

Title (en)

METHOD FOR DETERMINING THE REMAINING SERVICE LIFE OF A WIND TURBINE

Title (de)

VERFAHREN ZUM BESTIMMEN EINER RESTLEBENSDAUER EINER WINDENERGIEANLAGE

Title (fr)

PROCÉDÉ SERVANT À DÉTERMINER LA DURÉE DE VIE RESTANTE D'UNE ÉOLIENNE

Publication

EP 3283762 A1 20180221 (DE)

Application

EP 16716537 A 20160413

Priority

- DE 102015206515 A 20150413
- EP 2016058068 W 20160413

Abstract (en)

[origin: CA2980644A1] The invention relates to a method for determining the remaining service life of a wind turbine. The method comprises continuously detecting movements or vibrations of components of the wind turbine by means of sensors while the wind turbine is operating, and determining modes and frequencies of the movements or vibrations. In addition, the forces acting on the components of the wind turbine are determined on the basis of a model, in particular a numerical model, of the wind turbine, and stress spectra and/or load spectra of the components of the wind turbine are determined. Furthermore, the method comprises determining or estimating the remaining service life by comparing the determined stress spectra and load spectra with total stress spectra and total load spectra.

IPC 8 full level

F03D 17/00 (2016.01)

CPC (source: CN EP US)

F03D 17/00 (2016.05 - CN EP US); **G01M 5/0016** (2013.01 - US); **G01M 5/0025** (2013.01 - US); **G01M 5/0041** (2013.01 - US); **G01M 5/0066** (2013.01 - US); **F05B 2240/912** (2013.01 - EP US); **F05B 2260/80** (2013.01 - EP US); **F05B 2260/821** (2013.01 - CN EP US); **F05B 2270/331** (2013.01 - EP US); **F05B 2270/332** (2013.01 - EP US); **Y02E 10/72** (2013.01 - EP); **Y02E 10/728** (2013.01 - EP US)

Citation (search report)

See references of WO 2016166129A1

Designated contracting state (EPC)

AL 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 RS SE SI SK SM TR

Designated extension state (EPC)

BA ME

DOCDB simple family (publication)

DE 102015206515 A1 20161013; AR 104236 A1 20170705; BR 112017021932 A2 20180703; CA 2980644 A1 20161020; CA 2980644 C 20200901; CN 107454925 A 20171208; EP 3283762 A1 20180221; JP 2018511734 A 20180426; KR 20170133471 A 20171205; TW 201704636 A 20170201; US 2018283981 A1 20181004; UY 36625 A 20161130; WO 2016166129 A1 20161020

DOCDB simple family (application)

DE 102015206515 A 20150413; AR P160100985 A 20160413; BR 112017021932 A 20160413; CA 2980644 A 20160413; CN 201680021536 A 20160413; EP 16716537 A 20160413; EP 2016058068 W 20160413; JP 2017553422 A 20160413; KR 20177031718 A 20160413; TW 105111389 A 20160412; US 201615562391 A 20160413; UY 36625 A 20160413