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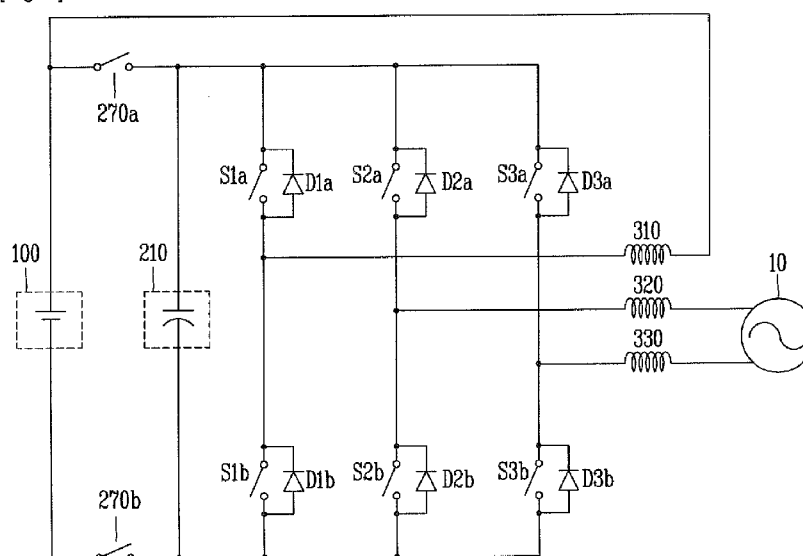
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(54) Title: ELECTRIC VEHICLE AND OPERATING METHOD OF THE SAME

[Fig. 4]



(57) Abstract: Disclosed herein is an electric vehicle and a driving method thereof. According to the present disclosure, it may be possible to drive an electric vehicle using a drive inverter and coils within a three-phase motor, and charge a battery using them as a charging device. According to the present disclosure, coils included in a motor control device and switching elements within an inverter may be used, and the use of the inductors and switching elements required for the charging device may be reduced.

**A. CLASSIFICATION OF SUBJECT MATTER*****B60L 11/18(2006.01)i, H02J 7/02(2006.01)i***

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)

B60L 11/18; B60W 20/00; H02J 7/00; B60W 10/30; H02J 7/02

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

Korean utility models and applications for utility models

Japanese utility models and applications for utility models

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

eKOMPASS(KIPO internal) &amp; Keywords: electric vehicle, charge, battery, motor, coil.

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

| Category* | Citation of document, with indication, where appropriate, of the relevant passages                  | Relevant to claim No. |
|-----------|-----------------------------------------------------------------------------------------------------|-----------------------|
| X<br>A    | KR 10-2004-0082852 A (HYUNDAI MOTOR COMPANY) 30 September 2004<br>See the abstract and figures 2-5. | 11<br>1-10, 12-20     |
| A         | JP 2007-196967 A (TOYOTA MOTOR CORP.) 09 August 2007<br>See the abstract and figure 1.              | 1-20                  |
| A         | JP 2007-068362 A (TOYOTA MOTOR CORP.) 15 March 2007<br>See the abstract and figures 1-6.            | 1-20                  |
| A         | KR 10-2009-0062236 A (HYUNDAI MOTOR COMPANY) 17 June 2009<br>See the abstract and figures 1 and 2.  | 1-20                  |



Further documents are listed in the continuation of Box C.



See patent family annex.

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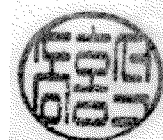
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Information on patent family members

International application No.

**PCT/KR2012/002710**

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