

A microwave system for moisture monitoring in wet powders for industrial applications

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A microwave resonant sensor for moisture monitoring in wet powders has been designed, fabricated and tested. The moisture content is evaluated by measuring the resonant frequency by means of inexpensive electronic circuitry capable of producing 800 frequency samples in less than 1 s. An accuracy better than 0.5% in wet sand has been demonstrated. The probe calibration procedure consists of just 3 resonant frequency measurements, allowing in situ calibrations for different types of powders.

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