December. 15, 2025
Kawasaki Heavy Industries, Ltd.
BladeRobots A/S

Kawasaki Heavy Industries and BladeRobots Form Strategic Partnership for Automated Leading-Edge Maintenance of Wind Turbine Blades

Kawasaki Heavy Industries, Ltd. ("Kawasaki") and BladeRobots A/S ("BladeRobots") have entered a strategic partnership to develop a new solution aimed at automating and streamlining wind turbine blade leading edge maintenance.

Wind power is a promising renewable energy source expected to continue growing steadily. The cumulative installed capacity worldwide has already exceeded 1 terawatt, and demand for wind turbine maintenance is rapidly expanding. Currently, maintenance for leading edge of blades—main components of wind turbines—are primarily carried out manually by specially trained technicians working at great heights, which poses challenges not only in terms of safety and operational efficiency but also in securing skilled personnel.

To address these issues, Kawasaki and BladeRobots will combine its unmanned helicopter "K-RACER" with a blade leading edge maintenance robot to create a new automated solution. In this system, K-RACER lifts the robot onto the blade, where the robot performs maintenance work automatically. Automating blade leading edge maintenance reduces man-hours, improves safety and ensures consistent quality. This approach addresses the growing demand for wind turbine maintenance, enabling efficient and scalable operations.

Demonstration test at a wind farm in Denmark using K-RACER

Prior to concluding this strategic partnership, Kawasaki and BladeRobots conducted a demonstration test at a wind farm in Denmark with the support of Vestas Wind Systems A/S, the global leader in wind energy, confirming the technical feasibility of this solution. In this test, under the strong wind conditions typical of wind farm locations, the process envisioned for actual operations was carried out: lifting the robot with K-RACER, placing it on the leading edge of the wind turbine blade, and then retrieving it and lowering it to the ground—all executed through a combination of automatic flight and remote control.

Leading-edge maintenance robot from BladeRobots

Kawasaki and BladeRobots will accelerate efforts toward real-world deployment and commercialization through this partnership.

＜Kawasaki Heavy Industries, Ltd.＞

A Japanese comprehensive heavy industry manufacturer operating in fields such as aerospace, railways, marine vessels, industrial machinery, energy, and powersports. Kawasaki is advancing the development of its unmanned helicopter, K-RACER, by combining its extensive expertise in helicopter engineering with high-power compact engine technology honed through its motorcycle business. https://global.kawasaki.com/en/

「**Unmanned Helicopter "K-RACER"**」

https://global.kawasaki.com/en/groupvision2030/K-RACER.html

＜BladeRobots A/S＞

A Danish company spun out from Vestas Wind Systems A/S, the global leader in wind energy. BladeRobots develops and provides a robotic solution that automates the maintenance of wind turbine blade leading edge, aiming to improve maintenance efficiency and safety.

https://bladerobots.com/

<Video>

Kawasaki: Unmanned Helicopter "K-RACER" Delivers a Maintenance Robot onto a Wind Turbine Blade

END