Abstracts

New Density-Independent Moisture Measurement Methods Using Frequency-Swept Microwave Transmission

F. Menke and R. Knochel. "New Density-Independent Moisture Measurement Methods Using Frequency-Swept Microwave Transmission." 1996 MTT-S International Microwave Symposium Digest 96.3 (1996 Vol. III [MWSYM]): 1415-1418.

This paper presents density independent moisture measurement procedures using frequency-swept microwaves. By proper processing changes of attenuation and phase of a transmitted signal versus frequency, calibration curves can be easily generated on-site, without any need of varying density or layer thickness of moist material under test. It is shown, that the new measurement methods are usable up to very high moisture contents of more then 40%, in contrast to previous methods, which are only usable below approximately 25%.

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