

TECHNOLOGY

DDIS INSTALLED A NEW WIND GENERATION WIND TURBINE TO DEMONSTRATE ITS KNOW HOW

It has a hub height of 50 meters, a diameter of 60 meters, weighs 90 tons (including the tower) and is called DDIS 60. She was just released from the workshop and erected at the end of January at Onnaing near Valenciennes (France). The DDIS 60 is a new generation wind turbine, designed by a French entrepreneur who intends to revolutionize the landscape of French wind industry ... Its strengths: an economic wind turbine of easy manufacturing, fully compliant with grid codes and multiphased, ie with an alternator and power converter splitted in 3 parallel modules. If one breaks, the wind turbine continues to produce more than 60% capacity, an advantage rather easy to understand! Explanations ...

20 years experience, international patents, a major innovation ...



Jean Marc CANINI is 55 years old and has a solid experience in electrical engineering and one ambition: to design a new generation wind turbine, "economic" and reliable. In 2008, he created DDIS (Direct Drive Systems), 3 persons at the time and worked for 2 years designing innovative electric generator, direct drive (gearless). Its aim: to propose a new machine architecture, more compact, less heavy and which does not stop in case of electrical cut-off. But the major innovation lies in the alternator with a power converter made by 3. Where a conventional electric machine has 3 phases, the DDIS account 9! In normal language this means that this machine is less expensive to manufacture because its components are more common and therefore more economical. It also means that if one component breaks, the wind turbine continues to be produced at 2 / 3 of its capacity. The wind turbine is therefore continuously available! And soon we imagine the strength of this technology for offshore wind turbines for example. Storm at sea, the conventional wind turbine is stopped, inaccessible, production is lost, not if the wind turbine is a DDIS 60.

and "pilot" wind turbine to demonstrate the know-how!



800 kW, 60 m wingspan and has a 45-ton nacelle, the "pilot" wind turbine erected at Onnaing is not intended to be the highest or most powerful one, and for good reason. With financial support from OSEO Innovation, the Nord Pas de Calais region and FEDER funds, DDIS has invested 3 million euros to implement the DDIS 60, primarily to demonstrate its technological innovation in the field. On the base of this first wind turbine, one of the objectives of DDIS is to license its technology to manufacturers in Europe and also in India and America. But the ambitions are clearly in the future to deploy this technology on machines of 2 and 5 MW. The model and architecture of the electrical machine designed by DDIS may also be of interest in the markets of naval propulsion or hydro-electric generation, where the absence of gearbox, the lowest head mass and the strong grid compatibility represent a real competitive advantage.

As a technocentre DDIS enjoys the status of Young Innovative Company and was awarded, in June 2008, the prize of the Ministry of Research. Headquartered in Anzin DDIS now has ten employees and was surrounded by local SMEs who participated in the manufacturing of this pilot wind turbine.

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Key figures:

DDIS 60
Three-bladed wind turbine
Hub height: 50 m
Rotor diameter: 60 m
Power: 800 kW
Estimated energy production: 2,000,000 kWh / year
Equivalence consumption: 400 households (1,200 persons)
Class III - A (highest level of turbulence)
Nacelle fully equipped : 45 t
Tower: 45 T
Total weight: 90 Tons

About DDIS

DDIS is an electrical engineering company founded in May 2008 by Jean-Marc Canini.

The objective of the company is to develop a new electric machine architecture having as main target wind energy production.

DDIS strategy is to sell licenses in France and worldwide.

For more information, visit:

www.ddiswt.com