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(54) Title: MULTIPLE PROCESS PRODUCT INTERFACE DETECTION FOR A LOW POWER RADAR LEVEL TRANSMITTER

(57) Abstract

Disclosed is a low power time domain reflectometry radar (LPTDRR) level transmitter (100) for calculating levels of first and second products (14, 15) in a tank (12). A termination (110) extends into the first and second products (14, 15) in the tank. A pulse generator (210) transmits a pulse along the termination (110) into the first and second products (14, 15). A pulse receiver (220) receives first and second reflected wave pulses corresponding to reflection of a first portion of the transmit pulse at a first product interface (127) and reflection of a second portion of the transmit pulse at a second product interface (128), respectively. A threshold controller (230) generates a first threshold for detection of the first reflected wave pulse and a second threshold for detection of the second reflected wave pulse. A dielectric constant calculator (240) determines a dielectric constant of the first product (14) as a function of the first reflected wave pulse. A level computer (250) calculates levels of the first and second products (14, 15).

