Abstracts

Dielectric Property Measurements of Materials Using the Cavity Technique (Short Papers)

A. Baysar and J.L. Kuester. "Dielectric Property Measurements of Materials Using the Cavity Technique (Short Papers)." 1992 Transactions on Microwave Theory and Techniques 40.11 (Nov. 1992 [T-MTT]): 2108-2110.

A cavity technique based on frequency shift was used to measure dielectric properties (dielectric constant and loss factor) of some particulate materials as a function of temperature. The materials studied were alumina, cobalt/alumina, dolomite and sand. The properties were measured at various points between room temperature and 610° C in the frequency range of 925-995 MHz. The dielectric constant and loss factor of all samples, except the cobalt/alumina catalyst sample, were approximately constant with temperature. The dielectric constant and loss factor of the cobalt/alumina sample exhibited a noticeable increase with temperature.

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