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(54) Title: A DRIVE TRAIN FOR A HYBRID ELECTRIC VEHICLE AND A METHOD OF OPERATING SUCH A DRIVE TRAIN

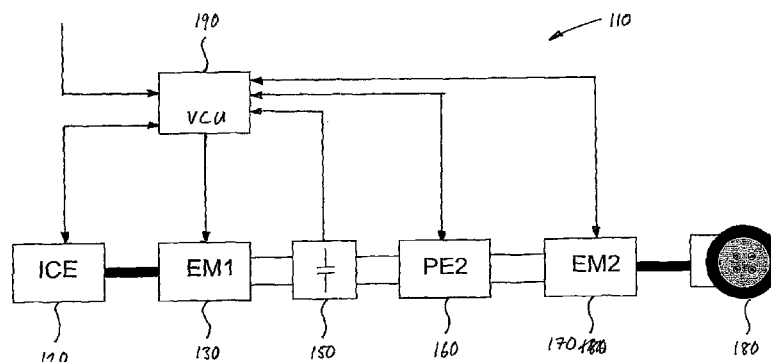


Fig. 2

(57) Abstract: A method of operating a drive train (110) for a hybrid electric vehicle, and a drive train, is disclosed. The drive train comprises an internal combustion engine (120), a first electrical machine (130) and electrical energy storage means (150). The internal combustion engine is coupled to drive the first electrical machine as a generator and the first electrical machine connected to supply electrical energy to the electrical energy storage means. The electrical energy storage means is arranged for supplying electrical energy to at least a second electrical machine (170) for driving wheels (180) of a hybrid electric vehicle. The method comprises the steps of sensing a parameter indicative of the voltage across the electrical energy storage means and, in response to this sensed parameter, controlling the internal combustion engine and/or the first electrical machine such that the first electrical machine operates to give rise to a voltage output of the first electrical machine such that the electrical energy storage means is charged without the need for power electronics.



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B. FIELDS SEARCHED
 Minimum documentation searched (classification system followed by classification symbols)
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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, WPI Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 5 778 997 A (SETAKA YOUSUKE [JP] ET AL) 14 July 1998 (1998-07-14)	1-5,10, 13-16, 24-26
Y	column 3, line 29 - line 41; figures 1,7 column 4, line 32 - line 35; figure 2	6-9,11, 12, 17-23,27
Y	----- US 2002/123836 A1 (KOMIYAMA SUSUMU [JP] ET AL) 5 September 2002 (2002-09-05) paragraphs [0061], [0062], [0064], [0065]; figure 5 paragraph [0049] - paragraph [0055]; figure 4	6-9,11, 12,17-20
Y	----- US 2002/069000 A1 (NAKAO YOSHITADA [JP]) 6 June 2002 (2002-06-06) paragraphs [0002], [0057] -----	21-23,27

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