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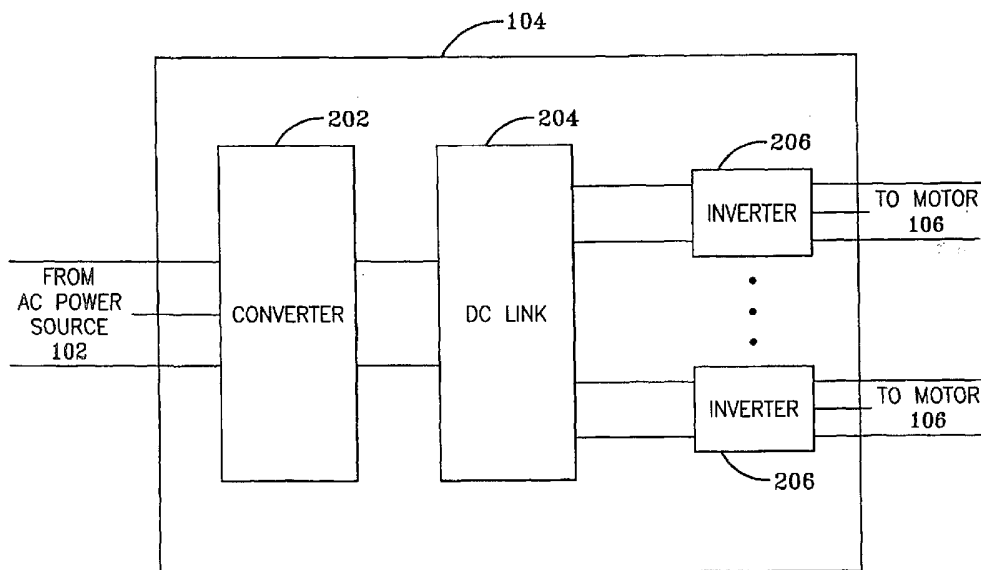
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[Continued on next page]

(54) Title: SYSTEM AND METHOD FOR CONTROLLING A VARIABLE SPEED DRIVE



(57) Abstract: A variable speed drive (104) is provided having a converter (202) to convert an AC voltage to a DC voltage, a DC link (204) to filter and store energy from the converter (202), and a plurality of inverters (206). Each inverter (206) is configured to convert a DC voltage to an AC voltage and is electrically connected in parallel to the DC link (204). An interleaved pulse width modulation control technique is used to control the operation of the plurality of inverters (206) and possibly the converter (202) to lower the RMS ripple current in the DC link (204).

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**Declaration under Rule 4.17:**

- *as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii)) for the following designations AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW, ARIPO patent (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG)*

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# INTERNATIONAL SEARCH REPORT

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**A. CLASSIFICATION OF SUBJECT MATTER**  
IPC 7    H02M5/458    H02M7/48

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 7    H02M

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 practical, search terms used)

EPO-Internal, PAJ

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 6 392 905 B1 (HUANG HENRY HEPING ET AL) 21 May 2002 (2002-05-21) the whole document	1-13, 19-37
X	EP 1 186 464 A (NISSAN MOTOR COMPANY LIMITED) 13 March 2002 (2002-03-13) the whole document	14-18
X	PATENT ABSTRACTS OF JAPAN vol. 2000, no. 06, 22 September 2000 (2000-09-22) & JP 2000 078850 A (AISIN AW CO LTD), 14 March 2000 (2000-03-14) abstract; figures 2,4	14-18
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Further documents are listed in the continuation of box C.

Patent family members are listed in annex.

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- "&" document member of the same patent family

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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT		
Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 2003/025398 A1 (NAKAMURA MASASHI ET AL) 6 February 2003 (2003-02-06)  paragraph '0029!; figure 2 -----	9, 10, 12, 26, 27, 29, 36
A	EP 1 271 067 A (DAIKIN INDUSTRIES, LTD) 2 January 2003 (2003-01-02) paragraphs '0027!, '0028!; figures 1, 2 -----	31-37

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