

Repairing Rotor Blade Edges Six Times Faster

Thanks to a single-layer structure and extremely fast curing, rotor blade edges of wind turbines can be repaired six times faster compared to conventional repair systems using an advanced elastomer coating.



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With the new coating, rotor blade edges can be repaired without additional priming and filling in just one work step.

Contractors have clear requirements for rotor blade repair: they expect a one product solution for filling and leading edge protection that offers easy and safe application, fast curing, and long service life. Teknos has therefore further developed its Teknoblade Repair 9000 coating system and improved it in terms of resistance and application.

Teknoblade Repair 9000-20 is an elastomeric-based high-build coating with 100 % solids content. In a single coat it forms a protective, elastic layer with a thickness of up to 2500µm, and it cures in a few minutes. The leading edge can be repaired in just one step without additional priming or filling, which delivers a considerable impact on time-savings.

While it takes about two days to repair a blade with a traditional system, Teknoblade Repair 9000-20 makes it possible to repair three blades in one single day, which is six times faster.

Long service life

The colourless product version launched in 2018 has already impressed by the long service life of leading edges. Due to its special elasticity, the elastomeric layer can absorb high energies in collision with objects. The resistance of the new white version has been further improved. In rain erosion tests (RET) according to DNVGL-RP-0171_2018, the leading edges withstand the exposure at 130m/s speed

for more than 10 hours. After accelerated UV-light aging the edges withstand defined impact 270 minutes, longer than required by DNVGL. All in all the system offers considerably increased resistance and enables a longer service compared to conventional coating systems on rotor blades.

Application has been improved, too. The coating can be applied both manually or by using a battery powered caulking gun and a unique spatula that has been further optimised. The new design ensures the uniformity of the layer thickness and serves as a wind shield during application. With a view to the near future, the simplicity of the application process makes elastomer coating an ideal solution when robotic applications are being considered.

Quality assurance is easy, as the product cures very fast, and both layer thickness and hardness according to Shore A can be measured on site at once. As a solvent-free product containing no volatile organic components (VOC), Teknoblade Repair 9000-20 is more sustainable than traditional repair systems and enables safe application with minimal personal protective equipment (PPE) required. //

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