

(12) International Application Status Report

Received at International Bureau: 22 August 2018 (22.08.2018)

Information valid as of: 01 October 2018 (01.10.2018)

Report generated on: 18 September 2019 (18.09.2019)

(10) Publication number:

WO2019/035400

(43) Publication date:

21 February 2019 (21.02.2019)

(26) Publication language:

Japanese (JA)

(21) Application Number:

PCT/JP2018/029750

(22) Filing Date:

08 August 2018 (08.08.2018)

(25) Filing language:

Japanese (JA)

(31) Priority number(s):

2017-157945 (JP)

(31) Priority date(s):

18 August 2017 (18.08.2017)

(31) Priority status:

Priority document received (in compliance with PCT Rule 17.1)

(51) International Patent Classification:

H02K 1/18 (2006.01); **H02K 1/02** (2006.01); **H02K 3/46** (2006.01)

(71) Applicant(s):

MINEBEA MITSUMI INC. [JP/JP]; 4106-73 Oaza Miyota, Miyota-machi, Kitasaku-gun, Nagano 3890293 (JP) (*for all designated states*)

(72) Inventor(s):

KEBUKAWA, Koji; c/o MINEBEA MITSUMI Inc., 4106-73 Oaza Miyota, Miyota-machi, Kitasaku-gun, Nagano 3890293 (JP)

(74) Agent(s):

TORANOMON INTELLECTUAL PROPERTY FIRM; 8-1, Kasumigaseki, 3-chome, Chiyoda-ku, Tokyo 1000013 (JP)

(54) Title (EN): STATOR STRUCTURE AND BRUSHLESS MOTOR

(54) Title (FR): STRUCTURE DE STATOR ET MOTEUR SANS BALAIS

(54) Title (JA): ステータ構造およびブラシレスモータ

(57) Abstract:

(EN): A stator structure (1) according to an embodiment is provided with: a stator core (10); a first insulator (20) and a second insulator (30); a plurality of coils; and a plurality of pins (40). The stator core (10) is configured by laminating thin band-like magnetic materials (10a) and has a plurality of teeth (12) extending radially from an annular main body part (11). The first insulator (20) and the second insulator (30) are made of resins and cover both sides of the stator core (10) in the axial direction. Each of the plurality of coils is wound on an extension part (12a) of the plurality of teeth (12) through the first insulator (20) and the second insulator (30). The plurality of pins (40) are formed integrally with at least one among the first insulator (20) and the second insulator (30), and couple the first insulator (20) and the second insulator (30).

(FR): Conformément à un mode de réalisation, la présente invention concerne une structure de stator (1) qui comporte : un noyau de stator (10) ; un premier isolant (20) et un second isolant (30) ; une pluralité de bobines ; et une pluralité de broches (40). Le noyau de stator (10) est configuré par stratification de matériaux magnétiques de type bande mince (10a) et comporte une pluralité de dents (12) s'étendant de manière radiale à partir d'une partie de corps principal annulaire (11). Le premier isolant (20) et le second isolant (30) sont réalisés en résines et recouvrent les deux côtés du noyau de stator (10) dans la direction axiale. Chacune de la pluralité de bobines est enroulée sur une partie d'extension (12a) de la pluralité de dents (12) à travers le premier isolant (20) et le second isolant (30). La pluralité de broches (40) sont formées d'un seul tenant avec au moins l'un parmi le premier isolant (20) et le second isolant (30), et couplent le premier isolant (20) et le second isolant (30).

(JA): 実施形態のステータ構造(1)は、ステータコア(10)と、第1インシュレータ(20)および第2インシュレータ(30)と、複数のコイルと、複数のピン(40)と、を備える。ステータコア(10)は、磁性材料の薄帯(10a)が積層して構成され、環状の本体部(11)から径方向に延在する複数のテース(12)を有する。第1インシュレータ(20)および第2インシュレータ(30)は、樹脂製であり、軸方向におけるステータコア(10)の両側を覆う。複数のコイルは、第1インシュレータ(20)および第2インシュレータ(30)を介して複数のテース(12)の延在部(12a)にそれ

ぞれ巻回される。複数のピン(40)は、第1インシュレータ(20)および第2インシュレータ(30)の少なくとも一方と一体的に形成され、第1インシュレータ(20)と第2インシュレータ(30)とを結合する。

International search report:

Received at International Bureau: 01 October 2018 (01.10.2018) [JP]

International Report on Patentability (IPRP) Chapter II of the PCT:

Not available

(81) Designated States:

AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BN, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DJ, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IR, IS, JO, KE, KG, KH, KN, KP, KR, KW, KZ, LA, LC, LK, LR, LS, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PA, PE, PG, PH, PL, PT, QA, RO, RS, RU, RW, SA, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TH, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW

European Patent Office (EPO) : AL, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MK, MT, NL, NO, PL, PT, RO, RS, SE, SI, SK, SM, TR

African Intellectual Property Organization (OAPI) : BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, KM, ML, MR, NE, SN, TD, TG

African Regional Intellectual Property Organization (ARIPO) : BW, GH, GM, KE, LR, LS, MW, MZ, NA, RW, SD, SL, ST, SZ, TZ, UG, ZM, ZW

Eurasian Patent Organization (EAPO) : AM, AZ, BY, KG, KZ, RU, TJ, TM