Title (en)

METHOD FOR DETECTING AND CLASSIFYING ELECTROMAGNETICALLY DETECTABLE OBJECTS IN A BULK STREAM

Title (de)

VERFAHREN ZUM ERKENNEN UND KLASSIFIZIEREN VON ELEKTROMAGNETISCH DETEKTIERBAREN TEILEN, INSBESONDERE VON FÖRDERGUTTEILEN IN EINEM SCHÜTTGUT

Title (fr)

PROCÉDÉ DE TRI ET DE CLASSEMENT DES OBJETS DÉTECTABLES PAR AIMANT ELÉCTRIQUE DANS UN COURANT EN VRAC

Publication

**EP 2938443 B1 20171115 (DE)**

Application

**EP 13827001 A 20131227**

Priority

- DE 102012025209 A 20121228
- EP 2013003920 W 20131227

Abstract (en)

[origin: WO2014102011A1] The invention relates to a method for identifying and classifying electromagnetically detectable parts, in particular conveyed material parts contained in bulk material, said method comprising the steps: preparing a stream (13) of bulk material (15,15',15",16,16',16"); conveying the stream (13) of bulk material past a sensor assembly (14) and through the sensor range of the sensor assembly (14), said sensor assembly (14) having at least one electromagnetic sensor which has at least one field coil (102) for emitting an electromagnetic excitation field and at least one detector coil (104); supplying the field coil (102) with a time-dependent excitation current; measuring a time-dependent electric signal induced in the detector coil (104); evaluating the signal in order to determine the electromagnetic characteristics of one section of the stream (13) of bulk material which is in the sensor range of the sensor assembly (14). The method is characterised in that the excitation current is generated by the superposition of multiple sinusoidal curves of different frequencies, the respective frequencies of the multiple sinusoidal curves being in particular integral multiples of a common fundamental frequency.

IPC 8 full level

**B07C 5/344** (2006.01)

CPC (source: EP)

**B07C 5/344** (2013.01)

Citation (examination)

US 5654638 A 19970805 - SHOEMAKER DONALD K [US]

Designated contracting state (EPC)

AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

DOCDB simple family (publication)

**WO 2014102011 A1 20140703**; EP 2938443 A1 20151104; EP 2938443 B1 20171115

DOCDB simple family (application)

**EP 2013003920 W 20131227**; EP 13827001 A 20131227