Power curve measurement with Spinner Anemometer according to IEC 61400-12-2

In wind industry power performance measurements on site is an increasing challenge due to the larger and larger rotors. An IEC standard on power performance verification with nacelle anemometry, IEC61400-12-2 [1], has been developed and was published 2013. However, nacelle anemometry has a number of drawbacks that makes use of the standard with respect to nacelle anemometry difficult to apply in the field [3] [4]. An option in the standard is to use spinner anemometry, a type of wind sensor that measures wind speed on the spinner in front of the rotor. The report is based on spinner anemometer measurements from two adjacent wind turbines and a met-mast. Due to the site layout, it is possible with the met-mast to measure the power curve of both turbines.

The report also presents a method for evaluation of uncertainty related to the spinner anemometer.

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