

Title (en)

CONTROLLABLE COOLANT PUMP FOR A MAIN DELIVERY CIRCUIT AND A SECONDARY DELIVERY CIRCUIT

Title (de)

REGELBARE KÜHLMITTELPUMPE FÜR HAUPT- UND NEBENFÖRDERKREISLAUF

Title (fr)

POMPE À LIQUIDE DE REFROIDISSEMENT POUVANT ÊTRE RÉGULÉE POUR UN CIRCUIT DE REFOULEMENT PRINCIPAL ET UN CIRCUIT DE REFOULEMENT SECONDAIRE

Publication

EP 3676498 B1 20210609 (DE)

Application

EP 18740810 A 20180712

Priority

- DE 102017120191 A 20170901
- EP 2018068958 W 20180712

Abstract (en)

[origin: WO2019042644A1] The invention relates to a mechanically driven coolant pump having a controllable delivery rate for a main delivery circuit from a first outlet and for a secondary delivery circuit from a second outlet of the coolant pump, said coolant pump comprising, among other things, a hydraulic control circuit (5) which is derived from the coolant pump and has an input-side auxiliary pump (6), an output-side proportional valve (7), and a control slide (8) as a hydraulic actuator for limiting the flow of the main delivery circuit, wherein a cylindrical portion of the control slide (8) can be axially displaced in the pump chamber (10) in order to radially shield the pump impeller (2), specifically by means of a pressure in the hydraulic control circuit (5) counter to a restoring force. The coolant pump is characterised in particular in that a control valve (9) is connected to the hydraulic control circuit (5) as a hydraulic actuator in order to limit the flow of the secondary delivery circuit, wherein actuations of the control slide (8) and of the control valve (9) are associated with pressure ranges in the hydraulic control circuit (5).

IPC 8 full level

F04D 15/00 (2006.01)

CPC (source: EP US)

F04D 15/0022 (2013.01 - EP US); **F04D 15/0038** (2013.01 - EP US); **F01P 5/12** (2013.01 - US); **F01P 2007/146** (2013.01 - US); **F05D 2250/52** (2013.01 - US); **F05D 2270/54** (2013.01 - US); **F05D 2270/64** (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 102017120191 B3 20181206; BR 112019028100 A2 20200728; CN 111051702 A 20200421; CN 111051702 B 20210914; EP 3676498 A1 20200708; EP 3676498 B1 20210609; US 11002281 B2 20210511; US 2020340482 A1 20201029; WO 2019042644 A1 20190307

DOCDB simple family (application)

DE 102017120191 A 20170901; BR 112019028100 A 20180712; CN 201880055517 A 20180712; EP 18740810 A 20180712; EP 2018068958 W 20180712; US 201816643009 A 20180712