Abstracts

Dual-Mode Stripline Resonator Array for Fast Error Compensated Moisture Mapping of Paper Web

M. Fischer, P. Vainikainen and E. Nyfors. "Dual-Mode Stripline Resonator Array for Fast Error Compensated Moisture Mapping of Paper Web." 1990 MTT-S International Microwave Symposium Digest 90.3 (1990 Vol. III [MWSYM]): 1133-1136.

A mechanically simple and therefore inexpensive sensor array for fast mapping of the water content of wet paper has been developed. The sensors are UHF strip-line resonators, which have two degenerate resonance modes, even and odd. By using the difference of these two frequencies a high accuracy can be achieved, because the resonance frequency of the odd mode is not affected by moisture changes in the wet paper, and can therefore be used for error compensation. Because of the electronic scanning the measurement is very fast and it makes almost real-time water content profiling possible.

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