

WindSense: Increasing the Cost Efficiency of Offshore Wind Energy by integrating

Publieke samenvatting / Public summary

Aanleiding

Modern blade designs tend to have a more slender design and as such a smaller blade root, for two reasons. A more slender blade allows to increase the blade length and thus increasing the swept area of the turbine, and with this increase the performance. The length of the blade is quadratic to the energy produced. The second reason to go for a more slender blade is related to road transport, up to a maximum width of 3.5m only a special transport permit is required, for anything wider for each transport, in each municipality a special permit is required. Either the blades cannot be transported to the site or it becomes far more costly.

Doelstelling

To demonstrate in a relevant environment that a root bushings connected rotor blade with optical sensory fibres running from the blade root to the point with the highest chord, will improve the predictability and reliability of material behaviour in such a way, that it is safe to reduce the common over-dimensioning of rotor blades.

Resultaat

A. Material Test Coupons B. Test Coupon Blade Root Connection C. Production process description D. Test report Analysis report E. Concept design F. Concept predictive twin G. Validated final design H. Validated predictive twin of a blade root and transition zone I. Optimisation Strategy report J. Validated predictive twin for blade root connection. K. Report on certification, business model and

Projectinformatie / Project information

Projectnummer / Project number
HER+-00643533

Subsidiebedrag / Grant amount
€ 614.858,00

Algemene informatie / General information

Penvoerder / Secretariat
TRES4

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development plan.

De data in deze applicatie is afkomstig van de Rijksdienst voor Ondernemend Nederland (RVO) en wordt in samenwerking met de Topsector Energie ontsloten.

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