Monday June 16th

15.00 Exhibit Booth set-up commences

16.30-18.30 Register, meet other delegates and enjoy wine and local cheeses

Tuesday June 17th

07.30 Registration desk opens. Early morning coffee.

08.15 Opening Remarks
   B.A. Wills (MEI, UK) and M.S. Powell (JKMRC, Australia)

08.50 **Technical Session 1- Understanding Breakage**
   Chairman: R.D. Morrison (JKMRC, Australia)

08.50 Development of a new particle breakage characterisation device – the JKRBT
   F. Shi, T. Kojovic, S. Larbi-Bram and E. Manlapig (JKMRC, Australia)

09.10 Surface area production during grinding
   E. Stamboliadis, O. Pantelaki and E. Petrakis (Technical University of Crete, Greece)

09.30 Investigating the different modes of particle breakage used in comminution
   M. van Eck (Mintek, South Africa), A.N. Mainza (University of Cape Town, South Africa)
   and M.S. Powell (JKMRC, Australia)

09.50 Brittleness test results and a meaningful expression between Bond Work Index,
   grindability index and friability value
   H.T. Ozkahraman (University of SDU, Turkey)

10.10 Nonlinear rates in breakage of coarse particles in ball mills
   L.M. Tavares and R.M. Carvalho (Universidade Federal do Rio de Janeiro, Brazil)

10.30 Relationship between micro-hardness and brittleness in CaCO₃
   M. Skrzypczak et al (Ecole Centrale de Lyon, France) and O. Guerret (Coatex SAS, France)

10.50 Coffee

11.30 **Technical Session 2 - Primary Comminution**
   Chairman: M. Lindqvist (Sandvik Mining & Construction, Sweden)

11.30 Sub-populations and patterns in blast-induced fines fragmentation
   S. Michaux (JKMRC, Australia)

11.50 Optimisation of yield and shape in crushing plant
   M. Bengtsson, P. Svedensten and C.M. Evertsson (Chalmers Rock Processing Research,
   Sandvik SMC, Sweden)

12.10 Autogenous SynchroCrusher
   H. van der Zanden (Synside, Belgium)

12.30 New developments in cone crusher performance optimization
   S. Szalanski (Metso Minerals-Mining Division, USA) and J. Lichter (Metso Minerals
   Optimization Services, USA)

12.50 Lunch
14.00 Technical Session 3 - High-Pressure Grinding Rolls
Chairmen: A.N. Mainza (University of Cape Town, South Africa) and H. Benzer (Hacettepe University, Turkey)

14.00 HPGR – FAQ
C. Morley (Fluor Australia Pty Ltd, Australia)

14.20 Application of High Pressure Grinding Rolls as high efficiency, high energy saving technology for the minerals industry, Humboldt Wedag experience.
E. Matthies, F.P. van der Meer, A Gruendken (Humboldt Wedag GmbH, Germany)

14.40 Development and implementation of a test procedure for simulating and scaling up HPGR operations based on bench-scale tests
C.L. Schneider, L.G. Austin (Mineral Technologies, Inc., USA) and V.K. Alves (VALE, Brazil)

15.00 Investigating the effect of recycling load on the performance of a HPGR circuit
H. Benzer and N. Aydoğan (Hacettepe University, Turkey)

15.20 Coffee

16.00 Commissioning of the Polycom 2.2/1.6 5.6 MW HPGR at Anglo Platinum’s new PPRust North Concentrator
C.M. Rule, A. Cope (Anglo Platinum Management Services, South Africa) and G. Humphries (PPL Concentrator, Anglo Platinum, South Africa)

16.20 A structured approach to the evaluation of the energy requirements of HPGR and SAG mill circuits in hard ore applications
P.P. Rosario and R.A. Hall (University of British Columbia, Canada)

16.40 High pressure grinding rolls (HPGR) an alternative technology versus SAG milling
R. Anguelov, J. Alexander and H. Ghaffari (Wardrop Engineering Inc, Canada)

18.00 Guided Coast Path Walk (optional)*
Wednesday June 18th

08.40  *Technical Session 4- Modelling and Simulation*
  Chairmen: P.W. Cleary (CSIRO Mathematical & Information Sciences, Australia) and A. Jankovic (Metso Minerals Process Technology, Australia)

08.40  **The application of a simplified approach to modelling tumbling mills, stirred media mills and HPGRs**
  A. Hinde and J. Kalala (Mintek, South Africa)

09.00  **Modeling of particle size effect on breakage and its application in AG/SAG simulations**
  F. Shi and T. Kojovic (JKMRC, Australia)

09.20  **Integration of evolutionary optimization algorithms with a grinding circuit simulator**
  A. Farzanegan and S.M. Vahidipour (University of Kashan, Iran)

09.40  **Phenomenological formula for SAG-processes**
  A. Hvan and V. Kichenko (Navoy Gold Mining, Uzbekistan)

10.00  **Investigation of alternative circuit design for cement grinding by simulation technique**
  N.A. Aydogan and L. Ergun (Hacettepe University, Turkey)

10.20  Coffee

11.00  **Extraction of DEM collision data for input to breakage models**
  M. Powell, M. Khanal (JKMRC, Australia) and J. Favier (DEM Solutions, UK)

11.20  **Predicting separation performance of double deck banana screens**
  P.W Cleary, R.D. Morrison and M.D. Sinnott (CSIRO Mathematical & Information Sciences, Australia) and R.D. Morrison (JKTech, Australia)

11.40  **The Finch-McIvor functional performance based grinding circuit modeling system**
  R.E. McIvor (Metcom Technologies, Inc., USA) and J.A. Finch (McGill University, Canada)

12.00  **The effect of ball size on breakage rate parameter in a pilot scale ball mill**
  A.S. Erdem and Ş.L. Ergün (Hacettepe University, Turkey)

12.20  **Study of sub-micron milling mechanism by mean of population balance modeling**
  S.L.A. Hennart, G.M.H. Meesters (DSM Food Specialties, Netherlands) and W.J. Wildeboer (Delft University of Technology, Netherlands)

12.40  **Evaluation by simulation of grinding circuit options to improve eco-efficiency**
  Z. Pokrajcic and R. Morrison (JKMRC, Australia)

13.00  Lunch

14.00  *Technical Session 5- Energy Considerations*
  Chairmen: B. Pålsson (Luleä University of Technology, Sweden) and J. Pontt (Technical University Federico Santa María, Chile)

14.00  **Energy considerations in compressive- and impact crushing of rock**
  M. Lindqvist (Sandvik Mining & Construction, Sweden)

14.20  **Relationships between comminution energy and the product size for a magnetite ore**
  A. Jankovic, H. Dundar and R. Mehta (Metso Minerals Process Technology, Australia)

14.40  **A more sustainable approach to assessing comminution efficiency**
  F. Musa (Energetics Pty Ltd, Australia) and R. Morrison (JKMRC, Australia)

15.00  **What if we already know? Energy efficient concentrator design**
  C. Walstra, D. Curry (Xstrata, South Africa) and C. Rule (Anglo Platinum, South Africa)

15.20  Coffee
16.00  **Comparison of energy efficiency between ball mills and stirred mills in coarse grinding**  
F. Shi, R. Morrison, F. Burns (JKMRC, Australia), A. Cervellin (Newcrest Mining, Australia) and F. Musa (Energetics, Australia)

16.20  **Using DEM to compare the energy efficiency of pilot scale Ball and Tower mills**  
R.D. Morrison (JKMRC, Australia) and P.W. Cleary (CSIRO Mathematical & Information Sciences, Australia)

16.40  **Horizontal Roller Mill (Horomill®) application versus ball milling in finish grinding of cement**  
Ö.Genç and A.H. Benzer (Hacettepe University, Turkey)

17.00  **Practical and theoretical aspects of minimizing energy consumption of hydrocyclone classification systems in grinding**  
R. van Ommen (Krebs Engineers GmBH, Austria)

18.30  Coach departs for Conference Dinner at Trebah Gardens
Thursday June 19th

09.00  Technical Session 6 – Grinding Practice
Chairmen: T. Kojovic (JKMRC, Australia) and J.A. Finch (McGill University, Canada)

09.00  Process and operational benefits of Eriez trunnion magnet systems in grinding circuits
P. Fears (Eriez Magnetics Europe, UK)

09.20  Applying grind-curves to mill operation and optimisation
M. Powell (JKMRC, Australia), A. van de Westhuizen and A. Mainza (University of Cape Town, South Africa)

09.40  Optimization of mill performances using on-line ball and pulp measurements
B. de Haas and B. Clermont (Magotteaux International, Belgium)

10.00  Pulp lifter design and material transport in AG/SAG mills
S. Latchireddi (Outotec Inc., USA)

10.20  Reliability and upgrading of gearless mill drive depending on interharmonics power losses of cycloconverter transformer
J. San Martin, J. Pontt, R. Aguilera and F. Bello (Technical University Federico Santa María, Chile)

10.40  Coffee

11.30  A review of AG/SAG mills in closed circuits with screens and hydrocyclones
A.N. Mainza (University of Cape Town, South Africa), M.S. Powell and R.D. Morrison (JKMRC, Australia)

11.50  Applying traceability to grinding circuits by using Particle Texture Analysis (PTA)
P. Oghazi, B. Pålsson (Luleå University of Technology, Sweden) and K. Tano (LKAB, Sweden)

12.10  The effect of grinding media performance on milling and operation behavior
U. Weber (Sigmund Lindner, Germany)

12.30  Influence of oxygen content in grinding mills
B.I. Pålsson (Luleå University of Technology, Sweden), B. Jarousseau, Metso Minerals, France) and S. Persson (Metso Minerals SKEGA, Sweden)

12.50  Lunch

14.00  Technical Session 7 – Fine Grinding
Chairmen: P. Baláž (Slovak Academy of Sciences, Slovakia) and J. Roth (PMT Jetmill GmbH, Austria)

14.00  Controlled pulverization of coal
H. van der Zanden (Synside, Belgium)

14.20  Coarser feed applications of MIG IsaMilling
C. Ayers, L. Knopjes and C.M. Rule (Anglo Platinum Management Services, South Africa)

14.40  Application of the Metso SMD unit for fine grinding of intermediate flotation concentrates at the PtMile tailings scavenger operation in Rustenburg
C.M. Rule, L. Knopjes (Anglo Platinum Management Services, South Africa) and R.A. Atkinson (Platinum Mile, South Africa)

15.00  Measurement and comparison of very fine size distributions
M. Larson, R. Morrison (JKMRC, Australia) and K. Pietersen (JKTech Pty Ltd, Australia)

15.20  Coffee

16.00  MILLPEBS : energy savings in fine grinding mining application
M. Brissette (Wheelabrator Allevard Enterprise, Canada)
16.20  The introduction of mainstream inert grinding, or “MIG” Isamilling technology at Anglo Platinum
C.M. Rule, L. Knopjes and R. Jones (Anglo Platinum Management Services, South Africa)

16.40  Improving fine grinding with the IsaMill
M. Larson, R. Morrison, F. Shi (JKMRC, Australia) and M. Young (Xstrata Technology, Australia)

17.00  The effect of particle shape on stirred mill performance
M.D. Sinnott, P.W. Cleary (CSIRO Mathematical & Information Sciences, Australia) and R.D. Morrison (JKMRC, Australia)
Friday June 20th

08.50  *Technical Session 8 - Ultrafine Grinding*
Chairmen: M.S. Powell (JKMRC, Australia) and S. Latchireddi (Outotec Inc., USA)

08.50  **Value adding of limestone to filler grade through ultra fine grinding process in Jet Mill for plastic industries**
S. Palaniandy et al (Universiti Sains Malaysia, Malaysia)

09.10  **Ultrafine milling in applied mechanochemistry**
P. Baláž (Slovak Academy of Sciences, Slovakia)

09.30  **Application of vibrating mills in ultra fine grinding circuits**
K. Andres, F. Haude and O. Handy (Humboldt Wedag Coal & Minerals Technology, Germany)

09.50  **Ultrafine grinding of minerals with agitated bead mills**
U. Enderle (NETZSCH-Feinmahltechnik GmbH, Germany)

10.10  **Advantages of planetary centrifugal grinding**
A. Chumokhvalov (Leotec Group, Russia)

10.30  Coffee

11.00  **Economical jet milling of industrial minerals and dry grinding in the sub-micron range**
S. Miranda (NETZSCH-CONDUX Mahltechnik GmbH, Germany)

11.20  **Ceramic grinding media and mineral applications**
P. Hassall (SEPR-Saint Gobain Zirpro, Belgium)

11.40  **Advances in ceramic media for high energy milling applications**
B. Farber (Zircoa, Inc., USA), L. Knopjes and N. Bedesi (Anglo Platinum Corp., South Africa)

12.00  **Anglo Platinum’s development of a ceramic grinding media selection protocol for MIG and UFG Isamilling**
C.M. Rule, L. Knopjes and N. Bedesi (Anglo Platinum Management Services, South Africa)

12.20  **Fine and ultrafine grinding using the Metso stirred media detritor (SMD)**
G. Davey (Metso Minerals, UK)

12.40  **Classifying – basis for ultrafine products**
V. Mayer and J. Roth (PMT Jetmill GmbH, Austria)

13.00  Lunch

14.30  **Copper and Tin Mining in Cornwall**

14.30  **Setting the Scene**
B.A. Wills (MEI, UK)

15.00  Coach and walking tour of the historic Camborne-Redruth Area (delegates and accompanying persons)*

* These walking tours are undertaken at delegate’s own risk. MEI accepts no liability for any injuries sustained during the tours.