

**MINERAL PROCESSING 2008
PROVISIONAL PROGRAMME**

THURSDAY 7 AUGUST

PLENARY PRESENTATION 1

08:30 - 09:15	PL01	Why be sustainable if the world is about to end?	<i>Chris Moran: SMI, University of Queensland, Australia</i>				
SESSION 1A GENERAL: Chair - A Burger							
09:20	OR01	The role of Process Mineralogy in Mineral Processing - with a focus on Flotation	<i>D Bradshaw: University of Cape Town</i>				
09:40	OR02	New methods for measuring and modelling froths	<i>JJ Cilliers, K Waters, G Morris: Imperial College, London, UK</i>				
10:00	OR03	Energy in mining	<i>M Powell: JK/MRC, University of Queensland, Australia</i>				
10:20	TEA						
SESSION 2A		GEOLOGY & MINERALOGY: Chair - P van der Plas		SESSION 2B		BIOPROCESSING : Chair - J Petersen	
10:50	OR04	A summary of hydrogeological and chemical work conducted at the Navachab Gold Mine, central Namibia in the period 200 - 2005	<i>NM Steven: Rockwater Consulting, Namibia; FP Badenhorst: AngloGold Ashanti Namibia Pty Ltd.</i>	10:50	OR08	Microorganism strain management for use in the removal of cobalt and copper from hydrometallurgical process solutions	<i>ND Dlamini, A. F. Mulaba – Bafubiandi; University of Johannesburg</i>
11:10	OR05	An integrated approach to mineral sulphide tailings management and AMD mitigation	<i>A Hesketh, JL Broadhurst, STL Harrison : University of Cape Town</i>	11:10	OR09	Operating considerations for lactate-fed sulphidogenic reactors for use in treatment of acid mine drainage	<i>O Oyekola, STL Harrison, R van Hille : University of Cape Town</i>
11:30	OR06	Geometallurgical characterisation of the Merensky Reef at Northam Platinum Mine: comparison of normal, pothole and transitional reef types	<i>M Becker et al : University of Cape Town</i>	11:30	OR10	Visualisation of microbial attachment to sulphide minerals in a bioleach environment: the novel biofilm reactor	<i>C-J Africa, STL Harrison, R van Hille: University of Cape Town</i>
11:50	OR07	A radiogenic and stable isotope study at the Multifura Mine, Zambia - with special reference to the copper ISL	<i>NM Steven et al: Rockwater Consulting, Namibia</i>	11:50	OR11	Kinetics of dissolution of Galena from a Sulphide concentrates by a chloride process	<i>T Mukongo et al: Columbus Stainless</i>

SHORT PRESENTATIONS				SHORT PRESENTATIONS			
12:10	SP01	Measuring velocity profiles in diaphragm valves	V Fester at al: Cape Peninsula University of Technology	12:10	SP08	Identification of process fault conditions with random forest model	C Aldrich, JJ Burchell, L Auret: University of Stellenbosch
12:17	SP02	Kinetic aspects of multi-component systems operated under eutectic freeze crystallisation conditions	DG Randall, AE Lewis, J Nathoo : University of Cape Town	12:17	SP09	An application of eco-efficiency to process design in minerals processing: a case study approach	M Guma, H von Blottnitz, J Broadhurst : University of Cape Town
12:24	SP04	Precipitation of selenium from acidic copper sulphate solution using sodium sulphite	M Mangere, J Nathoo, AELewis: University of Cape Town	12:24	SP10	Online tracking of operational fault conditions in hydrocyclones by use of machine vision	C Aldrich, A Louw, MJ Leeuwner: University of Stellenbosch
12:31	SP05	Applicability of using EFC to treat Hydrometallurgical Brines	L Zibi, AE Lewis, J Nathoo : University of Cape Town	12:31	SP11	Dry beneficiation of coal using an air-fluidised bed of magnetite	S Kretzschmar, J Pocock, BK Loveday: University of KwaZulu-Natal
12:38	SP06	Water minimisation at Skorpion Zinc – a systemic approach to process optimisation	H Bhikha, AE Lewis, J Nathoo: University of Cape Town	12:38	SP12	Escherichia coli and Pseudomona strains absorbing nickel from low sulphur Ni bearing solutions	E Fosso-Kankeu, AF Mulaba-Bafubiandi, B Mamba: University of Johannesburg
12:45	SP07	Removal of aluminum silicate scaling species from a gas liquor stream using alumina	N Mbedzi, J Nathoo, AE Lewis, H Matjie: University of Cape Town	12:45	SP13	Computational fluid dynamic modelling of two phase flow in a hydrocyclone	MJ Leeuwner: University of Stellenbosch
12:52				12:52	SP14	Investigating the effect of the specific gravity differences on the dry classification performance	H Benzer, O Altun, H Orkun Öksüz, E Uzun: Hacettepe University, Turkey
13:00	LUNCH			13:00	LUNCH		
SESSION 3A COMMINATION : Chair - M Powell				SESSION 3B PYROMETALLURGY & METAL ACCOUNTING: Chair - C Cutler			
13.50	OR12	Investigating the effect of recycling load on the performance of HPGR circuit	H Benzar, N Aydogan: Hacettepe University, Turkey	13.50	OR17	Control of electrode immersion in the Lonmin no. 1 circular smelting furnace through furnace feed manipulation	G Georgalli: University of Stellenbosch; JJ Eksteen: Lonmin Plc
14.10	OR13	Effect of HPGR on energy consumption, mineral liberation and particle size distribution of platinum ores	N Solomon, M Becker, J Petersen, A Mainza : University of Cape Town	14.10	OR18	Sorption studies of South African coals	R Cox, JH Knoetze : University of Stellenbosch; JJ Eksteen: Lonmin Plc
14.30	OR14	Studies on mill pulp lifter chamber, grate discharge and their effects on discharge flowrate and flow-back	P Condori, A Mainza: University of Cape Town; M Powell : JKMRRC, Australia	14.30	OR19	CFD modelling of molten matte and slag flows in a circular 3-phase smelting furnace	JJ Bezuidenhout, SM Bradshaw: University of Stellenbosch; JJ Eksteen: Lonmin Plc
14.50	OR15	Study of the efficiency of mineral department in the three-product cyclone	A Mainza: University of Cape Town; M Powell: JKMRRC, Australia	14.50	OR20	Development and initial application of a combined volume of fluid and discrete phase modelling approach to gas stirred ladles	S Cloete, SM Bradshaw: University of Stellenbosch; JJ Eksteen: Lonmin plc
15.10	OR16	Investigation of liner wear effect on semiautogenous mill operational parameters	M Karamoozian, Z Shafaei, R Kakaie: University of Technology - Shahrood-Tehran, Iran	15.10	OR21	Development of a heuristic methodology for designing measurement networks for metallurgical accounting	P Bepswa, DA Deglon : University of Cape Town
15.30	OR45	The JKRBT - the solution for fast tracking ore testing and characterisation	T Kojovic et al: JKMRRC, University of Queensland, Australia				
SHORT PRESENTATIONS							
15.50	SP15	Development of an oxidation index to predict floatability in a sulphide ore	O Bicak, Z Ekmekci: Hacettepe University, Turkey				
15.57	SP16	Multi component breakage modelling of a ball milling circuit during the blended cement production	Hakan Dündar, Hakan Benzer: Hacettepe University, Turkey				
16.04	SP17	Developing a fundamental understanding of the Kieserite crystallization process.	P Govan, AE Lewis, J Nathoo : University of Cape Town				
16.11	SP18	Phosphate crystallization from dewatering liquors	R Ramaru, J. Nathoo, AE Lewis: University of Cape Town				
16.18	SP19	Investigating the effect of slag chemistry on chrome department between the slag and the matte phase	RC du Preez, G Georgalli: University of Stellenbosch; JJ Eksteen: Lonmin Plc				
16:30-17:30	FORMAL POSTER SESSION						

FRIDAY 8 AUGUST 2008

PLENARY PRESENTATION 2 ; Chair - A Nesbitt

08:30 - 09:15	PL02	A new set of socio-economic sustainable development parameters facing the mining industry	FW Petersen: University of Cape Town				
SESSION 4A General: Chair - A Nesbitt				SESSION 4B BIOPROCESSING: S Harrison			
09:20	OR46	The estimation of the continuous selection error using variography based on different sampling strategies for the critical-to-metal accounting elements at a high carbon ferrochromium smelter	E Thyse: University of Stellenbosch; JJ Eksteen: Lonmin Plc	09:20	OR26	Investigating heap bioleaching - the effect of a variance in feed iron concentration on bioleaching performance and the microbial population.	S Harrison, AW van Zyl, N Spurr, R van Hille : University of Cape Town
09:40	OR23	Modelling of the High Efficiency Air Classifiers	Okay Altun, Hakan Benzer: Hacettepe University, Turkey	09:40	OR27	Soil washing and bioremediation of contaminated slime dam material	L Lorenzen, T Shumba: University of Stellenbosch
10:00	OR24	Predicting vibrating screen performance using a scale model	M Hilden, EV Manlapig: JKMRM, Australia; J-P Franzidis: University of Cape Town	10:00	OR28	The effect of fluid flow on inoculation, colonisation and leaching of chalcopyrite in a simulated packed bed reactor	R van Hille et al: University of Cape Town
10:20	OR25	Froth flotation in e-waste processing	IO Ogunniyi, MKG Vermaak: University of Pretoria	10:20	OR29	Biooxidation kinetics of <i>Leptospiillum ferriphilum</i> under heap bioleach conditions	T Ojumu, STL Harrison, P Petersen, GS Hansford: University of Cape Town
10:40	TEA			10:40	TEA		
SESSION 5A HYDROMETALLURGY: Chair - J Nathoo				SESSION 5B PROCESS CONTROL: G Jemwa			
11:10	OR30	Effect of seed concentration on the oxidation and precipitation of iron	M Hove, RP van Hille, AE Lewis: University of Cape Town	11:10	OR35	Identification of the dynamic state behaviour of a semi-autogenous mill	C Aldrich, JJ Burchell, JW de V Groenewald: University of Stellenbosch
11:30	OR31	Effect of surface properties on solid-liquid separation characteristics of metal sulphides	T Mokone, AE Lewis, R van Hille : University of Cape Town	11:30	OR36	RNMPC vs PID control of a RoM milling circuit	LC Coetzee: Mintek; IK Craig: Imperial College, UK; EC Kerrigan: University of Pretoria
11:50	OR32	Copper recovery in a bench-scale carrier facilitated tubular supported liquid membrane system	S Makaka, M Aziz, A Nesbitt: Cape Peninsula University of Technology	11:50	OR37	Monitoring of the steady state operation of a concentrator circuit by use of ensemble methods	C Aldrich, L Auret: University of Stellenbosch
12:10	OR33	Removal of metal pollutants from aqueous solutions: natural clinoptilolite put to the test	DW Nyembe, AF Mulaba-Bafubandi, BB Mamba: University of Johannesburg	12:10	OR38	Recirculating load stabilisation and optimisation at Newcrest Cadia Valley Operations using Mintek Floatstar	D Phillipotts: Mintek
12:30	OR34	Treatment of reverse osmosis retentate using eutectic freeze crystallisation	ST Reddy, AE Lewis, J Nathoo: University of Cape Town	12:30	OR39	Online monitoring of coal feeds on conveyor belts by use of support vector machines	C Aldrich, GT Jemwa, JD Thomas: University of Stellenbosch
12:50	LUNCH			12:50	LUNCH		
SESSION 6A FLOTATION: Chair - MC Harris							
13.50	OR40	Improving the froth flotation recoveries of copper and cobalt bearing minerals from a mixed copper- cobalt oxidized ore using a novel dilution technique	DT Bell: University of Johannesburg				
14.10	OR41	Continuous online xanthate monitoring by means of spectrophotometry	B Lalla, F van Zyl: Mintek				
14.30	OR42	Assessment of froth stability down a flotation bank	S Morar: University of Cape Town				
14.50	OR43	Development and modelling of a two-stage semi-batch flotation apparatus	NV Ramlall, BK Loveday, J Pocock: University of KwaZulu-Natal				
15.10	OR44	The effect of regrind on mineralogy and floatability of an ore	E Mavunga, MC Harris: University of Cape Town				
15.30	CLOSING with Refreshments						

POSTERS

- PP01** Automated analysis of laboratory sedimentation tests by use of machine vision *C Aldrich, GT Jemwa, A Samuels: University of Stellenbosch*
- PP02** Kinetics of microbial ferrous-iron oxidation by *Leptospirillum ferriphilum*: effect of ferric-iron on biomass growth *T Ojumu et al: University of Cape Town*