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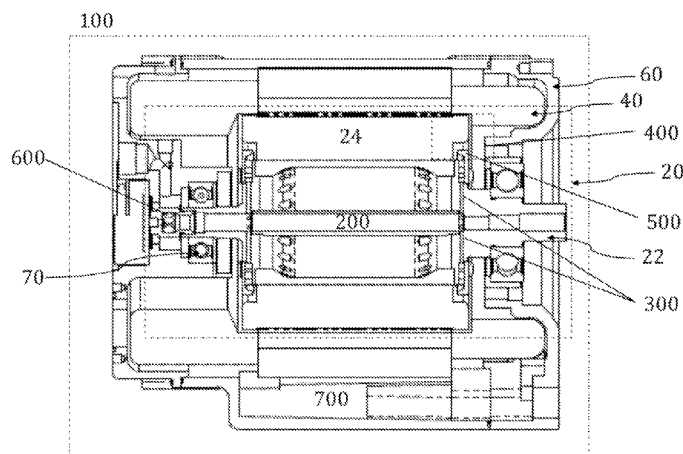


FIGURE 1

(57) Abstract: A system for cooling an electric motor, the electric motor including a stator disposed about a rotor, wherein cooling system includes a rotor assembly including a shaft with a shaft channel extending through the center of the shaft and radial channels extending radially from the shaft channel; a rotor with profiled rotor ends; and two guides, each coupled to a rotor end, that guides fluid from the shaft exterior to the rotor end. The system may additionally include interior channels that traverse through the rotor interior, wherein the interior channels fluidly couple the radial channels to a guide-rotor end pair. The system may also include stator cooling mechanisms, including cooling channels within the motor casing proximal to stator exterior surface and dispensing mechanisms that dispense working fluid to the stator coils.



## INTERNATIONAL SEARCH REPORT

International application No.

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## A. CLASSIFICATION OF SUBJECT MATTER

IPC(8) - H02K 9/00 (2012.01)

USPC - 310/16

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC(8) - H02K 9/00 (2012.01)

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Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched  
USPC - 165/104.19, 104.33; 310/16, 54

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

Database Searched: PubWEST(PGPB,USPT,USOC,EPAB,JPAB); Google Scholar

Search Terms Used Motor, rotor, stator, cool, winding, coils, fluid, working fluid, channels, passages

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 4,137,472 A (Workman et al.) 30 January 1979 (30.01.1979), entire document, especially, col. 1, ln. 45 to col. 2, ln. 2	1-33
Y	US 5,140,204 A (Cashmore et al.) 18 August 1992 (18.08.1992), col. 6 ln. 67 to col. 7, ln. 29, FIG. 3A-B	1-33
Y	US 2010/0038981 A1 (Urano et al.) 18 February 2010 (18.02.2010), para. [0050], [0051], [0052]	8, 20
Y	US 4,409,502 A (McCabria) 11 October 1983 (11.10.1983), abstract, FIG. 3-4	12-15
Y	US 6,844,637 B1 (Smith et al.) 18 January 2005 (18.01.2005), col 4, ln. 44 to col. 5, ln. 12	16-19

☐ Further documents are listed in the continuation of Box C.

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