System Enhancements, Retrofits and Refurbishment

GN Technology Retrofit for the Gamma-Metrics CBA

Base Technology Retrofit

What is the Base Technology Retrofit

This retrofit replaces everything except for the analyzer's shield blocks.

Steps to Retrofit

The technology retrofit of your Gamma-Metrics CBA can be implemented in one single step by replacing all hardware and software at once. Or, it can be implemented in two successive steps by first retrofitting the computing hardware and software, and then retrofitting the detection subsystem and supporting electronics.

All Gamma-Metrics CBA analyzers can be retrofitted to the GN technology. However, due to the customization of some systems, a Site Application Review may be required before an order is accepted.

For more information, please reference the *Start-up Services and Inspection for Cement Systems and Applications* specification sheet, as well as the *Site Application Review*, *System Start-up and System Commissioning Services* specification sheets.

Deliverables

- Two heated detectors
- One information processing module (IPM), including two DSP cards and a spectra acquisition computer
- One smart material controller computer with Windows® 2000 operating system, base analyzer software, and Object Linking and Embedding for Process Control based communication hardware and software
- One umbilical cord
- One set of tube-based reference standards
- One application-specific process control software package (Mound Tracking, RAMOS, PREBOS, etc.)

Main Advantages

- No liquid-based detectors temperature control circuit
- No need for air conditioning of electronics
- No analog electronics
- Reduced number of parts and no third party software
- Increased robustness of dynamic analytical performance through implementation of the Multi Variable Independent Analysis (MVIA) calibration technique
- Potential reduction in required amount of radiation sources
- Easier adaptation and configuration of OPC-based communication links
- Easier-to-use process control software
- Improved control performance

The Gamma-Metrics GN Technology Retrofit is the best alternative to buying an entire new system.

Deliverable Options

Top Center Block

The Top Center Block (TCB) is where the main detectors sit. A newly designed TCB allows for the installation of horizontally positioned detectors. The installation of horizontal detectors can decrease the required amount of radiation sources and ensure a higher level of protection against direct material hitting the detectors. It may also allow a higher loading of the belt with a consequent increase of up to 20% in production rate.

Moisture Meter

When retrofitting a Gamma-Metrics CBA analyzer, the existing electronics and cabling between the shield blocks and the IPM are completely replaced. The measurement of moisture will require the installation of a new moisture (He3) detector.

Remote SMC Workstation

A remote workstation is available for any application and any type of communication link between the main SMC and the remote SMC workstations.

Credit Options

Salvage Rights

A credit against the right of dispose of any of the replaced parts is considered with all quotations.

Refurbished Detectors

Instead of purchasing new detectors, refurbished detectors of equal performance and warranty can be delivered. A credit is applied to the quotation.

On-Site Retrofit Implementation

The on-site implementation of the Gamma-Metrics GN Technology Retrofit will require the Gamma-Metrics CBA belt to be stopped and secured; no production can be allowed. The typical on-site implementation is finalized within 3 to 7 working days.

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