Southern Innovation

SITORO® ACCELERATED ANALYSIS

Optimising Minerals Analysis with SITORO®

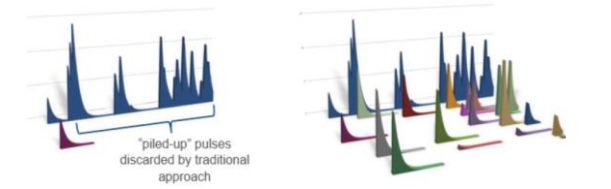
Southern Innovation's SITORO® digital signal processing technology dramatically enhances traditional analytical techniques to deliver faster, more accurate and more sensitive minerals analysis with a wide range of applications for mineral exploration, extraction and processing.

Introduction

Radiation-based materials analysis techniques are increasingly used in mining and mineral processing to characterise material properties and optimise decision making. However, many suffer serious limitations.

Southern Innovation develops, markets and licenses patented digital signal processing technologies that dramatically advance the speed and accuracy of materials analysis techniques used in the resources sector, including: X-ray fluorescence (XRF), X-ray diffraction (XRD), X-ray transmission (XRT), prompt-gamma neutron activation analysis (PGNAA), electron microscopy, and 3D CT.

Southern Innovation's SITORO technology dramatically enhances performance of materials analysis technology by quickly and accurately processing signal pulses received by detectors, overcoming many of the limitations of traditional techniques.



More Information + Faster + More Accurate

SITORO not only improves existing materials analysis technologies, but also offers a host of new and innovative applications as a result of enhanced performance. SITORO will drive transformative changes in exploration, mining, processing and metallurgical accounting.

In-flow Slurry and Powder Analysis

SITORO delivers continuous, real-time, and accurate slurry and powder analysis, using XRF to detect light elements, elements in low concentrations, and those with similar energy signals (such as silicon and aluminium). SITORO can be integrated in XRF units either on drill rigs or in processing plants.

SITORO optimises each stage of operations

Downhole Logging

SITORO supercharges existing PGNAA downhole logging for both exploration and production drilling with unprecedented speed, resolution and sensitivity.

Bulk Material Analysis & Ore Sorting

SITORO is capable of integrating with XRF, XRT and PGNAA to provide faster and more accurate analysis of bulk material flows, such as on conveyors or other transport mechanisms prior to crushing and processing. In addition to improving existing systems, Southern Innovation's novel multi-energy XRT technique offers cutting-edge material discrimination capability by characterising both density and effective atomic number, providing elemental and mineralogical information.

Future Technologies

SITORO also enables enhanced analysis of whole rocks for improved design of comminution and processing circuits, faster and more comprehensive drill core scanning, and next-generation lab and field-based XRF analysis. Research and development could deliver highly sophisticated whole rock analysis techniques with new methods combining XRF and 3D X-ray microscopy, which would provide unprecedented understanding of surface topology, grain and vein distribution, cracking behaviour and other critical characteristics.

Contact: Laura Grundy | Operations Manager | laura.grundy@southerninnovation.com | +61 3 9387 0338