

Title (en)

AUTOMATIC PITCH CONTROL FOR HAWT WIND TURBINES

Title (de)

AUTOMATISCHE ANSTELLWINKELSTEUERUNG FÜR HAWT-WINDTURBINEN (HAWT HORIZONTAL AXIS WIND TURBINES)

Title (fr)

COMMANDE AUTOMATIQUE DE PAS POUR LES ÉOLIENNES À AXE HORIZONTAL

Publication

EP 2411667 A2 20120201 (EN)

Application

EP 10711259 A 20100324

Priority

- GB 2010050500 W 20100324
- GB 0904921 A 20090324

Abstract (en)

[origin: WO2010109238A2] A self setting and self powered system for adjusting the blade angles of a wind turbine such that they have a high angle of attack when parked to promote early start up, move to their ideal setting angle for normal running, can respond to gusts and lulls with appropriate changes, and feathers the blades to limit the rpm and reduce loads in storm conditions. The system balances the thrust loads on the turbine against centripetal forces generated by masses reacting to the rpm, increasing the blade pitch with gusts to increase torque and hence rotational acceleration and reducing blade pitch in lulls to conserve rotational momentum, and uses springs to establish the starting position and the rpm limit appropriate for the generator mechanism.

IPC 8 full level

F03D 7/02 (2006.01)

CPC (source: EP GB US)

F03D 7/022 (2013.01 - GB); **F03D 7/0224** (2013.01 - EP US); **F03D 7/04** (2013.01 - GB); **F05B 2260/77** (2013.01 - EP US); **Y02E 10/72** (2013.01 - EP US)

Designated contracting state (EPC)

AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO SE SI SK SM TR

DOCDB simple family (publication)

WO 2010109238 A2 20100930; WO 2010109238 A3 20110428; CN 102439294 A 20120502; EP 2411667 A2 20120201; GB 0904921 D0 20090506; GB 2471060 A 20101222; US 2012014794 A1 20120119

DOCDB simple family (application)

GB 2010050500 W 20100324; CN 201080017970 A 20100324; EP 10711259 A 20100324; GB 0904921 A 20090324; US 201013260197 A 20100324