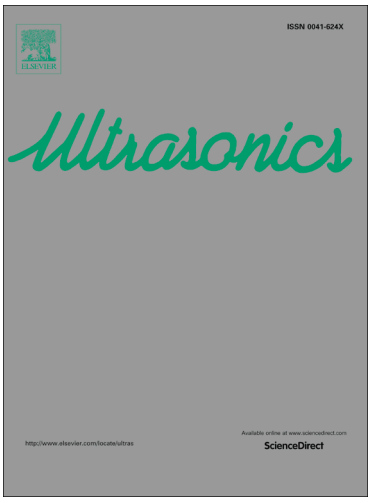

Attenuation measurements with ultrasonic diffraction grating show dependence upon particle size of slurry and viscosity of base liquid

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Attenuation measurements with ultrasonic diffraction grating show dependence upon particle size of slurry and viscosity of base liquid

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Highlights for article "Attenuation measurements with ultrasonic diffraction grating show dependence upon particle size of slurry and viscosity of base liquid"

Highlights

- Grooved surface of grating unit is in contract with slurry and transducers at rear
- Measures the attenuation and velocity of sound by observing a peak in receiver data
- Can measure very large attenuations with one-sided unit
- Attenuation measurements show differences for different particle sizes
- Attenuation measurements with sugar water are different from those for water

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Abstract: How can using an ultrasonic diffraction grating lead to slurry characterization? The diffraction grating, which is formed by machining triangular grooves on the flat surface of an aluminum unit, has send and receive transducers fastened to the unit at an angle of 30°. The ultrasonic beam strikes the back of the grating, in contact with the slurry, and reflects a beam to