Title (en)

ELECTRIC MACHINE WITH ENCLOSED, AUTONOMOUS COOLING MEDIUM CIRCUIT

Title (de)

ELEKTRISCHE MASCHINE MIT GESCHLOSSENEM, AUTARKEM KÜHLMEDIUMKREISLAUF

Title (fr)

MOTEUR ÉLECTRIQUE COMPORTANT UN CIRCUIT DE REFROIDISSEMENT FERMÉ AUTONOME

Publication

EP 2633606 A2 20130904 (DE)

Application

EP 11796688 A 20111213

Priority

- DE 102010064010 A 20101223
- EP 2011072518 W 20111213

Abstract (en)

[origin: WO2012084585A2] An electric machine has a base body (1), a rotor shaft (6) and a heat exchanger (10). The base body (1) comprises at least one stator (2). Cooling ducts (4) for a liquid cooling medium are arranged in the base body (1). The rotor shaft (6) is mounted in the base body (1) in such a way that the rotor shaft (6) can rotate about a rotational axis (5). The rotor shaft (6) is embodied as a hollow shaft through which liquid cooling medium can flow. The heat exchanger (10) serves to output heat contained in the liquid cooling medium to the surroundings of the electric machine. The heat exchanger (10), the rotor shaft (6) and the cooling ducts (4) are fluidically connected to one another in pairs so that a closed circuit for the liquid medium is produced. A feed element (11) is arranged in a rotationally fixed fashion on the rotor shaft (6), said feed element being connected into the closed circuit for the liquid cooling medium and being used to forcibly circulate the liquid cooling medium as the rotor shaft (6) rotates about the rotational axis (5) in the closed circuit for the liquid cooling medium.

IPC 8 full level

H02K 9/19 (2006.01); **H02K 1/20** (2006.01); **H02K 1/32** (2006.01); **H02K 5/20** (2006.01)

CPC (source: EP US)

H02K 5/203 (2021.01 - EP US); **H02K 9/197** (2013.01 - EP US); H02K 1/20 (2013.01 - EP US); H02K 1/32 (2013.01 - EP US)

Citation (search report)

See references of WO 2012084585A2

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

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