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## **DNV issues verification letter for Polytech's leading edge protection, ELLE™, used for wind turbine rotor blades**

### **DNV verifies ELLE™'s erosion resistance according to DNV-RP-0573**

DNV has issued a verification letter for erosion resistance of Polytech's leading edge protection (LEP) softshell, ELLE™, which protects wind turbines blades from erosion. This is the first time that DNV verifies an LEP product according to the latest standards, DNV-RP-0573, and therefore ELLE™ is currently the only LEP solution on the market with such verification.

In line with DNV's recommended practice DNV-RP-0573 for wind turbine blades, Polytech carried out extensive rain erosion testing (according to DNV-RP-0171) combined with 25 weeks of aging cycles, adhesion testing, and tensile fatigue tests to characterize the performance of the LEP system. DNV evaluated the test results and their interpretation, the work instructions, material specifications, and also inspected the test specimens and witnessed the tests that were not already DANAK accredited.

Based on these evaluations, DNV concluded that Polytech's ELLE™ meet the recommendations within DNV-RP-0573.

"Leading edge erosion of wind turbines blades is a widespread and major problem in wind industry that leads to high and unexpected repair costs", explains Christopher Harrison, Principal Engineer Rotor Blades at DNV. "That is why DNV's priority has been to bring confidence to the wind industry by supporting the development of LEP materials and solutions. Our two recommended practices, DNV-RP-0171 and DNV-RP-0573, provide an important framework for developing LEP solutions. We are happy to see that suppliers like Polytech use these recommended practices as a foundation when developing their LEP solutions to ensure a durable product that can tackle leading edge erosion."

Polytech used the DNV-verified test results to calculate the lifetime durability of ELLE™. The lifetime estimations show that in most cases, ELLE™ remains in the incubation period for 25 years of operation. DNV also reviewed these lifetime calculations and found them to be conservative estimates.

Polytech's CEO Mads Kirkegaard welcomes DNV's verification. "We are proud of this recognition by DNV, verifying the erosion resistance and durability of our ELLE™ leading edge protection softshell. We introduced ELLE™ to the market in 2016, and since then, we have further developed and improved it - not only to ensure durability of the product itself, but also to assure our customers that leading edge erosion can in fact be avoided. We recommend mounting ELLE™ already at the blade

manufacturing site for lowest levelized cost of energy, but the product can easily be applied to older, already existing turbines the first time they are up for LE repair to avoid future problems.”

The DNV verification process can also be used as a basis for developing various tools that are beneficial for customers and other players in the wind sector. Polytech, for example, used the DNV-verified results above to develop an erosion calculator. This tool provides wind turbine site owners and developers site- and turbine-specific erosion forecasts and provide recommendations to the required amount of LEP.

The DNV verification letter for Polytech’s ELLE™ gives wind turbine manufacturers, wind park owners, and developers a documented proof for strength and durability. By using such LEP solutions, the wind industry is on the right track to minimize costs related to leading edge erosion.

**If you have questions to this press release, please do not hesitate to contact [Polytech’s press and media team](#).**

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