

Title (en)  
TURBINE ANNULAR AXIAL ROTOR

Title (de)  
RINGFÖRMIGER AXIALROTOR EINER TURBINE

Title (fr)  
ROTOR AXIAL ANNULAIRE POUR TURBINE

Publication  
**EP 2394052 A1 20111214 (EN)**

Application  
**EP 09824326 A 20091109**

Priority  
• CA 2009001640 W 20091109  
• CA 2643587 A 20081110

Abstract (en)  
[origin: WO2010051647A1] An annular axial rotor for a turbine. The rotor includes a hub structure having a hub diameter and attached to a rotating shaft of the turbine. The rotor also has a plurality of turbine blades extending radially from the hub structure, and at least one annular shroud surrounding the plurality of turbine blades. The annular shroud has a first annular shroud diameter. The turbine blades are held between the hub structure and the annular shroud and the hub diameter is at least 0.3 times the shroud diameter. This configuration greatly facilitates the use of a plurality of airfoils to adjust the solidity and the tip speed ratio of the rotor. This can be achieved while maintaining a high coefficient for the conversion of fluid energy into useful torque.

IPC 8 full level  
**F03D 1/06** (2006.01); **F03B 3/12** (2006.01); **F03D 1/04** (2006.01); **F03D 3/06** (2006.01)

CPC (source: EP US)  
**F03B 17/061** (2013.01 - EP); **F03D 9/25** (2016.05 - EP US); **F03D 80/00** (2016.05 - EP US); **F05B 2240/133** (2013.01 - EP); **Y02E 10/20** (2013.01 - EP); **Y02E 10/72** (2013.01 - EP)

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

Designated extension state (EPC)  
AL BA RS

DOCDB simple family (publication)  
**WO 2010051647 A1 20100514**; CA 2643587 A1 20100510; EP 2394052 A1 20111214; EP 2394052 A4 20140115

DOCDB simple family (application)  
**CA 2009001640 W 20091109**; CA 2643587 A 20081110; EP 09824326 A 20091109