UNIVERSITY OF WOLLONGONG WEBSITES UPDATE

Naj Aziz

School of Civil, Mining and Environmental Engineering
University of Wollongong, Australia
http://www.uow.edu.au/eng/longwall
http://www.uow.edu.au/eng/outburst
http://www.uow.edu.au/eng/pillar
http://www.coalconference.net.au
Coal Mine OUTBURSTS

ACARP Project - C14015

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WHAT'S NEW

View Real Time Rock Bumps Video!!

All Coal Operators Conference Papers

Wollongong, Wednesday, June 27th 2012

Visit http://www.coalconference.net.au

DEFINITION

Outburst has been defined as a spontaneous ejection of gas and coal from the solid face, where the gas is a mixture of methane and carbon dioxide. This definition is questioned in the use of the term "spontaneous" as this suggests an outburst occurs without triggering, when an outburst can be provoked with the use of explosives or during the cutting of coal. Thus, outbursts have also been defined as a phenomenon characterised by ejection from the solid face into the mine as a mixture of broken rock and gas.
Coal Mine OUTBURSTS

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CONTRIBUTIONS

ACARP REPORTS
- Completed Thesis
- Presentations
- Publications
- References
- John Hanes Library

ACARP REPORTS
- COMPLETED Thesis
- PRESENTATIONS
- PUBLICATIONS
- REFERENCES
- JOHN HANES LIBRARY

St Petersburg 2012
Coal Mine OUTBURSTS

ACARP Project - C14015

RESEARCH AND PUBLICATIONS

ACARP REPORTS:

- ACARP Gas and Outburst Workshop - 28th August 2004 (download)
- Gas and Outburst Workshop - 22nd November 2003 (download)
- Outburst Scoping Study - John Hanes (download)
- Real Time Return Gas Monitoring for Outburst and Gas Drainage Assessment - July 1997, ACARP Project C 3076 (download, 1.13 MB)
- Outbursting Scoping Study - March 1996 (Lama & Bodziony, ACARP Project C 4034) (download, 3.90 MB)
- Outburst Symposium - March 1995, ACARP Project C 3079 (download, 80.5 MB)
- Coal Mine Outburst Mechanism, Thresholds & Prediction Techniques - Ian Gray (ACARP C14032)
- Other ACARP Reports
- NERDDC Completed Projects Report Booklet

Lama's Books

St Petersburg 2012
FACTORS AFFECTING THE DRAINAGE OF GAS FROM COAL 
AND METHODS TO IMPROVE DRAINAGE EFFECTIVENESS

A thesis submitted in fulfilment of the requirements for the award of the degree

DOCTOR OF PHILOSOPHY

from

UNIVERSITY OF WOLLONGONG

by

DENNIS JOHN BLACK

School of Civil, Mining and Environmental Engineering

2011
Coal Mine OUTBURSTS

ACARP Project

PRESENTATIONS

Gas and Outbursts seminars
Wollongong

November 2011

- Advances In Gas Drainage & Management Within AAMC
- Clean Energy Future - Australia’s Climate Change Plan
- Effective Response To An Emergency At An Underground Coal Mine - David Cliff
- 3rd Generation VRT Training - B. Dowsett V2
- A new method for diesel particulate measurement of raw engine emissions - Trev Wilson
- OB Seminar November 2011 Q&A
- Occupational Hygiene Monitoring - Gary Mace - Dec 2011
- Outburst Incidents in Mexican Coal Mines - Brian Nicholls
- Smartgas - Robert Strang

June 2011

- Raising The Outburst Threshold - Peter Wynn
- Pike River Presentation - Outburst Committee
- Virtual Reality Presentation On Mine Safety Training
- Comments On Outburst Thresholds In Bulli Seam Mines - Ray Williams
- Outburst Seminar Q&A

December 2010

- In-hole Surveying - Where we are and Where we are going - Mark MacCabe
- Personal DP and Noise Exposure Monitoring - Gary Mace

All Presentations
Since 2002

St Petersburg 2012
OCTOBER 2012

PUBLICATIONS

AUSTRALIA

. AUSIMM publication:
  - 1980
  - 1981
  - 1982
  - 1983
  - 1986
  - 1992

. Coal Operators conference:
  - 1998
  - 2001
  - 2002
  - 2003
  - 2005
  - 2006
  - 2007
  - 2009
  - 2010
  - All papers 1998 to 2012

. Committee on Outburst Research Symposium 1983
  - Introduction
  - Chapter 1
  - Chapter 2
  - Chapter 3
  - Chapter 4
  - Chapter 5
  - Chapter 6
  - Chapter 7
  - Chapter 8
  - Chapter 9
  - Chapter 10
  - Chapter 11
  - Chapter 12
  - Chapter 13
  - Chapter 14
  - Chapter 15
  - Chapter 16
  - Chapter 17
  - Chapter 18

. Symposium on Coalbed Methane, Research and Development in Australia

Organised by Dr Lama at UNSW

18 papers and worth reading

Townsville by Basil Beamish
1992- five volumes
St Petersburg 2012

http://ro.uow.edu.au/coal

RESEARCH ONLINE  http://ro.uow.edu.au/coal

Home > Engineering > coal

COAL OPERATORS’ CONFERENCE

The Coal Operators’ Conference has been held at the University of Wollongong since 1998. The Conference is organised jointly by the Illawarra Branch of The Australasian Institute of Mining and Metallurgy AusIMM, the University of Wollongong and the Mine Managers Association of Australia. For further information contact Naj Aziz (Chairman and Convenor), School of Civil, Mining and Environmental Engineering, University of Wollongong, 2522. Tel: (02) 4221 3449. Email:naj_aziz@uow.edu.au. See also the conference website and the Coal Science and Technology website.

Listing of previous conference papers here:


Papers from 2012

PDF  Development and mining of high gas low permeability coal seams in the Karaganda coal field, Kazakhstan, Sergazy Baimukhametov, Yury Stefluk, and Maarten Veltzeer

PDF  Investigating the influence of reactive pyrite on coal self-heating, Basil Beamish, Zhang Lin, and Rowan Beauch

PDF  Prevention of frictional ignition in coal mines using chilled water sprays, B. Belle, D. Carey, and B. Robertson

PDF  Experiences of the institute of occupational medicine form resolvable sampler use in mines, Bharath Belle

PDF  Opportunity for re-entry into a coal mine immediately following an explosion, Darren Brady and David Cliff

PDF  Failure modes of rockbolting, Chen Cao, Jan Nencik, Naj Aziz, and Ting Ren

PDF  Application of a numerical model for outburst prediction, control and management, Xavier S.K Chol

PDF  Addressing resin loss and glazing issues at a mine with coal roof, Peter Craig

➢ 130 countries
➢ 200 000 hits in one year
➢ Pike River paper a popular paper
PERMEABILITY TESTING OF COAL UNDER DIFFERENT TRIAXIAL CONDITIONS

Lei Zhang, Naj Aziz, Ting Ren, Jan Nemcik and Zhongwei Wang

ABSTRACT: Permeability refers to the ability of coal to transmit gas when a pressure or concentration gradient exists across it. The permeability of coal is dependent upon factors that include effective stress, gas pressure, water content, disturbance associated with drilling and matrix swelling/shrinkage due to adsorption/desorption. A programme of laboratory tests were conducted on coal samples from the Bulli seam for evaluating the permeability and drainability of coal. The study was conducted using two different types of permeability apparatus. The methods of permeability testing of coal under different triaxial conditions are discussed. Permeability testing of the Bulli seam coal sample with N₂ is described as an example in this study. Both the tests results and the values of calculated permeability were in agreement.
LONGWALL Mining

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WHAT'S NEW
Outburst S
Coal 2013
All Coal operators conference papers

Revised 2007 383632
RESEARCH AND PUBLICATION


- Analytical Tools For Managing Rock Fall Hazards In Australian Coal Mines. Editors: Ross Seedsman, Nick Gordan and Naj Aziz

- International Conference on Ground Control in Mining - Morgantown.

- Ground Movement & Control Related to Coal Mining - 1986, Ausimm Illawarra Branch. Editor: Naj I. Aziz

30th International Conference on Ground Control in Mining

Total Papers: 46

Chinese Mining Practices/Solutions
- Research on Mine Pressure Behaviors and Overlying Strata Movement Laws in Solid Rockfill Mining Methods, Shengli Yang, Jiachen Wang, Shengming Wang, China University of Mining and Technology (Beijing), Beijing, China
- Surface Subsidence Velocity of Fully-Mechanized Thick Seam Top Coal Caving Mining, Wenbing Guo, Xiaochuan Ma, Chengfei Huang, Henan Polytechnic University, Jiaozuo, China
- The Technical Progress and Problems to Be Solved of Thick Coal-Seam Mining in China, Jiachen Wang, China University of Mining and Technology, Beijing, China

Highwall/Open Cut Practices/Issues
No Papers.

Tunnel/Slope Ground Control Strategies
- Designing Shotcrete as Primary Support in Tunnels, Behdoun Orasse-Mirzamani, Imperial College London, London, United Kingdom, Mahdi Tavassoli, Tarbiat Modares University, Tehran, Iran, Kazem Orasse, University of Stirling, Stirling, United Kingdom
- Application of Stress, Geologic, and Support Design Systems (SGSS) to Ground Control for Mine Slope Entry: John Stankus, Kevin Jinrong Ma, Hanjie Chen, Xiaoting Li, Jennmar Corporation, Inc., Pittsburgh, PA

Ultra Thick Mining Practices/Issues
- Study on Eco-Friendly Underground Mining System for Ultra-Thick Coal Seams in Thailand, Takashi Sasaoka, Hideki Shimada, Kikuo Matsu, Akhiro Hamanaka, Nay Zar Lin, Kyushu University, Fukuoka, Japan, Hiroshi Takimoto, Mmi Coal Tech, Tokyo, Japan

Subsidence Evaluations I
- A Pipeliner's Perspective on Longwall Mining, Robert B Francini, Kiefner and Associates, Inc., Worthington, OH
- The Effects of Longwall Coal Mining on the Hydrogeology of Southwestern Pennsylvania, Megan N Witkowski, University of Pittsburgh, Pittsburgh, PA

Subsidence Evaluations II
- Surface Structures Impacted by Subsidence from Pennsylvania Coal Mines, 2003 to 2008, Anthony Iannacchione, Megan Witkowski, Jessica Bonner, Amy Palti, Nicole Iannacchione, University
LONGWALL Mining

RESEARCH AND PUBLICATION

- Analytical Tools For Managing Rock Fall Hazards In Australian Coal Mines. Editors: Ross Seedsman, Nick Gordan and Naj Aziz
- International Conference on Ground Control in Mining - Morgantown.
- Ground Movement & Control Related to Coal Mining - 1986, Ausimm Illawarra Branch. Editor: Naj I. Aziz
ANALYTICAL TOOLS FOR MANAGING ROCK FALL HAZARDS IN AUSTRALIAN COAL MINE ROADWAYS

ROSS SEEDSMAN\textsuperscript{1,2}
NICK GORDON\textsuperscript{3}
NAJ AZIZ\textsuperscript{1}

1 Civil, Mining and Environmental Engineering, University of Wollongong
2 Seedsman Geotechnics Pty Ltd
3 Gordon Geotechniques Pty Ltd
BORD AND PILLAR Mining

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University of Wollongong

Revised 2007

065811
Coal Operators' Conference
February 14th and 15th, 2013
University of Wollongong
McKinnon Building 67

Coal Operators' Conference (COAL2013)

The Coal Operators' Conference is an annual event, held regularly at the University of Wollongong campus in February. The Conference is organised jointly between the University of Wollongong, the Illawarra Branch of the Australasian Institute of Mining and Metallurgy, and the Mine Managers Association of Australia.

The next Coal Operators' Conference 'Coal 2013' is scheduled for February 14th and 15th, 2013, at the University of Wollongong. The Conference will address issues related to various aspects of modern underground coal mining operations. Accordingly, papers are invited from the following topics:

- Surface mining
- Geology
- Planning and Development
- Mining methods: longwall, bord and pillar, top coal caving and hydraulic mining
- Equipment and machinery performance or innovations
- Ground control and strata management
- Longwall and roof fall recovery
- Instrumentation and monitoring
- Mine subsidence
- Mine fires and explosions
- Mine flooding
- Risk management
- Mine management and mine contract

We strongly encourage papers from coal mine operations, as well as applied and fundamental coal mining research.

Important dates

<table>
<thead>
<tr>
<th>Event</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abstract submission</td>
<td>August 24th, 2012</td>
</tr>
<tr>
<td>Acceptance of the paper based on abstract</td>
<td>September 14th, 2012</td>
</tr>
<tr>
<td>Date of full paper submission</td>
<td>November 2nd, 2012</td>
</tr>
</tbody>
</table>

*UPDATE*
FULL COAL PROGRAM NOT AVAILABLE YET
• Now Online:

http://ro.uow.edu.au/coal

[All papers since 1998]

UOW Coal Mining websites:

http://research.uow.edu.au/coal

Next Conference is February 14/15, 2013:

http://www.coalconference.net.au
Thank You