

Title (en)

METHOD FOR EMPTYING A DEVICE FOR PROVIDING A LIQUID ADDITIVE

Title (de)

VERFAHREN ZUR ENTLERUNG EINER VORRICHTUNG ZUR BEREITSTELLUNG EINES FLÜSSIGEN ADDITIVS

Title (fr)

PROCÉDÉ POUR VIDER UN DISPOSITIF SERVANT À FOURNIR UN ADDITIF LIQUIDE

Publication

**EP 2929154 A1 20151014 (DE)**

Application

**EP 13792665 A 20131115**

Priority

- DE 102012111917 A 20121207
- EP 2013073974 W 20131115

Abstract (en)

[origin: WO2014086572A1] The invention relates to a method for operating a device (1) for providing a liquid additive, comprising a conveying route (2) along which the liquid additive is conveyed, wherein the conveying route (2) comprises at least one first section (3), in which a peristaltic pump (24), in particular comprising a reversible conveying unit (5) is arranged, which unit can be damaged by deposits discharged from the liquid additive and the conveying route (2) furthermore comprises at least one second section (26), in which a freeze-sensitive component (25) is arranged. According to the invention at first liquid additive is conveyed along the conveying route (2) of the device. Subsequently, the conveying of liquid additive is stopped. The conveying route (2) is then partially emptied, wherein in the at least one section (3) of the conveying route (2) liquid additive remains, while the at least one second section (26) is emptied.

IPC 8 full level

**F01N 3/20** (2006.01)

CPC (source: EP US)

**F01N 3/2066** (2013.01 - EP US); **F01N 3/208** (2013.01 - US); **F04B 43/0081** (2013.01 - US); **F04B 43/12** (2013.01 - US); **F04B 49/106** (2013.01 - US); **F04B 53/04** (2013.01 - US); **F01N 2610/01** (2013.01 - EP US); **F01N 2610/02** (2013.01 - EP US); **F01N 2610/1433** (2013.01 - EP US); **F01N 2610/1486** (2013.01 - EP US); **Y02T 10/12** (2013.01 - EP US)

Citation (search report)

See references of WO 2014086572A1

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 2014086572 A1 20140612**; CN 104968907 A 20151007; CN 104968907 B 20190319; DE 102012111917 A1 20140612; EP 2929154 A1 20151014; JP 2016500412 A 20160112; KR 20150103023 A 20150909; US 10240595 B2 20190326; US 2015308427 A1 20151029

DOCDB simple family (application)

**EP 2013073974 W 20131115**; CN 201380072422 A 20131115; DE 102012111917 A 20121207; EP 13792665 A 20131115; JP 2015545727 A 20131115; KR 20157017636 A 20131115; US 201314650400 A 20131115