continue to drive offshore wind forward," said Flemming Ougaard, chief operations officer at MHI Vestas Offshore Wind. "The concept will allow for improved logistics and more efficient installation — critical areas for our customers' business case. We are proud to participate with Vestas and Maersk Supply Service in bringing this concept to life."

Maersk Supply Service initiated and continues to drive the Vertical Installer project with the aim of finding a more efficient method to install offshore wind turbines using its current fleet. Vestas and MHI Vestas Offshore Wind are providing the industry insight necessary to ensure the new solution is tailored to industry needs and developed with the most up-to-date knowledge of challenges, logistics, operator requirements, and potential design modifications for future wind turbine models. They are also providing access to test facilities both

off- and onshore, which will reduce project risks and the time required before the solution is available in the market.

MORE INFO:

www.maersksupplyservice.com

MAINTENANCE

Seacat sends ships to Beatrice Wind Farm

Class-leading offshore energy support vessel (OESV) operator, Seacat Services, has secured a further charter agreement at Beatrice Offshore Wind Farm (Beatrice).

This latest two-year contract will see Seacat Mischief and her sister vessel, Seacat Magic, provide logistical support to manufacturer and service provider Siemens Gamesa Renewable Energy (Siemens Gamesa) throughout the operations and maintenance (O&M) phases.



Seacat Mischief and her sister vessel, Seacat Magic, provide logistical support to manufacturer and service provider Siemens Gamesa Renewable Energy (Siemens Gamesa) throughout the operations and maintenance (O&M) phases. (Seacat Services)

The pair of 23-meter jet propulsion catamarans will be based out of Wick Harbour in Scotland, with Seacat Mischief arriving on site in mid-August, and Seacat Magic in April 2019. They will become the third and fourth Seacat Services vessels to work at Beatrice, joining Seacat Resolute, which has just commenced a separate nine-month construction charter for Siemens







Chevron Marine Lubricants' Taro® range of cylinder lubricants provide solutions for a range of engines, fuel types, and operating requirements. (Courtesy: Chevron Marine Lubricants)

Gamesa, and Seacat Intrepid, which remains on charter for project developer Beatrice Offshore Wind Limited (BOWL).

With a milestone development such as Beatrice — Scotland's first major offshore wind farm — there is an opportunity to set a benchmark when it comes to bringing new generation capacity online efficiently. In particular, flexible and versatile vessel support is required to overcome the technical and logistical challenges of the time-sensitive commissioning and early operational phases, ensuring that a wind farm gets up and running on budget and on schedule, and then performs effectively over the long term.

This charter not only extends Seacat Services' presence at Beatrice; it also extends the vessel operator's relationship with the Siemens Gamesa service team, following a two-year deal signed last year to support O&M activity at the 336-MW Galloper Wind Farm. Seacat Services' crews and shore-based team are therefore familiar, both with the demands of the project site and the technical and logistical requirements of supporting Siemens Gamesa throughout initial operations.

"When it comes to the make-up of an

offshore wind project team, consistency and familiarity is a real advantage," said Ian Baylis, managing director, Seacat Services. "It ensures that lessons learned are transferred effectively and, in turn, that efficiency continues to improve from site to site and project to project. As we continue to work at Beatrice, we're looking forward to building on our existing relationships with Siemens Gamesa, BOWL and the wider team based out of Wick."

"Having worked with Seacat Services in the past, we're aware of the critical role versatile and reliable OESV support plays for a project like Beatrice as it enters long-term operations," said Craig Morton, chartering manager at Siemens Gamesa Renewable Energy. "For us, it is essential that our technicians get around the site, safely, quickly, and in the best possible condition to carry out the work that ultimately keeps the turbines performing at their full potential."

Seacat Mischief and Seacat Magic are two of the most capable OESVs serving the U.K. and European offshore wind markets. They have recently returned from Ørsted's Race Bank project, where, together with Seacat Courageous and Seacat Volun-

teer, they safely completed more than 27,000 crew and equipment transfers, covering a total distance exceeding two trips around the globe.

MORE INFO

www.seacatservices.co.uk

MAINTENANCE

Chevron Lubricants receives NOLs from MAN Energy Solutions

Following successful field testing, Chevron Marine Lubricants has been issued with two NOLs (No Objection Letters) from equipment manufacturer MAN Energy Solutions, for the use of three of its Taro® cylinder oils with their cylinder oil mixing system, ACOM.

"Receiving the NOLS from Man Energy Solutions demonstrates the impressive performance of our products in the field," said said Ian Thurloway, Chevron Marine Lubricants Brand & Marketing Manager. "The Taro range of cylinder lubricants provides solutions for the varied range of engines, different fuels, and the increasingly complex operating requirements that

we are faced with. It also highlights our continued strong working relationship with this leading OEM."

Both sets of field tests were carried out on a 6S90ME-C8 MAN B&W twostroke engine using MAN's Automated Cylinder Oil Mixing (ACOM) system.

The first NOL demonstrates the high performance of Taro Special HT Ultra, a 140BN product that has achieved impressive results helping combat cold corrosion in slow speed vessels burning high sulphur fuel and which Chevron Marine Lubricants was first to market with in 2017, blended with Taro Special HT LF, a 25BN lubricant ideal for low sulphur, distillate and alternative fuel types.

The second NOL allows for blending Taro Special HT 100 (100 BN) and Taro Special HT LF. These successful tests prove that the Taro range of cylinder lubricants can provide maximum flexibility for operators, as well as reliable service for vessels.

Chevron Marine Lubricants, a leading provider of marine products and services, continues to provide reliability and innovation for its customers, being among the first to market with both a 100 BN and 140BN cylinder lubricant, providing a range of cylinder oils suitable for the majority of two-stroke vessels and engine types, compatible with a wide sulphur range of fuels and most alternative bunker fuels.

MORE INFO

chevronmarineproducts.com

▼ MAINTENANCE

ANSI approves Dropped Object Prevention standard

ANSI, the American National Standards Institute, recently approved

the publication of a new standard addressing the need for dropped object prevention and tool tethering. It was approved July 2 and formally known as ANSI/ISEA 121-2018, American National Standard for Dropped Object Prevention Solutions.

This standard addresses the real need for reducing workplace accidents, injuries and deaths due to falling objects.

Dropped or falling objects from height present a significant safety hazard in many industries around the world today and the numbers are staggering. According to the Bureau of Labor Statistics, more than 52,000 "struck by falling object" OSHA recordable incidents occur every year in the U.S. alone. In 2015, the BLS reports 247 fatalities from being struck by a falling object, accounting for 5 percent of all workplace fatalities.

Most contractors rely on catching the falling object (netting, toe boards,



etc.) or erect temporary structures to shield people on the ground in the event of the inevitable drop. While this does help reduce the number of actual injuries caused by falling objects, it doesn't address the real root cause, and so the risk of injury or worse is always present. The only way to reduce the chance of injury or harm to zero percent is to prevent the uncontrolled fall in the first place.

Objects dropped from height strike the ground with incredible force. Take a simple tape measure weighing in at just 0.5 pounds. If it was dropped from a height of 10 feet, someone wearing PPE struck by it below will most likely only suffer a slight injury treatable with just first aid. Drop that same tape measure off the 17th floor of a building, and it will carry enough energy to defeat any PPE and even cause a fatality. A 2-pound wrench can be deadly from the fourth floor, and a standard power tool such as a drill can be serious from lower still.

The new standard is ground breaking, requiring dropped object prevention solutions to undergo dynamic drop testing to be considered fit for use.

When the ISEA 121 committee on Dropped Object Prevention (DOP) began working on the new standard, they made a keystone decision to require dynamic drop testing to prove all DOP solutions instead of the traditional static testing. But why is this important? How does this make us safer, and what is dynamic drop testing anyway?

Up until then, Dropped Object Prevention companies have tested their products the same way rock climbing companies test their rope and carabiners. They used a math equation and a static tensile test. To follow this method, you take the mass you're going to drop, use physics to determine the velocity it will be traveling at the full extension of the tether (aka lanyard) and, from that, determine the impact force that object will have when it is suddenly stopped by either the tether or the ground (hopefully the ground and not a person below). This force

is many magnitudes higher than just the simple mass of whatever was dropped. A 10-pound weight dropped 120 inches has an impact force of 460 pounds. To test the DOP device, a lab attaches it on a static (not moving) tensile testing rig and pulls or stretches it from both sides. The lab increases the force on the device until it breaks. If it breaks with a force higher than the minimum impact force, then it passes and is deemed safe for use. If it breaks at a force lower than the impact force, it's back to the drawing board or to a lower weight rating.

There is one problem with static testing. Static testing is an excellent way to determine how much force a safety device can withstand before it breaks (called load capacity) when it is manufacturer wants to discover on the jobsite where lives are at stake.

With a dynamic drop test, an object of known weight is dropped multiple times. If the device prevents a drop, it passes. If it breaks and the object drops, it fails. The device is still subjected to the same impact force as it would be in a static test, but with the added challenge of proving the total solution can withstand the stress and strain of swings, bounces, and recoils real devices are subject to everyday. When (not if) things don't perfectly align during the test, the device must still fight off gravity and prevent a drop, and that is something you just can't simulate with a static test.

MORE INFO

www.dropsafetyequipment.com



RotaGel Cutting Lube is an environmentally safe lubricant because its core ingredients are based off of a food grade lubricant. (Courtesy: Hougen)

pulled straight down and everything is perfectly aligned. However, in real life, dropped objects rarely fall straight down. They tend to swing, ricochet off structures and scaffolding, bounce and recoil in unpredictable ways.

A device may pass a static test with flying colors, but when put into a real-life situation, when the straps or cable, d-rings, carabiners, and other part are stressed and strained in ways that are not perfectly aligned by gravity, motion, and dynamic force it may still fail and break and that's bad for anyone standing underneath. This is something no contractor, worker, or

▼ MAINTENANCE

New environmentally safe RotaGel cutting lube increases tool life

Hougen Manufacturing, Inc., (Swartz Creek, MI) the leading manufacturer of magnetic drills and annular cutters announces their new RotaGel™ Cutting Lube. In most metalworking applications, nothing is more important than proper tool lubrication. RotaGel Cutting Lube is an industrial lubricant that provides superior

protection to the cutting tool even in hard, high-torque machining applications.

RotaGel Cutting Lube is an environmentally safe lubricant because its core ingredients are based off of a food-grade lubricant. It is non-toxic and biodegradable.

With the consistency of a creamy gel, RotaGel has properties that help it adhere to the tool and reduce friction throughout the cut. Because it is formulated with a Hougen blue color, it allows the operator to consistently gauge where the lubricant is applied and visually assures thorough coverage. Designed for use on all metals including carbon steel, stainless steel, inconel, hastalloy, titanium, aluminum, and other alloys and exotics, RotaGel is a versatile cutting lubricant that provides maximum lubrication and increased tool life with many different applications and tools. Examples of applications include: annular cutters, taps, drills, saws, reamers, endmills, general lubrication, and more. Not only does RotaGel provide lubrication to cutting tools, it also improves hole and surface finishes.

MORE INFO www.hougen.com

MANUFACTURING

Siemens Gamesa secures Brazil's largest-ever contract

Siemens Gamesa has reinforced its position in Brazil having signed its largest contract in this market. The company will supply a total of 471 MW to Neoenergia, Iberdrola's Brazilian subsidiary.

The agreement encompasses the commissioning of 136 of the company's SG 3.4-132 turbines at the Santa Luzia complex, which comprises 15 wind farm developments, in the state of Paraíba, in north-eastern Brazil.

The SG 3.4-132 is one of the company's newest and most efficient turbines; its blades stretch 65 meters long. Lastly, this contract will



Siemens Gamesa will supply a total of 471 MW of turbines to Neoenergia, Iberdrola's Brazilian subsidiary. (Courtesy: Siemens Gamesa)

also help foster the local manufacturing base as the turbines will be made at Siemens Gamesa's factory in Camaçari.

"We are very proud that Iberdrola has selected us for such an important endeavor," said said José Antonio Miranda, CEO of Siemens Gamesa in the Americas. "It constitutes a milestone in the history of the Brazilian wind sector as it is one of the largest turbines contract ever placed in this market."

MORE INFO

www.siemensgamesa.com

MANUFACTURING

Ingeteam to deploy new wind standard

Ingeteam, an independent global supplier of electrical conversion and turbine control equipment, recently announced it just completed the training program designed to deploy the new APQP4Wind quality processes standards across the industry.

Ingeteam, as an excellence-driven converter manufacturer, voluntarily sought compliance with the demanding requirements and welcomes the quality standardization for the wind sector.

APQP4Wind is a new wind-industry standard designed to enable wind energy OEMs and component manufacturers to strengthen their cooperation with regards to quality assurance processes.

It is also instrumental in establishing the common mindset and terminology needed in the industry to work collaboratively on these issues. For Ingeteam, fulfilling the requirements of APQP4Wind implies that the standards will be fully complied with throughout the designing and manufacturing processes, so they are well aligned with their partners' processes.

"Innovation is no longer just about technology. It is also about continuously finding new, more effective processes to deliver higher quality and increased customer satisfaction," said Ana Goven, director of Ingeteam Wind Energy. "It is no accident that Ingeteam adopted APQP4Wind without actually being required to do so. Our company culture is innovative by design, which is why we have always been able to anticipate our customers' needs. It underpins our continued effort to stay ahead of the competition, striving to meet our clients' most stringent requirements."

The APQP4Wind project was initiated in 2016 by the Danish Wind Industry Association (DWIA) after the trade body recognized the importance of establishing quality processes standards for the wind industry. DWIA enlisted the support of key OEMs such as Vestas and Siemens Gamesa (formerly Siemens Wind Power) to contribute to the development of these new quality standards.

MORE INFO www.ingeteam.com