Technical Programme

Sunday, 6 March 2011

14:00  Bus departs from Misty Hills to visit Ngwenya Glass Craft Market
15:30  Bus departs from Ngwenya Glass Craft Market to return to Misty Hills
17:00–19:00  Pre-registration cocktail function

To assist delegates in finding the relevant paper in the proceedings book, the page numbers are shown after the author’s name.

Day 1: Monday, 7 March 2011

Session Chairman: R.T. Jones

07:00–08:30  Registration & early morning refreshments
08:30–17:30  Slag Course by Ken Mills
19:00  Dinner at Carnivore Restaurant at Misty Hills

Day 2: Tuesday, 8 March 2011

Session Chairman: R.T. Jones

07:00–08:30  Registration & early morning refreshments
08:30–08:45  Welcome and introduction
              G.V.R. Landman, President, SAIMM

Session 1—Electric Furnaces
Session Chairman: L. Nelson

08:45–09:15  Some considerations on future developments in ferro-alloy furnaces (Keynote address)
              I.J. Barker, University of the Witwatersrand, SA
12:15–12:40  DC arc smelting of silicon: Is it technically feasible?
              M. Abdellatif, Mintek

Session 2: Steel, Ferrochrome and Silicon
Session Chairman: A.M. Garbers-Craig

11:00–11:25  The history and development of the pyrometallurgical processes at Evraz Highveld Steel and Vanadium
              W.S. Steinberg, W. Geyser, Evraz Highveld, and J. Nell, Hatch Africa
11:25–11:50  Ferrochrome smelting and smelting capacity investment in Zimbabwe
              J. Chirasha, ZA Chrome, Zimbabwe
11:50–12:15  Silicon processing: from quartz to crystalline silicon solar cells
              B.S. Xakalashe and M. Tangstad, Mintek and NTNU, Norway
12:15–12:40  DC arc smelting of silicon: Is it technically feasible?
              M. Abdellatif, Mintek

10:30–11:00  Tea

10:45–11:10  Application potential of SMS DC smelter technology for the pyrometallurgical industry in South Africa
              R. Degel, K. Schmale, M. Köneke, and H. Schmieden, SMS Siemag, Germany

11:10–11:35  Ferrochrome smelting and smelting capacity investment in Zimbabwe
              J. Chirasha, ZA Chrome, Zimbabwe

11:35–12:00  Silicon processing: from quartz to crystalline silicon solar cells
              B.S. Xakalashe and M. Tangstad, Mintek and NTNU, Norway
Session 3: Processing before and after Furnaces  
Session Chairman: M.D. Shapiro

13:40–14:05  **Recent Improvements in the Kumera Steam Dryer**  
J. Talja, S. Chen, H. Mansikkaviita, and I. Kylmäkorpi, Kumera Corporation, Finland (Page 117)

14:05–14:30  **Further processing and granulation of slags with entrained metal and high metal compound content, with specific reference to present manganese slag dumps as well as additions due to daily production**  
D. Norval, Consultant and R.E. Oberholster, Cembeton (Page 129)

14:30–14:55  **Co-generation: A challenge for furnace off-gas cleaning systems**  
E.S. Schubert and R. Gottschling, Theisen Engineering, Germany (Page 145)

14:55  **Tea**

Session 4: PGM’s, Nickel and Copper Part 1  
Session Chairman: J. Eksteen

15:25–15:50  **Characterisation of SO2 in off-gas at Zimplats smelter**  

15:50–16:20  **The distribution of metallic elements in granulated nickel converter matte phases**  
E.L. Thyse, G. Akdogan, University of Stellenbosch, P. Taskinen, Aalto University, Finland, and J.J. Eksteen, Lonmin Platinum (Page 173)

16:20–16:45  **Influence of slag composition on reduction control and operations of the slag-cleaning furnace at KCM, Zambia**  
H.M. Chikashi, Konkola Copper Mines, Zambia (Page 185)

16:45– Close of first day of conference

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**Day 3 Wednesday, 9 March 2011**

**Session 5: General**  
Session Chairman: R.T. Jones

08:30–08:55  **Mineralogical solutions to pyrometallurgical problems**  
L. Andrews and P. den Hoed, Anglo American Research (Page 199)

08:55–09:20  **The ROMA project, (Resource Optimization and Recovery in the Material Industry)—a typical cooperation project in Norway**  
M. Tangstad, Norwegian University of Science and Technology, Norway (Page 209)

09:20–09:45  **Pyrometallurgical Research at SINTEF and NTNU in Norway**  
E. Ringdalen, Sintef, Norway and M. Tangstad, NTNU, Norway (Page 219)

09:45–10:15  **Tea**

**Session 6: PGMs, Nickel and Copper—Part 2**  
Session Chairman: T.R. Curr

10:15–10:40  **Cracking a hard nut: An overview of Lonmin’s operations directed at smelting of UG2-rich concentrate blends**  
J.J. Eksteen, B. van Beek, and G.A. Bezuidenhout, Lonmin Platinum (Page 231)
10:40–11:05  Bindura Nickel Smelter—from decommissioning, care and maintenance, to plant re-start  
A. Mboma and K.D. Chitaukire, Bindura Nickel Corporation, Zimbabwe  
(Page 253)

11:05–11:30  Implementation of an alternative matte-level measurement solution at Lonmin Marikana Smelter Division for improved process monitoring  
T.J. Goff, Lonmin Platinum, N. Brogden, J.P. Nilsson, P. Bloemer, and A. Lyons, Agellis Group, Sweden  
(Page 269)

11:30–11:55  ISACONVERT™—Continuous Converting of Nickel/PGM Mattes  
(Page 285)

11:55–12:20  The smelting operations of Anglo American's platinum business: an update  
(Page 295)

12:20–13:20  Lunch

Session 7: Physical Properties  
Session Chairman: Q.G. Reynolds

13:20–13:45  Blast furnace control using slag viscosities and liquidus temperatures with phase equilibria calculations  
J. Muller, Algoness and M. Erwee, University of Pretoria  
(Page 309)

13:45–14:15  Thermal conductivity of solidified manganese-bearing slags—a preliminary investigation  
J.D. Steenkamp, University of Pretoria, M. Tangstad, NTNU, Norway, and P.C. Pistorius, Carnegie-Mellon University, USA  
(Page 327)

14:15–14:40  The thermophysical properties of raw materials for ferromanganese production  
M. Ksiazek, M. Tangstad, and E. Ringdalen, NTNU, Norway  
(Page 345)

14:40–15:10  Tea

Session 8: Refractories  
Session Chairman: P. den Hoed

15:10–15:35  Chromite—A cost-effective refractory raw material for refractories for various metallurgical applications  
N. McEwan, T. Courtney, R.A. Parry, and P. Knupfer, Vereeniging Refractories  
(Page 359)

15:35–16:00  Interaction of MgO-MgR₂O₄(R: Al, Cr, Fe) refractories with SO₂-containing gases  
N.Z. Fotyi, Mintek, and R.H. Eric, University of the Witwatersrand  
(Page 373)

16:00  Close of conference

18:00  Dinner at Misty Hills

19:00  Buses depart from Misty Hills to attend Theatre visits  
Group E: Cirque du Soleil (Coca-Cola Dome, Northgate)  
Group F: Evita (Montecasino)

At the end of the performance the buses depart from the Theatre Visits to Misty Hills
The organisers of the conference wish to thank the following sponsors for their support:

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