

Press release

CNC Onsite with on-site rotor blade root repair solution at Husum Wind

Conceived at Husum Wind two years ago as a joint development with We4Ce, the novel repair service will be presented on stand 3C32; Blade inserts drilled out and replaced in days; reduced logistics costs, minimal downtime and environmental savings; also alternative to decommissioning; Dutch partner We4Ce supplies high-strength replacement bushings

VEJLE, Denmark, 25 August 2023 – When CNC Onsite, a Danish machining tool expert, was looking for a partner for its blade root repair solution, the company was fortunate to connect with We4Ce, a Dutch rotor blade specialist located in the same exhibition hall at Husum Wind. Two years on and the companies can celebrate the successful development and launch of the wind turbine blade root repair service, which offers on-site repairs in days rather than costly transport of the blade to the manufacturer, the standard industry solution.

“Thanks to the Husum Wind venue, in 2021 we were able to identify a suitable partner, We4Ce, who are able to supply not only high-strength replacement bushings but also extensive knowledge about the cause of blade root damage, which is unfortunately not that uncommon,” says Søren Kellenberger, sales director and partner, CNC Onsite.

Embedded into the blade root during the manufacturing process, the threaded inserts joining the blade to the nacelle hub, can loosen over time. The polymer surrounding the inserts can, over time, shrink, which can result in microcracks that allow contaminants to weaken the bonding, ultimately endangering the structural safety of the blade root and, at worst, resulting in the blade breaking away.

Blade root damage to older wind turbines previously could only be repaired at the manufacturing site, leaving operators with a huge logistical task and a long downtime. With its new portable tool, developed to efficiently replace damaged inserts in blade roots, CNC Onsite is the first to offer economical precision repairs on-site directly in the turbine park, eliminating complex transportation and waiting times. At Husum Wind, 12-15 September at its stand 3C32, CNC Onsite will demonstrate the concept using multimedia and live commentary.

With CNC Onsite’s method, the rotor blade is dismantled and placed in a repair environment on site. The portable, automatic machining tool drills away the faulty inserts, matching the precise dimensions of the replacement part.

CNC Onsite and We4Ce offer full-service solution

CNC Onsite has teamed up with We4Ce, an international blade rotor and blade root connection expert, to deliver a complete repair solution focused on high-strength blade roots.

“The difficulties in replacing a threaded insert, or bushing, are centering the replacement and its bonding and we have developed inserts that consider both. This full solution offers consistent and stronger bond between the insert and the blade,” explains Edo Kuipers, Engineering Manager and Co-owner of We4Ce.

The exact cost of CNC Onsite's energy-efficient repair service varies depending on the number of blades to be repaired, the distance to the site and the training of the customer's technicians if required, among other factors, but it is always much cheaper than standard repair methods.

Older blade designs have shorter lifetime

The green energy transition means blade manufacturers are not only running at full capacity, but older models are often phased out earlier, which means the mold has to be recreated. Blades are the most expensive components in a wind turbine, accounting for some 25 to 30 percent of the build cost, as well as one of the most fragile.

Replacing blades on older turbines is often not financially feasible. The operator may decide to keep the turbine running at reduced capacity or even decommission it. Keeping the turbines running is important for renewable energy targets and this repair service, taking only a few days, can play an important part in extending turbine lifetimes.

The full repair service launched 2022

“From our many discussions with potential customers, it is clear there is a need for onsite repair. We look forward to presenting the repair concept at Husum Wind, which has a special place in our partnership with We4Ce. We believe it is the first on-site method. This is available for all blade sizes,” concludes Kellenberger.

CNC Onsite's blade repair solution, as well as its flange milling tool for 10-metre flanges and a patented yaw ring repair method, will be presented on stand 3C32 at Husum Wind 23.

About CNC Onsite

Headquartered in Vejle, Denmark, CNC Onsite operates in the onshore and offshore wind sector, designing and delivering high-precision mobile machining solutions for large diameter steel flanges and blade roots. CNC Onsite also offers specialized repairs of yaw rings, blade root inserts, rotor locks, generator shafts, bearing housings and fixings.

www.cnconsite.dk

About We4Ce

We4Ce, the rotor blade specialist, was founded in 2008 with experts in the wind energy sector. Headquartered in the Netherlands, the company has more than 25 years' experience in rotor design, blade root bushing concepts M20-M42, sectional exchangeable rotor blade tips as well as the Re-FIT blade root bushing repair method in the field and root cause analysis. We4ce is exhibiting on stand 2E28 at Husum Wind.

www.we4ce.eu

Media contact

Dr. Malene Conlong
Moller International (for CNC Onsite)
Email: M.conlong@mollerint.dk