



Mammoet helps clients improve construction efficiency and optimize uptime. (Courtesy: Mammoet)

INNOVATION

Mammoet climbs to new heights at WindEnergy expo

Last month, Mammoet revealed new crane technology and 3D engineering experiences at the world's leading expo for the wind industry: WindEnergy Hamburg. Exhibiting at the event, which ran from September 25-28, Mammoet focused on immersive technologies to demonstrate new techniques and cranes designed specifically for the wind industry.

Leading the exhibit were two new concept cranes that are set to eliminate the physical limitations of wind energy construction and maintenance. Using the wind turbine tower as the point of support, the Wind Turbine Assembly (WTA) crane and the Wind Turbine Maintenance (WTM) crane climb the tower to lift and lower loads. These cranes will set new benchmarks for safe, quick and efficient construction and maintenance.

Mammoet 3D Engineering also took a central place on the stand. Visitors stepped into the world of virtual reality to experience these new cranes and view engineering and lifting plans in action.

Sebastian Pohl, director of sales at Mammoet Germany, said, "Innovations such as climbing cranes and the ability to fully immerse stakeholders in the virtual engineering and construction of turbines gives more control over each stage of the project. Manufacturers can build bigger and more powerful turbines and owner/operators can realize the efficiencies that can be made in each stage of construction."

MORE INFO www.mammoet.com

INNOVATION

NRG Systems buys Direct Detect Lidar Technology

NRG Systems recently announced that it has acquired a portfolio of advanced

technology developed by Pentalum, an Israeli company that specialized in remote sensing solutions for wind measurement. Founded in 2009, Pentalum pioneered low-cost Lidar solutions that have been deployed by customers in the wind resource assessment, wind farm operations, forecasting, and research markets globally.

Pentalum's principal innovation was their patented Direct Detect Lidar technology that is able to deliver the high precision and reliability of lidar at a significantly lower cost compared to conventional Doppler Lidar technologies. Pentalum deployed this technology in its SpiDAR® Vertical Wind Profiler beginning in 2012, and it is now in use on five continents. NRG Systems' president, Justin Wheating, said, "NRG has played an active role in the global wind energy market for over three decades, and we recognize the growing importance of lidar in resource measurement and wind farm operations. Pentalum's technology, when paired with NRG's global sales and service capabilities, is a significant advantage for our customers, and a great new opportunity for customers who could not previously justify the high cost of Doppler Lidar solutions."

In addition to its favorable price-point, SpiDAR is a rugged, market-proven product that measures wind with high reliability and accuracy at the range of heights required by wind farms all over the world. When coupled with NRG-equipped met towers, SpiDAR delivers excellent flexibility, performance, and cost efficiency.

NRG Systems will work with its global partner network to offer sales, technical support and integrated services, such as remote power supply, making this product a truly complete solution for customers around the world. Wheating said, "Our customers have been asking us for a full service, integrated wind measurement solution that includes the latest tower based and remote sensing capabilities and we now have that for them."

The company plans to begin ship-



SpiDAR is a rugged, market-proven product that measures wind with high reliability and accuracy at the range of heights required by wind farms all over the world. (Courtesy: NRG Systems)

ping new SpiDAR units in early 2019 and will start offering complete service to existing SpiDAR customers in the coming weeks. NRG Systems will continue to work in close partnership with Leosphere to sell and support Leosphere's Windcube Lidar in North America.

MORE INFO nrgsystems.com

MANUFACTURING

Siemens Gamesa tailors turbine for Asia-Pacific markets

The new SG 8.0-167 DD offshore wind turbine variant for Asia-Pacific markets addresses local conditions across the region. Based on the proven Siemens Gamesa Offshore Direct Drive wind turbine platform, the variant is strongly suited for the growing Taiwanese offshore wind market. It ensures that the SG 8.0-167 DD is tailored to meet local codes and standards regarding typhoons, seismic

activities, 60 Hertz operation, as well as operation in high and low ambient temperatures. The design will be ready in 2019, with installation possible by 2020 for Taiwan. The flexible solution can also be adapted to individual market needs.

"Serving the growing Taiwanese offshore wind power market with our new product allows us to provide our customers with a cost-efficient, reliable, and powerful wind turbine which can withstand the challenging local conditions. The market-specific variant of the SG 8.0-167 DD demonstrates our commitment to moving the market forward on a technological front already from 2019," said Andreas Nauen, CEO of the Offshore Business Unit of Siemens Gamesa Renewable Energy.

The SG 8.0-167 DD wind turbine has a rated capacity of 8 MW, and a rotor with a 167-meter diameter. It has a swept area of 21,900 square meters, and uses the SGRE B81 blades, each measuring 81.4 meters. By the time of its introduction, more than 1,000 SGRE Direct Drive offshore wind turbines will be installed globally.

The variant ensures a design that accommodates local codes and standards in Taiwan and other Asia-Pacific (APAC) markets such as Japan. These include IEC Typhoon Class (T-Class) type certification by 2020, where the product will be certified as able to handle elevated extreme wind speeds in typhoon conditions. Siemens Gamesa is working closely with local authorities and certifying body to ensure that all applicable standards are considered.

Electrical systems and components will be adapted to 60Hz operation; grid models will be updated to reflect this 60Hz operation and local grid codes. Furthermore, the ability to operate in both high and low ambient temperatures reduces thermal limitation, thus increasing annual energy production while preserving turbine lifetime.

"We see promising developments ahead for the offshore wind industry in APAC as a whole. With Taiwan as an important regional base and the introduction of the market-specific variant of the SG 8.0-167 DD, we're able to meet customer needs in markets as they develop," said Niels Steenberg, Executive General Manager of Siemens Gamesa Offshore for Asia-Pacific.

MORE INFO www.siemensgamesa.com

MANUFACTURING

Moray East signs agreement with MHI Vestas Offshore Wind

Following the announcement in October 2017 of the selection of MHI Vestas as preferred turbine supplier for the Moray East offshore wind project, Moray East has recently signed a conditional agreement with MHI Vestas Offshore Wind for the supply and installation of 100 MHI Vestas V164-9.5 MW offshore wind turbine generators.

Moray Offshore Windfarm (East)