Title (en)

METHOD AND MIXING DEVICE FOR CONTROLLING THE INTRODUCTION OF A PULVERULENT MATERIAL INTO A LIQUID FOR AN INLINE MIXING METHOD

Title (de)

VERFAHREN UND MISCHVORRICHTUNG ZUR STEUERUNG DER EINBRINGUNG EINES PULVERFÖRMIGEN STOFFES IN EINE FLÜSSIGKEIT FÜR EIN INLINE-MISCHVERFAHREN

Title (fr)

PROCÉDÉ ET DISPOSITIF DE MÉLANGE POUR LA RÉGULATION DE L'INTRODUCTION D'UNE SUBSTANCE SOUS FORME DE POUDRE DANS UN LIQUIDE POUR UN PROCÉDÉ DE MÉLANGE EN LIGNE

Publication

EP 3638411 A1 20200422 (DE)

Application

EP 18718687 A 20180403

Priority

- DE 102017005573 A 20170613
- DE 102017005574 A 20170613
- EP 2018000148 W 20180403

Abstract (en)

[origin: WO2018228714A1] The invention relates to a method for controlling the introduction of a pulverulent material (P) into a liquid (F) consisting of at least one component for an inline mixing method according to the preamble of claim 1 or the preamble of sub-claim 2 and to a mixing device for carrying out the method, said method and mixing device ensuring that the disadvantages of the prior art which have become known are prevented. This is achieved by a first method in that, among others, • the pulverulent material (P) is supplied in a discontinuous manner in pulses by means of a chronological sequence of metering pulses (i), each of which is characterized by a mass flow of the pulverulent material (ṁP), a duration of the metering pulse (Δt1), and a time interval between adjacent metering pulses (Δt2), • a time-dependent power consumption (I(t)) is ascertained which is proportional to a stirring and/or shearing and homogenizing power required for a temporarily available mixing product (M*), and • at the end of the time interval between adjacent metering pulses (Δt2) and in the event of a deviation of the time-dependent power consumption (I(t)) from the reference power consumption (Io) by more than a specified tolerance, either upwards or downwards, the duration of the metering pulse (Δt1) for the following metering pulse (i) is shortened in the first case and lengthened in the second case while maintaining the ratio (V = Δt1/Δt2).

IPC 8 full level

B01F 5/10 (2006.01)

CPC (source: EP)

B01F 23/51 (2022.01); **B01F 23/53** (2022.01); **B01F 23/59** (2022.01); **B01F 25/50** (2022.01); **B01F 27/2321** (2022.01); **B01F 27/61** (2022.01); **B01F 27/90** (2022.01); **B01F 35/212** (2022.01); **B01F 35/2209** (2022.01); **B01F 35/22162** (2022.01); **B01F 35/71755** (2022.01)

Citation (search report)

See references of WO 2018228714A1

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)

WO 2018228714 A1 20181220; AU 2018285004 A1 20191212; AU 2018285004 B2 20201112; AU 2018285478 A1 20191121; AU 2018285478 B2 20201210; DK 3638409 T3 20211101; DK 3638411 T3 20211101; EP 3638409 A1 20200422; EP 3638409 B1 20210804; EP 3638411 A1 20200422; EP 3638411 B1 20210804; JP 2020523188 A 20200806; JP 6952802 B2 20211020; NZ 758627 A 20201030; NZ 759145 A 20201127; PL 3638409 T3 20220131; PL 3638411 T3 20220131; WO 2018228713 A1 20181220

DOCDB simple family (application)

EP 2018000148 W 20180403; AU 2018285004 A 20180403; AU 2018285478 A 20180403; DK 18718686 T 20180403; DK 18718687 T 20180403; EP 18718686 A 20180403; EP 18718687 A 20180403; EP 2018000147 W 20180403; JP 2019566814 A 20180403; NZ 75862718 A 20180403; NZ 75914518 A 20180403; PL 18718686 T 20180403; PL 18718687 T 20180403