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Powder X-ray Di raction

using the same integrated di raction system. e combination of XRF and XRD in the same instrument can provide complete quality control of clinker and cement [6-21].

Conclusion

XRD power di raction analysis serves as key tool for material characterization. Phase analysis by XRD opens enormous possibilities for process and quality control in the cement industry, especially for blended cements. Moreover, the development of fast X-ray detectors allows for fast quantitative XRD analysis and truly interactive process control. e Rietveld method allows precise and reproducible quantitative analysis of all types of blended cements and can be performed in an automated, stable and accurate way. Using an external standard or HKL t the determination of the amorphous content can be carried out directly on the cement sample. e resulting output includes the quantitative analysis of the crystalline and amorphous phases as well as the total amount of added cementitious material. Today the Rietveld method is being applied in many cement plants worldwide as the standard method for quantitative phase analyses of all types of blended cements.

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