

Keynote Speakers:

Dr Robert Cooke
Paterson & Cooke

Prof. Andy Fourie
*University of Western
Australia*

Mr James Lake
SRK Consulting

Dr Ed Thomas
Fellow AusIMM, Australia



Sun International's
Table Bay Hotel, Cape Town
21–25 March 2011

'FILL OR FAIL'

www.saimm.co.za/minefill2011

The 10th International Conference on Mining with Backfill will be held in 21–25 March 2011 in Cape Town, South Africa, one of the world's most surpassingly attractive cities. Since its inception at Mount Isa in 1973, this conference series has been held in a number of major mining countries. It has established itself over the decades as the key event for recording the advances in backfill technology worldwide. Thus, it provides the international exchange of recent innovations and experiences to ensure cost-effective backfill operations, which are often well-balanced compromises between conflicting requirements.

21 MARCH 2011
WORKSHOP
Evening Function
Conference
Registration and 'ice
breaker' cocktail party



22 MARCH 2011
CONFERENCE
Evening Function
Cocktail party
at the Aquarium



23 MARCH 2011
CONFERENCE
Evening Function
Sunset cruise with
light dinner on board



24 MARCH 2011
CONFERENCE
Technical tour
delegates to travel to
Gauteng



25 MARCH 2011
TECHNICAL TOUR
Gauteng

INTER-ACTIVE WORKSHOP ON 'Best Practices in Mine Backfill Technologies'

Monday 21 March 2011

This event needs to be booked separately.

These lectures are aimed at minefill practitioners who want to get an update on best practices for mine backfill technology. The style is interactive to maximise the benefits for the attendees.

Handouts will contain the Powerpoint presentations of the presenters, which include fundamental background information, references to related literature and a summary of the key points to be remembered in practice in each field.

Presenters:

Interaction of rock mass with *in situ* minefill
Prof Jamie Archibald, *Queen's University, Canada*

Minefill transportation by pipelines
Dr Robert Cooke, *Paterson & Cooke, Denver, USA*

Managing underground placement and *in situ* monitoring
Prof Andy Fourie, *University of Western Australia, Australia*

Integrated systems approach for optimised minefill designs
Tony Grice, *Australian Mining Consultants, Melbourne, Australia*

Sponsorship and Exhibition Opportunities

The SAIMM provides a unique opportunity for you to promote your products and services. If you want to be seen as a key player in the industry, let us assist you.

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julie@saimm.co.za

SPONSORS:



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PRELIMINARY PROGRAMME

KEYNOTE ADDRESSES

Backfill's fickle journey

R. Cooke, *Paterson & Cooke, Denver, USA*

A framework for designing and managing cemented mine backfill

M. Helinski*, A.B. Fourie*, and M. Fahey*, **The University of Western Australia and †The University of Newcastle, Australia*

Are there opportunities for a positive mining legacy?

J. Lake, *SRK Consulting, South Africa*

Reflections of the founder of the MINEFILL Symposium Series

E. Thomas, *Fellow AusIMM, Australia*

BUSINESS DRIVERS

Backfilling on a budget—low capital paste backfill injection for small mines or brownfield site remediation

R. Brown* and I. Ahmed†, **Paterson & Cooke and †Golder Paste Technology*

Backfill and grouting technology in underground coal mining with use of saline mine waters

J. Palarski, F. Plewa, and G. Strozik, *Poland*

Fundamental research on brine based fly ash pastes for underground disposal

P.C. Pretorius, J.S. Mahlaba, U. Nzotta, & S. Hareeparsad, *Sasol*

The impact of the use of backfill on the mine design process in deep narrow tabular platinum mines

P. Kluge, *Hatch Africa*

MINING WITH BACKFILL

Experimental study fill body non-uniformity for cut-and-fill mining

X.-c. Yang, W.-y. Xu, L.-j. Guo, and L.-k. Xie, *Beijing General Research Institute of Mining and Metallurgy, Peoples Republic of China*

Research and practice of unclassified tailings filling for extra-large mined-out spaces

C. Zhang*, J. Zhao*, Y. Kuang*, and H. Sun†, **SinoSteel Maanshan Institute of Mining Research Co. Ltd., †Dongguashan Copper Mine, China*

The evolution of mining and support strategies with increasing depth and other factors at Black Mountain

J.V. James* and N. Malitino†, **Celtis Geotechnical and †Black Mountain*

Review of backfill in deep level seismically hazardous areas

S. Murphy, *AngloGold Ashanti*

Backfilling and pillar re-mining in potash industry

H. Marx, D. Lack, and T. Flib, *K-UTEAG AG Salt Technologies, Sondershausen, Germany*

CASE STUDIES—MINING

Three fill stopping methods designed to prevent ground water inrush at the Baixiangshan Iron Mine, China

S. Cai*, D. Wu*, W. Wang†, and P. Yang*, **School of Civil and Environmental Engineering, University of Science and Technology, Beijing and †Gushan Mining Company, Ma-Steel Group, China*

Backfill practice at Konkola Mine, Chililabombwe, Zambia

C. Katongo*, J. Chola*, and A. Mutawa†, **Konkola Mine and †Nchanga Mine, KCM, Zambia*

Mining with backfill at Rajpura Dariba Mine

S. Dutta* and A.G. Grice†, **GM Production, India and †AMC Consultants, Melbourne, Australia*

Mining with backfill at Nkomati mine, a case study

R. Kersten, *Independent Consultant*

Rock engineering related experiences with the use of backfill on the deepest platinum mine

S.B. Streuders, *Northam Platinum Ltd*

Case Study: developing cemented hydraulic mine fill at Pyhasalmi Mine

T. Pekkala and L. Kuosmannen, *Pyhasalmi Mine, Finland*

LABORATORY

Mechanical properties of cemented rock-tailings backfill material
X.-c. Yang, L.-j. Guo, and W.-y. Xu, *Beijing General Research Institute of Mining and Metallurgy, Peoples Republic of China*

Research on the mechanical properties of mine fill: influences of material particle size, chemical and mineral composition, binder and mixing water

H. Saw and E. Villaescusa, *Western Australian School of Mines, Kalgoorlie, Australia*

Investigation into mechanical and microstructural properties of Gelfill

M.F. Kermani*, F.P. Hassani*, I. Isagont†, and M. Nokken‡, **McGill University, †Vale-Inco and ‡Concordia University*

Variability reduction for hydraulic fill conductivity measured in laboratory

J. Jofre*, A.G. Grice†, W. Bamford*, and J. Styles*, **University of Melbourne, †AMC Consultants Pty Ltd*

PREPARATION

Replacement ratio of cement with fly ash in cemented backfill

Z. Wang, *Jinchuan Co. Ltd, China*

Benefits of paste aggregate fill

S. Wilson and T. Fetherstonhaugh, *Golder Paste Technology (Europe) Ltd*

CASE STUDIES—PREPARATION

System design and application research on underground backfill plant

J.-j. Wang, B. Yu, and X.-q. Xu, *Beijing General Research Institute of Mining and Metallurgy, Peoples Republic of China*

The utilization of paste backfill admixtures at Barrick Gold Mines

T. Weatherwax*, R. Evans*, and F. Hafeez†, **Barrick Global Shared Services, Canada and †Barrick Kanowna Bell Mine, Australia*

Reclaimed tailings pastefill production at Xstrata George Fisher Mine—Operations challenges and solutions

K. Kuganatha, *Xstrata Copper*

FAILURE MECHANISM

Unique backfill design methodologies using centrifuge technology

E. De Souza, *Queens University, Australia*

The behaviour of paste fill under dynamic loading and prediction of backfill and backfill stope failure risk in underground methods

D. Antonov, *South Dakota School of Mines, USA*

Strength behaviour and failure mechanisms of backfill—Rock mass interfaces

S. Manaras, E. de Souza, and J.F. Archibald, *Queen's University, Canada*

Unique backfill technology with underground gasification of coal

E. De Souza, *Queen's University, Canada*

Backfilling technologies for special conditions in a final repository of radioactive residues

H.J. Roski, W. Schauenburg, and J. Pier, *DMT GmbH & Co., Germany*

TRANSPORTATION AND WEAR

A new method for test the resistance loss in pipeline transportation of paste filling slurry

J. Wang*, C. Yang*, D. Chu*, J. Zhang*, S. Guo†, and H.-w. Wang‡, **School of resources and Environment Engineering, Shandong University of Technology, †Changchun Gold Research Institute, and ‡Hunan Style Technology, China*

Settlement in backfill pipelines: Its causes and a novel online detection method

P. Goosen*, H. Ilgner†, and S. Dumbu‡, **Paterson & Cooke Consulting Engineers (Pty) Ltd, South Africa, †CSIR - South Africa, and ‡Stoner (Pty) Ltd, South Africa*

Abrasion mechanism and form of backfilling drill-hole pipelines in deep mine

X.-m. Wang, D.-m. Zhang, and Q.-l. Zhang, *Central South University, Changsha, China*

Protection lining of the paste backfill borehole at the HBMS 777 mine

B.Y.S. Lin*, K.T. Pearson*, E. Elkjert*, *Hatch and †UPS

Pipeline wear and the hydraulic performance of paste backfill distribution systems

M. McGuinness* and Robert Cooke†, *Kidd Mine, Xstrata, Canada and †Paterson & Cooke, USA

PLACEMENT

Use of the FILLSET system for backfilling with gold and platinum mine tailings

R.M. Smart, (Presented by D. O'Connor), *Minova RSA*

Critical factors influencing the capacity of arched fibrecrete bulkheads and waste rock barricades

M. Helinski*, D. Wines†, M. Revell*, D. Sainsbury†, *Revell Resources and †Itasca Australia

Cemented filling mining techniques using phosphorus chemical wastes

G.-y. Zhao*, X.-b. Li*, J.-r. Yao†, Z.x. Liu*, D.-y. Li*, K. Peng*, and Q. Liu*, *Central South University, School of Resource and Safety Engineering and Guizhou Kailin Group Co, China

CASE STUDIES—PLACEMENT

Paste fill for stope stability at the Challenger Gold Mine

K. Rich, *Boddington Gold Mine, Australia*, D. Antonov, *South Dakota School of Mines, USA*

Paste backfill design case study—Idaho Cobalt Project

M. Treinen*, R. Cooke*, B. Hasz†, and G. Jeski†, *Paterson & Cooke, Denver, USA and †Formation Capital, Vancouver, Canada

Stable paste fill walls in a large open stope at Sunrise Dam Gold Mine

L.A. Nienaber, *Sunrise Dam Gold Mine, AngloGold Ashanti, Australia*

A unique way of containing backfill

F.R.P. Pienaar and M. Howell, *Mining Product Developments (Pty) Ltd, South Africa*

Case study: Underhand cut and fill stoping using cemented tailings paste fill at the Lanfranchi Nickel Mine

J. Foster, S. Jessop, and P. Andrews, *Lanfranchi Nickel Mines*

HEAT FLOW

Modelling of the coupled thermo-chemo-mechanical processes in cemented paste backfill structures and application to the prediction of their performance

M. Fall and O. Nasir, *University of Ottawa, Canada*

Development of a numerical model for heat transfer in mine backfill

S.A. Ghoreishi Madiseh*, F.P. Hassani*, A. Mohammadian†, and F. Abbasy*, *McGill University and †University of Ottawa, Canada

Self-heating and mitigating methods for mine fill

A. Zarassi*, F. Hassani*, J. Nessel†, F. Rosenblum*, and I. Isagont†, *McGill University and †Vale, Canada

LEGAL COMPLIANCE/STANDARDS

Applying ASME Code B31.11 slurry transportation piping systems, an ANSI Standard

K.T. Pearson, *Hatch, Canada*

A new standard for the planning and operation of backfill systems in Austria

W. Hohl and H. Wagner, *University of Leoben, Austria*

Safe Canadian practices in mine backfill operations

J.F. Archibald*, E.M. de Souza*, and L. Beauchamp†, *Queen's University, Canada and †Workplace Safety North, Canada

INNOVATIONS

Backfill-based gully support system and experience with quality control procedures

N. Killassy* and L. Dison†, *Stitch-Wise (Pty) Ltd, South Africa and †Reinforced Earth (Pty) Ltd, South Africa

Backfilling technologies for special conditions in a final repository of radioactive residues

H.J. Roski, W. Schauenburg, and J. Pier, *DMT GmbH & Co, Germany*

Backfill and grouting technology in underground coal mining with use of saline mine waters

J. Palarski, F. Plewa, and G. Stozik, *Silesia University of Technology, Poland*

Regional support solutions for deep level mining challenges

J.S. Kuijpers, *CSIR*

Integrated backfill technology with underground gasification of coal

J. Palarski and G. Stozik, *Silesia University of Technology, Poland*

List of Hotels

The Table Bay Hotel

www.hoteltablebay.co.za. +27 21 406 5790

Cape Grace

www.capegrace.com +27 21 410 7100

Commodore Hotel

www.thecommodorehotel.co.za +27 21 415 1000

Dock House

www.newmarkhotels.coma +27 21 421 9334

One & Only

http://capetown.oneandonlyresorts.com +27 21 431 5888

Portswood Hotel

www.portswood-hotel.co.za +27 21 418 3281

Protea Breakwater Lodge

www.breakwaterlodge.co.za +27 21 406 1911

Radisson Blue Waterfront

www.radissonblu.com +27 21 441 3000

Southern Sun The Cullinan

www.southernsun.com +27 21 415 4000

Southern Sun Waterfront

www.southernsun.com +27 21 415 4000

Victoria & Alfred Hotel

www.vahotel.co.za +27 21 408 7600

City Lodge Waterfront Hotel

www.citylodge.co.za +27 21 419 9450

TECHNICAL VISITS

This event needs to be booked separately

The technical visits will take place in the Gauteng region. Delegates may choose one of the following tours:

- AngloGold Ashanti's Tautona and Mponeng goldmine: Deepest goldmine on earth showing mining-induced fractures and backfill integrated with mining

OR

- Gold Fields' South Deep goldmine: Extensive surface backfill preparation plant operations with quality control laboratory and a unique application of rock engineering to destress the upper orebody prior to mining of multiple reef bands below the backfilled upper layer

All delegates will return to Cape Town after the tour unless otherwise arranged

FOR FURTHER INFORMATION CONTACT

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SAIMM, P O Box 61127, Marshalltown 2107

Tel: +27 11 834-1273/7 · Fax: +27 11 833-8156 or +27 11 838-5923

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3 ECSA CPD credits will be allocated to attending delegates (1 credit per day)

**Sun International's Table Bay Hotel
Cape Town
21–25 March 2011**



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PERSONAL DETAILS

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Are you a presenting author? Do you require an invitation for visa purposes?

Please note: Non-members are entitled to free membership of the SAIMM, up to 30 June 2012, for attending this Conference

REGISTRATION FEES — All prices are inclusive of 14% VAT.

Please indicate your choice by (✓ tick).

WORKSHOP R3 500

Register on the morning of the workshop from 07:45–08:45

CONFERENCE

	Early registration fees Before 31 December 2010	registration fees After 31 December 2010
SAIMM/GSSA Members/Author	R7 500 <input type="checkbox"/>	R8 500 <input type="checkbox"/>
Non Members	R8 500 <input type="checkbox"/>	R9 600 <input type="checkbox"/>
Student Members	R2 500 <input type="checkbox"/>	R2 500 <input type="checkbox"/>

■ Registration fees include attendance at technical sessions, full colour proceedings, CD, cocktail parties, all refreshments and lunches at the conference. Cancellation: A 50% refund will be made for cancellations received before 20 February 2011. No refunds will be made for cancellations after 20 February 2011.

TECHNICAL VISIT R4 900

- The technical visits will take place in the Gauteng region. Delegates may choose **one** of the following tours:
 - AngloGold Ashanti's Tautona and Mponeng goldmine or
 - Gold Fields' South Deep goldmine

This fee includes all travel and accommodation costs. All delegates will return to Cape Town after the tour unless otherwise arranged.

ACCOMPANYING PERSON'S PROGRAMME:

(Partner accompanying the delegate, but who does not attend the conference)

- There are two options for accompanying persons.
 - Inclusion in social events i.e. cocktail parties and Harbour cruise R850
 - Full accompanying person's programme which includes all social activities plus tours to the following:
 - **Cultural Tour**
 - **Winelands**
 - **Shopping** R2 850

■ **Special Requirements** — Please advise any special requirements for diet, health or physical disabilities.

PAYMENT

Please include payment itemised as follows:

Workshop registration fee	R.....
Registration fee	R.....
Technical visit	R.....
Accompanying person (a)	R.....
Accompanying person (b)	R.....
TOTAL R

Cheques—Please find enclosed a cheque/money order (in SA Rands) payable to SAIMM or

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Prepayment is required for all Registration Fees before the date of this event, **PROOF OF PAYMENT** reflecting invoice number must be sent via fax or e-mail to the Conference Co-ordinator. Delegates who have not paid will not be permitted to attend the Conference.

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