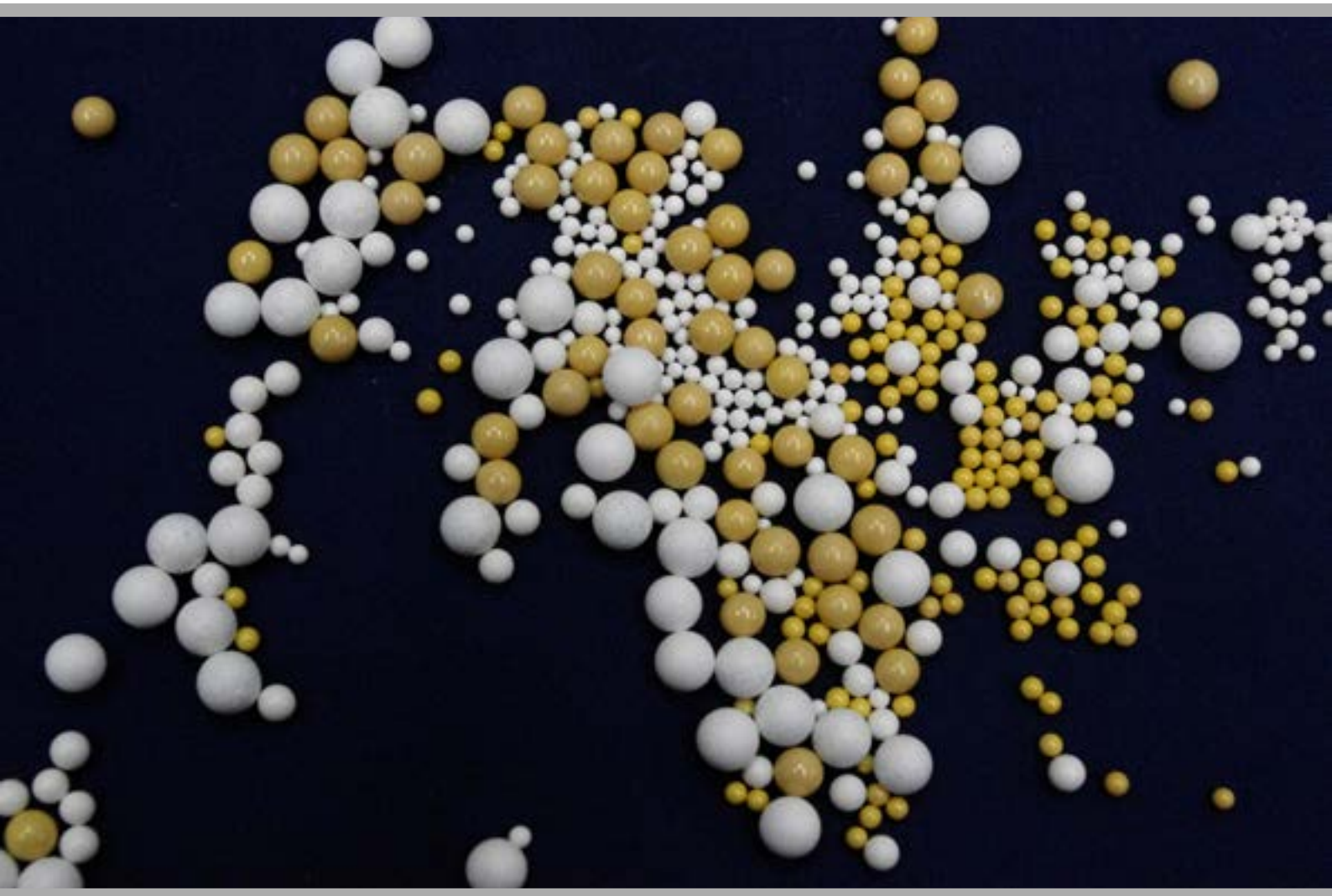
GRINDING SOLUTIONS
mineral processing services

MINERAL PROCESSING TECHNICAL AND INNOVATION WORKSHOP



GRINDING SOLUTIONS ARE HOSTING A TECHNICAL AND INNOVATION WORKSHOP AND WOULD LIKE TO INVITE YOU TO ATTEND ON:

Friday 29th September 2017

At Hotel A Esteva, Castro Verde, Rua Das Orquídeas, 7780 Castro Verde, Portugal

THE WORKSHOP HAS BEEN TAILORED TO SHOWCASE RELEVANT TECHNICAL DEVELOPMENTS AND INNOVATION IN MINERAL PROCESSING. THE WORKSHOP WILL CONSIST OF A COMBINATION OF PRESENTATIONS AND QUESTIONS WITH A VIEW TO HAVING AN OPEN DIALOGUE AND LEARNING CULTURE.

13:30 - 14:00 **ARRIVAL** Tea & Coffee

14:00 - 14:10 **INTRODUCTION**
An introduction to the afternoon's workshop, why the presentation themes have been selected and how they interrelate.
Nick Wilshaw, Director, Grinding Solutions

14:10 - 14:40 **MINERALOGY, METALLURGY & THE MINE SITE**
Mineral processing operations and metallurgical test programs have in the past relied on trial and error testing, supported by chemical assays to measure performance. This often means that testing can be lengthy and with questions left unanswered. The development of automated mineralogical techniques, gives the mineral processor a window into the process, allowing them to have clearer understanding of the mineralogy driving the metallurgical response. This not only allows for better assessment of performance, but also assists in guiding and accelerating the ongoing program. With lower grade and more complex resources becoming the norm it is becoming even more important to utilise all the tools available to maximise productivity and ensure that avoidable metal losses aren't occurring. This presentation will show how mineralogy fits into the modern mineral processing lab and how it is being implemented onto mine sites to support daily operational decision making.
James Strongman, Director, Petrolab

14:40 - 15:10 **SIMULATION OF METALLURGICAL BEHAVIOUR FROM LIBERATION ANALYSIS DATA**
Automated mineralogical analysis by scanning electron microscope has established itself as a valuable tool for liberation analysis and metallurgical troubleshooting. Historically, determination of liberation, modal abundance of minerals and their respective grain size have been the key targets. However, with advances in both software and hardware, it has become possible to gain significantly more information from the data generated from liberation analysis. This presentation showcases various types of analysis that go above and beyond the standard liberation analysis, including sampling analysis, estimation of liberation size and simulation of metallurgical variance based on sample mineralogy.
Klaas van der Wielen, Senior Metallurgist, Grinding Solutions

15:10 - 15:35 **BREAK** Tea & Coffee

15:35 - 16:05 **GRIND OPTIMISATION – CONSIDERATIONS WHEN GOING FINER**
In mineral processing when recovery is low, one of the first actions is often to grind finer to improve mineral liberation. However, reducing particle size may not increase liberation and if it does, liberation is not the only factor that should be considered. This presentation will discuss the other factors that should be considered: optimal mill and/or media selection, overgrinding and the consequence of increased slimes and the effect on and of sample constituents beyond the mineral(s) of interest.
James Gaydon, Senior Metallurgist, Grinding Solutions

16:05 - 16:35 **FLOTATION OPTIMISATION: USING PHYSICS TO UNDERSTAND CHANGES IN CHEMISTRY**
It is well known and widely accepted that a successful flotation operation requires a delicate balance between many different operating variables and feed parameters, which are often interrelated. Grinding media selection, for example, affects pulp chemistry and subsequently the efficacy of the flotation reagents. Variation in any factor affects the resulting froth structure and stability, and consequently the separation performance. In this talk, we will discuss, using the physics of flotation, how the froth phase is affected by corresponding changes in pulp chemistry, in addition to common variables such as particle size. We will demonstrate how measurement of pulp chemistry and froth stability can be used for troubleshooting and optimising flotation performance.
Kathryn Hadler, Consultant, Grinding Solutions / Imperial

16:35 - 17:00 **TECHNICAL PANEL**
A chance for you to ask questions to an experienced panel followed by closing remarks.
Nick Wilshaw, Klaas van der Wielen, James Gaydon, Mike Cook, Kathryn Hadler, James Strongman

17:00 - 19:00 **SUNDOWNER**
Retire to the hotel bar for a refreshing drinks reception and chance to reflect and discuss the topics of the day.

CLICK HERE TO REGISTER FOR THE EVENT:

https://www.eventbrite.co.uk/e/mineral-processing-technical-innovation-workshop-tickets-35690790114