



(51) International Patent Classification:
H02K 3/52 (2006.01)

(21) International Application Number:
PCT/JP2014/005748

(22) International Filing Date:
14 November 2014 (14.11.2014)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
2013-250759 4 December 2013 (04.12.2013) JP

(71) Applicants: **TOYOTA JIDOSHA KABUSHIKI KAISHA** [JP/JP]; 1, Toyota-cho, Toyota-shi, Aichi, 4718571 (JP). **AISIN SEIKI KABUSHIKI KAISHA** [JP/JP]; 1, Asahi-machi 2-chome, Kariya-shi, Aichi, 4488650 (JP).

(72) Inventors: **HARUNO, Kentarou**; c/o TOYOTA JIDOSHA KABUSHIKI KAISHA, 1, Toyota-cho, Toyota-shi, Aichi, 4718571 (JP). **HOSHINA, Hiroshi**; c/o TOYOTA JIDOSHA KABUSHIKI KAISHA, 1, Toyota-cho, Toyota-shi, Aichi, 4718571 (JP). **NAKAHO, Tatsuya**; c/o TOYOTA JIDOSHA KABUSHIKI KAISHA, 1, Toyota-cho, Toyota-shi, Aichi, 4718571 (JP). **KATO,**

Isao; c/o AISIN SEIKI KABUSHIKI KAISHA, 1, Asahi-machi 2-chome, Kariya-shi, Aichi, 4488650 (JP).

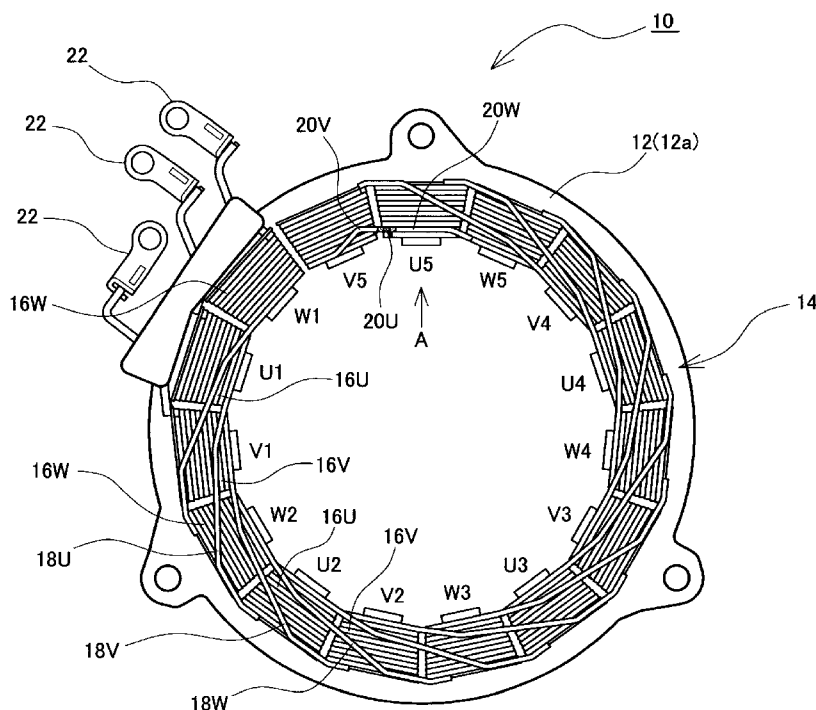
(74) Agent: **YKI PATENT ATTORNEYS**; 1-34-12, Kichijoji-Honcho, Musashino-shi, Tokyo, 1800004 (JP).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): 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, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IR, IS, KE, KG, KN, KP, KR, 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.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LR, LS, MW, MZ, NA, RW, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, RU, TJ, TM), European (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), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, KM, ML, MR, NE, SN, TD, TG).

[Continued on next page]

(54) Title: STATOR FOR ROTARY ELECTRIC MACHINE



(57) Abstract: According to the present invention, a stator for a rotary electric machine includes a stator core, coils of three phases formed of flat-type wire coils wound on the stator core by concentrated winding, neutral point bus bars which are connected to coil terminating ends respectively extending from innermost circumferences of the coils of three phases, and a neutral point formed by joining the neutral point bus bars to each other. The neutral point is formed by joining terminating ends of the three-phase neutral point bus bars to each other in a state in which the terminating ends are arranged adjacent to each other in the circumferential direction.

**Published:****(88) Date of publication of the international search report:**

10 March 2016

- *with international search report (Art. 21(3))*
- *before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments (Rule 48.2(h))*

INTERNATIONAL SEARCH REPORT

International application No
PCT/JP2014/005748

A. CLASSIFICATION OF SUBJECT MATTER
INV. H02K3/52
ADD.

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)
H02K

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

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

EPO-Internal

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	JP 2013 059156 A (HITACHI AUTOMOTIVE SYSTEMS LTD) 28 March 2013 (2013-03-28) the whole document -----	1-8



Further documents are listed in the continuation of Box C.



See patent family annex.

* Special categories of cited documents :

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier application or patent but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&" document member of the same patent family

Date of the actual completion of the international search

19 January 2016

Date of mailing of the international search report

26/01/2016

Name and mailing address of the ISA/

European Patent Office, P.B. 5818 Patentlaan 2
NL - 2280 HV Rijswijk
Tel. (+31-70) 340-2040,
Fax: (+31-70) 340-3016

Authorized officer

Van Staveren, Martin

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

PCT/JP2014/005748

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
JP 2013059156 A	28-03-2013	CN 103733482 A	16-04-2014
		DE 112012003722 T5	26-06-2014
		JP 2013059156 A	28-03-2013
		US 2014184011 A1	03-07-2014
		WO 2013035482 A1	14-03-2013
