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(54) Title: CAPACITIVE MEASURING SYSTEM

(57) Abstract

A capacitive sensor includes a tubular outer conductor, a tubular inner conductor coaxial with the outer conductor, and an electrically insulated chamber between the inner and outer conductors. The material sample to be measured is introduced into the chamber. The sensor is shielded against electric fields to maximize measurement accuracy. The shielding completely encloses the chamber during operation and may include a removable cap, a valve, or a screen made of a conductive material. A measurement circuit connected to the sensor includes a reference oscillator that oscillates at a constant frequency and a test oscillator that oscillates at a frequency determined by the sensor capacitance. A circuit displays a value representing the sensor capacitance in response to the frequency difference between the test oscillator frequency and the reference oscillator frequency.

