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- (71) Applicant: RAYTHEON COMPANY [US/US]; 870 Winter Street, Waltham, Massachusetts 02451-1449 (US).
- (72) Inventor: KUZNETSOV, Stephen B.; 41 Hanlon Drive, Marlborough, Massachusetts 01752-1721 (US).
- (74) Agents: DOYLE, David M. et al.; Munck Wilson Mandala, LLP, 600 Banner Place Tower, 12770 Coit Road, Dallas, Texas 75251 (US).
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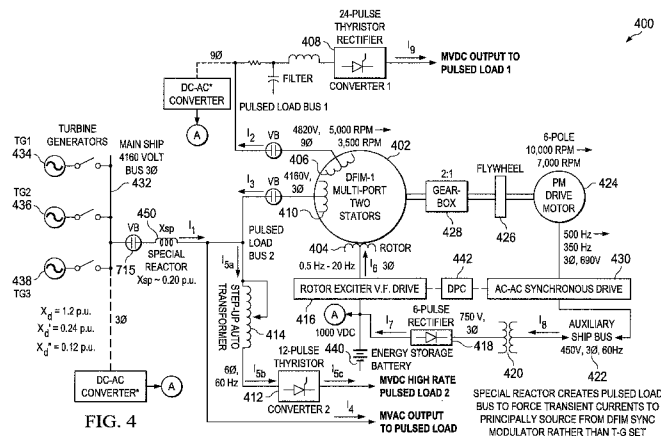


FIG. 4

(57) Abstract: A hybrid energy storage system is configured to control pulsed power. A first dynamo-electric machine (434, 436, 438) is coupled to an inertial energy storage device (426) and has multiple input stator windings configured to accept input power from a source. A polyphase output stator winding is configured to deliver electric power having a first response time to a DC bus. A secondary energy storage system (440) is coupled to the DC bus and is configured to convert its stored energy to electric power in a bidirectional manner. A second dynamo-electric machine (402) has an input stator winding (410) and at least one polyphase output stator winding (404) coupled to a converter, the converter coupled to a DC output. A polyphase boost exciter (416) is configured to derive energy from the DC bus and excite the second machine tertiary stator winding, wherein the second machine is configured to be excited at a faster rate than the first response time of the first machine.

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**INTERNATIONAL SEARCH REPORT**

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A. CLASSIFICATION OF SUBJECT MATTER  
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B. FIELDS SEARCHED  
Minimum documentation searched (classification system followed by classification symbols)  
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C. DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 2014/346868 A1 (KUZNETSOV STEPHEN B [US]) 27 November 2014 (2014-11-27) paragraph [0033] - paragraph [0044]; figure 3 paragraph [0059] - paragraph [0060]; figure 7	1-21
A	----- WO 02/061910 A2 (SATCON TECHNOLOGY CORP [US]) 8 August 2002 (2002-08-08) figure 6	1-21
A	----- US 6 161 495 A (AMBS LORAN [US]) 19 December 2000 (2000-12-19) abstract	1-21
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See patent family annex.

\* Special categories of cited documents :

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# INTERNATIONAL SEARCH REPORT

Information on patent family members

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