

## Physical Separation '17



MINING



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### Wednesday June 14th

16.30-18.00 Registration, wine and cheese reception. Accompanying partners welcome

### Thursday June 15th

- 08.00 Registration opens. Coffee and light breakfast
- 08.45 **Opening Remarks and Presentation of MEI Young Person's Award 2016**  
B.A. Wills (MEI, UK)
- 09.10 *Technical Session 1*  
Chairmen: J.-L. Liow (University of New South Wales, Australia) and R. Jain (Outotec Inc, USA)
- 09.10 **Keynote Lecture: Physical separation techniques continue to grow in importance – the key to optimum separation is preparation**  
S. Gray, Gekko Systems, Australia
- 09.40 **Comminution devices for more sustainable processing**  
R.D. Morrison, B.A. Adair, S. Walters (CRC Ore, Australia) and S. Gray (Gekko Pty Ltd (Australia)
- 10.00 **Four years of innovative VeRo Liberator® comminution – from invention to industrial-scale pilot phase testing**  
G. Borg (PMS GmbH & Martin Luther University Halle-Wittenberg, Germany) and F. Scharfe (PMS GmbH, Germany)
- 10.20 Coffee
- 11.00 **Upgrading of low grade silver-lead-zinc ore stockpiles at Volcan Compañía Minera SAA's basemetals operations in Peru, using sensor-based ore sorting**  
K Bartram (Steinert, Germany) and A. Parry (Steinert Australia Pty Ltd, Australia)
- 11.20 **Lightsaber mineral processing- TOMRA's latest laser-based scanning technology enables mining companies to create highest purity concentrate on quartz or pre-concentrate gold-ore**  
J.-M. Bergmann (TOMRA Sorting GmbH, Germany)
- 11.40 **Preconcentration alternatives for the reduction of the carbonatic gangue of a Brazilian silicate zinc ore**  
D.J. Neto, M.G. Bergerman (University of São Paulo, Brazil), A.S. Young and C.O. Petter (Federal University of Rio Grande do Sul, Brazil)
- 12.00 **Application of X-ray sorting in pre-concentration of the Zn-Pb ore**  
J. Kolacz (COMEX AS, Norway) and A. Wieniewski (Institute of Non-Ferrous Metals, Poland)
- 12.20 **Evaluation of ore sorting technology for iron ore coarse particles**  
N.P. Lima, L. Gois and R. Fina (VALE SA, Brazil) and J. Kolacz (COMEX AS, Norway)

- 12.40 **Assessing the amenability of gold ores to coarse particle gangue rejection**  
T.D.H. McGrath, J.J. Eksteen, P. Bode (Curtin University, Australia) and P. Walters (CRC ORE, Australia)
- 13.00 Lunch
- 14.00 *Technical Session 2*  
Chairman: J.J. Eksteen (Curtin University, Australia)
- 14.00 **Integration of coarse separation levers to drive value in mining operations**  
S. Walters, L. Keeney, C. Espejel, and B. Adair (CRC ORE, Australia)
- 14.20 **Automation for efficient separation of the Outotec SLon VPHGMS**  
R. Jain, I. Sherrell and P. Jansson (Outotec Inc., USA)
- 14.40 **Enhanced separation for ilmenite with centrifugal HGMS technique**  
Luzheng Chen and Jianwu Zeng (Kunming University of Science and Technology, China)
- 15.00 **New results in magnetic separation of a Ta ore**  
F. Zolotarev, T. Hühnerfürst and H. Lieberwirth (Institute of Mineral Processing Machines, Germany)
- 15.20 **Beneficiation of monazite from mixed minerals using electrostatic separation**  
G.B. Abaka-Wood, J. Addai-Mensah and W. Skinner (University of South Australia, Australia)
- 15.40 **Advantages of dry triboelectric separation of minerals**  
L. Baker, K.P. Flynn and F.J. Hrach (ST Equipment & Technology LLC, USA)
- 16.00 Coffee
- 17.00 Optional Guided Coast Path Walk\*, ending with a beer at the Quayside Pub, Old Falmouth. Accompanying partners welcome

### Friday June 16<sup>th</sup>

- 08.15 Coffee and light breakfast
- 09.00 *Technical Session 3*  
Chairmen: S. Saurabh (Millcreek Engineering Co., USA) and R. Tamblyn (Imerys, UK)
- 09.00 **Keynote Lecture: The Dense Medium Cyclone – past, present and future**  
T. Napier-Munn (JKMRC, Australia)
- 09.30 **Application of density tracers in a dense medium circuit: a case study**  
D. Izerdem, O. Ozcan and E. C. Orhan (Hacettepe University, Turkey)
- 09.50 **Pilot dense medium separation of Fe-ore fines**  
C. Bergmann and T. Moloane (Mintek, South Africa)
- 10.10 **Performance of mini-axial hydrocyclones**  
J.-L. Liow (University of New South Wales, Australia)
- 10.30 Coffee
- 11.10 **Optimising small hydrocyclones for fine particle classification**  
D. Vega-Garcia, J.J. Cilliers and P.R. Brito-Parada (Imperial College, UK)
- 11.30 **Performance comparison of different types of classifiers and their effects on circuit**  
O. Ozcan (Hacettepe University, Turkey)
- 11.50 **Impact of particle density on the classification efficiency of the static air classifier in Vertical Spindle Mill**  
Hong Li, Yaqun He, Jinshan Yang, Zhen Peng and Weining Xie (China University of Mining & Technology, China)

- 12.10 **A test work approach aimed at maximising data generation for fine screening circuit design and simulation**  
E. Ford and V. Sithole (Mintek, South Africa)
- 12.30 **Implementation of established physical separation technology in man-made materials**  
R.A. Verburg and T. de Boer (IHC Mining, The Netherlands)
- 12.50 Lunch
- 14.00 *Technical Session 4*  
D. Amariei (COREM, Canada)
- 14.00 **Magnet rod filter analysis for the treatment of radioactive waste from the abrasive water jet cutting**  
M. Brandauer, S. Gentes (Karlsruhe Institute of Technology, Germany), J. Starflinger (Institute of Nuclear Technology and Energy Systems, Germany), R. Langlois and K. Waters (McGill University, Canada)
- 14.20 **The pre-concentration of HREE-bearing zircon in the Nechalacho Deposit by selective comminution and gravity separation**  
C. Marion, R. Langlois, K.E. Waters (McGill University, Canada), T. Grammatikopoulos (SGS Canada Inc., Canada) and N.A. Rowson (University of Birmingham, UK)
- 14.40 **Separation of monazite from mixed minerals using multi-gravity separation**  
G.B. Abaka-Wood, J. Addai-Mensah and W. Skinner (University of South Australia, Australia)
- 15.00 **Recovery of fine tungsten-bearing minerals from waste streams using modified Multi-Gravity Separator**  
R.S. Fitzpatrick, Y. Ghorbani, P. Hegarty, G. Rollinson (Camborne School of Mines, UK), T. Mildren (Gravity Mining Ltd.) and K. Fergusson (SGS Mineral Services Ltd, UK)
- 15.20 **A design of experiments investigation into fine low-density ore processing using a 3-in. Knelson Concentrator**  
C. Marion, R. Langlois, O. Kökkılıç, M. Zhou, K.E. Waters (McGill University, Canada) and N.A. Rowson (University of Birmingham, UK)
- 15.40 Closing remarks and invitation to Physical Separation '19  
A.J. Wills (MEI, UK)
- 15.50 Cornish cream tea, and introduction to mine visit\*. Coaches leave for Camborne-Redruth area at 17.00  
Accompanying guests welcome

\*Walks carried out at your own risk