

Typhoon-ready blades

Leitwind has worked hard in R&D and manufacturing to produce a new set of turbines and blades that can withstand extreme, windy conditions. It is a development that will aid the exploitation of typhoon-like conditions for energy gain, and puts the company at the forefront of industry manufacture.

One of Leitwind's objectives in 2019 was to develop a wind turbine with blades that could withstand the kind of extreme winds (up to hurricane strength) seen in the Caribbean rainy season. The new LS39-H blade is designed for use on the 'Typhoon' version of the LTW80 wind turbine – currently one of the most reliable on the market.

The first six Typhoon GL A class LTW80 turbines, boasting an output of 1.65MW and a hub height of 48m, are being installed on the island of Guadeloupe in the Caribbean Sea. There, the blades will be exposed to extremely high winds, with gusts of up to 70m/s (250km/h or 155mph). The loading capacity and safety of the new



The blade team at the Wind Technology Testing Centre in Boston, US.

blades has been tried and tested at the Wind Technology Testing Centre in Boston, US, passing all tests with flying colours.

The LS39-H blade has been a global project for the Leitwind blade team, with in-house design in Italy, manufacturing in

India, testing in the US and, next up, installation in Guadeloupe.

Two more key aspects of the process are also relevant.

Thanks to the sound, but flexible, Leitwind blade manufacturing process, it was possible to almost double the blade resistance with a very minor modification of production tooling. And, thanks to the new LS39-H blade, Leitwind has unlocked the wind potential of a significant portion of hurricane and typhoon sites, such as islands, and has given customers the possibility of reducing the levelised cost of their energy by installing modern and efficient multi-megawatt wind turbines. ●

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