Title (en)
METHOD FOR CALIBRATING OR ADJUSTING ANY OSCILLATABLE UNIT

Title (de)
VERFAHREN ZUR KALIBRATION ODER ZUM ABGLEICH EINER SCHWINGFÄHIGEN EINHEIT

Title (fr)
PROCÉDÉ SERVANT À ÉTALONNER OU À RÉGLER UNE UNITÉ SUSCEPTIBLE DE VIBRER

Publication
EP 3008432 A1 20160420 (DE)

Application
EP 14726927 A 20140519

Priority
- DE 102013106172 A 20130613
- EP 2014060190 W 20140519

Abstract (en)
[origin: WO2014198493A1] The invention relates to a method for calibrating or for adjusting any oscillatable unit by means of a mathematical model (model) which describes the oscillatable unit, wherein the oscillatable unit interacts at least intermittently with a medium located in a container. According to the invention the oscillatable unit is stimulated to oscillation by means of a real input signal; the real output signal of the oscillatable unit is ascertained; the real output signal is digitised and a real output sequence (yu(k)) is generated; the real input signal is digitised and a digital input sequence (u(k)) is generated; the digital input sequence (u(k)) is supplied to a function block (model) which in interaction with the medium provides the mathematical model (model) of the oscillatable unit defined by at least two sensor-specific variables (G1, G2); a virtual output sequence (ym(k)) is generated by means of the mathematical model (model); the virtual output sequence (ym(k)) is compared to the real output sequence (yu(k)); in the event of a deviation (e(k)) the sensor-specific variables (G1, G2) of the mathematical model (model) are adaptively modified, until the deviation between the virtual output sequence (ym(k)) and the real output sequence (yu(k)) of the oscillatable unit lies within a predetermined tolerance range.

IPC 8 full level
G01F 23/296 (2006.01); **G01F 25/00** (2006.01); **G01N 9/00** (2006.01); **G01N 11/16** (2006.01)

CPC (source: EP US)
G01F 23/2966 (2013.01 - EP US); **G01F 25/20** (2022.01 - EP US); **G01H 3/005** (2013.01 - US); **G01N 9/00** (2013.01 - US); **G01N 11/16** (2013.01 - US); G01N 9/002 (2013.01 - EP US); G01N 2011/0006 (2013.01 - EP US)

Citation (search report)
See references of WO 2014198493A1

Citation (examination)
- US 2012239301 A1 20120920 - KISCHKAT TOBIAS [DE]
- WO 2004036191 A1 20040429 - SYMYX TECHNOLOGIES INC [US], et al

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

Designated extension state (EPC)
BA ME

DOCDB simple family (publication)
DE 102013106172 A1 20141218; CN 105324647 A 20160210; CN 105324647 B 20190628; EP 3008432 A1 20160420; US 10078005 B2 20180918; US 2016138964 A1 20160519; WO 2014198493 A1 20141218

DOCDB simple family (application)
DE 102013106172 A 20130613; CN 201480032565 A 20140519; EP 14726927 A 20140519; EP 2014060190 W 20140519; US 201414896937 A 20140519