

Title (en)

FLUID FLOW CONVERTER HAVING A TORSION BEARING IN A BLADE ROOT

Title (de)

STRÖMUNGSKRAFTWERK MIT DRALLLAGER IM BLATTWURZEL

Title (fr)

CONVERTISSEUR AU COURANT DES FLUIDES AVEC UN PALIER A TORSION DANS LE RACINE DU PALE

Publication

EP 2870355 A1 20150513 (DE)

Application

EP 13737188 A 20130704

Priority

- DE 102012106099 A 20120706
- EP 2013064127 W 20130704

Abstract (en)

[origin: CA2877046A1] The invention relates to a flow-based power generating plant with a turbine that can be subjected to a fluid flow and comprises a number of blades that extend from a blade root to a blade tip and are attached by the blade root to a rotating rotor, wherein, under the effect of the fluid flow, the blades can be elastically twisted about an axis (P) running through the blade root in such a way that the pitch of the blades can be increased, wherein the blade root is fastened to the rotor with a bearing device interposed and the bearing device is formed with respect to the axis rigidly in terms of tension, compression, bending and shearing but yieldingly in terms of torsion, wherein the bearing device has a primary connection part fastened to the rotor and a secondary connection part fastened to the blade root, which parts are connected to one another via a multiplicity of leaf springs in such a way that the primary connection part can be turned in relation to the secondary connection part under elastic deformation of the leaf springs, and the leaf springs are arranged on a substantially circularly formed circumference and have a rectangular cross section with a longer side and a shorter side, the longer side running radially outwards with respect to the circumference on which the leaf springs are arranged.

IPC 8 full level

F03D 1/06 (2006.01); **F03B 11/06** (2006.01); **F03D 80/70** (2016.01)

CPC (source: EP US)

F03B 11/06 (2013.01 - EP US); **F03D 1/0658** (2013.01 - EP US); **F03D 80/70** (2016.05 - EP US); **F05B 2240/40** (2013.01 - EP US); **F05B 2240/50** (2013.01 - EP US); **F05B 2250/411** (2013.01 - EP US); **Y02E 10/20** (2013.01 - EP US); **Y02E 10/72** (2013.01 - EP US)

Citation (search report)

See references of WO 2014006133A1

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 102012106099 A1 20140109; CA 2877046 A1 20140109; EP 2870355 A1 20150513; US 2015139804 A1 20150521; WO 2014006133 A1 20140109; WO 2014006133 A8 20140530

DOCDB simple family (application)

DE 102012106099 A 20120706; CA 2877046 A 20130704; EP 13737188 A 20130704; EP 2013064127 W 20130704; US 201314413201 A 20130704