

‘Aracnocóptero’, an aircraft designed to inspect wind turbines

The *Aracnocóptero* is an unmanned aerial vehicle developed by the company Arbórea, a company based in the Scientific Park of the University of Salamanca (USAL). This robotic ship has been adapted to the requirements of companies that manage wind farms for use in the inspection of wind turbine blades, lowering costs in their preventive inspections.

The development of the *Aracnocóptero* is the result of the collaboration between Arbórea and the Bisite research group of the USAL.



Aracnocóptero EOL6 in flight in a wind farm

Although the device is small in size, it can carry several kilos of weight and offers great stability, in addition to being prepared to carry cameras and sensors. The *Aracnocóptero* had eight engines (hence the thing about Arachno, on the eight legs of arachnids), but the new Eol 6 model only has six.

The blades of the wind turbines suffer the inclement weather and it is necessary to review them, since if problems are detected in an initial stage they can be repaired with a lower cut for the owner company; Failure to do so, the cost is increased by having to disassemble the blades, hence the need for a rigorous inspection and maintenance plan, and this is where the Eol 6 plays its part, since it performs the inspection work quickly, easy control and providing all the data needed for decision making. The process of improving the aircraft continues, both in its structure, mainly titanium and carbon, as in the electronics and software it requires. The Eol 6 is not limited to this wind turbine inspection task, since its functionality allows it to be a good tool in other sectors.