupesh Pandey, Jayesh Pawar, Mahesh Sahoo
Hindalco Industries Limited, Renukoot, India

AA-1: Alumina Session 1

Location: **GBR-4**
Chair: **Callan Gault**
Co-chair: **Sebastien Fortin**

Refinery design and equipment

1:20pm - 1:45pm

AA01 - Dilemmas in the Bayer Process – Design and Operate a Bayer Plant Efficiently

Benyan Pei, Brad Hogan, Andrew Furlong
WORLEY, Australia

1:45pm - 2:10pm

AA02 - Micro Capacity Alumina Refinery – An Innovative and Viable Technology

Garvesh Pal[1], Bijoy Satpathy[2]
1: ICSOBA, India; 2: Archimedes Engineers Pvt Ltd, Gurgaon, India

2:10pm - 2:35pm

AA17 - Advantages SWIRLFLOW® Provides Over Traditional Agitators in Tanks Other Than Alumina Precipitators

Bon Nguyen[1], Lachlan Graham[2], Julie Townsend[3], Darren Bambrick[4], Yuanlong Huang[5]
1: CSIRO, Australia; 2: CSIRO, Australia; 3: Queensland Alumina Limited (QAL), Australia; 4: Queensland Alumina Limited (QAL), Australia; 5: Shenyang Aluminum and Magnesium Engineering and Research Institute Co. Ltd. (SAMI), China

2:35pm - 3:00pm

AA18 - Cutting Energy Consumption in Bayer Process Agitation – Without Compromising Suspension and Natural Overflow

René Rödenbeck[2], Tabea Montag[2], Tobias Güllmar[2], Janin Klatt-Eberle[1]
1: STC-Engineering India Pvt.Ltd.; 2: STC-Engineering GmbH, Germany

3:30pm - 5:10pm

BX-2: Bauxite Session 2

Location: **Bipar&Hampi**
Chair: **Frank Feret**
Co-chair: **Anthony John Canfell**

Characterisation and mining

3:30pm - 3:55pm

BX01 - Study of Aluminogoethite, Boehmite Composition and Morphology in Jamaican and Guinean Bauxites by XRD Method

Veronika Rybakova, Yulia Chernyshova, Yulia Maksimova, Alexander Suss, Andrey Panov
RUSAL Engineering & Technology Center, Russian Federation

3:55pm - 4:20pm

BX08 - Fuel Dilution Diagnostics by FTIR and Associated Wear Mechanisms in Mining Diesel Engines

Fernanda de Moraes Ferreira, Erika Tallyta Leite Lima, Fabricio de Melo Lima, Katiane Cunha de Melo
Norsk Hydro S/A

4:20pm - 4:45pm

BX09 - Application of Predictive Analytics in Used Oil Filters - Reduction of Class I Waste and Emissions Mitigation in Mining

Fabricio Melo Fernandes de Lima[1], Fernanda de Moraes Ferreira[2], Pablo Diego Cruz[3]
1: Norsk Hydro, Paragominas, Brazil; 2: Norsk Hydro, Paragominas, Brazil; 3: Norsk Hydro, Paragominas, Brazil

4:45pm - 5:10pm

BX10 - Deck Charging Based Blast Optimization with Recycled Plastic Water Bottles for Sustainable Resource Extraction

Vijay Chauhan, Amar Bharti, Srikanta Hota, Manisha Kumari
Utkal Alumina International Limited ABG Group, India

EL-2: Electrodes Session 2

Location: **GBR-2**
Chair: **Elahe Khani**
Co-chair: **Francesco Carlos Baccalà**

3:30pm - 3:55pm

EL05 - Capillary-Driven Flow Dynamics in Sequential Mixing for Anode Production

Armin Beitollahi[1], Fatemeh Khademian[2], Simon Laliberté-Riverin[2], Houshang Alamdari[2], Seyed-Mohammad Taghavi[1]
1: Department of Chemical Engineering, Aluminium Research Centre-REGAL, Université Laval, Québec, QC, Canada.; 2: Department of Mining, Metallurgical and Materials Engineering, Aluminium Research Centre-REGAL, Université Laval, Québec, QC, Canada.

3:55pm - 4:20pm

EL06 - Characterizing Pitch Impregnation in Coarse Coke Particles for Carbon Anode Fabrication

Fatemeh Khademian[1], Armin Beitollahi[3], Simon Laliberté-Riverin[2], Seyed Mohammad Taghavi[4], Houshang Alamdari[5]
1,2,5: Department of Mining, Metallurgical and Materials Engineering, Aluminium Research Centre-REGAL, Université Laval, Québec, QC, Canada.; 3,4: Department of Chemical Engineering, Aluminium Research Centre - REGAL, Université Laval, Québec, QC, Canada.;

4:20pm - 4:45pm

EL07 - Critical Process Methodology Application in Green Anode Production for an Aluminium Smelter

Flavio Montoro, Harith Al Barakhti, Abdullah Al Dhahli, Ciro Kato, Agnello Borim
Sohar Aluminium, Oman

4:45pm - 5:10pm

EL08 - Green Anode Plant Throughput and Availability Improvement

Alok Nigam, Arun Karunanidhi
Vedanta Limited, Jharsuguda, India

AL-2: Aluminum Electrolysis Session 2

Location: **GBR-3**
Chair: **Abdulaziz Sarhan**
Co-chair: **Claude Serge Ritter**

3:30pm - 3:55pm

AL07 - Impact of Power Modulation on Thermal Behavior and Electrolyte Composition in Aluminium Smelters

Mahsa Shirazi[1], Martin Désilets[1], Lukas Dion[2], Marc LeBreux[1], Jean-François Bilodeau[3], Thomas Roger[3], Ali Kodfard[2]
1: université de sherbrooke, Canada; 2: université du Québec à Chicoutimi, Canada; 3: Rio Tinto Alcan, Canada

3:55pm - 4:20pm

AL08 - Testing Ready-to-Use Cathode (RuC®) Technology in a 235-kA Pot in Hirakud Smelter

Pratap Sahu[1], Piyush Mishra[1], Jay Prakash Soni[1], Kazi Arshad Ansari[1], Jaydeb Behera[1], Ambika Nayak[1], Mohammed Afnan Shaikh[1], Pankaj Bohra[2]
1: Hindalco Industries Ltd., Hirakud Smelter, Hirakud, India; 2: ABSTC, India

4:20pm - 4:45pm

AL09 - Optimised Selection of Sidewall Lining Material to Improve Potlife

Basavaraj Hanji, Ali Jasim Banjab, Shaikha Fatima Almualla, Alexander Mukhanov
EMIRATES GLOBAL ALUMINIUM (EGA), United Arab Emirates

4:45pm - 5:10pm

AL10 - Typical Mineral-Phase Compositions of Si3N4-Bonded SiC Sidelining Materials Used in Aluminium Electrolysis Cells

Egil Skybakmoen, Zhaohui Wang
SINTEF Industry, Norway

AA-2: Alumina Session 2

Location: **GBR-4**
Chair: **Andre Azevedo**
Co-chair: **Andrey Panov**

Refinery control and optimisation

3:30pm - 3:55pm

AA30 - Improved Alumina Yield and Impurity Management through Continuous Online Chemistry Measurement in Bayer Liquor

Heather Tugaoen[1], Philip Johnson[1], Liviu Mantescu[2], Shashank Srivastava[2]
1: Watergenics Inc., United States of America;
2: Watergenics GmbH, Germany

3:55pm - 4:20pm

AA31 - Revamping – Modernizing Aging Filters for Peak Performance

Matthias Hatzenbühler, Jürgen Hahn
BOKELA GmbH, Germany

4:20pm - 4:45pm

AA19 - Advanced Precipitation and Classification Control Strategy to Meet Customer Granulometry and Soda Specifications

Debashis Tripathy, Kumar Ayush, Sinchita Ghosh Hazra, Nalini Barik, Prasanta Bose
Hindalco Industries Limited, Muri Works, India

4:45pm - 5:10pm

AA20 - AI-Enhanced – Machine Learning in Production for Precipitation Productivity with Strong Decision Support

Ameet Chaure[1], Keshav Karn[2], Shweta Mishra[3], Subhajit Samanta[4]
1,2,3,4: Hindalco Industries Limited Renukoot, India

7:30pm - 10:30pm

Social Event: Gala Dinner

Location: **GBR-3+4**
(Registered participants only)

Date: Tuesday, 17/Nov/2026

8:30am - 10:10am

BR-1: Bauxite Residue 1

Location: **Bipar&Hampi**
Chair: **Lance Myers**
Co-chair: **Efthymios Balomenos**

Metallurgical Reuse

8:30am - 8:55am

BR04 - Electrochemical-Assisted De-Ironing of Bauxite Residue as a Novel Approach for Its Bulk Utilization

Debanita Mallick, Rupambika Mohanty, Debabrata Mohanty, Subash Chandra Mallick
LN INDTECH SERVICES PVT LTD, India

8:55am - 9:20am

BR05 - A Method and System for Extracting Iron Values from Bauxite Residue

Chakravarthy Damuluri, Bhargav Damuluri, Gayatri Banda, Sudhakar Reddy Doddamreddy, Sreeman Mamidyala
Eesavyasa Technologies Pvt Ltd, India

9:20am - 9:45am

BR06 - Strategic Importance of Iron Recovery Technology in Bauxite Residue Valorization

Bhagat Lal Tudu[1], Pooja Sahu[1], Chinmaya Kumar Sarangi[1], Kali Sanjay[1], Digvijay Rajkumar Samal[2], Satya Prakash Mohapatra[2]
1: CSIR-Institute of Minerals and Materials Technology (CSIR-IMMT) Bhubaneswar, India; 2: NALCO Research and Technology Centre, Bhubaneswar, India

EL-3: Electrodes Sessions 3

Location: **GBR-2**
Chair: **Simon Laliberté-Riverin**
Co-chair: **Francesco Carlos Baccalà**

8:30am - 8:55am

EL09 - PAH Capture Efficiency of a Fives Dry Scrubber Treating Fumes from Qatalum Anode Baking Furnaces

El Hani Bouhabila[1], Bassam Hureiki[1], Jérémy Neveu[1], Sunil Bhajun[2], Sachin Karkade[2]
1: FIVES SOLIOS, France; 2: Qatalum, France

8:55am - 9:20am

EL10 - Modeling of Volatile Transport in Anode Baking Furnaces – An Approach to Explain Anode Sticking Phenomenon

Alireza Sadeghi-Chahardeh, Nafiseh Shadvar, Simon Laliberté-Riverin, Houshang Alamdari
Aluminum Research Centre–REGAL, Mining, Material, and Metallurgy Engineering Department, Université Laval, Québec, Canada

9:20am - 9:45am

EL11 - Improved Anode Baking with Ceramic Burner Inserts

Frank Appel, Frank Heinke, Falk Morawietz
innovatherm Prof. Dr. Leisenberg GmbH + Co. KG, Germany

9:45am - 10:10am

EL12 - Improvement in Baked Anode Quality and Fuel Consumption

Shashi Kant Tiwari, Deepak Mishra, Mahesh Sahoo, Lokanath Nayak, Jayesh Pawar
Hindalco Industries Limited, India

AL-3: Aluminium Electrolysis Session 3

Location: **GBR-3**
Chair: **Eirik Hagen**
Co-chair: **Vinko Potocnik**

8:30am - 8:55am

AL11 - Design and Installation of the Forced Cooling Network at Vedanta

Bibhudatta Mohanty[1], Kumar AnantVikarm Singh[1], Avinash Pandey[1], Dagoberto Severo[2]
1: Vedanta Limited, Jharsuguda, India; 2: CAETE Engenharia Ltda, Porto Alegre, RS, Brazil

8:55am - 9:20am

AL12 - CFD Modelling of the Vedanta Forced Cooling Network

Vanderlei Gusberti[1], Dagoberto Severo[1], Avinash Pandey[2], Swapnil Hirave[2], Bibhudatta Mohanty[2]
1: CAETE Engenharia Ltda, Brazil; 2: Vedanta Limited, India

9:20am - 9:45am

AL13 - Rectifier Technologies for Aluminium Electrolysis—Evolution, Technical Comparison and Future Outlook

Carsten Ritter[1], Nandhakumar Vijayakumar[1], Sanju Augustin[1], Ganeshram Sankar[2]
1: ABB Switzerland Ltd, Switzerland; 2: ABB India Ltd, Switzerland

9:45am - 10:10am

AL14 - From Reactive to Predictive Data-Driven Reliability Enhancement of High-Power Rectifier Systems

Pratap Kumar Sahu, Biswajit Tewari, Dinesh Pandey, Abhijit Debata, Girish Nainwal, Jagannath Satpathy
ADITYA BIRLA GROUP, India

AA-3: Alumina Session 3

Location: **GBR-4**
Chair: **Michael Reid**
Co-chair: **Andrey Panov**

Organics removal

8:30am - 8:55am

BX02 - Novel Analysis of Deported Bayer Organics from Multi-Pass Cyclic Digestions

Sharon Smith, Lauren Blackwell, John Clark, Elizabeth Carter
Smelting and Technology Rio Tinto Aluminium Pacific Operations, Brisbane, Australia

8:55am - 9:20am

AA26 - Bayer Saltcake Destruction by Wet Air Oxidation

Jason Clohessy
Aughinish Alumina Limited, Ireland

9:20am - 9:45am

AA24 - Improved Foam-Control Efficiency in Bayer Process Alumina Refining Through Enhanced Antifoam Application

Shounak Banerjee[1], Prasenjit Nath[1], Anand Yadav[1], Timothy La[2], Scott Barham[2]
1: Nalco Water, India; 2: Nalco Water,Australia

9:45am - 10:10am

AA27 - Development of an Anaerobic Process for Sodium Oxalate Treatment in Alumina Refineries

Raj Kurup
Environmental Engineers International Pty Ltd, Australia

10:10am - 10:40am

Coffee Break

10:40am - 12:20pm

BR-2: Bauxite Residue Session 2

Location: **Bipar&Hampi**
Chair: **Louise Clune**
Co-chair: **Efthymios Balomenos**

Reuse and handling

10:40am - 11:05am

BR11 - Unified Framework for CO2 Mineralization and Geopolymer Valorization of Semi-Dry Red Mud for Carbon-Negative Mortars

Kamran Ilahi[1], Solomon Debbarma[2], George Mathew[3]
1: Department of Civil Engineering IIT Bombay, India; 2: Department of Civil Engineering IIT Bombay, India; 3: Department of Earth Sciences Engineering IIT Bombay, India

11:05am - 11:30am

BR12 - Optimization of Bauxite Residue Filtration in a Press Filter Using Advanced Dynamic Control

Erica Lima[1], Cesar Damasceno[1], Denise Rodrigues[1], Ulisses Courbassier[1], Anne Castro[2]
1: Hydro Alunorte, Brazil; 2: Metso

11:30am - 11:55am

BR13 - Structural Optimization of Filter Press Membrane Plates Using Fatigue-Based Finite Element Modelling

Leonardo Marques Braga, Cesar Augusto Damasceno, Vania Alves Donato, Alan Silva, Reginaldo Álvares Junior
Hydro Bauxite & Alumina, Brazil

11:55am - 12:20pm

BRPA - Bauxite Residue: Paper Announcements

Efthymios Balomenos
ICSOBA, Greece

Short three-slide summaries, given by BR subject Organizer, of bauxite residue papers published in this year's TRAVAUX whose authors could not attend the conference. The full papers are available in the proceedings

EL-4: Electrodes Session 4

Location: **GBR-2**
Chair: **Lona Alsouki**
Co-chair: **Francesco Carlos Baccalà**

10:40am - 11:05am

EL13 - Mitigation of Anode Spike Formation in Potlines Through Superior Baked Anode Quality

Vibhav Upadhyay, Chandresh Vaghasia
Vedanta Limited, Jharsuguda, India

11:05am - 11:30am

EL14 - Enabling High-Amperage Smelting through Carbon Plant Upgrade and Digital Process Control

Aswini Kumar Mishra, Sudhir Patel, Sandeep R, Devendra Pathe, Venket Goldar
Hindalco industries limited, Mahan Aluminium, India

11:30am - 11:55am

EL16 - Direct Connection Cathode Assemblies – Laboratory Validation of a Modular Platform for Continuous Optimisation

Yasuhiro Koyama[1], Takuya Tsuda[1], Ryo Akita[1], Yusuke Kude[1], David Molenaar[2], Jeremy Kieruj[2], Xinquan Zhang[3]
1: SEC CARBON, Japan; 2: Commonwealth Scientific and Industrial Research Organisation (CSIRO), Australia; 3: Alumtech Consulting, Australia

11:55am - 12:20pm

EL17 - Experimental Off-Line Testing of Full-Scale Novel and Traditional Cathode Assemblies

David Molenaar[1], Jeremy Kieruj[1], Xinquan Zhang[2], Yasuhiro Koyama[3], Takuya Tsuda[3], Ryo Akita[3], Yusuke Kude[3]
1: Commonwealth Scientific and Industrial Research Organisation (CSIRO), Australia; 2: Alumtech Consulting, Australia; 3: SEC CARBON, Japan

AL-4: Aluminium Electrolysis Session 4

Location: **GBR-3**
Chair: **Ciro Kato**
Co-chair: **Claude Serge Ritter**

10:40am - 11:05am

AL15 - Reliability Improvement of Compressor House Through Online Vibration Monitoring

Biswajit Tewari, Prasana Sahoo, Niharika Sahoo
Hindalco Hirakud, India

11:05am - 11:30am

AL16 - Pot Life and Energy Efficiency Improvement in Hirakud Low-Amperage Pots

Pratap Kumar Sahu, Piyush Mishra, Ajay Dewangan, Chinmay Sarangi, Narendra Tripathy
ADITYA BIRLA GROUP, India

11:30am - 11:55am

AL17 - Increasing the Service Life of RUSAL's Reduction Cells

Victor Mann[2], Victor Buzunov[1], Iliya Puzanov[1], Aleksandr Proshkin[1], Vasily Borisov[1], Vladimir Luzhetsky[1], Victor Chesnyak[1]
1: RUSAL Engineering & Technology Center, Russian Federation; 2: UC RUSAL, Moscow, Russia

11:55am - 12:20pm

AL18 - Applying Harrington's Desirability Function to the Smart Scheduling of Cell Cut-Outs for Relining

Victor Mann, Yuri Stefanyuk, Vitaly Pingin, Iliya Puzanov, Maxim Kibler
RUSAL, Russian Federation

AA-4: Alumina Session 4

Location: **GBR-4**
Chair: **Stephane Beaulieu**
Co-chair: **Sebastien Fortin**

Precipitation and refinery operation

10:40am - 11:05am

AA25 - Application of Efficient Antifoaming Agent in Alumina Industries

Ashish Rathore, Sirish Chandra Patnaik, Shivakumar Dugganahally Chikkanna, Narayana Reddy, Prateek Shah
KIMBERLITE CHEMICALS INDIA PRIVATE LIMITED, India

11:05am - 11:30am

AA21 - Optimization of Precipitation Conditions for Improving Alumina Trihydrate Strength and Productivity

Swapnil Ghatage[1], Parth Kamani[1], Chandrakala Kari[1], Ankur Gaur[2], Paul Gupta[2]
1: Aditya Birla Science & Technology Company Pvt Ltd, India; 2: Utkal Alumina International Ltd, India

11:30am - 11:55am

AA23 - Hydrate Quality Control in High-Yield Alumina Precipitation through Seed Ratio Optimization

Taynara Valentim, Enio Silva, Patricia Campos, Cleto Maues, Denise Rodrigues
Hydro Alunorte, Brazil

11:55am - 12:20pm

AA32 - Integrating the Cost of Risk and Critical Control Management – A Case Study in an Alumina Refinery

Beatriz Pantoja, Elizeu Ribeiro, Yuri Pires
Hydro Alunorte, Brazil

12:20pm - 1:20pm **Lunch**

1:20pm - 3:00pm

BR-3: Bauxite Residue Session 3

Location: **Bipar&Hampi**
Chair: **Carl Firman**
Co-chair: **Efthymios Balomenos**

1:20pm - 1:45pm

BR01 - Bauxite Residue Utilisation—the Global State of Play

Carl Firman
IAI

1:45pm - 3:00pm

PND-1: Panel Discussion - Bauxite Residue - Achieving 100% Reuse

Moderator: Efthymios Balomenos
Panellists: Abhishek Tripathi (General Manager – Sales, Marketing and BD for refinery byproducts, Hindalco Industries Ltd.) and Atul Mishra (General Manager – Quality and R&D, Dalmia Bharat, Rajgangpur Works), Carl Firman (Bauxite & Alumina Sustainability Programme Manager, International Aluminium Institute), Vaishali Surawar (Chief Sustainability Officer, Hindalco Industries Ltd.), Sébastien Fortin (Principal Adviser R&D, Bauxite and Bayer Process, Rio Tinto), Louise Clune (Environment and Regulatory Manager, Aughinish Alumina Ltd), Lance Myers (Director – Refining & Bauxite Technology, Alcoa)

Every tonne of alumina leaves behind one to one-and-a-half tonnes of bauxite residue, and most of it is still stored rather than used. Yet some refineries now reuse all of their annual residue, mainly in cement, while others struggle to place more than a few percent. What separates them? The session opens with a short overview from the International Aluminium Institute of how much residue is reused worldwide today, followed by a case study from India, where Hindalco and Dalmia Bharat Cement have taken residue from three refineries into cement at more than 100% of annual generation, drawing down stored residue as well. A panel then brings together the International Aluminium Institute and four producers working under very different regulatory, market and social conditions: Hindalco, Rio Tinto, Aughinish Alumina and Alcoa. The panelists will discuss what pushes refineries to invest in better residue handling and reuse, the barriers that remain in each region, and what producers, governments and residue users must do together to make 100% reuse the norm rather than the exception.

3:00pm - 3:30pm

Coffee Break

EL-5: Electrodes Session 5

Location: **GBR-2**
Chair: **Leslie Charles Price Edwards**
Co-chair: **Francesco Carlos Baccalà**

1:20pm - 1:45pm

EL15 - Assessment of Variability and Baking Temperature Sensitivity of the Sodium Sulfate Reactivity Test for Carbon Anodes

Elahe Khani, Simon Laliberté-Riverin, Guillaume Gauvin, Houshang Alamdari
Laval university

1:45pm - 3:00pm

PND-2: Panel Discussion - Electrodes - The Importance of Quality and Process Control

Moderator: Francesco Carlos Baccala
Panellists: Sergey Akhmetov, Christophe Bouché, Nicolas Gros and Simon Laliberté.

Electrode quality is fundamental to the technical, economic, and environmental performance of aluminium production. This panel will bring together industry experts to discuss how quality assurance and process control, from raw-material selection through anode and cathode production to final performance in reduction cells, can improve operational stability, energy efficiency, carbon consumption, productivity, and pot life. Topics will include material variability, manufacturing control, laboratory testing, traceability, digitalization, and predictive quality management. The discussion will also explore how closer integration among suppliers, electrode manufacturers, laboratories, carbon plants, and potroom operations can translate standardized quality data into more consistent and sustainable aluminium production.

AL-5: Aluminium Electrolysis Session 5

Location: **GBR-3**
Chair: **Jayson Tessier**
Co-chair: **Vinko Potocnik**

1:20pm - 1:45pm

AL19 - Development of an Innovative Hydraulic System for Pot Shell Deflection Recovery in Aluminum Smelters

Vinay kumar Tiwari, Brijesh Kumar, Piyush Chaudhary, Prosun Bose, Gaurav Verma
Hindalco Industries Limited, India

1:45pm - 2:10pm

AL20 - Development of a Fully Automated Mobile Gas-Fired Start-up System for Decommissioned Electrolysis Cells

Frank Appel, Frank Heinke
innovatherm Prof. Dr. Leisenberg GmbH + Co. KG, Germany

2:10pm - 2:35pm

AL21 - A Thermal-Sodium Diffusion and Structural Model for Electrolysis Cell Start-up and Early Life

Jose Dinarte Vieira Goulart[1], Vanderlei Gusberti[1], Dagoberto Schubert Severo[1], Maria Carolina Daviou[2], Leandro Edgardo Daurade[2]
1: CAETE Engenharia Ltda, Brazil; 2: Aluar Aluminio Argentino, Argentina

2:35pm - 3:00pm

AL23 - A Redox Reaction Integrated Tracer for Monitoring Anode Carbon Consumption and Enhancing Potline Current Efficiency

Ravi Selvaraj, Aqeel Al Lawati, Abdullah Saif AL Dhahli, Mohammed Al Mudallwi, Ciro Kato, Agnello Borim
Sohar Aluminium, Oman

AA-5: Alumina Session 5

Location: **GBR-4**
Chair: **Jose Erik Araujo**
Co-chair: **Callan Gault**

1:20pm - 1:45pm

AA33 - Drone Utilisation to Improve Safety, Asset Integrity and Operational Efficiency at Hydro Alunorte Refinery

João Silva, Ighor Ferreira, Luiz Macedo, Naylson Mesquita, Yuri Pires
Hydro Bauxite & Alumina, Brazil

1:45pm - 2:10pm

AA34 - Strengthening Sustainability Governance at Alunorte Through ASI Standards and Audit Data Integration

Jaise Carvallo, Jaqueline Silva, Vanessa Didier, Simone Araujo, Bruna Cabral
Hydro Bauxite and Alumina, Brazil

2:10pm - 2:35pm

AA35 - Supply Chain Efficiency at Hydro Alunorte's Port Operations

Renata Ikeda, Victor Albuquerque, Marcelo Siqueira
Hydro, Brazil

2:35pm - 3:00pm

AA36 - Implementing a Governance Model for Kaizen Management in an Alumina Refinery

Jaqueline Silva, Karina Karla Alves Trindade, Renata Ferreira Castro dos Santos, Jaise Keisy Silva Carvallo, Simone Rodrigues Ferreira de Araujo
Alunorte, Brazil

3:30pm - 5:00pm **Keynote Session B**

Location: **GBR-3+4**
Chair: **Marie-Pierre Paquin**
Co-chair: **Michel Reverdy**

3:30pm - 3:50pm

KN04 - Growth and Opportunities of Aluminium Industry—Indian Perspective

Brijendra Pratap Singh
National Aluminium Company, India

3:50pm - 4:10pm

KN05 - Technical and Market Developments in the Global Bauxite Mining and Alumina Refining Sector

Alan George Clark, Jason You
The CM Group, Australia

4:10pm - 4:30pm

KN06 - Operation of Utkal Refinery – Best Practices and Utilization of Bauxite Residue at Hindalco

Vaishali Surawar, Saurabh Khedekar, Abhishek Dash, Kumud Yadav
Hindalco Industries Limited, India

5:00pm - 5:30pm **Coffee Break**

5:30pm - 6:30pm **Annual General Members Meeting**

Location: **GBR-2**

7:30pm - 10:30pm **Social Event: Byg Brewski Brewing Company**

Registered participants only

Byg Brewski Brewing Company, Asia's largest premium brewpub, offers five experience zones, array of home-made craft Beers and a eclectic cuisine with combines both International and Local cuisines to suit every palate. Large open outdoor, adorned with lush greenery, water body combining nature's five elements namely earth, water, fire, metal, making this an opulent experience. Live music, no mobile zone, table games and many activities to participate in.

Date: Wednesday, 18/Nov/2026

8:30am - 10:10am

CH-1: Casthouse Operations 1

Location: **Bipar&Hampi**
Chair: **Jayson Tessier**
Co-chair: **Serge Risser**

8:30am - 8:55am

CH01 - InNexus™, a New Approach That Puts Domain Experts Back at the Heart of Industrial Software Development

Jean-François Parent[1], Pierre Trouiller[2]
1: EPIQ Digital, Montréal, Canada; 2: EPIQ Digital, Montréal, Canada

8:55am - 9:20am

CH02 - Transforming Operational Technology Visibility with Real-Time Alerts on Microsoft Teams

Swapan Gupta[2], Ashutosh Mantry[1], Anand Maurya[3], Mukesh Kumar[4]
1: Hindalco, India; 2: Hindalco, India; 3: Hindalco, India; 4: Hindalco, India

9:20am - 9:45am

CH03 - Remelting of Aluminium Electrolysis Bottom Cakes

Martin Syvertsen[1], Samuel Senanu[1], Marius Tokle Sørstad[2], Michael Glass[3], Eilif Gundersen[4]
1: SINTEF, Norway; 2: Alcoa, Norway; 3: Speira, Norway; 4: Hydro Aluminium, Norway

9:45am - 10:10am

CH04 - Flow Modification in Water Cooling Pan to Prevent Water Ingress Into Ingot Moulds

Yosua Wijaya, Harsel Purba, Ivan Ermisyam, Sabungan Rajagukguk, Haris Budiman
Indonesia Asahan Aluminium, Indonesia

AA-6: Alumina Session 6

Location: **GBR-2**
Chair: **Kausikisaran Misra**
Co-chair: **Sebastien Fortin**

Alumina red side - digestion and desilicatoni

8:30am - 8:55am

AA03 - Investigation of Desilication and Digestion Kinetics in the Bayer Process

Suchita Rai[1], Prachiprava Pradhan[1], Anupam Agnihotri[1], Jagdish Arora[2], Vinod Kumar Verma[2], Rama Satyanarayana Midde[2], Uma Mahesh Musti[2]
1: JNARDDC, Nagpur,India; 2: NALCO, India

8:55am - 9:20am

AA04 - Impact of Lime Addition on Alumina Extraction Under Low Temperature Digestion Conditions

Rajanikant Jadhav, Vaibhav More, Pratik Kundu, Hirak Mitra
Hindalco Industries Limited, India

9:20am - 9:45am

AA06 - Synthesis of Hydrogarnet from High Silica Indian Bauxite and Spent Liquor

Laxmipriya Nayak[1], Satyanarayanan Sharmila[1], Venkataseetharaman Aishvarya[1], Benadict Rakesh[1], Umapathi Balaji[1], Vinod Verma[2], Kumari Amrita[3]
1: CSIR, India; 2: NRTC, NALCO, India.; 3: NALCO Mines and Refinery, India.

9:45am - 10:10am

AA07 - Synthesis of Zeolite as a Desilication Product from High Silica Bauxite Leach Liquor

Arpita Sahu[1], Benadict Rakesh[1], Aishvarya Venkataseetharaman[1], Sharmila Sathyanarayanan[1], Bhagat Lal Tudu[1], Vinod Verma[2], Kumari Amrita[3]
1: CSIR, Bhubaneswar, India; 2: NNRTC, NALCO, Bhubaneswar, India; 3: NALCO Mines and Refinery, India

AL-6: Aluminium Electrolysis Session 6

Location: **GBR-3**
Chair: **Beverley Ann Pillay**
Co-chair: **Vanderlei Gusberti**

8:30am - 8:55am

AL24 - Optimizing Anode Effect Termination to Reduce PFC Emissions in INALUM Potline 2

Lego Sitinjak, Walter Doloksaribu, Edi Mugiono, Gratha Adhitya Putra, Kukuh Yudiarto
PT Indonesia Asahan Aluminium (INALUM), Indonesia

8:55am - 9:20am

AL25 - Reducing Anode Effects Through Preventive Anode Effect Detection and Treatment

Vincent Maigron, Adrian Pineau, Hervé Roustan, Pierre Marcellin, Anne Gosselin, Bastien Pansiot, Thomas Roger, Patrice Cote, Felizardo Bouene, Pradeep Varma
Rio Tinto

9:20am - 9:45am

AL26 - Reducing Anode Effects as a Pathway to Lower PFC Emissions—a Reliability-Driven Approach Aligned with ESG Goals

Agnello Borim, Ciro Kato, Said Al Hinai, Abdullah Al Dhahli, Salim AL Sudairi
Sohar Aluminium, Oman

9:45am - 10:10am

AL27 - Digital Transformation in a 60 Years Old Industrial Plant—A Practical Approach

Biswajit Tewari, Girish Nainwal, Anish Gupta
ADITYA BIRLA GROUP, India

AA-7: Alumina Session 7

Location: **GBR-4**
Chair: **Sharon Smith**
Co-chair: **Andre Azevedo**

Minerals extraction and analysis

AA28 - Improved Vanadium Sludge Recovery from Bayer Liquor

Bharathesh Kumar[1], Chandrakala Kari[1], Mukesh Kumar[2], Kumar Ayush[2], Debashis Tripathy[2]
1: Aditya Birla Science and Technology Company Pvt Ltd, India; 2: Hindalco Industries Limited, Muri, Jharkhand, India

AA29 - Gallium Extraction from the Bayer Liquor – A Technological Review

Maria Bagani, Elena Mikeli, Danai Marinos, Efthymios Balomenos, Dimitrios Panias
National Technical University of Athens, Greece

BX03 - Methodological Considerations for the Determination of Gallium in Bauxite by ICP-OES

Anastasia Pilichou, Eleni Mikeli, Efthymios Balomenos, Dimitrios Panias
National Technical University of Athens, Greece

BR14 - Optimization of the Calibration Curve for Analysis of Bayer Process Residues by WDXRF—Expansion of the Reference Matrix

Antonio Neto Paulino, Tracy Fonseca, Carlos Silva de Oliveira
Norsk Hydro Alunorte, Brazil

10:10am - 10:40am **Coffee Break**

10:40am - 12:20pm

CH-2: Casthouse Operation Session 2

Location: **Bipar&Hampi**
Chair: **Martin Fortier**
Co-chair: **Serge Risser**

10:40am - 11:05am

CH08 - Equipment and Technology Improvement for Aluminium Electrical Conductor Grade, Electrical and Mechanical Alloys Production

Alberto Ghisetti
Continuus-Properzi, Italy

11:05am - 11:30am

CH05 - Metallurgical Evaluation of the AluCLEAN™ Refining Rod as an Alternative to Gaseous Chlorine in Aluminium Degassers

Yanick Boulianne[1], Vincent Milani[1], Noluthando Majola[2], Ntandoyenkosi Khoza[2], Modise Mmakola[3]
1: STAS inc.; 2: Hulamin Rolled Products (Pty) Ltd; 3: Spectrum Technical (Pty) Ltd

11:30am - 11:55am

CH06 - Enhancement of Operational Performance in Tibor Rod Feeder System at EGA Jebel Ali Cast House

Khalid Rustamani, Faizali Palekar, Homer Menioria, Nilay Shah, Abani Kumar Meher
EGA, United Arab Emirates

AA-8: Alumina Session 8

Location: **GBR-2**
Chair: **Sanjay Mekala**
Co-chair: **Andrey Panov**
Alumina red side - filtration and separation

10:40am - 11:05am

AA10 - Anti-Scaling Performance of an Advanced Filter Fabric for Bayer Process Security Filtration in Diastar

Luc Parent[1], Shadeika Allen[2], Rachelle Wright[2]
1: Sefar, Canada; 2: Century Aluminum Jamalco,Jamaica

11:05am - 11:30am

AA11 - Optimization of TCA Preparation for Improved Security Filter Performance in an Alumina Refinery

Ameet Chaure[1], Praveen Vishwakarma[2], Shiv Sharma[3]
1: Hindalco Industries Limited; 2: Hindalco Industries Limited; 3: Hindalco Industries Limited

11:30am - 11:55am

AA12 - High Quality TCA Formation – A Key Driver for Refinery Optimization in the Bayer Process

Pooja Kumarnaik, Vaibhav More, Pratik Kundu, Hirak Mitra
Hindalco Industries Limited

11:55am - 12:20pm

AA13 - Adapting Bayer Process Liquor Clarification to Declining Bauxite Quality Through Flocculant Innovation

Raimunda Lina[1], Alexandre Freitas[1], Enio Silva[1], Bruno Tavares[1], Frederico Giusti[2]
1: Hydro Bauxite & Alumina, Brazil; 2: SNF Group

AL-7: Aluminium Electrolysis Session 7

Location: **GBR-3**
Chair: **Till Reek**
Co-chair: **Vanderlei Gusberti**

10:40am - 11:05am

AL28 - Development and Testing of Individual Anode Current Sensors for Hall-Héroult Process

Samuel Duplessis[1], Patrice Doiron[1], Marcel Guerreiro Neiro[2], Jayson Tessier[1], Dany Gauthier[1]
1: Alcoa, Canada; 2: Alcoa, Spain

11:05am - 11:30am

AL29 - Reconciliation of Anodic Electrical Currents in Hall-Héroult Cells

Jeneson Medeiros de Aquino Sales[1], Carl Duchesne[2], Éric Poulin[3], Samuel Duplessis[4], Julien Lauzon-Gauthier[4]
1: Aluminium Research Centre (REGAL), LOOP, Département de génie chimique, Université Laval, Québec, Canada; 2: Aluminium Research Centre (REGAL), LOOP, Département de génie chimique, Université Laval, Québec, Canada; 3: Aluminium Research Centre (REGAL), LOOP, Centre E4m, Département de génie électrique et de génie informatique, Université Laval, Québec, Canada; 4: Alcoa Corporation, Operational Excellence – Smelting Technology, Deschambault, Québec, Canada

11:30am - 11:55am

AL30 - On the Electrochemical Basis for Alumina Concentration Control

Asbjørn Solheim
SINTEF, Norway

11:55am - 12:20pm

AL31 - Application of AI Technology in Anode Yoke Maintenance

Yingwu Li, Xudong Wang, Qingguo Bai
Zhengzhou Jingwei Technology Industry Co., Ltd, China, People's Republic of China

AA-9: Alumina Session 9

Location: **GBR-4**
Chair: **Lousie Clune**
Co-chair: **Stephane Beaulieu**
Water balance and energy

10:40am - 11:05am

AA14 - Simulation-Based Control of Water Balance and Residue Washing Under Declining Bauxite Quality

Enio Silva[1], Taynara Valentim[4], Cleto Maues[5], Denise Rodrigues[2], Fabricia Ferreira[3]
1,2,3,4,5: Hydro Alunorte, Brazil;

11:05am - 11:30am

AA44 - Enhancing Industrial Effluent Treatment Resilience Under Extreme Rainfall Events at Hydro Bauxite and Alumina

Giselle Maria Lima Magalhães, Adjane de Sousa Rodrigues, Washington Gois Cândido, Jucyanne Vieira Pimentel, Felipe Alessandro Monteiro Picanço
Hydro Alunorte, Brazil

11:30am - 11:55am

AA43 - Integrated Process Condensate Utilization to Conserve Water and Energy – The Condensate Polishing Unit (CPU)

Rajesh Kumar Khuntia, Prince Siddhartha, Samavedam Bijaya Madhab
Hindalco Industries Limited (Utkal Alumina international Limited), India

11:55am - 12:20pm

AA39 - Improving Recovery and Thermal Efficiency through Optimized Bauxite Digestion – a Step towards Sustainability

Santunu Pathy
HINDALCO INDUSRIES LIMITED, India

12:20pm - 1:20pm **Lunch**

1:20pm - 3:00pm

CH-3: Casthouse Operation Session 3

Location: **Bipar&Hampi**
Chair: **Satya Mohapatra**
Co-chair: **Serge Risser**

1:20pm - 1:45pm

CH07 - Adjustable Tooling for Aluminium Slabs - Balance Between Production Flexibility and Geometric Accuracy

Anthony Baranov, Alexander Krokhin
LLC "RUSAL ETC", Russian Federation

1:45pm - 2:10pm

CH09 - Multiscale ICME-Based Design of High-Conductivity Alloys for EV Power Systems

Mainak Sen[1], Anirban Giri[1], Maneesh Chandra Srivastava[1], Snehashish Tripathy[2]
1: Vedanta Aluminium, Jharsuguda, India; 2: CSIR-NML, Jamshedpur, India

2:10pm - 2:35pm

CH10 - Development of Zr-Based Aluminium Alloy Wire Rod at Industrial Scale

Sanjay Chaturvedi[1], Sumant Ray[2], Sumit Singh[3], Vipin Pandey[4], Sambhu Ram[5], Nirdosh Prasad[6]
1: Hindalco Industries Limited, Unit - Mahan Aluminium, India; 2: Hindalco Industries Limited, Unit - Mahan Aluminium, India; 3: Hindalco Industries Limited, Unit - Mahan Aluminium, India; 4: Hindalco Industries Limited, Unit - Mahan Aluminium, India; 5: Hindalco Industries, Renukoot, India; 6: Hindalco Industries Limited, Unit - Mahan Aluminium, India

3:00pm - 3:30pm

Coffee Break

AA-10: Alumina Session 10

Location: **GBR-2**
Chair: **Janin Klatt-Eberle**
Co-chair: **Callan Gault**

Alumina red side - separation and heat exchange

1:20pm - 1:45pm

AA15 - Evaluation of Syensqo's Mud Rheology Modifier in Full-Scale Plant Trials at UC Rusal Ewarton Works, Jamaica

Patroy Foster[1], Alpha Barry[1], Scott Moffatt[1], Airong Song[1], Danielle Meggoe[2]
1: Syensqo, Canada; 2: UC Rusal Ewarton Works

1:45pm - 2:10pm

AA16 - Development of an Integrated Process Control Scheme to Optimise Mud Circuit Operation

Sarah Foley, Jason Clohessy, Steven Carey, Stephane Beaulieu, Peadar Lawlee
Aughinish Alumina Limited, Ireland

2:10pm - 2:35pm

AA08 - Mineralogical Characterization of Heat Exchanger Fouling for Maintenance Optimization in the Bayer Process

Taynara Valentim, Cleto Maues, Enio Silva, Patricia Campos
Hydro, Brazil

2:35pm - 3:00pm

AA09 - Thermal Imaging Diagnosis Technology for Scaling in Heat Exchangers

Qiu Ying, Zhang Manli, Wang Xinyan, Zhang Limei, Cheng Yao
Shanghai Heat Transfer Equipment Co Ltd., China, People's Republic of

AL-8: Aluminium Electrolysis Session 8

Location: **GBR-3**
Chair: **Samuel Senanu**
Co-chair: **Claude Serge Ritter**

1:20pm - 1:45pm

AL33 - Integrated Resource Recovery and Waste-Management Strategy for Skimmed Carbon Dust in Aluminium Smelting

Vinod Kumar, Manoj Kumar Tiwari, Vinay Kumar Tiwari, Gaurav Verma, Sasikumar Srinivasan
Hindalco Industries Ltd, India

1:45pm - 2:10pm

AL34 - Methods to Process Surplus Bath from Aluminium Production Into Valuable Products

Arne Petter Ratvik[1], Ole Wærnes[1], Erik Tveten[2], Hanna Marie Skogøy[3], Jakob Løyning[4]
1: SINTEF, Norway; 2: Hydro, Norway; 3: Alcoa, Norway; 4: Fluorsid, Norway

2:10pm - 2:35pm

AL35 - Waste-Free Recycling of Excess Smelter Bath to Obtain Fluorite Concentrate and Sodium Alkaline Solution

Alexander Suss, Daria Andreeva, Ruslan Badrtdinov, Andrey Gushchinskiy, Andrey Pinaev
RUSAL Engineering & Technology Center, Russian Federation

2:35pm - 3:00pm

AL36 - Upcycling of Spent Pot Lining Into High-Performance Air Cathode for Aluminium-Air Batteries

Sukanta Kumar Mahanta[1,2], Priyabrata Nayak[1,2], Gour Prasad Panda[2], Balaji Umapathi[1,2]
1: Academy of Scientific and Innovative Research, Ghaziabad, India; 2: CSIR-Institute of Minerals and Materials Technology, Bhubaneswar, India

AA-11: Alumina Session 11

Location: **GBR-4**
Chair: **Ben Yan Pei**
Co-chair: **Anthony Canfell**

Energy and evaporation

1:20pm - 1:45pm

AA38 - High Pressure Electric Boiler at Aughinish Alumina Using Renewable Energy

Brendan Lenihan, David Quinlan, David Horan, Rioch Magan, Stephan Beaulieu
Aughinish Alumina Limited, Ireland

1:45pm - 2:10pm

AA46 - Development of an Integrated Tool for Estimation and Optimization of Natural Gas Consumption

Fernanda Almeida[1], Fernando Melo[1], Natalia Neves[1], Fabricia Ferreira[1], Gladson Euler[2]
1: HYDRO ALUNORTE, Brazil; 2: Legasys Industrial Solution, Indaiatuba, Brazil

2:10pm - 2:35pm

AA41 - Dynamic Modelling of Multistage Mechanical Vapor Recompression for Alumina Refining

Madhusmita Ray[1], Siyun Ning[2], Woei Lean Saw[2], Jayshankar Ray[1,3], Jaichander Swaminathan[1]
1: Indian Institute of Science, India; 2: Adelaide University, Australia; 3: Triveni Engineering & Industries, India

2:35pm - 3:00pm

AA40 - Current Status and Comparative Analysis of Evaporator Technology Development in the Global Alumina Industry

Lirang Ju[1], Weixing Dong[1], Jun Dai[1], Michael Ren[1], Michael Missalla[2]
1: Juyeh Process Systems Co. Ltd, China; 2: MMMF Technical Services GmbH

3:30pm - 4:00pm

Best Paper Award Ceremony
Location: **GBR-3+4**
Chair: **Dagoberto Schubert Severo**

4:00pm - 5:30pm

Keynotes Session C
Location: **GBR-3+4**
Chair: **Abdulla Habib**
Co-chair: **Dagoberto Schubert Severo**

4:00pm - 4:25pm

KN07 - Sustainable Aluminium for a Greener Tomorrow—Vedanta Aluminium Metal Perspective

Vibhav Upadhyay
Vedanta Aluminium Metal Limited, Jharsuguda, India

4:25pm - 4:45pm

KN08 - Aluminium Market Outlook – a New Age of Disruption

Uday Patel
Wood Mackenzie, United Kingdom

4:45pm - 5:05pm

KN09 - Preventing Unplanned Production Stoppages Due to Safety Hazards and Accidents

Alex Lowery[1], Debashis Basu[2], Jaydip Dutta[2]
1: Wise Chem LLC, United States of America; 2: Pyrotek, India

6:00pm - 7:00pm

Women in Aluminium
Location: **Bipar&Hampi**

7:30pm - 10:30pm

Social Event: Fiestaa Resort and Events

Registered participants only

Fiestaa Resort n Events Venue is a Business Hotel, Resort and an Events Venue, all rolled into one, tucked cosily between eucalyptus groves, away from all the dust & din of the city, located between Bengaluru city and the Bengaluru International Airport.

Fiestaa Resort n Events venue is professionally managed by GEMS Hotel Management Institute, which marks the beginning of GEMS B School's venture in the Hospitality Sector. GEMS B School is one of the country's leading Business Schools, headquartered in The Bangalore Palace, Bengaluru.

Date: Thursday, 19/Nov/2026

8:30am - 10:10am

AL-9: Aluminium Electrolysis Session 9

Location: **Bipar&Hampi**
Chair: **Maitha Faraj**
Co-chair: **Vinko Potocnik**

8:30am - 8:55am

AL32 - Thermo-Electro-Mechanical Analysis of a Full Anode Assembly

Dupuis Marc[1], Du Pengfei[2], Hu Hongwu[3], Wang Xuan[4], Hou Jinlong[5,7], Sun Chihang[6]
1: Consultant GeniSim Inc., Jonquiere, Québec, Canada; 2,3,4,5,6: Shenyang Aluminum & Magnesium Engineering & Research Institute, China; 7: Central South University, Changsha, China

8:55am - 9:20am

AL40 - Monitoring of Heavy-Metal Potroom Emissions Using Particulate Matter as a Proxy

Thor Anders Aarhaug, Ole Sigmund Kjos, Debora Foppiano, Einar Jonsson, Elisabeth Thronsen
SINTEF, Norway

9:20am - 9:45am

AL43 - Using Life Cycle Assessment to Identify Environmental Hotspots and Decarbonization Vision for the Aluminium Industry

Vinod Kumar, Kumud Yadav, Abhishek Sharma, Manoj Tiwari
Hindalco Industries Ltd., India

9:45am - 10:10am

AL44 - Effect of Slot Submergence on Bubbly Flow and Bubble-Induced Liquid Flow in an Air-Water Model of the Hall-Héroult Cell

Ali Amiri-Gheisvandi[1,5], Simon Laliberté-Riverin[1,5], Samuel Duplessis[3], Ryan M. Soncini[2], Patrice Doiron[3], Gelareh Momen[4], Houshang Darvishi-Alamdari[1,5], Seyed Mohammad Taghavi[1,5]
1: l'Université Laval, Canada; 2: Alcoa, PA, USA; 3: Alcoa, Deschambault, Canada; 4: École de Technologies Supérieures, Canada; 5: Aluminum Research Center-Regal, Canada

10:10am - 10:40am **Coffee Break**

AA-12: Alumina Session 12

Location: **GBR-2**
Chair: **K Kiran Kumar**
Co-chair: **Anthony Canfell**

High purity alumina and special products

8:30am - 8:55am

AA53 - Engineering Hydrate-Filler Composites for Industrial Application – A Structure – Property Correlation Approach

Juhi Bhure[1], Madhur Kolte[2], Ganesh Basak[3], Hirak Mitra[4]
1,2,3,4: Hindalco Industries Limited;

8:55am - 9:20am

AA54 - Low-Cost Activated Alumina Production from NALCO Alumina Hydrates for De-Fluorination of Water and Wastewater

Jagdish Arora[1], Satyaprakash Mohapatra[1], Lavudya Naresh[1], Rupambika Mohanty[2], Subash Mallick[2]
1: National Aluminium Company Limited (NALCO), India; 2: LN INDTECH SERVICES PVT LTD, India

9:20am - 9:45am

AA55 - Tailored Surface Engineering of Alumina – Enabling Next-Generation Functional Materials Through Industrial Applications

Indu Bajpai, Karthikeyan Kumarasamy, Vikas Patil, Ganesh Basak, Hirak Mitra
Hindalco Industries Limited, India

9:45am - 10:10am

AA57 - Sustainable High Purity Alumina and Smelter Grade Alumina from Greenland Anorthosite

Jim Cambon, John Goode
Anortech Inc., Canada

AL-10: Aluminium Electrolysis Session 10

Location: **GBR-3**
Chair: **Bertrand Allano**
Co-chair: **Vanderlei Gusberti**

8:30am - 8:55am

AL38 - Broken Bag Detection in Large Gas Treatment Centres

Jesper Grjotheim Dahl[1], Mikkel Sorum[1], Anders Sorhuus[1], Anuj Jha[2]
1: REEL Norway AS, Norway; 2: Aditya Aluminium Private, Sambalpur, Orissa, India

8:55am - 9:20am

AL39 - Industrial Application of Horizontal Flue Gas Desulfurization for Aluminium Electrolysis

Yan Zhou, Haichen Song, Beverley Pillay
Alubase Industries, Australia

9:20am - 9:45am

AL41 - Repurposing Graphite from Spent Carbon Cathode Blocks in Lithium–Ion Batteries

Pradeep Pampalath[1,3], Sukanta Kumar Mahanta[1,2], Maneesh Chandra Srivastava[3], Balaji Umapathi[1,2]
1: Academy of Scientific and Innovative Research, Ghaziabad, India; 2: CSIR-Institute of Minerals and Materials Technology, Bhubaneswar, India; 3: Vedanta Aluminium Limited, Jharsuguda, India

9:45am - 10:10am

AL42 - Electrocoagulation-Enabled Treatment of High Fluoride Reverse Osmosis Reject for Water and Resource Circularity

Vaishali Surawar, Sagar Soni, Manoj Tiwari, Satyajit Mondal, Sandeep Mishra
Hindalco Industries Limited ; Aditya Birla Group, India

AA-13: Alumina Session 13

Location: **GBR-4**
Chair: **Ashutosh Kumar**
Co-chair: **Sebastien Fortin**

Decarbonisation and steam

8:30am - 8:55am

AA37 - Decarbonising Gladstone Alumina Refineries – Portfolio Progress, Prioritisation and Constraints

Sreeraj Balachandran, Tom Connor, Maxim Duchesne, Matilda Taylor, Ben O'Donnell
Rio Tinto Aluminium Ltd, Pacific Operations, Australia

8:55am - 9:20am

AA42 - Evaluation of Closed-Loop, Open-Loop and Hybrid Heat Pump Systems for Heat Recovery in Alumina Refineries

Siyun Ning[1,2], Graham Nathan[1,2], Peter Ashman[1,2], Woei Lean Saw[1,2]
1: Adelaide University, Australia; 2: Heavy Industry Low-carbon Transition Cooperative Research Centre, Adelaide, Australia

9:20am - 9:45am

AA45 - Technical and Statistical Evaluation of Açaí Seed Biomass Co-Combustion in Alstom CFB Boilers at Hydro Bauxite & Alumina

Fernanda Almeida[1], Fernando Melo[1], Felipe Picanço[1], Rodrigo Rodrigues[1], Edson Rui Montoro[2]
1: Alunorte, Brazil; 2: ERMontoro.

9:45am - 10:10am

AA48 - Refinery Decarbonization and Cost Reduction Using Thermal Energy Storage – Performance and Pre-Feed

Arijit Jatkar[1], Egon Linton[2], John O'Donnell[1]
1: Rondo Energy, United States of America; 2: Hatch Ltd, Canada

10:40am - 12:20pm

AA-14: Alumina Session 14

Location: **GBR-2**
Chair: **Marie-Pierre Paquin**
Co-chair: **Efthymios Balomenos**

Alternative alumina raw materials and technologies

10:40am - 11:05am

AA58 - Aluminum Tri-Hydrate Production from a Saskatchewan-Polymetallic Black Shale

Srinath Govindarajan[1], Jinmyung Jang[1], Benjamin Drakich[1], Egon Linton[1], Callan Gault[2]
1: Hatch Ltd, Canada; 2: Hatch Ltd, Australia

11:05am - 11:30am

AA59 - Mechanochemical Activation of Kaolin as an Alternative Feedstock for Sustainable Alumina Production

Maria Bagani, Laured Zuka, Dimitrios Sparis, Efthymios Balomenos, Dimitrios Panias
National Technical University of Athens, Greece

11:30am - 11:55am

AA60 - Halman – Alumina Recovery from Calcium Aluminate Slag Through Aluminothermic Reduction of Pre-Reduced Mn Ore

Manish Kumar Kar, Jafar Safarian
Department of Materials Science and Engineering, NTNU, Norway

11:55am - 12:20pm

AA61 - Recovery and Conversion of Alumina for a Closed Material Cycle in the REVEAL Project

Samuel Senanu, Erik Halaas Koren, Caren Regine Zeiger, Robert Fritzsch
SINTEF, Norway

12:20pm - 1:20pm

Lunch

AL-11: Aluminium Electrolysis Session 11

Location: **GBR-3**
Chair: **Amit Gupta**
Co-chair: **Claude Serge Ritter**

10:40am - 11:05am

AL46 - Anti-Disturbance Busbar Technology and Its Applications in Cells

Louis Bugnion, René von Kaenel
KAN-NAK, Switzerland

11:05am - 11:30am

AL47 - Estimation of Fluid Velocity Field Parameters in Aluminium Electrolysis Cells

Folco Giorgetti[1], Andrea Mattioni[3], Lucas Jose da Silva Moreira[3], Gildas Besancon[2], Mirko Fiacchini[2], Hervé Roustan[3], Francesco Ferrante[1], Mario Luca Fravolini[1]
1: Università Degli Studi di Perugia, Italy; 2: Université Grenoble Alpes, CNRS, Grenoble INP, GIPSA-Lab, France; 3: Rio Tinto, Laboratoire de Recherche de Fabrications, Saint-Jean-de-Maurienne, France

11:30am - 11:55am

AL48 - Improving Stability of the First or the Last Cell in a Potroom

Marc Dupuis[1], Valdis Bojarevics[2]
1: GeniSim Inc., Canada; 2: University of Greenwich, UK

11:55am - 12:20pm

AL49 - A Systematic Approach for Bipolar Cell Design Evaluation for Molten Salt Electrolysis

Sumit Deepak Gujar[1], Arun Eknath Pagare[1], Suyog Katkar[2], Chittaranjan Jena[1], Biswajit Basu[1]
1: Gharda Scientific Research Foundation, India; 2: M/S-FluiDimension,Pune,India

AA-15: Alumina Session 15

Location: **GBR-4**
Chair: **Sandeep Patil**
Co-chair: **Sebastien Fortin**

Alumina calcination and energy sources

10:40am - 11:05am

AA47 - Replacement of Heavy Fuel Oil with Natural Gas in Hydro Alunorte

Evilacio Luz Teixeira, Fernando Melo, Felipe Picanço, Andre Campos Terra, Giselle Magalhaes
Hydro Alunorte, Brazil

11:05am - 11:30am

AA49 - Microwave Assisted Calcination for Sustainable Production of Alumina

Nireesh Budumuru[1], Chandrakala Kari[1], Vilas Tathavadkar[1], Akash Mahajan[2], Pradeep Goyal[2]
1: Aditya Birla Science and Technology Company Pvt Ltd, India; 2: Pradeep Metals Limited, Rabale, Navi Mumbai, India

11:30am - 11:55am

AA50 - Preliminary Assessment of Burner Aerodynamic Similarity Parameters for Renewable Fuel Retrofits in Alumina Calciners

Daniel Jin Tung Ang, Muhammad Aqib Chishty, Graham Nathan, Alfonso Chinnici, Zhao Feng Tian, Woei Lean Saw
Adelaide University, Australia

11:55am - 12:20pm

AA51 - Pilot to Plant – Scale-up of Flash Calcination Process – a Strategic Engineering Approach

Nireesh Budumuru[1], Chandrakala Kari[1], Vilas Tathavadkar[1], Siddhalingesh G[2], Ashish Mishra[2]
1: Aditya Birla Science and Technology Company Pvt Ltd, India; 2: Hindalco Industries Ltd., Belagavi, India

1:20pm - 3:00pm

PND-3: Alumina Panel Discussion - From Efficiency to Industrial Transformation: Decarbonizing Alumina

Location: **GBR-2**
Chair: **Michaël Reid**
Co-chair: **Sebastien Fortin**

Panellists: Sreeraj Balachandran (Rio Tinto), Samir Dash (Hindalco), Carl Firman (IAI), Stephane Beaulieu (Aughinish Alumina) and Gus Nathan (HILT).

Decarbonizing alumina production will require more than a single breakthrough. Progress will depend on combining energy-efficiency measures, lower-carbon fuels and new technologies for steam production and alumina calcination. Energy efficiency is often the most immediate and cost-effective decarbonization lever, reducing both emissions and the scale of future low-carbon energy investments required.

This panel aims at connecting researchers advancing the next generation of technologies with the people implementing solutions in operating refineries. Panellists from various alumina-producing countries across the globe will offer a view of what is achievable today, what may become viable by 2030–2035 and what must change to accelerate deployment.

The discussion will begin by defining the main decarbonization pathways and clarifying the relationship between reducing energy consumption and reducing emissions. Refinery representatives will share experience from recent projects, discussing not only the technologies selected but also the practical lessons learned during project development, implementation and integration into operating refineries. Researchers will then outline emerging options, including lower-technology-readiness concepts that could enable deeper changes in alumina production.

The panel will examine the barriers that determine whether ideas move from pilot scale to industrial use. These include project economics, energy availability and pricing, technical integration, regulatory requirements, public policy, trade restrictions, intellectual-property protection and access to capital.

The panel will then explore models for collaborative technology de-risking, including shared demonstration projects, protection of R&D investment and incentives for early adopters. Audience members will be invited to interact with the panellists throughout the session, either by asking questions directly at the microphone or submitting them through the conference app. The session will conclude with an assessment of near-term opportunities, longer-term priorities and high-impact areas for collaboration across the sector.

PND-4: Aluminium Panel Discussion - Decarbonisation

Location: **GBR-3+4**
Chair: **Stephan Broek**

Co-chair: **Dagoberto Schubert Severo**

Panellists: Jayson Tessier (Alcoa), Sergey Akhmetov (Avenir Catalyst) Francesco Carlos Baccalà (R&D Carbon) and Dr. Anupam Agnihotri (MaxelS Tekventures).

As the aluminium industry faces increasing pressure to reduce greenhouse gas emissions while meeting growing global demand, this panel will explore the key technological, operational, and strategic pathways shaping the future of primary aluminium production.

Leaders from aluminium producers, technology suppliers, and research organizations will discuss how the industry can balance competitiveness, sustainability, and resilience in an era of rapid transformation. Topics will include the transition to low-carbon electricity, advances in cell technologies, inert anodes, carbon capture opportunities, the roles for digitalization and artificial intelligence, and operational excellence initiatives that can accelerate decarbonization while improving productivity.

Panelists will examine how primary aluminium producers can work collaboratively across the value chain to support circularity, improve resource efficiency, and meet evolving customer and regulatory expectations. The session will provide perspectives on both near-term opportunities and longer-term breakthrough technologies that could redefine aluminium smelting over the coming decades.

The panel aims to foster an open discussion on the industry's priorities, challenges, and opportunities as aluminium continues to play a critical role in the global energy transition and the development of a low-carbon economy.

The panel will identify the most promising technological and operational developments for reducing the environmental footprint of aluminium production while ensuring the industry's long-term economic sustainability. The discussion will provide valuable insights for producers, researchers, suppliers, and policymakers seeking to accelerate the industry's transition toward a more efficient, resilient, and low-carbon future.

3:00pm - 3:30pm **Coffee Break**

3:00pm - 3:30pm **Conference Closure**

Summary of Panels and Conference Closure

Date: Friday, 20/Nov/2026

8:30am - 5:00pm **Field Trip**