Title (en)

TESTING DEVICE FOR DETERMINING A DIELECTRIC VALUE

Title (de)

MESSGERÄT ZUR BESTIMMUNG EINES DIELEKTRIZITÄTSWERTES

Title (fr)

APPAREIL DE MESURE POUR DÉTERMINER UNE CONSTANTE DIÉLECTRIQUE

Publication

EP 3914904 A1 20211201 (DE)

Application

EP 19829425 A 20191210

Priority

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Abstract (en)

[origin: WO2020151869A1] The invention relates to a testing device for determining a dielectric value (DK) of a filled material (3) and to a method for operating same. The concept underlying the invention is based on transmitting a high-frequency signal (SHF) in the form of a radar signal (SHF) using a transmitter antenna (112) towards the filling material (3), and on receiving the radar signal (SHF) using a receiver antenna (121) after said signal has passed through the filling material (3). A phase detector (122) of the receiver unit (12) of the testing device (1) generates a first evaluation signal (sreal) which changes proportionally to a phase difference between the received radar signal (SHF) and the generated high-frequency signal (SHF). An evaluation circuit (123) of the receiver unit (12) determines at least one real part (ReDK) of the dielectric value (DK) on the basis of the first evaluation signal (sreal). This method for determining the dielectric value is advantageous in that the testing device (1) can be used on the container (2) without having to be calibrated thereon.

IPC 8 full level

G01N 22/00 (2006.01)

CPC (source: EP US)

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Citation (search report)

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