

# Multotec showcases its innovative sampling technologies

At the 11<sup>th</sup> World Conference on Sampling and Blending, Multotec showcased its competencies in sampling application knowledge and sampling compliance. Willem Slabbert, product specialist for Samplers and Magnetics at Multotec, outlines the company's focus.

**M**ultotec expertise was presented at the recent 11<sup>th</sup> World Conference on Sampling and Blending (WCSB11), which took place in Johannesburg, South Africa during May. The event offered valuable insights for academics, manufacturers, engineering firms and practitioners striving to achieve representative sampling across diverse industries.

Says Willem Slabbert, product specialist for Samplers and Magnetics at Multotec: "Key contributing authors from Multotec presented four technical papers at the conference and the company was one of the premium sponsors at the event, where delegates gained access to practical applications and industry knowledge around global best practices, standards for compliance and the Theory of Sampling (TOS). "Not only did we participate in the conference, but we were also part of the organising committee and technical review panel," says Slabbert.

Multotec focused primarily on sampling application knowledge and sampling compliance improvement from its in-depth understanding of industry and commodities. "We also presented sampler product innovations, such as our evolving Rotating Plate Divider. Through collaborative efforts with Multotec's customers, this device has undergone an amalgamation of refinements, which are aligned to TOS recommendations and combine our proven mechanical design, resulting in a product that is ready for the demands of the most challenging sampling applications," says Slabbert.

"A second paper was presented that delved into the understanding of practical mechanical equipment design and its role in sampling system compliance downstream, that is, not merely a unit working in isolation of the sampling system it is serving.

Our paper explained how three-times nominal particle top size cutter openings often collect sample increments that are too small for sufficient sub-division in downstream sampling operations. Our suggestion to improve one of the TOS recommendations comes from our experience of clients' insufficiently performing sampling systems, and rectifying such operations whether we were the designer or not."

## Cross-commodity experience

Additional papers shared a common thread, based on Multotec's cross-commodity experience. This experience allows the company to model and simulate its capital expenditure (capex) and operating expenditure (opex) of sampling systems for different lot sizes, sampling durations, and precision requirements. The case study explained which solutions were technologically and commercially best suited for each client's needs.

"We also discussed the use of alternative mineral commodity standards, that are modern and comprehensive, to supplement incomplete or dated standards so global-based sampling practices can be achieved across commodities," says Slabbert.

"Our team of sampling experts not only designs mechanical equipment samplers to prevent random errors, but also investigates non-random, constitutional and distributional heterogeneity to determine the required frequency and amount of composite sample required at different particle sizes, for targeted representative mineral reporting and stock/resource/reserve/performance declaration."

Multotec, which is both an Original Equipment Manufacturer and Sampling Knowledgeable Partner working towards compliance and assurance, understands the science presented by the Theory of Sampling



and makes it practical for customers and industry.

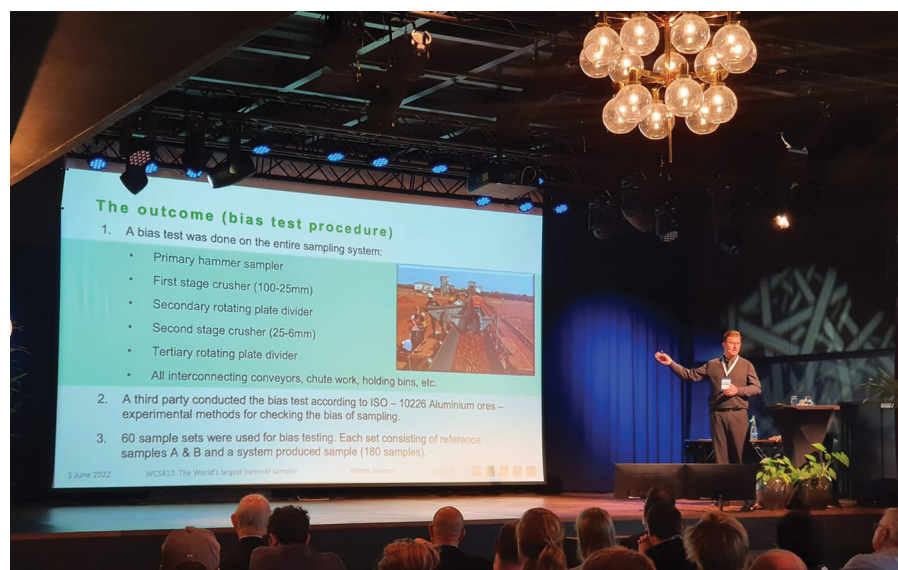
"This ensures that the sampling regimes that include our sampler equipment are accurate and precise, and therefore representative. We can also use our advanced chrono-statistical variogram tools and highly qualified personnel to work towards eliminating sampling errors – on systems supplied by us or not – until the system complies to global best practices and client reporting confidence requirements," says Slabbert.

## Product development and training

Multotec's customised solutions draw on extensive experience and once all this knowledge is packaged into a product, it is released to the industry, along with training aimed at end users, engineering houses, universities, and other players in the sampling fraternity.

"We publish technical articles and contribute to certifying standard bodies such as the South African Bureau of Standards and ISO committees. We also conduct peer reviews of the work of others," says Slabbert.

[www.multotec.com/en](http://www.multotec.com/en)



Key contributors from Multotec presented papers at WCSB11, sharing insights on practical applications, global best practices, standards compliance, and the Theory of Sampling.