

Title (en)  
FILLING LEVEL MEASURING DEVICE OPERATING WITH MICROWAVES

Title (de)  
MIT MIKROWELLEN ARBEITENDES FÜLLSTANDSMESSGERÄT

Title (fr)  
APPAREIL DE MESURE DE NIVEAU FONCTIONNANT À MICRO-ONDES

Publication  
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Application  
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Abstract (en)  
[origin: WO2010040580A1] The invention relates to a filling level measuring device operating with microwaves according to the propagation time principle for measuring the filling level of filling materials (5) in containers (3), with which microwave signals (SM, SN, SL) can be sent into the container (3) on several different signal paths and the associated echo signals (EM, EN, EL) of said microwave signals can be recorded and the measurement results obtained on the different signal paths can be evaluated separately from each other, having measuring device electronics (7), having a microwave generator (9) for successively generating microwave signals (SM, SN, SL) having different usable frequencies (fm, fn, fl), and having a frequency-selective passive antenna arrangement (11a, 11b, 11c, 11d, 11e) which is connected thereto and which comprises several antennas, which are used to send the different microwave signals (SM, SN, SL) into the container (3) consecutively, and to receive the echo signals (EM, EN, EL) thereof reflected back to the antenna arrangement (11a, 11b, 11c, 11d, 11e), which comprises several frequency selective elements (FM, FN, FL), particularly band-pass filters, through which one of the different usable frequencies (fm, fn, fl) can pass in each case, in which a uniquely associated signal path is specified for each of the different microwave signals (SM, SN, SL) and the echo signal (EM, EN, EL) thereof through the antennas and the frequency-selective elements (FM, FN, FL), said microwave signal being sent into the container (3) through said uniquely associated signal path and the echo signal (EM, EN, EL) thereof reflected back to the antenna arrangement being received and fed to the measuring device electronics (7) through said uniquely associated signal path, and a device (21) provided in the measuring device electronics (7) which associates the consecutively incoming echo signals (EM, EN) to the associated signal path.

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