

## Swift oil change

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## Caterpillar load

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# Pelican



QUARTERLY NEWSLETTER FOR THE JAMES FISHER GROUP OF COMPANIES

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## IN BRIEF

### No rest for James Fisher Subsea

James Fisher Subsea will be hard at work over the Christmas period - the team has the vessel, EDT Jane (below), on charter right through until the beginning of January in a mission to shift boulders from the cabling route at the Rampion Offshore Wind Farm off the south coast of England. The crew has also been charged with the task of laying up to 300 rock bags along the export cable route.



### Eye in the sky

JF Nuclear is forging a path for the use of drones in hazardous areas with a fully certified drone inspection capability: **Full story on page 2**

# Strainstall strengthens hand

Strainstall Malaysia has secured a contract to install its monitoring systems on the Penang bridge in a move which establishes the company as a key player within the instrumentation and monitoring sector in South East Asia.

As a key artery linking mainland Malaysia with the island of Penang, the Penang bridge is 8.4 miles long (5.2 miles of which are over water) and is one of the longest bridges in South East Asia.

This new contract means two of the three largest bridges in Malaysia are now

BridgeWatch is specially configured to work with existing sensors to expand its sophisticated structural monitoring appeal in Malaysia

fitted with Strainstall's state-of-the-art structural monitoring system, BridgeWatch, which offers a sophisticated preventative maintenance system enabling engineers to assess and create predictive maintenance strategies.

According to Strainstall Malaysia's structural monitoring manager, Damian Griffiths, the project was first mooted in 2015 when the team was working with the Malaysian highways authority on the Malaysia-Singapore Second Link - the bridge which links the country with Singapore.

'We formed a good working relationship with the Malaysian highways authority and their network maintenance manager, Opus International,' says Damian. The team

proposed a BridgeWatch system for the Penang bridge which works with multiple sensor types and uniquely integrates with the bridge's existing sensors.

'In working out a way to integrate existing sensors with new sensors in order to replace the legacy system from a competitor we were able to exhibit the flexibility and knowledge necessary to smoothly incorporate third party equipment,' Damian adds.

The new system will offer real-time monitoring with alerts to notify the bridge concession holder as well as the Malaysian highways authority of any stress, displacement or damage so they can act accordingly.

## Newsflash:

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# Flushing out oil change inefficiencies

JFMS kicks off the first Ship-to-Turbine contract in Belgian waters

James Fisher Marine Services (JFMS) has met significant environmental regulations to conduct its first Ship-to-Turbine (STT) oil exchange at a large wind farm in Belgian waters.

Belgian authorities always had notoriously stringent environmental regulations, refusing to permit oil transfers at sea for fear of spillage. However, with reassurance from JFMS, the first STT transfer recently went ahead at Senvion's Thornton Bank wind farm.

Andy Natrass, business development manager at JFMS who led the campaign says: 'It was our 169 year maritime track record and our significant experience of dealing with oil transfers in dangerous and difficult environments that gave confidence in our proposed solution.'

Once permission was granted, JFMS operations and maintenance manager, Richard Hardman headed the first STT operation. 'A very small weather window meant only three turbines could be exchanged, but the team will return next year to complete more,' he says.

'Not only is it safe but STT offers wind farm operators massive cost reductions in terms of manpower, speed and flexibility which means it plays an essential role in optimising the portfolio performance of O&M projects, improving technician utilisation and reducing turbine down time to boost operational efficiency for our clients.'

The contract comes as part of a new cooperation agreement with renewable energy specialist, Oil Management and Services GmbH to support the European offshore renewables industry cost reduction initiative to reduce the cost of megawatt per hour for offshore wind.

## Oil changing the old way...

*Changing the gearbox oil in an offshore wind turbine every five years required a two-day shut down and a manual and labour-intensive process which put the gearbox at risk of contamination.*

## ...and the new

*A vessel fitted with the STT system hoists three hoses to the top of the turbine. One sucks out the old oil, another flushes the system and the third fills the gearbox with fresh oil in a process which takes 4-5 hours with no risk of contamination.*



# Drone pioneers go aerial for nuclear site inspections

Building on its successful adaptation of ROVs, JFN has created a drone capability licensed to fly over hazardous areas

**After** a 12-month training and certification process, the team at James Fisher Nuclear (JFN) is now offering a fully-functioning drone inspection service to its customers for use in hazardous areas.

The unmanned aerial vehicles (UAVs) are used as a flying camera platform to allow the capture of hi-res images in inaccessible or high-risk locations.

'UAVs have moved away from the hobby world and are really being taken seriously in industry now so we were keen to get ahead of the game,' explains Simon Pyne, business development manager at JFN.

'We have invested in the best quality light-weight equipment and have trained our pilots to the highest level, which includes putting them through the HAZOP process so the kit can be used on a nuclear licensed site.'

This clever adaptation of the latest flying technology is another example of JFN's engineering innovation which comes on the back of the company's pioneering use of specially adapted submersible ROVs. The plan is for the team to design and build light-weight thermal cameras, radiation probes, laser scanners and air samplers which can be mounted on the drones as required in the future.

For JFN's customers the use of drones has significant cost and safety benefits because they do away with the need for scaffolding or cranes as well as possible risks to staff safety. The three JFN drones are extremely light (2-3kg in weight) but robust and designed to remain stable in high winds.

Pilots have been specially hand-picked for their hand-to-eye co-ordination skills before being put through a rigorous training programme and drone pilot certification.

The team has been working closely with Sellafield - JFN's largest and most longstanding customer to develop the necessary engineering and hone pilot skills.

One pilot, Bradley Jackson (who is 24) now divides his time between piloting ROVs and UAVs. He says: 'This is a dream job for me, it's quite unique - there are only a handful of people trained to properly fly UAVs. I do have experience of flying a hobby drone at home, and I've been an enthusiastic gamer since I was a child which clearly helped hone my hand-to-eye co-ordination. All those years of practise have finally paid off!'

## AWARD WINNERS

JFN is proud to have received some recent industry accolades:

- The Engineer magazine recently awarded the JFN engineering team and the Sellafield Pile Fuel Storage Ponds project team a 'highly commended' in the 'collaborate to innovate' category of their annual awards for their development of buoyancy bags and powerful magnets to remotely move large submerged items
- The JFN team also received high commendation at a regional awards ceremony, Britain's Energy Coast Business Cluster (BECBC 2016). The award was sponsored by Sellafield and focused on its local supply chain.
- The team has been shortlisted at the Nuclear Decommissioning Authority (NDA)'s Supply Chain Awards for 'best example of technology/innovation implementation' for its water jet cutting project.

# On the right track with Caterpillar

The team at Prolec was approached nearly five years ago by Caterpillar to develop a weighing system which could be incorporated onto the articulated dump trucks (ADTs) it manufactures in the UK.

The two businesses collaborated on the development, extensive testing and eventual manufacture of a payload management system which is now being fitted on the truck production line.

The system comprises a set of strain gauges attached to the 'walking beams' underneath the main carrying bucket of the trucks. These detect minute changes

Prolec's specially designed strain gauge weighing system is now on the production line at Caterpillar

in strain on the beams, sending the information to an electronic computer unit in the driver's cab to indicate the weight of the load.

'The system will help to improve productivity, efficiency and profitability because it can optimise the payload on every trip and shift,' explains David Menon,

Prolec's managing director.

'Both the driver of the ADT and loader receive real-time payload data which allows them to reduce overloads and underloads and thereby increase site efficiency.'

The payload system informs the driver (via a screen in the cab) and the loader (via a set of lights) when the payload is at optimal weight. This effectively reduces the number of cycles and wear on the ADT.

'Prolec's core business relates to retrofitting our systems onto existing vehicles and equipment, so this marks a positive development for the company in line with our marketing strategy,' David adds. 'We are very proud to have co-operated on the development of this new product in conjunction with a major original equipment manufacturer. Our system is now a factory fit supply item which will increase productivity for Caterpillar's customers.'

The system avoids the inefficiencies of under-loading and the expensive consequences of over-loading which can lead to vehicle damage. It also allows the operator to monitor daily production and payload values.

The project has had a long development and testing phase, but Prolec's senior development engineer, Neil McLaughlin played a central role throughout.



All Caterpillar articulated dump trucks now have the option of Prolec's system as standard

## Safe and wireless lifting

Scotload has launched a new zone 1 certified wireless range of SmartLoad products to aid load monitoring in hazardous areas

Scotload has come to the end of a long and complex certification process to successfully launch upgraded hazardous area certified versions of its award-winning SmartLoad product range. This brings wireless load monitoring to ATEX / IECEx zones 1 and 2 for the first time.

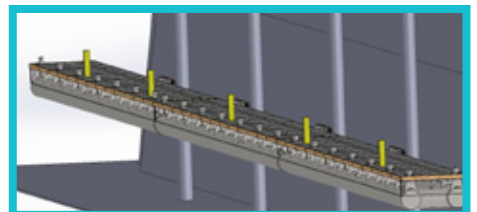
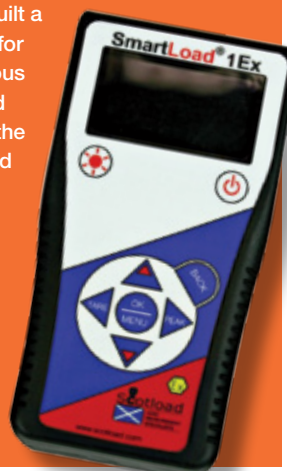
SmartLoad is an intelligent load monitoring system regularly used by the global lifting industry which incorporates data-logging into load cells. The whole range has now been upgraded with the latest wireless technology and has been designed, tested, and certified for load monitoring applications in hazardous environments. It uses the latest wireless technology to deliver increased range and signal reliability over any other product currently on the market.

According to Scotload managing director, Simon Everett, the range now makes monitoring loads safer and more reliable by eliminating the risks associated with cable

damage in congested offshore work areas.

'This opens up huge opportunities to reduce the cost of everyday oil and gas operations,' he says, adding, 'The team has worked hard with SGS Baseefa to achieve certification and we are very pleased with the results.'

Scotload has built a global reputation for providing hazardous area solutions and Simon highlights the integral role played on this project by electrical engineers, Awga Aung and Tin Aye who worked closely with engineering director, Adrian Coventry.



## JFMS raises stakes at Rampion

James Fisher Marine Services has been awarded the contract for design, manufacture and installation of a temporary 'holding pontoon' to be used during the peak construction phases of the Rampion Offshore Wind Farm on the south coast of England.

The 120m pontoon, which has been designed to accommodate up to 13 crew transfer vessels (or similar), is currently in fabrication. It is lined up for installation at the current 'RoRo 2' berth at the Port of Newhaven early in 2017.

'We are among many divisions within JFMS now working closely with the teams at Rampion and this opportunity allows us to prove our expertise at delivering a turn-key solution when presented with tight deadlines,' says Lucas Lowe-Houghton, bid manager at JFMS.

### Tell us a bit about yourself

My background is in business development - I am a graduate of Aberdeen University with a degree in English and I got my first job with Divex in the UK in 1987. In 1998 I emigrated to Australia as a part owner of a new Australian diving equipment company, and then rejoined Divex in 2003 to open the Divex Asia Pacific office in Perth. I ran that section until Divex was bought by James Fisher in 2013 and became part of the hugely successful JFD group.

### What's your current role?

I am now Asia Pacific director of JFD, responsible for development of the business in the whole region. My role is to form and develop close relationships with both commercial and government clients here, and to look for opportunities for JFD to provide technical solutions to clients' needs. The region is growing rapidly, and a significant part of JFD's order book is generated in Asia Pacific. As part of that brief, I teamed up with JFD commercial director, John Paul McCarroll to further relationships with Shanghai Salvage - one of the biggest professional salvage companies in China.

James Fisher recently acquired a Singapore-based saturation diving company called Lexmar, and more recently its technical director Martin Hardy joined me in the negotiations alongside JFD technical authority and project manager Jamie Watson.

### What's the background to the Shanghai story?

Back in 2009 Divex Asia Pacific built a 12-man, 300m saturation diving system for Shanghai Salvage. This system has operated very successfully and was deployed in the Chinese record deep dive in 2014.

We maintained close contact with

JFD has boosted its leading position in the saturation diving systems market with a multi-million pound contract with Chinese company, Shanghai Salvage. We meet Doug Austin who headed up negotiations for the project



Under the surface with:

# Doug Austin

Asia Pacific director of JFD

Shanghai Salvage throughout this time and discussions around a larger 500m system began three to four years ago. Over time, the specifications have been developed and requirements clarified and this has now resulted in a £35million contract to design, manufacture and install a 24-man saturation diving system capable of reaching depths of 500m.

### What's so exciting about this contract?

The system is unique in several respects. With a 500m depth rating, it will be the deepest diving system delivered anywhere in the world in the last 25 years, the deepest diving system in China, and the largest portable diving system ever built. JFD's track record in the successful

delivery of deep diving systems was key to Shanghai Salvage's confidence in us and our ability to meet the challenges of this exciting project.

### What does the future hold?

This contract is the result of several years' business development in the Chinese market, and we hope it will further strengthen our presence in the region and ensure China is a significant market for JFD in the future. In fact, we have recently entered into a joint venture agreement with a Chinese diving equipment manufacturer to form a company called Wahu Divex Diving Systems Ltd which will consolidate our position in China and enable JFD to fully capitalise on future opportunities there.

## SEASON'S GREETINGS FROM JAMES FISHER

### Best wishes for Christmas and the New Year!

With 2016 finally coming to a close it's a great time to reflect on a fantastically exciting year for the James Fisher group of companies and to acknowledge the sheer hard work and dedication that has gone in to ensuring continued success.

Major contract wins this year have included the Galloper offshore wind farm (which is pulling together JF teams from right across the group), the significant new ongoing relationship between JFD and the Indian Navy, and JFN's expansion with its decommissioning contract for Winfrith.

Innovation has always formed a central core value for so many of our businesses and this year we really have excelled in creating and implementing pioneering solutions for our customers.

We would like to thank everyone for their contribution as James Fisher continues to go from strength to strength, and to wish you all a very merry Christmas and a happy New Year!



*The Pelican Team*