

Title (en)

COOLANT PUMP HAVING AN OPTIMIZED BEARING ASSEMBLY AND IMPROVED HEAT BALANCE

Title (de)

KÜHLMITTELPUMPE MIT OPTIMISierter LAGERANORDNUNG UND VERBESSERTEM WÄRMEHAUSHALT

Title (fr)

POMPE À LIQUIDE DE REFROIDISSEMENT POURVUE D'UN DISPOSITIF PALIER OPTIMISÉ ET À BILAN THERMIQUE AMÉLIORÉ

Publication

EP 3755907 B1 20230719 (DE)

Application

EP 18808277 A 20181121

Priority

- DE 102018104015 A 20180222
- EP 2018082035 W 20181121

Abstract (en)

[origin: WO2019161950A1] The invention relates to an electrical coolant pump, preferably for use as an additional water pump in a vehicle, which electrical coolant pump is characterized in that radial support of the shaft (4) is provided by means of a coolant-lubricated radial sintered plain bearing (41) having a defined porosity, which is arranged between the pump impeller (2) and the rotor (32), and a shaft seal (5) is arranged between the radial plain bearing (41) and the motor chamber (13). In the sintered plain bearing (41), in the axial direction, at least one coolant flow channel (14) having a predefined depth proceeding from the end of the sintered plain bearing (41) on the side of the pump chamber (10) is provided.

IPC 8 full level

F04D 13/06 (2006.01); **F04D 29/046** (2006.01); **F04D 29/06** (2006.01); **F04D 29/10** (2006.01)

CPC (source: EP US)

F01P 5/12 (2013.01 - US); **F04D 13/0633** (2013.01 - US); **F04D 13/0673** (2013.01 - EP); **F04D 13/12** (2013.01 - US); **F04D 29/026** (2013.01 - EP); **F04D 29/043** (2013.01 - US); **F04D 29/046** (2013.01 - US); **F04D 29/0473** (2013.01 - EP); **F04D 29/061** (2013.01 - EP US); **F04D 29/106** (2013.01 - US); **F01P 2005/105** (2013.01 - US); **F01P 2005/125** (2013.01 - US); **F05D 2230/22** (2013.01 - EP); **F05D 2300/514** (2013.01 - EP)

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

DOCDB simple family (publication)

DE 102018104015 A1 20190822; BR 112020014776 A2 20201208; CN 111601971 A 20200828; CN 111601971 B 20210903; EP 3755907 A1 20201230; EP 3755907 B1 20230719; US 11306723 B2 20220419; US 2021079920 A1 20210318; WO 2019161950 A1 20190829

DOCDB simple family (application)

DE 102018104015 A 20180222; BR 112020014776 A 20181121; CN 201880086785 A 20181121; EP 18808277 A 20181121; EP 2018082035 W 20181121; US 201816961676 A 20181121