

Title (en)
PUMP UNIT

Title (de)
PUMPENEINHEIT

Title (fr)
UNITÉ DE POMPE

Publication
EP 2313656 A2 20110427 (DE)

Application
EP 09775988 A 20090720

Priority
• DE 2009001012 W 20090720
• DE 102008038718 A 20080812

Abstract (en)
[origin: WO2010017795A2] A pump unit (1) of a vane-type pump having no dedicated housing is proposed, comprising a drive shaft (5), a rotor (7) that interacts with the drive shaft (5) and accommodates vanes (19), a contour ring (9) surrounding the rotor (7), and a first and a second side plate (11, 13) which are disposed laterally of the contour ring (9).

IPC 8 full level
F04C 2/344 (2006.01)

CPC (source: EP US)
F04C 15/0026 (2013.01 - EP US); **F04C 15/0038** (2013.01 - EP US); **F04C 2/344** (2013.01 - EP US); **F04C 14/06** (2013.01 - EP US); **F04C 14/28** (2013.01 - EP US); **F04C 2230/60** (2013.01 - EP US); **F04C 2240/30** (2013.01 - EP US)

Citation (search report)
See references of WO 2010017795A2

Designated contracting state (EPC)
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 SE SI SK SM TR

Designated extension state (EPC)
AL BA RS

DOCDB simple family (publication)
WO 2010017795 A2 20100218; **WO 2010017795 A3 20100715**; CN 102089522 A 20110608; CN 102089522 B 20140423; DE 112009001697 A5 20110407; EP 2313656 A2 20110427; EP 2313656 B1 20160217; JP 2011530668 A 20111222; JP 5734186 B2 20150617; US 2011211984 A1 20110901; US 8932037 B2 20150113

DOCDB simple family (application)
DE 2009001012 W 20090720; CN 200980127120 A 20090720; DE 112009001697 T 20090720; EP 09775988 A 20090720; JP 2011522379 A 20090720; US 200913058514 A 20090720