

# We4Ce and CEWA Plus sign MOU to scale advanced On-Site blade root remanufacturing across Asia

*New regional service network to scale blade root bushing remanufacturing; New monitoring system "GapMaster Intelligence"; 12 Asian markets, Offshore*

ENSCHEDA, NETHERLANDS, April 22, 2026 /EINPresswire.com/ -- [We4Ce](#), a Dutch engineering authority in rotor blade technology, has signed a Memorandum of Understanding (MOU) with [CEWA Plus](#), a Thai developer and investor in renewable and infrastructure projects, to scale on-site blade root bushing remanufacturing across Asia. Serial orders start in April 2026. The MOU integrates We4Ce's proprietary "Re-FIT" methodology and Danish partner [CNC Onsite](#)'s specialized mobile machining hardware with CEWA Plus's on-site implementation and quality control measures.



CEWA Plus will conduct blade root manufacturing across Asia using We4Ce's Re-FIT method and CNC Onsite's mobile machines

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*Thanongpan Chaipalangrit,  
Project Manager at CEWA Plus*

The partnership builds on the 2025 application in Thailand, where CEWA Plus used the technology to restore damaged bushings on 22 blades in-situ at an operational wind park. CEWA Plus is now establishing a regional service hub set to restore thousands of bushings across a multi-gigawatt pipeline. The initiative enables large-scale, sustainable rotor blade maintenance. Following the wind season in April 2026, bushing remanufacturing is scheduled across a 12-country network starting in India, Sri-Lanka, Thailand and Vietnam.

"This MOU marks a strategic shift in how the industry handles structural maintenance," says Arnold Timmer, Managing Director of We4Ce. "By supplying the technical know-how for our Re-

FIT technology and coupling it with CNC Onsite's mobile precision drilling equipment and CEWA Plus's on-site setup, we enable regional service providers to resolve maintenance challenges right at the wind farms."

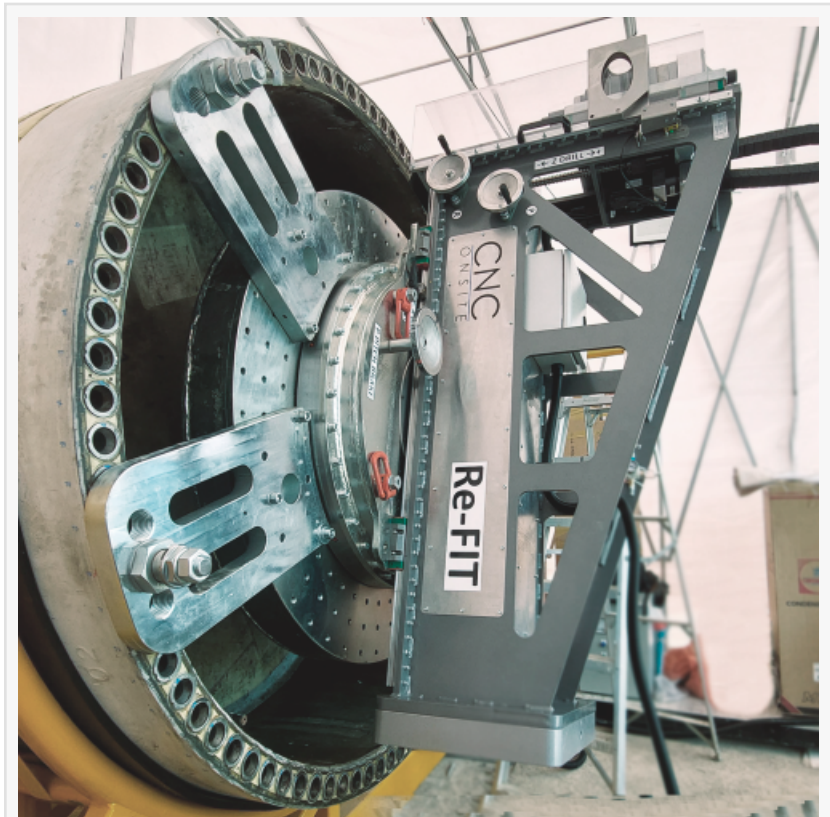
### Redefining blade root bushing maintenance

Blade root bushings are critical metal inserts that serve as the primary structural connection between the blade root and the turbine hub. In blades using polyester embedding, excessive shrinkage or uneven distribution can compromise the bushing's interface layer. This can create microcracks that may expand over time, reducing bonding strength and increasing the risk of the bushing loosening, potentially leading to catastrophic blade failure. The Re-FIT methodology provides the precise removal and re-insertion necessary to ensure a factory-standard mechanical bond.

Previously, addressing loose blade root bushings presented a downtime-ridden, logistical challenge. Operators typically chose between transporting blades to off-site repair facilities or full blade replacement, methods that are not only labor-intensive but also costly. The Re-FIT solution, assessed by UL (DEWI-OCC) offers a high-precision, on-site alternative: downtower remanufacturing.

Replacing bushings, and more critically the interface layer of the blade is a complex aftermarket process. The Re-FIT ensures a high-strength mechanical bond and the structural flatness of the blade root. By eliminating blade transport and waste, the process reduces repair costs by up to 60 percent while significantly lowering both CO2 emissions and downtime.

Delivered under a licensing model, this technology transfer enables wind park operators to carry



The CNC Onsite precision machine is fixed to the blade root to drill out loose bushings



The Re-FIT method uses infusion technology to fix the new bushings

out major blade remanufacturing independently using their own service teams. Optimized for a throughput of several rotor blades per week, the on-site workflow begins by lowering the blades to a controlled work environment for precision-drilling of the damaged interface layer with bushings. Utilizing a patented high-strength replacement and vacuum infusion process, the solution ensures a uniform interface bond that restores full structural strength. This down-tower process is engineered to maintain original surface tolerances and restores the blade root surface flatness, supporting the intended design life.

#### New monitoring system: GapMaster Intelligence

The MOU also covers the integration of "GapMaster Intelligence," a new monitoring system, developed by CEWA Plus. Utilizing high-precision laser scanning technology, the system continually monitors the bond between the bushing and the blade root. If a gap is detected or begins to expand, the system triggers an automated alert via the plant's central monitoring (SCADA) system, providing operators with real-time data. This allows maintenance teams to transition from reactive repairs to a proactive, condition-based approach designed to maintain a 'like-new' standard throughout the blade's service life.

"Having successfully validated the Re-FIT methodology during our initial project in Thailand, we recognized that this approach offers a distinct advantage," says Thanongpan Chaipalangrit, Project Manager at CEWA Plus. "By integrating this specialized capability with our monitoring system, we provide wind farm operators a sustainable pathway to extend asset life".

#### Training in Denmark and the Netherlands

Replicating that success, technical teams from Asia are scheduled for training in Denmark at CNC Onsite and the Netherlands at We4Ce in late spring. The program covers the operation of custom machining hardware to drill out damaged interface with bushings, the application of the patented Re-FIT vacuum infusion process to ensure a high-strength bond and the restoration of structural root flatness. This technology transfer equips independent service providers to apply factory-level precision in a field environment.

"We look forward to welcoming the new continental teams to our European facilities, where we will ensure they are fully trained to apply this level of precision to every blade in the portfolio, " said Søren Kellenberger, CEO at CNC Onsite. "

We4Ce and CNC Onsite are now targeting Brazil and the United States, positioning the Re-FIT methodology as a new standard for global blade root maintenance. The two companies will this year start development of offshore windfarm solution setups.

#### About We4Ce

Based in Enschede, We4Ce is a rotor blade engineering expert with 25 years of experience. The company's expertise spans the full blade lifecycle, including M20-M42 bushing design, exchangeable tips, and specialized aftersales solutions like Root Cause Analysis (RCA). Through partnerships with the TNO test institute, We4Ce validates its patented Re-FIT restoration method

with rigorous fatigue testing. This certified, high-precision bushing solution is offered via a licensing model, developed alongside park owners and major certification bodies like TÜV and UL.

#### About Charoen Energy and Water Asia (CEWA)

CEWA leads Southeast Asia's transition to sustainable infrastructure. Specializing in renewable energy and water management, CEWA focuses on high-impact projects like the Khao Kor Wind Farm to balance economic growth with environmental stewardship. Through advanced technology and strategic partnerships, the company delivers reliable, clean energy solutions to meet the evolving needs of the Asia-Pacific market.

#### About CNC Onsite

Headquartered in Vejle in Denmark, CNC Onsite serves the onshore and offshore wind energy sector delivering as standard solutions: machining of large diameter steel flanges and specialized repair services covering yaw ring, blade root bushings, rotor lock, generator shaft, bearing housing and threaded holes. Removal and replacement of worn and broken bolts round off the offering.

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