

50 YEARS OF ICSOBA

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Abstract

The International Committee for Study of Bauxite, Alumina & Aluminium (ICSOBA), was formed in 1963 in Zagreb (Yugoslavia). Over the last 50 years, 32 ICSOBA events - symposia, congresses and seminars were organized in 15 countries in different parts of the world. During the first 25 years most of the events took place in Europe, with bauxite and alumina being the predominant subjects. The next 25 years witnessed ICSOBA travel to other parts of the world such as Brazil, Iran, Jamaica, Russia, India, Canada and China. Consequently, ICSOBA has become a well-recognized and truly international organization. A TRAVAUX volume documenting conference proceedings was published following each event.

At present, ICSOBA is a non-profit association legally registered in Canada with a Board of Directors and Council members from different geographical areas representing major bauxite, alumina and aluminium producing countries. The main objective of ICSOBA is to promote collaboration among its members, fostering exchange of ideas and results from different fields of research and practices related to bauxite exploration and exploitation, and alumina & aluminium manufacturing. ICSOBA has individual and corporate members and its affairs are conducted according to modern Bylaws approved by its members in 2012.

Keywords: mission of ICSOBA, history of ICSOBA, ICSOBA events, TRAVAUX volumes, awards.

1. Introduction

This year ICSOBA reached a new milestone: 50 years of activity, which is a major reason to celebrate. We are all delighted and humbled when we hear stories of how our members are using ICSOBA to connect, learn and find opportunities. Half a century of vocation for an organization such as ICSOBA is quite an achievement by all means. Many entities created around the same time no longer exist today, but ICSOBA is alive and doing well. Unlike many other organizations that are stationary, ICSOBA moves from place to place and we travel with it. For both local participants and visitors there is a benefit resulting from exchanges of information, ideas and experience. General interest arrives from the fact that one can learn a lot at an ICSOBA event. Visitors often bring expertise and solutions that locals may not have and the opposite is also true. As ICSOBA travels the globe, it provides a unique forum for discussions and plant visits, allowing its members to see the aluminum world, to learn and share know-how from research and current practices.

50 years of service dedicated to the Al-community is a wonderful achievement. Congratulations and thanks to all of those who maintained the integrity and values that were fundamental to our association from its beginning. ICSOBA is truly a dynamic, healthy international organization and it is a pleasure to be a part of the team. With the quality of people that attend ICSOBA events and their commitment to excel, we all may be assured that next 50 years will be just as successful as the first. Best wishes to all!

2. Foundation of ICSOBA in Zagreb in 1963

In order to understand the success of ICSOBA over the years, one has to look at the reasons and motives behind bringing it to life and historical circumstances. Yugoslavia was created after WWII on a part of Balkan territory liberated from Nazi invaders. The young country assumed central planning and state controlled industry. Given the huge material and human sacrifices that the war required, followed by industry reorganization – the aluminum technology was in the beginning of its development. Available bauxite reserves and their potential were at the focal point of interest. The country and obviously several of its neighbours affirmed their desire to promote the aluminum industry.

The first ICSOBA symposium was organized by the Yugoslav Academy of Sciences and Arts in Zagreb in October 1963. The Academy took the leadership role by realigning its scientific activity for solving economic and technical problems. By giving scientists and scientific institutions of various countries an opportunity to remain in direct contact, the Academy contributed to establishing solid links for international collaboration in the interest of progress in science. In the Introduction to the 1963 Zagreb symposium we read: *“Our country made recently important investments so that the production of aluminum attains high levels given the natural resources and other very favourable elements promoting the aluminum industry. Despite considerable efforts made in our country for increasing production and consumption of aluminum, the obtained results are not satisfactory given the potential of our country that is one of the best among the European countries. In order to attain the production and consumption level of the developed countries we have to intensively make scientific research that is related with the technological process.”*

The first international meeting of bauxite and aluminium experts was organized under the title: *“Symposium sur les bauxites, oxydes of hydroxydes d’aluminium”*. One can notice that at that time in Europe, French was the communication language for science. Accordingly, the resulting proceedings were called TRAVAUX. This meeting, which had been declared to be the first Congress, was attended by 98 participants coming from six countries (Austria, France, Greece, Hungary, USSR and Yugoslavia). After the Congress, a very successful visit was arranged to the bauxite deposits of Dalmatia. During the concluding session the Hungarian and French participants made the proposal that the Yugoslav Academy contemplate the possibility of establishing a permanent international working community. The Yugoslav Academy accepted this proposal and elaborated the Statue of the International Committee for the Study of Bauxite, Alumina and Aluminium. The ICSOBA was born.

3. Early ICSOBA Congresses and Symposia

The most important events of ICSOBA, the congresses are generally held in 4-5 year intervals. During the first 25 years ICSOBA organized six congresses in Zagreb (1963), Budapest (1969), Nice (1973), Athens (1978), Zagreb (1983) and Sao Paulo (1988), followed by congresses in Budapest (1992), Milan (1995), Vienna (2002), Bhubhaneshwar (2008). During each congress the General Assembly of members took place and usually new Presidency members were elected. Figures 1 and 2 reflect the spirit of the time, whereas Figure 3 is a summary of events in the ICSOBA for the first half of the century. Please note on the vertical scale the number of participants at each event. Solid vertical lines represent congresses.



Fig. 1 The Presidency of the Second Congress



Fig. 2 Opening of the Congress in Athens (1978)

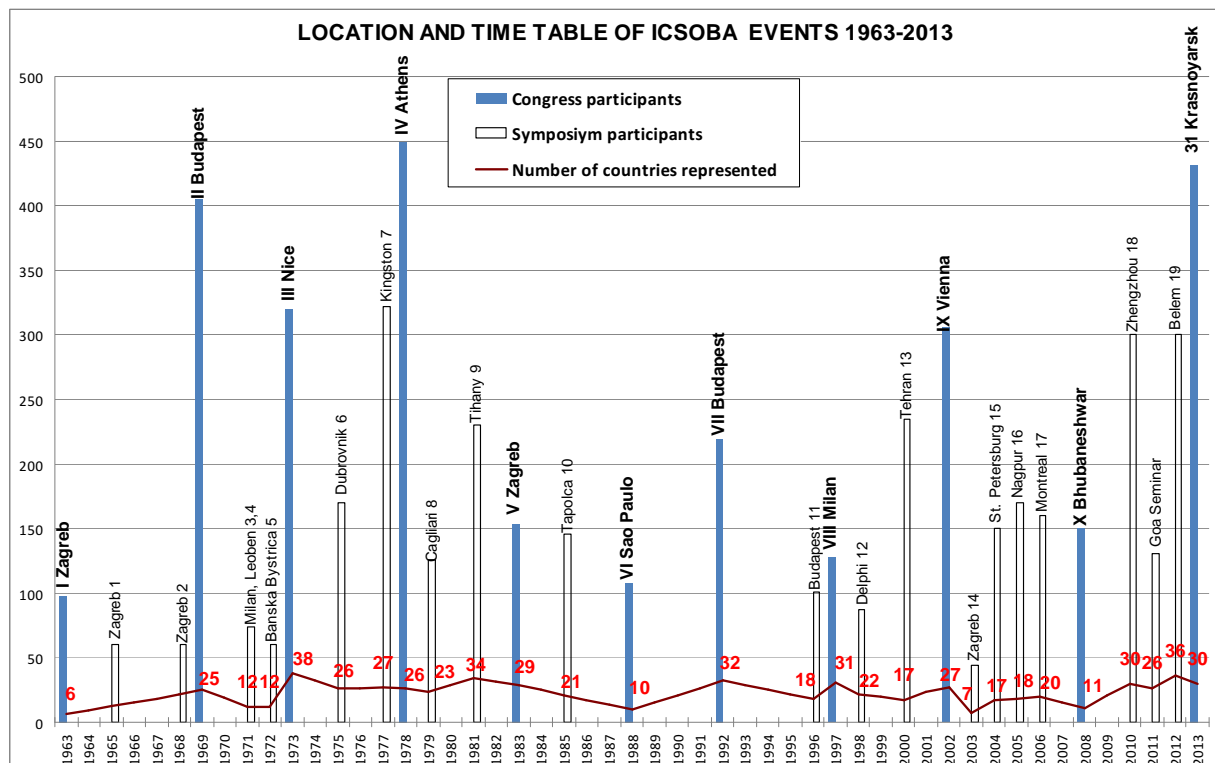


Fig. 3 Location and Timetable of ICSOBA Events 1963 – 2013.

The symposia were organized between congresses. There were 10 symposia organized in the first 25 years of ICSOBA existence and another 9 symposia plus one seminar and jubilee conference in the second 25 year period. Starting from 2013, all ICSOBA events are called conferences, without distinction of Symposia or Congress. A complete list of all 31 of the ICSOBA events for the last 50 years with subjects that each has focussed on is given in Table 1.

Table 1 Summary of ICSOBA Events

#	Date	Place	Event Title
1	1963 October 1-3	Zagreb, Yugoslavia	1 st Congrès, “Symposium sur les Bauxites, Oxydes et Hydroxydes d'Aluminium”
2	1965 October 1-4	Zagreb, Yugoslavia	1 st International Symposium of ICSOBA "White Bauxite"
3	1968 September 9-11	Zagreb, Yugoslavia	2 nd International Symposium of ICSOBA “Structure, Genesis and Properties of Clays”
4	1969 October 6-10	Budapest, Hungary	2 nd International Congress of ICSOBA
5	1971 June 7-9	Milan, Italy	3 rd International Symposium of ICSOBA “Anode Problems in Aluminium Electrolysis”
6	1971 November 18-19	Leoben, Austria	4 th International Symposium of ICSOBA “Terminology of Bauxite”
7	1972 June 6-8	Banska Bystrica, Žiar nad Hronom Czechoslovakia	5 th International Colloquium on Alumina Production from Grade Bauxites (Symposium)
8	1973 September 17-21	Nice, France	3 rd International Congress of ICSOBA
9	1975 October 20-22	Dubrovnik, Yugoslavia	6 th International Symposium of ICSOBA “Advances in Geology, Geochemistry and Treatment of Bauxite”
10	1977 August 14-20	Kingston, Jamaica	7 th International Symposium of ICSOBA-Clay Mineral Society Joint Conference “Bauxites and Clay Minerals”
11	1978 October 9-12	Athens, Greece	4 th International Congress of ICSOBA
12	1979 September 26-28	Cagliari, Italia	8 th ICSOBA-AIM Conference 1979 (Symposium) “New processes in aluminium production”
13	1981 October 6-9	Tihany-Balaton, Hungary	9 th International Symposium of ICSOBA “Alumina Production until 2000”
14	1983 September 26-28	Zagreb, Yugoslavia	5 th International Congress of ICSOBA
15	1985 October 2-5	Tapolca, Hungary	10 th ICSOBA International Symposium On Bauxite, Prospecting and Mining
16	1988 May, 11-20	São Paulo, Brazil	6 th International Congress of ICSOBA-Poços de Caldas
17	1992 June 22-26	Balatonalmádi, Hungary	7 th International Congress of ICSOBA
18	1996 May 21-24	Balatonfüred, Hungary	11 th International Symposium of ICSOBA “Quality Control in Aluminium Industry”
19	1997 April 16-18	Milan, Italy	8 th International Congress of ICSOBA “Energy and Environment in Aluminium Industry”
20	1998 September 16-19	Delphi, Greece	12 th International Symposium of ICSOBA “Bauxite and Alumina, Prospects, Opportunities and Challenges in Changing World”
21	2000 November 13-15	Tehran, Iran	13 th International Symposium of ICSOBA “Development of the Aluminium Industry in Asia”
22	2002 May 29-June 1	Vienna, Austria	9 th International Congress of ICSOBA “Bauxite and Aluminium for the Future”
23	2003 October 10-11	Zagreb, Croatia	14 th International Symposium of ICSOBA. Festive Session on the occasion of “40 Years of ICSOBA”

#	Date	Place	Event Title
24	2004 June 15-18	St. Petersburg, Russia	15 th International Symposium of ICSOBA “Aluminium Industry within World Economy: Problems and Trends of Development“
25	2005 November 28-30	Nagpur, India	16 th International Symposium of ICSOBA “Status of Bauxite, Alumina, Aluminium, Downstream Products and Future Prospects“
26	2006 October 1-4	Montréal, Canada	17 th International Symposium of ICSOBA “Aluminium: From Raw Materials to Applications“
27	2008 November 28-30	Bhubaneswar, India	10 th International Congress of ICSOBA “Bauxite, Alumina and Aluminium Industry at Austral-Asia and New Technological Advances“
28	2010 November 25-28	Zhengzhou, China	18 th International Symposium of ICSOBA “Overview of Bauxite, Alumina and Aluminium Industry worldwide with special reference to China”
29	2011 October 17-19	Goa, India	Bauxite Residue Seminar, ICSOBA-2011
30	2012 October 29- November 2	Belem, Brazil	19 th International Symposium of ICSOBA “Bauxite, Alumina and Aluminium Industry in Brazil and New Global Developments”
31	2013 September 3 - 6	Krasnoyarsk, Russia	31 st International Conference of ICSOBA “Bauxite, Alumina, Aluminium industry in Russia and new global developments”

It is clear from Table 1 that bauxite and alumina were the predominant subjects covered at early ICSOBA stages.

4. ICSOBA Past Presidents

For the 50 years of ICSOBA’s endeavour, 10 individuals enjoyed the honour of serving the society as president. These individuals are:

1. Jean Papastamatiou 1964 - 1969
2. György Dobos 1969 - 1973
3. Jean Nicolas 1973 - 1978
4. S.S. Augustitis 1978 - 1983
5. Ivan Jurkovic 1983 - 1988
6. Adolfo J. Melfi 1988 - 1993
7. György Komlossy 1993 - 1998
8. Peter Paschen 1998 - 2003
9. Dimitri Contaroudas 2003 - 2008
10. Roelof den Hond 2008 - 2011

On average, the typical length of president’s service was five years. A great majority of the presidents were associated with scientific institutions and not with the industry. Financial and administrative means needed for running ICSOBA forum were assured by selected government budgets.

5. TRAVAUX Volumes

Above 1400 lectures have been presented at its congresses, symposia and meetings during the ICSOBA’s 50 years. As it was decided by the Presidency in 1964, a journal for publishing lectures and other

information of common interest was organized and editorial staffs were established. Professor Dr. J. Marusic, member of the Yugoslav Academy of Sciences and Arts in Zagreb was elected as Chief Editor. Thanks to Prof. Marusic's important and responsible editorial work, TRAVAUX was issued in 34 volumes, during the first quarter of the century of ICSOBA existance. The number of volumes is more than number of meetings due to publishing some 7 volumes of papers in between of the symposia as well due to multiple volumes at ICSOBA Congresses. Including the 2012 Belem, Brazil event, 54 volumes of various size and content were edited and published. All volumes appear as books except for the last few starting from 2005, which were also available in electronic format.

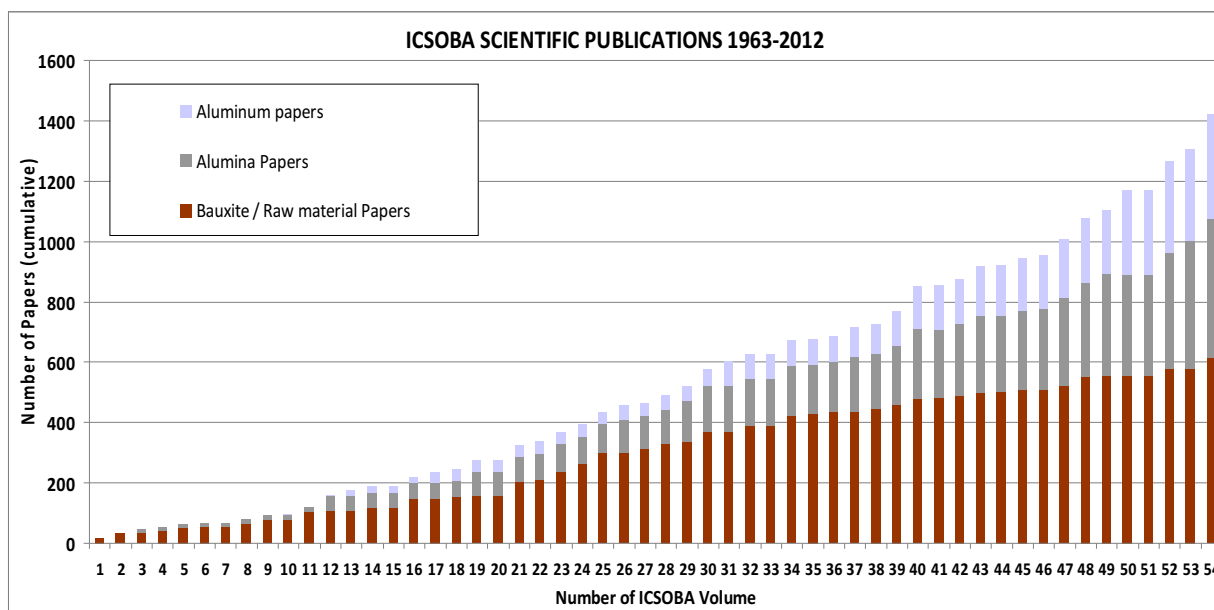


Fig. 4 Distribution of ICSOBA scientific papers by directions in 1963 – 2012.

The scientific level of TRAVAUX is high, because only lectures corresponding to the required quality and those previously accepted by the editorial staff are published. For its members, TRAVAUX is more than a simple journal. It has a special power which helps keep scientists of this organization together. It has its own character as being a scientific source for the development in global bauxite – alumina – aluminum science and industry. A great number of special studies, methods, inventions in prospecting, utilization and developments of the Al-industry appeared in TRAVAUX. All past TRAVAUX volumes have been electronically scanned over the last year and are presently available for members at the ICSOBA website (www.icsoba.info) 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.

For its members, ICSOBA also publishes a half-yearly NEWSLETTER which consists of technical papers, news & views and a diary of events. Beginning with the June 2009 edition, the NEWSLETTER is also available for personal use online at the ICSOBA website.

6. ICSOBA Bylaws

ICSOBA bylaws are a collection of guidelines and regulations that are to be observed for all activities and that define how to govern the society and to conduct its affairs. The first ICSOBA statues (bylaws) were elaborated by Miroslav Karsulin (Secretary General) and Jean Papastamatiou (President) in October 1964. The front page of the document is below. Please note that the name of ICSOBA was interpreted at that time as “International Committee of Studies of Bauxites and Aluminium-Oxide-Hydroxides”

STATUTES
OF THE INTERNATIONAL COMMITTEE OF STUDIES OF
BAUXITES AND ALUMINIUM-OXIDE-HYDROXIDE

Article 1

The Organization shall bear the name COMITÉ INTERNATIONAL POUR L'ÉTUDE DES BAUXITES, DES OXYDES ET DES HYDROXYDES D'ALUMINIUM (in the further text: The Committee). Abbreviation: ICSOBA (International Committee of Studies of Bauxites and Aluminium-Oxide-Hydroxides).

The seat of the Committee is in the Yugoslav Academy of Sciences and Arts, Zagreb, Yugoslavia.

Article 2

The task of the Committee is to stimulate, promote and encourage scientific research work in all spheres concerned with bauxites, oxides and hydroxides of aluminium and associated constituents. These investigations relate to the mineralogy, petrography, geology, chemistry, geochemistry and physical chemistry of bauxites and their constituents. It may likewise be concerned with objective examination of technological problems, without a lucrative aim.

Article 3

The Committee shall fulfil its tasks:

- a) by organizing international meetings, to wit: symposia, conferences and specialized meetings of study groups,
- b) by collecting and publishing documentation with the objective of communicating it to its members,
- c) by promoting collaboration in the field of scientific research mentioned in art. 2.

The most recent bylaws date to 2012 and were elaborated by the present Board of Directors. The document was approved by an overwhelming majority of delegates at the General Meeting of members during the Belem symposium in Pará, Brazil on 31 September 2012. The Full text of the Bylaws composed of 15 pages, is available on ICSOBA website (www.ICSOBA.info).

7. ICSOBA Awards

Based on the proposal of the Presidium of the Hungarian ICSOBA Committee the "ICSOBA Commemorative Medal" was designed and produced. The medal was awarded for the first time in Nice, France at the 3rd International Congress of 1973.

Another medal was produced to commemorate the 25th anniversary of ICSOBA in connection with the 1988 ICSOBA Congress in Sao Paulo (Fig. 5).

At the last year's (2012) ICSOBA symposium in Belem, Brazil, the Awards Committee, which is composed of current directors, was formed. On the occasion of the ICSOBA 50th anniversary this year, the Awards Committee decided to produce commemorative pins and medals. The pins are to be distributed to all ICSOBA participants of the 2013 conference in Krasnoyarsk. For the 50th anniversary of ICSOBA a new medal, which features elements from the past two designs, was produced (Fig. 6). The new "ICSOBA Commemorative Medal" is 70 mm in diameter and it takes its inspiration from two past designs. On one side there are the embossed portraits of Pierre BERTHIER (1782-1861), member of the

French Academy, discoverer of bauxite; Karl Joseph BAYER (1847 -1904), inventor of the Bayer alumina manufacturing process; Paul Louis Toussaint HEROULT (1863-1914) and Charles Martin HALL (1863-1914), inventors of aluminium-electrolysis, together with their names and dates of birth and death. On the other side there 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 award and may be awarded to not more than three persons on the occasion of ICSOBA International Meetings. The medal may be awarded to those members of ICSOBA who achieved significant scientific or practical results within the field of action, or who notably strengthened its organization or promoted its international scientific cooperation. The name of the awarded person is to be inscribed on the medal, and the awarding event should be published in the NEWSLETTER. The "Commemorative Medal" does not carry any pecuniary reward. The 2013 recipients of ICSOBA medals are: **György Komlossy and Dimitri Contaroudas**. Komlossy and Contaroudas were the ICSOBA presidents for the period of 1993 – 1998 and 2003 – 2008, respectively. Thanks to the sacrifices they made, the chances they took and the patience and persistence applied – ICSOBA not only survived, but is a better organization at present.



Fig. 5 ICSOBA 25 Anniversary Medal



Fig. 6 ICSOBA Commemorative Medal for the 50th Anniversary

8. ICSOBA Corporate Members and Sponsors

As ICSOBA successfully concludes the first half-century of its mission, we are strongly committed to integrity, transparency and mutual trust. Many important decisions have been made recently to ensure the longevity of our society. We believe that a bright future lies ahead, and we are already focusing on our operations for the years to come. We chose our venues strategically to provide our members with unique exposure to different facets of our industry across the world.

As ICSOBA members travel across the globe to meet once a year, they are fuelled by a common professional passion and desire to learn from one another. Our members are active in different fields and specializations, and they work within different social and economic frameworks, but there is one thing they have in common: they share the same conviction of the strategic role of aluminum in the present stage of world development. Annual events allow them to expand their professional horizons and to widen their circle of friends. These events represent a platform to advance the interests of our society. There is no doubt that ICSOBA is the industry ally. The direct benefit to the industry producers and suppliers triggered by ICSOBA activities is higher potential and technical competence of the professional workforce. The corporate members and sponsors understand ICSOBA vocation very well and we all are grateful for their continuing help. Without this help ICSOBA would not be in a position to accomplish its mission. The sponsors come from a variety of producers and suppliers.

Among the present corporate members of ICSOBA there are:

Aluchem Inc, Amber Development, Bauxite Resources Ltd, Bokela Gmbh, Colt International BV, Dubal Aluminium Co Ltd., Hangzhou New Time Valve Co Ltd, Hatch, Hindalco Industries Ltd., Mbe Coal & Mineral Technology India Pvt Ltd, Nalco India Limited,, National Aluminium Company Ltd (Nalco), Outotec Pty Ltd, Pt. Antam Tbk, Rio Tinto Alcan, Shandong Jingjin Environmental Protection Equipment Co., Ltd., Stc Engineering Gmbh, Vedanta Aluminium Ltd and Westech Process Equipment India P.Ltd.

Over the last few years, ICSOBA established partnerships with several institutions around the globe. Among the associated organizations are: International Aluminium Institute (IAI), Red Mud Project, Brazilian Aluminium Association (ABAL), Brasil Mineral, Non-Ferrous Metals of Siberia (NFM), Metal Bulletin (MB), Aluminium International Today, Minerals & Metals Review Online and Al Circle. These partnerships can only be mutually beneficial.

9. ICSOBA Continuity

Present regional representation of ICSOBA membership or delegates to recent events appears uneven. Not only conference participants from certain important places on this globe are missing, but current representation does not reflect all major industry players, whether producers or suppliers, engineering companies and universities. Continents, such as Africa (where players are either small or dependant), Middle East and countries such as USA and Australia are markedly underrepresented at present. The problem I believe is historical. For the first few decades ICSOBA almost always dealt with the upstream part of the business (bauxite, alumina) and only on occasion other sectors came into visibility. ICSOBA has a good tradition and also a very good representation in the raw materials sector. ICSOBA should continue along these lines but must diversify. In such a case it needs to cross the line and go more in the direction of carbon, electrolysis, casting, but probably not fabrication. However, we cannot think about having a session on aluminium without proper resources. We need to assure balanced representation of the membership and the Council first, before jumping into the downstream processes at the next conference. Balancing Council members with respect to geographical regions and professional vocation has already begun. Moreover, we members have to change the culture of ICSOBA along the way. If we want ICSOBA to become truly global and multidisciplinary, we need to transform it from a top-to-bottom organizational machine to a revitalized “movement of ideas” by complementing the flow of energy so that

it also springs from grassroots members rather than from a few strategists. It is not going to be easy as our industry is cyclical, but we have to try. As done over the years, ICSOBA must maintain strong ties with universities and other scientific institutions. Attracting scholars and students to appear on our events needs to remain high on the agenda.

In our mission we will not and cannot compete with the TMS. Competing with the TMS or AQW is out of the question because both forums are stationary (USA, Australia only) and predominantly serve national interests. ICSOBA is global and its activities span various countries thereby opening its forum to local and very often new players. Such combination enriches the society and active professionals and is a guarantee of ICSOBA future. One cannot forget that ICSOBA is an international association of members. ICSOBA belongs to its members and since the members periodically elect the Board of Directors and Council in the Annual Meeting, the members determine the policy and success of ICSOBA.

The subject of future directions to be explored by ICSOBA would constitute an interesting proposition for a major discussion or workshop next year.

One thought that appears in the Introduction to Zagreb 1963 symposium has been valid throughout the years and is still valid at present: *“Humanity could have never arrived at such level of civilisation that we enjoy at present - and which is the departure point for a new progressive society - if the scientific research had not been based on solid ground and without the sacrifice and tedious work of scientists. In our time the progress in science and scientific research advances with impressive speed and takes more and more international character. The aluminum industry cannot stay on the sidelines of those events and it needs global cooperation which has great value for its future evolution”*.

If we are a part of ICSOBA in 2013 this is because we believe in the above credo. Long live ICSOBA!