

International Bauxite, Alumina &  
Aluminium Society (IBAAS)

# “Aluminium Industry - The Evolving Asia-Pacific Story”

With One Day Theme Symposium  
on Energy Reduction in  
Aluminium Smelting,

Jointly organized with Indian  
Institute of Metals (IIM) on  
September 26, 2016



September 26 – 28, 2016

*Venue*

RADISSON BLU HOTEL & RESORT,  
SOUTH GOA

# IBAAS 2016

Circular I, February 2016



## **Invitation**

On behalf of the organizing committee, it is our pleasure to invite you to participate in the Fifth IBAAS International symposium (IBAAS-2016), being held in Goa, India during September 26 - 28, 2016.

The theme of the IBAAS-2016 symposium is “**Aluminium Industry- The Evolving Asia-Pacific Story**”. The first day of the Symposium is entirely devoted to Energy Reduction in Aluminium Smelting Industry and is organised jointly with the Indian Institute of Metals. **The details of this one day theme symposium are provided at the end of this circular.**

The symposium organizing committee is formulating a **World Class** program focusing on key topics and issues in the bauxite, alumina, non-metallurgical applications of bauxite and its derivatives, aluminium and aluminium downstream industry and secondary sectors.

## **Objectives of the Symposium:**

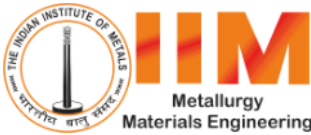
- ✦ Develop a Road Map for Aluminium Smelters in India
- ✦ Provide a platform to the attendees to share knowledge and review latest developments in the entire value chain of Aluminium Industry
- ✦ Review existing and upcoming bauxite resources in the world
- ✦ Technology up gradation and research work in the field of Alumina, Aluminium, Carbon products and electrodes, downstream products
- ✦ Application of Bauxite and Alumina for non metallurgical uses
- ✦ Recycling Industry and its contribution
- ✦ Critical drivers for entire chain of Aluminium Industry -Energy & Environment
- ✦ Waste (including SPL) disposal management and deriving value from waste

The Symposium will provide an excellent opportunity to meet and interact with International experts, scientists, engineers, entrepreneurs, equipment manufacturers, representatives of aluminium industries world over.

**International Bauxite, Alumina & Aluminium Society**



## Associated Organizers



Indian Institute of Metals



China Aluminium International  
Engineering Corporation Limited



Aditya Birla Science and  
Technology Company Pvt.Ltd



Jawaharlal Nehru Aluminium  
Research Development & Design Centre



Indian Institute of Chemical Engineers

## About IBAAS

International Bauxite, Alumina & Aluminium Society (IBAAS) is set up and registered in India by professionals active in various fields of aluminium industry [Registration No. MAH-820/12 (N)]. The initial activities are focused in the Asian region with special attention to India, China, Indonesia, Vietnam, Saudi Arabia and UAE. The founders of this society have vast experience in organizing similar symposia on bauxite, alumina and aluminium in India and China. IBAAS has successfully organized the four International events of Aluminium Industry in India and China during 2012-2015. Details of these IBAAS International symposia can be downloaded from the website <http://www.ibaas.info/>

## Patrons

- Mr. He Zihui, President, CHALIECO
- Mr. Kamal Prakash, Director, Unimark International
- Mr. Abjihjit Pati, Chief Executive Officer Aluminium Sector, VEDANTA
- Dr. Biswajit Basu, Dy CTO, ABSTCPL, Aditya Birla Group & Vice President - IIM
- Dr. Anupam Agnihotri, Director, JNARDDC
- Prof. Indranil Manna, Director IIT-Kanpur & Vice President - IIM



### **Core Team**

- Mr. Vinod Sood
- Mr. H Mahadevan
- Mr. Richard Flook (Australia)
- Dr. Nguyen Binh (Vietnam)
- Mr. D P Misra
- Mr. W U Ouyang (China)
- Mr. Yves Ocello, Director, (France)

### **Technical Committee**

- Dr. Rajiv Shekhar
- Mr. Tony McCabe
- Mr. Michael Shenton
- Dr. Mukesh Kumar
- Mr. Sanjib Roy
- Dr. P.K. Banerjee
- Mr. Sadguru Kulkarni
- Dr. T.R. Ramachandran
- Mr. A T Mathew
- Dr. B K Sathpathy
- Mr. Sateesh Kumar
- Mr. Manoj Chulliparambil
- Prof. S. S. Baral

### **Organizing Committee**

- Mr. R.N. Goyal
- Ms. Mohini

### **Convener (IBAAS)**

- Dr. Ashok Nandi

### **Co-Convener (IIM)**

- Dr. Vilas Tathavadkar



## Special Sessions

Apart from general topics on Bauxite, Alumina and Aluminium, it is planned to have following special sessions to be coordinated by leading experts during IBAAS 2016 symposium:

- ✦ *Aluminium Smelter - Energy Reduction - need and solutions for reduction in Energy consumption -Entire first Day program*
- ✦ *Worldwide Bauxite Deposits & Growth in Asian demand for bauxite and possible resources*
- ✦ *New Developments in Alumina Technology - Trends in Alumina technology with a constant pressure on costs*
- ✦ *Special Alumina - Growth opportunities for Non Metallurgical use of Bauxite and Alumina*
- ✦ *Opportunities in Aluminium Downstream & Recycling - Opportunities in Aluminium Downstream & Recycling including Aluminium Conductors*
- ✦ *Sustainability in Aluminium Production- from mining to downstream*
- ✦ *Bauxite Residue/Environment- Advances in Residue Management Techniques including neutralization of residue*
- ✦ *Breakthrough Technologies- Success stories on commercialization of R & D*

## Important Dates

### Deadlines for abstract and final manuscript

- |                                  |                 |
|----------------------------------|-----------------|
| ➤ Topic with Abstract in English | March 31, 2016  |
| ➤ Final manuscript in English    | June 30, 2016   |
| ➤ Presentations in English       | August 15, 2016 |

For young specialists and students, a special Poster Session will be organized to present poster papers at the venue of symposium.



### Symposium information

The venue for the IBAAS-2016 symposium is Radisson Blu Resort, Goa.

### **Contact details:**

**RADISSON BLU RESORT GOA CAVELOSSIM BEACH**



Cavelossim Beach  
South Goa  
India 403731

Tel: +91 832 672 6666

Fax: +91 832 672 6677

Email: [reservations@rdresortgoa.com](mailto:reservations@rdresortgoa.com)

### Hotel Tariff

Rooms Type (Superior/Premium)	Special Rate for IBAAS-2016 delegates (Including Breakfast)
Single Occupancy	INR 6500 per room per night*
Double Occupancies	INR 6500 per room per night*
Extra Adult	INR 2500 per room per night*

\*Tax extra as applicable (currently 3.63%)

### Other Hotels

Several hotels of varying price ranges are available near the symposium venue. Details will be provided to the interested delegates.

### How to reach

Goa is well connected to many cities including Mumbai & Bangalore by Air, Rail and Bus. Several international airlines including some Gulf based Airlines have direct flights to Goa.

### Language

The language of the Symposium is English. Papers will be published in the Proceedings (IBAAS Binder) in English.

### Invitation Letter

If requested by participants, an official invitation letter can be organized by IBAAS.



## Proceedings

Selected papers will be published in the form of PROCEEDINGS, a digital copy of which will be made available on a flash drive during the symposium. All the presentations received before the symposium will be compiled and circulated during the symposium.

## Post symposium visits

Details will be provided in the next circular and IBAAS website.

## Symposium fees

### 1. Delegate Fee

Please find below the fees for delegates, paper presenters and student/research scholar. Delegates from India and other countries can pay in USD and INR.

	Participants	Organizational Fee	
		US\$	INR
1.	General Delegates	400	20,000
2.	Paper Presenters	200	10,000
3.	Students/Research scholar	100	5,000
4.	Accompanying Spouse	100	5,000

Delegate fee includes symposium material, lunch and tea/coffee.

### 2. Sponsorship

By sponsoring this IBAAS-2016 International Event, you will raise your company profile and gain unparalleled access to the key decision makers in this industry. You can choose from various sponsorship packages as shown below:

#### a) Platinum Sponsor: INR 800,000 (US\$ 16,000)

1. A 20 min presentation on the second day of the symposium
2. Chairman of one session
3. A standard stall
4. Company logo on IBAAS webpage with a link
5. Company name and logo on background board of symposium hall, advertisements and symposium documents.
6. Company name in all the publications of IBAAS.
7. Sponsorship highlighted in updating symposium circular that to be sent to all the aluminium companies.
8. Projection of company name and logo in panel hall during tea break.



9. Full page colored advertisement in symposium souvenir (booklet).
10. 8 delegates free from symposium registration.

**b) Gold Sponsor: INR 600,000 (US\$ 12,000)**

1. A 15 min presentation on the second day of the symposium
2. A standard stall
3. Company logo on IBAAS webpage with a link
4. Company name and logo on background board of symposium hall, advertisements and symposium documents.
5. Company name in all the publications of IBAAS
6. Sponsorship highlighted in updating symposium circular that to be sent to all the aluminum companies
7. Projection of company name and logo in panel hall during tea break
8. Full page colored advertisement in symposium souvenir (booklet)
9. 5 delegates free from symposium registration

**c) Silver Sponsor: INR 400,000 (US\$ 8000)**

1. A 10 min presentation on the second day of the symposium
2. Company logo on IBAAS webpage with a link
3. Company name and logo on background board of symposium hall, advertisements and symposium documents.
4. Company name in all the publications of IBAAS
5. Sponsorship highlighted in updating symposium circular that to be sent to all the aluminum companies
6. Projection of company name and logo in panel hall during tea break
7. Full page colored advertisement in symposium souvenir (booklet)
8. 3 delegates free from symposium registration

**d) Symposium Lunch Sponsor: INR 300,000 (US\$ 6,000)**

1. Company name and logo on banners at the venue
2. Company logo on lunch coupon
3. Company logo on IBAAS webpage with a link
4. Company name and logo on background board of symposium hall, advertisements and symposium documents
5. Company name in all the publications of IBAAS
6. Sponsorship highlighted in updating symposium circular that to be sent to all the aluminum companies
7. Projection of company name and logo in panel hall during tea break
8. Full page colored advertisement in symposium souvenir (booklet)
9. 3 delegates free from symposium registration

**e) Support Sponsor: INR 200,000 (US\$ 4000)**

1. Company logo on IBAAS webpage with a link
2. Company name in all the publications of IBAAS
3. Sponsorship highlighted in updating symposium circular that to be sent to all the aluminum companies
4. Projection of company name and logo in panel hall during tea break
5. Full page colored advertisement in symposium souvenir (booklet)
6. 2 delegates free from symposium registration





## Exhibition

At the venue of IBAAS symposium, an exhibition is being organized showcasing the developments of aluminium industry in India and world over. Fully furnished aluminium framed stalls of 2mx2m size would be available for interested companies. More than 200 delegates from India and abroad are expected to participate in this International mega event. The tariff for exhibition stall is as follows:

	Exhibition module	Tariff for 3 days symposium	
		US\$	INR
1	1 stall	4000	200,000
2	2 stalls	6000	300,000
3	3 stalls	8000	400,000

## Advertisements

A Souvenir (booklet) will be brought out containing company profiles and advertisements. The tariff is as follows:

Sr. No.	Advertisement in Symposium souvenir	Fee	
		US\$	INR
1	Back Page Cover (Colored)	1800	90,000
2	Front inside Page (Colored)	1200	60,000
3	Back inside Page (Colored)	1000	50,000
4	Full Page (Colored)	800	40,000
5	Half Page (Colored)	500	20,000
6	Black & White (Full Page)	500	20,000



## Mode of Payment and Communication

All the Indian and Foreign companies and delegates can pay the delegate fees, sponsorship, advertisements and exhibition fees in INR to the bank account of IBAAS, India. While making payment, please specify **IBAAS Symposium-2016**.

The details of payment mode in India are as follows:

- ✦ By wire / Internet transfer to IBAAS Current Account No. 2162002100010474 of Punjab National Bank (Bharatnagar branch Nagpur-440001, branch code 2162), SWIFT CODE: PUNBINBBNKW, RTGS/NEFT IFS code : PUNB0216200
- ✦ By multicity cheque or demand draft in the name of "IBAAS" and send it by post to IBAAS, Row House A/5, Rajat Utsav II, Kachimet, Amravati Road, Nagpur 440033, India
- ✦ Receipt of payment will be provided by e-mail upon your request. The Permanent Account Number (PAN) of IBAAS for tax purpose is AAAAI5838B.

### Important Note:

- ✦ *A service tax of 14.5% would be added in the Sponsorship, Exhibition and Advertisements fees.*
- ✦ *Please confirm your payment by e-mail to [info@ibaas.info](mailto:info@ibaas.info) and contact us for further queries on payments.*

## Contact Information

### IBAAS Office

International Bauxite, Alumina & Aluminium Society (IBAAS), India

Web site: <http://www.ibaas.info/> Office E-mail: [info@ibaas.info](mailto:info@ibaas.info)

### Contact Persons:

- |  |  |
|--|--|
| ✦ Mr. Vinod Sood<br>Cell No.: +91 9870269851<br><a href="mailto:vinod.sood@ibaas.info">vinod.sood@ibaas.info</a>                               | ✦ Dr. Ashok Nandi, Symposium Convener<br>Cell No.: +919823015772<br><a href="mailto:ashok.nandi@ibaas.info">ashok.nandi@ibaas.info</a> |
| ✦ Mr. H. Mahadevan<br>Cell No.: +91 9963611125<br><a href="mailto:h.mahadevan@ibaas.info">h.mahadevan@ibaas.info</a>                           | ✦ Ms. Mohini<br>Cell No.: +919860240380<br><a href="mailto:info@ibaas.info">info@ibaas.info</a>  |
| ✦ Dr Vilas Tathavadkar<br>Cell No.: +91 8108333260<br><a href="mailto:Vilas.Tathavadkar@adityabirla.com">Vilas.Tathavadkar@adityabirla.com</a> |  |

You are requested to send all materials related to Symposium "IBAAS- 2016", to the e-mail addresses shown above. Your participation in the Symposium will be highly appreciated.

## **Organizing Committee**

**IBAAS - 2016**



# “Aluminium Industry- The Evolving Asia – Pacific Story”

## REGISTRATION FORM

<b>Title-(Prof/Dr/Mr/Mrs/Ms)</b>	
<b>Name of the Participant</b>	
<b>Position</b>	
<b>Name of the Organization/Institute / Company / Industry</b>	

<b>Address</b>			
<b>City</b>		<b>State</b>	
<b>Zip Code</b>		<b>Country</b>	
<b>Email</b>			
<b>Telephone</b>		<b>Mobile No.</b>	

**Require Visa Support Letter, Please tick**

<b>Yes</b>	<b>No</b>
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**Paper Detail (For Authors only)**

<b>Paper Title</b>	
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**Payment Detail**

<b>Mode of Payment : Bank Transfer / Cheque / DD / Cash</b>	
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**Hotel Accommodation**

<b>Require Hotel</b>	<b>Yes</b>	<b>No</b>
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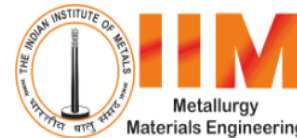
**Accommodation Choice, if any:**

**Post Symposium Plant Visit, Please tick**

<b>Yes</b>	<b>No</b>
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**Date:**

**Signature:**



## One Day IBAAS-IIM Theme Symposium (September 26, 2016)

on

# Energy Reduction in Aluminium Smelting

### Key Theme

Aluminium metal due to its light weighting and high recyclability potential has a low life cycle cost. However, energy consumption for primary aluminium manufacturing is considerably high accounting for 30 to 40% of production cost. While anticipating encouraging economic conditions and policy decisions from the government, industry realizes the need for a concerted effort with a long term view to address energy challenges in aluminium smelting.

In this regard, Indian Institute of Metals, JNARDDC and IBAAS, in participation with the three Indian primary aluminum manufacturers – HINDALCO, Vedanta and NALCO, plan to organize a special symposium. The symposium on “Energy Reduction in Aluminium Smelting” would be organized in close participation of industry, academia, research laboratories and professional associations with the following key objectives

- Share knowledge and deliberate on worldwide initiatives on reduction in specific energy consumption in Al-smelting & evaluate the path forward for Indian industries.
- Create a forum of experts from industry, academia & research laboratories from both India and overseas along with government bodies.
- Set-up collaboration framework including working groups between industry, academia & research institutions to address the industry challenges through exchange, training and R&D/Technology programs

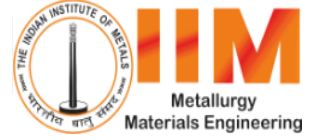
### Format of the Workshop

**Number of Sessions:** Inaugural session, followed by four (4) sessions of talks and discussion, and closing with one (1) group discussion session on focus areas and way forward

**Session Format:**

- Duration of each session is approximately 1.5 to 2 hours
- Each session will be dedicated to a specific theme

Each session to have 2 or 3 talks of 30-45 minutes, followed by 10-15 minutes of discussion for each talk, including questions to the speakers



## **Technical Session Details:**

### **Session 1: Overview**

- While setting the context for the one day event this session is intended to cover various technical and operational challenges as well as the regulatory requirements for energy reduction in aluminium smelters.
- Possible topics:
  - PAT & RPO energy regulation in India
  - Research at National Laboratories
  - Skill challenges and HRD
  - Operation challenges with high KA pots at low energy
  - Managing power fluctuations
  - Raw material quality

### **Sessions 2: Cell Technology**

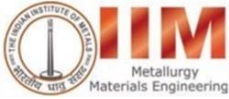
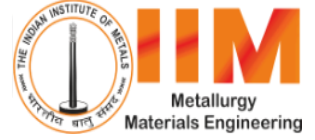
- The two sessions would focus on the latest trends in low energy cell technology. Also covered will be the critical areas of pot modeling, measurement and step changes in existing smelter for low energy operation
- Possible topics:
  - Low energy pot design and operation
  - Innovative low energy pot design in China
  - Pot modeling and measurement
  - Step changes in existing smelter

### **Session 3: Electrode Technology**

- The session would focus on the present trends in cathode and pot lining solutions as well as anode qualities and performance requirements for low energy cell.
- Possible topics
  - Cathode solutions
  - Anode requirements

### **Session 4: Process Control and Operation**

- Reduced anode cathode distance, bath volume and a narrower operation window poses more challenges for process control for low energy operation. This session would focus on the latest process control solutions and operations requirement for low energy
- Possible topics and speakers:
  - Low energy cell operation
  - Advanced process control solutions



#### About Indian Institute of Metals:

The Indian Institute of Metals is a premier organization representing materials and metallurgical engineers in India. Founded in 1946 by a group of metallurgists led by Dr. D.P. Antia, IIM is the largest professional organization for metallurgist in India with over 8000 members from R&D laboratories, academia and industry. The two main objectives of IIM are: promoting and advancing the science and technology of metals and alloys and protecting the interests of metallurgists and metallurgical industry.



#### About JNARDDC:

Jawaharlal Nehru Aluminium Research Development and Design Centre, is an autonomous body under ministry of mines, Govt. of India. It is a “center of excellence” set up in 1989 as a joint project by Ministry of Mines, Government of India and United Nations Development programme and fully functional since 1996. It was set up with a vision to create a state of the art research institute for the development of technologies and provide services to both primary and secondary aluminium industries with a special emphasis on environmental sustenance, energy and material conservation.



#### About ABSTCPL:

The Aditya Birla Science and Technology Company Private Limited (ABSTCPL) is the global corporate research and development hub for the Aditya Birla Group's diverse businesses. We undertake R&D projects to commercialise technologies for the Group's businesses in collaboration with its technology, production and marketing divisions. We also offer contract research, analytical services, engineering and scale-up facilities for entities outside the Group.