Rem Offshore and VARD have signed contracts for the design and construction of two Construction Service Operations Vessels (CSOVs), with an option for two more. (Courtesy: Rem Offshore)

CONSTRUCTION

VARD, Rem Offshore announce contracts for vessels

VARD, a major global designer and shipbuilder of specialized vessels, has announced contracts with Norwegian shipping company Rem Offshore for two Construction Service Operations Vessels (CSOVs) with an option for two additional vessels. The contracts for the two vessels total 100 million euros.

The CSOVs are ideal for service and maintenance operations at offshore wind farms. VARD's 4 19 design is a versatile platform for offshore wind farm support, with a focus on onboard logistics, security, and comfort.

VARD is set to deliver the first vessel in the first half of 2023. It will be delivered from VARD in Norway, while Vard Tung in Vietnam will deliver the second vessel in 2024.

"We are proud to be chosen as the preferred partner for Rem Offshore in this exciting project, and we are looking forward to working together with their team. These contracts confirm VARD's leadership in the CSOV market, both in terms of innovative ship design, breakthrough technologies and shipbuilding quality," said VARD CEO Alberto Maestrini.

With a length of 85 meters and a beam of 19.5 meters, the vessels will have a height-adjustable motion-compensated gangway with elevator system, a height-adjustable boat landing system, and a 3D-compensated crane. The CSOVs will accommodate 120 on board.

VARD's specialized high-tech subsidiaries will be involved with major deliveries onboard, and in the vessels' shipbuilding process.

"Rem Offshore has during the last few years increasingly focused attention on building a sustainable platform for growth in offshore wind. Our shareholders are driving this development together with our Rem colleagues onshore and offshore.

We are proud to continue our newbuild program in Norway and support the local maritime industry," said Aage Remøy, chairman of Rem Offshore.

MORE INFO www.remoffshore.no

Asia is predicted to be the leader in gigawatt capacity in the next 10 years. (Courtesy: VesselsValue)

CONSTRUCTION

Next decade will see more demand for wind farms

Demand for wind farms will increase over the next decade, according to offshore wind analyst Zac Ward.

In 2020, spending on offshore renewable projects was higher than that of offshore oil and gas spending, by an estimate of $12 billion, with $43 billion for oil and gas and $56 billion for renewable energy.

Newly built vehicles and repurposed or upgraded supply vessels will meet the demand for wind farm installation and maintenance vessels.

While the global capacity for offshore wind farms is now at 25GW, that number will rise to 235GW by 2030, estimates say.

VesselsValue's Orderbook shows that out of the renewable energy still on order, about half is for Europe and half are for the Far East.

The United Kingdom has the most wind farms installed, followed by Germany, China, Denmark, Belgium, and the Netherlands. Asia, however, has the highest number of future plans for wind farms.

MORE INFO blog.vesselsvalue.com

Gazelle Wind Power Limited's hybrid floating platform surmounts the current barriers of buoyancy and geographic limitations while reducing costs and preserving fragile marine environments. (Courtesy: Gazelle Wind Power Limited)

CONSTRUCTION

Gazelle Wind Power raises $4 million for offshore platform

Gazelle Wind Power Limited has raised $4 million toward the development of its hybrid floating offshore wind platform. The investment includes $1.3 million in seed funding and $2.7 million in long-term financing that will be used to develop Gazelle's first grid-connected demonstrator.

Investors include Spanish businessman Valentin de Torres-Solanot del Pino, as well as Peter Murphy and Zach Mecelis, co-founders of Covalis Capital.

"Gazelle has the potential to completely change the offshore wind industry. By combining the best features of tension-leg and semi-submersible platforms — while eliminating their drawbacks — Gazelle's technology will be at the forefront of tomorrow's energy landscape. The E2IN2 team is delighted to join Gazelle and contribute in its efforts to carry out this invaluable undertaking," said de Torres-Solanot del Pino.

The Dublin-based company's hybrid mooring platform is designed and engineered by naval engineers to enable floating offshore wind production in deeper waters farther out at sea. The patented design allows for a 70 percent reduction in the weight of steel, while delivering a stable platform with a tilt of less than one inch, together with a 30 percent cost reduction compared to other floating wind platforms.

Gazelle recently named a group of energy industry veterans to its board of directors, including leading global policymakers, government officials, engineers, and CEOs. The board includes Javier Canada (current CEO of Highview Power); Jon Salazar, a former senior advisor with Deloitte; Pierpaolo Mazza, formerly of GE Power Generation; Connie Hedegaard, Denmark's former environment minister; and David Mesonero, who was CFO at Siemens Gamesa Renewable Energy.

MORE INFO www.gazellewindpower.com

INNOVATION

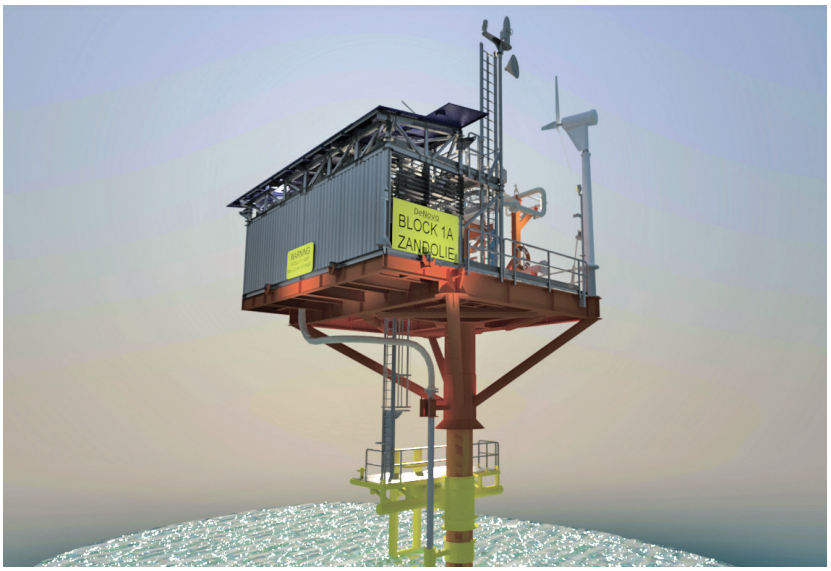
Leosphere launches new technology for wind measurement

Leosphere has launched WindCube Complex Terrain Ready, to deliver wind measurement in terrains from moderate to the most complex.

The offering includes Leosphere's patented Flow Complexity Recognition (FCR) software, and the Computational Fluid Dynamics correction method to deliver accurate and trusted measurement.

WindCube Complex Terrain Ready delivers wind measurement in terrains from moderate to complex. (Courtesy: Vaisala)

"With wind energy being one of the fastest-growing sources of sustain-



Aquaterra Energy has completed the design for DeNovo Energy's Sea Swift offshore platform. (Courtesy: Aquaterra Energy)

able energy production, the location of wind farm development and operations have expanded to new and challenging environments," said David Pepy, Leosphere's head of renewable energy.

"This expansion into hilly, mountainous and other areas with varying levels of terrain complexity, make it challenging to collect trusted and precise wind measurements that illustrate what the wind is doing in these increasingly complicated locations. That's where our solutions come in to ensure project operators realize precise data in all types of complex terrain," Pepy said.

With WindCube Complex Terrain Ready, companies have easy access to both FCR and CFD correction services, empowering wind farm developers with accurate, reliable, bankable, and widely accepted wind flow data. The integrated FCR solution is appropriate for moderately complex terrain while CFD post-processing, available as an option through partnerships with wind energy leaders and consultants, is leveraged for more complex terrain. In some cases, customers use both FCR and CFD data to ensure the highest possible wind measurement outcomes.

The company has partnered with proven CFD industry leaders, including Meteodyn and WindSim, and wind energy consultants such as ArcVera, Deutsche WindGuard, DNV, Fraunhofer IWES, and UL, to ensure WindCube customers have access to the right CFD solution and industry expert support to meet their specific needs.

MORE INFO www.vaisala.com/en/lp/windcube-complex-terrain-ready

INNOVATION

Aquaterra completes offshore wind platform design

Aquaterra Energy has completed the engineering design for DeNovo Energy Limited's Sea Swift offshore platform, a part of development activity in the Gulf of Paria off the west coast of Trinidad.

The platform, which will be self-powered by a wind turbine and a solar bank, is set to be installed in Q4 of this year, in water depths of 20m.

"Intelligent engineering is at the heart of what we do, so this renewable-powered solution is a testament to our ethos," said Stewart Maxwell,

Snap-on's model Plasma20i (pictured) can cut to a thickness of a quarter inch. (Courtesy: Snap-on)

Aquaterra Energy technical director.

The platform design will include a battery to store excess power, which eliminates the need for traditional diesel generators—which reduces emissions, including those resulting from refueling visits.

Monitoring technology will reduce maintenance trips by requiring personnel to visit only when alerted by onshore systems.

Another cost reduction in the Sea Swift design is drilling and installation via a jack-up rig, which removes the need for a heavy lift vessel.

The platform's reduced steel requirement and its focus on using infrastructure that is in local Trinidad and Tobago area adds to the increase in speed toward the platform's first oil or gas production.

"DeNovo is committed to securing Trinidad and Tobago's energy future—in a cleaner way," said Bryan Ramsumair, DeNovo managing director.

MORE INFO aquaterraenergy.com/products/sea-swift-offshore-platform/

MAINTENANCE

Snap-on provides specs for portable plasma cutters

Snap-on Industrial's portable plasma cutters can cut up to 3/4" thickness on a variety of ferrous, non-ferrous and high-strength materials.

Users can adjust the depth of the cut, so the top layer can be cut without disturbing the base layer. Performance specs for the cutters include:

PLASMA20I

- Maximum output amps: Adjustable 5-20
- Cut thickness: 1/4"
- Sever thickness: 3/8"
- Primary input (Volt AC): 115
- Primary input: 20 A
- Duty cycle rating: 100% at 15 A
- Minimum compressed air requirements: 50 PSI at 5 CFM
- Torch and ground cable lengths: 12'

PLASMA30I

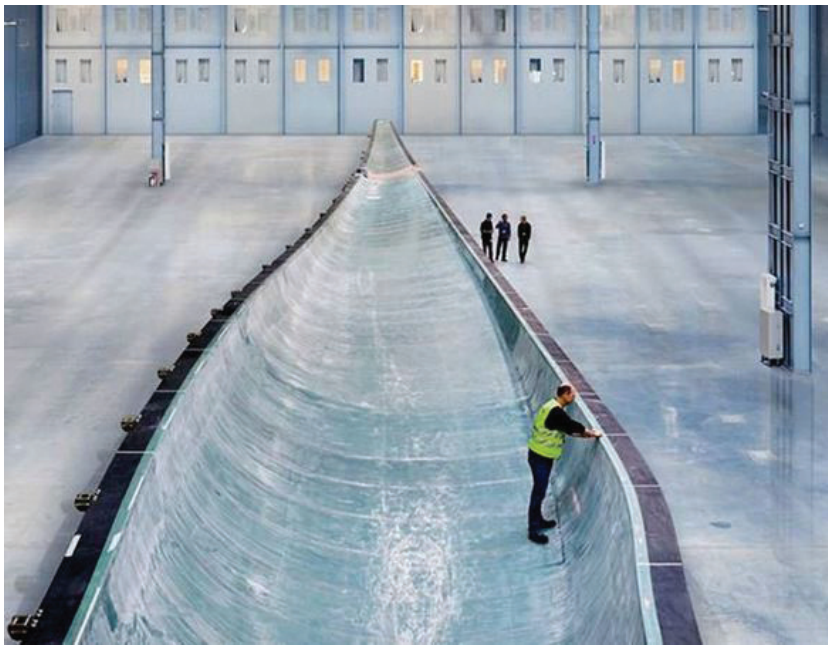
- Maximum output amps: Adjustable 5-25
- Cut thickness: 3/8"
- Sever thickness: 1/2"
- Primary input (Volt AC): 115 or 230
- Primary input: 30 A 115 V or 20 A 230 V
- Duty cycle rating: 60% at 22 A
- Minimum compressed air requirements: 50 PSI at 7 CFM
- Torch and ground cable lengths: 12'

PLASMA60I

- Maximum output amps: Adjustable 20-55
- Cut thickness: 3/4"
- Sever thickness: 3/4"
- Primary input (Volt AC): 208/230
- Primary input: 40 A
- Duty cycle rating: 60% at 40 A
- Minimum compressed air requirements: 68 PSI at 7 CFM
- Torch and ground cable lengths: 18'

MORE INFO b2b.snapon.com/

Deutsche WindGuard Inspection has completed recurring inspections on 30 wind turbines at the offshore wind farm Global Tech I in the German North Sea. (Courtesy: Deutsche WindGuard Inspection)



Siemens Gamesa is expanding its offshore blade factory in Hull, England. (Courtesy: Siemens Gamesa)

MAINTENANCE

Deutsche WindGuard completes wind-farm inspections

Deutsche WindGuard Inspection has completed recurring inspections on 30 wind turbines at the offshore wind farm Global Tech I in the German North Sea, which is owned by Global Tech I Offshore Wind GmbH.

Global Tech I is about 180km northwest of Bremerhaven, Germany. The inspection included towers and nacelles, in accordance with the Standard Design of the Federal Maritime and Hydrographic Agency (BSH).

"We are pleased that Global Tech I Offshore Wind GmbH counts on our expertise and has commissioned us with the inspection of the technical condition and safety equipment," said Jan Wallasch, managing director of Deutsche WindGuard Inspection.

"With the highest level of thoroughness, our experienced offshore experts carefully inspected this year's inspection scope of 30 turbines and also checked the monitoring and maintenance documentation. For this purpose, the team was stationed on board of the REM Inspector service vessel directly in the wind farm for four weeks in June," Wallasch added.

"The working environment in the offshore wind farm is very dynamic because of sudden weather changes, among other things," said Frederik Modes, Head of Operations & Maintenance Wind Turbines Global Tech I Offshore Wind GmbH.

MORE INFO www.windguard.de

MANUFACTURING

Siemens Gamesa to expand England blade factory

Siemens Gamesa will expand its offshore blade factory in Hull, England by 41,600 square meters, more than doubling the size of the manufacturing facilities. The expansion represents an investment of £186 million and is planned to be completed in 2023.

"Since our offshore blade factory opened in Hull in 2016, Siemens Gamesa has proudly served as the catalyst for the powerful growth the area has seen. The rapid development of the offshore wind industry – and continued, strong, long-term support provided by the UK government for offshore wind – has enabled us to power ahead with confidence when making these plans. We're committed to unlocking the potential of wind energy around the globe, with solutions from Hull playing a vital role," said Marc Becker, CEO of the Siemens Gamesa Offshore Business Unit.

The blade factory is the largest offshore wind manufacturing facility in the UK.

Manufacturing of next-generation offshore wind turbine blades will grow to 77,600 square meters and add 200 additional direct jobs to the approximately 1,000 person-workforce already in place.

"The UK government has provided strong and consistent support for offshore wind, having committed to a further 30 GW installed this decade, three times the current installed capacity," said Clark MacFarlane, Managing Director of Siemens Gamesa UK.

MORE INFO www.siemensgamesa.com

MANUFACTURING

USA Rare Earth praises magnet manufacturing bill

USA Rare Earth praised the introduction in the House of a bipartisan bill that would boost production of rare earth permanent magnets.

The new legislation would incentivize the domestic production of neodymium boron (NdFeB) rare earth permanent magnets that are used in electric vehicles, renewable energy, and the defense industrial base.

"USA Rare Earth applauds the introduction of the Rare Earth Magnet Manufacturing Production Tax Credit Act and efforts by Congress to restore

this critical U.S. production capability. These incentives would be a boost to U.S. manufacturers and would help establish a beachhead for NdFeB magnet production in the U.S. The legislation also reflects the urgent demand by automakers for the rare earth magnets necessary to transition to zero-emission vehicles by 2030, and it underscores the importance of the parallel requirements for the U.S. defense industrial base," said Pini Althaus, CEO of USA Rare Earth.

USA Rare Earth owns 80 percent of the Round Top Heavy Rare Earth, Lithium, and Critical Minerals Project in Hudspeth County, Texas. (Courtesy: USA Rare Earth)

USA Rare Earth, LLC owns 80 percent of the Round Top Heavy Rare Earth, Lithium, and Critical Minerals Project in Hudspeth County in west Texas. Round Top hosts critical heavy rare earth metals including lithium, zirconium, hafnium, and beryllium.

U.S. Reps. Eric Swalwell (D-CA) and Guy Reschenthaler (R-PA) authored the bill. They are co-chairs of the Congressional Critical Materials Caucus.

"This bill would spur domestic manufacturing and reward innovation, and it would help re-shore a vital U.S. supply chain with potential for international collaboration. Led by the chairs of the Congressional Critical Materials Caucus, the bill dovetails with the whole-of-government approach under way to swiftly secure U.S. supply chains and to restore NdFeB magnet manufacturing in the United States," Althaus said.

Once operational, USA Rare Earth's NdFeB magnet plant will produce at least 2,000 tons each year of rare earth magnets, accounting for about 17% of the (2019) U.S. permanent magnet demand.

The U.S. lacks a commercial-scale capability to process rare earth permanent magnets used in the automotive, aerospace, defense and electronics industries. At present, no other NdFeB permanent magnet manufacturing plant is operational in the United States.

MORE INFO usare.com