

Preliminary Programme—Heavy Minerals Conference • 16–17 August 2016

Monday, 15 August 2016

17:00: Welcome Cocktail and Early Registration
(Brew Monkey – Valley of Waves)

Tuesday, 16 August 2016 (Day 1)

07:30–08:30 Early Morning Refreshments and Registration

08:30–08:35 Chairman's Welcoming Address
J. Selby

08:35–08:40 Emergency procedures presentation

08:40–08:50 SAIMM Presidents Opening Address:
President, SAIMM

Session 1 J. Selby

08:50–09:25 **Keynote: African Mineral Sands challenges and opportunities**
J. Elder, *Hatch*

09:25–09:45 **Naturally-occurring radioactive materials and the regulatory challenges to the zircon industry**
K. Harlow, *Zircon Industry Association*

09:45–10:05 **The influence of trash minerals and conglomerate particles on spiral separation performance**
J.D. Grobler* and J.H. Zietsman†, **Exxaro* and †*Ex-Mente*

10:05–10:25 **Characterization of thin coatings on heavy minerals, with application to surface cleaning technologies**
A. Walliser and J. Grobler, *Exxaro Resources*

10:25–10:45 Morning Tea

Session 2 W. Erasmus

10:45–11:05 **Development of an enhanced heavy mineral spiral**
C. Ramotsabi, *Multotec Process Equipment*

11:05–11:25 **Fine chrome beneficiation and reverse PGM upgrade of existing slimes with vertical ring WHIMS technology**
W.P. Slabbert, *Multotec Process Equipment*

11:25–11:45 **Crude TiCl₄ purification: a review of the current state of the art and future opportunities**
L. Hockaday and A. Kale, *Mintek*

11:45–11:55 Sponsor Presentation – Hatch

11:55–12:45 Lunch

Session 3 N. Barkhuysen

12:45–13:20 **Keynote: The changing energy mix is going to radically change South Africa's economy**
M. Rossouw

13:20–13:40 **The thermodynamic potential and reaction kinetics of synthetic rutile and other feedstocks during chlorination**
H. Kotze, N. Bernard, A. Kale, and T. Kekana, *Consensi*

13:40–14:00 **Monitoring lining wear on submerged arc furnaces**
P. Schmidt, M. Hopf, and D. Zeelie, *Saveway GmbH & Co, Germany*

14:00–14:20 **Environment-friendly harvesting of heavy mineral deposits in India**
V. Subramanian, V. Velmurugan, and C. Swamydas, *V.W. Mineral*

14:20–14:40 Afternoon Tea

Session 4 B. Malan

14:40–14:50 Sponsor Session – Polypipe

14:50–15:10 **Design, construction, and commissioning of a heavy mineral sands concentrator pilot plant**
D. Nel, *Hatch Africa (Pty) Ltd*

15:10–15:30 **Sillimanite production from placer deposits: a new process**
C. Swamydas, A.D. Rajarethnam, and V. Velmurugan, *V.W. Mineral*

15:30–15:50 **Measurement of the variability of mineral band position on gravity spiral concentrator with a view to process control**
H.S. Baloyi, A.M. Russell, and D.N.C. Phillpotts, *Mintek*

15:50–16:10 **Prereduction and DC open-arc smelting of carbon-based ilmenite pellets**
K. Bisaka, I. Thobadi, and X. Goso, *Mintek*

16:10–16:15 Day One Conference Close

18:30 for 19:00–22:00 Conference Dinner – Letsatseng Boma
Delegates transfer from Hotels to Boma from 18:00

Wednesday, 17 August 2016 (Day 2)

07:30–08:30 Early Morning Refreshments and Registration

08:30–08:40 Emergency procedures presentation

08:40–08:50 Chairman's Welcoming Address
J. Selby

Session 5 P. Ramsaywok

08:50–09:25 **Keynote: The increasing need for innovation and technology in the Heavy Minerals industry**
V. Hugo, *Iluka*

09:25–09:45 **Online elemental analysis of rutile and zircon concentrates from mineral sands**
L. Koresaar, *Outotec (Finland) Oy*

09:45–10:05 **A case study of geotechnical characterization and 3D modelling of the biologically cemented Mandena heavy mineral sand deposit**
L.I. Boshoff*, A.H. Bracken*, and F. Hees†, **SRK Consulting* and †*Rio Tinto and Titanium-RTIT*

10:05–10:25 **Gold and associated industrial heavy minerals in the icy Cape District: White River to Icy Cape, Alaska, USA**
K. Eden*, A.E. Grosz†, J.E. Grosz†, C.J. Giles†, and J.Y. Foley‡, **Trust Land Office*, †*Global Mineral Sands, Inc.* and ‡*Exploration Geologist*

10:25–10:45 Morning Tea

10:45–10:55 Sponsor Presentation – Mineral Technologies

Session 6 P. Hlabane

10:55–11:15 **Expanding the geotechnical horizon at the Zulti South heavy mineral deposit, South Africa**
P. de Kock*, F. Hees*, and A. Louw†, **Rio Tinto Iron and Titanium* and †*Richards Bay Minerals*

11:15–11:35 **Mine rehabilitation using *Eucalyptus* at the Tronox KZN Sands Hillendale mine,**
C. Smith, B. Cocks, J. Beukes, and M. Vlok, *Paperbark Forestry Consulting and Tronox KZN Sands*

11:35–11:55 **The effect of net positive suction head (NPSH) on pump and stacker cyclone performance,**
J.D. Singleton* and L. Sarisar†, **Weir Minerals Africa* and †*Weir Minerals East Africa*

11:55–12:15 **Rare earths: applications, mineral resources, thorium, and the balance problem**
D. Kennedy* and T. Blench†, **University of Birmingham* and †*Steenkampskraal Thorium Ltd*

12:15–12:35 **Solid-state reduction of an ilmenite concentrate with carbon**
A. Bhalla, C.S. Kucukkaragoz, and R.H. Eric, *University of the Witwatersrand*

12:35–13:30 Lunch

13:30–13:40 Sponsor Presentation – Weir Minerals

Session 7 C. Mienie

13:40–14:00 **In-depth characterization and preliminary beneficiation studies of heavy minerals from beach sands in Brazil**
C.C. Gonçalves and P.F.A. Braga, *Center for Mineral Technology, Brazil*

14:00–14:20 **Making test work dollars count**
G. Diener, S. Gilman, E. Williams, and G. Williams, *TZ Minerals International, Australia*

14:20–14:40 **Review of titanium feedstock selection for fluidized bed chlorinators**
A. Kale and K. Bisaka, *Mintek*

14:40–15:00 Conference Close – Conference Chairman

15:00–15:30 Afternoon Tea