



Crosby Group acquired Feubo, a specialist provider of offshore mooring components for the oil and gas and wind-energy markets. (Courtesy: The Crosby Group)

► CONSTRUCTION

Crosby Group innovating floating offshore wind

It has been nearly two years since The Crosby Group, a global leader in lifting, rigging, and material handling hardware, completed the acquisition of Feubo, a specialist provider of offshore mooring components for the oil and gas and wind-energy markets.

The purchase included Feubo's facility in Hattingen, Germany, that has continued to serve as a center of excellence for mooring components. It is equipped to support the installation and safe operation of floating wind turbines, typically mounted on a floating structure that allows the turbine to generate electricity in water depths where fixed-foundation turbines are not suitable.

The Hattingen facility is also a focal point for key testing, engineering, and innovation, that notably led to the launch of the HFL Kenter, a high fatigue life shackle, based on the popular Crosby Feubo NDur Link.

"The floating wind industry remains relatively embryonic, and it needs product engineering and innovation partners to collaborate on products that can improve safety and reduce costs," said Mike Duncan, business development manager at The Crosby Group. "The HFL Kenter for temporary mooring is just an example of how a new product can be developed and broadly deployed within an industry to achieve industry goals."

As Duncan alluded to, the HFL Kenter is an accessory used for temporary and mobile mooring applications, such as rigging and anchoring mobile offshore drilling units (MODUs) or vessels. It represents the latest state-of-the-art evolution of a shackle concept

that is more than 100 years old. Finite Element Analysis, a method of numerically solving differential equations in engineering and mathematical modeling, was used to identify stress hot spots and re-engineer the product.

"In fatigue comparison tests in simulated marine environments, we were able to show that the Kenter boasts eight times more cycles," he said. "This has allowed us to show the floating wind sector our ability to engineer, innovate, and deliver product of high quality and proven fatigue life, for their specific, demanding applications."

Duncan reiterated the capabilities of The Crosby Group's center of excellence for mooring in Hattingen, Germany, which boasts static and dynamic testing machines that test mooring chains and components up to capacities of 60,000 kN, as well as fatigue testing in simulated marine environments. The facility can test and validate in real-time the fatigue

life of components in association with DNV GL Type Approval Certificate, acknowledging that its equipment meets the rigorous standards of the global quality assurance and risk management company for their use offshore.

MORE INFO www.thecrosbygroup.com

CONSTRUCTION

Collett acquires Plant Speed turbine equipment

Collett & Sons Ltd recently agreed to a deal with Plant Speed to have its specialist wind-turbine equipment join the Collett fleet. Taking the decision to remove themselves from the wind-energy industry and focus more on their haulage operations, Plant Speed is focusing more on haulage operations, and Collett is acquiring the entire Plant Speed fleet of super wing carriers, extendable trailers, and lift adapters.

“With several projects scheduled and currently under way, this move sees Collett strengthen our market position,” said Managing Director David Collett.

“Having worked in the renewable-energy industry for many years, the acquisition of this new trailer equipment is a decisive move for Collett, and one which significantly increases our wind-turbine carrying capabilities.”

Collett’s wind-turbine fleet expansion includes Nooteboom super wing carriers, quadruple extendable blade trailers, and lift adapters, alongside several specialist adapters including gyrostat tables, loading beds, and tower hooks.

As a well-established operator in the wind-energy industry, the addition of this new equipment increases Collett’s carrying capacity and adds to its already diverse fleet, providing a definitive range of specialist equipment



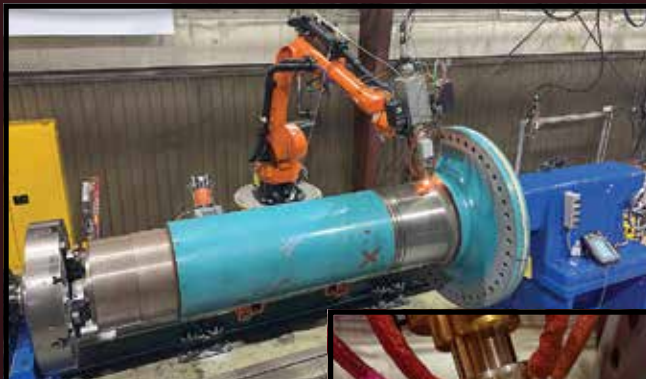
Collett has acquired Plant Speed’s entire fleet of super wing carriers, extendable trailers and lift adapters. (Courtesy: Collett)



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with which to undertake wind-farm development projects.

“Having worked closely with Collett in the past, the decision to amalgamate our fleet in to theirs was an easy one to make,” said Paul Lomas, Plant Speed’s managing director.

MORE INFO collett.co.uk

CONSTRUCTION

Collett completes deliveries to Scotland wind farm

Collett has completed the transport of components for the Twentyshilling Wind Farm in Dumfries & Galloway, Scotland. Over a period of 14 weeks, Collett moved components from King George V Dock to the site.

Collett moved the components for

each complete turbine: the three tower sections, three blades, nacelle, drive train and hub. It would require specialist transport logistics for the 170-mile journey to site.

The team made several route modifications. Two miles from the construction site, on approach to the wind farm, the loaded 57-meter blades would be unable to facilitate the necessary left turn to access. A turning head was constructed at Eliock Bridge to provide the required clearance to allow all 27 of the blades to safely navigate the turn.

Working on a two-day delivery schedule, with three deliveries per convoy, Collett’s specialist fleet delivered the 81 individual components.

The team employed super wing carriers to transport the 57-meter, 14.9-ton blades. For the other components, the 67-ton, 25-meter long bottom and 44.5-ton, 26-meter middle towers used specialist clamp trailers, while the remaining components, the top towers,

nacelle, drive trains, and hubs were transported using 5- and 6-axle step-frame trailers.

All components traveled under Collett’s Code of Practice escort vehicles, with police escorts in attendance for the blades, tower sections, nacelles, and drive trains.

The nine Vestas V117 140-meter tip turbines are expected to be fully operational in early 2022.

MORE INFO collett.co.uk

CONSTRUCTION

Aqueos supports growth of offshore wind energy

Aqueos has been a part of every offshore wind-energy project in the U.S. One project that showcases Aqueos’ merit is the Virginia Coastal Wind (VCW 01) Project.

When the Bureau of Ocean Energy Management (BOEM) issued consent to Dominion Energy to the first wind-energy research lease in U.S. federal waters, the bureau formed a chain of expertise that led to Aqueos. Dominion partnered with Danish multinational company Ørsted, which contracted Aqueos’ client, Subsea 7, to supply and install cables for the Virginia Coastal Wind (VCW 01) Project.

Aqueos assisted by providing project management and engineering services, as well as offshore support for the export cable nearshore installation.

Ørsted required divers to be IMCA-certified with similar experience. Aqueos personnel were already DNV-certified, IOGP approved, and IMCA/ADCI members. Aqueos assisted by developing HSE, quality, engineering, and management procedures. Subsea operations included the excavation of the HDD bore hole exit location, transmission cable pull-in, grouting operations, and survey activities.

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Dominion partnered with the Danish multinational company Ørsted, which contracted Aqueos' client, Subsea 7, to supply and install cables for the Virginia Coastal Wind (VCW 01) Project. (Courtesy: Aqueos)

the Aqueos team is now prepared for more wind-sector work — and is well positioned to deliver future wind-energy projects to the Northeast and the Gulf of Mexico and the West Coast regions of the U.S.

MORE INFO aqueossubsea.com

► **INNOVATION**

WindCube Nacelle Lidar earns full classification

Leosphere, a company that specializes in developing, manufacturing, and servicing turnkey wind Lidar instruments for wind energy, recently announced that WindCube® Nacelle is the first nacelle Lidar to receive full classification according to the new IEC standard for nacelle-based Lidar.

Latest enhancements to the WindCube Nacelle deliver simplified Lidar system and data management with the cloud-based WindCube Insights — Fleet.

Rotor equivalent wind speed Lidar data provides rotor-averaged wind speed, enabling more detailed analysis of most modern, large rotor turbines.

An integrated weather sensor directly mounted on the Lidar provides air pressure, temperature, humidity, and rain and hail data.

MORE INFO www.windcubelidar.com



The classification paves the way for increased adoption and acceptance for power performance testing (PPT). (Courtesy: National Renewable Energy Laboratory)

► **INNOVATION**

NewHydrogen to provide green hydrogen generators

NewHydrogen will provide green hydrogen generators to intermittent renewable power sites, such as wind and solar farms. The Massachusetts-based Solar Verde LLC will provide NewHydrogen with hydrogen generation systems.

“We are very excited about our new business relationship with Verde and our plan to partner with operators of intermittent renewable power sites, such as wind and solar farms,” said David Lee, CEO of NewHydrogen.

NewHydrogen is targeting wind and solar farms that produce excess solar and wind energy during certain times of the day. This power can be used to run an electrolyzer (the primary component in a hydrogen generator) that converts water into

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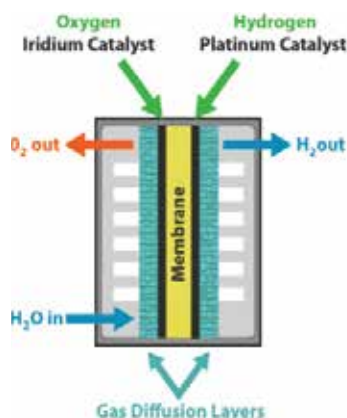
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Typical 1MW PEM Electrolyzer	
Component	Costs
Catalyst Coated Membrane	36% - 47%
Gas Diffusion Layers	17% - 25%
TOTAL	53% - 72%

(Source: NREL - 2019)

NewHydrogen is developing technology to reduce the use of rare earth metals in electrolyzers. (Courtesy: NewHydrogen)

green hydrogen, which is distributed in pipelines and converted back into electricity when needed. This green hydrogen can be stored in tanks and underground caverns, forming a network that can energize industry and back up electric grids.

“For NewHydrogen, this is a major leap forward,” Lee said. “By owning and controlling the hydrogen generators at these sites, we will be able to move very rapidly to demonstrate the economic viability of this approach, as well as new technology currently under development including our breakthrough catalysts.”

The goal of NewHydrogen’s sponsored research at UCLA is to lower the cost of green hydrogen by eliminating or reducing the use of precious metals in electrolyzers.

Electrolyzers currently rely on rare-earth materials such as iridium and platinum, which often accounts for nearly 50 percent of the electrolyzers’ cost.

MORE INFO www.newhydrogen.com

MAINTENANCE

James Fisher launches decommissioning business

James Fisher recently launched James Fisher Decommissioning (JF Decom) to

support customers in the renewables and oil and gas markets.

JF Decom will provide customers with a dedicated team to provide delivery in complex projects such as subsea infrastructure removal; structural removal, well severance, and well abandonment.

With one of the world’s largest fleets of decommissioning tooling and in-house design and engineering capability, JF Decom can support the rise in decommissioning projects to deliver cost and time saving solutions critical to achieving regulatory guidance of a 35 percent reduction in decommissioning costs, a target mapped out by the Oil & Gas Authority in 2016.

JF Decom’s services include the well abandonment tool SEABASS that provides a cost effective and quicker alternative to rig-based solutions when abandoning category 2 wells, due to its ability to deploy from a vessel of opportunity and work in any water depth.

“JF Decom is also dedicated to ensuring that decommissioning is conducted as sustainably as possible by restoring the seabed to its natural state,” said Jack Davidson, JF Decom managing director. “With our noise attenuation tools such as Bubble Curtains, we can also minimize environmental impact to marine life during decommissioning works and ensuring we provide environmentally responsible services is something that is at the forefront for JF Decom.”

JF Decom and JF Renewables will be

able to work independently or collaboratively to support the drive to net zero by providing full support services to the oil and gas and renewable markets in the installation, maintenance, and decommissioning of assets.

MORE INFO www.jamesfisherrenewables.com

MAINTENANCE

Pronomar dries work clothing, equipment

Pronomar drying systems can be a big help for workers on roads, urban green spaces, agriculture sites, and ships.

Pronomar’s rounded hangers can dry PPE including boots and gloves, jackets, trousers, coveralls, suits, helmets, masks, life vests, and other types of equipment.

By maintaining a correct temperature during drying, the material and quality of the PPE is gently and quickly dried, resulting in longer life for the clothing.

Pronomar’s drying systems include Eledry, using electrically heated hangers to dry footwear and gloves. The AIR system features quick drying, while the WATER system is most suitable for new build sites.

MORE INFO www.pronomar.com

MANUFACTURING

Titan Wind Energy chooses Haeusler for Shanghai facility

Titan Wind Energy has chosen Haeusler for its facility near Shanghai. Haeusler’s EVO machines have accessories adapted for the construction of wind towers, including manipulators for conical and cylindrical shells, as well as an upper support adapted for wind tower production and a swiveling in-feed roller table.



Pronomar systems can be helpful for workers in winter conditions. (Courtesy: Pronomar)

All machines are CNC-capable, which allows a fully automated production with short cycle times.

MORE INFO www.haeusler.com

MANUFACTURING

Siemens Gamesa to provide 84 wind turbines in India

Siemens Gamesa has secured an order in India from Ayana Renewable Power Six Private Limited to supply a 302-MW project, providing another boost to the country's wind-energy drive. A total of 84 units of the SG 3.6-145 wind turbines will be installed for the project in the Gadag district, Karnataka State.

"We are happy to announce this new deal with Ayana Renewable Power, one of the fastest growing renewable Independent Power Producers (IPPs) in India," said Navin Dewaji, India CEO of Siemens Gamesa.

"This order significantly helps us as we gear up for the next growth phase for Siemens Gamesa in India. With the SG 3.6-145, a turbine made for India, we are confident we are delivering bet-

ter value for our customers."

Ayana first partnered with Siemens Gamesa in 2019 for a 300-MW solar farm in the state of Rajasthan and has 3 GW of renewable energy capacity under various stages of development and operation across several Indian states. Ayana won this project in the SECI ISTS Tranche X tender and will develop the required infrastructure for this windfarm, planned in the state of Karnataka.

Siemens Gamesa launched this new turbine in 2020 despite an ongoing pandemic and announced its first orders in July 2021 for 623 MW. Turbines for this project will be supplied from the manufacturing plants in India and the project is expected to be commissioned in 2023. The SG 3.6-145 wind turbine is an extension of the SG 3.4-145.

Siemens Gamesa has operated in India since 2009, and the base installed by the company recently surpassed the 7-GW mark. The company has one blade factory in Nellore (Andhra Pradesh), a nacelle factory in Mamandur (Chennai, Tamil Nadu), and an operations and maintenance center in the Red Hills (Chennai, Tamil Nadu). ✈

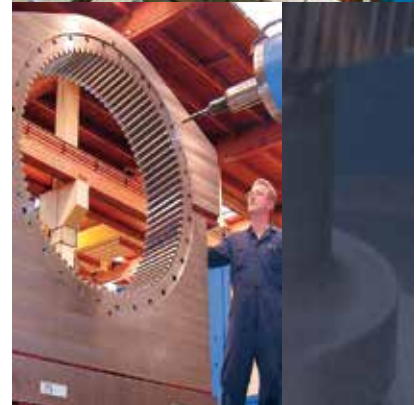
MORE INFO www.siemensgamesa.com

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