

Title (en)

METHOD FOR DETERMINING HYDRAULIC PARAMETERS IN A POSITIVE DISPLACEMENT PUMP

Title (de)

VERFAHREN ZUR BESTIMMUNG VON HYDRAULISCHEN PARAMETERN IN EINER VERDRÄNGERPUMPE

Title (fr)

PROCÉDÉ POUR DÉTERMINER DES PARAMÈTRES HYDRAULIQUES DANS UNE POMPE À DÉPLACEMENT POSITIF

Publication

EP 3039289 A1 20160706 (DE)

Application

EP 14758315 A 20140821

Priority

- DE 102013109411 A 20130829
- EP 2014067817 W 20140821

Abstract (en)

[origin: WO2015028386A1] The invention relates to a method for determining hydraulic parameters in a displacement pump, wherein the displacement pump has a movable displacement element, which bounds the metering chamber, which is connected to a suction and pressure line by means of valves, wherein a drive is provided for the oscillating motion of the displacement element. In order that pumped fluid can be alternately sucked into the metering chamber via the suction line and pressed from the metering chamber via the pressure line by means of an oscillating motion of the displacement element, a physical model having hydraulic parameters according to the invention is established for the hydraulic system, the force exerted by the displacement element on the fluid located in the metering chamber or the pressure in the metering chamber is determined and the position of the displacement element is determined, and at least one hydraulic parameter is calculated by means of an optimization calculation.

IPC 8 full level

F04B 17/04 (2006.01); **F04B 43/04** (2006.01); **F04B 49/06** (2006.01); **F04B 51/00** (2006.01); **F15B 19/00** (2006.01); **G05B 13/04** (2006.01)

CPC (source: EP KR US)

F04B 17/03 (2013.01 - US); **F04B 17/04** (2013.01 - EP US); **F04B 17/042** (2013.01 - EP US); **F04B 43/04** (2013.01 - EP KR US); **F04B 49/02** (2013.01 - US); **F04B 49/065** (2013.01 - EP KR US); **F04B 49/10** (2013.01 - US); **F04B 51/00** (2013.01 - EP KR US); **F04B 2203/0201** (2013.01 - EP US); **F04B 2203/0401** (2013.01 - EP KR US); **F04B 2203/0402** (2013.01 - EP KR US); **F05B 2260/60** (2013.01 - KR); **Y10S 417/00** (2013.01 - KR)

Citation (search report)

See references of WO 2015028386A1

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 2015028386 A1 20150305; CA 2920224 A1 20150305; CA 2920224 C 20210309; CN 105492767 A 20160413; CN 105492767 B 20180306; DE 102013109411 A1 20150305; DK 3039289 T3 20171127; EP 3039289 A1 20160706; EP 3039289 B1 20170927; ES 2648915 T3 20180108; HK 1220751 A1 20170512; JP 2016529441 A 20160923; KR 20160046855 A 20160429; US 2016305419 A1 20161020

DOCDB simple family (application)

EP 2014067817 W 20140821; CA 2920224 A 20140821; CN 201480047892 A 20140821; DE 102013109411 A 20130829; DK 14758315 T 20140821; EP 14758315 A 20140821; ES 14758315 T 20140821; HK 16108722 A 20160720; JP 2016537238 A 20140821; KR 20167007482 A 20140821; US 201414910687 A 20140821