

Title (en)

Internal gear pump with non-equal teeth pitch spacings

Title (de)

Interne Getriebepumpe mit unregelmässigen Teilungen in der Verzahnung

Title (fr)

Pompe à engrenages internes avec des pas d'engrenage irréguliers

Publication

EP 2012014 A1 20090107 (EN)

Application

EP 08159552 A 20080702

Priority

- JP 2007178177 A 20070706
- JP 2008148955 A 20080606

Abstract (en)

An internal gear pump which has a crescent (3) disposed between an outer rotor (2) and an inner rotor (1) having a trochoidal tooth profile, and which reduces vibrations caused by pulsations generated when the fluid is discharged. The internal gear pump has an outer rotor (2) having internal teeth (21) formed therein, an inner rotor (1) disposed on the inner peripheral side of the outer rotor and having formed therein external teeth (11) that mesh with the internal teeth (21), and a crescent (3) disposed in a clearance between the outer rotor and the inner rotor. Pitch spacings of the external teeth (11) of the inner rotor (1) are formed as non-equal spacings, and pitch spacings of the internal teeth of the outer rotor correspond to the pitch spacings of the external teeth of the inner rotor.

IPC 8 full level

F04C 2/08 (2006.01); **F04C 2/10** (2006.01); **F04C 15/00** (2006.01); **F04C 29/06** (2006.01); **F04C 18/08** (2006.01); **F04C 18/10** (2006.01); **F04C 29/00** (2006.01)

CPC (source: EP US)

F04C 2/084 (2013.01 - EP US); **F04C 2/101** (2013.01 - EP US); **F04C 15/0049** (2013.01 - EP US)

Citation (applicant)

JP H07253083 A 19951003 - LUK FAHRZEUG HYDRAULIK

Citation (search report)

- [DX] GB 2284021 A 19950524 - LUK FAHRZEUG HYDRAULIK [DE] & JP H07253083 A 19951003 - LUK FAHRZEUG HYDRAULIK
- [XA] US 6164944 A 20001226 - MARTIN BERTHOLD [US], et al
- [XA] WO 2005019652 A1 20050303 - BOC GROUP PLC [GB], et al
- [XA] GB 2247283 A 19920226 - PIERBURG GMBH [DE]
- [Y] DE 3416400 A1 19851128 - SCHWAEBISCHE HUETTENWERKE GMBH [DE]
- [Y] DE 4331482 A1 19940324 - LUK LAMELLEN & KUPPLUNGSBAU [DE]
- [A] EP 1600667 A1 20051130 - FORD GLOBAL TECH LLC [US]
- [A] DE 3533743 A1 19870402 - OPEL ADAM AG [DE]

Cited by

FR3033370A1; WO2010132914A1; WO2016139400A3; US9291248B2

Designated contracting state (EPC)

DE FR GB

Designated extension state (EPC)

AL BA MK RS

DOCDB simple family (publication)

EP 2012014 A1 20090107; US 2009010791 A1 20090108

DOCDB simple family (application)

EP 08159552 A 20080702; US 21648308 A 20080707