Calibration of a spinner anemometer for flow angle measurements by use of wind turbine yawing - DTU Orbit (11/12/2018)

**Calibration of a spinner anemometer for flow angle measurements by use of wind turbine yawing**

The present report describes a method to calibrate a spinner anemometer for angle measurements. The turbine is yawed several times (5 times approximately 60 with respect to the wind direction) in steady wind (> 6 m/s) and measurements of yaw position (measured by a yaw position sensor) and yaw misalignment (measured by the spinner anemometer under calibration) are recorded. The tangent of the two angles is plotted in a scatter plot. A linear fitting is made, and the slope coefficient is the correction factor $F_{\alpha}$. The method applied to a Nordtank 500kW wind turbine erected at the Risø test site is presented in this report.

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