FCT ACTech

THE POWER OF TOTAL PROCESS CONTROL

Introducing the superlative X-Series **CMXβ** Continuous Dual XRD and EdXRF Mineral and Elemental Analyzer

INCORPORATED SAMPLE PREPARATION ROBOTICS

OVER 500 TIMES MORE MATERIAL ANALYZED PER HOUR. ULTRA HIGH ACCURACY AND REPEATABILITY

ACCURATE ELEMENTAL AND MINERALOGICAL ANALYSIS FOR ULTIMATE PROCESS CONTROL

PROCESS PERFORMANCE MONITORING WITH THE POWER OF DUAL ELEMENTAL & MINERALOGICAL ANALYSIS

Maximize recovery, increase production and optimize environmental control with the ultimate analysis tool: the X-Series CMX$_\beta$ Continuous Dual XRD and EdXRF Mineral and Elemental Analyzer.

Be in command with the CMX$_\beta$ Total Process Control Machine.
Analyze. Trend. Adjust. Repeat.
Trust the output. Predict the future.

Designed to provide continuous, real time information on all major minerals of interest as well as full spectrum elemental analysis for total quality and process control.

The CMX$_\beta$ provides a direct means of monitoring the mineralogical and crystalline components as well as complete chemical composition of dry powder materials, continuously, in real time - making it the ultimate process control tool for the mining and mineral processing industries.

CMX$_\beta$ uses an array of state-of-the-art, proprietary Nova SxD silicon strip detectors, specifically developed by FCT ACTech to enable the system to operate in a fixed-geometry pattern, replacing the need for a moving genometer.

Apart from the XRD module, CMX$_\beta$ comes equipped wih a unique MD-Optics EdXRF system to provide continuous elemental analysis information that correlates and corrects any mineralogical information provided by the instrument.

The EdXRF module uses a state-of-the-art SDD detector for improved performance and accuracy. The detector is able to measure different energies of the characteristic radiation coming directly from the continuous sample, then separates (dispersion) the radiation from the sample into the radiation from the elements in the analyzed sample. Results are time-averaged from the analyzed stream.

The CMX$_\beta$ EdXRF MD Optics has a very low background to the analyzed spectrum, making it possible to detect very weak peaks and therefore determine lower concentrations with high accuracy.

Seamlessly integrates sample preparation robotics, ultra fast detection and analysis into one accurate, automated unit.

Features & Benefits

- Ultra fast, continuous real time on-stream or "fast batch" analyzer delivers complete real time mineralogial results of target minerals as well as complete elemental analysis
- Intuitive and easy to use
- State-of-the-art EdXRF based analytical module combined wth a unique patented sample delivery system for continuous and accurate elemental analysis of the entire sample stream
- Array of proprietary state-of-the-art, high resolution solid state detectors (application specific), displayed in a fixed pattern to detect minerals of interest for accurate, high-speed XRD mineral analysis without the need for moving goniometers
- In-built, automatic precision robotics replaces the need for a separate pulveriser and pellet press
- Large processed sample quality 150g/min (¼lb) generates results that are far more representative of the process than any other available methods
- Proprietary high resolution SSD & SDD detectors for accurate high speed XRD and XRF analysis
- Ultra fast analysis analyzes the complete material chemistry and composition providing 20 complete elemental and mineralogical updates every hour
- Designed for remote unattended operation, 24/7/365
- Unique patented sample delivery system delivers outstanding accuracy and repeatability
- Self referencing internal calibration minimises drift and increases accuracy
- Highly efficient x-ray system decreases power consumption and heat generation
- Industrial grade HD touchscreen computer interface for easy operation, diagnostics and control
- Integrated Modbus over ethernet protocol for fast and easy data transfer
- Modular system allows for multiple batch analysis or at-line configurations
- Sophisticated dual x-ray diffraction and fluorescence technology offers highly accurate results, avoiding the hazards and costs associated with radioisotopes and licensing requirements for other online analysis instruments
- Rapid analysis with continuous trending and control compared to any conventional sampling and laboratory testing
- Powered by ClassX proprietary software incorporating smart GUI, Rietveld and XRF quantitative analysis, fundamental parameters, diagnostics and control
- TCS: Total Compensation System embedded with ClassX software correlates and corrects both XRD and XRF outputs for unsurpassed levels of accuracy and repeatability

CMX$_\beta$ Specifications

Dimensions
1200 x 900 x 750mm (47 x 35 x 30 inches)

Weight
180kg (400lb)

Electrical specifications
110/240 VAC 50 or 60Hz, 900W, 1 Phase

- Optional HE DRX in line drier system (for slurry applictions)

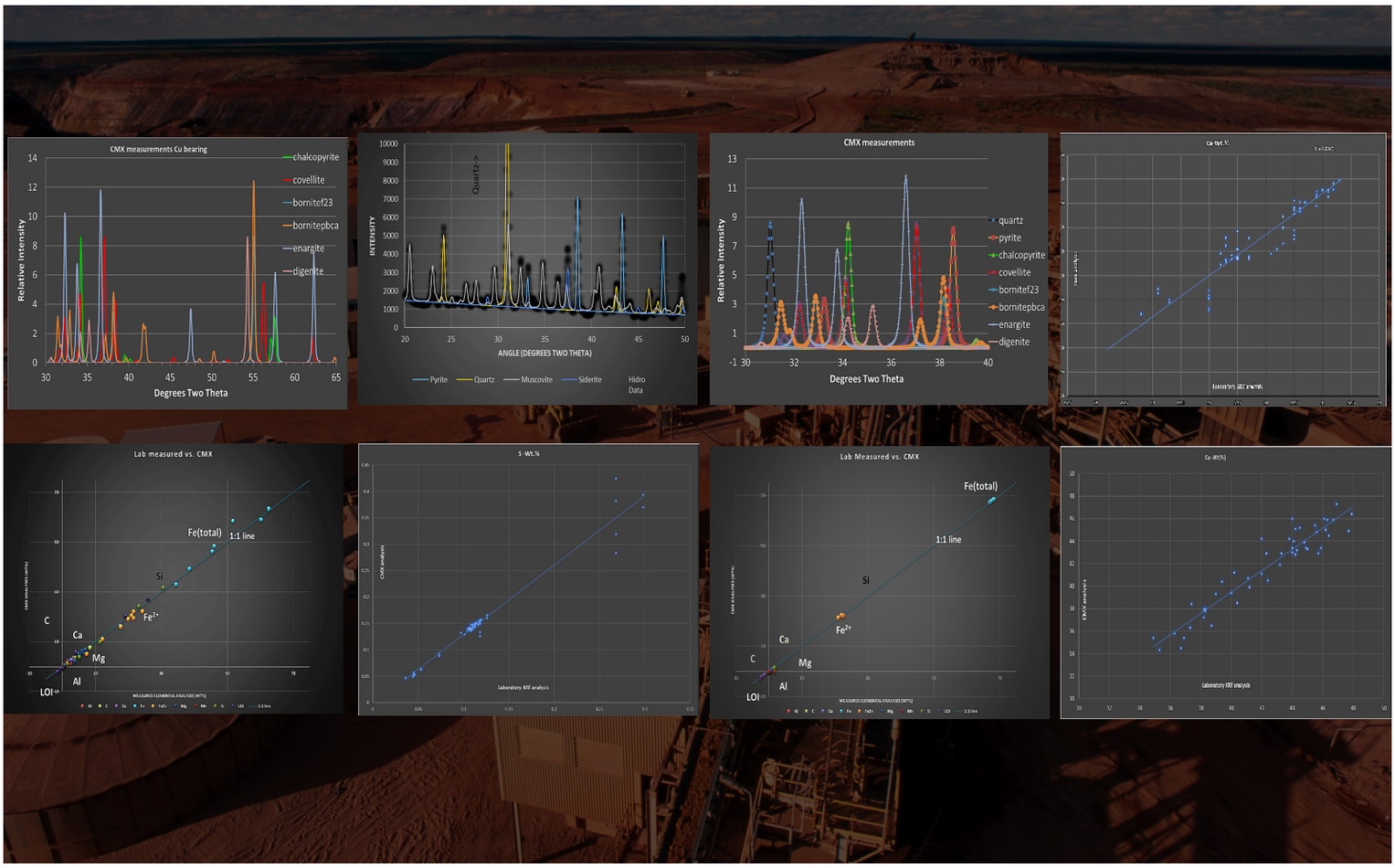
Why FCT ACTech?

For 20 years, FCT ACTech has been in the business of engineering tools for better process control. We design and manufacture the instrumentation that we know would make profound improvements to the operations of mineral processing plants.

With our new X-series online and fast batch analyzers, we have introduced advanced levels of precision and accuracy to process, recovery and control matching or bettering any classic standard "laboratory" instrument.

The CMX$_\beta$ is the most advanced analyzer in the X family of products, incorporating dual XRD and XRF technologies, total compensation control software and sample preparation robotics, to deliver unparalleled levels of accuracy and repeatability for major minerals of interest as well as all elements for optimal process control.

When you purchase an FCT ACTech product, you get local support backed by a global network of professionals with intimate industry knowledge.



AUSTRALIA (Asia Pacific)
T: +61 (8) 8352 9948
E: ACTech@fctinternational.com

USA (North & South America)
T: +1 (858) 333 5615
E: ACTech_US@fctinternational.com

EUROPE (Middle East)
T: +43 664 39 20 330
E: ACTech_ALL@fctinternational.com

www.fctactech.com