

# Local service provider delivers lab supplies to Zambian mines

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**M**ining industry-focused turnkey laboratory solutions provider Tramecon delivered laboratory supplies to numerous mines in Zambia, to the value

of more than R200 000 last month, MD Hannelie de Beer tells *Mining Weekly*.

Tramecon has been supplying laboratory equipment to Zambian operations since 2010



## BLIND SAMPLES

The results of proficiency tests help Qotho evaluate laboratories' processes in terms of precision

and continues to provide them with quality control services every three to four months.

The company also provides laboratory support services to Lubambe copper mine – jointly owned by mining companies Vale and African Rainbow Minerals – and was instrumental in the setup of this laboratory, when it was originally constructed.

De Beer adds that Tramecon subsidiary and laboratory proficiency-testing company Qotho Laboratory Services is establishing a gold laboratory proficiency testing scheme in Zambia, which will start servicing customers this month, provided that Qotho gets enough laboratories to participate.

"We usually require at least ten laboratories to take part, as this will provide enough data to enable us to develop meaningful statistics. If there are too few participants, we cannot detect if there are any errors in the participating laboratories' sampling and testing processes," says De Beer.

Currently, Qotho runs copper proficiency-testing schemes, in which four copper laboratories in Zambia participate. These include Lubambe, on-site laboratory services provider SGS and mining and minerals analysis provider AHK Laboratories.

Qotho director Nhlanhla Mamba tells *Mining Weekly* that Qotho sends "blind" samples – samples in which the contents are unknown – to laboratories participating in proficiency schemes, to be tested. The results of the tests

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Anybody who thinks they are a leader and doesn't have anybody following them is just out for a walk.

help Qotho to evaluate laboratories' processes in terms of precision.

"We prepare samples and ensure that they are homogenous. The laboratories complete the analysis and send the data back to us. We then compile comprehensive statistics on the analyses, after which we send out a report. This provides laboratories with the anonymous performance data of all participating laboratories, which enable them to benchmark their performance against that of competitors.

"The performance data will highlight any issues, enabling the laboratories to take the necessary

**About Tramecon**

Tramecon focuses on identifying the analytical requirements of mining laboratories and assists clients in buying the equipment. It also procures equipment on behalf of the client as part of a turnkey project. "We then commission the facility and provide training for staff, thereby not only equipping laboratories, but also transferring skills to effectively operate them," says Tramecon MD **Hannelie de Beer**. Tramecon also provides auditing services to help mining laboratories improve their quality standards. "During a laboratory audit, we analyse the facility, as well as its sampling and laboratory processes," she notes, adding that the company then provides recommendations to help improve its quality standards.

preventive actions to ensure better quality testing," De Beer adds.

Citing copper mining laboratories as an example, Mamba explains that Qotho sends copper concentrate samples to participating laboratories for analysis, to determine the samples' copper content and any impurities that can include iron, manganese and cobalt. "The copper content is of particular importance for mines – the higher the concentration of copper in a sample, the more profitable an operation.

Mamba adds that, should there be impurities occurring over an agreed amount between suppliers and clients, the mining houses are subjected to penalties from their buyers.

"Impurities form part of the orebody and different processes can be used to reduce the impurities. Mining houses will draw up contracts with investors stating the levels of copper required and the maximum level of permissible impurities," highlights De Beer.

She adds that proficiency schemes enable mining houses to prove that their laboratory is providing accurate information about the mine's orebody, their processes and their products.

Proficiency testing schemes are conducted every two months to provide laboratories with a performance indicator at regular intervals.

Laboratory proficiency tests

originated from ISO 17025 requirements, which is the laboratory equivalent of the ISO 9000 quality management certification. "Each step in the laboratory testing process needs to be validated under ISO 17025, and laboratories need to provide evidence that each step in their process is tested against the reference material. ISO 17025 also requires laboratories to take part in proficiency testing," explains De Beer. She further highlights that, previously, mines sent out samples to independent laboratories for testing and, as such, did not require ISO 17025 accreditation. "It is now becoming a trend for mining companies to aim for ISO 17025 accreditation, which, in

turn, indicates that the demand for proficiency testing is growing."

De Beer states that Tramecon identified this gap in the market about two years ago and has since established its own quality systems, which allows for the provision of a scheme that complies with the ISO 17043 quality requirements.

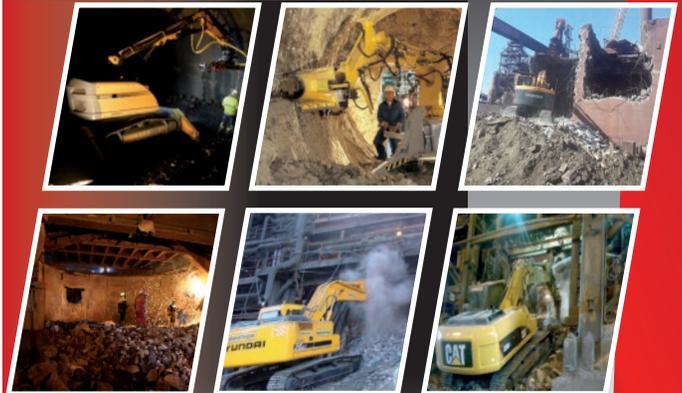
Qotho is in the process of becoming ISO 17043-accredited, which involves compiling enough evidence to validate the company's processes. "We need to ensure that every sample we send out per round is identical and that there are statistical and operating rules, in accordance with ISO 17043, that govern this," concludes De Beer. ■■

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