

Title (en)

CONTROL ARRANGEMENT AND METHOD FOR CONTROLLING A SENSORLESS MEMBRANE PUMP

Title (de)

STEUERUNGSANORDNUNG UND VERFAHREN ZUR STEUERUNG EINER SENSORFREIEN MEMBRANPUMPE

Title (fr)

DISPOSITIF DE COMMANDE ET PROCÉDÉ DE COMMANDE D'UNE POMPE À MEMBRANE EXEMPTÉ DE CAPTEURS

Publication

**EP 3997339 A1 20220518 (DE)**

Application

**EP 20731145 A 20200612**

Priority

- LU 101302 A 20190712
- EP 2020066354 W 20200612

Abstract (en)

[origin: WO2021008788A1] The invention relates to a control arrangement (13) for controlling a sensorless membrane pump (14). The invention furthermore relates to a method for controlling a sensorless membrane pump. The control arrangement (13) comprises a control fluid inlet (1) for connecting to a first control fluid reservoir (1A) having a pressure level which is higher than a reference pressure, a control fluid outlet (2) for connecting to a second control fluid reservoir (2A) having a pressure level which is lower than a reference pressure, a control fluid connection (8) for connecting a control fluid line for the sensorless membrane pump (14), wherein the control fluid inlet (1) is connected to a collection point (6) via a first proportional valve (3) and the control fluid outlet (2) is connected to the collection point (6) via a second proportional valve (4), wherein a mass flow sensor (5) is arranged between the collection point (6) and the control fluid connection (8), and wherein the control arrangement (13) furthermore comprises a control unit (12), which is connected for signal transmission to the first proportional valve (3), the second proportional valve (4) and the mass flow sensor (5).

IPC 8 full level

**F04B 43/00** (2006.01); **F04B 43/02** (2006.01); **F04B 43/06** (2006.01); **F04B 43/067** (2006.01); **F04B 43/073** (2006.01); **F04B 49/06** (2006.01)

CPC (source: EP US)

**F04B 43/0081** (2013.01 - EP US); **F04B 43/06** (2013.01 - EP); **F04B 43/073** (2013.01 - EP US); **F04B 49/065** (2013.01 - EP); **F04B 49/22** (2013.01 - US); **F04B 2205/09** (2013.01 - US); **F04B 2205/18** (2013.01 - 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

Designated extension state (EPC)

BA ME

DOCDB simple family (publication)

**WO 2021008788 A1 20210121**; CN 114127419 A 20220301; CN 114127419 B 20240426; EP 3997339 A1 20220518; JP 2022539428 A 20220908; US 2024209847 A1 20240627

DOCDB simple family (application)

**EP 2020066354 W 20200612**; CN 202080051034 A 20200612; EP 20731145 A 20200612; JP 2022501216 A 20200612; US 202017626169 A 20200612