The Australian

MINE VENTILATION

CONFERENCE 2013

1-3 July 2013 Adelaide Australia

Registration Brochure

Proudly hosted by

Palaris

Proudly supported by

www.austminevent.com.au
On behalf of the organising committee it is with pleasure I invite you to participate in The Australian Mine Ventilation Conference 2013, a joint initiative hosted by the University of New South Wales, The AusIMM and the Mine Ventilation Society of Australia. The conference, which follows on from the highly successful Mine Ventilation Conference 2011, will be held in Adelaide, South Australia from 1-3 July 2013.

We are pleased to present over 50 technical presentations from practitioners in both the metalliferous and coal mining sectors together with keynote speakers whose industry expertise combined will positively address the major issues facing mining operations. Our Keynote speaker line-up includes:

- Dr Rick Brake, Principal Consultant, Mine Ventilation Australia
- Dr Roy Moreby, Director, Morvent Mining Ltd
- Mr Bruce Robertson, Executive Manager – Technical Services and Planning, Carabella Resources Ltd.

A significant feature of this three-day conference will be the presentation of case studies from major events and novel solutions to mine site challenges. Additionally, workshop sessions will be held so that there are opportunities for you to raise concerns facing the industry with the collective expertise to ensure the industry can maintain its reputation of safety and innovation.

The conference program will also include opportunities to attend technical site visits to the BHP Billiton Olympic Dam and Oz Minerals, Ankata Underground Mine and the Prominent Hill operations. These tours will have an emphasis on the ventilation systems of the mine sites, and we urge interested delegates to register early as places are strictly limited! The conference program will also feature a trade exhibition, social functions and networking opportunities.

I look forward to welcoming you to The Australian Mine Ventilation Conference 2013 and Adelaide in July, and I am sure you will find it a rewarding and engaging experience.

Duncan Chalmers
Conference Chair,
The Australian Mine Ventilation Conference 2013
The Australian Mine Ventilation Conference 2013

PROVISIONAL CONFERENCE PROGRAM

<table>
<thead>
<tr>
<th>Sunday 30 June</th>
<th>Monday 1 July</th>
<th>Tuesday 2 July</th>
<th>Wednesday 3 July</th>
<th>Thursday 4 July</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-conference Registration</td>
<td>4.00 pm – 6.00 pm</td>
<td>The Australian Mine Ventilation Conference</td>
<td>9.00 am – 5.00 pm Conference &amp; Exhibition</td>
<td>T1: BHP Billiton Olympic Dam</td>
</tr>
<tr>
<td>Welcome Function</td>
<td>5.15 pm – 6.15 pm</td>
<td>Conference Dinner</td>
<td>7.00 pm for 7.30 pm</td>
<td>T2: OZ Minerals’ Ankata Underground Mine, Prominent Hill Operation</td>
</tr>
</tbody>
</table>

PROVISIONAL LIST OF TECHNICAL PAPERS

**Keynote Presentations**
- Stewart Bell, Deputy Director-General and Commissioner for Mine Safety & Health, Department of Natural Resources and Mines, Queensland Government
- Rick Brake, Principal Consultant, Mine Ventilation Australia

**Coal Mine Ventilation**
- Application of Leading Practice Spontaneous Combustion Assessment to Exploration at the Doyleys Creek Project — B Beamish, G Cambourn, G Lewis, J Edman and R Beamish
- Life-of-Mine Ventilation System Upgrade at Springvale Colliery – A Case Study — R Gelson and B Smith
- Review of Australian Longwall Panel Ventilation — S Gillies and H W Wu
- Non-Destructive Testing of In Situ Underground Mine Seals: Initial Technology Assessment — C Harwood, K Ludbacher and E Westman
- Operational Management of Underground In-Beam Drilling Site — F Hungerford, T Ren and Z Wang
- A Case for Change — Defining Mine Sealing and Understanding Flammable Mixtures during Sealing in Underground Coal Mines — A Mackay
- Belt Road Segregation and Escapeways – Compliance or Risk Management? — M Olsen

**Heat and Refrigeration**
- Cooling Pathways for Deep Australian Longwall Coal Mines of the Future — B Belle and M Biffi
- Controlled Recirculation and Refrigeration at Vale’s Taquari Potash Mine — S Bluhm, R Funnell and L de Oliveira
- Required Cooling System Capacities for Extended Longwall Panels at a Bowen Basin Mine — T O’Connor, M S Kizil and B Belle
- Energy Saving in Deep Mines — J A Shaw and M G Myrhartd

**Main and Booster Fans**
- Performance and Acceptance Testing of Main Mine Ventilation Fans — D J Brake
- The Protection of Surface Ventilation Fan Installations from Underground Explosions — T Rafferty and R Bourcier
- Removing some Subjectivity from Traditional BS848 and ISO 5802 In Situ Fan Flow Tests — J Rowland
- Practical Considerations when using Auxiliary Axial Flow Fans as a Primary Mine Fan — J van der Sandt, L van den Berg and D Roughedge

**Numerical Modelling and Integration**
- After Blast Re-Entry Time for a Room and Pillar Operation — A Agasty, E Clausen, M Kellner and O Langefeld
- An Analysis of the Mixing of Air and Methane in the Stream Produced by the Mine Injector Station – Presenting Preliminary Results of Measurements and Modelling — J Janus and J Krawczyk
- Computational Fluid Dynamics Modelling of Respirable Dust and Gas Behaviour on a Longwall Face — T Ren and Z Wang
- Determining the Pressurisa Pulse for an Air Blast — M A Tuck

**Prevention and Fighting of Mine Fires**
- The Influence of Inertisation Techniques on Gas Interpretation — D Brady
- Gas Analysis – Linking the Laboratory with Reality — D Cliff
- Prevention of Methane and Coal Dust Explosions
- Fire Safety Engineering Applied to Underground Coal Mining — F Mendham and J Hart

**Ventilation Monitoring and Control**
- A Scoping Study on Fibre-Optic-Based Temperature Monitoring of Underground Coal Conveyor Belts — S M Aminossadati and B Yang
- Underground Auxiliary Ventilation Monitoring and Diagnostic System — G Ratner and S Viviers
- Ventilation Planning — Case Studies
- Ventilation Considerations for the New Level Mine Project Access Tunnels — E Acuña, R Alvarez, K Wallace and B Prosser
- Life-of-Mine Ventilation and Refrigeration Planning for Resolution Copper Mine — S Bluhm, R Moreby, F van Glehn and C Pascoe
- Contract Considerations and Other Critical Ventilation Aspects in Achieving a New Mine Ramp-up — B Broad
- The Hybrid Ventilation System — A S Derrington

**Ventilation Planning**
- Ventilation Upgrade at the Frog’s Leg Mine – Case Study — A Llewellyn and M Varvari
- Sunrise Dam Short- to Long-Term Ventilation Planning — L van den Berg, M Podreka and P Merry
- Engineering Controls Applied to Main Fan Commissioning Grasberg Block Cave: Case Study — H Vega, P Gonzalez-Carbonell, P Wathyono, S Riza and P Vergara

**Safety and Health**
- Occupational Health — Mine Gases, Dust, Radiation
- Heat and Radiation
- Removing some Subjectivity from Traditional BS848 and ISO 5802 In Situ Fan Flow Tests — J Rowland
- Practical Considerations when using Auxiliary Axial Flow Fans as a Primary Mine Fan — J van der Sandt, L van den Berg and D Roughedge
- Numerical Modelling and Integration
- After Blast Re-Entry Time for a Room and Pillar Operation — A Agasty, E Clausen, M Kellner and O Langefeld
- An Analysis of the Mixing of Air and Methane in the Stream Produced by the Mine Injector Station – Presenting Preliminary Results of Measurements and Modelling — J Janus and J Krawczyk
- Computational Fluid Dynamics Modelling of Respirable Dust and Gas Behaviour on a Longwall Face — T Ren and Z Wang
- Determining the Pressurisa Pulse for an Air Blast — M A Tuck
- Prevention and Fighting of Mine Fires
- The Influence of Inertisation Techniques on Gas Interpretation — D Brady
- Gas Analysis – Linking the Laboratory with Reality — D Cliff
- Prevention of Methane and Coal Dust Explosions
- Fire Safety Engineering Applied to Underground Coal Mining — F Mendham and J Hart

**Computational Fluid Dynamics**
- Computational Fluid Dynamics Modelling of Respirable Dust and Gas Behaviour on a Longwall Face — T Ren and Z Wang
- Determining the Pressurisa Pulse for an Air Blast — M A Tuck
- Prevention and Fighting of Mine Fires
- The Influence of Inertisation Techniques on Gas Interpretation — D Brady
- Gas Analysis – Linking the Laboratory with Reality — D Cliff
- Prevention of Methane and Coal Dust Explosions
- Fire Safety Engineering Applied to Underground Coal Mining — F Mendham and J Hart

**Ventilation Planning**
- Ventilation Planning — Case Studies
- Ventilation Considerations for the New Level Mine Project Access Tunnels — E Acuña, R Alvarez, K Wallace and B Prosser
- Life-of-Mine Ventilation and Refrigeration Planning for Resolution Copper Mine — S Bluhm, R Moreby, F van Glehn and C Pascoe
- Contract Considerations and Other Critical Ventilation Aspects in Achieving a New Mine Ramp-up — B Broad
- The Hybrid Ventilation System — A S Derrington
- Ventilation Upgrade at the Frog’s Leg Mine – Case Study — A Llewellyn and M Varvari
- Sunrise Dam Short- to Long-Term Ventilation Planning — L van den Berg, M Podreka and P Merry
- Engineering Controls Applied to Main Fan Commissioning Grasberg Block Cave: Case Study — H Vega, P Gonzalez-Carbonell, P Wathyono, S Riza and P Vergara

**Safety and Health**
- Occupational Health — Mine Gases, Dust, Radiation
- Heat and Radiation
- Removing some Subjectivity from Traditional BS848 and ISO 5802 In Situ Fan Flow Tests — J Rowland
- Practical Considerations when using Auxiliary Axial Flow Fans as a Primary Mine Fan — J van der Sandt, L van den Berg and D Roughedge
- Numerical Modelling and Integration
- After Blast Re-Entry Time for a Room and Pillar Operation — A Agasty, E Clausen, M Kellner and O Langefeld
- An Analysis of the Mixing of Air and Methane in the Stream Produced by the Mine Injector Station – Presenting Preliminary Results of Measurements and Modelling — J Janus and J Krawczyk
- Computational Fluid Dynamics Modelling of Respirable Dust and Gas Behaviour on a Longwall Face — T Ren and Z Wang
- Determining the Pressurisa Pulse for an Air Blast — M A Tuck
- Prevention and Fighting of Mine Fires
- The Influence of Inertisation Techniques on Gas Interpretation — D Brady
- Gas Analysis – Linking the Laboratory with Reality — D Cliff
- Prevention of Methane and Coal Dust Explosions
- Fire Safety Engineering Applied to Underground Coal Mining — F Mendham and J Hart

**Computational Fluid Dynamics**
- Computational Fluid Dynamics Modelling of Respirable Dust and Gas Behaviour on a Longwall Face — T Ren and Z Wang
- Determining the Pressurisa Pulse for an Air Blast — M A Tuck
- Prevention and Fighting of Mine Fires
- The Influence of Inertisation Techniques on Gas Interpretation — D Brady
- Gas Analysis – Linking the Laboratory with Reality — D Cliff
- Prevention of Methane and Coal Dust Explosions
- Fire Safety Engineering Applied to Underground Coal Mining — F Mendham and J Hart

**Ventilation Planning**
- Ventilation Planning — Case Studies
- Ventilation Considerations for the New Level Mine Project Access Tunnels — E Acuña, R Alvarez, K Wallace and B Prosser
- Life-of-Mine Ventilation and Refrigeration Planning for Resolution Copper Mine — S Bluhm, R Moreby, F van Glehn and C Pascoe
- Contract Considerations and Other Critical Ventilation Aspects in Achieving a New Mine Ramp-up — B Broad
- The Hybrid Ventilation System — A S Derrington
- Ventilation Upgrade at the Frog’s Leg Mine – Case Study — A Llewellyn and M Varvari
- Sunrise Dam Short- to Long-Term Ventilation Planning — L van den Berg, M Podreka and P Merry
- Engineering Controls Applied to Main Fan Commissioning Grasberg Block Cave: Case Study — H Vega, P Gonzalez-Carbonell, P Wathyono, S Riza and P Vergara
T1: BHP Billiton Olympic Dam
Thursday 4 July 2013

A one-day fly-in, fly-out visiting BHP Billiton’s Olympic Dam operation. The tour includes a briefing on the ventilation system, a walk-through of all ventilation infrastructures such as the underground ventilation hut, intake and exhaust shafts, primary fans and refrigeration plant.

Located 560 km north of Adelaide, South Australia, Olympic Dam is a multi-mineral orebody. It is the world’s fourth largest remaining copper deposit, fourth largest gold deposit and the largest uranium deposit. It also contains a significant amount of silver. Olympic Dam is Australia’s largest underground mine, producing 9 Mt/a of ore.

Most of its employees live in the town of Roxby Downs, 16 km south of the operation.

This is a unique opportunity to visit one of the largest underground mines in the world with one of the most complex ventilation systems in the world.

Depart: Adelaide Airport approx 7.00 am
Return: Adelaide Airport approx 6.00 pm
Numbers: Minimum 9 – Maximum 17
Includes: Charter flight, on-site transportation and lunch.
Clothing: Participants to wear a long sleeved shirt, long pants and enclosed shoes. Boots and overalls to be supplied by BHPB.
Luggage: Participants are encouraged to leave luggage at their hotel or at the airport. Up to 7 kg, soft bag will be allowed if absolutely necessary.
Cost: A$1210 per person
To book: To register for this tour, please complete the appropriate section of the registration form.
Note: All bookings are subject to site approval and attendance is at the discretion of the site. Final itinerary details will be made available two weeks prior to the conference. Flight transfers at the conclusion of the tour are at the cost of the attendee.

T2: OZ Minerals’ Ankata Underground Mine, Prominent Hill Operation
Thursday 4 July 2013

A one-day fly-in, fly-out visiting OZ Minerals’ Ankata Underground Mine, which is a part of its Prominent Hill operation. The tour will include a briefing on ventilation system and a walk-through of all ventilation infrastructures such as intake and exhaust airways and primary fans.

Ankata Underground Mine is one of the newest underground mines in Australia. Production started in the first quarter of 2012, and ramped up to the full production capacity of 1.2 Mt/a in the third quarter of 2012.

The Prominent Hill operation is located 650 km north-west of Adelaide, South Australia. All of its employees work on fly-In fly-out arrangement from Adelaide.

This is a unique opportunity to visit a new underground mine that still has an evolving ventilation system.

Depart: Adelaide Airport approx 7.00 am
Return: Adelaide Airport approx 6.00 pm
Numbers: Maximum 7
Includes: Charter flight, on-site transportation and lunch.
Clothing: Participants to wear a long sleeve shirt, long trousers and steel capped boots. Prominent Hill will provide all other necessary PPE equipment.
Luggage: Participants are encouraged to leave luggage at their hotel or at the airport. Up to 7 kg, soft bag will be allowed if absolutely necessary.
Cost: A$1320 per person
To book: To register for this tour, please complete the appropriate section of the registration form.
Note: All bookings are subject to site approval and attendance is at the discretion of the site. Final itinerary details will be made available two weeks prior to the conference. Flight transfers at the conclusion of the tour are at the cost of the attendee.
VENUE & ACCOMMODATION
Hilton Adelaide Hotel
233 Victoria Square
Adelaide South Australia 5000
Telephone: +61 8 8217 2000
Email: adelaide@hilton.com
Website: www.adelaide.hilton.com/

ROOM RATE
Hilton Adelaide Hotel are pleased to offer conference delegates a room rate of A$175 per night (King Deluxe and buffet breakfast). To avail yourself of this offer please visit: www.austminevent.com.au/accommodation.html

NAME TAGS
All participants at the conference will be issued with a name tag upon registration. Your name tag is the official pass to all sessions and must be worn at all times. Lost name tags can be replaced at the registration desk.

SOCIAL PROGRAM
Welcome Function
Monday 1 July
Time: 5.15 pm – 6.15 pm
Cost: Complimentary for all delegates
Guests: A$33 per person

Conference Dinner
Tuesday 2 July
Time: 7.00 pm for 7.30 pm
Cost: Complimentary for all delegates
Guests: A$132 per person

DRESS CODE
Dress code for the conference and social functions is smart business casual.

CONFERENCE PROCEEDINGS
All conference delegates will receive a printed proceedings volume containing full papers. A USB version of the proceedings will also be available for purchase via the AusIMM booth.
- Additional printed proceedings: A$77
- USB proceedings: A$55

LOCAL WEATHER
The wonderful, Mediterranean-style climate in Adelaide provides mild weather, combined with year-round sunshine. The weather in Adelaide’s winter and spring months, between June to November, tends to be wetter and there is more chance of rain at this time of year, although sunny weather usually returns fairly quickly. Average temperatures for July range from 15 degrees – 7 degrees Celsius.

Companies represented at the 2011 Australian Mine Ventilation Conference included:

Adani Mining
Air Liquide Australia Ltd
AirEng, Industrial Fans
Anglo American
Angus Place Colliery
Australian Fluid Conditioning Services
BBE Consulting
Beikoff Consulting Pty Ltd
BHP Billiton
BHP Billiton, Illawarra Coal
BIS Industries Ltd
BMA Broadmeadow Mine
Caldon Mining
Centennial Coal Pty Limited
Chasm Consulting
Coal Mining Resources Pty Ltd
Coal Services PL
Corky’s
CSIRO
Dallas Mining Services Pty Ltd
Department Employment Economic Development & Innovation
Department of Trade and Investment
Department of Trade Investment Regional Infrastructure & Services
DITRIS, Resources & Energy
Draeger Safety
Drive Mining Pty Ltd
Eagle Downs Coal Management Pty Ltd
Energy Developments Limited
Falcon Mining
Geostudy Pty Ltd
Gloucester Coal
Hancock Galilee Pty Ltd
HMS Consultants Australia Pty Ltd
J. Rennie Ventilation Pty Limited
Joncri Service Solutions
Just For Satisfaction Pty Ltd
Kestrel Mine
LD0
M.E.T.T.S./Vale
Minarco Mineconsult
Minerals Industry Safety and Health Centre
Mines Rescue Service
Minova Australia
Newlands Northern Underground
NSW Trade & Investment
Olsen Consulting Group
Palaris Mining
Parker Mining Pty Ltd
Peabody Energy Australia
Rio Tinto
Rio Tinto Coal Australia
Runge Limited
RUS Mining
Singareni Collieries Company Ltd
Solid Energy NZ Ltd
Strata Linings Pty Ltd
Trade & Investment, NSW
TYB Constructions
UGM Australia
University of New South Wales
University of Queensland
University of Wollongong
Vale Australia
Vale Integra
Ventilation Solutions
Western Australia School of Mines, Curtin University
Xstrata Coal

The AusIMM
- Members of The AusIMM receive a significant discount on the conference and its related activities. This discount is generally above the cost of an individual’s annual membership subscription.
- Non-members of The AusIMM receive a great offer relating to AusIMM membership.
- A letter outlining this offer will be given to you upon registration at the event.
- A selection of conference proceedings, monographs, technical journals and CD ROM proceedings will be available to purchase at this conference.
- All attendees receive a full participants list to enhance your networking base.

Professional Development
It is a requirement of AusIMM membership that individuals engage in an appropriate level of professional development (PD). Maintaining current knowledge and skills through PD activities is imperative to ensuring AusIMM members continue to be the leading professionals in the global minerals sector. Attending or presenting at this conference will contribute towards members’ professional development. AusIMM Chartered Professional members and RPEQs can claim 21 hours towards professional development in their logbook.

www.austminevent.com.au
The Australian Mine Ventilation Conference 2013
1-3 July 2013, Adelaide, South Australia

DELEGATE DETAILS

Title – Please circle (Prof / Dr / Mr / Mrs / Miss / Ms )
AustIMM Membership Number (if applicable) ..........................................................
Last Name* ..........................................................................................................
First Name* ........................................................................................................
Preferred Name* ................................................................................................
Organisation* ....................................................................................................
Position* ............................................................................................................
Address* .............................................................................................................
City* ................................................................. State ........................................
Post Code* .................................. Country* ..................................................

BILLING ADDRESS (for receipting, if different to the above)

Organisation* .................................................. Address* ..................................................
City* ................................................................. State ........................................
Post Code* .................................. Country* ..................................................

AustIMM Membership record update: Would you like us to update your membership record with these details? Please indicate (✔) Yes  ❏ No  ❏
Guest Name ..........................................
Required information

REGISTRATION PROCEDURES

ATTENDANCE
Only pre-registered, pre-paid registrations will be guaranteed access to the event. Upon receipt of your registration and payment, The AusIMM will send registration confirmation.

REGISTRATION ON-SITE
On-site registrations, with payment only, will be admitted on space availability.

AustIMM MEMBER RATES
To qualify for the special rates of ‘AustIMM member’ as quoted on the registration booking form you must be a financial (paid) member. AustIMM 2013 membership fees are due by 1 January 2013. Non-member registration fees apply to all non-members and non-financial AustIMM members.

METHOD OF PAYMENT – CREDIT CARD ONLY
Payment must accompany all registrations. We accept the following credit cards: Visa, MasterCard, American Express and Diners. All enquiries regarding payments, please telephone +61 3 9658 6100.

GST
All prices quoted in this brochure are inclusive of 10% GST.

WHAT’S INCLUDED
We welcome all overseas delegates, members, non-members, authors, and new professionals to register by completing the registration form and returning it with their remittance to Event Management.

• Author / delegate / international delegates / non-members / new professionals registration includes: attendance at technical sessions, Conference proceedings, morning and afternoon teas, lunches, Happy Hour and Conference Dinner.
• A Student must be currently enrolled full-time at a tertiary institution. Proof of full-time status must be submitted with the registration form.

1 CONFERENCE REGISTRATION

REGISTRATION – Please indicate (✔)
AustIMM member A$910  ❏ Non-member A$1150  ❏
International A$910  ❏ New Professional member A$790  ❏

COMPLIMENTARY FUNCTIONS – Please indicate if attending (✔)
Welcome Function  ❏ Conference Dinner  ❏

AUTHOR REGISTRATION – Please indicate (✔) (Must register by Friday 26 April 2013)
Author / Presenter A$770  ❏

COMPLIMENTARY FUNCTIONS – Please indicate if attending (✔)
Welcome Function  ❏ Conference Dinner  ❏

SINGLE DAY REGISTRATION – Please indicate (✔)
AustIMM member A$495  ❏ Non-member A$660  ❏ International A$495  ❏

SELECT CONFERENCE DAY – Please indicate (✔)
Monday 1 July  ❏ Tuesday 2 July  ❏ Wednesday 3 July  ❏

YES  ❏ I would like to attend the Conference Dinner at an additional A$132

STUDENT REGISTRATION – Please indicate (✔)
AustIMM member A$220  ❏ Non-member A$330  ❏

COMPLIMENTARY FUNCTIONS – Please indicate if attending (✔)
Welcome Function  ❏ Conference Dinner  ❏

2 GUEST SOCIAL FUNCTIONS
Please indicate (✔)
Welcome Function x ................. tickets @ A$33 per ticket
Conference Dinner x ................. tickets @ A$132 per ticket

3 CONFERENCE PROCEEDINGS
Please indicate (✔)
Note, that one printed copy of the proceedings is included with your registration.

YES  ❏ I wish to purchase an additional printed copy – A$77
YES  ❏ I wish to purchase a USB copy – A$55

4 CONFERENCE TOURS
Please indicate (✔)
T1 – Olympic Dam  ❏ A$1210 per person
T2 – Prominent Hill  ❏ A$1320 per person

5 SPECIAL REQUIREMENTS
Please advise any special requirements regarding diet, health or physical disabilities.

6 PAYMENT – TAX INVOICE (INC 10% GST)

PAYMENT MUST ACCOMPANY REGISTRATION – CREDIT CARD ONLY

Total A$........................................................................................................................

• Registration Procedures – Please indicate (✔) that you have read the Registration Procedures

• Credit Cards – Please (✔) debit my:
Visa  ❏ Mastercard  ❏ AMEX  ❏ Diners Card  ❏

Card No. .............................................................................................................
Expiry Date: ............................................. CSV Number: ..........................................

Signature: ............................................................................................................

Please print name of cardholder:

All enquiries regarding payment, please telephone +61 3 9658 6100

How to register:

Telephone: +61 3 9658 6100  Facsimile: +61 3 9662 3662  Email: conference@ausimm.com.au
Online: www.ausimm.com