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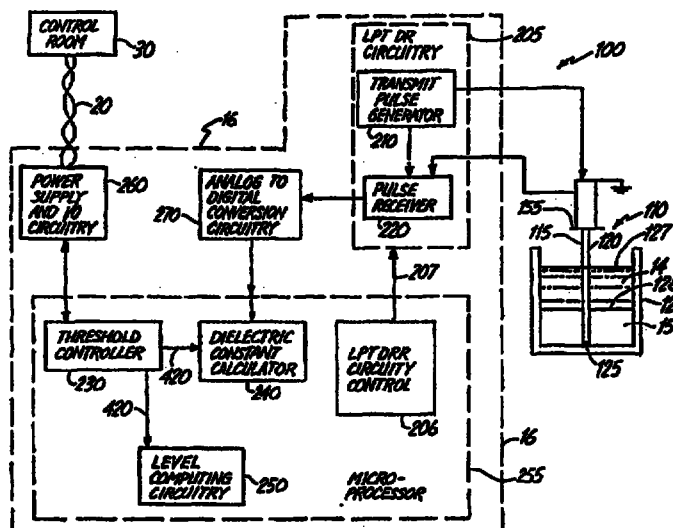
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(54) Title: MEASUREMENT OF PROCESS PRODUCT DIELECTRIC CONSTANT USING A LOW POWER RADAR LEVEL TRANSMITTER



(57) Abstract

Disclosed is a method of using a low power radar level transmitter to calculate a dielectric constant of a product in a tank. Low Power Time Domain Reflectometry Radar (LPTDRR) circuitry is controlled to calculate a time delay between transmission of microwave energy down a termination (110) extending into the product (26) in the tank and reflection of the microwave energy. In some embodiments, the dielectric constant of the product is calculated as a function of the time delay. In other embodiments, the dielectric constant is calculated by controlling the LPTDRR circuitry to calculate amplitudes of transmit and receive pulses. The dielectric of the product is calculated as a function of the amplitudes of the transmit and receive pulses.