

**INTERNATIONAL COMMITTEE FOR STUDY OF  
BAUXITE, ALUMINA AND ALUMINIUM  
ICSOBA**

**NEWSLETTER**



A biannual publication

**Volume 16 – December 2016**

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The picture on the front page shows the charming autumn scene of Parc national de la Jacques-Cartier, Quebec.

In case you consider publishing in this forum, please contact the editor before writing your article.

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## FOREWORD

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Dr Claude Vanvoren  
President of ICSOPA

Dear ICSOPA Members!

As you will discover reading through this Newsletter, ICSOPA Organisation is moving full speed ahead to make this conference your conference.

Building on the success of the 34<sup>th</sup> Conference in Quebec and the lessons learned from the online satisfaction survey – for which I would like to warmly thank the overwhelming 53% of delegates who responded and made useful suggestions – ICSOPA Board is currently revisiting the organisation strategy to make ICSOPA even further at the service of the global Aluminium Industry of the 21<sup>st</sup> century.

Following the election, Board composition is reflecting this objective by integrating a fully diversified association representatives, both in terms of Companies and Geography.

In summary, the Board of your organisation is fully engaged in the modernisation and strengthening of your organisation through a whole range of initiatives you will be invited to validate during our next Member's General assembly in Hamburg. Those initiatives are all driven by an ultimate ambition: to ensure ICSOPA conference is the place to be for all the contributors of the Aluminium Industry,

being Company employees, Academics, Consultants or Retirees.

Updated strategy will address a wide range of issues from consolidation of the Technical Committee, establishing an University network, improving visibility and reputation without forgetting improvements of the conference itself.

All these initiatives are aligned towards ICSOPA vision: The Technology Conference of the Aluminium Companies, for the Aluminium Companies.

So, stay with us, we will regularly report progress through this Newsletter and I already invite you to visit our updated website and register to the 35<sup>th</sup> International Conference and Exhibition of ICSOPA which will be held October 2-5, 2017, in Hamburg, Germany in collaboration with TRIMET and DadCo.

With my best regards,

Claude Vanvoren  
President of ICSOPA

## NEWS AND EVENTS

## ICSOBA 2017

The [35<sup>th</sup> ICSOBA International Conference & Exhibition](#) will be held 2 – 5 October, 2017, in Hamburg, Germany in collaboration with TRIMET and DADCO. The theme of the meeting will be "Bauxite, Alumina & Aluminium Industry in Europe and New Global Developments," and your paper could be a part of the excitement! It's already time to start working on your submissions for the ICSOBA 2017 conference!

### CALL FOR PAPERS

### 35<sup>TH</sup> CONFERENCE AND EXHIBITION

## ICSOBA 2017

2 - 5 October 2017,  
Hamburg, Germany

**Organized by:** In cooperation with:



**Bauxite, Alumina & Aluminium  
Industry in Europe and  
New Global Developments**



**54<sup>th</sup> Anniversary of ICSOBA**

## INVITATION

**Dear Colleagues,**

The International Committee for Study of Bauxite, Alumina & Aluminium (ICSOBA) has great honor to announce the 35<sup>th</sup> International Conference and Exhibition of ICSOBA. The event will be held in the Radisson Blu hotel in Hamburg, Germany from 2 to 5 October, 2017 in cooperation with TRIMET and DADCO.

**Objectives of the Conference are to:**

- Review the status of bauxite, alumina and aluminium industries in the world with emphasis on Europe
- Discuss promising research developments aimed at production, productivity and cost improvements
- Highlight proposed Greenfield and Brownfield activities in the aluminium industry
- Discuss developments in the field of environment and safety
- Update market aspects of bauxite, alumina and aluminium and their products
- Provide an excellent opportunity to interact with international experts, scientists, engineers, technology suppliers, equipment manufacturers and representatives of aluminium industries the world over
- Facilitate university students meeting with industry representatives.

We look forward to seeing you at the ICSOBA 2017 Conference in Hamburg in October.

*Dr Claude Vanvoren and Dr Frank Feret*

**Keynote speakers:**

Among the expected keynote speakers are:

- **Dr Martin Iffert** (TRIMET),
- **Marco van der Werff** (DADCO),
- **Satish Pai** (Hindalco),
- **Rafael Vieira da Costa** (Hydro Bauxite & Alumina),
- **Carl Firman** (Wood Mackenzie).

## CALL FOR PAPERS

The Organizing Committee is inviting the submission of papers. Abstracts and papers should be written in the *ICSOBA Author Guidelines Template*, the presentations should use *ICSOBA Presentation Template*, both, available on the ICSOBA website [www.icsoba.org/ICSOBA-2017](http://www.icsoba.org/ICSOBA-2017). The submission of abstracts, papers and presentations is managed by ConfTool which is customized to ICSOBA 2017 Conference. The access to ConfTool is via ICSOBA website.

### Deadlines for abstracts, manuscripts and presentations:

<b>Abstract:</b>	<b>15 May 2017</b>
<b>Full Paper:</b>	<b>30 July 2017</b>
<b>Presentation:</b>	<b>15 September 2017</b>

## ORGANIZING COMMITTEE

**General coordination:** Dr Frank Feret, Dr Claude Vanvoren

**Secretary General:** Dr Andrey Panov

**Director Asia, Pacific:** Mr Bhawani Pani

**Director Academia:** Prof. Dr Houshang Alamdari

**Program organizer:** Michel Reverdy

**Subject organizers:**

**Bauxite and alumina:** Steve Healy and Errol Jaeger

**Bauxite residue:** Prof. Dr Yiannis Pontikes

**Carbon:** Matthieu Arlettaz

**Aluminium:** Dr Vinko Potocnik and Dr Viktor Buzunov

## REGISTRATION

Conference registration is managed by ConfTool which is customized for ICSOBA 2017 Conference. The access to ConfTool is via ICSOBA website [www.icsoba.org/icsoba2017](http://www.icsoba.org/icsoba2017).

## PROGRAM

- I. Keynote session: 2 October
- II. Technical sessions: 2 – 4 October
  - Global bauxite resources and mining scenario
  - Bauxite residue, challenges and its applications
  - Alumina production, specialty alumina
  - Aluminium reduction – new smelter and cell design
  - Carbon and carbon materials, non-consumable anodes and new cathode design
  - Casting and aluminium recycling
  - Economics, finance - new projects in mining and metallurgy
  - Regional dynamics & market analysis
  - Upstream and downstream challenges and opportunities
  - Environment, zero emission plants, health and safety
  - Operational excellence and productivity
  - Innovation and new technologies
  - Manpower for the next generation aluminium industry.
- III. Technical field trips: 5 October.

### Exhibition

During the Conference an Exhibition of latest technologies, equipment and other devices for the aluminium industry is planned (2 - 4 October).

### Registration, Welcome Reception and Meals at the Conference

The registration will start on Sunday, 1 October from 16 – 20 h and will continue Monday, 2 October in the morning at the Welcome Desk. Welcome cocktail with drinks and light buffet will take place on Sunday, 1 October, while the Gala Dinner will be on Monday, 2 October in the evening.

The special dinner for organizers, sponsors and exhibitors will take place on Tuesday, 3 October.

The Best Papers Awards and conference closure ceremony will take place on Wednesday, 4 October.

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## ICSOBA MATTERS

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Dr Frank Feret, CEO, Vice President of ICSOBA

### *ICSOBA – JER 2016 Conference & Exhibition in Quebec*



**General view of Quebec**

The 34<sup>th</sup> International Conference and Exhibition of ICSOBA was held in the period 3 – 6 October in the capital of the Quebec province in Canada in the Palace Royal hotel. The Conference obtained support from Rio Tinto and REGAL (Regroupement Aluminium) and attracted more than 350 delegates from 29 countries. REGAL is an organization which regroups professors and students from Quebec universities doing research on aluminium related projects and their annual meeting (JER) was a part of the conference. As many as 130 REGAL delegates participated in the event.



Most of the conference participants

The ICSOBA 2016 conference featured many international industry and academia speakers who covered topics including bauxite and bauxite resources, alumina production and residue solutions, primary aluminium production, carbon and carbon materials and aluminium products and alloys.

The conference included 92 technical and scientific presentations and 75 posters, discussions on alumina and aluminium production in Canada, as well as on new global developments. Under direction of Michel Reverdy and Vinko Potocnik the 2016 papers were published in the TRAVAUX vol. No. 45, which this year contains 934 pages.

### ***The Best Papers Awards***

During the gala dinner four papers from the conference were announced for the best paper award. The awards are dedicated to recognizing outstanding papers across the entire program. Three subjects were considered: bauxite and alumina, carbon and electrolysis. The subject organizers of each stream: Steve Healy (bauxite and alumina), Mathieu Arlettaz (carbon) and Vinko Potocnik (electrolysis) made their selections. Given the breadth, diversity and quality of the nominations, the job of picking winners was quite difficult. Two aluminium electrolysis papers were awarded due to the larger number of papers in this subject. The awards are:

1. The “Best Bauxite & Alumina Paper Award”: Tobias Hertel, Remus Ion Iacobescu, Bart Blanpain and Yiannis Pontikes - “Large Scale Valorization of Bauxite Residue for Inorganic Polymers”, Paper AA13, *Travaux* 45, 199-209.
2. The “Best Carbon Paper Award”: Camilla Sommerseth, Rebecca Jayne Thorne, Arne Petter Ratvik, Espen Sandnes, Hogne Linga, Lorentz Petter Lossius and Ann Mari - “The Effect of Varying Mixing and Baking Temperatures on the Quality of Pilot Scale Anodes – A Factorial Design Analysis”, Paper CB07, *Travaux* 45, 333-342.
3. The “Best Aluminium Paper Award”: Pierre Reny, Martin Segatz, Friedrich-Markus Leder, Ole Johnny Midtun, Jørund Gimmestad Hop and Håvard Gikling - “Low Energy Start-up for Low Energy Cells”, Paper AL02, *Travaux* 45, 485-496.
4. The “Best Aluminium Paper Award”: Alton Tabereaux - “Low Voltage Anode Effects and Unreported PFC Emissions”, Paper AL16, *Travaux* 45, 631-641.

## **Sponsors and Exhibitors**

ICSoba could not continue its mission without sponsors supporting the non-for-profit organization. Among the 2016 sponsors we have: Rio Tinto - the host sponsor, as well as the Économie, Science et Innovation - Quebec government, Aluminium Association of Canada and FLSmidth. The other sponsors are BOKELA, Cytec Solvay Group, Maestria Solutions, Nalco - an Ecolab Company, Outotec, PANalytical, SEFAR and of course REGAL as partner. Seven exhibitors (Aqseptence Group S.r.l., CCEWOOL Thermomax Inc., Cytec Solvay Group, CIR Laboratory Inc., MECFOR Inc., PANalytical, REEL Alesa Ltd.) displayed information on their products in the booths.

## **Formal Changes to ICSoba**

ICSoba is an international association of members and the members periodically elect the Board of Directors in the Annual Meeting. At the time of the 34<sup>th</sup> ICSoba conference held in Quebec, Canada a complementary election to the board of Directors took place.

There are some changes in the composition of the Board of Directors that were proposed to the members at the Members Meetings on 4 October in Quebec and that were accepted. The changes result from the need to strengthen ICSoba and do everything possible to assure its continuity. More than a half century of contributions to society have proven ICSoba's cause.

At present, Andrey Panov, Frank Feret and Michel Reverdy, who were elected by members in Zhengzhou, China in 2014 continue their work for another two years. Four new Board members who were elected and who complement the new Board are: Claude Vanvoren Matthieu Arlettaz, Houshang Alamdari and Bhavani Pani. The Directors will jointly assure responsibility for the organization and have assigned duties. Composition of the new Board of Directors is given in the table below:

<b>Who</b>	<b>Association</b>	<b>Position</b>	<b>E-mail Address</b>
Dr Claude Vanvoren	Rio Tinto	President	<a href="mailto:claude.vanvoren@gmail.com">claude.vanvoren@gmail.com</a>
Dr Frank Feret	ICSoba	Vice President, CEO	<a href="mailto:feretfr@gmail.com">feretfr@gmail.com</a>
Dr Andrey Panov	Rusal	Vice President Secretary General	<a href="mailto:Andrey.Panov@rusal.com">Andrey.Panov@rusal.com</a>
Michel Reverdy	Emirates Global Aluminium	Program Director	<a href="mailto:michel.reverdy@hotmail.fr">michel.reverdy@hotmail.fr</a>
Prof. Dr Houshang Alamdari	Laval University	Director University Affairs	<a href="mailto:Houshang.Alamdari@gmn.ulaval.ca">Houshang.Alamdari@gmn.ulaval.ca</a>
Matthieu Arlettaz	R&D Carbon	Director	<a href="mailto:Matthieu.Arlettaz@rd-carbon.com">Matthieu.Arlettaz@rd-carbon.com</a>
B.S. Pani	SPAN Resources	Regional Director Asia	<a href="mailto:bspani@yahoo.com">bspani@yahoo.com</a>



## ICSOBA Medals

On ICSOBA's 50<sup>th</sup> anniversary in 2013, the Awards Committee decided to produce commemorative medals (see below). The new "ICSOBA Commemorative Medal" is 70 mm in diameter and takes its inspiration from two past designs. On one side are the embossed portraits of Pierre BERTHIER, Karl Joseph BAYER, Paul Louis Toussaint HEROULT and Charles Martin HALL. On the other side are the emblems of ICSOBA and the World, the full ICSOBA name, the name of the person awarded and the year of bestowal.



As in the past, the "ICSOBA Commemorative Medal" constitutes a special recognition and may be awarded only to a small number of recipients each year. The medal may be awarded to those members who achieved significant scientific or practical results within the field of work, or who notably strengthened ICSOBA organization or promoted its international scientific and industrial cooperation. The name of the awarded person is inscribed on the medal, and the awarding event is published in the NEWSLETTER.

Six medals were awarded in 2013 in Krasnoyarsk (Dr György Komlóssy, Dimitri Contaroudas, Prof. Dr Peter Polyakov, Dr Viktor Buzunov, Dr Andrey Panov and Marja Brouwer).

In 2014 in Zhengzhou four medals were awarded to: Roelof Den Hond, Prof. Dr Li Wangxing, Dr Jeannette See and György Bánvölgyi.

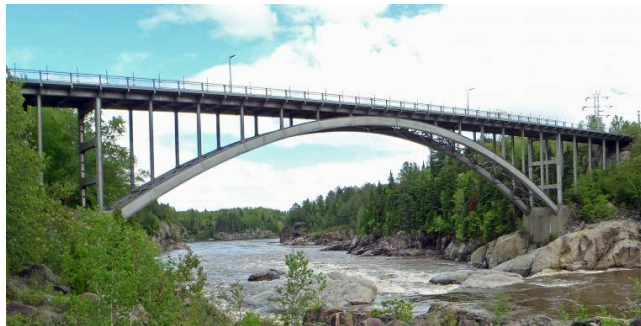
Last year three medals were awarded in Dubai to: Dr Ali Al Zarouni (2015 President of ICSOBA), Michel Reverdy, ICSOBA-2015 Program Organizer, and Dr Vinko Potocnik (subject organizer and TRAVAUX co-editor).

This year two medals were awarded in Quebec. The first medal went to: **Dr Claude Vanvoren** of Rio Tinto in recognition of his work as the 2016 ICSOBA president, which includes welcoming ICSOBA in Quebec, facilitating the organization of the highly successful conference, and seeing to ICSOBA's prosperity and growth.

The second medal was awarded to **Dr Houshang Darvishi Alamdari** of University Laval, for his work on the Board of Directors and for outstanding contribution to organization of ICSOBA 2016 conference, which includes opening of ICSOBA to the representation of academia.

Since 2013 two medals are given each year to the visited plants as tokens of appreciation for hosting ICSOBA delegates. This year the medals were awarded to Rio Tinto Alma Smelter and to Rio Tinto Vaudreuil Plant.

### **Plant Visits**



In 1950 the Arvida Bridge, an arched aluminum bridge, was completed, spanning the old Saguenay gorge near the Shipshaw power house. The deck, piers and arch are all made in aluminium. The total length is 153.62 m. The arch span is 91.50 m and the deck width is 10.36.m.



Located in Jonquière, Saguenay, Vaudreuil refinery transforms bauxite into alumina via the “Bayer” process. The Vaudreuil site is the largest centre of inorganic chemistry in Canada. The bauxite Vaudreuil uses comes from several countries including Brazil, Guinea and Ghana. It was commissioned in 1936 and is one of the last alumina refineries to operate without being located near a bauxite mine. Vaudreuil refinery produces 1 500 000 tonnes of alumina and specialty products (hydrates, aluminium fluoride) per year. It supplies most Rio Tinto smelter’s need in the region, which is converted into primary aluminium in the Saguenay – Lac-Saint-Jean smelters. Vaudreuil is one of the best refinery in the world in terms of greenhouse gases emissions and in terms of energy efficiency.



Located in Alma, Quebec, this smelter began operating in 2000. It operates 432 AP30 cells and produced over 466 000 tonnes of primary aluminium in 2015. Alma is powered by hydroelectricity from the Saguenay-Lac-Saint-Jean's various power stations. The aluminium produced at the Alma smelter is cast in various shapes; namely, rod, T-ingot, pig ingot, and molten aluminium for specialised markets worldwide. The Alma smelter is recognised as an environmental performance leader within the Rio Tinto Group, and the global aluminium industry.



Participants in the plant visits

### ***ICSOPA 2016 Satisfaction Survey***

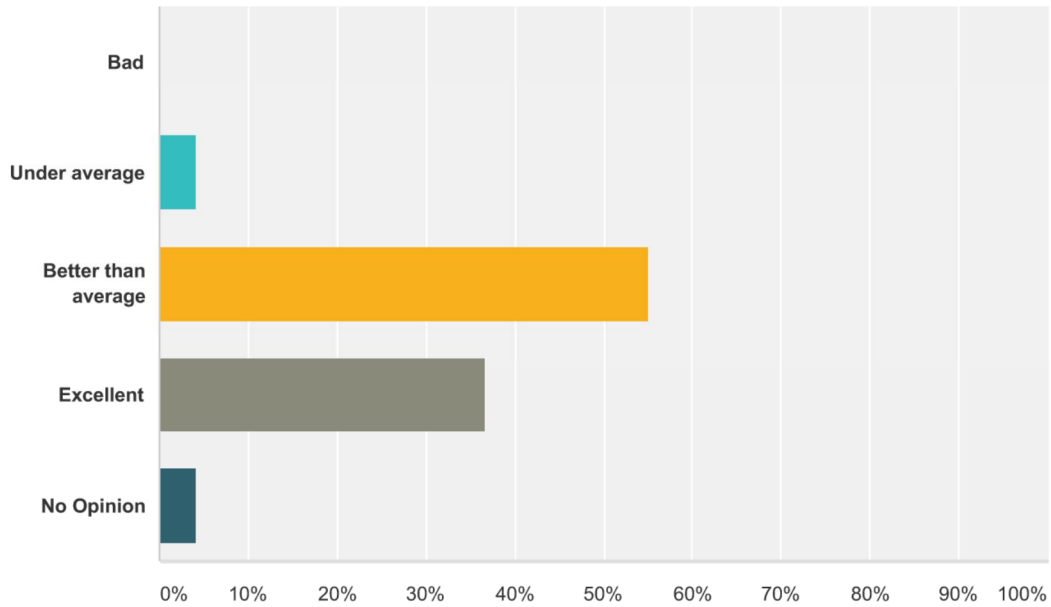
Following the event, an online Quebec conference satisfaction survey was carried out among the participants. The comprehensive results of the survey lead to the selected conclusions as follows:

- Response rate of 53% demonstrates the overall interest from delegates to ICSOPA organisation and conferences
- For technical quality, applicability and innovative nature of the papers we got good or very good results
- Some critical comments were made regarding the keynotes presentation
- Very good results obtained regarding organisation, registration process, staff support, conference material, social function
- Points for improvements are:
  - Plant visit format to be adjusted to ICSOPA audience
  - Exhibition (size, format, layout)
  - Conference room layout, audio and video
  - ICSOPA website.

Overall, a very good rating of the conference versus other events and an overwhelming 90 % of recommendation.

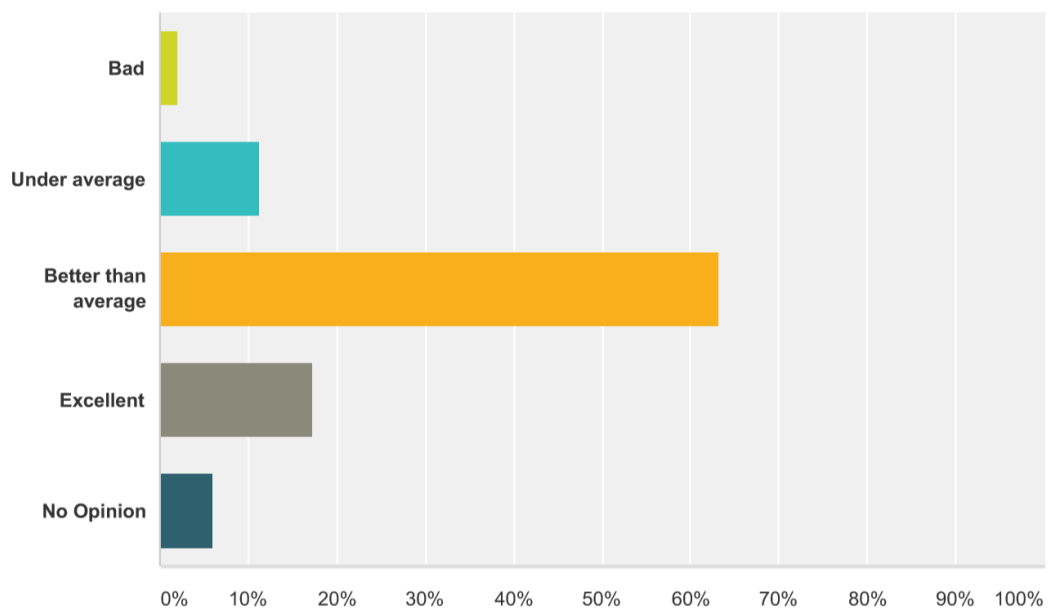
### Q1 Technical quality and content of the presentation

Answered: 98 Skipped: 0



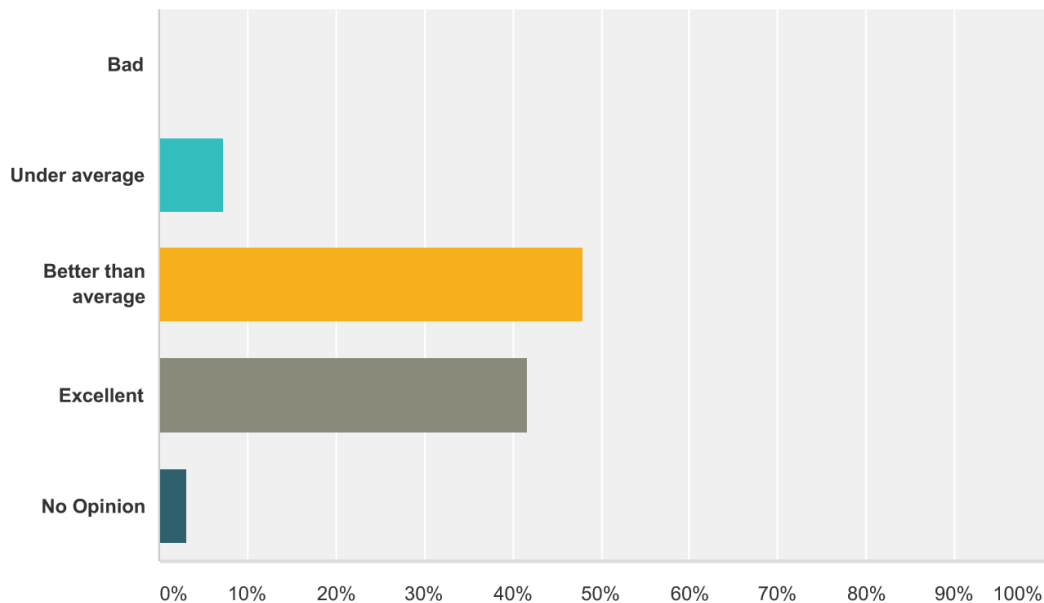
### Q3 Innovative nature of technical content presented (new information)

Answered: 98 Skipped: 0



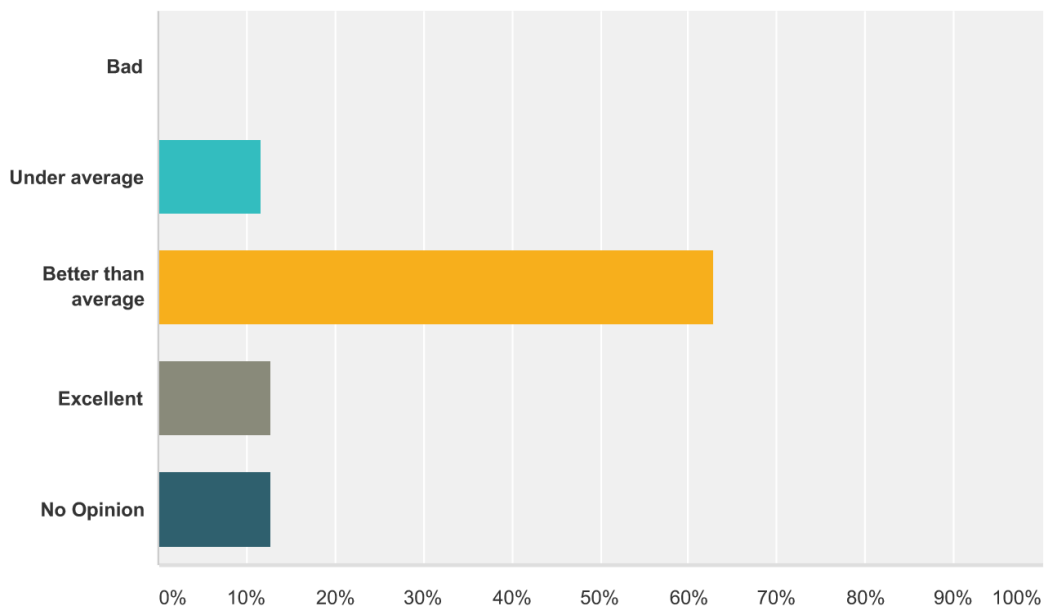
### Q6 Networking opportunities

Answered: 96 Skipped: 2



### Q13 How ICSoba 2016 compares to other similar events that you have attended

Answered: 94 Skipped: 4



We thank you for your constructive feedback regarding the 2016 ICSoba conference. Your effort to let us know how we are doing, and how we can do better, is appreciated; so, keep those comments coming.

## Associated Organizations

The list of associated organizations can be found on the ICSOBA website at [www.ICSOBA.org/AboutUs/ASSOCIATED ORGANIZATIONS](http://www.ICSOBA.org/AboutUs/ASSOCIATED_ORGANIZATIONS).

**MetalBulletin**  
Events

23rd Bauxite & Alumina Conference

MAR  
14

Conrad Miami  
Miami, United States  
14 - 16 March 2017



## ***Public relations and Communication***

For additional information on this year and past events please consult [www.ICSOBA.org](http://www.ICSOBA.org).

### **ICSOBA's executive office**



Not only requests for past proceedings, but all inquiries sent to ICSOBA, whether by email to [icsoba@icsoba.info](mailto:icsoba@icsoba.info) or by phone to + 91 982 328 98 17, are addressed by Ms. Sudipta (Dipa) Chaudhuri in Nagpur, India.

Also mailings and the underlying database of ICSOBA's contacts are taken care of by Ms Dipa Chaudhuri in the executive office.

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## TECHNICAL PAPERS

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The Technical Papers will appear in a separate issue, expected in March 2017.