

Title (en)

Adjustable coolant pump for the coolant circuit of a combustion engine

Title (de)

Regelbare Kühlmittelpumpe für den Kühlkreislauf einer Verbrennungskraftmaschine

Title (fr)

Pompe à réfrigérant réglable pour le circuit de refroidissement d'un moteur à combustion

Publication

**EP 2131042 A3 20110810 (DE)**

Application

**EP 09157242 A 20090403**

Priority

DE 102008027157 A 20080606

Abstract (en)

[origin: EP2131042A2] The pump has guide blades (8) made of sheet metal and arranged concentrically at a pump impeller (3) between a ring channel (6) and the impeller in a pump head (4). Each blade has three journals, where the journal (9) is arranged in an area of an outer edge of the blades that are rotatably supported in the head via the journal (9). The journal (11) is arranged in an area of the guide blades, and projects into grooves or slots (22) of adjusting rings (23). The rings are arranged rotatably in the pump head, and the grooves or slots have radial and tangential components.

IPC 8 full level

**F04D 29/46** (2006.01)

CPC (source: EP US)

**F04D 29/466** (2013.01 - EP US)

Citation (search report)

- [Y] WO 2007025375 A2 20070308 - FLOWORK SYSTEMS II LLC [US], et al
- [Y] DE 964551 C 19570523 - POWER JETS RES & DEV LTD
- [A] WO 2005057018 A1 20050623 - HONEYWELL INT INC [US], et al

Cited by

CN104755824A; CN102265038A; US9243649B2; US9011091B2; CN102782329A; ITBS20100021A1; EP2495448A3; EP2687728A1; WO2011095907A1; WO2011107153A1

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 TR

Designated extension state (EPC)

AL BA RS

DOCDB simple family (publication)

**EP 2131042 A2 20091209; EP 2131042 A3 20110810; EP 2131042 B1 20160928**; DE 102008027157 A1 20091210; DE 102008027157 B4 20140717; US 2009301412 A1 20091210; US 8235653 B2 20120807

DOCDB simple family (application)

**EP 09157242 A 20090403**; DE 102008027157 A 20080606; US 47890709 A 20090605