

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



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The picture on the front page shows the major port in Hamburg, Germany.

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

Deadlines for a June issue is 10th of June and for a December issue 10th of December.

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www.icsoba.org

ICSoba is registered as non-profit association at:
128 Des Fauvettes, St. Colomban, Quebec J5K 0E2, Canada
Corporations Canada, Ontario under number 802906-7, and
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FOREWORD



Dear ICSOBA members,

At the time of printing this foreword, we are only three months ahead of our next international conference which will be held in the Radisson Blu Hotel in Hamburg (Germany) from 2nd to 5th of October. The program organizers already received more than 100 abstracts and I encourage those of you who didn't to lodge yours before long.

As you understand, complying with abstract and full paper deadlines is paramount to ensure quality review by the Technical Committee. However, as a tradition with ICSOBA, we will do our best efforts to integrate late abstract.

Even though Aluminium has been, so far, a good performer amongst the other commodities, our Industry is still suffering in this "new normal" situation of sluggish LME price. In such situation of structural oversupply, even if moderate, new capacity projects are the exception, outside of China. Most of the companies are focusing on productivity improvement in order to preserve their profitability.

This year, ICSOBA is coming back to the "Old Europe" and it will provide unique opportunity to learn and debate on the latest developments, from Bauxite residue treatments to energy saving or digitalized smelter, brought to the market by the European actors of the Aluminium Industry.

ICSOBA is one of, if not the only one organization, bringing its conference on the home turf of its members having recently visited Goa (India), Belem (Brazil), Krasnoyarsk (Russia), Zhengzhou (China), Dubai (UAE) and Quebec City (Canada) and thus becoming global and

providing unique opportunity for local contributors to take on the stage and share their success or their challenges with scientist, operation and management colleagues.

But, beyond this objective, ICSOBA is striving towards its vision to be **The Technology Conference of the Aluminium Companies, for the Aluminium Companies.**

This 35th international conference will therefore be an opportunity to listen to the view of renowned keynote speakers including representatives from our European host companies, Trimet and DadCo, but also major Indian, Brazilian and Chinese industry leaders, perspective from an end user – the view of a German car maker, as well as market and general presentation from IAI, CRU and Wood Mackenzie.

ICSOBA is a truly international organization which is reflected in its Board composition integrating a fully diversified association representatives, both in term of Companies and Geography.

ICSOBA is also and mainly an organization belonging to its members. Hamburg general assembly will provide the opportunity for the Board to report on the work done since last conference and for the members to express their views and votes.

Participating to an ICSOBA meeting is not only rewarding for the delegate but more importantly it is also of high return for delegate's companies through the know-how they brought back home from these few days.

As of this 35th ICSOBA conference, I would like to extend my best wishes, on behalf of ICSOBA Directors, to all of you for an enjoyable and successful conference in Hamburg.

With my best regards,

Claude Vanvoren
President, ICSOBA

NEWS AND EVENTS

35th ICSOBA Conference and Exhibition in Hamburg

In the organization of the ICSOBA 2017 event ICSOBA joins forces with **TRIMET Aluminium** and **DadCo**, who are the host sponsors.



Registration, Welcome Reception and Meals:

The registration will start on Sunday, 1 October from 16 to 20 h and will continue Monday, 2 October in the morning at the Welcome Desk. Welcome Cocktail with drinks and light buffet will be on Sunday, 1 October, while the Gala Dinner will be on Monday, 2 October in the evening. The Best Papers Cocktail will be on Wednesday, 4 October in the evening.

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

The event in Hamburg will begin on 2 October 2017 with the official opening ceremony of the congress and exhibition, followed by a plenary session consisting of lectures on subjects relevant to the aluminium metallurgy and mining industries. In the afternoon, technical sessions will commence.

Please note that registration deadlines are fast approaching.

15 July	To enjoy the early bird registration fee
15 July	For registration with business visa support
30 August	Normal registration
30 August	For booking a booth.

Exhibition:

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

Venue of the Conference:

The conference will take place in Radisson Blu Hotel that is ideally located in the Hamburg downtown. A limited number of rooms are reserved at Radisson Blu hotel. Make sure that you do not delay the booking at <https://www.radissonblu.com/en/hotel-hamburg/>. Promotional Code: ICSOBA. The deadline for group reservations is guaranteed until 1 July 2017.

**Program:**

The hourly program of the 35th ICSOBA Conference and Exhibition is on the following page.

In the **keynote session** on Monday, 2 October, you will listen to 10 presentations by distinct speakers:

1. **Dr Martin Iffert**, Chief Executive Officer of TRIMET Aluminium SE – The Industrial Society as a Skyscraper”.
2. **Marco van der Werff**, Managing Director, DadCo Holdings (Netherlands) B.V. – “Dadco and Aluminiumoxid Stade - A General Overview, Past, Present and Future”.
3. **Dr Hagen Seifert**, AUDI AG, Ingolstadt – “Materials and lightweight construction, Influence on vehicle concepts exemplified by aluminium”
4. **Rafael Vieira da Costa** Vice President, Technology - Hydro Bauxite & Alumina Hydro Bauxite & Alumina - “Mining & Refining 4.0”.
5. **Abhijit Pati**, Chief Executive Officer, Vedanta Aluminium Ltd, "Developments in the Primary Aluminium Industry in India”
6. **Dr Bingliang Gao**, Professor, School of Metallurgy, Northeastern University, Shenyang, China – “Recent Developments in Aluminium Smelting in China”.
7. **Carl Firman**, Aluminium Analyst for Wood Mackenzie – “Bauxite, Alumina and Aluminium Market Overview”.
8. **Dr. Kelly Driscoll**, Managing Consultant, Managing Consultant, Aluminium Team Leader, CRU Group – “Bauxite, Alumina and Aluminium Market Overview”
9. **Katy Tsemelis**, Manager - Mining & Refining, International Aluminium Institute - “Bauxite Mine Rehabilitation and Bauxite Residue Management: a Global Perspective”
10. **Dr PK Banerjee**, President & Chief Technology Officer, Hindalco Industries Ltd., “Bauxite Residue Processing in India” - Title to be confirmed

Hourly Program - 2017 ICSoba Conference in Hamburg

Hours	Sunday 1 st October 2017	Monday 2 nd October 2017	Tuesday 3 rd October 2017	Wednesday 4 th October 2017	Thursday 5 th October 2017	Friday 6 th October 2017
7:00 - 8:00		Registrations				
8:00 - 8:30		Opening remarks				
8:30 - 10:00		Keynote session (3)	Technical Sessions (4)	Technical Sessions (4)		Director's Meeting
10:00 - 10:30		Coffee	Coffee	Coffee		
10:30 - 12:00		Keynote session (4)	Technical Sessions (4)	Technical Sessions (4)	Field trips to the TRIMET and DadCo plants	
12:00 - 12:30						
12:30 - 13:00		Group photo	Lunch	Lunch		
13:00 - 13:30		Director's Meeting	Lunch			
13:30 - 14:00				Technical Sessions (4)	Technical Sessions (4)	
14:00 - 14:30		Keynote session (3)	Technical Sessions (4)	Technical Sessions (4)		
14:30 - 15:30						
15:30 - 16:00		Coffee	Coffee	Coffee		
16:00 - 16:30		Registrations	Technical session	Technical Sessions (3)	Technical Sessions (4)	
16:30 - 17:00						
17:00 - 17:30				Members meeting	The Best Paper Awards	Outotec and Claudius Peters events
17:30 - 18:00						
18:00 - 18:30						
18:30 - 19:00						
19:00 - 19:30			ICSoba Gala Dinner			
19:30 - 20:00	Opening cocktail		Dinner for 2017 organizers & sponsors	2018 Program organizers meeting	Directors meeting	
20:00 - 21:00						

Exhibition will take place from Monday to Wednesday.

For the **technical sessions** 94 abstracts in all subjects were obtained by 19th June. Additional abstracts are still expected to come later.

Plant Visits

The ICSoba-2017 program provides for visiting on **5 October**:

- TRIMET Smelter in Hamburg
- DadCo's alumina refinery, Aluminium Oxid Stade GmbH.

The schedule for the plant visits is as follows:

9:00 am bus leaving to the two plants; 13:00 pm buses leaving the plants. Estimated arrival at Radisson Blu: 14:00h for Trimet visit. It takes approximately 45 min more to get to the DadCo's AOS plant in Buetzfleth than to Trimet's plant in Hamburg, meaning 1.5 hours additional travel time for this fieldtrip.

The plant visits will take approximately 3 h. This will also include some light lunch snacks. So to be on the safe side, the delegates could catch the earliest flight at 4:30pm. Or take a taxi straight from the plants to the airport. Then even earlier flights can be reached.

TRIMET Aluminium is family-owned aluminium trading business and Germany's largest aluminium producer. It has about 1 900 employees. The company was founded in 1985 and has production facilities in Essen, Gelsenkirchen, Hamburg, Harzgerode, Sömmerda, and Voerde, Germany, as well as internationally. The smelters in Essen and Hamburg provide combined annual production of 300 000 tonnes of primary aluminium. The anode factory is in Hamburg. TRIMET's recycling plants in Harzgerode and Gelsenkirchen produce 85 000 tonnes per year of saleable aluminium alloys in liquid or ingot form. TRIMET develops, produces, casts, recycles and markets aluminum products in all sorts and shapes. TRIMET has a significant global presence in aluminium trading.

DadCo is a privately-owned investment, manufacturing and trading group active in the aluminium industry and a leading supplier of high quality alumina-based products and services in Europe. DadCo is a shareholder of Halco Mining Inc., which in partnership with Rio Tinto Inc., Alcoa World Alumina and Chemicals owns 51 % of Compagnie des Bauxites de Guinée (CBG) in Guinea. DadCo's production facility, the Aluminium Oxid Stade (AOS) refinery has a current production more than one million tonnes of alumina per annum. AOS refines various grades of bauxite into smelter grade alumina and alumina chemicals, which come in diverse forms. DadCo seeks to increase its recognition as a leader in the alumina and alumina chemicals industry and to maintain a world-wide reputation for quality and value.

Claudius Peters

On Friday, **6 October Claudius Peters** would arrange the pick-up service from Hamburg to Buxtehude Plant (approximately 30 min). During the field program, a lunch will be offered in their CP-Restaurant. Depending on the available time window and the number of participants the hosts could offer an attractive return on the way back to Hamburg: either a small boat trip back to Hamburg or to have a small tour to the Airbus Factory, to see some aluminium installed.

ICSOBA

Visit Claudius Peters

October 6, 2017 Buxtehude



Come and see how Claudius Peters has improved various installations in the worldwide alumina industry

You will get:

- **Latest** references and **best** practise
- Ideas to **reduce** energy consumption
- Answers how to **improve** your quality
- Get **rid** of maintenance

And **much more...**



Contact

For further information please contact:
Monika Kroeger - Claudius Peters Projects GmbH
monika.kroeger@claudiuspeters.com

Please send your confirmation by September 15th to Email Address above

Agenda / Focus

- **Alumina Distribution System (ADS)**
Safe, reliable and highly efficient alumina distribution from silo to cell
- **Anti-Segregation System**
Patented Anti-Segregation System minimizes segregation during filling
- **FLUIDCON**
Low conveying velocities resulting in low attrition and low energy requirement
- **Anode Coke Grinding**
Maintenance-free grinding system with an outstanding service life
- **FCF**
Dense Phase Cell Feeding via FLUIDCON
- **Impurities Extraction from Powders**
- **Paper: "Influence of Handling Parameter on Powder Properties"** Light Metals 2017 by Peter Hilgraf, Jan Paepcke, Arne Hilck
- **Claudius Peters Technical Center**

You are invited to join us at
Claudius Peters
Open Day Technical Center
October 6, 2017



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CP HY Mixer (08/04/2016 / Issue 1. Due to a policy of constant improvement, we reserve the right to change any specification without prior notice. ERRORS & OMISSIONS EXCEPTED.

Outotec

Welcome to the 19th Alumina User's Meeting in Hamburg, 5-8 October, 2017

Every second years since 1987, the alumina community is given the opportunity to come together and meet for a few days at the Outotec Alumina User's Meeting. The User's Meeting was established to create a forum for Outotec' costumers, where they may exchange and discuss their own experiences with other users and Outotec's team of experts. Originally this meeting focused exclusively on calcination technology and several improvements of the process and process equipment have been developed as a result. The driving force behind the User's Meeting is Outotec's strategy regarding costumers experience and orientation technology leadership and life cycle solutions. The high quality of presentations and discussions have resulted in very positive feedback from the costumers in the past and significant progress on common issues has been made. This years' User's Meeting will be the 19th event where the topics include Outotec's entire Alumina refinery portfolio, such as grinding, digestion, settling-washing (thickening), red mud filtration/neutralization, and security filtration. The theme of "Maintenance" has been chosen for the forum, as we see this as an extremely relevant topic for the industry in a time when capex growth is limited due to economic downturn and low commodity prices.

Traditionally a site trip has been included in the program and AOS Alumina Refinery in Stade, Germany is welcoming the User's Meeting and the ICSOBA delegates in a collective visit on 5th October.

You are cordially invited to the 19th User's Meeting.

DrAlessio Scarsella
VP Alumina

Maximilian Koepf
VP, Services Metals and Chemical Processing

Marcílio Cenísio
User's Meeting Coordinator 2017
Product Manager / Account Director
marcilio.cenisio@outotec.com

ICSOBA 2017 Sponsors

TRIMET Aluminium and **DadCo** are two host sponsors of the 2017 ICSOBA Conference and Exhibition.



The bronze sponsors are:



ICSOBA 2017 Exhibitors

The exhibition will take place in the period 2-4 October and at the end of June, the following companies signed up as exhibitors:



Visa Support

A visa invitation letter is available for registered participants on ConfTool(<https://www.conftool.net/icsoba2017/index.php?page=index>)

Delegates who may have difficulty obtaining visa can count on ICSOBA support. Please contact ICSOBA secretariat (Ms Dipa Chaudhuri at info@ICSOBA.org for a letter of support.

Retired & Student Incentives

Also this year ICSOBA offers great incentives for retired delegates and for students (including post docs) to attend the conference. From reduced fees to free meals to award opportunities, students can receive all the benefits the conference has to offer at a low cost. **Reduced registration is EUR350** for a full length of sessions and exhibits, and includes a student lunch on Monday afternoon with the organizing committee and delegates.

About the City of Hamburg

Hamburg is Germany's second-largest city and is home to one of the busiest European ports — located in the heart of the city — and has been maintaining trade relations with countries from all over the world for centuries.

The Free and Hanseatic City of Hamburg is one of Germany's 16 federal states: its status as a city-state has been retained for over 800 years. More than 5 million people live in the Hamburg Metropolitan Region; the city itself has roughly 1.8 million inhabitants.

With the highest per-capita gross national product of all German federal states, Hamburg can rightly be called an economic powerhouse. In comparison to other European urban areas, the Hamburg Metropolitan Region ranks fourth in economic performance — after London, Luxembourg and Brussels.

Over the last decades, many international residents and companies have settled in Hamburg: one of the reasons for the city's cosmopolitan and open-minded reputation. The G20 events will take place in St. Pauli, one of Hamburg's most popular districts. Everything you might want to see can be reached by foot or public transportation easily.

Besides the Elbe river that connects the port with the North Sea, the Alster Lakes are much loved by residents and visitors for watersports like sailing and rowing, while its shores provide lush green areas — perfect for walking, relaxing and barbecuing.

With an outstanding mixture of historic and modern architecture, Hamburg is one of the most charming cities in Germany. More than six million visitors a year make Hamburg one of Germany's most popular travel destinations.



TECHNICAL PAPERS

Alumina from Silicates

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ABSTRACT

While sodium hydroxide is used universally to recover alumina from bauxite, hydrochloric acid is proposed for leaching clay and anorthosite to get alumina. In the bauxite process red mud is a waste product while in the silicate process silica is a by-product. However, it is believed that alumina from silicates cannot compete with the Bayer process. The nepheline process in Russia is successful because it is in alkaline medium among other things.

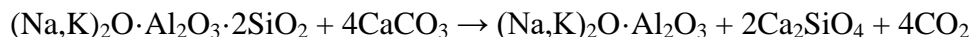
Keywords: Kaolinite, Anorthosite, Nepheline, Oxihydrolysis, Red mud, Silica, Sodium carbonate

INTRODUCTION

Alumina is produced today mainly from bauxite by the Bayer process [1]. Bauxite is aluminum hydroxide(s) containing clay minerals, hematite, goethite, anatase and rutile as main impurities. A typical bauxite contains 50% Al_2O_3 . Bauxite residue (also known as red mud) is a waste product while gallium is a possible secondary product and vanadium oxide is a potential by-product. Alumina is also produced from silicates in Russia from nepheline and there are attempts today in Canada to use kaolinite and anorthosite. While the Russian process is a success the other two processes are questionable.

ALUMINA FROM NEPHELINE

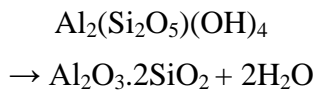
The production of Al_2O_3 from nepheline is a unique process used only in Russia [2]. The source material is the nepheline concentrate from the beneficiation of apatite–nepheline rock, or nepheline-syenite, which contains enough Na_2O and K_2O to convert its alumina content into aluminates. The feed material is mixed with limestone and calcined at 1250–1300°C in a rotary kiln:



The sintered product is then crushed, ground, then leached with recycle NaOH solution. The filtrate is processed by CO_2 to precipitate $\text{Al}(\text{OH})_3$ while the dicalcium-silicate residue is made to cement. Some sodium carbonate and potassium carbonate are also recovered by crystallization from the leach solution after precipitating $\text{Al}(\text{OH})_3$.

ALUMINA FROM CLAY

Hydrochloric acid has been proposed for leaching kaolinite which is the major component of clay and contains about 33-35% Al_2O_3 , 45% SiO_2 , and 13% H_2O . Dilute acids are effective in solubilizing clay if the clay is first dehydroxylated at 400–800°C to convert it to metakaolin:



Metakaolin which is an amorphous aluminum silicate can be leached with acid to extract aluminum selectively leaving behind crystalline SiO_2 :

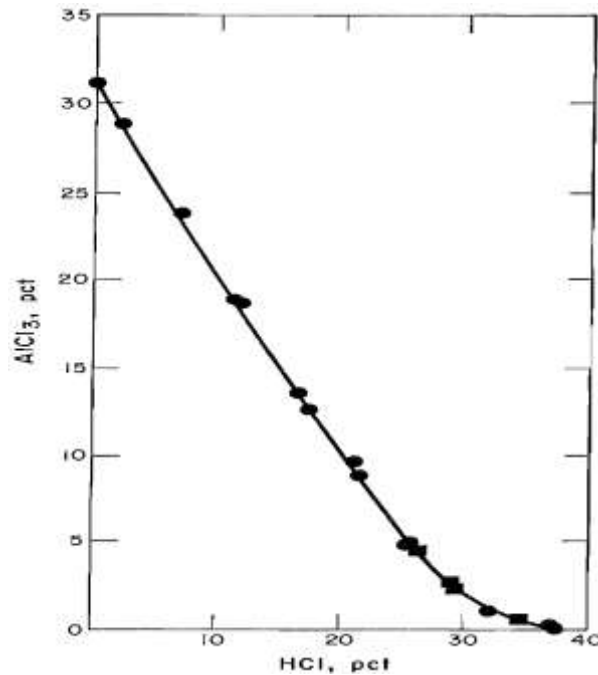
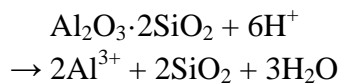
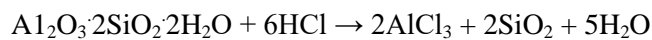
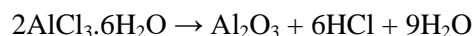


Figure 1 Solubility of $\text{AlCl}_3 \cdot 6\text{H}_2\text{O}$ in hydrochloric acid [4]

Researchers at the former US Bureau of Mines in 1985 [3], however, extracted alumina from uncalcined kaolinitic clay in 15 minutes by heating it at 200°C using 20-27% HCl:



They also found out that aluminum chloride hexahydrate is insoluble in HCl (Figure 1) that is how it is separated from the leach solution by sparging with HCl. The process is being developed further by OrbiteAluminae in Cap Chat, Quebec Province in Canada and an industrial plant is planned [4]. Clay is leached under pressure and after filtration to get pure silica, the solution is sparged with HCl and the precipitated $\text{AlCl}_3 \cdot 6\text{H}_2\text{O}$ is then calcined to recover HCl and alumina:



The mother liquor, mainly ferrous and ferric chloride in HCl, is decomposed at high temperature to recover Fe_2O_3 and HCl (Figure 2).

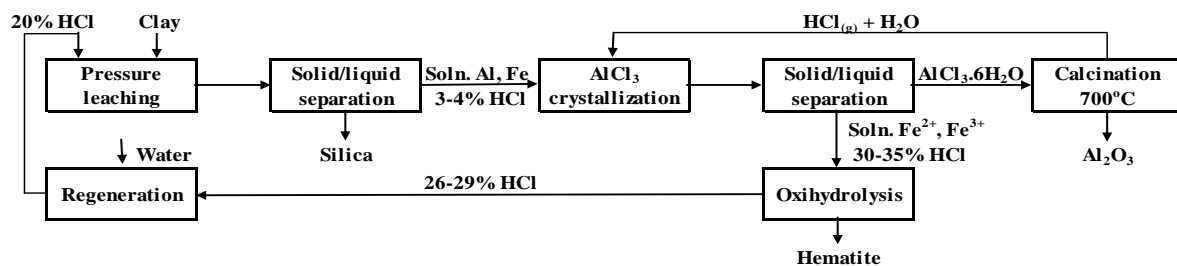


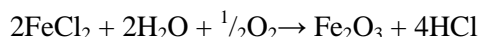
Figure 2 Simplified Orbite process

ALUMINA FROM ANORTHOSITE

Anorthosite like clay is widely available and contains about 30% Al₂O₃, 50% SiO₂, and 15% CaO. Anorthosite is a feldspar rock composed of variable amounts of albite (Na₂O·Al₂O₃·6SiO₂) and anorthite (CaO·Al₂O₃·2SiO₂). Anorthosite at the White Mountain deposit in Western Greenland was leached by hydrochloric acid, filtration of insoluble residue, HCl sparging of clear solution to precipitate aluminum chloride hexahydrate, calcination of the hexahydrate to regenerate HCl and produce alumina. Calcium silicate and amorphous silica in the residue are marketable by-products [5].

REGENERATION OF HYDROCHLORIC ACID

Ferrous chloride produced in the kaolinite and anorthosite processes can be economically decomposed to ferric oxide and HCl in a fluidized bed or in a spray roaster according to:



CONCLUSIONS

The recovery of alumina from silicates, other than nepheline, seems that it cannot compete with the treatment of bauxite under the present conditions for the following reasons:

- The low tenor of alumina in the silicates as compared to bauxite
- The ease of precipitation Al(OH)₃ from NaOH as compared to the precipitation of AlCl₃·6H₂O by sparging with HCl gas
- The ease of calcination of Al(OH)₃ as compared to the calcination of AlCl₃·6H₂O
- The corrosion problems and materials of construction associated with handling of HCl
- The question of waste product red mud as compared to silica as a co-product in the other processes cannot justify the competition of the silicate processes.

REFERENCE

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- [3] D.L. Sawyer, Jr. and T. L. Turner, "Pressure Leaching Alumina From Raw Kaolinitic Clay Using Hydrochloric Acid", US Bureau of Mines *Report of Investigation* 8978 (1985)
- [4] R. Boudreault et al. (OrbiteAluminae), "Processes for Preparing Alumina and Various Other Products", *Canadian Patent* CA2885255 C (2013)
- [5] J. R. Goode, J. Tuer, and J. Cambon, "High Purity Alumina from Greenland", *Proceedings 28th International Mineral Processing Congress*, paper 607 (2016)

ADDENDUM

After submitting this manuscript it was learned that Orbite announced bankruptcy and closed the plant after six years operation and spending \$ 127 million.

J. Fournier, «Rien ne va plus pour Technologies Orbite» *Le Soleil* [Quebec City] April 3, 2017

ICSoba MATTERS



Annual Financial Statements

ICSoba fiscal year with Revenue Quebec and Revenue Canada is from 1 January to 31 December. Continuing our dedication to transparency ICSoba finances are revised every year. Since 2013 a chartered accountants' office of Gariepy&Bussière CPA INC is requested to carry out the annual task. Summary of operations revenues and expenses (in CAD\$) for years ending December 31, 2016, 2015, 2014 and 2013 is as follows:

	2016	2015	2014	2013
EXPENSES	215 340	182 640	238 383	169 669
REVENUES	246 096	262 443	228 483	157 493
EXCESS OF REVENUES OVER EXPENSES	30,756	79,803	(9,900)	(12,176)
ASSETS CURRENT (Cash, GIC, Receivables, Prepaid expenses)	280,220	250,789	168,234	178,842
LIABILITIES CURRENT	2,904	4,229	1,477	2,185
NET ASSETS	277,316	246,560	166,757	176,657

In the 2016 financial statements we read: “Based on the review, nothing indicates that the 2016 Financial Statements are not in accordance with Canadian accounting standards for not-for-profit organization”.

As the Financial Statements reveal the excess of revenues over expenses was \$30,756 last year, compared to losses in some of the previous years (2013, 2014). This was chiefly possible due to better than expected participation from Quebec and particularly REGAL delegates. Also, no services were hired to do local organization tasks as most contributions came from local staff. The support from sponsors and exhibitors was more important (\$87,575) than in past years (including Quebec government subsidy), and Rio Tinto sent a large group of delegates.

Following the financial review the tax declarations were filed with Revenue Quebec and Revenue Canada for 2016.

ICSoba primary revenue leaders are the events and sponsors. As a non-profit, ICSoba focuses on using all resources to advance the association's mission. The available funds belong to the association and are meant for the development and promotion of ICSoba and future events. The existing surplus is not as impressive as of some other organizations of the similar vocation but it already guarantees ICSoba activities for the near future. We should all strive to maintain this healthy reserve for the benefit of ensuing delegates. Some money reserve is necessary for rainy days and to continue uninterrupted operations and monetary advances.

The annual financial statements are available at the registered office of the Association and any member may, on request, obtain a copy.

ICSoba Corporate Members

We would like to inform you that the corporate membership fee is EUR 1,000 in 2017.

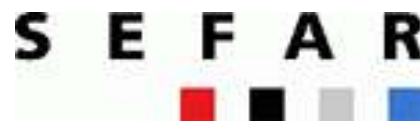
Corporate members are shown in the ICSoba Newsletters and listed on the ICSoba web site with company logo. When requested, digital proceedings (TRAVAUX, vol. 46) can be made available to all employees at the company's intranet.

A 10% discount applies to the registration fee at all stages for each delegate from the corporate member. If a delegate first registers and then his company becomes a corporate member for the given year, then the 10% discount will be credited. Corporate members can nominate up to two employees as their representatives who have the same voting rights as individual members, and obtain Newsletters.

You can open and fill in the membership application form on-line if you click on the applicable link: for individual membership or for corporate membership. In the latter form you can also indicate the names of two employees. In 1 to 7 days you will receive an invoice by email with a button for payment by credit card and with payment details if you prefer to pay by wire transfer to our Canadian bank.

The registration form is under: <http://www.icsoba.org/form/registration-form>

The 2016/2017 Corporate Members are:



Associated Organizations (Partners)

ABAL

Aluminium Circle

Aluminium International Today

Aluminium Network

AZ China

Brasil Mineral

Chalco Zhengzhou R&D Center

CNIA

International Aluminium Institute

International Aluminium Journal

Light Metal Age

Metal Bulletin

Metals – Open Access Metallurgy Journal

Minerals & Metals Review Online

Non-Ferrous Metals Siberia

Red Mud Project

Become a corporate member, sponsor or exhibitor

Event-related sponsorship opportunities give you valuable, well-placed exposure that integrates with your marketing objectives and budgets. Become a sponsor and stand out from the rest and ensure your logo is on the conference stage, all event banners and marketing material, which is visible to thousand professionals in the field.

Host a delegate lunch Entertain many existing and potential clients. Sponsor packages vary in cost and profile so they can be adapted and tailored to suit customized requirements and accommodate new ideas. For detailed information please consult the Sponsor Prospectus, below.

Fees in EUR€	16,000 (TRIMET + DadCo)	10,000	6,000	3,000	Partners
Number of Free Delegates	4 + 4	4	2	1	
Number of invited guests for organizers & sponsors dinner	3 + 3	3	2	1	
Presentation at the opening of the conference	X				
Cultural evening or welcome drinks in honor of company	X				
Banner with own logo placed in principal area of the venue	X				
Lunch or dinner in honor of company / table for invited guests during sponsored meal	X	X			
List of participants including email addresses (14 days after event)	X	X			
Company logo on ICSoba website + link to company's website	X	X	X	X	X
Company logo on promotion material and on banners	X	X	X		X
Company logo, text and contact details in conference book	X	X	X	X	X
Company mentioned in press releases	X	X	X	X	
Company name in ICSoba Newsletter – biannual publication	X	X	X	X	X
Insertion of brochures (max 20 pages) in the conference bags	X	X	X	X	X
Exhibition table Includes 1 table, 4 chairs and electric connection	3,000 EUR€	Entitles one delegate to free registration			

The ICSoba Website

The ICSoba website is like a weekly/monthly newspaper and one of the most important information channels in the interaction between the organizers and the delegates and other interested individuals. There are always updates to make as time goes by and we try to keep the website up-to-date. Updating the website contents regularly is the main factor for keeping high ranking in Google search.

Scientific Citation

Modern scientists are sometimes judged by the number of times their work is cited by others—this is a key indicator of the relative importance of a work in science. Accordingly, individual scientists are motivated to have their own work cited early and often and as widely as possible. Especially students and young scientists are motivated to get this mean of judgment. A formal citation index tracks which referred and reviewed papers have referred which other such papers. Many consider the number of times a paper is cited to be a significant metric of its quality, and thus of innovation.

In 1964, a journal called TRAVAUX was organized for publishing lectures from ICSoba events and other information of common interest. Until 2015 TRAVAUX was issued in 44 volumes. All past volumes appear as printed books except for the last volumes starting from 2005, which were also available in electronic format. Until present, the TRAVAUX volumes have only been available to the members and conference delegates and have not been indexed in any of the most popular science and technology search engines worldwide. The tables of content are at the ICSoba website (www.icsoba.org) as searchable pdf files. There is full list of papers available of all volumes on the website which can be used as a guide for finding specific information or paper. However, to access this information someone needs to enter the ICSoba website.

At present, ICSoba would like to open access to the articles and assure citations (indexing). The Internet search should allow tracing down a specific subject, article title or an author's name. The full article would only be available upon a direct request. The process would begin with the last year proceedings (34th ICSoba conference in Dubai, UAE; volume 44). The established mechanism should allow further additions of content from future or past volumes.

CONTACT US



For questions on registration, payment, exhibition and sponsoring, please contact:

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