nference Programme

3rd International Conference and **Workshop on Anode Rodding Plants** for Primary Aluminium Smelters

> 21 - 23 September 2005 Reykjavik, Iceland

Co-organised by dmg world media (uk) Itd publisher of "Aluminium International Today" and IceTec Technological Institute of Iceland with Metal Park



-23 September

2005



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Welcome to the Conference

It is my pleasure to welcome you to the 3rd Conference and Workshop on Rodding Plants for Primary Aluminium Smelters, which will take place in Iceland's capital Reykjavik late September this year. Two remarkably successful conferences have been held, in September 2001 and September 2003. These conferences provided, for the first time ever, an opportunity to discuss matters relevant to anode rodding shops as well as to explore the rapid development in this important field of the aluminium industry. The focus has not only been on the rodding shop operations but also on the effect the rodding shop has on other sections of the smelter, particularly the potroom. The keynote presentation will this time be on economic considerations in smelting aluminium and their implications for rodding plants. We are confident that the experience from the first two conferences will enable us to raise the standard even further in the third conference.

Iceland has the highest per-capita production of primary aluminium in the world. The aluminium producers benefit from the competitive production of environmentally friendly energy from sustainable hydroelectric and geothermal power resources with minor greenhouse gas emission. As I am welcoming you to our conference, Alcoa has begun construction of a 322.000 tpa greenfield smelter in Reydarfjordur, east Iceland and the production capacity of Nordural is presently being expanded from 90.000 tpa to 220.000 tpa with start-up of the expanded smelter in 2006. Alcan Iceland has also announced their interest in further expanding their capacity. The already decided expansions will bring aluminium production in Iceland to 700.000 tpa and it is likely that further development will, in 10 to 15 years from now, take that figure to one million tpa.

During the last fifteen years R&D activity in Iceland has grown from around 1% of GDP in 1990 to more than 3% for 2002, which places Iceland among the top five countries within the OECD. Based on the domestic growth of light metal production in the coming years, we see a major opportunity for product development based on this highly dynamic industry. A number of local companies have developed on those grounds and are successfully mastering the challenges of the global aluminium-related market.



I sincerely hope, on behalf of the organizers, that the conference and workshops will be beneficial to you and your company. I would furthermore like to welcome you to Iceland and wish you an enjoyable stay in this exciting country.

Mellgrimu frassa Hallgrimur Jonasson General Director IceTec

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3rd International Conference and Workshop on Anode Rodding Plants for Primary Aluminium Smelters

21 - 23 September 2005 Reykjavik, Iceland

After one year of preparation and the remarkable success of the 2nd Conference, the co-organizers are pleased to announce this unique conference and workshop which once again will give access to a wealth of information and expert opinions in the field of Anode Rodding Shops.

The structure and content of the programme will allow for interaction between the speakers and delegates resulting in the gathering of knowledge vital for future advancement.

Established and potential new development in the sector will be highlighted. Innovation is the key. If you are a manager or operator of an Anode Rodding Plant, Maintenance Manager, Safety Manager, Quality Manager, Project Manager, Engineer, Consultant or Producer of equipment, then this is the conference and workshop you should attend.

The recognition of the importance of the event is the level of patronage and sponsors it has attracted.

Sponsors





Metal Park is a light metal network in Iceland. The emphasis of the network is information exchange, education, marketing, product development and research in the field of light metals. The network consists of light metals producers, manufacturers, research institutes, universities, trade schools and MÁLMGARÐUR the Federation of Icelandic Industries.



The Ministry of Industry in Iceland focuses on industrial development and energy resources. Applied technology and innovation are largely delegated to the Technological Institute and to the Building Research Institute. All aspects of energy exploration and sources, harnessing, distribution, district heating plants, electricity generation, energy research and utilisation - are handled by the Ministry and its statutory bodies the National Energy Authority and the Energy Fund.

City of Reykjavik Iceland's capital Reykjavik is situated on the southwest corner of the island and has a population of some 110.000. City of Reykjavik Modern and spacious, Reykjavik offers everything expected of the largest cities. The cultural scene is vibrant and exceptionally varied.

> Landsvirkjun generates 85% of all electricity in Iceland and sells on the wholesale market to public utilities and to power intensive indus

Alcan Iceland Ltd is the largest aluminium smelter in Iceland, with a production capacity of 170,000 tpa, and by far the biggest industrial company in the country. The smelter is located in Hafnarfjördur, close to the capital Reykjavik, and Alcan Iceland was the first Icelandic company to obtain ISO 14001 certification. It is ISO 9001 certified as well.

Nordural NA, is an aluminium smelter situated at Grundartangi, Hvalfjordur, owned by Century Aluminium, with headquarters in Monterey, California. The production capacity is presently being expanded from 90,000 tpa to 220,000 tpa. Startup of the expansion will take place in 2006.

ICELANDAIR, the flag carrier of Iceland, services 147 markets in 15 countries on both sides of the Atlantic through its Reykjavik hub in Iceland. ICE-LANDAIR services these markets with one of the youngest fleet in the world, high technology equipment, excellent service, and with 60 years of experience in the field of aviation.

ALTECH SMV Ltd of Reykjavik develops and supplies innovative equipment for improved environment, efficiency and economy in primary aluminium smelters. ALTECH's main area of expertise is in equipment for the Rodding Plant where the company has delivered products to many smelters worldwide.

The Association of Chartered Engineers in Iceland and the Icelandic Society of Engineers have about 2,000 members from all disciplines of engineering. The main interest of the association is to promote engineering and engineering skills in Iceland.

Stimir hf. is a solution provider to the primary aluminium industry, with particular focus on the Rodding Plant. All aspects of design and fabrication are undertaken at Stímir 's own facilities, ensuring total quality control and on-time delivery.

HRV Engineering is owned and operated by three of Icelandic's largest engineering consultants; Hönnun, Rafhönnun and VST. It has played a leading role in all of the country's aluminium smelter projects, spanning the entire spectrum of consulting and general engineering services.









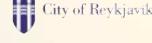














General Conference Information





Venue Reykjavik, Iceland

The weather in Reykjavik can never be taken for granted but temperatures in September are likely to be between +8°C and +13°C. Be prepared for wind and rain but also for good, calm weather.

With its vibrant life by day and night, Reykjavik is just as much part of the Icelandic experience as the midnight sun or the magical landscapes forged by ice and fire. Old accounts say it was the ancient gods themselves who led Iceland's first settler Ingólfur Arnarson, to make his home in Reykjavik. He named the place Reykjavik ("Smoky Bay") after the geothermal steam which today heats homes and outdoor swimming pools throughout the city, a pollution-free energy source that leaves the air outstandingly fresh, clean and clear. One of Iceland's best salmon rivers runs through the city limits and on the outskirts are places for fishing, horse trekking and golf.

Reykjavik, including neighbouring communities, has a population of around 170,000 and is characterised by an interesting mix of cosmopolitan culture and traditional village roots. Reykjavík 's cultural scene is exceptionally diverse; it has numerous museums, a symphony orchestra, an opera house, several theatres, music recital halls, galleries and a vibrant nightlife.

In Reykjavik you can find some of the freshest and healthiest food: Delicious seafood, ocean-fresh from the morning's catch or unusual game and lamb are specialities not to be missed.

Walking distances are short in the downtown area and everything outside the city centre can be quickly and conveniently reached by bus. Small boutiques, with both traditional souvenirs as well as the latest fashions, are situated both downtown or in the shopping malls at Kringlan and Smáralind.

Conference Centre

Nordica Hotel, Reykjavik, Iceland

The venue is the most prominent hotel in Reykjavik and has just recently been extensively renovated. Hotel guests can enjoy the comfort of a first class restaurant, exclusive bar lounge, 1,000 m² of fitness centre and spa as well as soothing Jacuzzis. The conference facilities include 11 meeting and function rooms, all equipped with the latest audio-visual equipment for multi-purpose uses.

A centre that matches the quality of the conference programme.

Location

The conference centre is easily accessible from the international airport, which is served by regular buses direct to the hotel (and alternative accommodation), or by taxi. Located at the Laugardalur recreational park area, the conference location is within walking distance from the town centre and the Kringlan shopping mall.

Hotel Accommodation

The organisers have made an arrangement with Iceland Travel Conferences to help with your accommodation requirements at the Nordica Hotel and at alternative hotels close to the conference centre to suit all budgets.

Iceland Travel Conferences will also assist with air travel arrangements and extended visits.

Delegates are advised to arrive on Tuesday 20 September 2005 as flights are limited. International flights arrive normally at 15.30 each day except from the USA, which arrive early morning. Delegates planning to arrive on Wednesday 21 September 2005 would miss the first day session.

Conference and Works Visit Staff

Organisers' staff together with Iceland Travel Conferences representatives will be in attendance throughout the duration of the conference and works visits.

Technical Sessions, Workshops and Works Visits

Technical sessions and workshops are scheduled for two and a half days 21-23 September 2005 with technical sessions and works visits on 23 September 2005

Speakers, titles and content are shown within the brochure. The organisers reserve the right to alter the programme up to and including the last day of the event.

Conference Papers

Each delegate will receive a set of papers in hard copy format or CD in English (the organisers reserve the right to present individual papers in any alternative language to English as supplied by the speaker). The papers will be presented in a delegate case with additional information and relevant literature.

Conference Language

The speakers and workshop programme will be presented in English only.

Catering

The conference includes morning and afternoon refreshments and lunch each day served in a special restaurant set aside for event delegates, speakers and organisers. Works visits include lunch.

Event Reception

Three receptions are scheduled for delegates and partners; transport to/from each venue will be provided:

- (1) Tuesday 20 September 2005 18.00-19.30
- (2) Wednesday 21 September 2005 18.30-20.00
- (3) Thursday 22 September 2005 17.30-19.00

Extension of Stay / Optional Excursions

Why not extend your visit before or after the event to take in the delights and wonders of Iceland? Iceland Travel, our partner for all travel and accommodation issues will gladly assist you in tailoring any specific requirements for delegates and partners.

Thorunn Dogg Arnadottir, project manager and

Bjarnthora Egilsdottir, bookings

Lágmúli 4 PO Box 8650 IS-128 Reykjavik Iceland

Tel: +354 (585) 4381 Fax: +354 (585) 4390

Email: thorunnd@icelandtravel.is and bjarnthora@icelandtravel.is www.icelandtravel.is

The following tours are examples of what can be arranged before or after the conference or even during the event for partners travelling with delegates.



Today Reykjavik is a modern city with a variety of restaurants, museums, galleries and theatres.

On our tour we cover the city from end to end.

First to the high-lying Breidholt, with extensive views over the city and to the bay and mountains beyond. Pass the Árbær Open Air Museum to where many houses from Reykjavik's past have been moved and restored. Visit the modern, Olympic-size swimming pool at Laugardalur and the sculpture collection of the well-known artist Asmundur Sveinsson. Then past Hofdi House, site of the 1986 Reagan/Gorbachev Summit Meeting, and into the older part of the city to the imposing Hallgrímskirkja church whose high steeple is a landmark. Moving into the centre of the city, we pass the parliament, housing the world's oldest legislative assembly, and catch a glimpse of the City Hall, the Lutheran and Catholic cathedrals, continuing to the often busy fishing harbour for a short stop. Drive along the coastline of the peninsula on which Reykjavik lies with a view over the small fjord to Bessastadir, the residence of Iceland's President, then past the University, the National Museum and the National Gallery.

Included: Coach and guide Price: 3,100 ISK per person

City Escape - half day super jeep tour

Duration: 4-5 hours

A trip in Super-jeeps to the Hengill area situated on the great rift and tectonic zone that cuts through Iceland. You will see steam jets and feel the earth tremble at a geothermal power project. Then we visit Hveragerdi, where greenhouses are heated by natural hot water, which emerges as springs throughout the town. On the way to Reykjavík we will go

off road over the Hellisheidi heath. Included: English speaking driver/quide.

Note: Wear warm clothes and sturdy shoes. Price: 11.500 ISK per person

Blue Lagoon - a most unique bathing pool

Duration: 4-5 hours

Filled with mineral-rich waters, the Blue lagoon has become internationally known for providing soothing, medicinal relief for sufferers of skin ailments, as well as for others simply looking for an absolutely brillant bathing experience. It was in 1980 that people began bathing in the Blue Lagoon, and since then its popularity has continued to increase. There is also an indoor pool filled with sea water, a winter garden, restaurant and much more. After a nice and refreshing bath you can enjoy excellent food at the restaurant.

The Lagoon is only a 45 minutes drive from Reykjavík. (incl. bus, guide and entrance fee into the lagoon).

Price: 3,000 ISK per person

Travel Formalities

The programme does not include accommodation or travel costs from original destination.

Visas – Iceland Travel Conferences can advise which delegates require visas. Where visas are required, these can be obtained through the Danish Embassy in delegates' country of residence.

All major credit card facilities are accepted by Nordica Hotel. There is an ATM in the hotel for Visa and Mastercard credit and debit cards, which are also accepted by most outlets in Iceland.

The event is co organised by dmg world media (uk) Itd and IceTec Technological Institute of Iceland with Metal Park. Iceland Travel Conferences will act as the on site administrator for the event.

All queries should be directed to Iceland Travel who in turn will liaise with dmg world media (uk) ltd, IceTec and Metal Park to assist in the participation of delegates.

Iceland Travel

Thorunn Dogg Arnadottir, project manager and Bjarnthora Egilsdottir, Bookings

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dmg world media (uk) Itd

3rd International Rodding Conference **Neil Roberts**

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IceTec / Metal Park

Birgir Jóhannesson (birgirj@iti.is) Thorhildur Fjola Kristjansdottir (thorhildur@iti.is) Keldnaholti, 112 Reykjavík, Iceland

Tel: +354 570 7100 Fax: +354 570 7111

Email: info@rodding-conference.is

Latest information and updates can be found on the conference website www.rodding-conference.is

Conference Costs

Cost per delegate ISK 80,000 (note that ISK will be the fixed currency). Delegate fee includes full participation at the conference over three days, 21 -23 September 2005 and works visits on 23 September 2005. Lunch and refreshments on all three days; set of conference papers, delegate case and three event receptions.

Accommodation and travel from original destination to conference centre is not included.

Detailed information and payment are included on the enclosed order form.

Tabletop Exhibitions - A Unique Marketing Opportunity

Commercial companies wishing to promote their products and services to conference delegates can take advantage of tabletop display units that will be situated in the conference foyer area through which delegates have to pass to enter the conference hall and where tea and coffee breaks take place.

The cost per table is ISK 70,000.

There are a limited number of positions available which will be allocated on a first come, first served basis

Contact: Neil Roberts

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Contact: Thorhildur Fjola Kristjansdottir

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Conference Programme

NORDICA HOTEL REYKJAVIK, ICELAND, 21 – 23 September 2005

Tuesday 20 September

13:00 – 18.30 Registration 18:00 – 19:30 Welcome Reception – Nordica Hotel

Wednesday 21 September

07:30 - 08:30 Registration & Service Desk 08:30 - 10:00 Opening Ceremony Chairman: Mr. Hallgrimur Jónasson, IceTec

- Opening Address
 Minister of Industry and Commerce, Iceland
- Conference and Workshop Programme Presentation and Aim Dr. Tim Smith, Editor, "Aluminium International Today", UK
- Keynote Address
 Economic Trends in Aluminium Smelting and their implications for Rodding Rooms
 Mr. Jeff Keniry, Alumination Consulting Pty Ltd

10:00 - 10:50 Coffee / Table top exhibition

10:50 – 12:20 <u>Session 1 Modern Rodding Plants</u> Chairman: Mr. Ingólfur Thorbjörnsson, IceTec

- Alcan Alma Rodding Shop
 Mr. Paul Gravel, Alcan Alma
- The Rodding Shop viewed as an Alcoa Business System Assembly Line Mrs. Diane D Martin, Alcoa
- title to be announced Speaker 3

12:20 - 13:20 Lunch

13:30 – 15:00 <u>Session 2 Anode Butts Transportation, Cleaning & Recycling</u> Chairman: Mr. Ingvar Pálsson, Alcan Iceland Ltd

- Changing challenges of handling four or five products from spent anodes Mr. Sveinn Snaeland, Nordurál
- Inspection and repair of anode rods and stubs for improved cell efficiency Mr. Jón H Magnusson, Altech SMV
- title to be announced Speaker 3

15:00 - 15:30 Coffee/Table top exhibition

15:30 – 17:30 Workshop Session 1 Anode Butts Transportation, Cleaning & Recycling Chairman: NN

18:00 - 19:30 Reception

Thursday 22 September

08:00 - 08:30 Registration & Service Desk

08:30 - 10:00 <u>Session 3 Optimal Assembly of Anodes and Rods</u> Chairman: Dr. Birgir Johannesson, IceTec

- Rod maintenance for minimisation of voltage drop Mr. Stefán Thor Ragnarsson, Alcan Iceland Ltd
- Comparison of methods for stub welding Mr. Bernd Rolofs
- Graphite coating of anode rod stubs Mr. Barry Woodrow, Stímir hf

10:00 - 10:30 Coffee / Table top exhibition

10:30 – 12:00 <u>Session 4 The Magic of Cast Iron</u> Chairman: Mr. Sveinn Snaeland, Nordurál

- Cast iron for anode and cathode rodding Mr. Juan Romero, Alcan
- Cast iron for anode rodding from a metallurgical perspective Mr. Jón Thor Thorgrimsson, MThJ Foundry

12:00 - 13:00 Lunch

13:00 – 14:30 <u>Session 5 Increasing Productivity</u> Chairman: Mr. Tomas Mar Sigurdsson, Alcoa Fjardaál

- Increasing amperage Prof. Barry Welch, University of New South Wales
- Production increase at elder smelters with reasonable efforts Mr. Bernd Rolofs
- Impact of anode quality on metal production cost
 Mr. Werner K Fischer, R&D Carbon and Ulrich Mannweiler, Mannweiler Cons.

15:00 – 17:00 Workshop Sessions 2 The Magic of Cast Iron Chairman: NN

17:30 - 19:00 Reception

Friday 23 September

08:00 - 08:30 Registration & Service Desk

08:30 – 10:00 <u>Session 6 Industry Trends</u> Chairman: Mrs. Rannveig Rist, Alcan Iceland Ltd

- 25 years of Dubal's progressive development Mr. Abdulla Kalban, Dubal
- Moving towards zero anode effect frequency while achieving world class KPI Mr Willy E Kristensen, Nordurál
- Aluminium and power in Iceland
 Mr. Bjarni Bjarnason, Landsvirkjun, Iceland

10:00 – 10:30 Closing Ceremony Dr Tim Smith, DMG, Editor "Aluminium International Today", UK

11:00 -12.00 Lunch

12:30 Buses leave Nordica Hotel for technical visits

Technical visits 13:00 – 14:00 Alcan Iceland Ltd (ISAL), Straumsvik 15:00 – 16:00 Nordurál, Grundartangi

17:00 –18:00 Back to Hotel 18:00 – 19:00 Reception – Nordica Hotel

*The programme is subject to change at any time

Organisers reserve the right to refuse entry for any delegate to the technical visits if requested by any of the host companies without redress against the organisers. No photographs are allowed at host company's property during technical visit.

3rd International Conference and Workshop on Anode Rodding Plants for Primary Aluminium Smelters

21 - 23 September 2005 Reykjavik, Iceland

Registration details

Delegates are asked to register on line at the conference web site: www.rodding-conference.is Alternatively complete the form and send it to Iceland Travel Conferences

Registration Form for Delegates			Please debit my credit card:	
Herewith I register the following delegates for above Conference (if you wish to book for more than one delegate, please copy this form). (BLOCK CAPITALS PLEASE) Company Name Delegate Name			☐ Euro ☐ Visa ☐ Mastercard ☐ Diners Club	
			Card Number	
			Amount in IS Krona Expiry Date	
Address			Signature Cardholder	
ridal 655			Credit cards will be debited in Icelandic Krona, no later than 4 weeks before arrival.	
Telephone Fax			Upon receipt of your registration form you will be debited your delegate fee plus accommodation	
Email	Tax		plus accommodation	
Litidii			Cancellation	
Delegate Fees (please tick as appropriate)			Cancellation	
Per delegate ISK 80,000 Tabletop + 1 delegate place ISK 130,000 Tabletop (no delegate place) ISK 70,000 If you are a speaker, please tick here			No refund to be made in respect of cancellation after 25 July 2005. Any cancellation before that date may be subject to a 10% cancellation fee. Delegate substitution may be made at any time.	
			The undersigned declares that he/she is legally authorised to submit this application. With the signature below the General Conditions of participation overleaf are accepted.	
For current exchange rate go to: "The Universal currency converter" at www.xe.com/ucc			Signature Date	
The delegate fee includes:			Please return completed form to:	
Full participation at the three day conference			Iceland Travel Conferences	
Delegate lunches (21 – 23 September 2005) morning and afternoon refreshments			Thorunn Dogg Arnadottir, project manager and	
Conference documentation			Bjarnthora Egilsdottir, bookings	
Works visit 23 September 2005 inclusive of lunch			PO Box 4, Lágmúli 4 IS-128 Reykjavik	
Three event receptions			Iceland	
Registration for workshops are also on line on the Conference web site. Please refer to conference programme for information regarding workshops.			Tel: +354 (585) 4381	
			Fax: +354 (585) 4390	
			Email: thorunnd@icelandtravel.is and bjarnthora@icelandtravel.is	
Signature	Date		www.icelandtravel.is	
			Conditions of Participation	
Hotel Accommodation/Payment			·	
Arrival /2005	Departure /	2005	The organisers reserve the right to alter the programme at anytime. Changes within the programme are not accepted as a reason for cancellation of the application.	
Hotel	Single room per night	Double room per night	Delegate fee has to be paid prior to the conference. All applications are only valid if the full amount is paid. Non payment by delegates will cancel participation in the conference.	
Nordica Hotel standard/deluxe Hotel Cabin	☐ ISK 18,600 ☐ ISK 8,740	☐ ISK 22,000 ☐ ISK 10,100		
For current exchange rate go to: "The Universal currency converter" at www.xe.com/ucc			Non appearance through illness or any other reason is not acceptable for non payment or return of fee. Transfer of named delegate participation is acceptable up to one week prior to the opening day of the event if received by the organisers in writing.	
Nordica Hotel and Hotel Cabin offer special room rates for participants.			Organiser directives during the conference must be followed.	
Hotels will be allocated on a first		205	The organisers limit their liabilities according to legal requirements.	
Hotel rooms cannot be guaranteed after the 20th July 2005. Breakfast and VAT are included in the hotel prices.			If for any reason the organisers cancel the event all delegate and partner fees will be	
Accommodation is to be paid in full to Iceland Travel Conferences.			refunded. No claim will be allowed against the organisers for loss of travel costs,	

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* Please detatch or copy form and return

to the address as shown or register on line

at www.rodding-conference.is

hotel charges or any other costs incurred by registered delegates, partners or guests.

These conditions are part of the applications/registration of delegates.

The house rules of Nordica Hotel (the venue) have to be accepted.

3rd International Conference and Workshop on Anode Rodding Plants for Primary Aluminium Smelters 21 - 23 September 2005, Peykjavik, Ireland

















Photographs from the 2nd Rodding Conference in September 2003

