



AQW POCKET PROGRAMME

18 – 22 March 2012

Perth Convention and Exhibition Centre, WA

*Pocket Programme
Sponsor:*



AQW 2012 TECHNICAL PROGRAMME


SUNDAY 18 MARCH 2012

1400	Registration opens Speakers support centre opens
1800	Welcome reception and opening of industry exhibition (Venue: Exhibition Pavilion 1 – Level 1, Perth Convention and Exhibition Centre) <i>Sponsored by FLSmidth</i>
2000	Welcome reception concludes and industry exhibition closes Registration closes Speakers support centre closes




MONDAY 19 MARCH 2012

0730	Registration opens Speakers support centre opens
0800	Industry exhibition opens
	OPENING PLENARY SESSION (Venue: Level 2 Riverside Theatre) Chair: Steve Rosenberg , BHP Billiton Worsley Alumina, WA
0845	Welcome to Country – Wadumbah Aboriginal Dance Group
0855	Welcome: Steve Rosenberg
0900	Opening Address by Hon Norman Moore MLC , Minister for Mines & Petroleum, WA
0930	Formal Opening: Steve Rosenberg
0940	KEYNOTE PRESENTATION 1: Zero Harm in the Alumina industry – Ricus Grimbeek , Asset President, BHP Billiton Worsley Alumina, WA
1010	Morning tea: industry exhibition

1040	PLENARY SESSION: ZERO HARM (Venue: Level 2 Riverside Theatre) Session Introduction by Chair: Ron Toussaint , WorleyParsons, QLD <i>Sponsored by WorleyParsons</i>	
1050	KEYNOTE PRESENTATION 2: Safety Excellence – Trevor Peters , General Manager Refinery Operations, BHP Billiton Worsley Alumina, WA	
1120	KEYNOTE PRESENTATION 3: The Psychology of Safety Culture Change – Bryce Ridgeway , Sentis, QLD	
1150	Developing a practical mechanism for incorporating sustainability principles into mineral processing plant design and operation. Stevan Green , SUSOP Pty Ltd, WA	
1210	Building an interdependent safety culture in heavy industry. Daniel Taylor , Queensland Alumina Ltd, QLD	
1230	Alumina refining and air quality: VOCs and odour. Ian Galbally , CSIRO Marine & Atmospheric Research, VIC	
1250	Lunch: industry exhibition	
	Stream 1 CONCURRENT SESSION: ZERO HARM (Venue: Level 2 Riverside Theatre) Chair: Michael Ison , AAC	
1350	Dust control in red mud residue operations. Carl Urbani , Nalco, WA	
1410	Reducing environmental footprint of filters in Bayer process: trial of used bags recycling. Luc Parent , Sefar, Canada	
1430	Quantifying alkaline process liquor in soils and groundwater from leaks and spills. Geoffrey Thomas , Alcoa of Australia, WA	
1450	Indigenous culture, socio-economics and the social licence to operate. Howard Smith , Northern Land Council, NT	
	Stream 2 CONCURRENT SESSION: PROCESS DEVELOPMENT & OPTIMISATION (Venue: Level 2 Meeting Rooms 1 & 2) Chair: Dean Ilievski , Alcoa	
1350	Plant experience with replacement of a three step drum filter plant by a one step pan filter at al-hydrate product filtration. Juergen Hahn , BOKELA GmbH, Germany	
1410	Advances in control of trihydrate classification using high performance flocculation. Ryan Chester , Nalco, WA	
1430	Prediction of deep cone settler performance under increased feed loads using multivariate modelling. David Caffin , BHP Billiton Worsley Alumina, WA	
1450	A new concept for dry disposal of Alunorte's bauxite residue. Joaquim Ribeiro , Alunorte	

1510	Afternoon tea: industry exhibition
	CONCURRENT SESSION: ZERO HARM (Venue: Level 2 Riverside Theatre)
1540	Removal of colour and solids from QAL sea water neutralisation effluent using Veolia actiflo high rate clarifier. Alan Kane , Queensland Alumina Ltd, QLD
1600	A study of odour reduction in a alumina refinery. Brian Hooker , Aerison, WA
1620	Geochemistry and ecotoxicology of Bayer liquids using different neutralisation techniques. Malcolm Clark , Southern Cross University, NSW
1640	Long-term environmental stability of hydrotalcite precipitated in industrial systems – a molecular modelling approach. Howard Smith , Northern Land Council, NT
	CONCURRENT SESSION: PROCESS DEVELOPMENT & OPTIMISATION (Venue: Level 2 Meeting Rooms 1 & 2) Chair: Dean Ilievski , Alcoa
1540	Evaluation of MaxHT on silica scaling rate at Queensland Alumina. Michael Kiriazis , Queensland Alumina Ltd, QLD
1600	Management and control of silica in the Bayer process. Alex Aboagye , Nalco, WA
1620	Feedstock conversion from bauxite to SGH. Kazuki Takemura , Sumitomo Chemical, Japan
1640	Theory and practice of filtration in the alumina industry. Juegen Hahn , BOKELA GmbH, Germany
1700	Session wrap up – Day 1
1700	Registration closes Speakers support centre closes Industry exhibition closes
1830-2030	Cocktail Function Fraser's Restaurant, Kings Park

TUESDAY 20 MARCH 2012

0730	Registration opens Speakers support centre opens	
0800	Industry exhibition opens	
0845	PLENARY SESSION (Venue: Level 2 Riverside Theatre) Welcome by Steve Rosenberg BHP Billiton Worsley Alumina, WA Chair: Outotec <i>Sponsored by Outotec</i>	
0900	KEYNOTE PRESENTATION 4: Long term challenges for the industry – Robin Batterham , Australia Academy of Technology Sciences & Engineering, VIC	
	Stream 1 CONCURRENT SESSION: ENGINEERING TECHNOLOGY & DEVELOPMENT (Venue: Level 2 Riverside Theatre) Chair: Outotec	
0935	Long term study of nano-engineered mercury vapour sensors tested under simulated alumina refinery conditions. Suresh Bhargava , RMIT University, VIC	
0955	Automated descaling – improving safety and efficiency. Ian Blevin , WOMA, WA	
1015	Project is to increasing the flow capacity of pregnant liquor purification filters by installing a new design of filter bag frame. David Tebbutt , Jord International, WA	
	Stream 2 CONCURRENT SESSION: FUNDAMENTAL CHEMISTRY RESEARCH (Venue: Level 2 Meeting Rooms 1 & 2) Chair: Peter Smith , CSIRO	
0935	Unravelling metal binding on modified bauxite refinery residues. Malcolm Clarke , Southern Cross University, NSW	
0955	The impact of desilication product on bauxite residue flocculation. Alex Senaputra , Curtin University, WA	
1015	Recovery of soda from residue by acid leaching and electrochemical processing. Takuo Harato , CSIRO, WA	
1035	Morning tea: industry exhibition	

	CONCURRENT SESSION: ENGINEERING TECHNOLOGY & DEVELOPMENT (Venue: Level 2 Riverside Theatre) Chair: Helen Adamson , HATCH
1100	The conditioning of solids flow for process productivity. Scott Doig , Maxbend, WA
1120	Optimising digestion flash tank design for the alumina industry. Brady Haneman , Hatch, WA
1140	Pressure surge mitigation in high temperature digestion unit. Alan Wang , Hatch, WA
1200	Digester vessel design. Alessio Scarsella , Outotec, Germany
	CONCURRENT SESSION: FUNDAMENTAL CHEMISTRY RESEARCH (Venue: Level 2 Meeting Rooms 1 & 2) Chair: Peter Smith , CSIRO
1100	Implication of calcium hydroxide in the seawater neutralisation of bauxite refinery liquors. Sara Couperthwaite , QUT, QLD
1120	Understanding the origin and mechanism of hydrogen production in the Bayer process. Allan Costine , CSIRO Process Science & Engineering, WA
1140	Towards a better understanding of DSP precipitation. Rob LaMacchia , Alcoa of Australia, WA
1200	High-resolution thermal gravimetric analysis (hi-res TGA) of bauxites and muds. Elaine Tolentino , BHP Billiton Worsley Alumina, WA
1220	Lunch: industry exhibition
	CONCURRENT SESSION: ENGINEERING TECHNOLOGY & DEVELOPMENT (Venue: Level 2 Riverside Theatre) Chair: Gerald Roach
1320	Electrochemical management of scale build up in Bayer solutions. Liam Holloway , Savcor, WA
1340	Operating experience with improved precipitation agitation system. Thomas Davis , Queensland Alumina Ltd, QLD
1400	Fabric filter operating results with 10m long bags and low purging pressures. Carl-Vilhelm Rasmussen , FLSmidth, Denmark
1420	Alumina refinery design for climatic extremes. Daniel Thomas , WorleyParsons, QLD
	CONCURRENT SESSION: FUNDAMENTAL CHEMISTRY RESEARCH (Venue: Level 2 Meeting Rooms 1 & 2) Chair: Ronan Courtney , University Limerick
1320	Impact of chemical additives on sodium oxalate crystallisation rate and stability. Eric Boom , BHP Billiton Worsley Alumina, WA
1340	Investigation of wet oxidation mechanisms of malonate and substituted malonates in highly alkaline solution. Jackie Dong , RMIT University, VIC
1400	Scale predominance diagrams for Bayer precipitation tanks. Alistair Gillespie , Rio Tinto Alcan, QLD
1420	Measuring electrochemical potentials in Bayer liquors. Greg Power , Arriba Consulting, WA

1440	Afternoon tea: industry exhibition <i>Sponsored by Sefar</i>	
	CONCURRENT SESSION: ENGINEERING TECHNOLOGY & DEVELOPMENT (Venue: Level 2 Riverside Theatre) Chair: Daniel Thomas , WorleyParsons	
1510	Corrosion resistance of white cast irons in caustic solutions. Richard Clegg , CQ University, QLD	
1530	A novel and environmentally friendly process for the treatment of Bayer process residue. Alessio Scarsella , Outotec, Germany	
1550	Online gross error detection system applied to an alumina refinery evaporation process. Michael Lee , Alcoa World Alumina, WA	
1610	The advancement of alumina production in China. Wangxing Li , Zhengzhou Research Institute of Chalco, China	
	CONCURRENT SESSION: PROCESS CONTROL & MEASUREMENT (Venue: Level 2 Meeting Rooms 1 & 2) Chair: Denis Audet , RioTinto Alcan	
1510	Dynamic real-time optimiser for precipitation solids control. Angelo D'Agostino , BHP Billiton Worsley Alumina, WA	
1530	Application of multiple modelling platforms for optimisation of production ramp-up. Humberto Andrade , BHP Billiton Worsley Alumina, WA	
1550	Measurement of the shape of oxalate crystals by an automated optical image analysis. Andrey Bekker , CSIRO, WA	
1610	Advantages of fieldbus systems in process control, maintenance and asset management. Rafael Koenig , Tyco Flow Control, NSW	
1630	Session wrap up – Day 2	
1640-1740	Happy Hour <i>Sponsored by Tyco Flow Control</i>	
1730	Registration closes Speakers support centre closes Industry exhibition closes	
1800	Free Evening	

WEDNESDAY 21 MARCH 2012

0730	Registration opens
0800	Speakers support centre opens Industry exhibition opens
0845	PLENARY SESSION (Venue: Level 2 Riverside Theatre) Welcome: Steve Rosenberg BHP Billiton Worsley Alumina, WA Chair: BOKELA <i>Sponsored by BOKELA</i>
0900	KEYNOTE PRESENTATION 5: Residue management – Ron Knapp , International Alumina Institute, UK
0930	Stream 1 CONCURRENT SESSION: RESIDUE AND OTHER BYPRODUCTS (Venue: Level 2 Riverside Theatre) Chair: David Cooling , Alcoa
0935	Optimising bauxite residue dewatering and consolidation. Leon Munro , BHP Billiton Worsley Alumina, WA
0955	Filtration map of bauxite residues: filterability of red mud from several bauxites and possible use of continuous pressure filtration like hi-bar filtration. Reinhard Bott , BOKELA, Germany
1015	Development and characterisation of tubular ceramic membranes produced from an alumina residue. Iliana Guimaraes , Federal University of Campina Grande, Brazil
1035	Cost effective storage capacity increase for alumina tailing disposal area through spillway optimisation. Iain Lonie , GHD, QLD
	Stream 2 CONCURRENT SESSION: ALUMINA QUALITY (Venue: Level 2 Meeting Rooms 1 & 2) Chair: Linda Kristiansen , HYDRO
0935	Stabilisation of product quality at Yarwun alumina refinery. Denis Audet , Rio Tinto Alcan, QLD
0955	Particle breakdown and alumina strength during calcination. Benny Raahauge , FLSmidth, Germany
1015	Examination of drop in bath acidity due to change-over of alumina qualities in Sunndal smelter, Norway. Astrid Meyer , Hydro Aluminium, Norway
1035	Thermometric titrimetric determination of reactivity with acids and bases by smelter grade alumina. Thomas Smith , Multitrator, QLD





1055 Morning tea: industry exhibition
Sponsored by Red Earth Engineering

CONCURRENT SESSION: RESIDUE AND OTHER BYPRODUCTS (Venue: Level 2 Riverside Theatre)
Chair: **David Smirk**, Residue Solutions

1120 Preliminary assessment of tricalcium aluminate hexahydrate flue gas desulphurisation. **Leon Munro**, BHP Billiton Worsley Alumina, WA

1140 Development of Bayer geopolymer paste and use as concrete. **Evan Jamieson**, Alcoa World Alumina, WA

1200 A goldsim model for bauxite residue disposal. **Hongyu Li**, Rio Tinto Alcan, QLD

CONCURRENT SESSION: ALUMINA QUALITY (Venue: Level 2 Meeting Rooms 1 & 2)
Chair: **Steve Healy**, RioTinto Alcan

1120 Development of a fast method for progressive attrition testing. **Linda Kristiansen**, Hydro Aluminium, Norway

1140 Hydrate reversion to boehmite as a calciner feed. **Christine Wingate**, CSIRO, WA

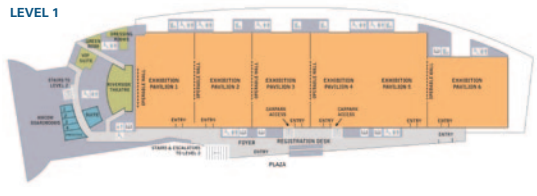
1200 Influence of diethyl malerate (maleic acid diethyl ether) on growth of gibbsite crystals in synthetic Bayer liquor.
Balakrushna Padhi, National Aluminium Company, India

1240 Lunch: industry exhibition

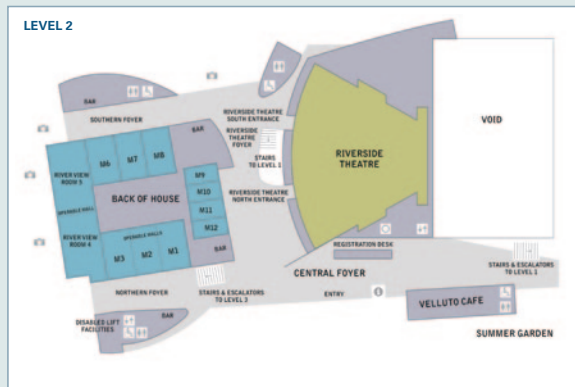
	CONCURRENT SESSION: BAUXITE & MINING (Venue: Level 2 Riverside Theatre)	
1330	Nanocrystalline caustic-insoluble aluminium and iron oxides in bauxite in South Western Australia. Bob Gilkes , University of Western Australia, WA	
1350	The flotation of a Brazilian bauxite ore. Sandro Marino , University of Utah, USA	
1410	Study of a Vietnam 155km bauxite slurry pipeline from the highlands to coast. Quoc-Khanh Tran , Hatch, WA	
1430	The use of surface miner at Paragominas bauxite mine. Edil Pimental , Paragominas, Brazil	
	CONCURRENT SESSION: ENERGY & WATER (Venue: Level 2 Meeting Rooms 1 & 2) Chair: Bogdan Skomra , QAL	
1330	Opportunities for water savings and water quality improvement in the Bayer process. Sam Adano , Nalco, WA	
1350	Two stage calcination. Dean Ilievski , Alcoa of Australia, WA	
1410	Application of highly energy efficient calcination configuration to AOS stage CFB calciners. Cornelis Klett , Outotec, Germany	
1430	Energy consumption and optimisation for the Bayer process. Tomas Mach , Rio Tinto Alcan, QLD	
1450	Review on the energy saving technologies applied in Bayer process in China. Songqing Gu , Aluminium Corporation of China	
1510	Session wrap up – Day 3	
1515	Afternoon Tea	
1530-1700	Poster presentation in industry exhibition Presenters at poster to answer questions	
1700	Registration closes Speakers support centre closes	
1800-2300	AQW Gala Dinner (Venue: Bellevue Ballroom, Perth Convention and Exhibition Centre) Formal closing acknowledgements, prize awarded for best overall paper and best student presentation... then PARTY!	
THURSDAY 22 MARCH 2012		
0800	Technical Tours Worsley Refinery Boddington Minesite CSIRO Waterford	Partner Tour Rottneest Island

VENUE FLOOR PLAN

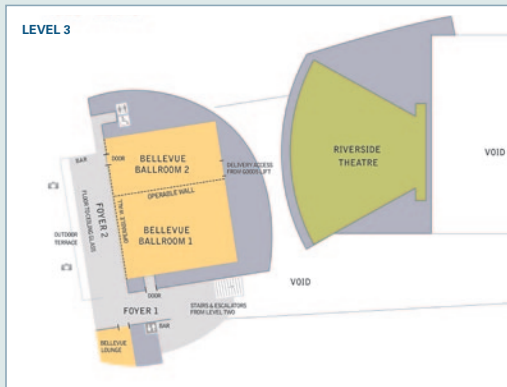
LEVEL 1



LEVEL 2



LEVEL 3





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