

20-June 2007 New application of ALXION frameless alternators for wind turbines in water pumping for irrigation

The wind turbine installations are growing strongly, according a rate which is itself continuously growing. Everybody knows the spectacular projects of wind farms including several huge wind turbines of 1 to 4MW each, but the vertiginous growth attached to the small wind turbines is much less known; that is to say wind turbines for individual houses, farms, small industries from 1KW to 50 KW, where the goal is to produce the electricity that will be directly consumed, and only accessorily to sell the extra production to Electricity utilities.

In that context, the French company EOLTEC (<http://www.eoltec.com>) has operated in March 2007 an installation of 7 wind turbines with a rated power of 3 KW each, used for directly supplying pumps without Power Electronics in order to irrigate plantations along the road RD602 accessing to Nice International Airport (France) . Those wind turbines are equipped with ALXION frameless alternators 400STK2M in direct drive without gear on the axle of the blades. The interest of those Direct Drive alternators is both the high efficiency, the silent operation, the load capability even at low speed and the lowest resistive torque resulting in the start of the turbine from a low wind speed, thus maximizing the generation of electricity in exploitation. That new installation is particularly cost-effective due to the absence of Power Electronics.

The collaboration of EOLTEC and ALXION is not new and numerous series of SCIROCCO 6 KW wind turbines equipped with 400STK3M alternators are installed worldwide.



Wind turbines EOLTEC with STK alternators ALXION 400STK2M, on road RD 602