Title (en)
MEASURING A FILL LEVEL USING A MACHINE LEARNING ALGORITHM

Title (de)
FÜLLSTANDMESSUNG MIT EINEM MASCHINELLEN LERN-ALGORITHMUS

Title (fr)
MESURE D'UN NIVEAU DE REMPLISSAGE À L'AIDE D'UN ALGORITHME D'APPRENTISSAGE AUTOMATIQUE

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Abstract (en)
[origin: WO2022263099A1] The invention relates to a measuring system and a corresponding measuring method for reliably determining the fill level (L) of a filler (2) in a container (3). For this purpose, the measuring system comprises a radar-based measuring device (1) comprising a transmission unit (11), by means of which high-frequency signals (SHF) can be transmitted towards the filler (2) and can be received as received signals (RHF) after being reflected on the filler surface; a signal generating unit which generates the high-frequency signal (SHF) to be transmitted; and a receiving unit which records the received signal (RHF). According to the invention, a machine learning algorithm (MLA) is designed to be able to detect the fill level (L) using the received signal (RHF) in an analysis unit (4). In this manner, the invention solves the problem of the fill level surface not necessarily being assigned to the correct signal maximum of the received signal (RHF), as is required in the prior art in order to detect the fill level. In fact, mainly received signals (RHF) which have been recorded under complex measuring conditions, such as interference or multiple reflections for example, can be substantially reliably interpreted using the machine learning algorithm (MLA).

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