Title (en)

GEAR PUMP

Title (de)

GETRIEBEPUMPE

Title (fr)

POMPE À ENGRENAGES

Publication

EP 3246573 A1 20171122 (EN)

Application

EP 17171019 A 20170515

Priority

JP 2016100851 A 20160519

Abstract (en)

In a gear pump, a gear chamber (4) is defined in a housing hole (2) of a housing (3). A pair of gears (7, 8) is housed in the gear chamber (4). The gears (7, 8) are rotatably supported at support holes (13, 14) of a pair of side plates (5, 6) via support shafts (15, 16). As viewed in an axial direction of the support shafts (15, 16) during rotation of the gears (7, 8), addendum circles (70, 80) of the gears (7, 8) displaced under a differential pressure between a low-pressure chamber (31) and a high-pressure chamber (41) form first contact points (P1) with respect to an inner peripheral surface (2a) that defines a housing hole (2). As viewed in the axial direction of the support shafts (15, 16) during rotation of the gears (7, 8), the first contact points (P1) are covered with the side plates (5, 6) displaced under the differential pressure.

IPC 8 full level

F04C 2/18 (2006.01); **F04C 15/00** (2006.01)

CPC (source: CN EP US)

F04C 2/14 (2013.01 - US); **F04C 2/18** (2013.01 - CN EP US); **F04C 15/0046** (2013.01 - EP US); **F04C 15/0049** (2013.01 - US); **F04C 15/06** (2013.01 - US); **F04C 18/14** (2013.01 - US); **F04C 29/0035** (2013.01 - US); **F04C 29/12** (2013.01 - US); F04C 2240/30 (2013.01 - US); F04C 2240/50 (2013.01 - EP US); F04C 2240/60 (2013.01 - US)

Citation (applicant)

JP H10122160 A 19980512 - KOYO SEIKO CO

Citation (search report)

- [X] JP H09264265 A 19971007 - KOYO SEIKO CO
- [X] US 2015308428 A1 20151029 - BREDENFELD GUIDO [DE], et al
- [X] US 6135741 A 20001024 - OEHMAN JR ROBERT E [US]
- [X] JP 2001012362 A 20010116 - KOYO SEIKO CO

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)

EP 3246573 A1 20171122; CN 107401503 A 20171128; JP 2017207024 A 20171124; US 2017335846 A1 20171123

DOCDB simple family (application)

EP 17171019 A 20170515; CN 201710338416 A 20170515; JP 2016100851 A 20160519; US 201715592341 A 20170511