



SAIMM
THE SOUTHERN AFRICAN INSTITUTE
OF MINING AND METALLURGY

SAIMM HYBRID

CONFERENCE

CONFERENCE

MINTEK, RANDBURG, SOUTH AFRICA

28-29 JUNE 2021 — CONFERENCE

30 JUNE 2021 — TECHNICAL VISIT

RENEWABLE SOLUTIONS FOR AN ENERGY INTENSIVE INDUSTRY

PRÉMA



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Preliminary Programme

Day 1 – Monday 28 June 2021

- 09:00–09:30 **Registration and Early Morning Refreshments**
- 09:30–09:40 **Welcome and Opening Address**
L. Hockaday, *Conference Chairperson*
- 09:40–09:45 **Safety Briefing**
- 09:45–10:00 **Welcome Address - SAIMM President**
V.G. Duke, *Sound Mining Solutions Pty Ltd*

Session 1—A South African Perspective on energy use and emissions reductions

Session Chairperson: *Lina Hockaday, Mintek*

- 10:00–10:30 **What's happening in energy and emissions? And what do these changes mean for industries and organizations?**
M. Evans, Partners in Performance, South Africa
- 10:30–11:00 **De-coupling the link between energy-intensive and CO₂ intensive – how to capture and track emissions and implement change**
E. Zollner, EDS Systems, South Africa
- 11:00–11:15 **Mid-Morning Refreshments**
- 11:15–11:45 **A pragmatic approach to renewables in the metallurgical industry**
J. Malan, Vuselela, South Africa
- 11:45–12:15 **Climate finance facility**
M. Sayed, DBSA, South Africa
- 12:15–13:00 **Lunch**

Session 2—Impact of renewable solutions

Session Chairperson: *Dr. Joalet Steenkamp, Mintek*

- 13:00–13:30 **Opportunities for sector coupling of electricity, heat demand and transport in underground mining operations**
P. Klein, CSIR, South Africa
- 13:30–14:00 **TBC**
M.M. Bantsijang, DMRE, South Africa
- 14:00–14:45 **Keynote Address: Climate-Smart Mining**
D. La Porta, World Bank Group, USA
- 14:45–15:15 **Invited speaker: Decarbonizing industry with sunlight and advancements in concentrated solar**
P. Gauche, Heliogen, USA
- 15:15 **Day 1 Close**

Day 2 – Tuesday 29 June 2021

- 08:00–08:30 **Registration and Early Morning Refreshments**
- 08:30–08:40 **Welcome and Opening Address**
L. Hockaday, *Conference Chairperson*
- 08:40–08:45 **Safety Briefing**

Session 3—New frontier of zinc melting, die-casting and galvanization with solar energy

Session Chairperson: *Dr. Quinn Reynolds, Mintek*

- 09:30–10:00 **Preliminary investigations on flux requirements of zinc melting in support of solar heated galvanization**
L. Hockaday, R. Hollhumer, K. Ramdhaney, and W.G. le Roux, Mintek, University of Pretoria, South Africa
- 10:00–10:30 **A second life for a white elephant**
D. Bezuidenhout, Mintek, South Africa
- 10:30–11:00 **An expanded techno-economic model for the integration of solar energy into zinc production with reference to energy storage technologies**
A. Sithole and L. Hockaday, Mintek, South Africa
- 11:00 – 11:15 **Mid-Morning Refreshments**

Session 4—Planning and impact of renewable solutions

Session Chairperson: *Aditya Kale, Mintek*

- 11:15–11:45 **Macro considerations for the implementation of solar solutions in energy-intensive industries**
M. Swart, Mintek, South Africa
- 11:45–12:15 **A review of life cycle analysis studies for solar thermal process heat technologies**
L. Hockaday, Mintek, South Africa
- 12:15–13:30 **Lunch**

Workshop: Building partnerships for Renewable Solutions, sponsored (PRÉMA)

- 13:30–14:00 **Renewable Research in South Africa**
J.D. Steenkamp, Mintek, South Africa
- 14:00–14:30 **Building partnerships for Renewable Research in Australia**
- 14:30–15:00 **Commercial partnership**
TBC
- 15:00–15:30 **Workshop open discussion on building partnerships**
- 15:30 **Day 2 Close**