

#### O&M at EA1

JFMS wins £5.6m offshore maintenance contract for major UK wind farm: Page 2

#### Ventilators for NHS

JFD-designed InVicto uses significantly less oxygen in the fight against COVID-19: Page 3

### **Bridge surveillance**

JFTS puts Bridgestrike monitoring systems on eight bridges for London Underground: Page 4

### **Airbus X-ray testing**

James Fisher NDT wins approval for X-ray testing of 3D printed Airbus parts: Page 6



### Fendercare helps MoD carrier weather the storm

The Royal Navy's £3.1bn aircraft carrier, HMS Prince of Wales, weathered the 70mph winds of Storm Jorge in February thanks to Fendercare Marine, which provided secure protection (all mooring and towing equipment, plus anchors and chains) for the 280mlong vessel during her stay at Liverpool's historic waterfront. James Fisher Shipping Services also conducted a successful refuelling for the vessel last year (see page 7).

### STOP PRESS

### JFN hits decommissioning project milestone

James Fisher Nuclear (JFN) has hit a significant milestone as it continues the decommissioning of the Steam **Generating Heavy Water Reactor** (SGHWR) plant at Winfrith, Dorset.

The manufacture of key shield doors has now begun ahead of schedule, with a team from JFN working closely alongside Magnox on this, the first decommissioning of a commercial nuclear power station in the UK.

See page 5 for the inside story.

### Did you know?

You can read extended versions of Pelican articles with added insight and commentary online. Register to receive Pelican by email so you never miss an issue. Just visit:

james-fisher.com/pelican

# Life-saving rescue partnership

### World-leading submarine rescue system ensures ongoing high levels of safety for Australia's navy

JFD Australia has secured a \$A70m contract to continue to supply its worldleading submarine rescue system to the Royal Australian Navy (RAN) for at least the next four years, which maintains JFD's position as a world leader in submarine rescue.

The JFD team has been working in close partnership with RAN for more than a decade, providing this critically important undersea combat support system.

In Australia, submarine rescue involves sending a smaller or 'mini' piloted submarine to a disabled submarine to rescue the crew

on board and transfer them safely under pressure to the ocean's surface where they are able to receive potentially life-saving decompression treatment in a speciallydesigned hyperbaric equipment suite.

'Keeping submariners and other defence force personnel safe has been, and will always be, JFD's highest priority,' says Toff Idrus, managing director, JFD Australia (and a former submariner).

'With our submarine rescue service being one of only four air transportable systems in the world, we are focused on saving lives and we look forward to continuing to be



a reliable partner for the RAN through the ongoing delivery of this proven submarine escape and rescue service.'

This contract extension will create at least four full-time defence industry jobs bringing to 10 the number of new positions JFD has created in the past six months. This extension will also see an increased focus

Continued on page 3

# Building stronger bonds with East Anglia One

Close working relationships with wind farm owners seals extended operations and maintenance contract

After more than three years working closely with ScottishPower Renewables (SPR) at the East Anglia ONE (EA1) offshore wind farm, James Fisher Marine Services (JFMS) has been awarded the £5.6m offshore maintenance contract for the site

This win is a strong validation of the close working relationship the JFMS team has created and nurtured in the region, and with the EA1 team.

The three-year contract covers both onshore and offshore servicing and includes all ongoing maintenance to the wind farm, including statutory inspections, equipment maintenance and structural integrity checks for components.

'This shows the power of a properly integrated relationship during a wind farm's construction phase, one which we're delighted to extend with SPR and the EA1 team as we work together to drive down the cost of operations and maintenance,' says managing director, Barry Jennings.

Operation and maintenance plays a key role in the management of an offshore wind farm and constitutes a significant proportion of costs incurred over the asset's life cycle. But the JFMS team is working to constantly innovate products, services and methods to minimise turbine downtime and reduce maintenance costs. 'This contract win shows the trust placed in JFMS by SPR, and the confidence that the team is capable of maximising the wind farm's output, extending its operational life span, and playing its part in driving down the cost of renewable energy,' adds Barry.

EA1 is located 43km off the east coast of England, and work on the new maintenance contract will be managed and run out of the JFMS base at Lowestoft. The base was set up in 2016 at the heart of the local supply chain to bring together the group's marine, offshore and subsea specialist capabilities to support the construction of the Galloper Wind Farm there.

As a single-source supplier JFMS will continue to provide an integrated service. 'It feels like we've been on this journey together, hand in hand. We've overcome the challenges, worked through any snagging issues and taken our learnings as a team, which makes us the best possible partner for ongoing maintenance work on the wind farm,' says Heather Leadbetter, project engineer at JFMS, who manages this integrated marine package and spends two days a week at EA1 HQ as an embedded extension of the EA1 team.

Importantly, the Lowestoft base has allowed the JFMS team to become closely involved in the local supply chain community too. This allows for the integration of smaller local contractors (such as RMi Engineering and Fern Communications), which helps to boost employment in areas closest to the wind farms.

Barry adds: 'As a company rooted in Lowestoft, we are really proud to be part of a local supply chain that celebrated a collective achievement when the wind farm first generated power last year. We are all making huge strides towards helping to produce the clean energy the UK needs, and we are continuing to provide opportunities to the people and businesses of East Anglia.'

Charlie Jordan, project director at SPR adds: 'We're delighted to have such a strong supply chain in East Anglia and we're really pleased to be furthering our working relationship with the James Fisher team.'

He continues: 'The integrated marine package covers a wide range of services which have enabled EA1 to successfully manage the offshore site in accordance with project requirements. Overall, these services have been delivered successfully and we continue to work with JFMS to further tailor the services to our needs.'

It is the first of four wind farms in the East Anglia area, with SPR planning to further expand its wind farm network by 2030.

#### continued from page 1

### Life-saving rescue partnership

on involving more local West Australian industry particularly in the specialist area of operating the system's new hyperbaric treatment chambers.

Further, the contract also guarantees the continued employment of the workforce of up to 60 at JFD's Australian headquarters at Bibra Lake in Perth to ensure the submarine rescue system is 'rescue ready' and on standby to respond to a submarine emergency anywhere in the world.

### **Pressure testing in Scotland**

JFD Australia has also secured a \$A7.2m contract with the Australian government to build and pressure-test submarine-like hulls, which will make full use of JFD's new global testing centre at the National Hyperbaric Centre in Scotland.

The hull is the most structurally important part of a submarine as it allows the submarine to withstand incredible amounts of water pressure as it dives deep below the ocean's surface. JFD will be working with Australian partners and at its global testing centre in Scotland to validate analysis methods and procedures that will be relied upon in the future for assurance and acceptance of the pressure hull design of the Australian Attack Class Submarine.

The four-year contract, awarded by the Australian Government Defence Science and Technology Group (DSTG), will see the JFD team working closely with DSTG and other Australian defence industry firms.

Together, the team will be testing three pressure vessels which simulate a submarine hull, applying pressure to the point where the hull collapses.

'It is impossible to underestimate the critical significance of a submarine's hull or the expertise and experience required to ensure it is pressure tested to the world's highest possible safety standards,' says Toff Idrus, managing director of JFD Australia, 'Safety will always be JFD's number one priority.'

The work will be managed from JFD Australia's headquarters and advanced production centre near Perth where a project management team has already commenced preliminary work on engineering and fabrication of ring-stiffened test cylinders. Specialised transport crates, cradles and pallets and packaging needed for transportation will be made at JFD's manufacturing and fabrication facilities at Warners Bay near Newcastle, Australia. JFD's world-leading hydrostatic testing facility in Scotland, will be used for the final pressure tests on these submarine-like hulls.



# Innovative ventilators to tackle COVID-19 crisis

Diver support breathing equipment has been adapted to provide oxygen-saving ventilators for the NHS

In response to the unprecedented global crisis presented by the COVID-19 pandemic JFD has used its experience in developing breathing apparatus to produce a new ventilator system and is ready to supply up to 2,000 units per week to help support medical professionals at a time when health services are under exceptional pressure.

The company is one of many to have responded to the government's call for the design and production of ventilators to ease the strain on the NHS during the coronavirus crisis. It has developed the InVicto system, which uses significantly less oxygen (O2) than other ventilators on the market - a factor that could prove crucial if O2 supplies become short.

A sample of the system has been sent to the UK's Medicines and Healthcare products Regulatory Agency (MHRA) for testing and a first set of trials have been completed with promising results. Once approved, InVicto can be used to provide breathing support in a variety of locations, including care home and pre-critical temporary wards - easing pressure on health care systems at a critical time.

The JFD team pooled considerable experience in producing breathing apparatus, life support equipment and hyperbaric medical equipment in order to develop InVicto very quickly. Managing director Giovanni Corbetta said the team has been 'working around the clock' since the COVID-19 outbreak hit.

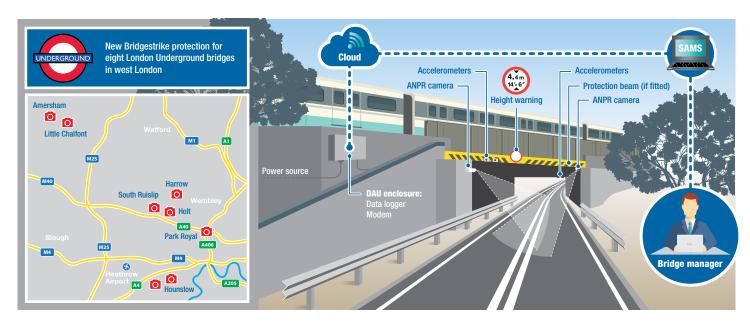
'A key part of this project has been to take into account the likely pressures on O<sub>2</sub> supply,' he says. 'Designing a ventilator 'The JFD team has been working around the clock to find solutions since the virus outbreak hit'

Giovanni Corbetta managing director of JFD

with O<sub>2</sub> consumption in mind has enabled us to incorporate our wide range of skills in gas management and highly precise patient monitoring, which we bring from our diving systems and medical hyperbaric rescue capabilities.'

InVicto is based on an existing ventilator system designed for hyperbaric medical treatments, but it has been updated with modern monitoring technologies and numerical analysis to ensure it meets the operational standards required for the treatment of COVID-19.

Eoghan O'Lionaird, James Fisher's chief executive, explained the company has a 'unique perspective into how best to deliver oxygen to patients safely, effectively and efficiently', adding: 'Our new InVicto ventilator does this, not only helping to save lives but also preserving crucial oxygen reserves at a time when global supplies are under considerable strain.'



# Monitoring London's bridges

### Bridge damage surveillance system is installed at eight key sites across the London Underground network

JFTS has been awarded a new contract from Transport for London to install its Bridgestrike monitoring system on eight bridges in west London in a bid to keep the country's iconic underground system operating safely and efficiently.

Transport for London (TfL) is responsible for the London Underground and surprisingly, 79% of the 249-mile underground rail network is above ground and uses over 800 bridges many of which cross busy roads. Bridge impact - where a vehicle crashes into or damages the bridge - is becoming an increasingly common problem and can seriously risk the structural integrity of the bridge, potentially putting it out of action and jeopardising the efficiencies of the transport network.

An estimated 10 bridge strikes occur every day in the UK, costing considerable sums in repairs, compensation and delays.

However, JFTS's solution is Bridgestrike which provides an effective and reliable means of monitoring bridges remotely by offering 24/7 surveillance and instant notification when

a strike occurs. It enables bridge owners and operators to manage the response to an incident effectively and where necessary, recover costs from the vehicle owner.

In 2016 JFTS installed a Bridgestrike monitoring system for TfL on a railway bridge near Watford, which carries the Metropolitan line over the busy A4145 and which had received an unprecedented number of vehicle collisions. In the 18 months after it was installed, Bridgestrike had recorded more than 30 incidents, with the offending drivers successfully prosecuted, and damages reclaimed in 100% of cases thanks to JFTS' images and data.

It is the success of schemes like this and two others on the TfL network which have led to the new contract which puts Bridgestrike on eight TfL bridges across London.

The Bridgestrike system comprises a custom-built suite of monitoring tools using accelerometers, video cameras and data acquisition units which feed information into JFTS's Smart Asset Management System

(SAMS) software. This provides operators elsewhere with real-time reports and clear video images of any strike.

Julian Allen, director of monitoring at JFTS says: 'It is very exciting to be awarded this contract which builds on our collaboration with TfL. We are continually developing the Bridgestrike software to boost the quality of data collected and the analytics processed.'

Bridgestrike can analyse the severity of any impact and offer sophisticated data analytics of the strike. It immediately informs the operator and takes photos for possible prosecution, analysing the strike to determine what actions (if any) are required. This means no impact event is missed and appropriate maintenance can be completed giving the bridge owner the opportunity to clearly demonstrate due diligence.

Ash Parmar, asset manager at TfL adds: 'We have found Bridgestrike to be a fantastic tool for immediately notifying and alerting us of bridge strikes. It allows us to act as soon as a strike takes place, so decisions can be made to ensure the train service operates safely and with minimal delays. It also allows us to recover damage costs and collect data for analysis.'

# Strong subsea signals from China

After 18 months of negotiations, RMSpumptools has been awarded contracts to supply its subsea connectors and sensor systems to oil and gas wells off the coast of China.

This comes on the back of engineers from the connector and sensor divisions at RMSpumptools combining knowledge and experience to provide a new subsea tree and monitoring system to focus specifically on the emerging Asia offshore market.

The contracts, with a Singapore-based company called WEFIC that manufactures wellhead and well control equipment, includes a wide range of connector and sensor technologies for electrical subsea production systems.

The equipment will provide digital output signals for pressure and temperature values, allowing the operator to control and flow their well more effectively.

'WEFIC is a new subsea customer for RMSpumptools,' says subsea director Michael Winfield. 'Our systems and engineering support teams have spent the last 18 months working with WEFIC to secure this purchase order with this particular customer and operator. Its success will put RMSpumptools at the forefront of long-term future market supply.'



# Under the surface with: Ian Smith

**Principal engineer at James Fisher Nuclear** 

We meet Ian Smith, principal engineer at James Fisher Nuclear (JFN), who is playing a key role in the team's biggest decommissioning project to date at Winfrith in Dorset

#### Tell us a bit about yourself

Growing up in North Yorkshire I loved cricket and woodwork and I always thought I'd end up as a DT teacher, but when I was at school I managed to get a bit of work experience at a company in the nuclear industry and was advised to channel my energies into engineering. It wasn't long into my Masters degree in mechanical engineering at Loughborough University when I realised I would never have enjoyed a teaching career.

If you ask my colleagues, they'll tell you my job is my real passion, but outside of work I enjoy watching motorsport and playing village cricket in the summer months.

#### How did you come to join the James Fisher group?

I spent my university placement year at RMSpumptools which, at the time, had a nuclear division. RMS was subsequently acquired by James Fisher and the nuclear section became part of JFN. I was thrilled when JFN offered me a graduate position as mechanical design engineer there. In fact, I sat my last exam on a Thursday and started at JFN the following Monday. I've been there ever since, working my way up to engineering manager and then principal engineer.

#### Tell us about your job?

I am responsible for the technical delivery of projects (or parts of projects) leading a team of 10-15 engineers working on solutions to client problems. I am currently leading part of JFN's single biggest decommissioning project to date, working out the best way to



safely and efficiently break up and remove the Steam Generating Heavy Water Reactor (SGHWR) core at Winfrith.

The project, for Magnox, involves cutting up the SGHWR and packaging the waste into appropriate containers for storage. Although this sounds relatively straightforward, the radioactivity of the waste means everything has to be done remotely, and I am not sure much thought was put into decommissioning the reactor when it was designed back in the early 1960's! For instance, key features are difficult to access and every bolt head has been welded on meaning they cannot be easily removed with standard tooling but have to be machined off.

JFN is responsible for the design and build of the whole project - from the structural modifications required to get our robots in place, through to providing all the maintenance equipment necessary to

support the facility. My team is responsible for the core segmentation aspects of the project, developing the robots and tooling which will be used to cut up the core of the reactor. This means we work on modifying off-the-shelf power tools so they can be deployed from a large industrial robot (such as the KUKA pictured left). The unique nature of the work means we spend quite a bit of our time trialling and adjusting the tooling to ensure it is fit for purpose. It is probably every engineer's dream job! But alongside the fun stuff, there's quite a bit of technical underpinning work required (complex calculations, paperwork and safety tests) to ensure our designs comply with legal and industry requirements.

#### What do you enjoy most about vour iob?

I love the sheer variety of the work I have to do, and because JFN has the unique capability to work on every stage of a project from design and manufacture to testing and installation, I get the job satisfaction of seeing our designs successfully manufactured and put into service.

My career highlight – so far – has been working as lead engineer for the development of the RODMAN II manipulator which helps to recover dropped fuel rods within the Magnox Reprocessing Facility at Sellafield. We worked very closely as a team to deliver ahead of time, and on budget, a solution which was rated excellent in terms of technical achievement, and positive client feedback.

#### What does the future hold?

I will be busy for the next couple of years seeing the SGHWR project through to successful completion. We are due to start initial integration testing later this year which is the final stage before we get to install everything onsite. It is fantastic to see three years of hard work on this project starting to come together now.

This is a very interesting time in the nuclear industry, with several reactors being readied for decommissioning, and hopefully the experience and knowledge JFN has gained on the SGHWR project will put us in an excellent position to win a share of this future work - both in the UK and internationally.

# 2D testing for 3D printing technology

Certification means Airbus parts will now be safely and swiftly tested with X-ray scanners

James Fisher NDT has been working closely with Airbus to develop a certified 2D radiographic testing service for new parts created through 3D printing technology, as a robust and assured alternative for quality control for these components. This makes it the only testing house in the UK with approval to perform this important service.

'As an approved supplier to Airbus, we were asked if we would take the necessary qualifications to carry out 2D radiography on additive manufactured (AM) components,' explains Vikki Urwin, radiographer (level 3) at JFNDT. 'Previously, these safety-critical parts would be tested for faults or defects by 3D CT scans, but 2D radiography (X-ray) is a far quicker and much more cost-effective process.'

JFNDT has had to go through a rigorous approval process with Airbus to prove the film and digital X-ray systems are effective at identifying microscopic defects (such as inclusions, lack of fusion, gas entrapment or shrinkage) smaller than 1mm in size, in the metal components (similar to those pictured above).



AM, also known as 3D printing, uses computer aided design to build objects layer by layer. It offers huge cost and sophistication advantages over traditional methods of manufacture and is being increasingly widely used in industries such as aerospace, medicine, and automotive industries. The value of a shortened development cycle and a more efficient process means that products can be created more quickly and design changes can be incorporated more easily.

Although big companies such as Airbus will routinely use 3D CT scans to test prototype parts before manufacture, there is now confidence that JFNDT's 2D scanners offer a robust and assured alternative for subsequent quality checks. As the only testing house in the UK in a position to conduct such intricate 2D scanning, JFNDT is now in a strong position to take on similar work from other big manufacturing companies.

# **Condition** monitoring on Scotland's west coast

James Fisher Mimic (JFM) has secured a contract to install its condition monitoring software on 14 CalMac Ferries which will ensure early warning of any problems to the crucially important form of transport which services the Scottish west coast islands.

Caledonian MacBrayne (CalMac) is the UK's largest ferry operator, which uses 50 ports and harbours across 200 miles of Scotland's west coast. Last year the ferry company shipped around 5.6m passengers and 1.4m vehicles across its network in sailings ranging from five minutes to seven hours.

Now JFM is providing software, hardware (a mixture of hand-held and fixed Mimic condition monitoring systems), training and expert services to 14 of CalMac's larger vessels which provide lifeline services to the remote Scottish islands. These specifically designed vessels operate in some of the most difficult seas around the UK. They will use the JFM's system to identify early patterns of failure across a



wide range of onboard equipment in a bid to reduce the effect of lost services and vessel downtime.

The JFM team's effort to secure the new contract was led by Martin Briddon, JFM business development manager who continues to be involved in helping CalMac to introduce condition monitoring into the vessels' maintenance strategies in order to predict failures and improve asset management and reliability. Callum Jones, JFM project manager, and his team of CM and IT consultants also worked to commission the Mimic systems onboard. 'Close collaboration and diligent project management have been key to the successful commissioning of the project,' says Martin.

Julie Philpott, director of asset management for CalMac Ferries says: 'We are

delighted to be working with JFM on this important piece of work. Early identification of defects is vital to ensure a resilient fleet serving the communities of Scotland's west coast."

JFM's condition monitoring software analyses asset condition, vibration data, performance and efficiency of the vessels' systems and equipment to provide vessel owners and operators with live decisionmaking and early warnings relating to asset condition, performance and efficiency to ensure the vessels remain operational. The collected data provides an early warning of potential faults. This enables fleet companies such as CalMac to eliminate unscheduled breakdowns, reduce maintenance costs and increase operational capability.

# **Container** weighing speed boost for busy Spanish port

The Spanish port of Yilport Ferrol is offering a considerably faster service to its customers and a 300% acceleration in weighing speed, after Strainstall installed its Container Weight System (CWS) there last year. The system streamlines the process, enabling the port to move goods faster, reducing costs and increasing customer numbers.

It was previously reported in Pelican that new, global regulations had been set up in 2016 holding vessel operators and marine terminal operators legally responsible for ensuring that all packed containers have a verified container weight before being loaded onto vessels.

As Yilport doesn't have its own weigh bridge all containers were weighed at an offsite facility with the port paying to hire trucks to transport the containers back and forth. Warehouses were fast becoming congested and time-bound service targets had been put at risk.

However, Diogo Pereira de Castro, director at Yilport Ferrol says since installation, the port's container weighing speed has increased by 300% with the team now processing 12 containers per hour



'Our weighing speed has increased by 300% and we are now processing 12 containers per hour, up from four'

Diogo Pereira de Castro **Director at Yilport Ferrol** 

(at five minutes per container) compared to the four containers per hour (15 minutes per container) using their previous process.

'From concept to installation, the Strainstall team has been responsive, professional and reliable,' he says. 'Their solution delivers a considerably faster service for our customers.'

'We were delighted to partner with Yilport Ferrol to help it deliver a faster service for its customers, while ensuring SOLAS compliance,' says Ian Roberts, technical sales manager at Strainstall. 'The system both meets obligatory safety standards and increases

efficiency, which represents an important development for smaller ports which have to operate under tight budgets, allowing them to see an increase in the number of customers they can take in,' he adds.

Strainstall specifically developed its Container Weight System (CWS) to fit on straddle carriers to offer a swift and efficient container weight verification service. It was first trialled at a Southampton-based container terminal in 2017 and an increasing number of international ports have been expressing interest in the system in a bid to reduce weighing time and costs, while maximising asset protection for customers.

CWS seamlessly integrates load monitoring technology onto existing container handling equipment, meeting the International Maritime Organisation's amendments to SOLAS safety guidelines to deliver accurate weight verification data in real-time, as part of a port's regular lifting cycle. CWS's real-time load monitoring also provides immediate insights to ensure safe container weighing, stowage and transportation, with the option for container snag detection and centre of gravity data too.

# **MoD** refuelling mission

In the last few months James Fisher Shipping Services (JFSS) has conducted a complex but successful refuelling of the Royal Navy's newest aircraft carrier, the Prince of Wales; supervised a dry dock overhaul for oil tanker the Rayleigh Fisher, and achieved a 5,000-hour safety award for the Shannon Fisher.

Last year, the Ministry of Defence (MoD) asked JFSS to help refuel massive aircraft carriers undergoing sea trials prior to commissioning. The design of the 284m-long carrier's hull meant a refuelling vessel would not be able to come alongside, so the JFSS team had to find a suitable port that could accommodate both vessels and also allow 400m of fuel hose to be laid on the quayside.

'We chose Invergordon (in the Scottish Highlands) because of its secluded nature and the facilities available,' says James Rowland-Smith, head of offshore (pictured right). The JFSS vessel Sarnia Cherie was selected for the job.

As the work was nearing completion, the team received a surprise visit from the MoD project team asking for extra fuel to allow the Prince of Wales to complete full speed trials. 'The process was slow, but effective and completed to the highest satisfaction of the Prince of Wales team,' James adds.

In November 2019 the Raleigh Fisher, which is the latest addition to the James Fisher fleet, underwent a thorough inspection and overhaul in dry docks in the north east of England. JFSS fleet manager



Mark Armistead says: 'Particular attention was given to safety and environmentally sensitive elements of the ship's operation.' The underwater areas were coated with a self-polishing and anti-fouling paint to aid fuel efficiency and the vessel colours updated to those of the James Fisher fleet.

The Shannon Fisher has received a prestigious safety award in recognition of achieving 5,000 days without a recorded lost time incident.





### **Retirement for Pumptools founder**

After 13 years at the helm, Stan Foster-Rooke is stepping down as managing director of RMSpumptools and handing over to Doug Harwell.

Stan set up what was then Pumptools with a partner in 2000, establishing the company's reputation for developing innovative systems for electric submersible pump production operations, and winning its first major sale from Shell in 2001 for the Gannet oil field in the North Sea.

The business continued to expand geographically, extending into parts of South America, Africa and China with major longterm contracts supplying systems to Exxon in Chad and Anardarko Bohai Bay in China.

James Fisher purchased Pumptools in 2007, and in 2009 Stan led the merger with RMS and assumed the role of MD. The company has now reached a global turnover of £30m and achieved an unsurpassed reputation in the artificial lift industry.

Stan, 66, trained originally as an engineer prior to starting his first business in the car industry. In retirement he is planning to spend more time with his wife, Joanne and their young family, and indulging his passion for classic cars and music.

He will be replaced by Doug Harwell, previously chief operating officer who joined the company in 2009 and was one of Stan's early customers.





## A starring role for JFD centre in the Last Breath movie

Watching the documentary, Last Breath, which tells the near miraculous recovery of a saturation diver who survives for over 30 minutes at 100m without gas, you might recognise shots of JFD's National Hyperbaric Centre (NHC) in Aberdeen.

Saturation diver, Chris Lemons was working at the bottom of the North Sea in 2012 when his umbilical cable severed, and he was left stranded with just five minutes of gas in a back-up tank. The movie tells the story of the horrific accident and the agonising time it took for a rescue ROV to reach him.

Footage and audio recorded at the time were woven together to create a mini documentary used as part of training and safety demonstrations across the industry. However, film teams were keen to expand this documentary into a feature length movie, combining the clips with interviews and reconstructed scenes.

Producers approached JFD about using the NHC to reconstruct scenes in the diving bell. The 18-man land-based saturation diving system replicates the system on board a dive support vessel and provides a controlled environment for training and testing - but it also offers an ideal environment for filming projects.

In May 2018, Chris and his co-diver, Duncan Allcock were brought to the NHC to re-enact parts of the incident.

'We became familiar with the filming process after the NHC was used for shots in the 2015 movie Pressure, but this was a bit different,' says Martin Robb, head of delivery for commercial services at JFD. 'It was challenging to watch the divers having to re-enact their horrific ordeal.'

'It is reassuring that divers now have access to 45 minutes emergency breathing gas with JFD's COBRA rebreather system.'



Scan this code to watch the movie trailer or go to Netflix at the following link: https://www.netflix.com/gb/title/80215139



### Support for the homeless

Staff at the Barrow office of James Fisher Shipping Services raised £200 last year for their local Homeless Shelter appeal along with donations of food, toiletries and essentials.

### **New wheels for Futurestars**

Over 2.500 school children in Ghana and 1.600 in neighbouring Togo have already benefited from Fendercare Marine's support of the Futurestars Charity, but now the charity has just taken delivery of a customised Toyota Highlander SUV and new minibus, funded mainly by Fendercare Marine, to safely transport teams of young footballers between league games in Ghana.

As previously mentioned in Pelican, Futurestars provides football coaching at schools in West Africa which otherwise would have no sports facilities. The new transport arrangement enables the charity to save the cost and administrative headache of hiring taxis or private vehicles to get the team of 11 children, plus reserves, coach and manager to their games.



The Futurestars team with their new SUV and minibus