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Introduction of a new XRF measurement concept called HRTC

HRTC XRF™ stands for high-resolution real time continuous X-ray fluorescence.

The availability of highly efficient, compact, solid-state energy dispersive XRF detectors opened the opportunity to build on-line x-ray systems, where the sample is presented on a continuous moving support plate to the x-ray beam and simultaneously the relevant x-ray response signal is collected.

The compact design of the beam path completes the set-up for high obtainable count rates.

This methodology combines the ultrafast data collection with outstanding particle statistic information, in a unique setup for real time, high quality material characterization and high quality count rates in respect of the overall flux and energy discrimination. The obtained data is the perfect input for successful quality and process control, where the chemical composition of the material stream is essential.

Based on the combination of our protected unique sample handling and presentation system in combination with the HRTC XRF technique we can offer an analyzer with very high measurement precision resulting from the fact that intensities are detected from many more particles than other (pressed pellet type) analysers, and thereby obtain the best possible information about the chemistry of the material streams.

The realized global spread of installed machines indicates a huge potential for building materials and minerals applications. The usage of such technology opens not only the opportunity to produce in a highly efficient and consistent manner, but it generates the possibility to implement building blocks for a circular economy-based production. The detailed real time knowledge of the material streams increases the yield of the primary products as the utilization rate of secondary by-products can be increased in one analytical measurement step.

In cases where the elemental information is not sufficient there is an optional phase analysis extension. One sample handling and presentation system can be used for XRF and XRD analysis simultaneously.

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