



**International Bauxite, Alumina & Aluminium Society (IBAAS)
& Jawaharlal Nehru Aluminium Research Development &
Design Centre (JNARDDC)**

PRESENTS

**10th International Conference & Exhibition
(IBAAS-JNARDDC 2022)**

ON

**'SUSTAINABILITY CHALLENGES OF BAUXITE, ALUMINA
& ALUMINIUM INDUSTRY'**

TECHNICAL PROGRAM - 2022



Courtyard Marriott Hotel, Raipur, India

September 14-17, 2022

**Program Highlights of IBAAS-JNARDDC 2022
Conference & Exhibition**

13th September 2022

15.00 - 19-00	Registration at Hotel Courtyard Marriot, Raipur
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14th September 2022

09.00 - 10.30	Inaugural Session
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10.30 - 13.00	Keynote Addresses & Presentation of General Interest
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14.00 - 18.00	Presentation by Sponsors & Supporters
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15th September 2022

	Three Parallel Sessions
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09.00 - 18.00	<ul style="list-style-type: none">• Bauxite, Non-Metallurgical Bauxite-Alumina & Bauxite Residue
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	<ul style="list-style-type: none">• Alumina
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	<ul style="list-style-type: none">• Aluminium Smelting & Downstream
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16th September 2022

09.00 - 15.00	Special Session on Sustainability by Aluminium Stewardship Initiative
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09.00 - 18.00	Remaining Parallel Technical Sessions
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17th September 2022

09.00 - 18.00	One Day Brainstorming Session on Non-Ferrous Metal Recycling in India by JNARDDC
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18th September 2022

07.00 - 18.00	Post Conference Plant Visit
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DAY 1 (14-09-2022)

Time (hrs)	13 th September 2022	
15.00 – 19.00	Registration at Hotel Courtyard Marriot, Raipur	
14 th September 2022		
07.30 - 09.00	Registration & Welcome	
09.00 - 10.30	Inaugural Function	
09.00 - 09.05	Welcome to IBAAS-JNARDDC 2022	
09.05 - 09.10	Presentation of bouquet to dignitaries	
09.10 - 09.20	Introduction of IBAAS by Convener	
09.20 - 09.30	Address by Representative of Aluminium Stewardship Initiative (ASI)	
09.30 - 09.40	Address by Representative of International Aluminium Institute	
09.40 - 09.50	Address by Guest of Honour	
09.50 - 10.00	Address by Chief Guest	
10.00 - 10.10	Vote of Thanks	
10.10 - 10.30	Opening of IBAAS 2022 conference	
10.30 - 11.00	High Tea	
	Speaker	Keynote addresses
11.00 - 11.30	Mr. Bibhu Mishra President & Head Manufacturing Center of Excellence of Hindalco Industries Limited, India	Keynote address 1: Digital Strategy, its Deployment and Various Elements for Success with Reference to HINDALCO
11.30 - 12.00	Ms. Lavinya Kugaswaran Environment (Bauxite & Alumina) Program Manager International Aluminium Institute	Keynote address 2: Bauxite & Alumina: Now and in the Future

12.00 - 12.30	Dr. A. Agnihotri Director JNARDDC	Keynote address 3: Future of Aluminium Industry in India
12.30 - 13.00	Dr. Vilas Tathavadkar Chief Technology Officer of Hindalco Industries Limited, India	Keynote address 4: Recent trends in Indian Alumina Industries: Opportunities & Challenges
13.00 - 13.30	Dr. Diego Rosani RosCon Cement Consulting International Aluminium Institute	Keynote address 5: Bauxite Residue Utilisation in Cement: The European perspective
13.30 - 14.30	Lunch Break	
14.30 - 15.00	Mr. Senthil Nath Unit Head Hindalco Industries Ltd.- Mahan, Singrauli, M. P.	Keynote address 6: Hindalco Aluminium Smelter Journey - Towards Greener-Stronger-Smarter World
15.00 - 15.30	Mr. Rajat Jain Vedanta Limited, India	Keynote address 7: Digital Transformation Journey at Vedanta Jharsuguda to embrace Industry 4.0 solutions
15.30 - 16.00	Tea /Coffee Break	
16.00 - 16.20	Mme Hadja Rayhanatou Diallo SOGUIPAMI	Keynote address 8: An Essential Actor in the Development of Bauxite Resources in the Republic of Guinea
		General Presentations
16.20 - 16.40		Presentation by NALCO Water, India
16.40 - 17.00		Presentation by Bokela GmbH, Germany
17.00 - 17.20		Presentation by Gaudfrin
17.20 - 17.40		Presentation by Tokai COBEX GmbH, Germany
17.40 - 18.00		Presentation by Ashapura Group, India

DAY 2 - PARALLEL SESSION 1
(15-09-2022)
TS-1: BAUXITE, NON-METALLURGICAL BAUXITE
ALUMINA & BAUXITE RESIDUE

Time (hrs)	Speaker	Title
09.00 - 09.10	Chairman	Introduction of Bauxite Session
09.10 - 09.30	Bijesh Jha President (Mines) & Bauxite Vertical Head Hindalco Industries Limited	Untapped Bauxite Resource & Strategic Outlook for growth
09.30 - 09.50	Thomas Baumann Sales and Business Development AKW Apparate + Verfahren GmbH	Bauxite Tailings Valorization: From Test Works to Industrial Scale Up
09.50 - 10.10	Basudeb Datta General Manager Sierra Mineral Holdings 1 Ltd. (Vimetco)	How Cut-off Grade Changes the Configuration of Bauxite Ore Body, Resources, Grades and Contribute to Economic Valuation of a Project?
10.30 - 11.00	Tea /Coffee Break	
11.00 - 11.10	Chairman	Introduction of Non-Metallurgical Bauxite-Alumina Session
11.10 - 11.30	Nandkumar Desai Managing Director Dharti Group	Bauxite for Production of Abrasive and Refractory grade Calcined Bauxite
11.30 - 11.50	P. G. Bhukte Principal JNARDDC, India	Non-metallurgical Grade Bauxite - Status & Future Prospects
11.50 - 12.10	Gajanan Thakare Sr. Manager (Quality Control) Castwel Industries Pvt Ltd, India	Refractory Raw materials, Indian Scenario, Challenges and possible solutions

12.10 - 12.30	S. Sankaranarayanan Alprocon	A Review of High Purity Alumina Industry
12.30 - 12.50	Priyanka Nayar Jr. Scientist, Analytical Division JNARDDC, India	Synthesis of 3N Pure Alpha Nano-Alumina from Aluminium Foil
13.10 - 14.00	Lunch Break	
14.00 - 14.10	Chairman	Introduction of Bauxite Residue Session
14.10 - 14.30	Subhasis Das Deputy General Manager FLSmith Private Limited	Recovery of Mineral from Red Mud and Disposal Solution to Provide Green Footprint to Alumina Industry
14.30 - 14.50	Silvia Farias Sr. Mine Consultant Norsk Hydro Brasil	Tailings Management and Sustainability
14.50 - 15.10	Anya Bouarab Researcher, INNORD Geomega Resources Inc.	A Sustainable and Profitable Bauxite Residues Valorization Process
15.10 - 15.30	Shreekant Kulkarni CEO Sejal Techno Services	Extraction of TiO ₂ from Titaniferous Bauxite Residue
15.30 - 16.00	Tea /Coffee Break	

DAY 2 - PARALLEL SESSION II
(15-09-2022)
TS-2: ALUMINA

Time (hrs)	Speaker	Title
09.00 - 09.10	Chairman	Introduction of Alumina Session
09.10 - 09.30	Preetam Routray Senior Sales Manager - MCP Metso Outotec	Relevance of Tube Digestion Technology in High Temperature Alumina Refinery
09.30 - 09.50	Yves Ocello Managing Partner Amber Development SAS, France	A Way to Use Local Bauxite Resources and to be Independent
09.50 - 10.10	Alessio Scarsella Director of Light Metals Metso Outotec, Oberursel, Germany	Metso Outotec's 5th Generation of CFB Alumina Calciners – Optimized Process and Equipment Design
10.10 - 10.30	Rajesh Khuntia Sr. Manager UTKAL Alumina and Solvay S.A.	MAX HT® 550 SODALITE SCALE INHIBITOR application at UTKAL Alumina International Ltd. – A “Green Solution” for Alumina Refinery's Sustainable Performance Improvement
10.30 - 11.00	Tea /Coffee Break	
11.00 - 11.10	Chairman	Introduction of the Session
11.10 - 11.30	Petra Mühlen CEO SpectraFlow Analytics Ltd., Switzerland	Improved Process Control Based on Near Infra-Red Online Analytics
11.30 - 11.50	Jürgen Hahn Director Global Sales Bokela GmbH, Germany	Solid-Liquid Filtration in Alumina Production - Developments to Date and Future Outlook

11.50 - 12.10	Jyoti Ranjan Swain Production In charge, Milling operations Vedanta Limited, India	Advanced Process Control for Grinding Circuit - Unlocking the Potential for throughput Improvement and Energy Savings in Ball Mills
12.10 - 12.30	Darwin Del Aguila Corrosion Scientist Aushex Pty Ltd, Australia	Corrosion Performance of Superhex Heater Tubes Exposed to Alumina Refinery Plant Conditions
12.30 - 12.50	Hans Sauer CEO Clearguard Group Pty Ltd	Auto Rodder – A Product of the Future
12.50 - 13.10	Adrien Dagallier Gaudfrin	Early Phase Separation and Disc Structure: Two Keys to the Reliable Operation of the First 7.5 m Diameter Vacuum Disc Filters
13.10 - 14.00	Lunch Break	
14.00 - 14.10	Chairman	Introduction of the Session
14.10 - 14.30	Janin Klatt-Eberle / René Rödenbeck STC-Engineering GmbH Waldenburg, Germany	Power Saving in Mixing, Steps for a Sustainable Environment
14.30 - 14.50	G. Vasudev Rao AGM Technical Utkal Alumina International Limited, India	Novelty in Commissioning Approach of Utkal Alumina Brownfield Expansion
14.50 - 15.10	David Brodie Principal Process Engineer Worley, Australia	A Fresh Water Free Alumina Refinery
15.10 - 15.30	Abhishek Seth Aditya Birla Science and Technology Company Pvt. Ltd, India	Mixing Behavior Analysis and its Effect on Precipitation Circuit Productivity
15.30 - 16.00	Tea /Coffee Break	
16.00 - 16.10	Chairman	Introduction of the Session

16.10 - 16.30	Amol U. Mankar Hindalco Industries Limited	Reducing Iron Impurity in Bayer Liquor
16.30 - 16.50	Pungkuntran Jaganathan Global Product Line Manager FLSmith	Carbon Footprint Reduction in Alumina Calciners
16.50 - 17.10	Bharathesh Kumar Aditya Birla Science and Technology Company Pvt. Ltd, India	CFD Modeling of Cooling Cyclones in a Gas Suspension Calciner for an Alumina Refinery
17.10 - 17.30	Suchita Rai Principal Scientist JNARDDC	Precipitation Process Intensification Using Mixed Seed in Bayer Circuit

**DAY 2 - PARALLEL SESSION III
(15-09-2022)**

TS 3: ALUMINIUM SMELTER

Time (hrs)	Speaker	Title
09.00 - 09.10	Chairman	Introduction of Aluminium Smelter Session
09.10 - 09.30	Abhishek Patel BALCO, India	Innovative Online Busbar Repairing in Aluminium Smelter
09.30 - 09.50	Prasad Nuka Runaya Refining LLP, Jharsuguda	A Process to Recover Metallic Aluminum from Aluminum Dross Ensuring Zero Waste and Zero Discharge, Promoting Circular Economy
09.50 - 10.10	Kuldip Chandrakar Head Bakeoven BALCO, India	Reduction in Specific HFO Consumption in Carbon Anode Baking Furnace

10.10 - 10.30	Chandrasekhar Kalingiri AGM (Metallurgy) NALCO	Restart the Pot lines After Prolonged Power Failure
10.30 - 11.00	Tea /Coffee Break	
11.00 - 11.10	Chairman	Introduction of the Session
11.10 - 11.30	Christophe BOUCHE Carbon Product Director Fives Solios, France	Make your Anode Baking Furnace Smart and Greener
11.30 - 11.50	Suryakanta Nayak Head Anode Baking Furnace Aditya Aluminium, India	Sustainable Operation of Anode Baking Furnace with shorter fire cycle to meet customer requirement
11.50 - 12.10	Maheswar Behera Consultant Aluminium Industries	Development of Bath Recycling Crushing Circuit for Anode Covering Materials
12.10 - 12.30	Khalil Khaji Consultant - Carbon Plants Carbon Anode Technology	Factors Affecting Properties and Performance of Carbon Anodes
12.30 - 12.50	Abdul Hamid Khan General Manager Head Process Control Mahan Aluminium Hindalco Industries Ltd., India	Production of P0303 Grade Sows at Mahan Aluminium
12.50 - 13.10	Rajesh Singh COO Metal BALCO, India	Reduction in Specific Auxiliary Power consumption of Pot Room
13.10 - 14.00	Lunch Break	

14.00 - 14.10	Chairman	Introduction of the Session
14.10 - 14.30	Debananda Bhattacharyya GM (Smelter) NALCO	Operation Excellence in Potlines Of Aluminium Smelters
14.30 - 14.50	Tushar S. Thorat Scientist ABSTC, India	Computational Analysis of Mechanical Deformation in Aluminium Reduction Cell
14.50 - 15.10	Vishnu Lodhi BALCO, India	Reduction in dead Pot Voltage in Aluminium Smelter
15.10 - 15.30	Jitendra Ahirwar BALCO, India	AO Digital Dashboard Using Power BI
15.30 - 16.00	Tea /Coffee Break	
16.00 - 16.10	Chairman	Introduction of the Session
16.10 - 16.30	Venkannababu Thalagani Scientist ABSTC, India	Impact of Operational Parameters in Aluminum Reduction Cell - A Computational Analysis
16.30 - 16.50	Rajeev Kumar Yadav Scientist ABSTC, India	Impact of Feed Quantity on Pot Performance
16.50 - 17.10	Kopal Agrawal VP Strategic Procurement Hindalco	Challenges in Raw Material Availability & quality for Alunimium Industry
17.10 - 17.30	V. K. Jha Sr. Scientist JNARDDC, India	Industry 4.0 for Indian Aluminium Smelters
End of Day 2		

DAY 3 - PARALLEL SESSION 1
(16-09-2022)
TS-4: ASI WORKSHOP

Time	Topic	
09:00 - 10:30	<ul style="list-style-type: none"> • Welcome and Overview of the Workshop 	
	<ul style="list-style-type: none"> • ASI Standards and Certification: <ul style="list-style-type: none"> o ASI Standards and Indigenous Peoples Advisory Forum (IPAF) o ASI Standards Revision process – role and input IPAF o ASI Performance Standard v3: focus on Biodiversity, FPIC, Human Rights and Community Engagement 	
	<i>10:30 - 10:45</i>	<i>Coffee /tea break</i>
	11:00 - 12:00	Background
	<ul style="list-style-type: none"> • Application on the ground, some real life examples of responsible development 	
	<ul style="list-style-type: none"> • How can some of the lessons learned in other countries be applied in India? 	
12:00 - 13:00	<i>Lunch break</i>	
13:00 - 13:45	Case-studies from Australia, Ghana and elsewhere	
13:45 - 14:45	Opportunities <ul style="list-style-type: none"> • What are the opportunities available for Indigenous peoples and communities to participate in responsible mining, before, during and after mining operations? • What are the options and opportunities for responsible development that include Indigenous peoples and communities to help protect the environmental, social and cultural values? 	
14:45 - 15:00	<i>Coffee /tea break</i>	
15:00 - 15:45	ASI Certification – Q&A	
15:45 - 16:15	Sustainability, Environmental, Social and Governance Landscape of Indian Aluminium Value Chain, Readiness, Challenges and Way Forward to Attain Global Competitiveness by Mr. Gangaa C Sharma & Mr. Vishwas Kamble	

DAY 3 - PARALLEL SESSION 11
(16-09-2022)
TS-5: ALUMINIUM DOWNSTREAM

Time (hrs)	Speaker	Title
09.00 - 09.10	Chairman	Introduction of Aluminium Downstream Session
09.10 - 09.30	Rashmi Ranjan Sahoo Deputy Process Control Head- Cast House Vedanta Limited, Jharsuguda, Odisha	Development of 65032 Alloy in Billet & Successful Customer Qualification
09.30 - 09.50	Jagadish Chandra Achinadkaa Principal Consultant q-Maxim LLP	Additive Manufacturing Process for Manufacture of Al Parts & Moulds for Al Manufacture - An Overview
09.50 - 10.10	A.K. Chaubey CSIR-(IMMT), India	Effect of Rare-Earth Elements on Structural Stability and Mechanical Properties of Al-Zn-Mg-Cu Alloys
10.10 - 10.30	R. Anil Kumar Jr. Scientist JNARDDC, India	Production and Certification of Certified Reference Materials for AA 6063
10.30 - 10.45	Tea /Coffee Break	
10.45 - 10.50	Chairman	Introduction of the Session
10.50 - 11.10	Mark Bumford Sales Director RIA Cast House Engineering GmbH	Operational Advances in Aluminium Cast Houses with In-Furnace Cameras and Laser Level Systems
11.10 - 11.30	Lokesh Kumar Sharma BALCO, India	Ramp up of Production and Quality Improvement Journey of Alloy Ingot for BALCO
11.30 - 11.50	Sanjiv Garg Jindal Intellicom Ltd.	Improved Energy Savings as well as Reduced Emissions using Water-in-Oil Nano-Emulsions in Aluminum Calciners and Bake Ovens

12.00 - 13.00	Lunch Break	
13.00 - 13.05	Chairman	Introduction of the Session
13.05 - 13.25	Immanuel Raju K JNARDDC	Effect of Ram Speed on Evolution of Peripheral Coarse Grain during Extrusion of AA2024 Alloy
End of Day 3		

**DAY 4 - SESSION I
(17-09-2022)
TS-6: NON-FERROUS METAL RECYCLING SESSION**

10:00 – 10:20	Welcome of Dignitaries and Lamp Lighting
10:20 – 10:40	Welcome address Dr A Agnihotri, Director, JNARDDC (MRA)
10:40 – 10:55	Non-Ferrous Metal Recycling Visions Joint Secretary, Mines
10:55 – 11:10	EPR for Recycling Industry Shri V P Mishra, Director, HSM Division, MoEF & CC
11:10 - 11:25	Shri P.K. Nimonkar, State Head Chhattisgarh Industrial & Technical Consultancy Centre
11:25 – 11:45	Tea break & networking
11:45 – 12:00	Role of Standard & Standardisation in Circular Economy Shri V K Rawat, Metallurgical Eng. Department, BIS
12:00 – 12:15	Skill Development for Circular Economy Mr. Ravishankar, Indian Iron & Steel Sector Skill Council
12:15 – 13:00	Industry Talk from Secondary Al, Cu, Pb and Zn MRIAI, ASMA, FAIAUM, BNFMA, ICA
13:00 – 14:30	Lunch break & networking
14:30 – 15:30	QA session

15:30 – 15:40	Vote of thanks By MRA
15:40 – 16:00	Tea break & networking

**DAY 5 - POST CONFERENCE PLANT VISIT
(18-09-2022)**

Time (hrs)	Program for Plant Visit
07.00	Departure from Hotel Marriot by Bus (maximum 30 selected delegates)
12.30	Arrival at HINDALCO Lapanga Smelter in Jharsuguda, Odisha, India
12.30 - 13.00	Short Working Lunch and Tea/Coffee
13.00 - 15.00	Plant visit
15.00	Return to Raipur