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**(54) Title (EN):** ELECTRIC MOTOR

**(54) Title (FR):** MOTEUR ÉLECTRIQUE

**(54) Title (DE):** ELEKTROMOTOR

**(57) Abstract:**

**(EN):** The invention relates to an electric motor, in particular for driving an oil pump. The electric motor according to the invention comprises an external stator (3) which is arranged about an internal rotor (4), wherein the stator (3) and the rotor (4) extend in an axial direction along an axis of rotation (A) about which the rotor (4) rotates during operation of the electric motor (1), and wherein the stator (3) and the rotor (4) are located in a motor housing (2) in which there is a coolant circuit (7, 8, 9, 10, 17) for guiding cooling medium. The electric motor according to the invention is characterised in that the coolant circuit (7, 8, 9, 10, 17) comprises a cooling path (10) which, in order to cool the stator (3), extends adjacent to its outside side (6) which delimits the stator (3) in the radial direction with respect to the axis of rotation (A), wherein the cooling path (10) is designed such that the cooling medium is transported around the outer side (5a) of the stator (3) in the peripheral direction with respect to the axis of rotation (A).

**(FR):** L'invention concerne un moteur électrique, en particulier pour l'entraînement d'une pompe à huile. Selon l'invention, le moteur électrique comprend un stator (3) externe disposé autour d'un rotor (4) interne, le stator (3) et le rotor (4) s'étendant dans une direction axiale le long d'un axe de rotation (A) autour duquel le rotor (4) tourne pendant le fonctionnement du moteur électrique (1), et le stator (3) et le rotor (4) étant disposés dans un carter de moteur (2) dans lequel est formé un circuit de refroidissement (7, 8, 9, 10, 17) pour guider le fluide de refroidissement. Selon l'invention, le moteur électrique est caractérisé en ce que le circuit de refroidissement (7, 8, 9, 10, 17) comprend un chemin de refroidissement (10) qui, pour refroidir le stator (3), passe près de sa face extérieure (6) qui délimite le stator (3) dans la direction radiale par rapport à l'axe de rotation (A), le chemin de refroidissement (10) étant conçu de telle manière que le fluide de refroidissement soit transporté autour de la face extérieure (5a) du stator (3) dans la direction circonférentielle par rapport à l'axe de rotation (A).

**(DE):** Die Erfindung betrifft einen Elektromotor, insbesondere zum Antrieb einer Ölpumpe. Der erfindungsgemäße Elektromotor umfasst einen außenliegenden Stator (3), der um einen innenliegenden Rotor (4) angeordnet ist, wobei sich der Stator (3) und der Rotor (4) in einer axialen Richtung entlang einer Drehachse (A) erstrecken, um welche der Rotor (4) im Betrieb des Elektromotors

(1) rotiert, und wobei der Stator (3) und der Rotor (4) in einem Motorgehäuse (2) angeordnet sind, in dem ein Kühlkreislauf (7, 8, 9, 10, 17) zur Führung von Kühlmedium ausgebildet ist. Der erfindungsgemäße Elektromotor zeichnet sich dadurch aus, dass der Kühlkreislauf (7, 8, 9, 10, 17) einen Kühlpfad (10) umfasst, welcher zur Kühlung des Stators (3) benachbart zu dessen Außenseite (6) verläuft, die den Stator (3) in radialer Richtung in Bezug auf die Drehachse (A) begrenzt, wobei der Kühlpfad (10) derart ausgebildet ist, dass das Kühlmedium in Umfangsrichtung in Bezug auf die Drehachse (A) um die Außenseite (5a) des Stators (3) herum transportiert wird.

#### **International search report:**

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#### **Declarations:**

Declaration made as applicant's entitlement, as at the international filing date, to claim the priority of the earlier application, where the applicant is not the applicant who filed the earlier application or where the applicant's name has changed since the filing of the earlier application (Rules 4.17(iii) and 51bis.1(a)(iii))