

SUBSEA UK NEWS

THE NEWSLETTER FROM SUBSEA UK

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SEPTEMBER 2011

BREAKING THROUGH

SUBSEA
ECONOMIC
SURGE

IN THIS ISSUE

Next Chapter in Subsea Growth
Subsea Success Stories
New Innovations
Latest Technologies

...and more

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New Members

Bowtech Products Ltd, Coract Group Plc, EPTM Ltd, HCL Fasteners Ltd, Jee Ltd, Net Survey, SETS Ltd, Turbios

Member List

Aberdeen Renewable Energy Group, Aberdeenshire Council, AC-CESS Co UK, AGR Integrity UK, AGR Subsea Ltd, Aker Qserv, Aker Solutions, Allomax Associates Limited, ANSYS UK Limited, Ashtead Technology, Atkins, ATR Group, Aubin Limited, Baker Hughes Process and Pipeline Services, Baule UK Limited, Bel Valves, BG Group, Bibby Offshore Limited, Bond Pearce LLP, BP Exploration Operating Company Limited, BPP-TECH, Bridge Energy UK, Britannia Engineering Consultancy Ltd, Bruck UK Limited, Buchan Technical Services Limited, C3 Global Limited, Caley Ocean Systems Limited, Cameron Limited, Castrol Offshore Ltd, Central Insurance Services Ltd, Centrica Energy, Chevron Upstream Europe, C-MAR, Cranfield University, CSL, CTC Marine Projects, Cutting Underwater Technologies Ltd., Deepwater EU Ltd, Delmar North Sea Ltd, DOF Subsea UK, Dominion Gas, DUCO Ltd, Dunlop Oil & Marine Ltd, Dynamic Positioning Services (DPS), E.ON Ruhrgas North Sea UK Ltd, East of England Energy Group, Ecosse Subsea Systems Ltd, EPC Offshore Limited, ESS Support Services Worldwide, EV Offshore Ltd, Expro Group, EXSTO, Fathom Systems, First Subsea Ltd, Fisher Offshore, Flexlife Limited, Flowline Specialists Limited, Forum Energy Technologies, Framo Engineering UK Ltd, Frazer-Nash Consultancy Ltd, Fugro General Robotics Limited, Fugro impROV, Fugro Subsea Services Ltd, Furmanite International Limited, Genesis Oil and Gas Consultants, Global Energy Group, Global Marine Systems Limited, Granherne Limited, Hallin Marine (UK) Ltd, Helix Esg - Well Ops, Hydrasun Limited, Hydratight, IHC Engineering Business, Imenco, Infield Systems Limited, Innospection Limited, Inspectahire Inst. Co. Limited, Integrated Subsea Services Limited, Inuktun Europe Ltd, ISIS Technical Services Limited, iXBlue Limited, J + S Ltd, J Kenny (Caledonia) Ltd, JDR Cable Systems, K.D. Marine Limited, Kiltie Pipeline Technology Ltd, Kongsberg Maritime Limited, L&N (Scotland) Limited, Litre Meter, Marin Subsea Ltd, Marketec, Master Flo Valve Co (UK) Limited, Matrix Composites & Engineering, MCS Kenny, McDermott International Inc., Modus Seabed Intervention Limited, Molecular Products Ltd, MSI Kenny., National Hyperbaric Centre, National Oceanography Centre, National Subsea Research Institute Ltd, Nautronix, NCA - Norse Cutting & Abandonment Ltd, NCS Survey Limited, NETmc Marine Ltd, Nexen Petroleum UK Ltd, NGP UK Ltd, Noordhoek Offshore B.V, NSIG (Northern Scotland Industries Group), NSW Technology Ltd, Nylacast Ltd, Oceaneering International Services Ltd, Oceanlab, University of Aberdeen, ODS-Petrodata, Offshore Installation Services, Offspring International Limited, OMB Offshore Applications Limited, Online electronics, Optical Metrology Services Ltd, Pangeo subsea Scotland Ltd, Pan-Ocean Engineering Limited, Paradigm Flow Solutions Ltd, PDL Solutions (Europe) Limited, Penspen Limited, Peritus International, Perry Slingsby Systems Limited, PFC Energy, Photosynergy, Pipe Coil Technology Ltd, Polar Media, Port Services Group, Project Development International Ltd, Proserv Offshore, Prospect, Quadrant EPP UK Ltd, RBG Limited, RiserTec, Robert Gordon University, Rotech Subsea Limited, Roxar Limited, RRC Controls Services Limited, Saab Seaeye Limited, Saint-Gobain Isover, Saipem UK Limited, Sonsub Division, Schilling Robotics Ltd, Schlumberger Subsea Surveillance, Scottish Enterprise, Seal-Tite UK LLC, SECC, Seebite Ltd, SgurrEnergy, Shell UK Ltd, Simmons & Co International Limited, SMD Ltd, Smit Subsea Europe BV, Society for Underwater Technology, Solstad Offshore (UK) Limited, Sonardyne International Limited (Aberdeen), Sonavision Limited, Sonomatic, Specialist Subsea Services, Speciality Welds Ltd, Strategic Resources European Consultants Ltd, Stronachs LLP, Sub- Atlantic, Subsea 7, Subsea Deployment Systems Ltd, Subsea Integrity Group (SIG), Subsea Supplies Limited, Subspecion Ltd, Technip UK, Teijin Aramid BV, TESS-JNW Ltd, The Underwater Centre, Titanium Engineers Ltd, Total E&P UK plc, Tracerco, Tritech International Limited, UKPS/SUBCO, UnderSea Sense Ltd, Underwater Engineering Services Ltd, Univation, Universal Engineering Ltd, Universal Pegasus, University of Aberdeen, University of Strathclyde, UTEC Survey, Valeport Ltd, Vector International, VerdErg Connectors Limited, Vetco Gray UK Ltd, Viper Subsea Ltd, Visualsoft Limited, Weatherford Production Optimisation (UK) Ltd, Webtool, Welaptega Marine UK Ltd, Wellstream International Limited, Weston Compliance Services Ltd, WFS Energy & Environment, WGIM, William Hackett Chains Ltd, Wilton Engineering Services Ltd, Worldwide Business Portfolios Ltd, Xodus Group Limited



Energy Institute's Dr Cameron Stewart & Subsea UK's Chief Executive Neil Gordon reviewing the guidelines for obsolescence

The subsea industry is one of the most exciting sectors to be in. I firmly believe subsea is where the real action is in the wider energy industry. It's challenging, fast-paced, high-tech and growing with a long-term future and major opportunities in the emerging alternative energy markets.

At the cutting edge, the skills and technology of our subsea companies are in demand to meet the challenges of extracting the remaining offshore oil and gas reserves around the world, safely and in an environmentally-friendly way. The mission critical projects our members are involved in require innovation in engineering and technology development, creativity and the ability to solve highly complex problems all over the world.

The sector is also entering a really strong period of further growth, having recorded 40% growth from 2007 until 2010.

This is the message we have to convey to our young people because we need the best of the next generation of engineers. In fact, it would be great if we could get them now!

In the last two months, I have visited a significant number of member companies, industry bodies and other stakeholders. Everywhere I go there is talk of skills gaps looming. What are we doing to avoid severe shortages? It was only a few years ago, we saw the escalating costs of fishing in the same pool for limited talent. This time we should be making sure that we attract and develop a steady stream of new talent that have a positive perception of the industry and see a long term future ahead.

After two months, I don't have the solution but helping members attract and develop the skills needed in practical ways will be high on the agenda for Subsea UK.

Our other priority will be ensuring that members capitalise on internationalisation. Already, exports account for around 50% of the UK subsea sector's output. With a flattening domestic market, we have to widen this to build our long-term sustainability.

With UK subsea firms commanding a third of the global market and benefiting from an established reputation for subsea excellence, we are in an ideal position to exploit the emerging markets in Brazil, Australia, Russia and the Arctic.

By pioneering the use of British skills, expertise and technology into new frontiers, we can maintain our world-leading position. Many companies still over-estimate the risks with internationalisation and under-estimate the rewards, with the potential to miss out to overseas companies.

On another note we have been working with the Energy Institute (EI), and have created new guidelines targeted at obsolescence and risk management for subsea systems. This initiative is the first joint project with EI and follows on from a previous project undertaken, targeting Subsea Integrity.

The document provides high level management policy and principles for subsea obsolescence, plus the framework for successful obsolescence management processes. It is recommended reading for all senior managers whose responsibilities are associated with the design or operation of offshore assets. It contains more detailed guidance for lifecycle management and strategies, tasks and responsibilities, monitoring, risk assessment, and a review of equipment.

Subsea UK will be bringing out many collaborative initiatives for the industry over the coming period and I look forward to helping build a stronger future for the industry.

I hope you enjoy this issue.

Neil Gordon, Chief Executive, Subsea UK

Forthcoming Events in 2011-2012

03 November 2011	Subsea UK Annual General Meeting & Dinner Gordon Highlander's Museum, Aberdeen
14-15 November 2011	Subsea Europe 2011 Paris
01 December 2011	Subsea Pipeline Integrity Management London
08-09 February 2012	Subsea 2012 Aberdeen
22-24 February 2012	Subsea Australasia 2012 Perth

Please visit www.subseauk.com for details of forthcoming events.

Best Subsea Photograph Competition

Do you have a great subsea photograph you want to share?

Subsea UK is searching for the best subsea photographs in the world to help promote the sector. The winning companies will have their picture promoted with credit on a wealth of marketing material put out by Subsea UK for one year, including printed literature, inclusion on the front page of our website's rolling slides, and will be featured at our upcoming Subsea 2012 exhibition in February.

The winners will be announced at the forthcoming Subsea UK Annual General Meeting in November.

If you have a compelling photograph showing subsea at its best and would like to enter, send it to daniel@subseauk.com no later than Friday 28th October 2011. There is a maximum limit of five entries per company. This competition is for Subsea UK members only.



Categories:

- Safety
- Skills/learning/technology
- Diversification/renewables
- Global reach/exports
- Teamwork/people

Please state which category each entry falls into. Good luck!

New Appointments in the Subsea Industry

Subsea mooring connector specialist, First Subsea Ltd, has appointed John Shaw as global sales and business development manager. Formerly head of Engineered Products Group at Trelleborg Offshore, he will be responsible for developing First Subsea's innovative ball and taper connector business worldwide.



Technip has also announced the appointment of Bill Morrice as managing director. Bill joined Technip following a nine year tenure at subsea well intervention specialists, Helix Well Ops, part of the global Helix ESG Group.



Fugro GRL, the leading European developer of subsea simulator and visualisation systems, has appointed Simon Marr as Business Development Manager. Simon's principal responsibility will be growing FGRL's sales of software and services and extending awareness in the subsea community of the engineering and operational benefits of simulation technologies.



Market leading asset rental business Ashtead Technology has appointed of Chris Braithwaite as Non Executive Chairman of the Group. Chris has over 25 years' experience in the Oil and Gas Services sector, and was most recently Chief Operating Officer of Wellstream Holdings.

Meanwhile DeepOcean Group Holding AS, an integrated provider of subsea, trenching and marine support vessels and services, has announced the formation of its Board of Directors. The Board is currently comprised of five directors, including three industry veterans, as well as two representatives of the company's new shareholders. These are: Thomas Andersen, Chairman of the Board; Bart Heijermans, Director; Harald Norvik, Director; Arvid Trolle, Director; and David Weinstein, Director.

Subsea Capability Brochure Launched

UK Trade & Investment (UKTI) and Subsea UK have been working together to produce the 2011 Subsea Capability Brochure, now available online. This document provides directory information on the capabilities of many of the UK companies in the oil and gas sector.

Neil Gordon, Chief Executive of Subsea UK, said: "The UKTI Capability Brochure is a valuable resource and directory of subsea companies in the UK, listing the services, capabilities and and contact information of a vast and diverse range of businesses in the industry. We are very pleased with this publication and are confident that it will prove a useful reference guide to everyone involved in the subsea sector."

In addition to listing the capabilities of UK companies, the directory also offers case studies; projects carried out by these companies which exemplify the UK's subsea excellence.

You can access the UKTI Capability Brochure through www.subseauk.com

The Last Piece of the Jigsaw: Technology Evolution in Subsea Pipelines

Since the late 90's two technology challenges – the move to deepwater and flow assurance – have dominated the Subsea Umbilicals, Risers and Flowlines industry (SURF).

To address these challenges, Technip embarked upon a decade of research and development focused on expanding the application of reeled pipelines and in particular pipe-in-pipe (PiP) systems. Notable achievements were made, namely the installation of reeled PiP steel catenary risers in the Gulf of Mexico, the world's deepest water PiP installation and the most thermally insulated PiP using passive insulation systems. This latter application was installed for the Total Dalia project offshore Angola, and until recently marked the zenith in the use of PiP technology using such passive insulation alone to solve flow assurance problems.

Anticipating the market would require evermore thermally efficient PiP systems, and the realisation that Dalia was close to the threshold for passively insulated PiP products, had some years earlier prompted Technip to embark on the development of a heated PiP product.

After careful evaluation Technip opted to focus on Electrically Trace Heated PiP (ETH-PIP) since it provided a low power solution which also



complimented reel-lay installation techniques. Technip completed its R&D programme in 2003. Subsequently, the anticipated requirement for more demanding flow assurance applications did not immediately materialise with market needs being fulfilled by passive insulation alone, or in a limited number of cases, the use of direct heating technology.

From 2009 Total Group has worked closely with Technip and others to advance the ETH-PIP concept with subsea design solutions enabling its pre-qualification. As part of this process Total has awarded Technip the Islay Development Project where ETH-PIP will see its world's first field

deployment, albeit as an addition to the base case flow assurance solution, which itself represents a novel approach of seabed conditioning. Following an extensive onshore industrialisation process, including major infrastructure enhancements at Technip's Evanton Spoolbase in Scotland to accommodate ETH-PIP assembly, the Islay ETH-PIP will be commissioned later in 2011. When operational the ETH-PIP will represent the last piece of the SURF technology jigsaw foreseen since the late 90's, and once again demonstrate the criticality of the North Sea in providing an arena for transfer of ground breaking technology to the world-wide subsea industry.

SECC Unveils Next Generation Emergency Disconnect Solution for Subsea Market

Subsea connector specialist, SECC Oil & Gas, has unveiled its next generation of emergency disconnect solutions to help offshore operators reduce the risk of pollution and provide protection to offshore personnel, subsea equipment and the marine environment.

The Mid Line Valved Breakaway Connector, which was recently delivered to Wild Well Control in Houston for use on their new 7 Series Subsea Intervention System, is the latest in SECC's portfolio of full-bore, pressure-balanced connectors.

The connector was developed specifically for projects using offshore vessels that could experience a loss of dynamic positioning, causing drift-off. In the event of a vessel shifting from its position, its movement applies tension to the line on which the connector sits. The connector automatically disconnects when a pre-determined load level is reached, self sealing each end of the bore and ensuring the safety of the vessel and its personnel while avoiding the potential damage caused by an uncontrolled disconnection or emergency guillotine device.

It features SECC's unique pressure balanced technology which makes connection and disconnection 100 per cent dry. In practice, this means automatic or manual breakaway in an emergency, under full working pressure and at depths

of 10,000ft or more, will instantly seal each section of the line with no risk of fluid spill. SECC's patented full-bore design also means there is no obstruction in the flow path, enabling servicing companies to achieve a high flow rate with minimal pressure loss during pumping.

"The need for robust risk reduction measures is greater than ever in the wake of the Macondo oil spill, as oil companies face increased pressure to protect the safety of their offshore staff and the environment," says Justin Marshall, Business Development Manager at SECC Oil & Gas.

He believes the growing trend towards rigless intervention and wider use of vessels at deeper levels is making breakaway technology more important than ever before:

"The steady shift from using rigs for intervention and well stimulation towards a greater reliance on smaller, less expensive vessels, particularly in deeper water, has dictated the way our technology has been developing.

"This new approach creates even greater challenges associated with working in harsh environments, deep water and higher pressures, and means technologies like ours, which are designed to support this type of work, have a clear and crucial role to play."

Hallin's New Design: Compact Semi Submersible "CSS Derwent"

Today a service provider is faced with how to meet the need of increased and challenging technology requirements, yet respond to the expectations of the operator, in addition to meeting the challenge of maximising vessel utilisation and day rates to offset recovery.

Hallin's new design, the "CSS Derwent", a compact semi-submersible, is the first vessel of its class and manages to capture the leading technology providers such as Rolls Royce, Kongsberg and ABB in its fit out, control and power management systems.

Built as a vessel under ABS classification, the CSS Derwent is DP3 and one of a few vessels to be able to claim to be MODU as well as fully compliant with latest Special Purpose Ships rules with an staggering accommodation capability of 155 heads.

The vessel build concept is to provide a ship that is able to work across a spectrum of duties including subsea installation, construction support work, IRM and Well Intervention. With the motion characteristics equal to or better than a 120m monohull the vessel is ideally suited to provide an intervention solution.

The vessel has a short hull of 84m and a beam of 32m. This notation is assigned to a mobile offshore structure that depends upon the buoyancy of columns for flotation and stability for all float modes of operation of raising and lowering the unit.

The twin hull design maximise the deck space and gives a 1300m² back deck with a starboard side working platform. The huge deck of 10t/m² around the moon pool allows loads to be moved around the deck without using the crane at sea.

The active heave compensated Module Handling System (MHS) can lift up to 160mt (dynamic) with a stacking height of 31 metres. The upper draw works alone can split load up to 100mt offering a flexible handling capability. The tracked lower deployment cursor reduces the effect of the vessel transverse and heaves motion characteristics during launch and recovery of a module. The motion is minimised due to the unique hull design reducing roll and heave in the region of the working moonpool.



The "CSS Derwent"

The MHS is supported by a 150t active heave compensated crane and are cable of working at depths of 3000m and each giving a lift capability of 120mt at 2000m. The vessels two built-in deepwater 3000m construction class ROV units allow the operator to have a single source contract for all the vessels intervention and support services.

The multi service vessel with an intervention capability has a substantial competitive advantage, especially when equipped with permanent McGregor module handling systems and a deepwater lifting capability to depths of 3000m.

The vessel is designed to interface with the sister company Wild Well Control's 7/3/8" deepwater intervention solution that has the capability to deploy the deepwater capping systems.

Marin Subsea Delivers a One-stop Asset Removal Service

Excavation and troubleshooting specialist Marin Subsea is now offering a new one-stop approach to asset recovery, removal and decommissioning.

The Evo Marin Recovery System (MRS) has been specifically engineered to support a broad range of subsea asset handling projects, in particular recovery and removal.

Among the technology underpinning the service is a new full ocean depth tool specifically designed to recover both dropped

assets and decommissioned equipment protected by rock dump or by bitumen or conventional concrete matting. It can also be used to recover cut pipeline sections for transfer into disposal baskets.

The new tool complements the Evo MRS grab, which has already been used on major decommissioning projects including Frigg in the Southern North Sea in 2010 and pipeline removal in the nearby Frost field earlier this year.

The complete Evo MRS also

features specialist full ocean depth shearing and CO₂ cutting technology and can be delivered offshore anywhere in the world in a single 20ft container, which includes all the equipment needed to address a broad range of asset recovery and decommissioning applications.

Marin Group's full spread of services includes ROV-mounted and diver excavation tooling, specialist drilling tooling and support, inshore jet sled technology, and customised module and container supply.

MEC-Combi Crawler for Subsea Structure Inspection



Inspection solutions and technology provider, Innospection Ltd, has developed the MEC-Combi Crawler to support the inspection and lifetime assessment of subsea structures ranging in size and complexity from small diameter risers through caissons and pipes, to platform legs and flat surfaces like ship hulls. It is designed for the deployment from work class Remote Operated Vehicles (ROV) operated from a support vessel.

Developed as a customised solution for a North Sea operator, the MEC-Combi Crawler inspection system was built to enable the inspection of platform legs where conventional rope access was not possible.

By combining the Magnetic Eddy Current fast sensor array system with an Ultrasonic sensor, the MEC-Combi Crawler provides valuable data on the internal and external wall thickness through the identification of localised defects and general wall loss. The fitted camera and light system supports a visualisation of the scan while the position encoder system enables its location on the inspected surface to be determined.

The key feature of MEC-Combi Crawler is its ability to crawl up the structures and through the splash zone while performing the scanning. The integral buoyancy of the scanner, in combination with its magnetic system, allows the system to remain in stable contact with the inspection surface and travel

through the splash zone under its own power, unhindered by the effects of turbulence and wave action.

The electromagnetic technique is less susceptible to surface condition and the preparation of the inspection surface is less critical than with other inspection techniques. The MEC-Combi Crawler will only require the removal of heavy marine growth.

Capable of external and internal corrosion detection with a penetration of up to 40mm wall thickness, including through coating and painting, the MEC-Combi Crawler is capable of providing instantaneous Eddy Current and Ultrasonic wall thickness data. Together with Innospection's comprehensive reporting software with advanced colour condition mapping, an analysis of the internal and external defects in terms of the location, size and severity of wall loss is provided.

The inspection of the platform's structural legs was successfully completed in June 2011.

Subsea Installation Game Changer

Subsea Deployment Systems Ltd has developed an exciting Step Change in Subsea Installation. The Subsea Deployment System (SDS) is a method of installing or recovering large subsea structures without a Heavy Lift Vessel (HLV). It offers potential cost savings of 60% on multi-structure installations and up to 80% on single structure installations.

The SDS has been designed for the transportation and installation of medium to large structures (100t to several 1,000t) in water depths of 100m – 3,000m, without the need for an HLV and enables even the smallest crane vessels to install very large subsea structures in hostile environments.

The SDV is fully submerged throughout the installation/recovery process and consequently the surface weather conditions have little impact on the tow or lowering operations. Final positioning and set down is achieved by means of chains lowered into the SDV which behave as soft springs and minimise dynamic loading. It also avoids the often critical phases of offshore over boarding and lowering

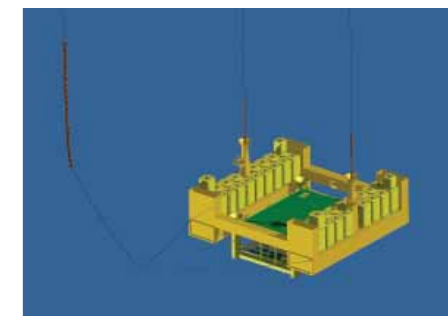
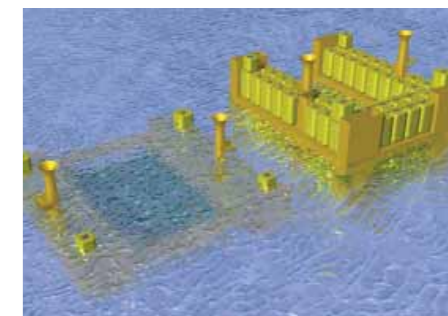
through the splash zone.

The reduced weather sensitivity increases the operating window for hostile regions, offering greater schedule flexibility. This is a distinct advantage in emergency response scenarios. The low dynamic loading and avoiding the need to recover structures to deck offshore makes the system particularly attractive for salvaging redundant structures.

All the individual aspects of the SDS are developed from very basic principles and existing technology, but the combination has resulted in a potential "game changer" for the development, installation and decommissioning of subsea structures.

An affordable and readily available subsea heavy lift capability offers the potential to develop fields with fewer and larger structures avoiding costly inter-structure connections. It will also facilitate the development of more marginal fields.

Operators and contractors worldwide are currently looking at this new system and reviewing its applications with interest, with respect to widening their options



for their forthcoming projects, reducing costs, but perhaps even more importantly reducing the project schedule. SDS is looking to align with an innovative partner to bring this concept to market.

Sonomatic Takes Ultrasonic Inspection to a New Level

Sonomatic has launched the first remotely steerable UT scanner capable of being deployed at up to 300 metres water depth.

The MAG-Rover 300 can be attached subsea by ROV or diver and then remotely manoeuvred to the exact inspection location, making it among the company's most versatile tools yet and ideally suited to a range of topsides, splash zone and subsea applications.

Until now, inspection could only be carried out by diver, involving the costly hire of dive support vessels and restricted operating windows due to weather and other constraints.

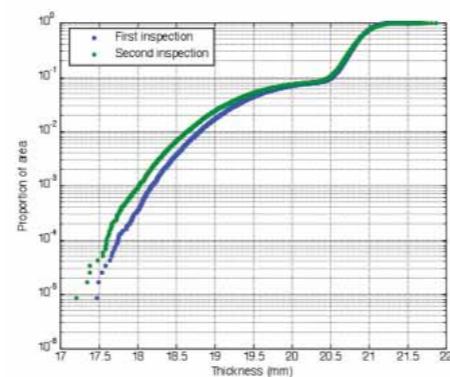
Now the MAG-Rover 300 greatly widens operators' choices. Uniquely, it can be attached to a structure at a topsides location, even by rope access technician, and then driven from there — under an operator's control — to the subsea inspection location.

The design also allows topsides or onshore inspection without the need for scaffolding, and can be deployed to areas of restricted access on

pipelines, storage tanks, pressure vessels and columns to carry out a range of inspection types, including time of flight diffraction (TOFD) and automated pulse-echo inspection of welds and corrosion mapping for plate material.

The MAG-Rover 300 was initially conceived to meet inspection challenges in the offshore oil and gas industry, and is designed to operate in all but the most extreme weather. Specific subsea applications include the periodic inspection of jacket closure welds on a range of installations, particularly in the North Sea, with other applications envisaged on semi-submersible structures. Sonomatic is also exploring the new and emerging offshore wind sector.

The standard MAG-Rover 300 unit comprises a steerable crawler driven by two magnetic drive wheels which allow the scanner to adhere to any magnetic surface. At the front is the UT transducer, which gimbals to follow the contour of the surface being inspected. Sonomatic's Microplus ultrasonic



Example of comparison of wall thickness distribution plots for reliable identification of changes between inspections

system is incorporated for proven measurement reliability, and the tool can utilise the ROV's communications system.

Sonomatic launched the company's first manually manipulated subsea ultrasonic inspection scanner in 1989. This was followed by a motorised subsea UT scanner, the diver-deployed Nautilus, which remains in constant use to this day, and by last year's launch of the ROV-deployed Sonomatic ROViT-2000, which can operate both vertically and horizontally and has been successfully used on projects in the Southern and Northern North Sea.

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QUADRANT

The New Hybrid from Saab Seaeye – AUV/ROV Combined



Dave Grant, Managing Director of Saab Seaeye, sees hybrid vehicles offering new ways to solve current operational problems

A new underwater vehicle concept has been created by Saab Seaeye that can go places and undertake tasks where ROV deployment is difficult or impossible.

Called Sabertooth, the hybrid vehicle combines the technologies of both AUV and ROV vehicles into a single unified resource.

For operators it offers the range and manoeuvrability of an AUV, yet with the tooling capability of a light-work ROV.

The concept comes from a reconfiguration of Saab's hovering AUV, built for defence operations, to one suited to the oil and gas

industry using ROV technology proven in that sector but with the same exceptional stability proven for the defence application.

For subsea operators, the Sabertooth offers a choice of three operational modes: autonomous roaming; attached fibre-optic cable; or umbilical carrying power and communications.

It has an excursion range of 20 to 40km, depth rated option to 3,000 metres, and can embark on either long range programmable missions, or under operator control around set targets, with obstacle avoidance and precise manoeuvrability for safe and easy access, including working inside complex structures.

Indeed, where space is limited, the Sabertooth's 360 degree manoeuvrability means it can orientate itself into any position – even directly up, or down – from where it can attend to its light work or inspection task.

And in places where access is seasonally restricted, it can remain for a year at an isolated location, in resident mode, at its docking station, ready to be launched on task as needed, under the remote guidance of an operator.

At the docking station tooling packs can be stored ready for use; its batteries re-charged, data and video downloaded and fresh instructions uploaded.

The whole hybrid AUV/ROV concept is expected to bring significant savings in operating costs as a vehicle like Sabertooth is easily deployed from a platform, shore-base, or small low cost vessel.

Managing director, Dave Grant, sees the concept as offering an important new technological resource to the oil and gas industry - and the renewable energy market where there is a growing need for inspection and intervention as activity moves further subsea.

He says: "Sabertooth is the first of a new range of deep water, long-range, hovering hybrid vehicles that will solve current operational problems and open up new cost effective solutions for survey, inspection, light work and intervention."



Sabertooth combines AUV and ROV technologies into one unified resource

Subsea Technology Solutions can Attract up to 100% Funding

ITF is calling on technology developers to come forward with innovative solutions to subsea challenges, with the potential for successful proposals to receive up to 100% funding.

Identified by ITF's members as a key priority, the Subsea Technologies Call for Proposals resulted from two Technology Challenge Workshops which took place in June. Oil and gas operators and service companies gathered in London and Perth, Australia, and explicitly identified the current shared challenges in the subsea field.

Neil Poxon, Managing Director of ITF said: "The subsea sector continues to grow in importance as more aspects of oil and gas operations are moved to the seabed. We are interested to hear from organisations that can help close the existing technology gaps in the sector. Not only do technology developers have the opportunity to have their ideas reviewed by major

oil and gas players, but they can also secure funds to realise their novel technologies."

Industry forecasts have predicted that around £10 billion of future subsea activity will be focused on deepwater, production, profitability and viability of remote and deepwater operations, all of which are key elements within the call.

The call is an open invitation for organisations to submit high quality proposals for research, development and/or field trial of potential solutions to deal with issues faced with subsea technologies. Specific areas of interest have been identified by ITF members as follows:

- Subsea Power
- Flow Assurance
- Subsea Separation
- Temperature Management
- Pipeline Integrity Management / Cost Reduction
- Low Cost Intervention
- Specific Australian Regional Challenges

The call also identifies priority focus areas in the Australasian region which aim to create a step change reduction in development cost and improve recovery. This includes water separation and disposal direct to ocean, pipeline corrosion management and remote power. However, these challenges are not unique to Australia and solutions may also be applicable to other regions.

The deadline for proposals is 6 October 2011. Interested companies can find out more at oil-itf.com or by calling 01224 222410.

A not-for-profit organisation, ITF has 28 global oil and gas operator and service company members. Widely regarded as the global funding programme of choice, ITF has assisted in the funding of new technology developments from early stage joint industry projects (JIPs) through to field trials and commercialisation.

Paradigm Flow Solutions Boosts Production for Supermajor with New Technology to Unblock Subsea Pipelines

Paradigm Flow Solutions has successfully increased production for a supermajor in a North Sea field by over 3,000 barrels of oil per day using new groundbreaking technology.

The Aberdeenshire headquartered company revealed how it has cleared subsea pipelines that had been blocked for over a decade. The campaign took less than a week to unblock multiple flowlines in the central North Sea field.

Rob Bain, Managing Director of Paradigm Flow Solutions said: "The operator had tried various other conventional methods to tackle the issue, but these blockages were stubborn and their efforts were not successful. Using Pipe-Pulse, our engineers cleared flowlines and subsea chemical umbilicals of long-term wax inhibitor cores in less than a week."

Pipe-Pulse is a remote, non-intrusive method of locating and removing blockages in long distance pipe-work up to 30 miles. The system is designed to be connected on the topsides of the host platform through either the pig launcher or the umbilical termination unit to clear the blockages.

The Pipe-Pulse unit delivers high energy and volume pressure pulses into the pipeline or subsea umbilical, which are transmitted to the



blockage several miles away.

Prior to Pipe-Pulse, these problems were usually treated by expensive methods such as deploying a coiled tubing system from a rig into the pipeline, or undertaking subsea interventions using a Remotely Operated Vehicle (ROV) or saturation divers.

Mr Bain added: "There is a significant market opportunity for

Pipe-Pulse in operations around the world as it delivers dramatic cost savings. In the case of chronic blockages which have gone unresolved over a number of years, the only solution has often been to replace the affected piece of pipework which can cost millions of pounds. This is sometimes more than the margin of the field, rendering it economically unviable."

DiveCert Makes Dive System Certification Easy

DiveCert is a new software package that controls air diving and saturation diving system certification while organising it in accordance with IMCA Guidance documents.

The software allows companies to create, control, store and synchronise entire dive system certification from one easy to use portal. It compliments Planned Maintenance Systems through ease of use, ease of access to certification and timed reminders.

DiveCert has been designed to utilise IMCAD023 & D024 and assists with the discipline and organisation for audits and quality control purposes. Over 350 certificate templates are available, covering all sections of IMCA D018

enabling rapid access and ease of auditing.

The system maintains all certification and identifies when they are due to expire or overdue, ensuring that the user has full control and awareness of the status of system usability.

David Smith, Managing Director of the NHC commented: "Common feedback from attendees of our DESIGN Auditor and Dive System Auditors courses is that many diving companies have no real systems in place to organise certification. Many of these companies are losing track of when certification is due and where the certification is kept, therefore failing audits. We saw



the requirement in the market for DiveCert program, which has made certification and audits a walkover."

The software is ideal for new system builds and indeed some manufacturers are buying the software to supply a coherent certification system on new build sat systems.

Bibby Offshore Join Schools Career Industry Partnership (SCIP)

Bibby Offshore, a provider of subsea construction, IRM (inspection, repair and maintenance) and offshore management services, has recently become a member of Schools Career Industry Partnership (SCIP).

SCIP's programme is aimed at helping 4th-6th year pupils throughout the North East of Scotland who are transitioning directly into work after leaving school. The programme is designed to bridge the skills gap and give pupils a clearer understanding of what employers require from them and also how to be prepared for an interview.

It focuses on building self-confidence, understanding their own strengths and areas they can improve on, how they think and communicate with others and how to maximise these skills in an interview situation. They build a professional and effective CV throughout the day with input from business professionals; experience a one-to-one interview situation with honest, constructive feedback. Finally they learn what is involved in an Assessment Centre and take part in a group exercise.

Bibby Offshore have been working closely with several Academy schools in Aberdeen and Aberdeenshire, this involvement led to Bibby inviting three pupils from Bridge

of Don Academy for work experience during the summer holidays. The pupils worked in different departments throughout the company, gaining further knowledge on the oil and gas industry as well as giving them the chance to experience working life.

On the last day they gave a short presentation to members of the management team about their time working at Bibby Offshore. The children were also taken on board the Bibby Sapphire and shown around the state of the art diving support vessel.

Andrew Duncan, Business and Commercial Director for Bibby Offshore, has been greatly involved in the programme and has attended many of the participating schools, has commented: "These sessions have been a tremendous experience, not just for the pupils but for all of us at Bibby Offshore. We hope that this initiative has helped provide the children with a positive insight into our business and the industry as a whole. The pupils might just become employees of the future and we've been greatly encouraged by their aptitude to learn and their overall enthusiasm. All in all, it's been a great success and we look forward to continuing our support next year."

Kongsberg Maritime Secures Over £1 Million in Orders from Fugro



Fugro's FCV 2000 ROV

Kongsberg Maritime is pleased to announce an order of over £1 million from Fugro, the largest, world-wide integrated supplier of geoscience, survey, and geotechnical related services. Kongsberg Maritime will supply a range of its latest high resolution cameras and Mesotech scanning sonar systems as part of Fugro's 2011 ROV Sensor Refurbishment and Newbuild programme.

The contract represents Kongsberg Maritime's fifth consecutive year working as prime camera and scanning sonar supplier under a consolidated supply framework with Fugro. By the end of this project the leading underwater camera supplier will have delivered over 500 cameras to Fugro to date.

During 2011 Kongsberg Maritime will supply more than 170 high resolution underwater cameras and over 40 avoidance sonar systems for use on Fugro's existing global fleet of ROV Systems and the company's planned newbuild ROV Systems, including its own in-house designed and built FCV 3000 and FCV 2000 Work Class ROV Systems and the new Lynx and Panther XT Saab Seeye ROV Systems.

The order includes a number of the latest OE14-502 multi standard High Definition (HD) cameras, an indication of the company's increased investment in this latest technology.

The other equipment purchased includes the latest Low Light, OE13-124/125 BIT navigation camera, the OE14-366 colour zoom camera, the OE14-376/377 colour light ring camera, the OE15-108 general purpose mono camera together with the latest ultra high resolution imaging sonar.

Bill Stuart, Sales Manager at Kongsberg Maritime Ltd comments: "Our team has worked hard to develop and maintain a fruitful relationship with Fugro and we are pleased that orders have increased year on year. This latest order reinforces Fugro's satisfaction with the products and services we offer and gives us confidence that we can continue to build on this success and support Fugro's future demanding ROV imaging requirements."

Nautronix Secures Multi Million Dollar Digital Acoustics Contract for Ultra-Deepwater Drillships

Nautronix are to supply NASDrill RS925 deepwater acoustic positioning systems for Noble Corporation's three new ultra-deepwater drillships due for delivery second and fourth quarters of 2013, and second quarter of 2014 respectively.

These new rigs will be constructed at Hyundai Heavy Industries shipyard in Ulsan, Korea and are based on a Hyundai Gusto P10000 design. The rigs will have DP-3 station keeping abilities and the ability to handle two complete BOP systems allowing for operation in water depths of up to 12,000 feet.

NASDrill RS925 systems have been designed specifically to meet the requirements for a reliable, stable DP and position reference system for demanding offshore operations, in particular deepwater drilling vessels.

NASDrill RS925 combines the two most accurate deepwater acoustic positioning technologies – Short Baseline (SBL) and Long Baseline (LBL) – to calculate multiple independent position solutions providing reliable,



repeatable input to the vessel DP system; with SBL mode providing accuracies of 0.15% slant range and LBL mode providing accuracies up to 1m RMS independent of water depth.

The Noble vessels will be fitted with dual redundant, six-hydrophone NASDrill RS925 systems offering significant built-in redundancy in both topside and subsea elements.

The NASDrill RS925 system is complete with all external interfacing to the Dynamic Positioning System for automatic station keeping and can be used as part of an integrated acoustically-

aided INS positioning solution.

For drilling, NASDrill RS925 also provides Differential Riser (Flex Joint) calculation and monitoring capability. Multiple seabed transponder groups can also be assigned to simplify batch drilling, where separate transponder arrays can be deployed at several locations on the seabed, allowing the rig to move between them without the need to collect and redeploy seabed arrays each time, saving valuable rig time.

The system is also fully upgradable to use NASEBOP and NASNet® (Nautronix unique underwater GPS) in the future.

As with all Nautronix leading commercial acoustic systems, NASDrill RS925 utilises Nautronix proprietary ADS2 (Acoustic Digital Spread Spectrum) broadband signalling technology which has been proven, with over 10 years of successful subsea operations, to provide superior accuracy, repeatability and reliability for dynamic positioning of vessels during deepwater drilling operations.

A&P Group Complete Second Project for Offshore Sector

A&P Group has completed another subsea structure for an offshore oil and gas field. The Mid Water Arch left the ship repair and fabrication yard at Hebburn bound for a North Sea oil field.

For the last six months, 50 men worked daily on the project to cut, shape and weld the shell-like structures wrapped around two pressurised buoyancy cylinders. The entire structure is built in steel and the yard also built the gravity base, clump weights and piles that will secure it to the seabed, weighing a massive 600 tonnes altogether.

The subsea arch is headed for the Athena Development in the Outer Moray Firth, which will be operated by Ithaca Energy. The field is expected to produce around 22,000 barrels of oil per day once production starts.

It is the second such order secured by A&P Group; earlier this year it completed two buoyant subsea structures for an African offshore oil field.

Project director Iain Campbell said: "This job was totally different in that the Athena arch is supported by pressurised steel cylinders as opposed to the polymer buoyancy



units the earlier subsea arches were built around.

"The pressure vessel buoyancy tanks are a new design and required very high standards of welding and fabrication. In fact the project required us to meet extremely high standards in all aspects.

"As it's suspended underwater the arch is painted to NORSOK coating standards, so it will last for 25 years."

A 1,000 ton crane was needed to lift the bright yellow subsea

structure – which is 17 metres long, 15 metres wide and 7 metres high – onto a barge to sail up to a yard in Invergordon for final assembly. The base, clump weights and piles are to follow on a coaster.

The Athena field is due to start production towards the end of this year. When it does the subsea arch will support control cables from the well-heads to the floating production, storage and off-loading vessel on the surface.

Oil and Gas Know-How Could Help Renewables Industry Settle in



Mike Hawkins,
Technical Director at Jee

The renewable energy industry is developing rapidly in response to ambitious targets set by the UK government. As a nation, we've got to reduce CO₂ emissions and increase power generation from renewable sources such as wind, wave and tidal power. We are literally at sea in new territory and as a consequence may suffer from a skills shortage in the renewable energy sector. This is where Jee has found its experience in the oil and gas industry in lending a helping hand.

In 2009 the UK government set a target of getting 15% of our energy from renewable sources by 2020; almost a seven-fold increase in the share of renewables in more than a decade. It also planned to create up to half a million jobs as a result of around £100 billion investment. Whatever your opinion on renewable power, it is clear it is here to stay.

The UK renewable energy strategy also aims to tackle

climate change by reducing the UK's CO₂ emissions by over 750 million tonnes by 2030. One of the ways it is planning on doing this is through carbon capture and storage (CCS) techniques. Jee found that the experience gained in the oil and gas industry transfers itself well to these types of projects.

Jee's experienced pipeline design engineers are now tackling the problem of safely transporting liquid CO₂ at very high pressures to storage sites beneath the seabed. They are also assessing the suitability of existing pipeline infrastructure for the same purpose. Likewise geologists are now looking at the best ways to fill a reservoir, instead of emptying it; enhanced oil recovery (EOR) being a technique used to do both.

The fundamentals of the engineering work remain the same, whether designing a pipeline for oil extraction or carbon dioxide injection. It is imperative that lessons learned from the extensive haul of pipeline projects over the last 40 years are put into practice for the emerging CCS projects. In fact, engineers from the oil and gas industry are being hunted for their expertise in developing this concept.

Our young aspiring engineers are fully aware of the shift in attitude towards greener energy and the resulting demand for associated skills. Jee run training courses predominantly for clients in the oil and gas sector but its subsea engineering techniques can be applied to any subsea application.

Mike Hawkins, Technical Director at Jee Ltd, says: "The oil and gas industry is not always seen in a positive light. But the experience gained from the successes and failures within the oil and gas industry should not be overlooked. I believe the knowledge gained from the oil and gas industry will help scale the steep learning curve we have to climb so that we meet the targets of 2020 and beyond."

Litre Meter Supplies Geveke Pompen with Positive Displacement Meters for Wingate Meg Skid

UK flowmeter specialist Litre Meter has shipped VFF positive displacement flowmeters to Dutch oil and gas package supplier Geveke. The meters will be used in a monoethylene glycol (MEG) injection skid for Wintershall's new Wingate natural gas platform in the North Sea.

Under conditions of low temperature and high pressure, gas hydrates can solidify as crystals which may block the pipeline and valves, impeding the transfer of the oil and gas. This can result in a shutdown and the risk of explosion or unintended release of hydrocarbons into the environment.

MEG is injected at high pressure where there is

a risk of hydrates (dew) forming then freezing at low temperature. Litre Meter VFF positive displacement flowmeters measure the correct amount of MEG needed to prevent hydrate formation.

The process, known as bullheading, forcibly pumps MEG into the bore hole to act as an 'antifreeze' to lower the freezing point of gas hydrate. This protects the wells' sub-surface valves from hydrates forming under high pressure and low temperatures during long shutdowns.

Subsea repairs and the associated loss of production are high cost, so protecting deepwater well bores from hydrate formation and plugging is a major flow assurance concern in offshore operations. Hydrate prevention strategies provide protection during normal operation, start-up and shutdown.

Geveke project engineer Eric Wijnen said: "We selected Litre Meter VFF meters because we have used them successfully in the past. We know that they are versatile and operate accurately at the flow rate and pressure that we need - in this case 1.19 cubic meters per hour at 344 barg."

The VFF flowmeter is suitable for measuring liquids at pressure ratings up to 4,000 bar (60,000 psi) and flow rates from 0.0004 l/m (0.5 litres per day) to over 270 l/min. It is of intrinsically safe design and manufactured to operate reliably at temperatures ranging from -40 to 100°C.

Litre Meter CEO Charles Wemyss said: "Litre Meter's VFF flowmeter is ideally suited for use in the oil and gas industry and in particular for low flow/high pressure applications.

"Years of experience in chemical injection applications onshore and offshore have confirmed the instrument's capability to reliably measure fluids under extreme conditions of both temperature and pressure."



Left: Litre Meter has supplied VFF meters to Geveke Pompen used to monitor MEG which helps prevent hydrate formation in lines on the new Wingate natural gas well in the North Sea

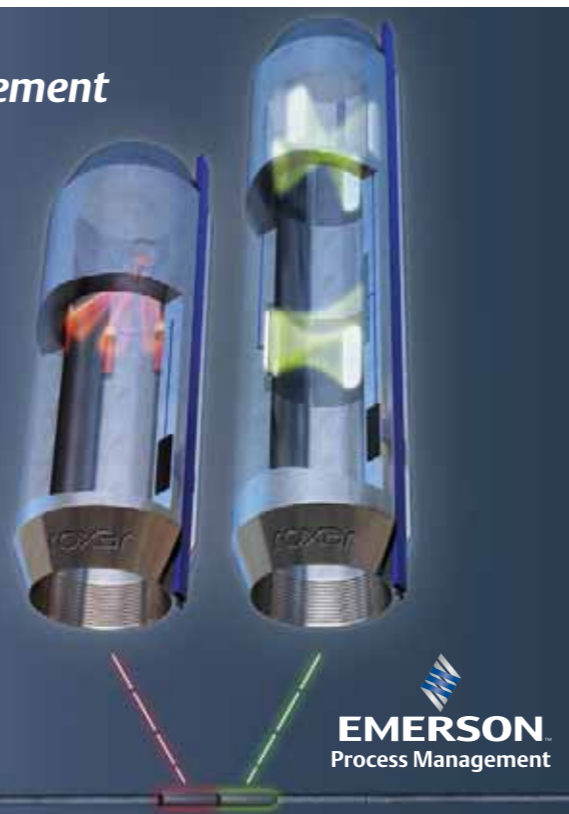
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- Comprehensive analysis and commentary is provided by region and country. Activities of the predominant oil companies and subsea equipment manufacturers, as well as capital expenditure, are split by drilling and completion and subsea equipment: including subsea satellite wells, templated wells, templates, manifolds and subsea processing.

- The report has been developed using Infield Systems' OFFPEX Market Modelling & Forecasting System and the Offshore Energy Database of all operational and future fields.

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Leading Commercial Diver Training Centres in UK and USA Form Alliance



Graduate Daniel Hammond

Leading commercial diver training centres in the UK and USA have formed an alliance to provide North American students with the opportunity to advance their careers in the global market.

The Underwater Centre in Fort William, Scotland, will now offer graduates of the Divers Institute of Technology (DIT) in Seattle the opportunity to complete their saturation diver training and ROV pilot technician training with them.

Currently nowhere in the USA offers the Closed Bell training required to complete internationally recognised saturation diving certificate, but The Underwater Centre does. The alliance means that DIT can provide American subsea workers access to

certification and training that will increase their employability.

As well as graduates from DIT, the school will also assist any other divers in the USA to access the courses at The Underwater Centre, offering advice, assistance and a straight-forward booking procedure.

Both schools have recognised the need to maintain a high standard of training, industry focused competence and reliable certification on a worldwide basis, which the alliance between the two centres will provide.

The Underwater Centre has a reputation for offering internationally recognised certifications, resulting in large numbers of the Centre's students coming from overseas.

In 2010, 67% of the graduates from The Underwater Centre came from outside the UK.

Daniel Hammond, a graduate of the DIT, signed up to the three week HSE Closed Bell course at The Underwater Centre, and was delighted with the training facilities and staff.



He said: "I have nothing but praise for The Underwater Centre. As far as the saturation dive training goes, it appears to cover all the bases to give you a great foundation to start your new career as a saturation diver."

Finlay Finlayson, Managing Director of The Underwater Centre said: "For some time now the Divers Institute of Technology and The Underwater Centre, here in Fort William, have enjoyed a developing relationship based on shared ethos of providing students with the best possible platform on which to build a global subsea career in diving and ROV."

Subsea Specialist Flexlife Opens New UK Base



Andrew Lake (left) and John Marsden (right)

Oil & gas industry specialists in subsea project and integrity management, Flexlife, have opened a new base in Newcastle and plan to recruit 25 staff by the end of this year, rising to 50 within 18 months.

The award-winning company has appointed Andrew Lake as Director of Operations in Newcastle. He is a Chartered Engineer with more than 30 years' experience, including senior roles at Soil Machine Dynamics, BPP Technical Services and Wellstream International. He holds a 1st class Mechanical Engineering degree and is a Member of both the Institute of Mechanical Engineers and the Association for Project Management.

As well as attracting new recruits into the industry, Flexlife believes the location will be a draw to many workers who commute weekly to Aberdeen and other energy hubs at present. The office is at the newly developed Baltic Place on the quayside near to the Millennium Bridge.

Chief Operating Officer John Marsden said: "We know from our experience that there is a talented pool of highly-skilled staff in the Newcastle area and we are hoping to tap into that. We have the best team in the industry and are confident we will quickly attract the same calibre of staff for our Newcastle office. We are already off to a great start with Andy taking charge of our operations in Newcastle."

Mr Lake said: "Flexlife is experiencing a period of significant growth and the new office will expand our capability to offer specialised support to our clients. The choice of Newcastle for this latest expansion recognises the skills in the region and will be a new addition to the growing subsea sector in the North East of England."

Mr Marsden added: "Looking ahead, the Newcastle office will provide us with the capability to expand our range of services to include front end engineering design to support the ongoing work for our clients."

Flexlife reported an increase in turnover of more than 50% for year ending 2010/11, with a rise from £4.8 million to £7.5 million. A further rise to £17.8 million is predicted for 2011/12.

As well as the new office in Newcastle, Flexlife has moved into premises in Brazil and taken on a new global HQ in Aberdeen. The company also operates in Africa, the Far East and Mediterranean and staff numbers globally are expected to reach 120 by the end of this year.

Acteon Group Bolsters Subsea Services with Acquisition of NCS Survey

Subsea services group Acteon has acquired Aberdeen-based NCS Survey Limited. The acquisition adds to Acteon's capability in the rig-positioning market and provides an additional suite of survey services to clients that operate rigs and vessels.

NCS Survey provides high-precision rig positioning, construction support and subsea visualisation services to the global offshore market, including upstream oil and gas and offshore wind. As the market leader in providing surveys through lightweight autonomous underwater vehicle technology, NCS Survey has performed over 600 projects in 35 countries since it was founded in 2005.

The company will retain its existing personnel and management team, headed up by current managing director, Andy Gray. He said: "NCS Survey has enjoyed continued growth, thanks to the early adoption and delivery of technologies that deliver tangible benefits for clients. Joining Acteon will enable NCS to accelerate this expansion through the group's international footprint."



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Ecosse Subsea Systems Turnover Grows To £1.9 Million



Managing Director Mike Wilson with Personnel Operations Director Maureen Petrie

Aberdeen-based Ecosse Subsea Systems has marked its 16th anniversary with news they have received two nominations for prestigious business awards and that turnover has increased.

For the year to March 31st, 2011 the company saw revenues grow to £1.9 million in a year which included the launch of the company's innovative and ground-breaking SCAR specialist trenching plough.

An increase in work prompted the creation of two student summer placements for 2011 while Maureen

Petrie has been promoted to the role of personnel operations director to cope with an upturn in demand for Ecosse Subsea Systems' personnel division, which specialises in sourcing experts for the subsea oil and gas and offshore renewables industries.

The company is also a finalist in the Wood Group Award for Innovation category of the annual Grampian Awards for Business Enterprise.

Ecosse Subsea Systems has also been shortlisted for two prestigious Northern Star Business Awards and has reached the finals of the categories for Commitment to Innovative Use of R&D and the new Energy Award.

Commenting on the success of the past year, Ecosse Subsea Systems' founder and managing director Mike Wilson said: "Much of our focus during the past 12 months has been on getting SCAR to the marketplace and we are delighted at the global interest there has been in this piece of technology. We are currently tendering for work in many locations across the world including Hong Kong, the United Arab Emirates and Saudi Arabia.

"Alongside that, we have continued to work with Ellon-based Aubin on the DeepBuoy and GLS lifting gels, and trials of the latter are about to begin in Orkney. We anticipate that these will revolutionise the subsea lifting market and they also have very strong possibilities for use in the renewables sector."

Dominion Gas – Shaping the Future



Managing Director Russel Davies

Dominion Gas recently opened a modern gas plant in Ghana, West Africa. Established in 1987, Dominion Gas underwent an MBO in 2007 with funding provided by Graphite Capital and The Royal Bank of Scotland. Later the same year the company acquired Global Gas Supplies (GGS) and in 2008 the firm increased its range of products and services through the acquisition of Argon Isotank.

Russel commented: "This is a really exciting time for Dominion Gas and for me personally. We are delighted to be acknowledged as one of Europe's leading independent suppliers of gases to the offshore industry. Our reputation has been established over the years as a result of the hard work undertaken by the previous

owners. With a proven track record based on many years' experience, we are able to offer our clients an extremely high quality service. We are constantly looking for new ways to improve and offer bespoke innovative products and technically competent solutions. Over the years we have developed an excellent relationship with our clients who are aware of our desire to continuously improve and offer them best value for money."

EV Expansion



Neptus wireless subsea camera

Fast evolving oil and gas camera specialist EV, whose ground-breaking technology is being used to obtain pictures in remote and challenging environments such as down wellbores and inside pipelines, has bolstered its global position by expanding its reach across the US, Scandinavia and the Far East.

In order to enhance the company's rapid response to its growing customer base in the United States, EV has established its regional headquarters in Houston's energy corridor. New operational bases have also been set up in Oklahoma, Texas and Colorado to complement EV's existing operational base in Lafayette, Louisiana, which services the Gulf of Mexico. An additional base in West Virginia is due to be opened shortly.

In Scandinavia, EV has established a partnership with Aker Well Services in Norway and Denmark which is already benefiting customers with rapid response from EV's suite of electric line, slickline, coil tubing and drill pipe cameras.

Meanwhile, in the Far East, a new operational base in Malaysia has recently been opened in conjunction with Highland Energy Partners. Operations have already commenced in the South East Asia region.

EV has further plans in place to continue its rapid geographical expansion based on strong demand for both its industry leading downhole video technology and its innovative products for subsea and pipelines such as the company's Neptus wireless subsea camera.

SeeByte are Named Business Impact Award Winners

SeeByte, the global leader in creating smart software technology for unmanned systems, has been named winner of the Business Impact Achieved award at the Impact Awards Ceremony hosted in Glasgow by PraxisUnico.

This award recognises projects that have made an outstanding business impact through successful knowledge transfer. SeeByte has been able to grow the outcome of a joint project with Heriot-Watt University into a first class business endeavour. In parallel SeeByte has generated its own intellectual property and has grown an extensive product portfolio. Amongst only 12 entries to be short-listed for an award, SeeByte was chosen by a judging panel led by Professor Sir Tim Wilson, retired Vice-Chancellor of the University of Hertfordshire.

Wilson commented on the awards: "The strength and diversity of the entries made the task of the panel extremely challenging. It is a privilege to be exposed to such a wealth of ideas and innovations."

Stuart Genet, COO of SeeByte, attended the awards ceremony on the company's behalf. Genet



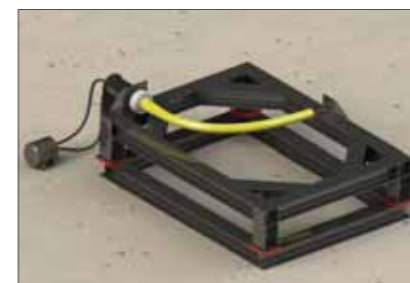
SeeByte receives Business Impact Award

commented: "It was an honour for SeeByte to be awarded the Business Impact Achieved award. SeeByte has expanded its technology and market-space steadily over the past decade and it is encouraging to have our achievements recognised in this way. This award also demonstrates the value of our ongoing relationship with Heriot-Watt University."

Having achieved 10 consecutive years of revenue growth, SeeByte

is considered a leading independent company in the development of smart software for unmanned underwater vehicles for both commercial and government clients globally. Spun out from Heriot-Watt University 10 years ago, SeeByte now has offices in Edinburgh, San Diego and Seattle with flagship software SeeTrack used as the de facto technology for 12 of the world's navies and a number of leading oil and gas companies.

RiserTec Achieves Two Milestones



RiserTec's new Rotating Test Rig

Aberdeen-based specialist consultants RiserTec have concluded two milestone events for the company. The first is an agreement with Dutch manufacturer Lankhorst to jointly develop, design and test their range of

dynamic bend stiffeners. The second is the start-up of an office in Houston. The agreement with Lankhorst will give RiserTec a mainstream manufacturing partner to develop our designs and bring the tested products to the market.

"We are really looking forward to this next phase of product development," said Jonathan Jury, who has worked on the development of the company designs for over four years.

The second milestone of opening an office in Houston has been supported by the amount of demand for a specialist Riser Analysis and Design company.

RiserTec has long carried out work for several companies in Houston including BP America and Petrobras Inc and with the start of RiserTec Inc, the company will now be able to better support its clients.



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Wood Group Kenny Wins Australia's Subsea Company of the Year



Wood Group Kenny accepts Subsea Company of the Year award at the inaugural Subsea Energy Australia award ceremony

Wood Group Kenny has picked up the Subsea Company of the Year award at the inaugural Subsea Energy Australia award ceremony. Nominated companies were judged not only on their commercial and strategic performance, but also on people development, leadership culture and the impact they have made to their communities. In awarding Wood Group Kenny, the judges made specific reference to the company's significant intake of graduates from the University of Western Australia and Curtin University, and its commitment to technology initiatives to help the future needs of the subsea industry.

Wood Group Kenny opened an office in Perth in 1985 and now has over 400 staff spread across Perth, Melbourne and Brisbane, and an annual turnover well in excess of A\$100 million.

Since opening in Australia, the company continues to win major subsea and pipeline FEED (Front End Engineering Design) projects on the North-West Shelf and Timor Sea. Recent contract awards include subsea and pipeline engineering for Woodside's deepwater Browse project and for Apache Energy's Julimar gas field development.

Steve Wayman, CEO for Wood Group Kenny, said: "Australia is an extremely important growth region for the Subsea industry and is also one of Wood Group Kenny's largest and most established global centres. Having retained a permanent base in Perth for around 25 years, we are committed to continuing our pivotal role, which includes developing new talent, establishing innovative technology and delivering successful world class projects for our many clients in this expanding market."

Wood Group kenny

- Subsea & Pipelines Engineering Design, Renewables & Project Management
- Riser Design & Advanced Subsea Technology
- Flow Assurance & Process Optimisation
- Integrity Management & Materials Engineering

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Leading the Way – Nylacast Continue to Raise Standards



Nylacast lightweight, chemical, corrosion & abrasion resistant thruster nozzle

Leicester based Nylacast has become the first UK company of its type and one of only six UK companies to have achieved the industry recognised accreditation to ISO29001:2010-Oil and Gas.

Nylacast are the first and only UK company in the production and manufacturing of engineering polymers to achieve the standard.

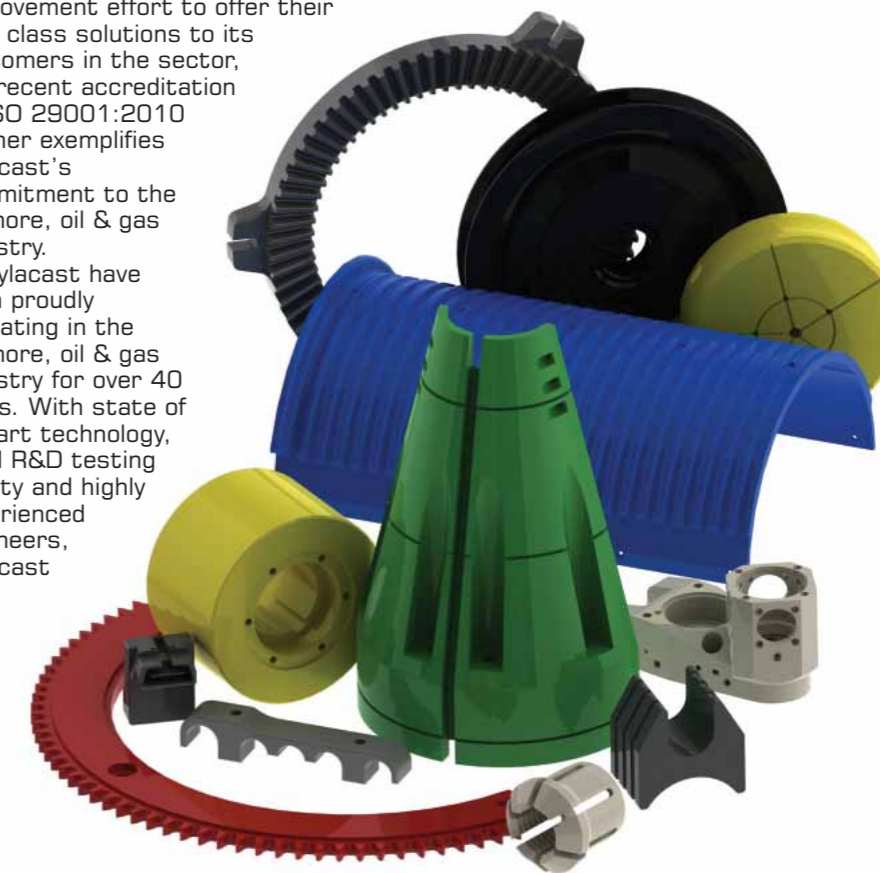
ISO 29001:2010-Oil and Gas was developed as a direct result of a partnership between ISO and the international oil and gas industry, led by the American Petroleum Institute. The quality standard defines "the management system requirements for the design, development,

production, installation and service of products for the petroleum, petrochemical and natural gas industries".

In a continual growth and improvement effort to offer their first class solutions to its customers in the sector, the recent accreditation to ISO 29001:2010 further exemplifies Nylacast's commitment to the offshore, oil & gas industry.

Nylacast have been proudly operating in the offshore, oil & gas industry for over 40 years. With state of the art technology, a full R&D testing facility and highly experienced engineers, Nylacast

components and materials are recognised as the perfect solution to the arduous environments encountered during operations within the industry.



Fugro Breaks World Record for Low-Logistic AUVs Using SeeByte Software

SeeByte, the global leader in creating smart software technology for unmanned systems, has announced that Fugro Survey Pty Ltd (Fugro) has successfully broken the current world record for the longest uninterrupted pipeline inspection using a low-logistics AUV.

The SeeTrack AutoTracker software was utilised by Fugro in conjunction with the Gavia AUV to survey a pipeline on the Northwest Shelf off Western Australia in 90 metres of water. The vehicle successfully inspected 31 kilometres of pipeline on a single mission, surpassing SeeByte's existing record. The mission was manually ended due to low battery while AutoTracker was still operating successfully. The SeeTrack software was developed to enable AUVs to carry out export pipeline inspections. Through SeeTrack AutoTracker the inspection data is improved and time is saved by reducing repeat missions which are usually required due to missing data. SeeTrack AutoTracker can also operate in areas where multiple pipelines and unexpected burials are encountered.

Ian Hobbs from Fugro said: "The data attained from this successful mission has provided us with clear and accurate information regarding the status of the pipeline. The SeeTrack software operated at an ideal offset and it is apparent that, with practiced operations, the software provides a time-efficient method for accurate pipeline inspection. We were very pleased with the results."



The Gsvai AUV, using SeeTrack AutoTracker software, inspected 31km of pipeline on a single mission

WHEN SCINTILLATION OCCURS AND YOUR DGPS SIGNALS BREAK UP, WILL YOU BE ABLE TO MAINTAIN POSITION ACCURATELY ENOUGH TO CARRY ON OPERATING?



NASNet® DPR IS THE ANSWER.

If you are involved in marine DP operations you will be aware that we are now entering another period of atmospheric scintillation which will potentially affect DP operations in various deepwater oil and gas development regions world-wide.

If you have a traditional acoustic DP reference, which in deep water has an update rate and latency of position inferior to that of a stable DGPS input, will it be capable of providing you with the information you need to remain safely on station?

To address the limitations of traditional systems Nautronix have introduced a NASNet® application for marine DP operations - NASNet® DPR - an acoustic positioning system which will allow you to carry on operating seamlessly, a true redundant system. As a stand alone system NASNet® DPR offers no interference to or from other acoustic systems and can operate in high ambient noise environments. This, along with its DGPS type system architecture, makes it the ideal DP reference.

For further information on how NASNet® DPR can help you reduce time, money and risk for your subsea operations please call the sales team on +44 (0)1224 775700 or email us at info@nautronix.co.uk



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