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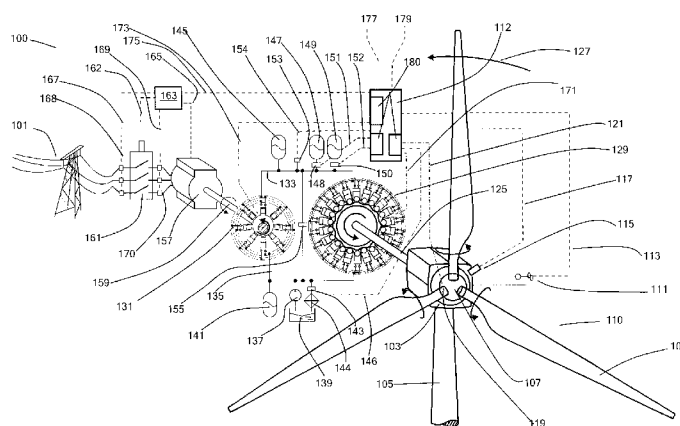
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(54) Title: ENERGY EXTRACTION DEVICE, GROUP OF ENERGY EXTRACTION DEVICES AND OPERATING METHODS

[Fig. 1]



(57) Abstract: A wind turbine generator (100), or other energy extraction device, has a hydraulic circuit comprising a hydraulic pump (129) driven by a rotating shaft (125) and a hydraulic motor (131) driving an electricity generator (157), or other load. A high pressure manifold (133) extending between the pump and motor is in communication with an accumulator (145, 147, 149). A controller receives a control signal and regulates the displacement of working fluid by the hydraulic pump and the hydraulic motor relative to each other. Thus, power input through the rotating shaft and output to the load can be decoupled for at least a period of time and the energy output of energy extraction device can be varied, for example to smooth the total power output to an electricity grid (101), without compromising power input. A group of energy extraction devices can be controlled in concert to maximise power input while providing smooth power output. Individual electricity generators in different energy extraction devices can be switched on and off in concert to provide smooth power output while benefiting from the reduced energy losses that can be obtained by switching off electricity generators where possible.





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B. FIELDS SEARCHED
 Minimum documentation searched (classification system followed by classification symbols)
 F03D F04B F03C
 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)
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