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Overview

‘We’re metallurgists, not magicians!’

E McLean

Presented at MetPlant 2011, this paper has been updated and edited for this compilation.

Back to the future – why change doesn’t necessarily mean progress

P D Munro and P A Tilyard

Presented at MILOps 2009, this paper has been updated and edited for this compilation.

Back to the future – still on the dark side

P D Munro

Presented at MILOps 2016 as a follow-on to the paper: ‘Back to the future – why change doesn’t necessarily mean progress’, this paper has been updated and edited for this compilation.

Undermining productivity – when good key performance indicators go bad

J Pease

Presented at MILOps 2014 as a PowerPoint presentation, this paper has been written specifically for this publication.

Geometallurgy

Geometallurgy – what do you really need to know from exploration through to production?

K Ehrig

Presented at MetPlant 2013, this paper has undergone minor edits for this compilation.

Integrating geometallurgy with copper concentrator design and operation

G Harbort, K Jones, D Morgan and C Sola

This paper was presented in various forms at MetPlant 2011, MILOps 2014 and MILOps 2016. It has been updated with a new geometallurgy model, undergone significant edits and is the integration of the papers presented at the three events outlined above.

Integrated mining and metallurgical planning and operation

P L McCarthy

This is a compilation of three papers presented and published for MetPlant 2011, MetPlant 2013 and MetPlant 2015.

Project economics

Guidelines for economic evaluation of projects

P Card

Presented and published at MetPlant 2011, this paper has been significantly reviewed and updated for this compilation.

Sensible cost cutting for resource projects

D Connelly

Presented at MetPlant 2011, this paper has undergone significant edits and updates for this compilation.

When does further processing at the mine site make sense?

C Fountain, S La Brooy and G Lane

Presented at MetPlant 2008, this paper has had minor edits for this compilation.

The ABC of Mine-to-Mill and metal price cycles

P Cameron, D Drinkwater and J D Pease

Presented at MILOps 2016, this paper has been reviewed and abridged for this compilation.

Base metals concentrate sales contracts – change Pavlov and the dog

P D Munro and S E Munro

Presented at MetPlant 2015, this paper has undergone minor edits for this compilation.

Project design

Karouni Gold Project from drill core to commissioning

K Nilsson and D Connelly

Presented at MetPlant 2015, this paper has undergone minor edits for this compilation.

Upgrades, modernisations, automation and expansions . . . where will the expertise, capability and skills come from in the future?

R Coleman, J King and T Hunter

Presented at MILOps 2016, this paper has undergone minor edits for this compilation.
Is an 80th percentile design point logical?

D David

Presented at MetPlant 2013, this paper has undergone significant edits for this compilation.

Measuring and taking notice of orebody variability – an essential ingredient for reliable plant design

D David

Presented at MetPlant 2015, this paper has undergone significant edits for this compilation.

Getting optimum value from ore characterisation programs in design and geotechnical projects associated with comminution circuits

S Morrell

Presented at MiilOps 2009, this paper has been updated and edited for this compilation.

Cost-effective concentrator design

G Lane, P Dakin and D Elwin

Presented at MetPlant 2013, this paper has undergone minor edits for this compilation.

Project management and delivery

Fatal flaws in technical due diligences

A J H Newell

Presented at MetPlant 2015, this paper has undergone significant updates and edits for this compilation.

Guidelines for mineral process plant development studies

P R Whincup

Presented at MetPlant 2008, this paper has undergone minor edits for this compilation.

Project delivery

G Lane and E Skinner

Presented at MetPlant 2013, this paper has undergone minor edits for this compilation.

Mineral project management – a perspective from four decades in the industry

J S Dunlop

Presented at MetPlant 2013, this paper has been updated and edited for this compilation.

Keeping projects on the rails

J Canterford

Presented at MetPlant 2011, this paper has undergone minor edits for this compilation.

Operations versus projects – how do people think and what are the implications?

G Lane and B Clements

Presented at MiilOps 2012, this paper has undergone minor edits for this compilation.

Performance testing – when, what and how?

G Lane, M Davis, E McLean and J Fleay

Presented at the Project Evaluation 2007 conference, this paper has undergone minor edits for this compilation.

Unit design and development

Process development and throughput forecasting at the Phu Kham copper-gold operation, Laos PDR

D Bennett, I Cnkovic, P Walker, A Hoyle, A Tordoir, D La Rosa, W Valery and K Duffy

The subject matter for this paper was written, published and presented at three AusIMM conferences: MiilOps 2012, MiilOps 2014 and MetPlant 2015. Significant effort has gone into combining, updating and editing this combination of the three papers for this compilation.

What can go wrong in comminution circuit design?

C Bailey, G Lane, S Morrell and P Staples

Presented at MiilOps 2009, this paper has undergone significant edits for this compilation.

Do we need a gravity circuit or not? A case study in applying best practice

A Giblett and K Afewu

Presented at MetPlant 2015, this paper has undergone minor edits for this compilation.

Solvent extraction of uranium – towards good practice in design, operation and management

P Bartsch and S Hall

Presented at MetPlant 2011, this paper has been updated and edited for this compilation.

Design of copper-cobalt hydrometallurgical circuits

G Miller

Presented at MetPlant 2008, this paper has undergone minor edits for this compilation.

A review of best practice in gravity circuit design and operation

A Giblett, A Bay, G Wardell-Johnson and W Staunton

Presented at MetPlant 2013, this paper has undergone minor edits for this compilation.
Leach residue and pregnant liquor separation – process and capital comparison of counter-current decantation and counter-current washing with vacuum filtration

R Klepper and P McCurdie
Presented at MetPlant 2011, this paper has been updated and edited for this compilation.

Filtration test work – extracting the whole story for studies and design

G Bickert and B Längner
Presented at MetPlant 2011, this paper has been updated and edited for this compilation.

Considerations for effective gold process development

A Giblett, D Appelhans and R Dunne
Presented at MetPlant 2013, this paper has undergone minor edits for this compilation.

Energy efficient ball mill circuit – equipment sizing considerations

A Jankovic and W Valery
Presented at MetPlant 2013, this paper has been updated and edited for this compilation.

Advances in dense medium cyclone plant design

T J Napier-Munn, G Gibson and B Bessen
Presented at MILOps 2009, this paper has undergone minor edits for this compilation.

Sampling, metallurgical accounting and control

Using metallurgical data to drive continuous improvement

R Dunne
Presented at MILOps 2016, this paper has been updated and edited for this compilation.

The importance of sampling in the mineral industry

R J Holmes
Presented at MetPlant 2013, this paper has been updated and edited for this compilation.

A progressive, iterative approach leading to reliable metallurgical accounting sampling systems

F F Pitard
This paper was written for MetPlant 2015 but not presented at the conference. It has undergone significant edits for this compilation.

Sampling, corporate governance and risk analysis

G J Lyman and F S Bourgeois
Presented at MetPlant 2015, this paper has been significantly edited and updated for this compilation.

Metallurgical management tools for continuous improvement

W McCallum and R Dunne
Presented at MILOps 2012, this paper has undergone minor edits for this compilation.

Measuring the influence of sample size on the precision and accuracy of gravity gold estimation

A Giblett and T J Napier-Munn
Presented at MetPlant 2015, this paper has been updated and edited for this compilation.

Defining practical metallurgical accounting discrepancy limits for gold operations

A Giblett, R Dunne and K McCaffery
Presented at MILOps 2012, this paper has undergone minor edits for this compilation.

Manual control, process automation or operational performance excellence – what is the difference?

P Thwaites
Presented at MILOps 2014, this paper has been significantly updated with new information for this compilation.

Unlocking processing potential by empowering our operators

X Li, M S Powell and W McKeague
Presented at MILOps 2012, this paper has been updated and edited for this compilation.

Current developments in the operation and control of autogenous and semi-autogenous grinding mills in Australia

J Karageorgos, Y Atasoy and D Baas
Presented at MetPlant 2008, this paper has undergone minor edits for this compilation.

Environmental management and sustainability

Mine waste risk minimisation by integrated waste management and process optimisation

D Brett
Presented at MetPlant 2013, this paper has been updated and edited for this compilation.

Sustainability, made easy – a business improvement case study

G Corder, N Currey and G Becker
Presented at MetPlant 2013, this paper has been updated and edited for this compilation.
Continuous improvement – how changes in metallurgy can have a substantive impact on environmental impact and closure: lessons learnt from environmental auditing

P Mulvey and G McMillan
Presented at MetPlant 2013; this paper has undergone minor edits for this compilation.

Process improvements and case studies

Improving fines recovery by grinding finer

J D Pease, M F Young and W W Johnson
Presented at MetPlant 2004; this paper has had significant updates and edits for this compilation.

Cunning solutions to process improvement

T J Napier-Munn
Presented at MetPlant 2004; this paper has undergone minor edits for this compilation.

How to prioritise process improvements

D J Hill
Presented at MillOps 2014; this paper has had a significant update for this compilation.

Some practical problems in running statistically valid plant trials and their solution

T J Napier-Munn
Presented at MetPlant 2008; this paper has undergone minor edits for this compilation.

The optimisation of semi-autogenous grinding and ball mill based circuits for mineral processing by means of versatile and efficient high pressure grinding roll technology

S W Kirsch and M J Daniel
Presented at MillOps 2009; this paper has been significantly updated for this compilation.

Optimisation opportunities for high pressure grinding rolls circuits

M S Powell, M M Hilden, C M Evertsson, G Asbjörnsson, A H Benzer, A N Mainza, L M Tavares, B Davis, N Plint and C Rule
Presented at MillOps 2012; this paper has been significantly updated for this compilation.

An update on applications of high frequency screens in closed grinding circuits

S B Valine, J E Wheeler, B Packer and A N Cavendor
This paper is a compilation of two papers from MetPlant 2011 and MillOps 2012. It has been significantly updated with additional case studies and information obtained for the Alban Lynch publication Comminution Handbook.

The influence of liner wear on milling efficiency

P Toor, T Perkins, M S Powell and J Franke
Presented at MetPlant 2011; this paper has been significantly updated for this compilation.

Development of the Fosterville gold mine heated leach process

M Binks and P Wemyss
Presented at MetPlant 2011; this paper has been significantly updated for this compilation.

Collector – addition point and consumption

C J Greet, W J Bruckard and D MacKay
Presented at MetPlant 2008; this paper was revised several years later for Transactions of the Institutions of Mining and Metallurgy – Mineral Processing and Extractive Metallurgy, and has been further updated and edited for this compilation.

The Ausenco carbon reactivation kiln initiative

J K Claflin and S R La Brooy
This paper was specifically written for this compilation as an author foreword to the following two papers.

Lessons learnt and performance – installing and commissioning an Ausenco carbon reactivation kiln in Africa

J K Claflin, S R La Brooy and D Preedy
This paper was presented at MetPlant 2015. Context for this paper and the paper immediately below has been provided via an author foreword (above), which also provides significant new insights and updates.

Carbon management in a high gold price environment

S R La Brooy and J K Claflin
This paper was presented at MetPlant 2013. Context for this paper and the paper immediately above has been provided via an author foreword (above), which also provides significant new insights and updates.

The impact of gravity gold recovery at Kalgoorlie Consolidated Gold Mines

A Giblett, D Hillier, K Parker and V Ramsell
Presented at MillOps 2012; this paper has undergone very minor edits for this compilation at KCGM's request.

Agglomeration – the key to success for the Murrin Murrin heap leach

D Readett and J Fox
Presented at MetPlant 2011; this paper has been updated and edited for this compilation.

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