Title (en)

ROTARY PERMANENT MAGNET ELECTRIC MOTOR WITH VARYING AIR GAP BETWEEN INTERFACING STATOR AND ROTOR ELEMENTS

Title (de)

ELEKTRISCHER PERMANENTMAGNETDREHMOTOR MIT LUFTSPALT WECHSENLDER BREITE ZWISCHEN ROTOR- UND STATORELEMENTEN

Title (fr)

MOTEUR ELECTRIQUE A AIMANT PERMANENT ROTATIF AVEC ENTREFER VARIABLE ENTRE LES ELEMENTS DE STATOR ET DE ROTOR EN INTERFACE

Publication

EP 1512212 A1 20050309 (EN)

Application

EP 03719436 A 20030328

Priority

- US 0308673 W 20030328
- US 16025702 A 20020604
- US 16025402 A 20020604
- US 20784802 A 20020731

Abstract (en)

[origin: CA2482974A1] A permanent magnet motor is configured with selective variation of the radia l distance between an interfacing pair of rotor permanent magnet and stator po le along the circumferential length of the pair. The effects of cogging torque on the overall torque signature can be controlled by setting an appropriate air gap variation profile. The stator pole and rotor magnet surfaces may be slop ed with respect to each other, the angle therebetween being selected to obtain desired cogging torque compensation. Other air gap variation profiles may include provision of concave surfaces, the degree of concavity being selectable.

IPC 1-7

H02K 21/12; H02K 1/14

IPC 8 full level

H02K 1/26 (2006.01); **H02K 1/14** (2006.01); **H02K 1/18** (2006.01); **H02K 1/22** (2006.01); **H02K 1/27** (2006.01); **H02K 21/12** (2006.01); **H02K 21/22** (2006.01)

CPC (source: KR)

H02K 1/12 (2013.01); **H02K 1/14** (2013.01); **H02K 1/18** (2013.01); **H02K 1/22** (2013.01); **H02K 1/26** (2013.01); **H02K 1/27** (2013.01); **H02K 21/12** (2013.01); **H02K 21/22** (2013.01)

Citation (search report)

See references of WO 03105318A1

Citation (examination)

US 6188159 B1 20010213 - FAN YANG-FUNG [TW]

Designated contracting state (EPC)

AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IT LI LU MC NL PT RO SE SI SK TR

DOCDB simple family (publication)

AU 2003223320 A1 20031222; BR 0311507 A 20050222; CA 2482974 A1 20031218; CA 2482974 C 20070109; CN 100588088 C 20100203; CN 1659768 A 20050824; EP 1512212 A1 20050309; JP 2005529575 A 20050929; KR 100741230 B1 20070719; KR 20050004287 A 20050112; MX PA04012142 A 20050419

DOCDB simple family (application)

AU 2003223320 A 20030328; BR 0311507 A 20030328; CA 2482974 A 20030328; CN 03812828 A 20030328; EP 03719436 A 20030328; JP 2004512270 A 20030328; KR 20047019746 A 20030328; MX PA04012142 A 20030328