

# We4Ce's 2.5-3MW rotor blade design passes validation test at Suzlon in India

*We4Ce designed rotor blade structure; InDutch Composites produced mold and prototype; Suzlon performed fatigue tests; TÜV Rheinland issued certification*

ALMELO, NETHERLANDS, January 29, 2025 /EINPresswire.com/ -- We4Ce, a Dutch rotor blade design and technology supplier, has this month completed end-to-end blade tests in India for a new 2.5-3MW rotor blade currently under development at a global blade manufacturer. After designing the blade structure in the Netherlands, [InDutch](#) Composites Technology produced the mold for the prototype that [Suzlon](#) Group subsequently tested for load and fatigue. The results met the IEC61400-5:2020 certification, the production standard for engineering integrity of wind turbine blades.



We4Ce's 2.5-3MW blade design was subjected to fatigue tests at Suzlon's test center

Eight months of design and engineering work preceded the final validation testing and included blade structure design and the infusion process for the materials – carbon fibres and epoxy resin - as well as training for the production of two molds and one complete rotor blade prototype. Passing these validation tests, the new rotor blade is ready for serial production.

“From an engineering perspective, this result is motivating. We had a very tight schedule of just eight months, which is a challenge, especially for the production of mold and prototype. In the end, the successful TÜV certification proved that our engineering design will work in practice,” says Arnold Timmer, managing director, We4Ce.

The standard IEC 61400-5:2020, issued by independent test service provider, TÜV Rheinland,

specifies the requirements for the engineering integrity of wind turbine blades and operational safety and includes aerodynamic, structural design and material selection, We4Ce's competence. The certification provides the technical reference for designers and manufacturers among others.

We4Ce's rotor blades engineers designed the 2.5-3MW rotor blade at its headquarters in Almelo, Netherlands. InDutch Composites Technology produced the molds and prototype at its facility in Vadodara, Gujarat, India where also Suzlon's testing center is located.



Two of We4Ce's engineers working on rotor blade designs for wind turbines

We4Ce trained technicians from the blade manufacturer and InDutch Composites Technology to use its infusion method for the prototype production, whereby carbon fibers and epoxy resin are placed in the mold and then vacuum processed for uniform distribution. Following prototype production, Suzlon performed static load tests, dual-axis fatigue and post fatigue test, simulating 20-year lifecycle performance.

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*Arnold Timmer, CEO, We4Ce*

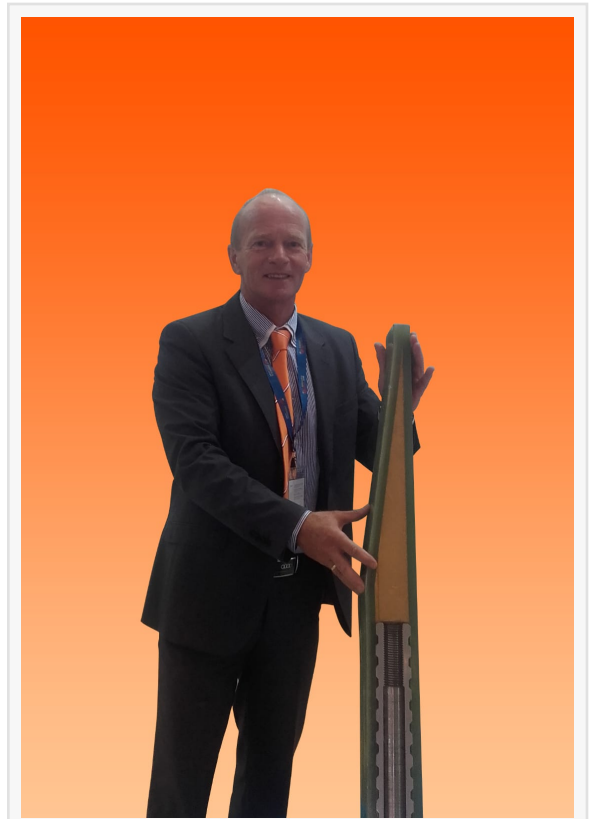
Offering full service from documentation, drawings, static to fatigue testing requirements, We4Ce supports with training blade manufacturers worldwide during prototype blade production on-site. Currently, 40 customized rotor

blade engineering designs have resulted, from 900kW 23-m to 14MW 108-m blade length.

#### About We4Ce

Headquartered Almelo, the Netherlands, We4Ce has more than 25 years' experience in rotor blade design, blade root bushing concepts M20-M42, sectional exchangeable rotor blade tips as well as the Re-FIT blade root bushing repair (Front Infusion Technology) method and root cause analysis. Working closely with wind park owners, We4Ce's research lab performs a range of fatigue tests and extreme load tests for different sizes and parameter changes, aiding the development of bushings for manufacturers. We4Ce also works with TNO and Fraunhofer test institutes for large size sample testing and approval for the certification bodies, including TÜV and UL.

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Arnold Timmer, CEO of We4Ce, holds one of the company's latest inventions

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