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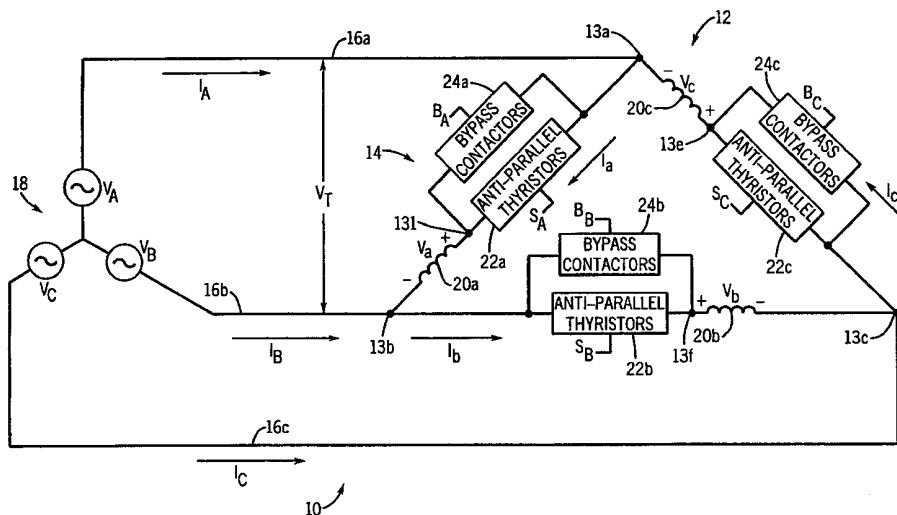
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(54) Title: METHOD FOR CONTROLLING THE STARTING OF AN AC INDUCTION MOTOR UTILIZING CLOSED LOOP ALPHA CONTROL



(57) Abstract: A method is provided for controlling a three-phase, AC induction motor (12). Each phase of the AC induction motor (12) is connected to an AC input source (18) by a thyristor switch (22a-22c) and a bypass contactor (24a-24c) connected in parallel in order to provide voltage and current to the AC induction motor (12). The method includes the steps of sequentially firing pairs of thyristor switches (22a-22c) at a predetermined initial alpha firing angle. A new alpha firing angle is calculated which is dependant upon the initial alpha firing angle. Thereafter, pairs of thyristor switches (22a-22c) are fired at the new alpha firing angle. The new alpha firing angle is provided as the initial alpha firing angle and a new alpha firing angle is calculated. The process is repeated until the AC induction motor (12) reaches its full operating speed.



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For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

INTERNATIONAL SEARCH REPORT

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A. CLASSIFICATION OF SUBJECT MATTER
 IPC 7 H02P1/26 H02P1/28

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 H02P

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

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	LUKITSCH ET AL: "Solid state energy savers for motors in the cement industry" IEEE CEMENT INDUSTRY TECHNICAL CONFERENCE, vol. XXXIII, no. 90CH2880-3, 22 - 24 May 1990, pages 13-17, XP010007162 Tarpon Springs, Florida, USA	1,6,11
Y	page 14, paragraph 3; figure 3 ---	2,7,12
Y	EP 0 883 232 A (SATO ET AL.) 9 December 1998 (1998-12-09) abstract page 4, column 6, line 2 - line 9; figure 1 page 4, column 6 --- -/--	2,7,12



Further documents are listed in the continuation of box C.



Patent family members are listed in annex.

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- *8* 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	<p>EP 0 446 936 A (ALLEN-BRADLEY) 18 September 1991 (1991-09-18) page 2, column 1, line 3 - line 30 page 4, column 6, line 29 - line 34; figures</p> <p style="text-align: center;">-----</p>	1,6,11

INTERNATIONAL SEARCH REPORT

Information on patent family members

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