



Setting standards


Founded on innovation and the POS-GRIP® friction grip method of engineering, Plexus Holdings plc is known for challenging the wellhead market through the delivery of ground-breaking equipment that significantly enhances safety and minimises cost. Admitted to trade on the London Stock Exchange AIM market in the final quarter of 2005, the Aberdeen based operating subsidiary Plexus Ocean Systems Ltd has developed an impressive customer base both in the vibrant North Sea and globally with its exploration jack-up rental wellhead systems.

First patented in 1997, the POS-GRIP wellhead system was designed, developed and commercialised by founder and CEO Ben van Bilderbeek, an accomplished engineer with more than 42 years industry expertise; it has since been used on more than 350 wells worldwide and has become an industry leading solution in surface wellhead design. Safer, more reliable and cost-effective than conventional wellhead equipment, POS-GRIP proprietary technology was originally used as an adjustable rental wellhead system for standard pressure jack-up exploration drilling. Subsequent technological developments led to Plexus supplying specialised high pressure and high temperature (HPHT) wellhead systems to the market; a product that has proven vital to the oil and gas industry, where HPHT drilling conditions demand the best and safest technology, which has become particularly relevant after a number of high

profile incidents in the field, such as the 2010 blowout in the Gulf of Mexico.

The advantages of the POS-GRIP wellhead design include enhanced safety such as avoiding the need to lift the blow out preventer to terminate casing, virtual elimination of movement between the seal parts, larger metal-to-metal seal contact areas, fewer components and much greater corrosion resistance. In addition, the technology is easier to manufacture, has a reduced installation cost, and increased and long-term integrity.

As the need and demand for enhanced solutions and technology continues to grow, Plexus was invited by the industry post the Gulf of Mexico incident to take its technology from the surface to subsea, and to design and develop a new subsea wellhead which could address and solve shortcomings of conventional subsea wellheads subsequently identified as contributing factors to the incident.

In response to this request, and committed to changing global drilling standards, Plexus launched a joint industry project (JIP) in collaboration with a number of major oil and gas operators for the development and commercialisation of a new, safer subsea wellhead (HGSS) through the utilisation of Plexus' POS-GRIP technology. Key planned features of the HGSS wellhead include an 18 ¾-inch full-bore system, rated to 15,000 psi and 350 degrees Fahrenheit, upgradeable to 20,000 psi and 450 degrees Fahrenheit; four million 

Above
POS-GRIP 15ksi HPHT
Exploration Wellhead System

Below
Ben van Bilderbeek, CEO



pounds of instant casing hanger lockdown capacity, annulus monitoring and bleed-off capability, which enables it to address sustained casing pressure, with diagnostic and remedial capability as well as the ability to open and reseal the casing to enable remedial cement jobs. The integration of such features and capabilities will be a first in the industry; furthermore, the monitoring of casing annuli capability is currently not considered feasible due to a number of technical and cost reasons.


In September 2014 Plexus announced BG International Ltd (BG), a subsidiary of BG Group, was the sixth major oil and gas consulting partner to sign up for the ongoing JIP; the JIP is extremely well supported by a number of major international oil companies and members now include Total E&P Recherche Development SAS, Maersk Oil North Sea UK Ltd, BG, Shell International Exploration and Production BV, Wintershall Noordzee BV, Tullow Oil, Senergy Holdings Limited, Eni SpA Oil States Industries Inc. and the UK entity of the world's largest offshore drilling firm. Continuing to contribute to the design and engineering process, the JIP members will be focused on upcoming milestones such as the completion of the HGSS testing programme and the construction of a prototype, which the JIP aims to have installed in the field for the first time in the second half of 2015.

This commitment to continuous technological improvements has led to the company being shortlisted for two Northern Star Business Awards: 'outstanding contribution to the energy sector' and 'commitment to innovative use of research and development'. These shortlisted nominations focus on Plexus' two current R&D projects, the HGSS wellhead and the HPHT tieback connector; the results will be announced at the 11th Annual Northern Star Business Awards ceremony on September 25th.

As well as Plexus developing and expanding its range of POS-GRIP applications it continues to pursue initiatives that will increase sales and expand its customer base. The company recently announced that its subsidiary, Plexus Ocean Systems (Singapore) PTE LTD, has completed the formation of a new Malaysian joint venture company (Plexus Products (Asia) Sdn Bhd – 'PPA'), which will enable it to pursue opportunities in the Asian region. A major milestone in Plexus' strategy to develop a wholly operational business hub in Asia, PPA was

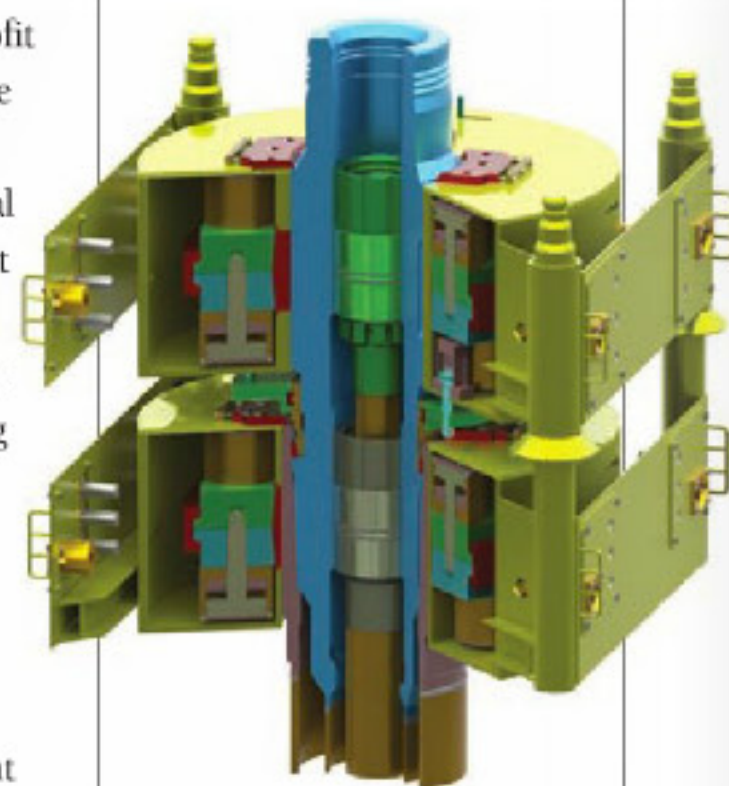
established in conjunction with local Malaysian oil and gas partner Integrated Petroleum Services Sdn Bhd (IPS); a renowned upstream support services firm with in-house manufacturing capabilities and a strong presence in the Malaysian and Asian Pacific region's oil and gas industry, IPS will provide PPA with an already established regional network of positive working relationships, and has an immediate goal of securing a Petronas Licence.

In addition to developing a high quality joint venture in Malaysia, Plexus has also recently invested £2.4 million in expanding its operational headquarters in Dyce, Aberdeen, through the acquisition of an extra workshop and office facility. The purchase of a 36,000 square foot workshop and office facility, which lies adjacent to Plexus' existing 36,500 square foot site, will double the size of the company's Aberdeen base as it continues to strengthen its offering to the oil and gas industry. Furthermore, the new facility will enable Plexus to consolidate its work facilities, which will improve logistical efficiencies as well as create additional workshop, warehouse and service bay capacity.

These exciting developments and ongoing market penetration for its innovative POS-GRIP wellhead equipment has led to the board at Plexus anticipating full year results in line with market expectations at revenue level, while profit after tax is expected to be materially ahead. The board's trading update announcement of its expectations follows the end of Plexus' financial year on 30th June 2014 and also confirmed that Plexus has a strong order book in place, with demand for its POS-GRIP wellhead equipment spanning the globe from both new and existing customers. To help with its global ambitions, particularly in relation to the Gulf of Mexico, Plexus has just announced the appointment of Charles Edward Jones as a non-executive director of the board on 18th September 2014. With more than 30 years of senior management and board experience, in addition to a proven track record in the oil and gas equipment and services sector within the US and Gulf of Mexico, Charles will provide strategic direction to the board as Plexus identifies ways of delivering POS-GRIP to the American markets. Moreover, with the company's Asian expansion strategy progressing well, and its JIP at an advanced stage, Plexus looks set to flourish as it continues to achieve strong revenue growth and increased profitability. 



features of the HGSS wellhead include an 18 3/4-inch full-bore system, rated to 15,000 psi and 350 degrees Fahrenheit, upgradeable to 20,000 psi and 450 degrees Fahrenheit; four million pounds of instant casing hanger lockdown capacity, annulus monitoring and bleed-off capability, which enables it to address sustained casing pressure, with diagnostic and remedial capability as well as the ability to open and reseal the casing to enable remedial cement jobs



Above
HGSS Subsea Wellhead

Plexus Group
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Services
Engineering
wellhead solutions

Top of the class

YXLON COPENHAGEN

YXLON Copenhagen is a highly specialised Danish company with more than 50 years of experience in portable X-ray solutions for industrial non-destructive testing. Our products are the best on the market and accommodate the strictest regulations worldwide.

MACHINEFABRIEK J. POOT BV

Machinefabriek Poot has been a reliable partner of Applus RTD for more than 20 years. The relationship intensified when Poot started the production of calibration blocks for Applus RTD ten years ago. Today these high precision blocks for AUT are used all over the world.

Besides calibration blocks Poot is a supplier to many other clients in the offshore industry for all kinds of specialised equipment, construction and machine parts. Machinefabriek Poot is ISO 9001 certified.



Specialising in non-destructive testing (NDT) since 1937, when founder Lambertus van Ouwerkerk realised x-ray inspection techniques could be used to check welds on ship hulls, Applus RTD boasts nearly 80 years of experience in the evaluation of materials, components or systems in the shipping, construction and oil and gas industries. Remaining at the forefront of new techniques and customised solutions, Applus RTD has been a pioneer in the use of non-destructive examination methods such as magnetic flux leakage, radiography and ultrasonics. Today a global leader in NDT, the company sets standards through the delivery of unrivalled high quality services and individually tailored solutions that help meet construction project timelines or maintain productivity and cost-effectiveness for every installation.

Previously featured in sister publication *Shipping & Marine Magazine* in August 2011, the company has continued to grow and develop over the last three years as part of Applus+ Group, a global leader in inspection and testing for the oil and gas industry, vehicle inspection, engineering and testing for the automotive sector and laboratories targeting industry, and construction and payment methods.

Martin Pot, director of global project services of Applus+ RTD discusses: "We are a truly global company. This is the result of all Applus RTD acquisitions joining forces internationally to become the one organisation we are today. Also we have recently gone from being a privately owned company to stock listed, fuelling further growth. Meanwhile, our main developments have been in the growing economies and large oil and gas projects across the world; these opportunities are predominantly North America,

where we have established substantial businesses. In addition, the Middle East West and East Africa offer great opportunities at the moment."

Consistently adaptable to market demands, Applus RTD is able to deliver a comprehensive range of services to its global customer base, 90 per cent of which is within the oil and gas industry. The company unveiled the latest inspection application in its ground-breaking NDT range in June 2014; developed in partnership with Delta SubSea, the RTD INCOTEST (Insulated Component TESTing) deepwater system utilises state-of-the-art pulsed eddy current technology, which ensures the reliable detection of surface and subsurface corrosion in pipelines with both thin and thick walls.

"The external inspection of pipelines is already an integral part of our business, but, because there is an increasing need for subsea inspection and because our clients asked us to do so, we have tapped into this business through the formation of a strategic alliance with an ROV operator. Our technology, INCOTEST, is now deployed on their ROVs, which means we can jointly perform inspections on subsea pipelines. RTD INCOTEST enables us to perform corrosion assessments through marine growth or other materials that tend to prohibit seeing the condition of a pipeline; this, in combination with our internal inspection capabilities, allows us to deliver a full portfolio to our customers," highlights Martin.


Indeed, it is this drive to bring new technological solutions to the market that is a key strength for Applus RTD, as NDT technical authority Niels Pörtzgen notes: "Our company is technology driven; we have a good communication network with our clients and 

therefore know what kind of inspection challenges they are facing; based on these issues we built our development programme. Furthermore, we also see there is a lot of technology in other application fields, which we then scout for their technology and see if it can add value to our services in advance of our clients requesting it. It is important to us to not only respond to our clients demands, but to also anticipate issues by having new technology available.”

An example of this adaptability to the market is the company’s DTI (Difficult To Inspect) tools that will be presented at the International Pipeline Conference & Exposition in October 2014, as pipeline inspection authority at Applus RTD, Jan Pols states: “We have been performing internal pipeline inspections with our broad range of tools, but are now entering the free swimming market, which requires technology of a higher resolution. Our state-of-the-art tool will collect much more information from the pipeline than any other tool that is currently on the market, and can thus provide an enhanced service through astounding performance and resolution. There is a lot of demand in refineries

and storage areas, while the current applications that can be utilised in these challenging situations are very limited; this is why our customers came to us for a solution.”

This competitive edge is complemented by the company’s strong global presence, as Martin adds: “We have a good network of offices based around the world, where we can not only deliver NDT services locally, but can also transfer knowledge from one part of the world to another.”

An associate member of the International Pipe Line & Offshore Contractors Association (IPLOCA), Applus RTD helps to set standards within the industry through discussing the NDT perspective and presenting improved plans that will benefit end clients. It is this commitment and passion for delivering the best possible solutions that has cemented the future growth of the company over the coming years, as Martin concludes: “We have been involved in the most complex inspection and pipeline construction projects over the last decades, which will also be the case over the next two to three years. In most projects, we will be involved one way or another.” 

COMET INDUSTRIAL X-RAY

COMET Industrial X-Ray, based in Switzerland, develops and manufactures customised high-power, high-energy x-ray sources for the non-destructive examination of materials and components in the pipeline, automotive, aviation and casting industries. COMET also has a complete line of x-ray sources for the inspection of baggage and cargo at airports and borders.

Applus RTD
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Services
Non destructive testing

Industrial X-RAY Sources

customised solutions
high-quality performance
lowest total cost of ownership



COMET – Market leader with more than 65 years of experience

COMET Industrial X-Ray, based in Switzerland, provides high-quality, robust x-ray sources to meet any of your demanding requirements. COMET can make an affordable, customized solution for you which will ensure the reliability of your application.

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