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Issue 28

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That you can follow BVAA on Twitter @theBVAA or join the Valve User Forum on Linked In.

Shale Shilly Shally

Welcome to the latest issue of BVAA's Valve User magazine!

by BVAA Director, Rob Bartlett

I was deeply impressed by an eloquent and well informed radio interviewee the other day talking on the subject of shale gas. An eminent UK academic, he led a University consortium focussed on the issue of shale gas and oil exploration using hydraulic fracturing (so called 'fracking'). See: **www.dur.ac.uk/refine**

The presenter allowed him to explain in a few succinct paragraphs what the process was, how it worked, what might be gained, etc. I say 'allowed' because these days there is a tendency by some broadcasters to try and make a name for themselves by constantly interrupting and asking inane, irrelevant questions. Ever mindful of the energy gap I was so impressed I took notes. A colossal 1300 trillion cubic feet of gas under the North of England alone!

The University 'don' was keen to point out however the process of exploration needed to be fully completed first, before anyone could speak confidently about 'reserves' - what might feasible to extract with current technology.

The next day we heard that Total is to invest $21million in UK shale gas with three other partner companies, and our UK Prime Minister proposed a local tax regime to kick start local authority buy-in to the process, adding the missing ingredient of local benefit. Tax breaks for the UKCS were a similar catalyst for the renaissance in investment for the offshore sector.

Then the farce. Prime air-time is given the next day to a follower of an obscure cult spouting forth patent non-facts. Another I saw advanced a theory about shale gas being a global conspiracy to decrease the world's population by polluting the water table! The nay-sayers are digging a much bigger 'hole' for themselves than any exploration company could ever hope to achieve.

The way forward is clear. Let the real experts do their job first and establish just what we have and what is possible. Then *promptly* put in place a strategy and energy blend that is neither perpetually deferred to the 'next Government' nor relies on the continual good will of overseas energy suppliers, or the vagaries of the British weather!

Cover: A pair of 18" ANSI 900 Anti surge Valves fitted with Vector – velocity control trims destined for the In Amenas project in Algeria (Koso Kent Introl)

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Price: £360.00

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Safety Integrity Levels (SILs) - Friday, 14th March
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Price: £450.00

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Price: £450.00

Valve Metallurgy for non-Metallurgists - Monday, 24th March
Price: £450.00

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AGM Fever!

String Fever and guests wowed the crowd at the Evening reception

The 2013 BVAA AGM was held at Rockliffe Hall Hotel in Darlington. We are pleased to report that according to member's feedback, BVAA staged an event fit for the luxury surroundings provided by this excellent hotel.

The AGM provides an important chance for the BVAA management team and Board to report to the wider membership. To this end the formalities of the AGM are preceded by an open executive committee meeting to which representatives of all members are encouraged to attend. The 2013 meeting also included a very informative talk from renowned international energy expert Prof. Michael J Economides. It was evident from his presentation that Prof. Economides was a knowledgeable, vivacious and witty personality. It was very saddening then to hear that he passed a few days after his appointment with the BVAA.

The day time meetings were, as in previous years, followed by a black tie dinner dance with cabaret entertainment. The event was attended by over 120 people from member companies, their customers and guests.

Before the dinner there was Champagne (sponsored by Rotork) a the guests were entertained by caricaturists (sponsored by Quickits). The excellent four course meal (with wine sponsored by Hobbs Valve) was followed by entertainment from 'Yes! Brazil!' a samba themed band and dance act and the excellent *String Fever. String Fever's* act in many ways defies description, but

BVAA Director Rob Bartlett address the AGM

they earned one of the best receptions we have seen at a BVAA event with their obvious musical talent and sense of fun.

After the cabaret all that was left to do for the guests was to take their choice of: dancing the night away at the disco, finding a comfortable lounge for a drink, or retiring to bed. Suffice it to say there were some sore… feet in the morning at breakfast!

The BVAA team would like to extend their thanks to all the evening's generous sponsors, those mentioned above plus: Bel Valves, Abacus, Asco numatics, Zoedale, Cameron and Crane.

2014 AGM

Date: 21st November

Venue: Rockliffe Hall

Trevor Fairhurst (Shiphams) having his portrait drawn

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BVAA Mad Hatters

Last issue's winner

Congratulations to Martin Sandles of ARC Energy who correctly identified that Jimmy was on Lake Titcaca. Better still, Martin spotted that Jimmy was on one of the floating reed islands – well done Martin! His chosen charity is Gloucester Wildlife Trust so BVAA have made a £50 donation in Martin's name.

The South African Conundrum!

The Chairman of BVAA member The Smart Actuator Company (SACO) did a fantastic job of getting some snaps in his BVAA hat on a recent business trip to South Africa (see below) – looking good Tony! We were not able to find a good 'where is Tony' shot, so BVAA will donate £50 to the charity chosen by the first person to provide us (via jimmy@bvaa.org.uk) with the correct answer to the question below:

Q: How many full years did Nelson Mandela hold office as South Africa's President?

Chris Warnett Retires

In December 2013 Rotork gave a farewell party for Chris Warnett, international sales director for the Process Controls Division. Starting with Rotork in the UK as a design engineer in 1976, Chris moved to the USA in 1980 to design the P Range pneumatic actuator.

He then stayed in the US to become the fluid power product manager and then later the Corporate VP of Sales for the Americas.

For the last 6 years he has been focused on the process controls products particularly the revolutionary CVA control valve actuator, and contributed regularly to Valve User magazine.

In the attached photo he is being presented with a model of the CVA by Derek Olson (left) the RPC divisional Director.

Chris will continue to be active in the valve and actuator industry, providing marketing and sales consulting services through CPLoyd Consulting Inc. Chris's friends and colleagues can congratulate him at Chris.warnett@outlook.com, Tel: 585 298 6239.

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Valve World 2014

Networking at BVAA's British reception at Valve World 2012

The 9th Biennial Valve World Conference and Exhibition will be held this December, in Dusseldorf, Germany, 2-4 December 2014.

At Valve World 2012 BVAA organised a very successful British Pavilion and Group Stand. At the time of *Valve User Magazine* going to press, negotiations with the event organisers are at an advanced stage to repeat this arrangement. BVAA members, or indeed any British Company interested in taking a booth as part of our expanded British Pavilion should contact Rob Bartlett on 01295 221 270. The pavilion will be fully serviced by the BVAA team.

Call for papers

A message from Carl Neekens, Chair, Valve World Conference 2014:

'Dear Valve Fellows,

When the first Valve World conference was organised in 1998, it focused strongly on fugitive emissions. This still remains an important topic at today's Valve World conferences. It seems to be like safety on production sites: The moment you lose your focus, achievements deteriorate.

In today's Valve World conferences many other topics claim their rightful position. Topics such as standardisation, valve selection, maintenance, control valves, special services, etc. but also new concerns for the end user will be handled, such as today's variable casting quality.

In order to thoroughly prepare for the Valve World Conference 2014, I would like to invite and encourage all of you in the valve industry to send in your abstracts and ideas, and think of suitable and important topics that affect all of us, all around the world. The Steering Committee will then carefully review and assess these abstracts, so that we can have a strong, dedicated and international Valve World Conference 2014!'

Contact details and deadlines for submitting abstracts are available at www.valve-world.net

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Fundamental Change Urgently Needed to Address UK Exploration Crisis Says Oil & Gas UK Chief

Commenting on Wood Mackenzie's annual review of UK upstream oil and gas, which followed on the heels of data released by the Department of Energy (DECC) on drilling activity in the UK Continental Shelf (UKCS), Oil & Gas UK CEO Malcolm Webb said:

'Both the Wood Mackenzie review and the latest DECC figures clearly illustrate the parlous state of exploration on the UKCS. We are just not drilling enough wells in UK offshore waters and those that we are drilling are not finding enough oil and gas.

'This worrying trend has been growing for some time. It started in 2011 with a 50% drop in the number of exploration wells drilled, which has since failed to recover. Our members tell us that drilling rig availability and the ability of smaller companies to secure equity capital are major hurdles. In any event, it is clear that we now face a crisis which demands urgent concerted action by DECC, HMT and the industry, if we are to maximise economic recovery of our offshore oil and gas resource and sustain future production.

Mr Webb continued: *'The paradox is that the UK continues to record annual levels of capital investment at over £13 billion. We now have a two speed North Sea. On the one hand we have seen tremendously strong development activity from a small number of large, highly robust projects plus a greater number of smaller ones, only made commercial by targeted reductions in unsustainably high tax rates, ranging from 62 per cent to 81 per cent.*

'Meanwhile, production from existing fields has fallen significantly and the total number of exploration wells has dropped to just 15 in 2013, according to data just published by DECC. We are simply not putting enough reserves into the hopper for future development. Unless we do something about exploration now, we face a risk of a collapse in capital spend in a few years' time and hence lower future production.

'Sir Ian Wood sets out the right prescription in his interim report to the Secretary of State for Energy, Maximising Economic Recovery for the UK, published last November. He proposes a new and strongly resourced oil and gas regulator, working in cooperation with the Treasury and the industry towards the shared goal of maximising economic recovery of the substantial remaining UK oil and gas resource.

'Oil & Gas UK looks forward to the imminent publication of Sir Ian's final report and to HMT, DECC and the industry working together as a matter of urgency to implement its recommendations, including, crucially, this new tripartite approach. There are substantial volumes of oil and gas still to recover from the UK continental shelf but action must be taken now to avoid billions of barrels being left in the ground.'

SMC - Forbes innovators top 100 company joins BVAA

SMC Pneumatics, the Milton Keynes based global manufacturer of fluid control instrumentation and pneumatics has announced it has joined the British Valve and Actuator Association. The company beat global brands including Apple, Unilever and Adidas to rank at number 61 in the prestigious annual Forbes 100 innovators list

SMC UK Process division are looking forward to serving the BVAA community as well as the UK and global valve automation market with its high quality products and innovative approach to process automation. It will showcase some of the products which helped earn it the Forbes accolade at the Fluid Power and Systems Expo at the National Exhibition Centre, which the company will also co-sponsor the event (8-10 April 2014).

UK Process Industry manager Thom Shannon will lead a national team of process specialists in developing relationships within the market and helping clients take full advantage of the latest technology available.

Present in over 78 countries, SMC are able to support individual projects from a technical and product requirement level at the source of project design or at the project's site.

SMC provide complete control system design and build in pneumatic & electro pneumatics, fluid control and instrumentation products for valve automation, and special bespoke product design and manufacture for special applications. SMC's 24,000 sq mtr UK Manufacturing plant contains 27,000 standard parts as an 'emergency' repository for customers who require parts at short notice, satisfying customer requirement is paramount.

SMC will showcase some of the products which helped earn it the Forbes accolade at the Fluid Power and Systems Expo 8-10 April 2014

SMC has been named as the 61st most innovative company in the world by Forbes Magazine

SMC has invested in a state of the art technical centre at the heart of its UK Manufacturing site. These investments show that innovation is at the heart of the company's business model. Customers and BVAA members are encouraged to visit the technical centre if they can. Visitors will see the latest developments in process automation and new SMC products coming to market. The feedback from visitors has been unanimously positive and most people leave with some new knowledge of a product they may have been unaware was available. BVAA members are welcome to take advantage of this facility for meetings and training opportunities of their own staff and customers. A factory tour is usually available to give a full appreciation of what SMC has on offer please contact UK Process Industry manager Thom Shannon for more information.

SMC

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New Member Profile:

ESI Process UK

More than Equipment suppliers.....Solution providers. Engineering expertise means ESI add value to valve distribution services

ESI Process UK, valve distributor and engineering solutions provider, based in Wales & Middlesbrough, has joined the British Valve and Actuator Association. Part of the ESI Technologies Group, which was founded in Ireland in the 1920's, ESI registered in the UK in 2000 to provide high-level engineering & stocking support to large key Multinational customers.

Operations Director Declan Field explains the reasons for ESI's continued success:

'At ESI we are more than valve distributors; we are experts in fluid and gas handing, be it pumping / control / monitoring / isolation or filtering. Via our different divisions we provide complete system solutions. We are able to add value for our clients through the engineering expertise we possess. As an example, working with clients we design & build entire flow control systems which often outperform their expectations. The systems are assembled and delivered through our UK facilities in Yorkshire and South Wales.'

ESI serve the Pharmaceutical, Chemical, Petro-chemical, Semi-conductor and Bio-tech industries among others where flow control management is critical. The systems designed by ESI's engineers, can range from a complete Continuous Batch Pharmaceutical plant to Heating and Cooling systems for reactors.

Managing Director of ESI Technologies Group, Morgan O'Brien commented:

'That does not mean ESI only design and manufacture systems. The stocking and supply of manual / actuated and control valves are a key element our business. ESI hold large Preffered Valve supply contracts with some of the largest multination companies based in the UK . These customers demand quality, proving its not always about price. As the logo states More than Equipment suppliers..... solution providers'

More information about ESI process UK can be found at esitechnologies.co.uk. The company's website also includes an excellent blog section which presents innovations & initiatives, which its customers find informative.

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Challenging Offshore North Sea Project will use Special Anti-Corrosion Instrumentation Made in Devon

Project could bring in over £10m of business for Barnstaple's Parker Hannifin

An offshore oil and gas project that will site new offshore platforms in challenging conditions in the North Sea has selected high-reliability valves and tube connection fittings from the Instrumentation Products Division of Parker Hannifin in Barnstaple – the global leader in motion and control technologies.

Named after the pioneering Norwegian feminist Gina Krog, the new oil and gas field is located some 250 km west of Stavanger, Norway. The offshore platforms for the Gina Krog project will be constructed rapidly. Parker anticipates that this could result in more than £10m of orders over the next 12 months for its Barnstaple facility - which employs over 200 directly and many more at local subcontractors.

Parker estimates that it will supply at least 10,000 individual valves, tube fittings and other components for this project, as well as some 10 kilometres of tubing. These will be used to construct liquid and gas instrumentation systems that will measure parameters such as temperature, pressure and flow to help control gas and oil and processing operations.

As well as manufacturing using high-grade stainless steel materials, this project will make extensive use of titanium and the 6Mo steel alloy in key parts of the fluid tubing systems. These specialist materials are required to combat the threat of corrosion, which is a major problem in harsh offshore environments such as the North Sea.

Parker's know-how about machining valves and fittings using 6Mo and titanium, and its proven supply chain for these specialist raw materials, were important factors

> *'unique features'*

in securing this business. Another key aspect was the global nature of the Parker business, as the engineering and construction work for Gina Krog is taking place in numerous locations around the world.

'In the oil and gas production sector today there's an intense focus on extending equipment lifetimes and eliminating the threat to reliability that corrosion brings. The know-how that Parker has built up in the area of anti-corrosion materials is bringing us considerable success,' says Parker Hannifin's Andy Guest. *'A large proportion of our production output is now manufactured from corrosion-resistant alloys instead of more conventional stainless steels.'*

'Our products have a performance edge because we always focus on adding value to industry-standard instrumentation products by employing unique features and superior materials and quality to design-out potential failure modes and improve reliability,' adds Ian Huggins, General Manager of the Instrumentation Products Division of Parker Hannifin. *'This is particularly relevant in the oil and gas marketplace which is doing all it can to improve safety and reliability, and it's helping our business to flourish even in the face of intense competition from low-wage Asian economies.'*

Turnover at Parker's Barnstaple facility has grown significantly in the last two years alone - largely as a result of being selected as the instrumentation supplier to major engineering projects for offshore platforms. North Sea oil and gas production continues to be a major business opportunity as production innovations continue to increase the volumes of oil and gas that can be extracted from existing and mature fields. As a result, lots of offshore platforms are being refurbished and extended. Parker's share of this market has grown so much that it believes it is the largest supplier of fluid instrumentation components in the North Sea sector today.

Another interesting aspect of the latest North Sea project order will be the specification of tube connectors for critical parts of the fluid tubing system that are able to withstand higher working pressures. This is being met by Parker's new Autoclave product line, which is the result of an acquisition in 2012. Although these products are manufactured at a sister factory in Wexford, Ireland, both the R&D and customer service departments for this advanced product line have recently been relocated to Parker's Barnstaple facility for efficiency. The ability to offer instrumentation solutions for both conventional pressure ranges and higher pressures is also helping Parker to win more business.

To help cope with the higher levels of business, Parker has invested around a million dollars in eight further computer-controlled machining centres for the Barnstaple facility. These new machines will be manufacturing many of the tube fittings required for Gina Krog. The automated machines add to the capability of one of the Parker Hannifin's corporation's most sophisticated manufacturing businesses worldwide. Parker in Barnstaple manufactures products using advanced build-to-demand 'lean manufacturing' principles. It was the first plant worldwide to be awarded *'Lean Model Plant'* status by the $13 billion Parker Hannifin corporation - a major accolade.

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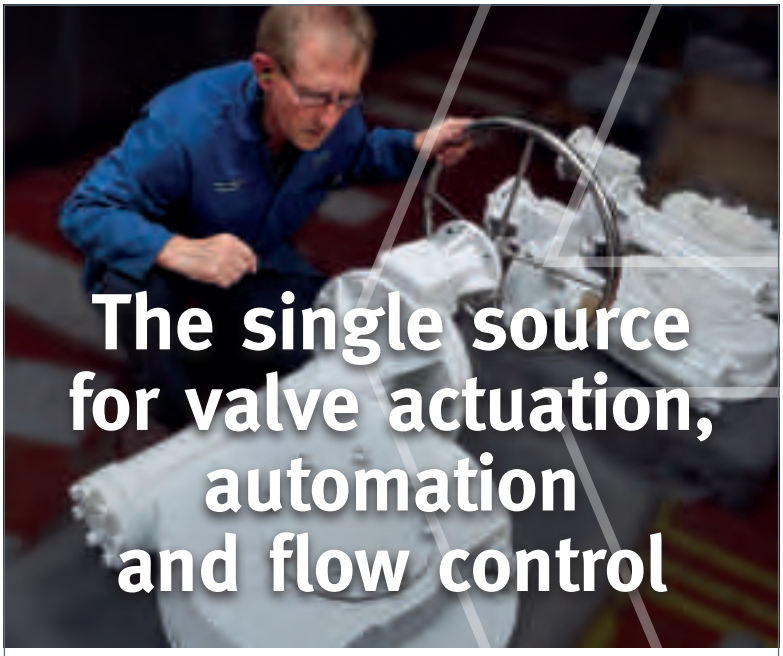

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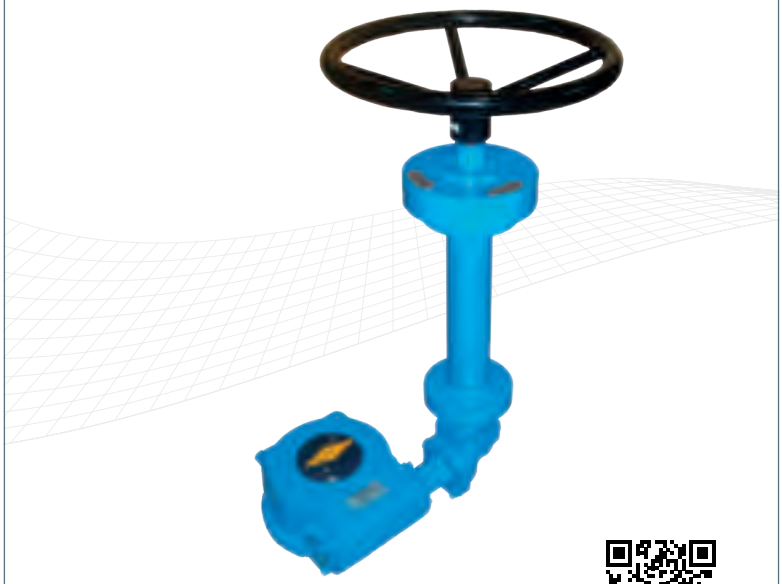

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Matt Rawnsley, MD Europe of Associated Spring proudly poses with his BVAA plaque

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CAMERON

New Member Profile:

ThermaFlue Systems

A new range of products which provide solutions to common flow control problems

Doncaster based ThermaFlue Systems Ltd has announced that it has joined the British Valve and Actuator Association. ThermaFlue Systems manufactures a range of patented heat protection sleeving products for chimney exhaust insulation. However as the company's innovative product grew in popularity, it became apparent that applications could be designed to provide solutions to common problems within the Flow Control Industry. The company's in-house design team quickly got to work and a range of products relevant to the valve industry have been launched.

Sales Representative Stephen Parsons is delighted to be joining BVAA:

'We believe that our team has developed a unique range of products that can make a real difference to safety within flow control. We've had some excellent feedback on our products. Now we are looking forward to working with BVAA as we introduce the products to the market.'

ThermaFlue Systems Ltd began to develop valve and flange protection products after discussion with a large power generation company, who had suffered a series of failing valve/pipe flange connections which sprayed pressurised lubrication oil onto the hot turbine exhaust manifolds, causing serious fires. ThermaFlue's in-house engineering management team looked at what was currently on offer in the marketplace to combat these dangerous incidents, and decided none met the criteria required to solve the problem. A range of valve and joint covers were born, including the ThermaFlue Spraysafe® Shield.

ThermaFlue Shields prevent spray-outs by interposing an impregnable barrier between the medium flowing through the pipeline system and the external environment. In the event of a leak, the escaping fluid is controlled within the shield, the pressure is dissipated, allowing the leakage to gather and activate the visual or electronic indicator. The Spraysafe® Shield is unique in offering full coverage of the valve, flange and welding to prevent 'spray outs' at the same time as providing a visual indication that a leak has occurred. For more information on how ThermaFflue Spraysafe® Shields work, please see the dedicated article on page 34

ThermaFlue Systems covers are made using flame resistant materials. The outer cloth meets BS476 Part 6 & 7 and the insulation meets BS476 Part 4.

The company is part of the Cresco Group. Cresco Industrial Supplies Ltd was formed in 1993 and began supplying the UK Coal Mining Industry with Hydraulic

The ThermaFlue sales team – Seb Price (left) and Stephen Parsons

Hose Assemblies and Hydraulic Fittings. Therefore ThermaFlue Systems benefit from the backing and expertise of Cresco's engineering and design departments. The company are also guaranteed under the Group's ISO 9001 Quality Management System.

Sales Engineer Seb Price commented:

'As part of Cresco we have a 20 year track record of providing excellent, effective solutions to high temperature problems and teaming our products with tailored advice and customer service. Our design team enable us to provide solutions completely to the customer's specifications.

'Throughout the company we are committed to quality and continuous high standards and have maintained ISO 9001-2008 accreditation since 1997. We are looking forward to providing these values to the Flow Control Industry'.

Examples of the ThermaFlue range including a Spraysafe Shield (left)

ThermaFlue Systems Ltd
Tel: 01302 750057
www.thermaflue.co.uk

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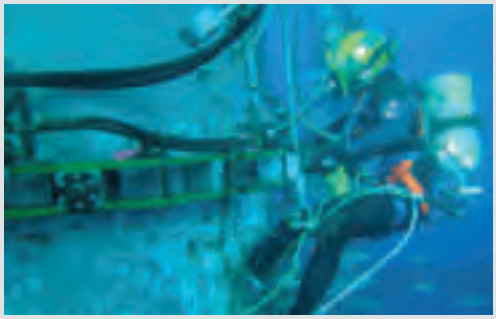

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Saco Powers into South Africa with 'Revolutionary' Actuator

Tony O'Donnell on his way to South Africa and sporting his BVAA Cap!

SMART ACTUATOR manufacturer SACO is now powering into markets across the globe with the unveiling of a world-beating energy efficient actuator

The UK-based company already has a full order book following a successful trip to demonstrate their ground-breaking technology to high-ranking Government officials and business people in South Africa.

SACO has developed a revolutionary actuator which shows energy savings of over 75 per cent compared to traditional motor-driven systems.

'energy savings of over 75 per cent'

SACO chairman Tony O'Donnell took the actuator on a trade mission organised by UK Trade and Investment and made presentations to more than 10 leading South African companies.

Tony commented: *'I was stunned by the response that we have had demonstrating our product to a variety of audiences.*

'We had lined up a sales partner in South Africa in advance and it was great to hit the ground running with a series of high-level meetings.

'I was able to come back to the UK and tell the team that we have a set of orders that will see us well into next year.

'This is fantastic news for the company and proof that we have a product that is capable of making a serious impact across the globe.'

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BiS Valves Report on Successful 2013

2013 has proven to be an exciting and challenging year for BiS, following unprecedented growth in 2012 which resulted in a 40% increase in turnover

To meet a stated aim of increasing capacity in 2013 BiS Valves added 2 new factory units, additional machinery and a 3rd shift to allow 24 hour manufacturing. In turn, this created several new posts, added to those generated by increased demand over the last few months. Our expanded team will help ensure we maintain efficiency under increasing workloads. Operations, QA and Sales have all seen the appointment of new Management and additional support staff. Our experienced Engineering team has maintained their reputation for providing excellent support and innovative solutions and here too we are in the process of recruiting additional staff.

'...working closely with valued customers...'

Nick Frost and Louise Peden at Offshore Europe 2013

We have continued to work closely with valued customers including GE Oil & Gas, Aker Solutions, FMC, Expro and Subsea 7 both here in the UK and globally. We proudly maintain our close association with Cre8 in Norway, winners of the coveted Gulkronen new Venture of the Year 2013 award. August saw the delivery of the first bespoke manifold to Control Cutter, Norway, for their patented emergency device designed to release the largest anchor chains under extreme loads in less than 2 seconds. The first system has already been sold to Statoil.

Various projects are underway to improve our factory layout and facilities in 2014 prior to an eventual move to a new location nearby.

We successfully exhibited at OTC Houston and Offshore Europe attracting many visitors to our new eye catching stand at both shows.

With the Oil and Gas market looking buoyant for the future BiS is set to achieve our targets for continued growth and excellence.

BiS Valves
Tel: . +44 (0)1202 896322
www.bisvalves.co.uk

CTL Launch Hydrostatic Pressure Testing Facility

CTL, the leading CNC machining procurement and assembly specialist, has recently commissioned a new Hydro Test Chamber at its facility in Stockport. CTL are trusted by clients from within the Oil and Gas, Aerospace, Defence and Transport Sectors and recently rejoined the British Valve and Actuator Association.

The new Hydro Test Chamber has a pressure rating of 22,500psi and is a dual system capable of using oil or water mediums. The approved 22,500psi pressure test system has a high pressure calibrated transducer with a USB connection for connecting to a PC or Laptop. Windows based software is provided on a CD Rom, this can be used to record and monitor the results of the pressure and medium temperature against time.

The Pressure Testing is carried out in an explosion proof enclosure. There are three colour CCTV PTZ remote cameras to safely view inside the test rig whilst all the controls and instruments are mounted externally.

CTL Works Director David Bannister commented: *'The facility was requested through our close work with many clients in the Oil & Gas Sector who require High Pressure Testing as part of the Factory Acceptance Test criteria, to ensure the integrity of the components or assemblies supplied by CTL.*

'By adding this facility to our portfolio we are able to provide a complete service to customers. The facility negates the need to ship products to separate testing facilities, therefore reducing our customers lead times – a vital benefit in the oil and gas industry.'

CTL's new testing capabilities add to an already comprehensive facility spread of 70,000 sq ft. and including lifting capacity of 20 tonnes. The addition of this service is the latest result of a long term strategy of investment in the latest technology, machine tools and IT systems. CTL, and its motivated and skilled workforce, aim is to continue to be the preferred precision machining facility of both national and international clients.

CTL's newly launched Pressure Testing Facility has a pressure rating of 22,500psi

CTL Engineering
Tel: 0161 430 3173
www.ctl-eng.com

By BVAA's Technical Consultant, Peter Churm

TECHNICAL HOT SPOT

Hot Spot ISO 15848-1 and ISO 15848-2 DIS Enquiry

The two following draft standards were updated according to the discussions during the last meeting of ISO/TC 153/SC 1/WG 10 in September 2013:

ISO 15848-1 "Industrial valves - Measurement, test and qualification procedures for fugitive emissions - **Part 1:** Classification system and qualification procedures for type testing of valves"

ISO 15848-2 "Industrial valves - Measurement, test and qualification procedures for fugitive emissions - **Part 2:** Production acceptance test of valves"

Both draft standards have been submitted to ISO for parallel DIS Enquiry.

SmartKey+ Securely Manages Safety Interlock Keys in Real Time

SmartKey+ Securely Manages Safety Interlock Keys in Real Time

SmartKey+ is an extension of Smith Flow Control's Key Management Systems. Key cabinets provide a safe and visual way of storing interlock system 'initiating' keys. SmartKey+ has been developed to provide all the features of SFC's Visual Alert Key Cabinet, along with the ability to record movements of keys in real-time, providing complete accuracy.

SmartKey+ uses RFID (radio-frequency identification) technology which allows a key to be tracked with complete confidence, providing operator and control room personnel with information on interlocked processes and their status. Full transaction history is available, revealing details of key insertion/removal. The unit is designed to support a remote web interface, without any specific licence.

'enhanced levels of system security'

SmartKey+ has enhanced levels of system security. All keys are trapped in the cabinet until authorisation is granted; a user is identified by a pin code. SmartKey+ highlights specific key positions that the operator is authorised to use. The user selects the appropriate key from the panel and removes the key as the selected key position is unlocked.

To reinsert a key in the SmartKey+ Cabinet, the user scans the key in front of the integrated scanner and the appropriate key position is highlighted on the frontal display for re-insertion.

The SmartKey+ Cabinet is configured around a central control panel capable of running a system with over 500 keys. SmartKey+ is comprised of modular sections, each containing 18 key positions, and can be increased incrementally.

SFC's SmartKey+ provides a unique solution to key management, combining innovative software and smart technologies.

SMITH FLOW CONTROL LTD

Smith Flow Control Ltd
Tel: +44 (0)1376 517 901
www.smithflowcontrol.com

Hardide aims high for prestigious Nadcap approval

Hardide Coatings' plan to secure the aerospace industry's prestigious Nadcap approval is taking off. The provider of advanced surface coating technology aims to reach new frontiers of surface engineering by securing the accreditation within the next 18 months

The company, which is currently undertaking test programmes with Airbus and AgustaWestland (AW), will be among the top tier of global aerospace suppliers for manufacturing quality when it gains Nadcap approval. This will bolster its systems and processes standards beyond the requirements of the currently held AS 9100 Rev C.

'world class'

Nadcap (formerly the National Aerospace and Defence Contractors Accreditation Program) is a globally recognised award managed by the aerospace and defence industries to recognise excellence in manufacturing quality products through superior processes. Increasingly, it is being seen as a mandatory requirement for key suppliers to aerospace OEMs (original equipment manufacturers).

Hardide is currently undertaking test programmes with Airbus and AgustaWestland

Philip Kirkham, CEO of Hardide plc said: *'We have products in development and testing with several of the biggest names in the aerospace industry and while we are not currently required to have Nadcap, we want to be Nadcap-accredited at the earliest opportunity as this further enhances our reputation with customers by bringing our quality systems and controls to what will be world class levels.'*

The test programmes with Airbus and AW are for use of the coating in safety-critical applications, so they have had to be very wide-ranging and detailed. It is estimated test programmes for both companies will be completed before mid-2014.

The schedule of work leading to Nadcap accreditation is expected to be completed by the end of 2014 and forms one of a range of preparations for future aerospace business.

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Spirax Sarco controls improve production efficiency

Effective condensate removal has reduced tablet drying times on steam-heated ovens at Piramal Healthcare's pharmaceutical production site in Morpeth, Northumberland. Automatic pump traps (APTs) from Spirax Sarco have proved so effective at improving temperature control and solving maintenance problems on three of the company's ovens that Piramal plans to install them on the site's two remaining units.

'The temperature control on the ovens was previously ±5°C, but now it's accurate to ±0.5°C,' says Mechanical Engineer Paul Lunn. 'We don't know exactly how much we're saving, but we know that the improved control must be saving energy because it's reducing the drying time.'

The build-up of condensate was also causing corrosion and erosion in the heating coils. Piramal typically had to replace each coil once or twice a year, putting an oven out action for three days every time. As well as the cost of the repairs and downtime, any product in the oven when a coil sprang a leak had to be scrapped. *'We haven't had any problems with the coils since the Spirax Sarco pump traps were installed. I'd say the reduction in maintenance has been the biggest benefit for me,'* says Mr Lunn.

Production efficiency has improved at Piramal Healthcare

All the problems were caused by a build-up of liquid condensate in the steam coils. Back pressure made the liquid difficult to clear using conventional steam traps, but APTs from Spirax Sarco can always clear condensate effectively, even under vacuum.

The APTs act like steam traps to drain the condensate normally as long as there is positive pressure in the steam coils. But if the pressure in the system drops below the condensate back pressure, the steam-driven APTs actively pump the condensate away.

'We've worked well with Spirax Sarco before and this time the local engineer worked with us to design a solution and apply it successfully,' says Mr Lunn. *'Now we've seen how well the APTs are working on the first three ovens we're planning to fit them on the other two.'*

Piramal Healthcare is a leading contract pharmaceutical manufacturer. The company took over the Morpeth site in 2006, where it continues to make a range of hormone-based products.

spirax sarco

Spirax Sarco
Tel: 01242 521361
www.spiraxsarco.com

Quickits propel inspection capabilities to next level

Quickits' latest investment sees the procurement of the Faro Prime CMM (Co-ordinate Measuring Machine)

With increased demand from customers for detailed inspection reporting the latest £40,000 investment allows Quickits to provide electronic inspection reporting including 3D modelling of its components.

With increased demand from customers for detailed inspection reporting, the latest £40,000 investment allows Quickits to provide electronic inspection reporting including 3D modelling of its components.

Using reverse engineering technology critical dimensions can be measured and compared to engineering data to instantly detect any deviations. Angles, distances, geometric and positional dimensions are easily inspected and compared against the permitted tolerances.

Capable of measuring a component with a cubic area of up to 3mtr the 6 axis measuring arm is more than capable of inspecting the vast range of components that Quickits design and manufacture at its head office and production facility based in Nottinghamshire, UK.

Commenting on the recent investment Mark Clarke, Production Manager said; '*This latest investment in the*

Quickits can provide electronic inspection reporting including 3D modelling of its components.

Using reverse engineering technology critical dimensions can be measured and compared to engineering data

Faro could not have been timed any better since we were able to house this in our new recently purchased production and warehouse facility which is situated on the same industrial park as our existing premises. A single investment of £40,000 in measuring equipment is substantial however, with a workforce in excess of 40 personnel teamed with 30 state of the art CNC machines utilising such inspection equipment to maintain our quality is vital. Ensuring concentricity of PCD's and drive couplings in relation to our products is essential and the Faro allows such measurements to be measured with precision accuracy and recorded for our customers to view, something which is unique to our industry.

'Such measuring equipment is common in the aerospace industry and to now have this within our own business demonstrates the level of investment that Quickits are prepared to go to in order to remain at the forefront of technology.'

On target to exceed budgeted sales in excess of £3million this year Quickits latest investment further enhances its enviable reputation within the industry as the first choice supplier when professional solutions are required for valve actuation on a global scale.

Quickits Ltd
Tel: 01623 515545
www.quickits-online.co.uk

Case Study:

Providing Project Managed Services

Rotork is well known for supplying flow control equipment for new and upgraded industrial plants and processes on a global scale. In these contracts, often involving tens or hundreds of valve actuators and associated control equipment, Rotork works with valvemakers, engineering companies and end users as one of several members of a project team, each with different areas of expertise and generally all under the supervision of a main contractor.

Another part of Rotork's activity involves actuators that are retrofitted on site as part of improvement projects which often also include additional work such as mechanical, electrical and civil engineering. The members of Rotork's dedicated Site Services Division have many years experience of these projects, enabling them in many cases to organise the total supply of the work that is required together with project management services, embracing all of the project team disciplines in what is called an extended scope contract.

A major benefit for the customer is the simplified contractual route that the extended scope contract enables, by reducing the number of separate sub-contractor contracts. Extended scope contracts have become particularly popular with customers in areas including water, power and environmental

Close-up of the obsolete sluice gate motor drives

Buscot Weir after the completion of Rotork's extended scope contract, which encompassed project management, new valve actuation and adaptation, a new control panel in an adjacent building and the installation of a new walkway platform for inspection and maintenance.

improvement, where projects can be relatively modest in scale but still demand a diverse range of engineering skills and disciplines. A recent Rotork UK contract for the Environment Agency at the picturesque village of Buscot in Wiltshire is a good example.

For many years Buscot Weir on the River Thames had been equipped with electric motors that were used to adjust the position of two sluice gates in order to manage the river level and flow rate during fluctuating weather conditions. These motors, with the associated valve shafts and an electrical control panel in an adjacent building, had become obsolete and required replacement to safeguard the river banks from potential flooding in the future.

As well as replacing all the obsolete equipment, the Environment Agency wished to ensure that future inspection and maintenance could be carried out safely. To achieve this it would be necessary to construct a new access walkway platform along the length of the weir. Following the preliminary site survey of the existing installation, Rotork Site Services submitted a contract proposal to the principle contractor AMCO Engineering which encompassed project management services and the total supply of all the elements of the project – new valve actuation, valve adaptation, wiring and control panel, new walkway platform, removal of old equipment, installation of new and commissioning.

Upon acceptance of the proposal, Rotork engineers returned to site to carry out a detailed survey to enable the replacement equipment to be dimensioned, designed and fabricated and to organise all the other equipment needed for the installation work such as scaffolding and temporary access. In this case it included

Left: A Rotork engineer confirms the successful operation of the new control panel during site commissioning.

Right: Installation nearing completion on the new walkway platform; the IQ3 actuator in the foreground is fitted with its vandal-proof cover.

the provision of pontoons by a company that specialises in safeguarding working environments when the presence of water is a potential hazard.

Rotork's design team was able to replace the two existing electric motors with a single IQ3 electric valve actuator to operate both sluice gates simultaneously, driving through a combination of new shafting and three gearboxes supplied by Rotork Gears. The IQ3 actuator is certified as watertight and temporarily submersible to IP68, providing secure environmental protection for long term reliability in all anticipated ambient conditions. As the installation is adjacent to a public footpath, additional security is provided by the fitting of a vandal-proof cover over the actuator's local control buttons to prevent any unauthorised operation or interference.

Rotork Site Services co-ordinated the manufacture and fabrication of all the new equipment and materials required for the upgrade. When this was completed, engineers from Rotork and the sub-contractors were back on site to remove the old equipment, install the new actuator and valve shafting with control panel, wiring, walkway platform and all associated ancillaries, completing the installation and commissioning within seven days.

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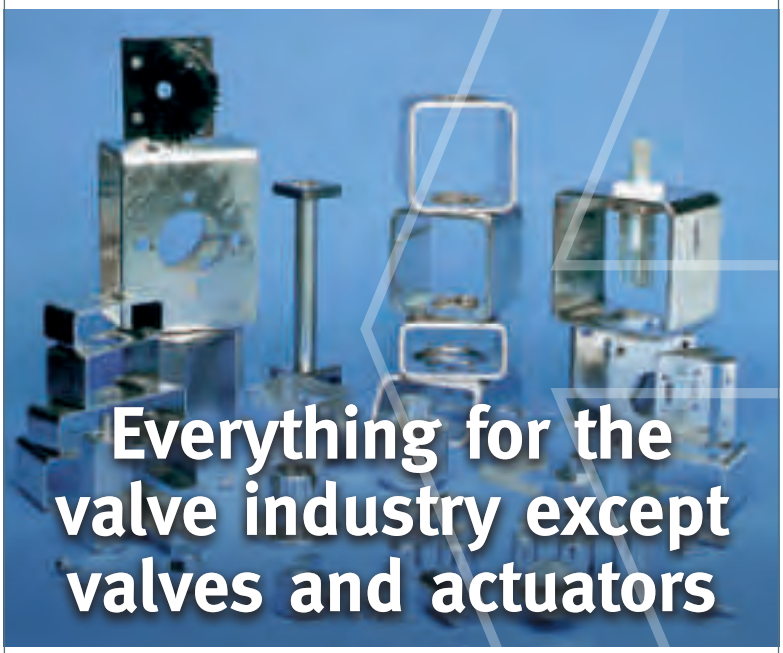
Valvekits



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The latest machinery is used whilst a continuous investment plan keeps the company at the forefront of technology.

Valvekits - the market leader, see our dedicated website at: **www.valvekits.co.uk**

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Redefining Flow Control

Unique Solution to Problem of ‘Spray-Out’ Leakages

ThermaFlue Spraysafe® Shield stops spray out and provides visual indication of a leak.

ThermaFlue Systems Ltd, the Doncaster based manufacturer of bespoke high temperature covers, has designed a uniquely effective solution to the problem of ‘spray-out’ leakages in high pressure flow control. The ThermaFlue Spraysafe® Shield prevents the dangerous affects of a ‘spray-out’ by interposing an impregnable barrier between the medium flowing through the pipeline system and the external environment. In the event of a leak, the escaping fluid is controlled within the shield, the pressure is dissipated, allowing the leaked fluid to gather and activate the visual or electronic indicator.

The innovative solution is believed to be the only product on the market that combines 100% joint coverage, high temperature resistance and a visual indication that a leak has occurred.

‘Peace of mind’

Applying ThermaFlue Spraysafe® Shields to an existing high pressure flow control system will prevent the often catastrophic consequences of a ‘spray-out’ leak. Indeed it was after hearing about a series of fires suffered by a large power generation company that the ThermaFlue team developed the Spraysafe Shields. The fires were caused by failing valve/pipe flange connections which sprayed pressurised lubrication oil onto the hot turbine exhaust manifolds.

‘Customers are finding that using ThermaFlue Spraysafe Shields provides them with the peace of mind that if a leakage occurs, the consequences do not go beyond those associated with the loss of that high-pressurised line’ said Sales Engineer Seb Price. ‘Serious incidents can be avoided for a relatively minor cost.’

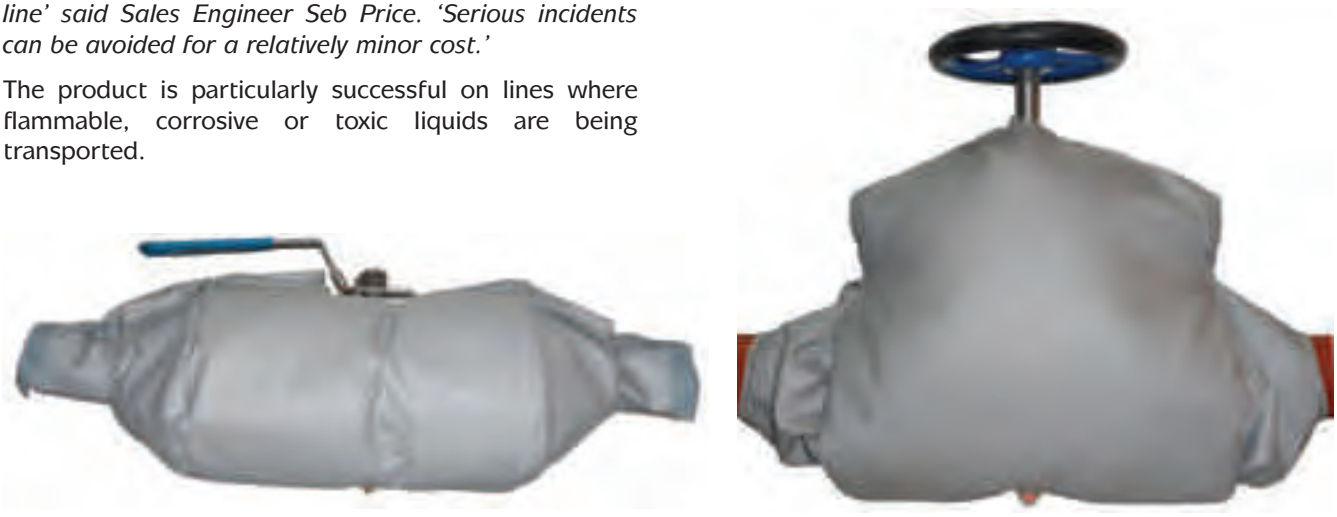
The product is particularly successful on lines where flammable, corrosive or toxic liquids are being transported.

The Spraysafe Shield, with visual leak indicator (orange ball at base)

The Spraysafe® Shields, like the majority of ThermaFlue’s products, are made using flame resistant materials. The outer cloth meets BS476 Part 6 (Fire Propagation) & 7 (Class 1 rating awarded for surface spread of flame). Insulated shield use an insulation that meets BS476 Part 4 (Non-combustibility).

‘Bespoke design’

Shields can be manufactured to cover any and all types of valves and pipe connections. They can be fitted with insulation material to give a thermal barrier protection against internal or external temperatures of +230°C/-10°C, which meets BS5422:2009. ThermaFlue’s in-house design and manufacture departments mean that bespoke shields can be manufactured and delivered within 3-4 working days, though standard models which are held in stock can be delivered quicker. This



Shields applied to a ball valve (left) and gate valve (right) – all valve types can be covered

includes products to cover flanges, couplings, valves, unions, expansion joints, hose couplings, flowmeters, pumps, heat exchangers, pressure vessels, instruments, customised connections, tees and elbows.

ThermaFlue Systems Ltd has qualified engineering personnel, who can make site visits to advise customers on the best solution to specific problems. They also provide an on-site design and measuring service for any bespoke applications. ThermaFlue Spraysafe® Shields can be customised to special sizes and configurations.

'Our engineering expertise and design department means we are fully flexible' says Sales Representative Stephen Parsons 'We can place the leak indicators in the best place, or even replace our visual orange ball indicator with an electronic indicator which alerts a warning system. The choice is really with the customer.'

Forthcoming Exhibitions

The ThermaFlue Sales team will be exhibiting the Spraysafe® Shields at two exhibitions at the NEC in the first half of 2014. Seb Price and Stephen Parsons will be delighted to discuss the benefits of the shields at 'Maintec 2014' in March and 'Plant and Asset Management 2014' in April. Indeed both Seb and Stephen are available for no obligation consultations using the contact details opposite.

Seb Price (left) and Stephen Parsons (right) will be at two exhibitions in early 2014

ThermaFlue Systems Ltd
Tel: 01302 750057
www.thermaflue.co.uk

By BVAA's Technical Consultant, Peter Churm

TECHNICAL HOT SPOT

Hot Spot Machinery Directive 2006/42/EC

CEIR and BVAA have given diligent and careful consideration to the interpretation of the requirements of the Machinery directive relative to its application to industrial valves, valve actuators and actuated valves. Both organisations have separately reached the same conclusions and issued their interpretation of the requirements of the directive in separate documents outlining the following:

- Manual valves, valves without actuating device and check valves are excluded from the scope of Machinery Directive 2006/42/EC
- In general all valves (including actuated valves and valve actuators) should not be considered as machinery in accordance to the Machinery Directive 2006/42/EC
- Safety valves are not considered to be *"safety components"* which have special status under Directive 2006/42/EC
- Actuated valves and valve actuators should be considered as Partially Completed Machinery (PCM), but only when they are manufactured to be incorporated into machinery. Therefore actuated valves and valve actuators should be considered as PCM only when they are explicitly intended to be incorporated into machinery and issued with a Declaration of Incorporation.
- Each manufacturer has to decide which products will have to fulfil the requirements of Directive 2006/42/EC, and will specifically indicate it in the sales documents with a declaration of incorporation.

For more than 3 years now these statements of the requirements of the Machinery Directive have been accepted as correct interpretations by valve/actuator manufacturers and European users alike.

However BASF in Germany are now refusing to accept these interpretations and are insisting that actuated valves are machines and subject to the requirements of Machinery Directive 2006/42/EC.

German manufacturers have identified this problem and representation has been made to the European Commission, CEN and CEIR to resolve this issue.

CEN TC/69 has re-confirmed the CEIR and BVAA interpretation and are seeking meetings with BASF in an effort to resolve this issue.

Flowserve Announces New Valtek GS and Logix 420 Control Valve System

Achieving exceptional balance between high performance and value while delivering high flow rates

Flowserve Corporation, a leading provider of flow control products and services for the global infrastructure markets, today announced the introduction of two new products, the Valtek GS globe control valve and Logix® 420 digital positioner, that deliver exceptional high performance and value. These products provide a fully integrated valve package for general service continuous process control throughout the plant.

The Valtek GS is an environmentally-friendly control valve that complies with the latest standards for controlling fugitive emissions requirements (ISO 15848). The GS is based upon simple, yet proven Valtek design philosophies of building an instrumented control valve package by providing automated calibration and some of the highest flow rates in a general service globe valve package - over 55 Cv in a 2-inch valve and nearly 150 Cv in the 3-inch model.

'optimal balance'

In addition to value and high performance, the Valtek GS accommodates a range of sizes and pressure classes:

1. General service applications in sizes 0.5" to 6" (DIN 15 to 150)
2. Pressure class 150 and 300 (PN 16 to 40)
3. Market leading Cv in a globe control valve package

Boasting quick installation and simple setup by maintenance technicians without instrument or process engineering skills, the Valtek GS high capacity valve is available in multiple trim and material options. The GS handles a wide array of general service application requirements for greater long-term value including excellent flow control, durability and reliability equating to less maintenance over the life of the valve.

The new Logix® 420 digital positioner supports the Valtek GS control valve platforms and is designed with the latest technology to support precise and reliable control while allowing fast commissioning with its single, push button calibration. The Logix® 420 is a compact, explosion-proof (certification pending) positioner that is able to control small to large valves with high flow rates and direct mounting capabilities which virtually eliminate the need for more expensive mounting options. Additionally, the Logix 420 is designed for use in safety--related applications, per IEC 61508 SIL3 certifications.

'When combined with the Valtek GS, this package provides both maintenance technicians and process plant operators an optimal balance of performance and value without compromise to product quality, safety or integrity,' said John Lenander, vice president and general manager, Flowserve Flow Control Division, Oil and Gas Sector.

Both the Valtek GS and the Logix® 420 products are included in the latest release of Performance! - the Flowserve Control Valve sizing, selection, and project management software. Performance! employs industry-standard IEC and ISA sizing equations, among other

Valtek GS: an environmentally-friendly control valve that complies with the latest standards for controlling fugitive emissions

measures, to assist the user in selecting the best solution for their application.

Among competing globe control valves, the Valtek GS and Logix® 420 fully integrated package can deliver the highest flow capacity - over 55Cv (2-inch valve). Once again, Flowserve proving to lead the market in best application fit, performance and value.

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Compact actuators for LNG cryogenic valves

The use of LNG (Liquefied Natural Gas) as a cheaper and less polluting alternative to diesel for generators providing the power to remote sites is becoming increasingly widespread. With many thousands of sites throughout the world, oil and gas drilling industry companies are among the operators who have introduced the technique, which involves the use of specialised trailer-based plant to deliver, store and process the gas prior to combustion.

LNG is transported to site in specially designed tankers which also store the liquid gas at the cryogenic temperature of -162° Celsius. A separate trailer, housing the re-gasification system, normally sits between the tanker and the generator. The main component of the re-gasification system is the vaporiser, which converts the LNG from liquid to gas and feeds it to the point of use. This system, together with auxiliary processes including pressure building in the tanker to improve flow, utilises scores of valves which are typically small, cryogenic and tightly arranged within a compact installation.

The Rotork Schischek ExMax actuator is successfully used in LNG cryogenic applications.

Those valves that are automated therefore require a particularly compact and fast acting actuator, capable of providing powerful rotary or linear drive, for isolating and modulating duties in a hazardous environment. This is a scenario that is proving to be ideal for the Rotork Schischek range of electric actuators, due to their small size, flexible power supply range, failsafe capabilities and explosionproof approvals. An increasing number of ExMax (quarter-turn) and ExRun (linear) actuators are being supplied to OEMs and fabricators in these areas and in other process applications handling LNG in cryogenic environments.

The Schischek self-adaptive universal power supply has a range of 24 to 230V, ac or dc. Explosionproof certification for Schischek actuators encompasses UL, CSA, ATEX, IECEx, GOST/RTN, INMETRO and KOSHA international standards, with safety integrity levels up to SIL3 also available with failsafe products.

Valve stroke times are suitable for fast operation and selectable at speeds between one and 120 seconds, depending on actuator model. All models are fitted as standard with internal heaters enabling cryogenic operation at ambient temperatures down to -40°C Celsius.

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Score Europe Awarded Large Employer of the Year by Skills Development Scotland

Each year the SDS (Skills Development Scotland) Scottish Modern Apprenticeship Awards are held to recognise the achievements and commitment of individuals and employers involved in the Modern Apprenticeship programme. At this year's event on 13th November, held in the Glasgow Science Centre, Score (Europe) Limited was delighted to be announced as the winner in the Large Employer of the Year category.

'talented individuals'

Score Europe's Modern Apprenticeship Scheme has been running for 25 years

Conrad Ritchie, Deputy Managing Director of Score Europe spoke on behalf of the company after receiving the award.

'Our Modern Apprenticeship programme is at the core of the company. For over 20 years our business model has depended on it to provide us with talented, skilled and competent individuals who take Score Europe and Score Group forward globally and allow us to prosper.'

'We take real pride in the knowledge that our Modern Apprenticeship programme has enabled so many young men and women to pursue their dreams. We are delighted to get the Award, as it is a real testament to what we do and what we have been doing for 25 years. We are in this for the long haul and it is great to have that commitment recognised in this way.'

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KOSO

Raising Joint Integrity Awareness

Engineers from across the UK came together in the North East to discuss new technology and legislation regarding Joint Integrity at an information and training session led by the Academy of Joint Integrity and TTE.

The free Joint Integrity Seminar was attended by more than 20 engineers who are involved in or have responsibility for Flange Assembly, integrity issues and maintenance in the power and process sector.

The seminar focused on the importance of joint integrity training, latest integrity standards, new gasket technology as a reactive maintenance tool for corroded flanges and awareness of the risks relating to mechanical sources of ignition in hazardous areas.

Following the demonstration was a question and answer session that provided the opportunity for individuals to discuss issues with TTE and Academy engineers.

The Academy of Joint Integrity, which is part of The Flexitallic Group, provides accredited, bespoke and open courses covering all aspects of joint integrity.

Left to right, Alex Lattimer from the Academy of Joint Integrity, seminar delegate Graham O'Hare and TTE's Gary Brown

A close relationship has been formed between the Academy of Joint Integrity and TTE to enhance the range of skills development programmes for engineers and technicians working or living in the North East, using events such as this free to attend seminar.

Its open and accessible training is available for individuals or teams of engineers and can be delivered on site or at one of the Academy's dedicated training venues, which includes the excellent facilities at TTE.

The training utilises a specialist flange joint assembly rig known as the Flexitallic Sustainable Training Unit (FSTU), which enables the user to tighten a bolted joint and see the impact of tightening procedures, on-screen, through the innovative load monitoring software. This gives the best mix of practical hands-on training and classroom learning.

Alex Lattimer, Training Director for The Academy of Joint Integrity, said: *'These seminars demonstrate the importance, even for experienced engineers, to update knowledge of techniques, competencies and legislation surrounding Joint Integrity. In addition, they provide a useful forum for engineers with similar responsibilities to share best practice and discuss issues with our experienced Joint Integrity expert.'*

John Taylor, TTE Group Business Development Manager, said: *'The seminar proved to be very successful and was well attended by North East engineers who were able to enhance their knowledge and understanding. The FSTU was particularly useful when explaining bolt correction procedures, and provided a clear and easy to understand demonstration.'*

The Academy of Joint Integrity

Academy of Joint Integrity
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By BVAA's Technical Consultant, Peter Churm

TECHNICAL HOT SPOT

Hot Spot 2014 CEN/TC69 systematic review

The systematic review of the following standards of CEN/TC 69 is opened:

EN 593:2009+A1:2011 "Industrial valves - Metallic butterfly valves"

EN 1349:2009 "Industrial process control valves"

EN 12627:1999 "Industrial valves - Butt welding ends for steel valves"

EN 12760:1999 "Valves - Socket welding ends for steel valves"

EN 12982:2009 "Industrial valves - End-to-end and centre-to-end dimensions for butt welding end valves"

EN 15714-1:2009 "Industrial valves - Actuators - Part 1: Terminology and definitions"

EN 15714-2:2009 "Industrial valves - Actuators - Part 2: Electric actuators for industrial valves - Basic requirements"

EN 15714-3:2009 "Industrial valves - Actuators - Part 3: Pneumatic part-turn actuators for industrial valves – Basic requirements"

N 15714-4:2009 "Industrial valves - Actuators - Part 4: Hydraulic part-turn actuators for industrial valves - Basic requirements"

Voting for the following options regarding the future status of the listed standards with regard to;

1. Confirmation for continued use of the existing standard for a further 5 years

2. Revision of existing standard (with reasons)

3. Amendment of existing standard (with reasons)

4. Withdrawal

Should be forwarded to BVAA by 15 March 2014 for onward submission to BSI and CEN.

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New appointments at YPS Valves

YPS Valves Ltd, whose headquarters are in Leeds, West Yorkshire, has appointed Nick Day to its in-house technical design department.

Nick, a qualified mechanical design engineer, is an important addition to the experienced team responsible for the design and manufacture of new products.

Nick said: *'I am delighted to be joining such a well respected business with a strong reputation for design and innovation and look forward to helping bring new products to market.'*

YPS ex-stock & modification service department take on more staff

YPS has also added two new members of staff to its ex-stock and modification service department to meet continuing demand.

In addition to its strong design and manufacturing capabilities, YPS can take 'stock' valves and engineer fast track modifications to the specific requirements of the end user.

The ability to provide a *'one stop shop'* stock, modification and full in house test service enables YPS to offer a bespoke solution in weeks, rather than months. The service is favoured by companies during plant shutdowns, or for urgent breakdown work. It also appeals to the maintenance requirements of all the industries served by YPS.

The standard YPS modification services include:

- Packing, gasket and bolting changes
- Variable trim materials
- Cryogenic and bellows sealed conversions

Nick Day is looking forward to bringing new products to market

All of the extensive stock held by YPS is subject to stringent quality systems

- Operational changes, i.e. gearboxes and actuation
- By-pass and purge connections

All valves modified by YPS are subject to stringent quality systems, and a full range of testing is provided with a YPS certification package. Modified valves are also marked CE where necessary, to comply with European Pressure Equipment Directive.

YPS looks to clean up with new facility

YPS Valves has installed a new ultrasonic cleaning facility at its headquarters in Leeds, to add to its current capability.

The giant tank can degrease valves up to a 16" 900 globe valve, making them suitable for oxygen service and other applications.

Rachel Wormald, Managing Director, said: *'The cleaning system enhances our capability of supplying valves to the market which are free of contamination.*

'The investment in this and other types of specialist equipment is a statement of our commitment to be at the forefront of the valve manufacturing and supply industry.'

YPS Valves Ltd
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Pneumatrol determined to grow internationally

Ryan Wang and Andy Nash

As a key part of its business development strategy, Pneumatrol Limited, a North West based specialist manufacturer of pneumatic control products for use within both hazardous and safe area environments, has recently finalised an agreement with Shenzhen Auto-Valve Controls Company Ltd. to bring its products to the Chinese market.

For over 50 years Pneumatrol has developed the technical and manufacturing expertise together with the market knowledge necessary to meet the demands of the Process, Rail, Energy and Industrial market sectors.

Shenzhen Auto-Valve Controls Company Ltd. was founded in 2005, with strong expertise within the automatic valve control industry. The company is dedicated to providing first class products and solutions to its customers. A flexible approach and superb customer service are the key elements of its corporate strategy. Auto-Valve has gained a great reputation by successfully serving the Natural Gas, Power and Petrochemical sectors in China.

At a time of contraction for many businesses, Pneumatrol has decided to take on new challenges by growing into further international markets.

Andy Nash, Sales Director of Pneumatrol, commented: *'Following a strategic review of the business in 2013, we have elected to develop our business further into the Chinese market which has significant potential for our products especially within the Process and Energy sectors. We design and manufacture a wide range of pneumatic and electro-pneumatic products – standard and bespoke – to meet our customers' requirements. Growing export sales into China, is a very important part of our business strategy and I have great confidence in this new joint venture.'*

Ryan Wang, Managing Director of Auto-Valve Controls Co Ltd. also added: *'British products have a great reputation in China, not only because of its solid build quality, but also the advanced industry standards. We are delighted that Pneumatrol has chosen Auto-Valve Controls as its strategic partner for the Chinese market and we look forward to a very successful ongoing business relationship.'*

pneumatrol

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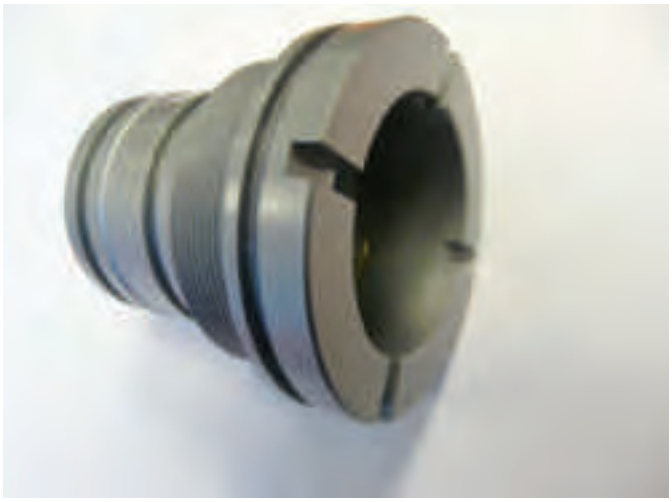
Armoloy NTDC and the Oil & Gas sector



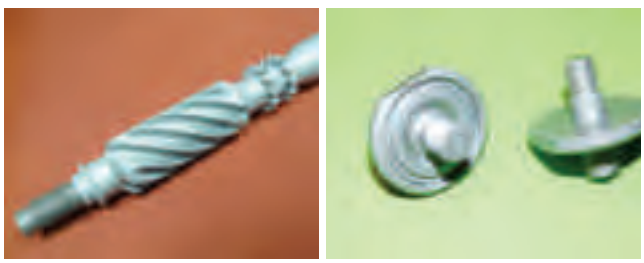
Customers using NTDC have been 'greatly impressed'

Armoloy (UK) Ltd has recently expanded its operations in response to an increasing demand from the offshore Oil & Gas sector for its unique surface assurance process. It has added a fourth process tank to its production plant and increased its capacity for treating larger metal items. This investment means that Armoloy UK can now handle items up to 5 metres in length, giving them enhanced protection in corrosive and abrasive environments. We also have travelling cranes that can handle 3 and 5 tons respectively.

The Armoloy NTDC process creates a thin, dense coating which permeates and bonds with its host metal to provide a surface finish that is extremely hard, resilient and slippery. Its ability to permeate and bond produces a highly engineered surface finish that does not flake, crack or peel in extreme hostile

'A surface finish that is extremely resilient'

environments. This makes it an ideal protective coating in a wide range of applications where metal surfaces are exposed to abrasion, corrosion or friction.



Armoloy NTDC coating is extremely thin, making it very versitile

Observed benefits of this surface finish are wide ranging and include longer product life, reduced maintenance costs and better performance properties. The targeted gains for the Armoloy coating may well vary with the base material. Cast iron and alloy steels will show significant benefits in wear and corrosion resistance whereas stainless steels, inconels and hastelloys will typically show reductions in galling problems and enhanced lubricity.

Furthermore, the application of Armoloy NTDC is essentially a cold operation - processing temperatures do not rise above that of hot water so we have no problems with distortion. A significant additional benefit for most of our customers is that we operate to finished tolerances - no additional machining is required after we have completed our processing.

In offshore applications, the corrosion resistance and friction reduction properties of Armoloy NTDC are applied to valves, gears, winches, flow tubes, mandrels and a variety of housings. It is being used in completions, interventions, artificial lift, wellheads and trees: blow-out preventer (both sub-sea & surface) and diverter valves.

One of the largest global providers of intervention services has been using Armoloy UK to treat components being used in sand-control solutions and in particular on expandable sand screens. To begin with, rollers on the sand screen's expansion tool were treated with Armoloy NTDC for corrosion protection but over time it became apparent that the coating's ability to significantly reduce friction also meant that it could be applied to the screens sliding surfaces to prevent galling issues. The company has been *'greatly impressed'* with the performance properties of Armoloy NTDC.

Another company that is a leading provider of well flow management systems and well testing services has been using Armoloy NTDC on subsea test trees, in particular, on Ball Valve housings and bodies, to protect vulnerable areas. Because the integrated coating is extremely thin, the company has also used the process as an *'easy fix'* to retro-treat areas where there has been previous corrosion, as no new design work or additional machining is required.

The surface coating has also been recently used on a new range of large bore *'anti-seize'* diverter valves that are being used on offshore oil platforms. The coating is an integral part of the high performance properties of the new valves which have a product life requirement of 25 years.

'natural choice'

Both the valve plug and internal surface of the main body are treated with the Armoloy process because of the highly corrosive and abrasive environments in which the valves operate, They had begun trialling Armoloy NTDC on small components but quickly found it was delivering the friction and corrosion resistance benefits that they were looking for and it quickly became the *'natural choice'* for them.

Because of the nature of the applications, the types of component and the adverse working environments associated US Armoloy plants have been involved with components for fracking operations for some time. Armoloy NTDC is processed to an international standard that is universally accepted in all the countries that manufacture equipment for the Oil & Gas industry. This means that Armoloy UK is ideally placed to assist companies in what we see as a rapidly expanding, potentially vast market.

In addition to Oil & Gas, Armoloy NTDC is increasingly being used on valves and actuators in the Aerospace sector, in machinery for Food processing and Packaging, in Pharmaceuticals, in Nuclear Power and in advanced engineering applications. Our holding of ISO9001, AS9100 and NADCAP accreditations together with our wide range of company approval and specifications are proof positive of the of the skill and Quality Assurance protocols that we apply to our operations.

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Improving measurement and process performance using smart instruments and asset management systems

Developments in smart instrumentation and asset management systems are offering a raft of new opportunities for today's process operators. Providing real-time access to an expanded array of information, these developments can help to dramatically improve process performance. Les Slocombe, Sales Manager, Instrumentation, for ABB's UK Measurement Products business, explains the key developments that have taken place and the benefits they can bring in a process environment.

Global process industry losses amount to $20 billion, or five percent of annual production, caused by unscheduled downtime and poor quality. ARC estimates that almost 80 percent of these losses are preventable and 40 percent are primarily the result of operator error.

The process industry is suffering losses cause by unscheduled downtime

Smart instrumentation combined with asset management offers the opportunity to minimise these losses. Smart instrumentation first appeared in process and power plants in 1983. Since then, significant advances in sensor and microprocessor technology have resulted in a new generation of intelligent field devices offering more information than users could have dreamed of in the past.

Smart instruments in the field measure or directly affect single or multiple plant variables, contain a microprocessor for processing data, and are commercially available *"off the shelf."* These instruments include not only sensors for measurements and communications, but also actuators, valves, motor variable speed drives, and other control equipment. They allow operators and engineers to gain more useful information about the process and the device itself which was previously locked away.

Today's plant engineers and operators have access to such functions as power management, maintenance systems, process automation, asset optimisation, and safety systems. Standards such as NAMUR NE107 are steadily improving the Human Machine Interface (HMI), making it easier to commission, configure, and manipulate instrument parameters.

Benefits of smart instruments

Smart instruments are characterised by:

- Fast, bidirectional digital-communication capability
- Enhanced sensor, electronics, and process diagnostics
- Increased measurement accuracy under varying operating conditions
- Better record keeping
- Capability for wireless communications.

Process engineers are no longer limited to a process variable measurement from a unidirectional 4-20 mA analogue signal. Intelligent instruments in fieldbus networks offer remote configuration and calibration, data beyond process variables, diagnostics, and much more. These systems are decreasing the cost of process instrumentation while providing increased informational value.

The key benefits of smart instrumentation include:

- Scaled process variable: No further scaling is needed outside of the instrument, reducing complexity and the possibility of introducing error
- Self-validation/status: Indication of instrument's state and health, alerting operators to a change in quality of measurement and potential problems
- Tag-number: Clear P&ID identification of the device within the network, reducing potential errors
- Description: A written definition of the instrument and its application more clearly identifies its role
- Time stamp: Provides a real-time record of process variable information
- Serial number: Can be synchronised with remote instrument life-cycle management systems and maintenance information
- Traceable validation: Indication that device calibration is valid, often addressing ISO 2001 Chapter 7.6

The development of bus communications has drastically increased the amount of transmissible information. Also, bidirectional communication of digital information can take place between a field device and a system, and between field devices.

To make the most of communication improvements and to satisfy more advanced needs, big changes are taking place within field devices, especially those with wireless capabilities.

Multivariable transmission

Developments in multi-parameter sensor technology, where one field device detects multiple measured variables, are opening up a raft of new opportunities for measurement across a plant. A traditional analogue transmission system requires one cable for each measured variable. Bus communication supports multivariable transmission. So the field device can transmit all measured variables detected via a single cable. The same goes for control signal transmission to a positioner for an actuator or control valve. Using a bus communication system enables the transmission of multiple data such as control signals, limit signals, and valve opening signals.

Examples of uses for multivariable detection and transmission include:

- Monitoring the condition of the steam heat tracing of differential pressure transmitters by ambient temperature information
- Detecting clogging in impulse lines by static pressure information

Many other pieces of information can also be used to expand measurement and control capabilities. Combining multiple sensor systems in a single pressure transmitter permits simultaneous measurement of differential pressure, absolute pressure and, via an external sensor, process temperature. Additionally, the sensor's internal temperature is measured and recorded for service and diagnostic purposes. The sensor temperature and the absolute pressure can be used to eliminate environmental effects on the sensor.

Improving DP flowmeter accuracy

A single multivariable DP instrument can measure gauge or absolute pressure, differential pressure, and temperature, overcoming the problems associated with multiple instruments by reducing pipe intrusions and the opportunities for leaks while facilitating regulatory compliance.

Three sources of error exist in a DP flow measurement, specifically:

- Minimising transmitter errors
- Minimising errors in gas and steam caused by pressure and temperature variations
- Minimising primary element errors.

Minimising all three sources provides the best accuracy and repeatability.

Based on their experience with traditional analogue systems, many users believe that the transmitter is no longer important when it comes to improving DP flow measurement performance. They believe the transmitter is a 3 to 5 percent device over a 3:1 flow turndown, and that the orifice plate is the main source of error. However, new smart transmitters can dramatically improve performance by taking into account the effects of the various sources of pressure variability and flow errors that can affect DP flow measurement.

Recalculating these components based on the flow rate and temperature significantly improves performance, and can greatly extend the flow range that can be measured accurately with DP Flow. Recognising these

issues explains how DP orifice flow measurement can improve from a 3 to 5 percent device to a better than 1.0 percent device.

Asset management

Equipment uptime for continuous production represents an important factor in improving process plant productivity and overall profitability. Smart instruments can play a key role in optimising the maintenance function toward this end.

Coal pulverising and rotating machinery provide good examples of the benefits of asset management principles. In coal pulverising operations typical of power plants, plant maintenance sometimes has to deal with problems associated with the long impulse lines that transfer pressure to remotely mounted pressure transmitters.

The lines may plug as often as once a week and even once a shift in some cases. A small air purging system in the sensing line may be present to provide positive pressure, attempting to keep the coal out of the sensing line. Even then, this may not be sufficient to stop the problem. Wet coal following a rainstorm, for example, will invariably lead to plugged lines, creating dried 'mud' which has to be drilled out by maintenance technicians.

Once impulse lines are plugged, reliability of measurement becomes questionable. Smart pressure transmitters equipped with Plugged Impulse Line Detection (PILD) can quickly alert maintenance departments to measurement problems. On sensing a plugged impulse line, the transmitter displays a diagnostic message while sending a digital and/or analogue alarm.

This capability protects the transmitter while offering predictive diagnostics of the pressure measurement loop. The operating condition of critically important rotating machinery can be monitored continuously. Permanently installed sensors make it possible to communicate vibration information continuously. Vibration levels of support machinery can also be measured periodically in the field by plant personnel using portable equipment.

In both cases, health management software processes the data, providing a complete picture of the operating condition. The ability to overlay frequencies, and match fault frequencies to peaks, allows trained personnel to efficiently analyse the data. Alarm reports enable decision makers to quickly evaluate a situation and take appropriate action to prevent a breakdown.

NAMUR standards

The aim of the Namur NE107 recommendation is to summarise how to make use of diagnostic data from field devices to support operators to take appropriate actions as required. ABB smart instruments follow the NAMUR *"Traffic Light"* standard for identifying fault levels, which can be adapted by the customer, depending on the application.

The user must be able to interpret the fault levels and formulate an appropriate response to a diagnostic event. Reactions to a fault in the device may vary, depending on the user's requirements.

Linking smart instrumentation back into an asset management system such as ABB's System 800xA control system provides improved process visibility

Focused asset management supports maximum productivity while incurring minimum costs. Productivity is maximised by fast, reliable start-ups, by adopting predictive maintenance strategies to assure reliability of essential production assets, and by using field-based information and diagnostics to identify and avoid potential trouble. Careful planning and execution of plant turnarounds minimises their duration and extends intervals between them.

A predictive maintenance program can be expected to bring a 1 to 3 percent improvement in product throughput, generating enough additional revenue for payback in three to six months.

Summary

Despite the numerous benefits of smart instrumentation, there still remains a long way to go before the benefits of field-based intelligence are fully embraced throughout the process industries. However, growing pressure from all the key areas impacting on business today, from tough trading conditions and health and safety issues to energy costs and environmental concerns, are all driving plant operators to look for ways to work smarter. Intelligent instrumentation can help them do that.

As a manufacturer and supplier of intelligent instrumentation encompassing everything from pressure and temperature measurement through to smart positioners and water and process analysers, ABB is well-placed to advise on the expanded range of possibilities offered by today's technologies. For more information, email moreinstrumentation@gb.abb.com or call 0870 600 6122 ref. 'smart instruments'.

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Clear cut material choice?

When considering which pressure regulators or filter regulators to fit on your valve actuators and given equal performance products, the material choice often fell into one of two camps: if price is the issue use aluminium or if quality and traceability is key, use stainless steel.

At Red Dragon we can offer the Sitecna® range of products that are manufactured in Italy to stringent quality and traceability standards in 316L stainless steel as well as 3051 copper-free aluminium. This allows us to offer a material choice for practically any application, for example the aluminium 1" NPT R16 regulator pictured here has a standard epoxy coating and shows the factory code relating to its EN10204 3.1 certificate ensuring material traceability.

For high corrosion environments, both the aluminium and stainless steel constructions can be supplied with high build offshore specification coatings and there is also the option for manufacturing regulators in exotic alloys to ensure the ultimate corrosion resistance and long working life.

Corrosion resistance as criteria for selection is often accompanied with a requirement for extended ambient temperature ranges as oil and gas exploration expands into harsher environments. The regulator pictured here is suitable for -40°C to +80°C and in colder climes we can offer an option for -55°C to +90°C.

Arduous environments and exposed installations reinforce the need for quality, robust components especially in safety critical systems. There are no thin wall castings or plastic constructions in the Sitecna® range allowing the aluminium regulators to have a maximum inlet pressure of 25Bar and 30Bar for the stainless construction. At the ¾" or 1" size as shown here, all the component parts are machined from solid which removes the risk of casting flaws causing premature failure and makes them very resistant to physical damage.

'strength and quality'

This strength and quality of manufacture is matched by the performance driven design which is optimised to provide excellent flow characteristics and accurate pressure control. This has been proven both by 3rd party testing and reliable operation in process conditions around the world.

This regulator is ATEX certified II2GD c IIC T6 X for hazardous area applications and GOST certified for use in the Russian Federation. This is not an option to charge more for and extend deliveries, all Sitecna® products have these approvals as standard whether of aluminium or stainless steel construction.

The aluminium 1" NPT R16 regulator has a standard epoxy coating and shows the factory code relating to its EN10204 3.1 certificate

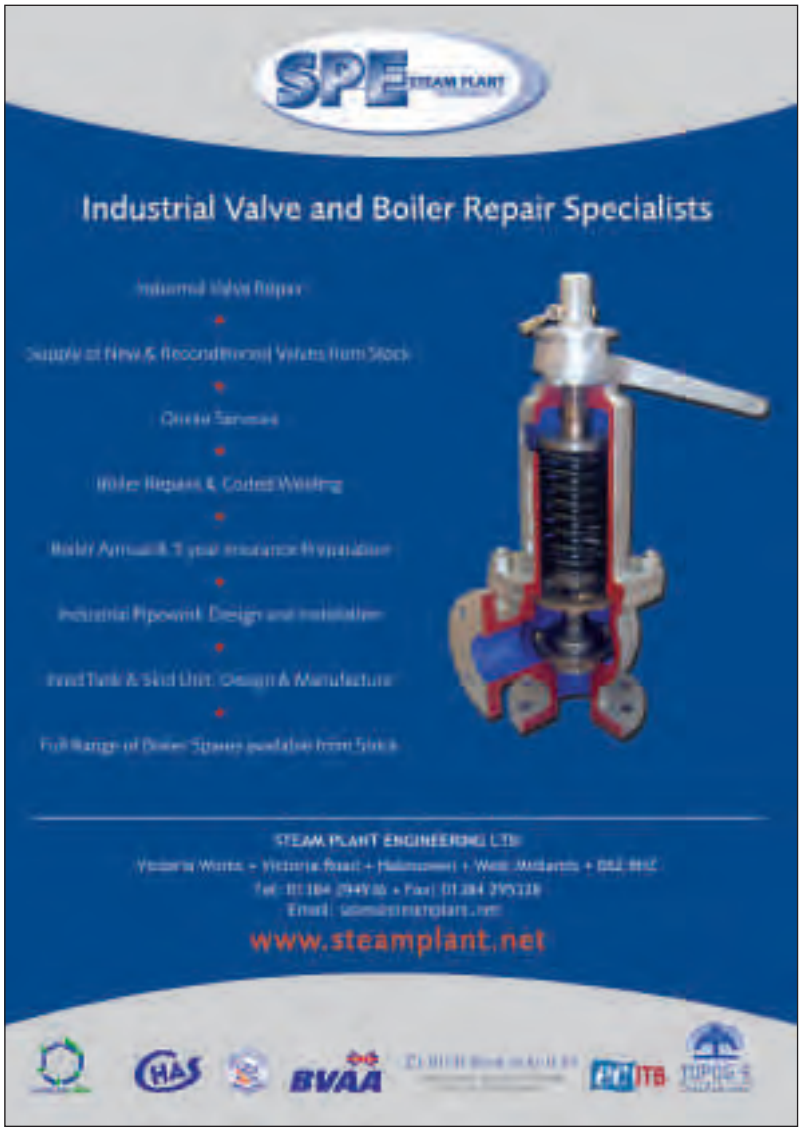
For quality, traceability, certification and corrosion resistance, the Sitecna® range offers a wide variety of product options with constructions in 316L stainless steel and copper-free aluminium. Which material will you choose next time?

Red Dragon Valves
Tel: 01443 772500
www.reddragonvalves.co.uk

Investment in Manufacturing at BiS

Increased recognition of the cost, space and time saving advantages of bespoke manifold solutions has driven further investment in manufacturing capacity at BiS Valves.

Doosan Mynx5400 Manifold assembly with multiple shut-off valves



Last December saw the delivery of a new CNC machining centre at BiS Valves' component manufacturing facility. The Doosan Mynx 5400 is a vertical machining centre with an integrated 4th axis, and will be a versatile addition to in-house manifold machining capacity.

Recent months have seen exceptional demand for bespoke manifold solutions. Custom designed to fit perfectly into the application, manifolds allow multiple valves to be installed into a single compact assembly that matches a specific customer requirement.

Laurence Card, Engineering Manager, explained, *'assembling a system with multiple valves connected together with tube and fittings takes an enormous amount of space, a lot of assembly time, and gives rise to a potential leakage point at every joint. As well as being faster to assemble and far more compact, one of the major advantages of combining valves into a manifold assembly is the serviceability. Once the manifold is installed, replacing or servicing a valve does not require the pipework to be disturbed, which is often a prime cause of introducing leaks into a system.'*

'The engineering team have many years experience designing manifolds, and always work closely with the customer to ensure that our solution is cost effective and suits the system layout perfectly,' added Laurence.

BiS VALVES

BiS Valves
Tel: . +44 (0)1202 896322
www.bisvalves.co.uk

By BVAA's Technical Consultant, Peter Churm

TECHNICAL HOT SPOT

Hot Spot ISO/CD 28921-2

ISO CD 28921-2 Industrial valves – Isolating valves for low-temperature applications – Part 2: Type testing

During its last plenary meeting on 27 September 2013, ISO/TC 153/SC 1 adopted resolution to submit ISO 28921-2 to CD Enquiry – comments required by 6 February 2014

This International Standard specifies requirements for the type testing of low temperature type valves to verify the performance of valves at a low temperature from – 50 °C down to – 196 °C.

Refer to ISO 28921-1.concerning the coverage as far as the DN or NPS and PN or Class

This International Standard does not evaluate valve actuators unless they are integral part of the valve. Valves during testing may be operated manually or an actuator may be utilized during the testing. The effect of cold gas vapours during testing is taken into consideration in particular if the actuator is mounted directly over the test stand with the cold gases engulfing the actuator.

This International Standard does not apply to valves for cryogenic services, designed in accordance with ISO 21011, used with cryogenic vessels.

World-class API 622 performance

Supagraf® Premier

API 622 test – carried out at United Valve, Houston
- Average emissions of just 10.5PPMv
- Max emissions of only 37PPMv
- 5 thermal cycles
- 1510 mechanical cycles
- 5 year simulated service life
- No stem adjustments required
- Excellent corrosion resistance

Class A ISO 15848 AH CO2; SHELL 77-312; TA LUFT

Supagraf Premier – low emissions – low friction – low maintenance – ultimate performance

James Walker

Tel: 01270 536 000 Email: sales.uk@jameswalker.biz

www.jameswalker.biz

BVAA 75 YEARS

ANNUAL review

British Valve & Actuator Association

www.bvaa.org.uk

Neil Kirkbride, BVAA Chairman

CHAIRMAN'S STATEMENT

I'm delighted to report that the BVAA continues to go from strength to strength!

The year ending March 2013 saw revenues climb to another all-time high, to a position in excess of an ambitious budget. Prudent accounts management however allowed us to invest wisely mid-year in additional activities, services and staff, resulting in a healthy but measured surplus.

However being a 'not for profit' organisation, any residual surplus is also automatically converted to additional activities for members the following year, providing BVAA members with both immediate and long-term improvements in service.

Membership also grew beyond our expectations this year, with the total currently standing at 185 companies – another record and a remarkable achievement.

Our Training stream continued to thrive and expand with some attractive and innovative new courses. 'In-house' training also proved to be very popular for some of our industry's key clients.

The initiatives from last year's Strategic Review bedded in well and I'm pleased to report a growing uptake in the Business Development opportunities facilitated by our partners at NOF Energy. Our other informative, networking and social events also continue to thrive, and our Customer Golf Days and Conferences have also become important 'must attend' events for many members.

10", 10,000psi top entry subsea ball valves on a North Sea manifold (BEL Valves)

We also re-structured the Association's governance structure at this year's AGM to provide a larger, more representative Board and eliminate some duplication of effort. I am confident that we now have a very cohesive blend of youth and experience, with representatives drawn from all sectors of the membership.

I am eternally grateful for all the help and support I receive from my friends and colleagues on the BVAA Board. I would also like to recognise the extraordinary effort put into the meetings of the Association by its various working groups, and thank both the members and especially the working group chairs for their sterling work.

I would like to close with my sincere thanks to BVAA Director Rob Bartlett and his small but hard working team who have continued to provide members with a very lean and efficient but also very friendly service.

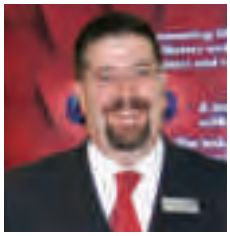
BVAA BOARD

Neil Kirkbride
Chairman

Joe Kelly
Vice-Chairman

David Millar
Vice-Chairman

Laurence Kettle



Rob Bartlett
Director & CEO

Peter Everett

Colin Findlay

Tim Guest

Rhys Jones

Glyn Williams

Cover: *'Non-intrusive' diagnostic data retrieval from a Rotork IQ intelligent valve actuator.*

Rob Bartlett, BVAA Director

DIRECTOR'S REPORT

BVAA will support members again at Valve World 2014.

'A terrific year, an incredible decade' would be an excellent summary of BVAA.

I recently reflected upon the many changes I have seen in my 10 years at the Association, and in the industry during that relatively short period.

2003/4 saw the UK valve industry under threat from a static market, a contracting and consolidating industry, 'cheap' overseas competition, and a largely inward-looking trade body insufficiently resourced to adequately address the mounting issues facing UK valve and actuator companies.

Continued exploration work is essential to maximise recovery from the North Sea

Fortunately the Association's governance team at the time had recognised the issues and created a foundation for vigourously addressing them!

Ten years on we see a UK valve and actuator industry at the top of its game. Investment in UK plant and facilities is at an all-time high it seems, and I am delighted to see first-hand these impressive facilities on my site visits.

The market is also very buoyant, particularly it has to be said in oil and gas. Domestically however we need to keep UKCS exploration investment up too and not just rely on refurbishing established fields and exports. The valve industry has steered itself directly to where the opportunities remain most promising and fruitful, and usually therefore challenging, and some companies have changed their businesses accordingly. Service and customer support are now at the very highest levels. Anything less would not be conducive to survival.

'Cheap' competition remains a threat, but thankfully customers are wise now to the pitfalls of purchasing low-quality and inferior / unproven products. British superior quality has won out in the end, and remains unbeatable when coupled with the aforementioned service and support.

And BVAA itself has won through too. With an expanded, highly professional and responsive staff, a HQ / training facility that reflects that professionalism, and a service and training portfolio that remains the envy of the world, we are indeed at the top of our game too! Not to mention we are now a publisher, with the industry's most widely distributed journal, Valve User. It's no wonder our Membership stands at four times that of 2003 and our finances are so extraordinarily healthy. We are also culturing excellent relationships with our members' customers.

None of this would be possible however without the guidance and support of the BVAA's Chairman, Board and wider members.

It's my honour to thank the BVAA working group chairs, who do such sterling work for the Association and its membership. These include Laurence Kettle (Marketing), Peter Hirst (Actuators), Peter Burnett (Valves) and Adrian Jefferies (Seals).

A special, additional thank-you however goes to my colleague and firm friend Peter Churm, who provides both members and staff with cheery and tireless technical support and who remains a highly respected ambassador for our industry.

I would also like to take this opportunity to personally thank the association staff; Karen Webb, Jimmy Phillips, Barbra Homer and Ellie Davies, and our Accountant Chris Griffin, without whom the BVAA could not function so effectively.

2014 will be the BVAA's 75th Anniversary year, and seldom in that period has the Association looked so strong or our market looked so full of opportunities.

Peter Churm, BVAA Technical Consultant

TECHNICAL REPORT

This year my activities have included continued work on International, European and British standards committees, technical support to BVAA member companies, support and guidance to BERR and HSE on technical valve issues, and attendance at - and support for - the BVAA Working Groups. Additionally I have attended CEN, ISO and BS valve standards meetings as the principal UK expert / representative. The frequency and the number of BVAA training courses I present has also increased significantly.

A considerable amount of time has been dedicated to the attendance of standards meetings. The work on International, European and British standards continues and the essential drafting and commenting processes on standards is unrelenting.

I do take this opportunity however to remind members again of the increasing need for diligence - the work does not cease upon a standard's publication. Far from it in fact!

Every 5 years there is a systematic review of published standards where it becomes in effect 'open season' on their content. The interests of the UK need to be vigorously represented when any changes to existing standards are proposed. The dwindling number of experts engaged in drafting, and the difficulties encountered in recruiting new standards committee members in our industry, is a worrying trend that we must address.

Work Programme of CEN/TC69 Industrial Valves

73 European standards have been published to date

12 draft standards are under Vienna Agreement with CEN/TC 69, with ISO lead.

13 draft EN standards are under preparation.

The following draft standards have been ratified in 2013

- EN 1983: 2006 "Industrial valves - Steel ball valves"
- EN 13547 "Industrial valves – Copper alloy ball valves"

Work Programme ISO/TC153/SC1 – Valves Manufacture, Marking and Test

19 International standards have been published to date.

4 draft standards are registered at preliminary stage and 4 draft standards are under preparation.

4 standards were published under Vienna agreement during 2013. These were…

BS EN ISO 4126 "Safety devices for protection against excessive pressure –

Part 1: Safety Valves

Part 4: Pilot operated safety valves

Part 5: Controlled safety pressure relief systems (CSPRS)

Part 7: Common data.

ISO/TC153/WG1 'Valves' experts met in 2013 at Bromont, Canada

Standards work in progress worthy of note:

- prEN ISO 15848-1 *"Industrial valves - Measurement, test and qualification procedures for fugitive emissions - Part 1: Classification system and qualification procedures for type testing of valves"* and *"Part 2: Production acceptance test of valves"* These two draft standards are developed under Vienna Agreement, ISO lead, with ISO/TC 153/SC 1. The drafts have been approved with comments and await submission for Formal Vote.
- Participation in the ISO Working Group revising *"ISO 14313 Pipeline valves"* to ensure commonalty with API Spec.

Valve casting in progress (DMI Young and Cunningham)

6D has been delayed due to a dispute over the potential participation of an embargoed country. However API 6D version is set to be TWO revisions ahead of its ISO 14313 counterpart now, as API continue to review their version with vigour while the ISO standard stumbles.

- The three valve shell design strength standards have been amended following their 5 year review and are ready for submission for Formal Vote…

FprEN 12516-1 *"Industrial valves - Shell design strength –*

Part 1: *Tabulation method for steel valve shells"*

Part 2: *Calculation method for steel valve shells"*

Part 4: *Calculation method for valve shells manufactured in metallic materials other than steel."*

To ensure that member companies are aware of the preparation and revision of industrial valve standards BVAA regularly and routinely announce and where necessary distribute draft standards to members to ensure the input of a wider cross-section of views. To raise their profile with recipients still further these are now issued as 'Technical Hot Spots' and are now also promulgated in Valve User magazine.

The high levels of activity within the BVAA Working Groups is encouraging, with meetings of most groups being well attended. Most require my participation. Useful issues addressed include technical developments and presentations, European directives, valve standards, statistics and BVAA publications. These Working Group meetings are often held at member companies' premises where, as engineers, we all enjoy seeing the latest technology and techniques.

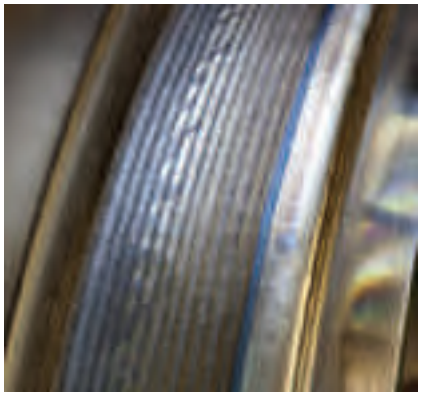
A regular service I provide at the BVAA's 'Desktop Exhibitions' is a Technical Desk at which I provide technical advice and support on Standards and European directives and related issues to the host contractor's engineers.

I am chairman of the BVAA Repair Working Group which recently published a new Code of Practice. Further comments have since been received and these will be addressed at a Working Group meeting early in 2014 where we will also study a proposed BVAA *'Approved Valve Repair Scheme.'*

I would like to close by assuring members of my continued support during the coming year.

Peter Burnett, Heap & Partners

VALVE WORKING GROUP



Weld overlay cladding (ARC Energy)

Meetings

The Valve Working Group met twice in 2013, both meetings being very well attended.

The March meeting was held at ARC Energy in Stonehouse, Gloucestershire, and included an illuminating presentation on advances with valve cladding technology, plus a facility tour. These 'added elements' to the standards meetings are proving very popular with members.

A spin-out of the March session was a sub-WG meeting in April at Weir to discuss the proposed changes to API 6D and API 20A, where substantial feedback was formulated for passing back to the drafting committees of both standards.

A subsequent outcome was the invitation to a member of the API drafting committee to attend the BVAA Conference in May, where members were able to voice in person their concerns. It is pleasing to report that API 20A will be revised to take into account many of the comments made by BVAA members.

The October meeting was held at Severn Unival's impressive new facility in Brighouse, Yorkshire. This too included a tour plus an informative presentation by BVAA member PDL Europe on CAD, FEA and CFD.

Valve WG discussing CFD at Severn Unival's new facility

Valves come in an infinite variety of types, size, materials and design-applications (Crane ChemPharma & Energy)

Increased Need for Standards Development

Our recent meetings have proven beyond doubt that our participation in national and international Standards work must be continued – it has definitely increased rather than decreased as some might expect. Our recent API experiences also show how potentially damaging a standard could become, and just how influential BVAA can be, even when thousands of miles away from the action.

Fugitive Emissions remain of significant interest however, particularly the non-ISO / API developments, and we will receive updates on these standards at our next meeting directly from the Seals WG.

We have two main meetings scheduled for 2014 and propose to continue the use of ad-hoc/life-of-issue WGs, as and when needed.

Peter Churm covers specific developments with individual standards in his Technical Report so I will not reprise them here. I will however, on behalf of myself and fellow WG members, express heartfelt thanks to Peter for the outstanding, detailed work he does on all our behalf, attending meetings and monitoring standards around the globe. Likewise to Mike Gray (Safety Systems) who attends and reports upon all of the Safety Devices standards, and to Chris Williamson (BEL Valves) who participates in many WGs on numerous issues.

Peter Hirst, Rotork Controls

ACTUATOR WORKING GROUP

Meetings

The last meeting of the BVAA Actuators working group was held at the end of 2012. We generally time our meetings to coincide with preparation for and/or debriefing from international standards meetings, so suffice to say there has been no significant ISO activity since that time.

ISO 5210 & 5211 Interfaces

The UK has been keenly awaiting the commencement of formal activity on the revision of the interface standard EN ISO 5210 *"Industrial Valves & Part turn actuator attachments"* and its EN ISO 5211 "multi-turn" counterpart. These were promised for Quarter 1 of 2013 but, despite our progress chasing, never materialised. BVAA has prepared proposals on extending the current torque/thrust ratings and an inclusion of linear output attachments, addressed doweling issues, proposed the inclusion of additional drive types and suggested an informative annex on sizing. The delay is therefore quite frustrating for members given the time we have already put into this important project.

Repair

We were also very pleased to see our input into the BVAA Draft Code of Practice for Repair adopted in the final document published by the Association this year. There are now some additional comments

A wide range of valve and actuator mounting kits, spool pieces, brackets and accessories (Rotork Valvekits)

Stainless steel gearbox kit (Quickits)

to address and no doubt we will participate in the continued maintenance of this important document.

ISO/TC67/SC2/WG18

Another frustration this year has been this important working group developing a new ISO 16441 *"Actuator mechanical integrity and sizing for subsea pipeline valves"* standard which is largely based on our previous pipeline actuator project, ISO 12490. The WG was suspended due to a USA/ISO International membership dispute. An interim solution to what was essentially a political problem was found we understand, but the project has still not progressed since.

Functional Safety

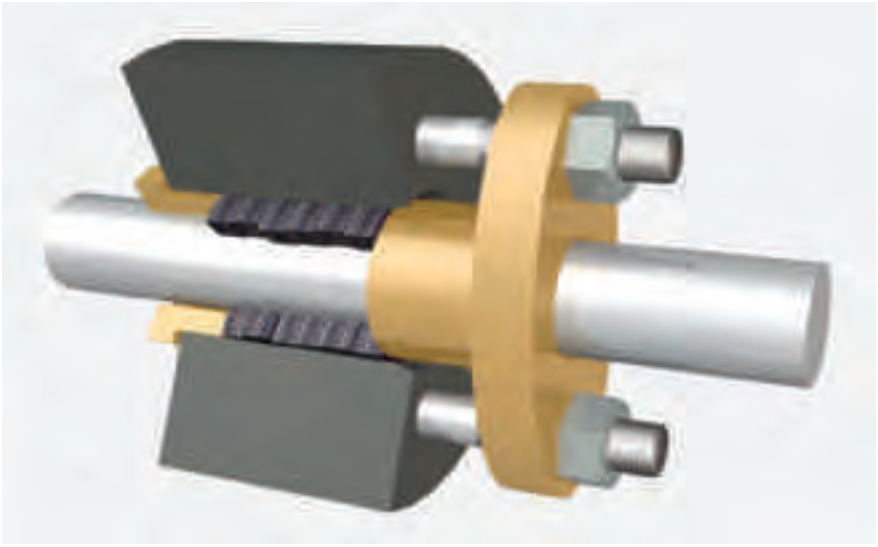
This is a perennial issue for us. Customers are demanding reliability data for actuators but this remains Spartan and it becomes an especially complicated topic when one takes into account that actuators can be pneumatic, hydraulic, or electrically powered, or indeed combinations of more than one media. Products are becoming more and more sophisticated these days and the topic will need addressing at future meetings.

HKS range of actuators from Hydrastore

The BVAA Actuator WG is responsible for hydraulic, pneumatic and electric actuators, plus mountings and related issues (Rotork)

Adrian Jefferies, James Walker

SEALS WORKING GROUP



API 622 tests packing in a standardised housing allowing direct performance comparison of compression packings without the consideration of valve type and form. (James Walker)

Fugitive Emissions

As previously reported in my BVAA Annual Review column, the two ISO Fugitive Emissions standards BS EN ISO 15848-1 and -2 *'Industrial Valves - Measurement test and qualification procedures for Fugitive Emissions, Classification System and Qualification Procedures for type testing of Valves'* are being revised. As they fall under the international standards community's co-operative 'Vienna Agreement' ISO/TC153/SC1 is leading the project.

After extensive work, the two draft standards were approved at a SC1 'Working Group 10' meeting in October 2013 and will be submitted for parallel 'DIS' (draft international standard) enquiry, due in 2014. This is traditionally the stage where technical comments are discouraged, so the documents should proceed to final publication now with this agreed content, which represents a more practicable, workable standard, more aligned to some key industrial standards.

I am very grateful for the sustained support of BVAA's Peter Churm and Chris Williamson (BEL Valves), who have continued to regularly contribute to the drafting and discussion processes.

API Standards

As readers may be aware, the ISO Fugitive Emissions standards have never gained popularity in the United States. There work progresses toward completion of an API 624 standard for valve emissions entitled *'Type testing of Rising & Rotating Stem Valves Equipped with Flexible Graphite Packing for Fugitive Emissions.'*

There already exists API 622 *'Type Testing of Process Valve Packing for Fugitive Emissions'* which defines a test rig and method for evaluating the emissions performance of the gland packing. The proposed API 624 standard takes this to the next stage, with a block valve test being defined.

The ISO method utilises 'bagging' using helium as the medium. The API tests however use methane and a 'sniffing' detection system – methane raising concerns given the catastrophic outcomes that could be possible if there is an uncontrolled leakage coupled with an ignition source.

These two methodologies have been debated at length with advocates on both sides strongly supporting their own preferences. Methane does replicate in part some conditions found in actual refineries, but the ever-decreasing and irreplaceable supply of helium on the planet, and associated rising cost, is however also to be noted.

O-rings – highly engineered sealing solutions (PPE)

I am grateful to my colleague Mark Richardson for continuing to represent us at the API discussions and for providing valuable feedback. BVAA Seals experts are scheduled to update our Valve WG colleagues at their next meeting on progress with these important standards.

Training courses

I continue to deliver the revised-format Fluid Sealing Course for BVAA several times a year. Condensed now to a single day course, we continue to receive excellent feedback. It is however surprising that given the criticality of these highly engineered components that so relatively few members take up the opportunity to undergo formal training.

Practical hands-on training in joint integrity is underpinned by the imparting of detailed technical knowledge (Academy of Joint Integrity).

Likewise BVAA members *'The Academy of Joint Integrity'* continue to deliver their bolted joint integrity 'Master Class' at their Cleckheaton facility under the BVAA banner. This includes a facility tour – an excellent way for students to experience just how much expertise and technology goes into ensuring process fluids remain in the pipeline.

Peter Churm, BVAA Technical Consultant

REPAIR WORKING GROUP

A 12" screwlift right angle valve for military seawater application - before and after repair (Young and Cunningham)

BVAA Repair Code of Practice

The drafting of a 'Code of Practice' was the core activity of the BVAA Repair Working Group, which I had the pleasure of Chairing.

After another round of editorial modifications, I am pleased to report that the document was finally approved for publication by the BVAA Executive and finally hit members' doormats in October 2013. This Code of Practice supersedes the previous BVAA publication *'Industry Guidelines – The Repair/Reconditioning of Industrial Valves and Actuators'* published in 2005.

On site machining of flange and seat faces can be an important part of valve repair service (Provalve)

BVAA's Code of Practice for Repair

The final issue included the Actuator Working Group comments – specific to the repair of Actuators – that I mentioned last time. Unfortunately any additional proposals received after the special Actuator session could not be included due to the pressing need to publish the document after many delays. Our next task will be to re-visit these proposals, and any other comments received since, with a view to a first revision. I hope to initiate this process shortly via a meeting of the working group.

Training & Qualifications

One item that needs to be addressed is that of a definition for 'Competent Person,' referenced in the Code but not yet quantified in detail. As engineers (many among us being highly experienced valve repairers) we all had an understanding of the level of skill and experience needed by such a person, but unfortunately this important field of expertise has no formal industry-wide qualifications associated with it. Since tests of competence generally require a combination of written examinations and practical task assessments, with all that entails, clearly a great deal of additional work could be needed to address this issue fully.

BVAA Approved Valve Repair Centre Scheme

This was another initiative mooted by the Working Group at its early meetings. This too would be highly reliant on documenting repair staff skills and competences, and again demanding formal qualifications in the subject. While repair operatives may undertake training and be 'certificated' in certain manufacturers' products, they cannot possible take OEM courses to cover every valve they are likely to come across in their careers – a generic qualification is certainly required.

That said I am confident that the document we now have in place is a major step forward compared to its 2005 counterpart, but it should very much be regarded as a 'work in progress.'

Jimmy Phillips, BVAA Marketing & Communications Manager

MARKETING FOCUS

NOF Energy networking events feature personal introductions to potential customers and suppliers

The Marketing function remains a key BVAA activity and a major benefit to our members. Our new, smaller Marketing Focus Group has therefore been tasked with taking an active role in BVAA Marketing Strategy. To assist with this BVAA appointed Jimmy Phillips in March 2013 to plan and implement our day-to-day Marketing activities. The Group now comprises Laurence Kettle (Rotork, Chair), Andy Will (Heap & Partners), John Hancill (Emerson) and Stuart Billingham (KKI), plus BVAA's Rob Bartlett and of course Jimmy.

Following the Strategic Review in 2012, BVAA focuses its Marketing efforts in six main areas: Business Development Events, Exhibitions, Valve User Magazine, Websites, Marketing Reports/ Statistics, and our Product Sourcing Tool.

Business Development: Partnership with NOF Energy

Our Strategic Partnership with NOF Energy is one of BVAA's most significant Marketing investments. Through the partnership, BVAA members are able to attend NOF Energy Networking events at heavily discounted prices.

A survey was undertaken to provide feedback from BVAA members attending NOF events - it found that a majority of members find the events beneficial. One key observation was that over 90% of responding members are interested in working in oil & gas. We were pleased to note that that both individual and company attendances were growing, with over half attending more than one event and a similar number reporting they received *'genuine business benefit'* from their participation.

BVAA staff have found the NOF events relevant and useful too. The Partnership was therefore unsurprisingly renewed in 2013. There is already a busy calendar of events scheduled for 2014, the details of which can be found directly on the NOF Energy website.

Exhibitions

In the last year BVAA has taken stands at the following exhibitions:

Valve World Americas

This was a standard booth, manned by Jimmy Phillips. It was a very successful show, well attended by BVAA and VMA member companies. The organisers plan to grow the show and BVAA recommend future attendance, assuming timing and pricing is agreeable.

The very busy BVAA Stands at ADIPEC, Abu Dhabi (top) and Valve World Americas, Houston.

Offshore Europe

This featured a constructed stand, manned by a full BVAA team. A very successful show for BVAA, we engaged with over 200 individuals from 70 member companies. We were also able to significantly promote Valve User Magazine and BVAA's services to industry (e.g. Desktop Exhibitions).

ADIPEC

This was a corner stand taken as part of EIC / UKTI British Pavilion, manned by Jimmy Phillips. Also a very successful and busy show, it provided excellent opportunity to promote BVAA's product sourcing tool, which hopefully will generate business opportunities for members via enquiries from the Middle East.

Exhibition Strategy

Following a study of a survey of BVAA members on which exhibitions they rated, combined with feedback from BVAA's own experiences at exhibitions, the Focus Group agreed on the following strategy:

"Attend one main exhibition per year, alternating between Valve Wold Europe and Offshore Europe. Compliment this with two additional shows, attended by one or two members of staff as appropriate. Additional shows to come from shortlist of: ADIPEC, ACHEMA, ONS Stavanger, OTC Houston, Rio Oil & Gas and Valve World Americas."

Valve User

Valve User Magazine continues to grow in several ways. The magazine is bigger than ever and includes still more contributions from the membership. Issue 26 of the magazine was the largest ever, spanning 142 pages, and included a special *'Oil and Gas'* section. Timed for promotion at Offshore Europe and ADIPEC, the magazine received excellent exposure at both shows. The readership continues to grow after the substantial 2012 exercise where virtually all current readers were verified as 'opt-in' subscribers.

A 2014 media guide for the magazine has been released which outlines the plans for each of the next four issues, in terms of focus and promotion. The intention is for members to be able to plan their PR activity with greater accuracy.

BVAA Websites

Following a redesign in 2012, the main BVAA website remains popular and well visited. In 2013 BVAA were able to offer increased advertising opportunities on the site. There is a redesign of the 'valveuser.com' website planned for 2014; this will see an extension to the aim of offering members targeted advertising opportunities. The redesign will also allow for a far smoother reading experience when visiting on tablet or mobile.

Market Reports/Statistics

BVAA continue to circulate an annual forecast report for the global valve industry. This is one of our most popular services and includes a five year forecast covering 63 countries. The data is classified by nation, end-user industry and product type.

BVAA's latest Global Valve Market Forecast (exclusive to BVAA members only) and the widely circulated Product Sourcing & Literature DVD

Product Sourcing Tool

We continue in our efforts to allow those operating in key end-user industries to access the best of the British Valve industry through the BVAA product sourcing tool. The tool can be accessed via the BVAA website and an extended version is distributed on DVD at Exhibitions, events and via our extensive contact network.

We are aware of a number of six figure orders which have been generated for members via enquiries from BVAA! Consequently members remain keen to keep their product details up to date.

ACTIVITIES

BVAA AGM

The BVAA Annual Meeting has some challenging criteria, namely; be at an accessible yet quality venue, be cost effective, entertaining and informative, meet our administrative obligations yet be highly enjoyable for members and guests. In 2013 we managed it in style!

The December event was held at Rockliffe Hall, Darlington, a very impressive venue which attracted another big attendance.

Our day commenced with a presentation *'Natural Gas: Future Premier Fuel of the World Economy'* by Prof Michael Economides of the University of Houston. Witty, amusing, informative and at times controversial and strikingly honest, this presentation from a giant of the industry was warmly received, and we were greatly saddened to learn of his sudden passing shortly afterwards.

Due to organisational changes this was also the last meeting of the BVAA Executive Committee format; however the usual working group progress reports were an important part of the day, as was updates on commercial, technical and administrative matters.

There was a partners' programme again this year, with a very popular Cocktail Making demonstration.

Rockliffe Hall

The BVAA Dinner Dance – generously underpinned by member sponsorship – featured a champagne reception, some very amusing caricaturists and two pieces of cabaret. In anticipation of next year's World Cup, members were first entertained by dance troupe 'Yes Brazil!' followed by the indescribable 'String Fever' who amazed members with their prodigious talent.

BVAA Conference

This year's BVAA Spring Conference – again generously sponsored by members - was held at Celtic Manor, Wales. Speakers covered topics as diverse as CFD, Hipping, social media, the vagaries of the metals market, casting integrity standards and the global economy.

Alan Beaulieu giving insights into the world's future economy

Alan McLelland of NAMTEC updating the industry on fluctuations in the metals market

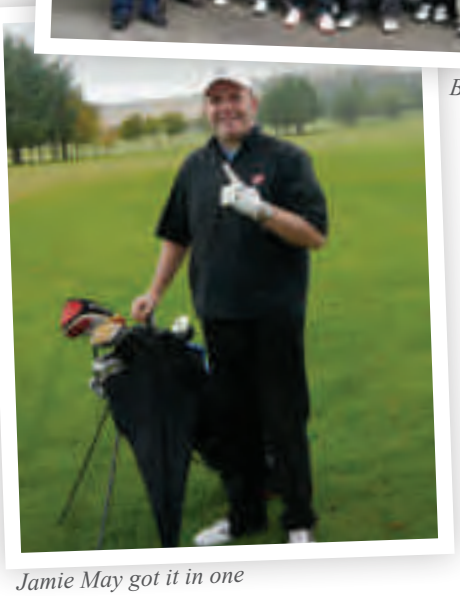
If that wasn't enough there was also a mini exhibition by several supplier-members of the Association.

Highlights included Rick Faircloth's presentation on the proposed casting integrity standard API 20A. BVAA members were able to put a collation of concerns directly to Rick (Cameron USA) to pass directly back to his colleagues on the standard's drafting committee.

Another star act was Alan Beaulieu of ITR Economics. Having already charmed member CEOs at the 2012 AGM, Alan delivered a highly impressive presentation on the cyclical nature of global econom-

Four players, one instrument - 'String Fever' in full flow

BVAA Golfers at Celtic Manor



Jamie May got it in one

ics, with some encouraging predictions interspersed with strong advice on the timings of future investment and divestment.

Feedback from the day was very encouraging and we're already looking forward to arranging the 2013 event.

BVAA Golf Society

The pairing of the southern May Golf Day with the Conference at Celtic Manor proved a very popular choice. Despite a veritable 'monsoon' the previous day, 34 members were able to enjoy the very competitive Stableford format in glorious sunshine! Thankfully more about fun and fellowship and less about scoring, the event's Trophy winners were Roddy Philp, Vince Duffy, Les Littlewood and Andrew Newham with 89 points.

Our customer golf day in Scotland – also generously sponsored - was held at Westhill, Aberdeen in September. Again looming rain clouds parted right on cue to allow us a tremendously enjoyable day. Things got off to a terrific start with Jamie May scoring a hole-in-one on just the second hole. BVAA trophy winners this time were David Smith, Jamie May, Chris Tait and Liam Ogden – Jamie's hole-in-one proving decisive as the team won by joint one point! Our thanks to everyone who supported these enjoyable events.

BVAA Desktop Exhibitions

Business Development remains at the forefront of Association activity (see Marketing Report) and we are especially keen on helping our members' customers. It's very pleasing to report therefore a record year for our Desktop Exhibitions with five such events in 2013. Held 'in house' at Worley Parsons, Petrofac, Amec and both south east KBR venues, it is gratifying to see us extending our range from the traditional London-based contractors right into the heart of North Sea activity in Aberdeen.

Essentially portable demonstration pieces backed up by knowledgeable technical experts, the events are typically held over the lunch period for minimum downtime / maximum efficiency and allow hosts to keep up to date with industry innovation without even having to leave their office.

The AMEC Aberdeen Desktop Exhibition saw a record attendance

Membership

Although BVAA represents most British companies engaged in the industry we still see very buoyant recruitment of new members to the Association, setting new membership records year on year. There's also tremendous diversity in membership now – new products, materials, services, supply and support. A huge boost however has been the record return of lapsed members this year – companies who are best placed to understand and appreciate the improving service level of the BVAA.

Some of the BVAA's new recruits

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BVAA Training Courses - March 2014

Introduction to Valves - Monday, 10th March
Price: £360.00

Introduction to Valve Actuators - Tuesday, 11th March
Price: £360.00

Control Valves - Wednesday, 12th March
Price: £360.00

Joint Integrity MasterClass - Wednesday, 12th March
Price: £360.00

Safety Valves - Thursday, 13th March
Price: £360.00

Safety Integrity Levels (SILs) - Friday, 14th March
Price: £360.00

Managing Commercial Risk - Monday, 17th March
Price: £450.00

PED & ATEX Directives - Tuesday, 18th March
Price: £360.00

Fluid Sealing - Wednesday, 19th March
Price: £360.00

Diaphragm Valve Master Class - Thursday, 20th March
Price: £360.00

Business Growth - Thursday, 20th March
Price: £450.00

Presenting to Win - Friday, 21st March
Price: £450.00

Valve Metallurgy for non-Metallurgists - Monday, 24th March
Price: £450.00

For full details on each course, visit **www.bvaa.org.uk/training_courses.asp**

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Karen Webb, Member Services Manager

TRAINING

BVAA Joint Integrity Master Class (Institute of Joint Integrity)

Originally comprising just four 'introductory' courses, the BVAA Training offer has again grown and expanded in the last twelve months - it now takes over two full weeks to deliver a complete set of the 14 BVAA courses. Indeed a significant problem has been finding properly sequenced and unbroken periods that suit all of our lecturers and which avoid the various holidays and diary choke points!

Nevertheless the programme flourishes and we continue to train the industry and build relationships with our members' customers, who comprise C.50% of the attendees on most sessions. BVAA courses remain incredibly good value due to our extremely competitive fees structure, discounted further for BVAA members.

Our 32 seat capacity training unit is now really coming into its own, and donations of valve/actuator demonstration pieces arrive regularly are now ensure that the units we show our clients are not only fresh but also the latest technology. More donations from members are always welcome however.

It is also worth remembering that BVAA also regularly holds courses inside clients' own premises where numbers make it viable – I would be happy to discuss this further with any interested parties.

Geoff Bolton lecturing at BVAA's new Valve Metallurgy Course

New courses have again come on line this year, such as the new Valve Metallurgy course run at BVAA HQ in conjunction with Namtec/AMRC. A challenging subject which feedback shows our clients want to know more about in their daily working life.

Practically all of our team of lecturers are volunteers, and while we cannot name them all individually I would like to thank them publically for their extensive time and effort on our behalf – it is much appreciated and our feedback sheets continue to show the high regard in which the lecturers are held by students.

Scheduled BVAA course dates are already fixed for spring, summer and autumn 2014. Details can be found at www.bvaa.org.uk/training or contact karen@bvaa.org.uk

Not superhuman – just composite material technology on display at BVAA (a DN80 SAFI thermoplastic valve)

Who are '*They*'?

Whenever you have a conversation about standards, you will inevitably hear '*They*' mentioned...

- '*They* wrote this standard...'
- '*They* tested and decided...'
- '*They* met recently and discussed...'

But just who are '*They*'?

It's us! BVAA Members have thousands of years of collective experience of standardisation, and we regularly participate in over 50 technical and standards committees around the world. For every standard being developed, you can be sure there is a BVAA group monitoring and contributing to the work.

Faceless people? Not us!

If you would like to participate in standards making, just contact the BVAA.

BVAA®

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Adanac Jackets keep it flowing

Left: Adanac's 'Flexi-Jacket' provides the perfect solution for jacketing low-cost 3-pce ball valves Middle: Adanac have been training more welders to meet demand Right: The valves can be oversize flanged, wafer pattern or butt weld in design

The past 12 months has seen a noticeable turnaround in the valve industry in the UK, with the majority of companies seeing a significant increase in order intake. Adanac is no different, with turnover to date and our current order book being the highest in the company's history.

What is even more noticeable at Adanac is the dramatic increase in orders for jacketed valves, and encouragingly, a large proportion of these valves are destined for UK production sites. In July and August of this year we manufactured 69 jackets fitted to a range of Stainless Steel ball valves for one specific customer alone, and in September and October we shipped a further 45 valves with either full or partial jackets. And it doesn't stop there. We also have orders for a further 175 valves with heating jackets for delivery through November, December and January.

It has been noticeable that a specific range and type of valves have required jackets. The vast majority of jacketed valves that we have supplied recently are Ball valves but we are also seeing significant orders to jacket 'Y type' Strainers, Gate, Relief, Check, Butterfly and Plug valves. With every type of jacket differing in design, the Adanac design office has been challenged significantly in recent months. But as expected they have risen to the occasion with great success to meet the demands of our production department by producing jacket designs in a timely fashion. This has enabled Adanac to achieve our promised delivery times and ultimately keep our customers satisfied. In addition, many of our customers are insisting upon weld procedures to ASME IX, so our design department is not the only area being kept on their toes. Adanac's welders have also been met with substantial pressure to meet delivery demands, but we never compromise on the quality of our finished product. Due to this recent demand Adanac is taking the step to qualify additional welders to meet the requirements of ASME IX which will increase our welding capacity and reinforces our commitment to invest in our staff.

Heating jackets are used in a variety of applications where the process temperature needs to be maintained to keep the media fluid. Certain substances can solidify when temperatures drop, often there is potential for the media to be trapped within a closed valve, so the heating jacket can be vital to prevent this from happening. Heating jacket applications include the production of Chocolate, Sulphur recovery, Pharmaceutical and Fertiliser Products.

Adanac can manufacture both partially and fully jacketed valves. The fully jacketed valves, generally intended for installation in jacketed pipework systems where continuous process heating is required. The valves can be oversize flanged, wafer pattern or butt weld in design. Adanac's partial heating jacket design generally covers the area around the seats while leaving access to the existing valve end connectors. The jacket itself can be fully welded to the valve where the outer wall of the valve becomes the inner wall of the heating chamber. Clamp-on type jackets are another method of heating a valve, allowing for easy replacement of the valve without the need to replace the heating jacket. Adanac's *'Flexi-Jacket'* provides the perfect solution for jacketing low-cost 3-pce ball valves. Adanac Heating Jackets are suitable for a variety of heating media such as hot water, steam or hot oil and can be provided with various jacket connection options, Adanac's standard being threaded, but flanged, socket weld and butt weld are also available.

This increase in demand for jacketed valves has coincided with a number of large orders for cryogenic valves which keeps our design office and welders very busy, but long may it last! Hopefully this recent investment in UK production sites signals the start of a return of confidence in the UK economy.

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The UK Craft Beer Market and Zoedale's Favourite Brews

Flow control specialists Zoedale Plc has been supplying the UK Brewing Industry for many years but 2013 saw a huge rise in demand from breweries of a different kind. The Craft Beer revolution started with the introduction of Small Brewers' Tax Relief in 2002 and has grown steadily ever since. According to Mintel, 13 Million Brits (25% of the population) said they had consumed Craft Beer over the past six months and the popularity is spreading with supermarkets like Tesco & Morrisons stocking affordable Craft Beers.

What is Craft Beer? The US definition is that a Craft Brewery must be Small, Independent and Traditional. Many UK Beer enthusiasts would disagree with this statement though and would argue it is more about the beer itself than the brewery. In a recent survey of UK Craft Beer drinkers the terms that came up most when asked to describe the drink were: High Quality, Pure, Experimental, Hoppy, Trendy, Young, No Boundaries, Non Corporate. A large part of the appeal is that anyone can have a go at making it. Brewers such as Gazz Williams and Brad Cummings who founded Newport's Tiny Rebel Brewery were garage brewers before deciding to turn commercial and breweries can be set up with only a small capital investment required.

'strength and quality'

The explosion of the craft beer market comes at a bad time for the world's biggest breweries as they look to offset declining volume sales with new revenue opportunities. As further investment pours into this category, craft beers will become more prominent in pubs, bars and retail outlets and the challenge for beer marketers will be will be finding a way to stand out from the crowd with so many brands looking to drive word-of-mouth marketing. If you're looking for hard facts as to the popularity of Craft Beers, look at the Brewdog Share scheme. Their brand and product is so powerful they were able to raise well over £4M for investment in to the business without borrowing or venture capitalists. They created a Share Scheme where anyone can buy a share in the businesses for £95 in return for a loyalty and discount card. The company

Zoedale has supplied a large number of breweries

According to Mintel, 13 Million Brits had consumed Craft Beer over the past six months

is not listed on any markets and it's highly unlikely the shares will ever increase in value so why would people 'Invest'? According to a number of Brewdog Shareholders it's 'knowing that you are supporting an independent brewery who make exceptional beers', 'helping to fund the continued growth of the Brewdog range', 'Helping rid the world of dull, mass produced commercial beers'.

There are now over 1,000 breweries in the UK with just over 50 in London and these numbers are set to grow throughout 2014. This is great news for Zoedale Plc's team who have specified and supplied Solenoid Valves, Electric and Pneumatic Actuators and Valves to a large number of breweries. Zoedale are able to pull from a large range of products to design solutions for breweries of all sizes from 1 man in his shed to the well known global brands and everything in between. Zoedale's experience combined with the team's passion for well made beer make them an excellent partner. The team have listed a few of their favourite beers here:

Zoedale's Favourite Craft Beers

Punk IPA – Brewdog
So'Hop – Moor Brewery
Urban IPA – Tiny Rebel
Jaipur – Thornbridge
Pint – Marble Beers
DNA – Wells & Youngs / Dogfish Head
Stone IPA – Stone
Pale Ale Centenial Mosaic – Kernel Brewery
Plum Porter – Titanic Brewery
Espresso Stout – Dark Star

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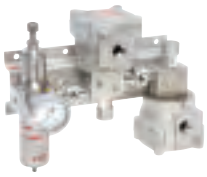

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Maintaining a constant flow of beer

By Helmut Ambros and Uwe Daebel

Since 2010, leading festival tent operators have converted to central beer supply systems at the Munich Oktoberfest. The pressure conditions prevailing at the bars and taps should be kept nearly constant at all times for trouble-free drawing despite changing pressure heads in the tanks and widely fluctuating beer sales. This is now achieved through the highly precise automatic control of the CO2 pressure head using the 6020 aseptic right-angle valve from Schubert & Salzer Control Systems.

6.7 million litres of beer were served at the 2013 Oktoberfest. These amounts present major logistical challenges for the festival tent operators. In order to improve bar operations and to simplify delivery during the night, some breweries have changed over to large container facilities with several tanks, each with a capacity from 75,000 to 100,000 litres. This guarantees that, immediately after the first barrel is tapped, it will be possible to serve up to 12,000 litres per hour continuously and trouble-free. During this time, the barmen leave up to 13 taps per tent completely open. While pouring is taking place, the liquid level in the tanks is falling, also however changing the pressure at the bars. Up to now, the falling pressure has been compensated manually by raising the CO2 pressure over the beer. To do so, whenever the need arose, the barmen had to turn to the technicians to adjust the pressure control valve manually. However, the pressure stability achieved in this manner was unsatisfactory and needed constant adjustment by barmen and technicians.

The 6020 right-angle valve from Schubert & Salzer Control Systems in the container facility at the 2013 Oktoberfest.

Uwe Daebel, of Paulaner, was impressed by the precision with which the 6020 right-angle valve with a 8049 digital positioner was able to maintain pressure.

As a result, the Paulaner brewery searched for an automatic solution for their three large tents on the Oktoberfest – *"Winzerer Fähndl"*, *"Hacker Festzelt"* and *"Pschorr Bräurosl"*. The intended aim is to keep the total pressure of the system constant – meaning the liquid plus the Co2 overlay – by controlling the pressure of the Co2. In any event, this control should have a maximum deviation from the setpoint value of just 0.5 bar.

A compact process valve provides extremely precise control

Schubert & Salzer Control Systems came up with a solution by using a right-angle valve of the 6020 series which more than meets this requirement, having a deviation of just 0.02 bar. The valve controls the CO2 head pressure to between 1.15 and 1.18 bar. With a beer throughput of 4,000 litres per hour, the 6020 right-angle valve is open 28%, corresponding to a Kvs value of 1.6 on an equal percentage curve.

The red actual line shows perfectly constant maintenance of the beer pressure at 1.6 bar.

A digital positioner from the 8049 series ensures the exact positioning of the stroke actuation for this case. These 8049 positioners have proved to be ideal for innumerable applications due to their top-mounted design since they are located centrally over the valve actuator and consequently take up very little space needing no additional room for installation. Furthermore, its great compactness means that no moving parts are accessible, which maximises operational reliability.

The 6020 right-angle valves are machined out of solid, pore-free stainless steel and are designed especially for applications requiring a high degree of hygiene. As a compact unit, the 6020 right-angle valve is completely enclosed and has no parts which are accessible from the outside. The 6020 right-angle valve range is offered in the nominal sizes DN 15, 25 and 40 up to a PN 16 pressure level. Actuation and positioner bodies are optionally also available in stainless steel versions. IP 65 is standard.

This CO2 control method was used for the first time during the 2013 Oktoberfest. During the night the beer containers were refilled from beer tanker trucks. The refilling was done using the gas displacement method, i.e. the gas flows from the tank back into the tank trailer while pumping the beer.

In the bar operation, the beer pressure at the tap was set at 1.6 bar and the report of setpoint and actual values in the technical monitor revealed an overlap in which the setpoint line was hiding behind the actual line. The technical specialists at Paulaner were so persuaded of the precision with which this pressure was maintained that an order was placed immediately for two further applications for the 2014 Oktoberfest.

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when standard products are not the answer

The overriding majority of valve actuation applications in today's industries are fulfilled with standard products. In some cases an actuator may need to be modified to suit specific operating requirements, but here again a solution based on a standard product can usually be found. There are occasions, however, when the physical and operational demands of an application rule out anything other than an entirely customised approach to the problem.

The long-standing experience of Rotork-Hiller in the fluid power and motion control industries has been mostly built on the provision of actuators for critical and vital applications calling for the design and manufacture of solutions to suit customers' individual requirements. Unlike other manufacturers therefore, customised valve actuation is the cornerstone of the company's activity.

Among many examples, an actuator recently built in compliance with customer specifications serves as a practical illustration of this activity. The specification called for a self contained electro-hydraulic modulating actuator to operate a three-way globe bypass valve within a reactor water chemical clean-up system. This was a non-safety related application, but the specification also dictated a strict weight limitation and a maximum overall dimension envelope.

The custom-built Rotork-Hiller actuator designed for the electro-hydraulic operation of a three-way globe bypass valve within a reactor chemical water clean-up system.

Rotork-Hiller engineers put together a package incorporating all the requirements, including a number of components manufactured uniquely for the application. Meetings with the customer and design reviews enabled modifications to be made during the production process until the compact final package was completed.

One of the engineers closely involved with the project takes up the story:

'Everything was achieved in a timely fashion during which we designed and built a prototype for proof of concept and life testing in only six weeks, prior to design modifications and final design approval. The design demanded a lot of project specific direction to produce a modular electro-hydraulic actuator with a wide range of linear travel and thrust outputs. The lightweight and compact design delivers a highly accurate and responsive modulating performance and incorporates an intelligent positioner with HART communication protocol.

The complete package was successfully tested to industry standards for Electro-magnetic Compatibility (EMC) at an independent laboratory. The project illustrates how Rotork-Hiller is willing to go the distance and provide customer service at a level that is exemplary.'

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Les Littlewood, Sales Director, Albion Valves UK attributes twenty years in the industry to traditional values...

Commitment to their distributors has been at the heart of Albion's business model since opening their doors in South Yorkshire twenty years ago. Today, maintaining excellent distributor relations is still a focal point in their strategic approach, and one that continues to contribute to their ongoing growth.

Albion was set up with the sole purpose of supplying quality products at an affordable price, to independent pipework distributors and engineering merchants throughout the UK. Today, their network of distributors is more important to their operations than ever. Simply, when distribution is good, business is good.

Les Littlewood, Sales Director at Albion commented:

'This is a people business and we run on traditional values. At Albion it is the dynamics of personalities and good relations that drives business, rather than optimizing search engines or collecting 'likes' and 'followers'.

'New media certainly has its place and works for many organisations, and we do embrace new technology where relevant. However, it is our core traditional values of quality and reliability that are integral to Albion's culture, and that makes our wheels of commerce turn.

'People buy from people. We endeavour to go that extra mile for customers, not because it says so in our brochures or is it written on the website, but because it is a way of life.'

In recent years Albion has become increasingly recognized as an established brand, providing customers with a trusted alternative to premium priced products.This position as a 'challenger' brand has found favour with their distributor network resulting in Albion increasingly gaining ground in the marketplace.

In addition, the manufacturing *'status quo'* in the UK's commercial valve industry has also leveled the playing field. Today, almost all valves are manufactured in the Far East meaning that contactors can compare *'like with like'.*

Les commented: *'We have always been transparent regarding the manufacture of our valves, which are devised in the UK and made in either Italy or China. All our products, which are sourced from quality manufacturers, meet our own exacting standards and have the necessary approvals for gas and water applications where required.*

Les Littlewood, twenty years experience in the valve industry

Les Littlewood, '…the dynamics of personalities and good relations drive [Albion's] business'

We have developed products hand-in-hand with customers, ensuring they get exactly what they need, and much of our product range has emerged as a direct response to customer requirements. We ensure our distributors always have the best choice available to them, and carry a stock of over 5000 products to which they have full access.'

With choice and quality as standard, Albion endeavours to support distributors and boost their bottom line through marketing.

Les added: *'As a team we have thought long and hard about how to deliver a marketing campaign, that would drive business directly to our distributor network. So, the brief to our advertising agency was to create a campaign that would both boost the Albion brand name and communicate the product's USPs, but direct potential customers straight to our distributors for purchase.'*

Similarly, Albion's online presence is very much a reference tool designed as a product information portal to be used by their distributor network, rather than a vehicle to place orders.

This has been a successful strategy, in that marketing activity has stimulated interest for the brand through advertising and targeted publicity, which ultimately translates in orders for distributors.

Albion
Tel: 01226 729900
www.albionvalvesuk.com

Advanced growth

for West Yorkshire actuator supplier

Silsden-based Advanced Actuators Limited has reported a 40 per cent increase in turnover for 2013 and announced two key internal promotions

Managing Director Chris Woodhead has revealed significant expansion plans with over 50% of current business secured through export and says the changes in personnel will help sustain further business growth.

With over 20 years combined experience with the company - a leading supplier of actuators and control solutions to the industrial valve market - Lee Ellerton has been promoted to Engineering Director and Graham Coulton has taken on the role of Production Director.

Chris said: *'Lee and Graham's new positions brings an increased responsibility for all contracts from order placement to product dispatch alongside the launch of new product ranges and the development of our onsite facilities.*

Managing Director Chris Woodhead with newly appointed Directors Lee Ellerton and Graham Coulton

'Their strategic involvement with the business means I can take on a greater role expanding the Advanced Actuators portfolio in the Middle East and the Far East which is where we anticipate a further 20% growth in 2014.

'While our 2012-13 financial year was exceptional, we have secured 80% of last year's turnover just one month into our new financial year,' Chris added.

'This is a significant growth period for Advanced Actuators and we anticipate further job creations at home and overseas, in the coming months.'

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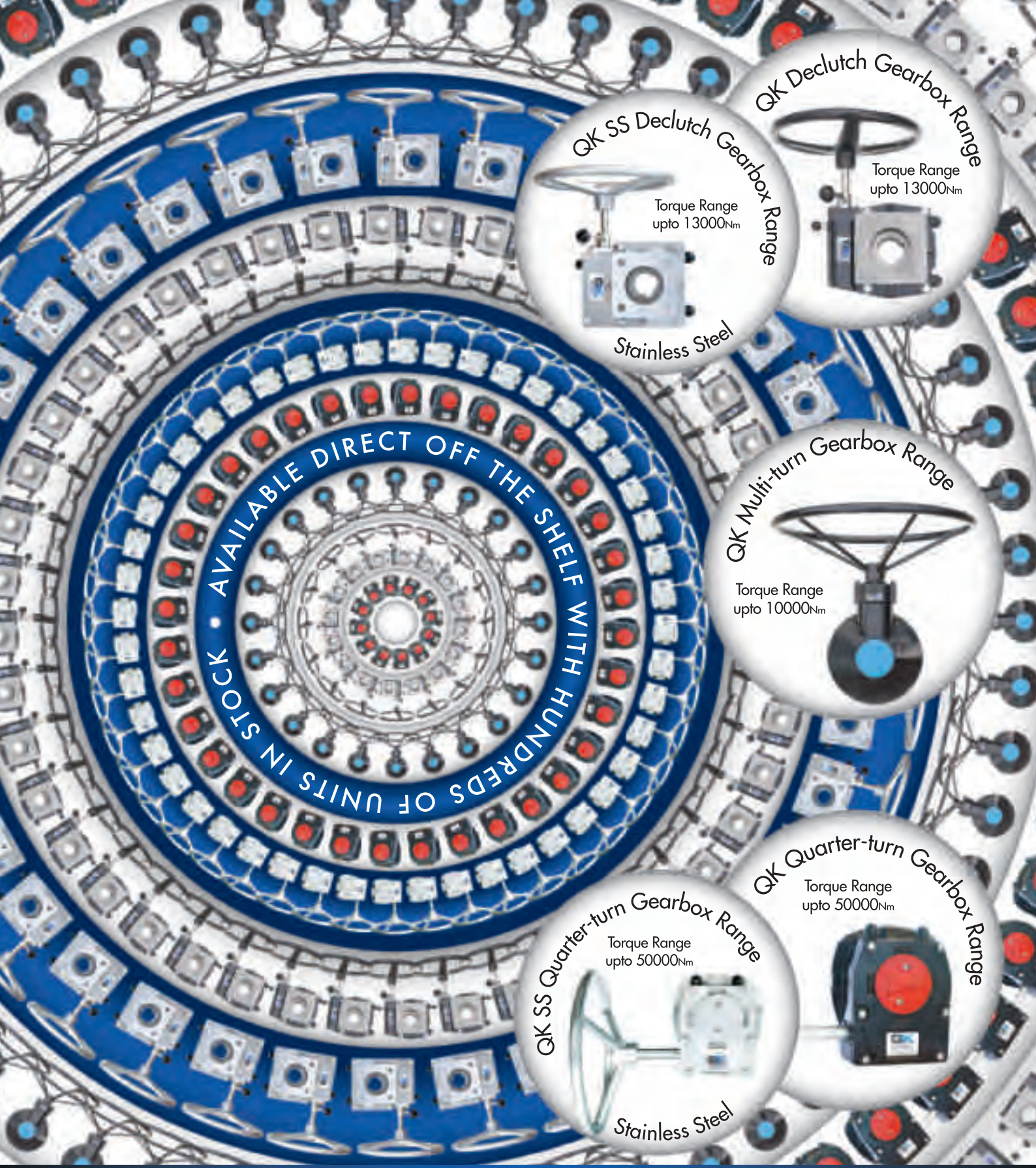

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SIPOS' actuation solution for steel plant

SIPOS Aktorik has secured a prestigious contract to supply advanced actuation technology to the Dillinger Hütte steel plant in Germany. The company's SIPOS 5 HiMod actuators have been selected for essential valve control automation of a new double-strand continuous caster which has been authorised by the Supervisory Board of Aktien-Gesellschaft der Dillinger Hüttenwerke (Dillinger Hütte).

Known as Continuous Caster 6 (CC6), the line will supply slab to both high-capacity heavy plate rolling mills in Dillingen and to the company's wholly owned subsidiary, GTS Industries in Dunkirk, in addition to fulfilling the requirements of the company's increasingly sophisticated product mix. The line, which has a vertical caster design, will replace Continuous Caster 3.

Commenting on the selection of the SIPOS 5 HiMod actuation technology, Tino Raschke, SIPOS' regional sales manager said:

The SIPOS 5 HiMod precision actuator provides essential valve control automation on a continuous caster at the Dillinger Hütte steel plant. Image via: Stahl-Zentrum

'Cooling regulation at CC6 requires extreme accuracy to ensure the high quality of the plates. This is aided by the HiMod actuator which is a precision product designed to address the most challenging valve control requirements with high end modulating duty, precision and longevity.

'Key features of the SIPOS 5 HiMod, which helped to secure the Dillinger Hütte contract, included its high precision position encoder offering exceptional accuracy and Modulation Class D (continuous duty) according to DIN EN 15714-2.'

Representing an investment of around EUR 300 million, CC6 is reported to be one of the biggest single investments ever made at the Dillingen site. The project establishes Dillinger Hütte's technological leadership in the production of premium, continuously cast slabs for demanding heavy plate specifications. CC6 is due to commence operation in the first half of 2014.

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Beating the Stock Market:

How RPV went from nothing to a leading international valve stockist in just 20 years

Sate of the Art: RPV has come a long way in 20 years

Suffolk based RPV has one of the largest inventories of any valve stockist in the World. Twenty years ago the company had only just formed, today it stocks over £60m worth of product in 110,000 sq ft of warehousing. In addition to the ¼" to 48" Gate, Globe, Check, Ball & Butterfly valves from manufacturers; Bonney Forge, Della Foglia, Goodwin, Kitz, Shipham, Valvosider and Vanessa, RPV provides comprehensive test and coating services to international clients from the Oil & Gas Sector. QA Director Steven Withers tells Valve User how they did it.

'There is no secret to RPV's success. We simply provide the valve you want, when you want it' says Mr Withers. *'It's the 'when' that provides the key. We can provide very high specification valves at very short lead-times.'*

RPV was formed with the intention of becoming one of the suppliers of high spec., high value valves for the oil and gas industry; back in the early 1990s however the company consisted of a single small warehouse and a one man sales team.

'The philosophy back then was the same as it is now. RPV provided valves critical to the oil and gas industry on short lead times. Obviously stock levels weren't the same, but the company relied on the vast industry knowledge of individuals to ensure we could provide the products customers needed' said Mr Withers.

Holding large levels of high spec stock is key for RPV so that it can work to extremely short lead times for its customers. In addition to the impressive stock levels, RPV's stock monitoring systems and seven-day-a-week opening hours allow it to meet the needs of even the most demanding customer.

More than a stockist

In 2014 RPV provides a full suite of services aimed at the valve procurer. In 2013 the company made significant extensions to its testing facilities to include cryogenic testing down to a temperature of -196°C. When added to the company's capability to hydrostatic test and gas test up to 10,000 psi RPV now boast some of the most comprehensive test facilities in the World.

The test facilities are available as a standalone service, but more importantly the facilities contribute to reducing lead times for RPV's customers. Valves no longer need to leave RPV's site to be tested, so shipping times are saved; furthermore testing can be viewed via website link from anywhere in the world. The company now have full control over the testing process meaning high priority orders can be expedited.

'If a customer was to approach us for a 2", class 800lb gate valve for cryogenic service, we'd of course have the base valve in stock, but now we could modify it with a cryogenic extension, clean and degrease, test it to -196°C, carry out PMI inspection and have it ready to ship within the week. Furthermore the work could be CE marked under our PED certification. It is very exciting for us and our customers' says Steven Withers.

That is not the only expansion at RPV in recent months. The company has further extended its service portfolio by opening a 'Blasting and Coating Division' at its Suffolk Headquarters. The facility, which opened in early October, comes complete with 10 tonne lifting capacity and the ability to process over 1,000 valves and associated products per week.

Large stock levels and high value items remain a key part of RPVs offering to customers

Shot blasting at RPVs blasting and coating division

This has been a major investment for the company, in terms of both equipment and expertise. Not only does the company now posses a large bespoke shot blasting unit 6m x 3m in dimension, three dry back spray booths each with their own extraction with a fourth currently underway and a 2 ½ x 2m gas recirculating oven; but they have also invested in 40 years worth of expertise in those who operate the division. Top of the range equipment and experienced staff makes RPV.

Putting the customer first

The common thread for RPV throughout their growth has been meeting customer needs. From day one in 1993 the company has invested heavily in stock levels. This investment, coupled with their level of industry expertise has ensured that customers have always had access to the valves they need, when they need them.

The additions to RPV's service portfolio are motivated by the same desire to provide the best possible service to customers. By bringing testing and coating services in house, RPV can knock days off lead times. In the oil and gas industry two days saved, can mean huge financial benefits.

Visit www.rpv-group.com for further information about RPV's services and heritage. Download a copy of the company's latest stock list, ISO 9001:2008 and PED 97/23/EC certificates.

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HKS Actuators Guarantee Water Management on a Drilling Rig in the Gulf of Mexico

HKS's latest project is the successful implementation of the entire water management system on a DP3 Well Intervention Semi-submersible Unit for operation in the Gulf of Mexico.

For this project HKS designed and manufactured 372 customer-specific actuators of the SA-H and AFR types following the high standards required for off-shore applications. Within the two series, different sizes ranging from the SA-H 30 to SA-H 125 double acting, and, AFR 20 to AFR 520 spring return, were supplied for operation in the ballast system, seawater and fresh water cooling systems, fire extinguishing systems, drilling water systems, leakage water system, tank cleaning system, 'black water' system, fuel and oil transfer system, fresh water generating system and ventilation system.

The HKS design and manufacture followed intensive collaboration and wide-ranging modification of the customer specification. The individual customer requirements and added value, such as customized design, ABS-certification and IP 68-requirement were at the heart of the process. All actuators were equipped with a hydraulic control unit and associated electronics board, which allowed position control, speed control, load holding function as well as emergency operation. In addition, the AFR series were supplemented with a safety function so that in the event of loss of pressure, the actuator will automatically drive to a predefined position. This allows, in an emergency situation, the valves to fail open or closed, as necessary.

HKS actuators are available in a wide design range

In general, HKS actuators are available in a wide design range such as ISO 5211 or customized flanges; double-acting or fail-safe designs; with inductive, magnetic or mechanical feedback sensors. HKS actuators are also available in different materials and coatings to meet the requirements of the offshore or sub-sea environment. HKS actuators can be incorporated into the existing hydraulic system, or can also be used as local stand-alone single actuation systems.

HKS produces hydraulic and pneumatic compact rotary actuators and systems for rotating, tilting, accelerating, decelerating and holding of different types of load. The broad performance spectrum of the family-run company is supplemented by high-quality rotary lift combinations and cylinders. HKS German Advanced Technology Products work safe worldwide in uncountable various applications. Currently HKS employ about 180 people at two manufacturing facilities in Germany.

Hydrastore are exclusive UK partners for HKS. Covering sales across the UK and Ireland, they provide access to the full range of product, adding value with a wide range of hydraulic equipment, delivered loose or, as part of control panels or systems to all current standards. Designed and manufactured in-house at their purpose built factory in South Yorkshire.

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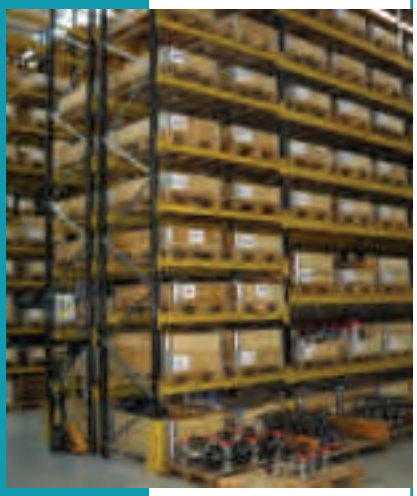

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Kent Introl's UK focus: there's no place like home

In its four decades of trading, Brighouse-based valve manufacturer Koso Kent Introl has worked with customers and on projects in virtually every corner of the globe. But as a British success story, it will always ensure that it continues to look after its home-based customers too.

The ongoing importance of the UK market to KKI has seen the recent expansion of the sales team, to allow the existing Area Business Managers the ability to cover smaller individual territories and thereby offer customers an even more attentive service.

James Palmer joined the team last October, to cover central UK from coast to coast; whilst Stephen Magowan continues to look after Scotland, and Harry Thom has responsibility for the South of England.

'total product support'

James's inclusion in the team follows a subtle change in the KKI customer relationship model for the future. The emphasis will be very much on one key person being responsible for guiding the customer's access into the company's end-to-end capability. The Business Managers will provide frontline support at every stage: when customers are placing orders, through production and on into aftermarket. Customers will still access KKI's expertise in these areas, but the Business Manager will guide and support this engagement, to ensure the customer has a single point of contact and is directed to the specific expertise they might need.

The focus is very much on providing total product support, thereby ensuring whole life cost effectiveness. This might mean that, where existing valves are in situ, the Area Business Managers will provide access to advice on service and maintenance options, spares and upgrades, to ensure that productivity is optimised and expensive replacements avoided or postponed. For new orders, this might mean ensuring that the whole application in which the valve will be installed is understood, to ensure the specification of the valve under commission is correct, and ensures optimum running whilst in service.

The UK team continues to work with its traditional customer base in the downstream oil and gas industry and with those operating upstream, as well as with customers in the refinery and power sectors.

With the UK economy cautiously welcoming news of a recovery, KKI is confident that this new model will be welcomed by its customers and prospects, who, after five years of economic uncertainty, continue to exercise prudence in their spending. Such customers have learnt the lessons of false economy and are seeking the ongoing reassurance of KKI's highly accredited manufacturing operations and the fact that all spares come with a certificate of conformance and original equipment manufacturer (OEM) guarantee.

Profile on: James Palmer

Area Business Manager, Central UK

James has worked for more than 15 years in the valves industry. As well as working in the UK, James has over five years of international sales experience including spells in the Netherlands, South Africa and in South Korea. James has a degree in Mechanical Engineering and is a member of the Institute of Measurement and Control.

Harry Thom (left) and Stephen Magowan form part of KKI's UK team

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New explosion-proof electric actuator from AUMA

Explosion-proof electric actuators from AUMA include the new part-turn SQEx .2 (foreground) and multi-turn SAEx .2

AUMA has announced that orders can be placed for its new explosion-proof version part-turn actuator. Designed for butterfly and ball valve automation, the SQEx .2 replaces AUMA's established SG .1 range. For enhanced positioning accuracy, and an increased number of permissible starts per hour, AUMA has produced an SQREx version actuator for modulating duty.

Sophisticated diagnostics and asset management functionality are enhancements set to benefit a range of process control installations. Additionally, torque capability has been significantly enhanced with a new actuator size which covers 50Nm to 2,400Nm, without the need for a gear box.

Commissioning and operation of SQEx actuators are identical to the SAEx .2 multi-turn range - this benefits users as controls are interchangeable and, where both product series are installed, on-site device management is simplified. Both ranges are available with simple AMExC or micro-controller operated ACExC integral controls.

The SQEx .2 meets the European ATEX and International IECEx standards. The product will be submitted for certification in additional countries including the Russian Federation, the United States, Japan and Canada.

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Valvekits to stock Soldo hazardous area switchboxes

Rotork Valvekits, the Rotork actuator manufacturing and flow control group's specialist valve mounting kit company, is now the UK stockist for Soldo switchboxes. Soldo is a highly regarded manufacturer of compact switchboxes featuring a range of switch options with local visual position indication for rotary quarter-turn pneumatic actuators.

Rotork Valvekits will predominantly stock Soldo switchboxes for hazardous area applications, encompassing the SK and SQ explosionproof ranges and intrinsically safe models from the SP range. SK and SQ switchboxes are internationally certified for installation in EExd Zone 1 and 2 hazardous areas by ATEX, IECEx, GOST (Russia) and CCOE (India).

Soldo switchboxes stocked by Rotork Valvekits, comprising the SK, SQ and SP ranges

Available with painted aluminium or polished 316L stainless steel enclosures, these switchboxes can be supplied with electromechanical switches, magnetic switches, proximity sensors or inductive sensors to suit user requirements. A pre-wired terminal strip incorporates two extra terminals for solenoid valve connections. Integral adjustable Namur standard mounting legs enable swift attachment to any actuator with VDI/VDE3845 dimensions.

Environmentally sealed to IP66/67 as standard or IP67/68 as an option, the switchbox enclosure is fitted with two cable entries and a 3D visual position indicator for maximum visibility from the top and side. The standard ambient operating temperature range is -20ºC to +80ºC, with optional low and high temperature versions available for -55ºC and +105ºC respectively. Simplified mounting and commissioning is facilitated by tool-free adjustment of high resolution, vibration resistant splined switch operating cams and an internal twin shaft design that maintains the match between the actuator shaft and position indicator .

Soldo SP switchboxes incorporate the same features as the SK/SQ ranges within an IP65 weatherproof reinforced polymer enclosure designed for non-hazardous or intrinsically safe applications. Intrinsically safe versions incorporating micro-switches or proximity sensors are being stocked by Rotork Valvekits.

The Soldo agreement is Rotork Valvekits' third stockist/distributor agreement to have been announced in recent months. In May the company announced its appointment as the UK distributor for the well established Centork range of pneumatic valve positioners and an exclusive stockist and distributor appointment for the industry-leading Pneumatrol Namur range of solenoid valves.

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Alternative Acquisition

Morgan O'Brien, of ESI Process UK, tells Valve User Magazine that being acquired does not necessarily mean being 'swallowed up'

Acquisitions are a fact of business life. They take many forms and fulfil many purposes. For several small business owners, they can present a legitimate strategy for accelerating growth; either through the acquisition of other companies, or through accepting the investment of a larger group. It was the later options which ESI Technologies Group opted for recently, as they became part of the Swedish based Indutrade Group.

'Your business being acquired: The discovery that you're no longer a big fish in a small pond or even a small fish in a big pond, but a small fish inside a big fish! Most owners who have grown their own company or their family company would fear this as the worst possible outcome' says Morgan O'Brien. *'This is a legitimate fear. Whether the original owner intends to continue working in the business or not, there are few who will not consider the welfare of their work force moving forward.'*

ESI Technologies has found that there is another Model that nurtures companies and its staff. The Group reports that Indutrade of Sweden has a totally different philosophy. The Swedish based Indutrade Group has acquired approximately 200 engineering companies to date.

'Indutrade believe it is better having 200 independent ships sailing into a rocky harbour than one super tanker' says Mr O'Brien. *'Obviously we entered into discussion with a healthy scepticism, however we spoke to other businesses that were acquired by the group and they were extremely positive. Our own experience has been positive too, Indutrade has been as hands of as it said it would be.'*

Indutrade believe that if you are going to acquire a company and leave it run independently with its own name, brand and identity, it is critical the company, its owner and staff are a perfect fit.

They work to an exact formula. The company has to be a niche technology company, with strong management who want to stay within the Indutrade group and grow their company. Whether the growth is organic or through further acquisition, Indutrade provide the financial support.

Mr O'Brien is very happy with progress so far. *'ESI had a long term strategy to expand in the UK.*

This plan has now been accelerated with the support of Indutrade. Indutrade has built its group of companies in Northern Europe initially, they are now focusing on the UK and Ireland. ESI are one of the first Acquisitions and more are planned, be that manufacturing or distribution companies. It looks like this is going to be a busy year.'

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Metso's Neles® capping valves give an automated solution for batch cooking

Stora Enso Fine Paper's Nymölla mill in Sweden selected Metso as the supplier of new capping valves for its batch digester line 1. In total, Metso will deliver 5 Neles PZ-series capping valves to replace the mill's old hydraulic cappers. This gives Stora Enso an automated solution for its digesters replacing old valves and actuators that needed manual assistance in the chip filling phase and increasing overall productivity.

The Neles PZ series of capping valves improves process safety, enhances process reliability and eliminates unscheduled process downtime thanks to its proven technology. Design features, like a preloading device mounted outside the valve body, prevent chips and liquor from causing hazards. Special interlocking systems, essential to plant safety, help lower maintenance costs.

The Nymölla mill's batch cooking process is a very demanding application because magnesium bisulfite is used as a cooking liquor. The local Metso sales and product line teams were able to offer Stora Enso Nymölla mill a solution that fulfilled their requirements by making a few technical changes to the standard Neles PZ-series capping valve design. These details were thoroughly discussed with the customer. Technical compliance, together with a proven track record in similar applications around the world, helped Stora Enso Nymölla mill decide in favor of the new capping valve solution.

The Nymölla mill specializes in producing high quality office papers and has had a good working relationship with Metso already for decades. Today, the whole mill with two paper machines has an installed base of approximately 1,000 Metso valves. In addition, the mill's PM 1 and 2 are equipped with Metso's automation system Metso DNA, Metso IQ quality control system, nelesACE basis weight valves and a range of profilers, which are fully integrated with Metso DNA. The new capping valves will also be connected to Metso DNA.

The valves for this project will be delivered during 2014. All valves are scheduled for installation and commissioning by the end of the second quarter of 2014. The delivery contains 5 Neles PZ capping valves equipped with pneumatic actuators, control centers and Neles SwitchGuard intelligent on/off valve controllers.

The capping valve is one of the innovations for the pulp and paper industry that originated from Metso. More than 1,500 capping valves in total have been delivered to batch cooking applications worldwide.

The first capping valve deliveries to Sweden were made during 1969, and Metso has continued its valve deliveries and related services in the country since then.

Metso has a long track record of delivering engineered performance and reliability to the oil & gas industry with leading brands Neles®, Jamesbury® and Mapag®. In nearly 90 years, Metso has delivered globally millions of valves, control valves and on-off valves, and has become one of the leading suppliers of intelligent valve controllers.

All of this is backed by field service expertise from currently over 55 Metso Automation service hubs and over 30 valve service centers around the world. Automation's valve technology and supply centers are located in Finland, the US, Germany, China, South Korea, India and Brazil.

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The sliding gate valve reins in costs for steam systems

Rapid control dynamics reduce steam consumption by up to 30 %

The level of quality attainable in controlling a steam plant is heavily dependent on the dynamic characteristics of the total system comprising the control element, actuator and controller. The control parameters for sliding gate valves relating to dynamic behaviour are clearly superior to those for conventional control valves. As a result, the highly responsive dynamics not only improve the control quality but also form the basis for control circuits with very short reaction times. This has proved to be the key factor in steam savings of up to 30 %. Current comparisons of steam plant operators show that savings of this magnitude are attainable only by installing a sliding gate valve in place of a traditional control valve.

The most important prerequisites for short reaction times in a control element are short strokes, small actuators and low actuation forces resulting from these. All of these characteristics come together in the sliding gate valve. As it operates, two slotted plates slide against each other transversely to the direction of flow. Thus, the sliding gate valve seals itself without the need for a metallic seat. The typical stroke between opened and closed is a mere 6 to 9 mm. One of the most noteworthy advantages stemming from this operating principle is the low actuation force required for the positioning movements.

This actuation force F can be determined for the sliding gate valve by the coefficient of friction μ of the sliding pair, the slot area ASlot facing the flow and the differential pressure Δp with $F1 = \mu$ ASlot Δp. The force requirement for an equivalent globe style valve is obtained from F2 = ASlot Δp. Comparing these two forces mathematically results in $F1 / F2 = \mu$ASlot/ASeat = 0.1 for valves with the same Kvs value and the same differential pressure. Therefore, the sliding gate valve needs only one tenth of the actuation force required by a globe style valve under the same process conditions. Also as a direct result of this, the valve actuator for sliding gate valves is naturally correspondingly lighter and smaller.

Control dynamics at the highest performance level

By analysing its frequency response, the dynamics of a control valve can be evaluated in terms of its control performance. This aspect was studied experimentally for different control valve systems (see picture on page 93). The general conclusion which can be gathered from this is that the use of sliding gate valves in a control circuit results in higher critical gains. On the one hand, therefore, the process controller can be set *"more aggressively"*, while, on the other hand, overshooting is reduced when approaching a changed set point value, which is also reached more quickly.

Depending on the plant and process, it is therefore possible to tap into potential additional savings simply by exchanging a globe style valve by a sliding gate valve. By doing so, the quantities of steam fed unnecessarily into the system by an overshooting action are reduced. This is supported by the figures recorded by operators of different steam systems.

Chinese Tobacco manufacturer, Hongta Tobacco, reduces steam consumption by 30 %

In the three lines at the Chinese tobacco manufacturer, Hongta Tobacco, the tobacco is conditioned at different temperatures. The process variable defining the quality

is the temperature setting at 60, 65 or 70°C. Depending on the temperature setting required, previously Hongta Tobacco had required up to 990 kg of steam per hour for this process. The plant operator replaced traditional globe style valves in this steam facility – without making any other changes to the plant – with sliding gate valves. Then the temperature control parameters were readjusted and the resulting steam consumption measured with the following remarkable results. Afterwards, the steam consumption fell in the

- 60 degree line by 200 kg/h, or 36 %,
- 65 degree line by 200 kg/h, or 25 % and
- 70 degree line by 150 kg/h, or 17 %.

The investment in the sliding gate valves had payed off within a matter of a few months.

Palm oil producer Palmaju Edible Oil saves 5 tons of steam per day

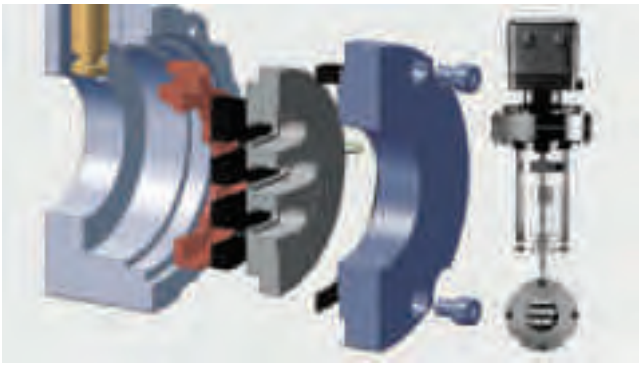
Besides the advantages that sliding gate valves can bring to systems, they are also easy to automate. The potential savings that can be achieved from a sliding gate valve incorporating an intelligent positioner are impressively documented by the operator of a palm oil plant, Palmaju Edible Oil, in Johor, Malaysia. By using a small sliding gate valve with a nominal size of DN32 with an electro-pneumatic positioner instead of a self acting pressure regulator, Palmaju Edible Oil was able to reduce the steam consumption by 5 tons per day. Based on the energy generating costs in Malaysia the savings potential amounts to over 25,000 euros per year for the plant operator by using this single valve.

With integrated process controller

As an option, the 8049 positioner used here has an integrated process controller for local control tasks. This version of the positioner with an IPC process controller combines the function of a positioner with that of a process controller. Thus, it is possible to set up local control circuits as found commonly in steam circuits, with minimum cost and effort involved in installation.

The sensor for the process variable – one pressure sensor is sufficient for maintaining the pressure – is connected directly to the controller on the valve and the adjustments needed are carried out on location using a keyboard with a display or with the *"DeviceConfig"* configuration software. Due to the excellent control quality, the electro-pneumatic positioner which controls the sliding gate valve pays-off within a few weeks in

Palm oil producer, Palmaju Edible Oil, saves 5 tons of steam per day by using sliding gate valves



The high control quality of sliding gate valves form the basis for control circuits with very short reaction times

steam systems. By minimising the work required for installation and cabling, converting from manually-controlled valves to automated valves can be achieved extremely smooth.

Short stroke means less wear

In the sliding plate principle with its surface seal formed by the plates in the throttling element, the pressure of the medium against the moving valve plate assists the sealing function of the valve. This functional principle produces a self-lapping effect by the moving valve plate. This seal between the plates is therefore significantly less prone to fail and leakage rates of less than 0.0001 % of the Kvs-value are achieved.

In addition, the slotted plates suffer hardly any wear as they slide against each other so that these valves combine long service lives with a high level of enduring leak tightness, even under the severe conditions they face in steam systems, for example. As an option, sliding gate plates are also available in carbon, so that an excellent seal is assured even at very high temperatures with a hard/soft combination of materials.

The very short stroke is also a factor in service life: short motion paths and switching times protect the packing and the actuator. In the sliding gate valve, both are subject to substantially lower loads. Even after many years, many sliding gate valves reveal no traces of wear either on the diaphragm or in the packing area.

The body length of sliding gate valves is extremely short so that they fit easily between two flanges and are easy to handle – including its actuator a DN 150 weighs no more than 14.2 kg. So it only takes one person for removal, installation and maintenance.

Sliding gate valves are available in sizes DN 15 to DN 250 for pressures up to PN 100 and media temperatures from - 100 °C to + 350 °C (max. 530 °C).

SCHUBERT SALZER UK Ltd.

Schubert & Salzer UK Limited
Tel: 01952 46 20 21
www.schubert-salzer.co.uk

New dual chamber orifice fittings help keep fiscal metering lines running

Disruption in fiscal metering applications caused by the removal and inspection of orifice plate flowmeters can now be eliminated using ABB's new meter2di FPD220.

The meter2di is a dual-chamber orifice fitting which enables orifice plates to be inspected or replaced without removing the fitting itself from the pipeline.

Many orifice meters used in the oil and gas industry typically feature a single chamber design. Single chamber fittings have an orifice plate that can be replaced without removing the fitting from the pipeline. However, before the plate can be withdrawn, the flow must first be stopped and the pipeline vented, causing potential disruption for many hours as the line is shut down.

'…safe removal of the orifice plate while the line remains pressurised and the product is flowing.'

ABB's meter2di overcomes this by enabling safe removal of the orifice plate while the line remains pressurised and the product is flowing. The orifice plate is withdrawn into a dual chamber, which is then isolated from the pipeline. Although the second chamber must still be vented, there is no requirement for the pipeline itself to be vented.

Added protection against the risk of leakage from the pipeline into the second chamber during plate removal is provided by the meter2di's dual isolation feature. This uses two independent chamber seals to ensure maximum safety during live orifice plate changes or routine inspections. Valve isolation is provided by 'Category II Proved Isolation' using a double block and bleed arrangement. All chamber equalization and venting is controlled by a single manifold that can be supplied as *"firesafe"* if required.

Two pressure gauges integrated into the unit display the pressures in each chamber, enabling operators to see whether the process is properly isolated.

By enabling an orifice plate to be removed, inspected / exchanged and reinserted into the line within just 30 minutes while the flow line remains live, the meter2di

can help operators to achieve annual savings of up to $50k per stream through reduced downtime. Further cost and maintenance savings are also possible through the elimination of parallel streams or bypass lines, which are no longer required to handle flows while the main stream is offline.

ABB Ltd
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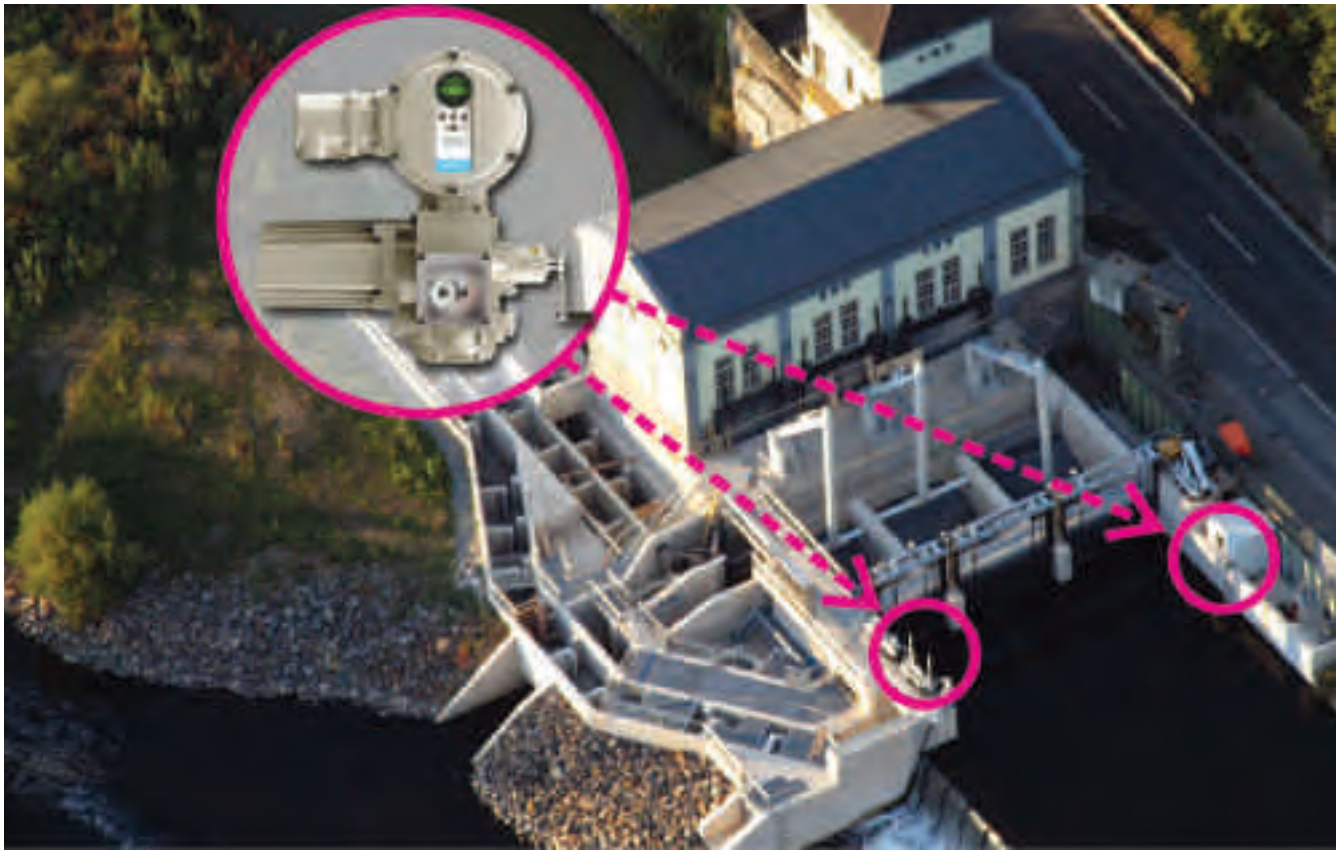
SIPOS supports energy sector environmental initiative



The Unkelmühle hydro-electric power plant pilot eel bypass initiative incorporates SIPOS' synchronised actuators

SIPOS and the eels

The advanced capabilities of SIPOS' electric actuators are supporting an environmental initiative for an eel bypass system at Unkelmühle - a hydroelectric RWE power plant near Bonn.

As part of its energy policy, the German government is supporting measures for the modernisation of hydroelectric power plants. System upgrades are being encouraged with an incentivised feed-in tariff. Environmental conditions have also been considered, this includes a requirement for turbine intake screens to have lower clearances to guarantee that fish pass parallel to the power plant.

SIPOS' universally applicable actuator concept enables parallel operation (synchronisation) of several SIPOS 5 actuators without the need for a PLC. Over the entire stroke range, the torque and current position of all SIPOS actuators incorporated into a scheme are monitored and coordinated. Via electronic synchronisation, devices that are long distances apart and impossible to link mechanically can be connected and, if necessary, the traditional mechanical shaft connection can be omitted. The parallel running capability also facilitates the smaller dimensioning of subsequent parts, such as threaded weir spindles or penstocks.

An installation at the converted power station Unkelmühle has been adopted as a pilot project for an eel bypass solution. Designed to address the fact that eels rarely use fish ladders for their descent, a flap (bottom gallery) was installed over the entire base span of the inlet. The flap is periodically operated by two synchronised SIPOS 5 part-turn actuators located both sides of the inlet and connected by cables to the flap. The eels now have the opportunity to bypass the inlet area via the cross flow through the flap and a pipe system.

SIPOS reports that another power station (EOn Gerlachshausen / Lower Franconia) has been equipped with its eel bypass solution.

SIPOS AKTORIK

SIPOS Aktorik
Tel: 01275 871141
www.sipos.de

New Pilot Valve Reduces Piping Costs and Complexity

Process valves with pneumatic actuation can use a variety of pneumatic and electro pneumatic (solenoid) valves and instruments to achieve valve operation and failsafe actions. Multiple operating modes are used depending on how critical the process is and whether the valve needs to fail open, closed or stay put for a particular condition. In addition to commanding the valve from the plant control room and inbuilt automatic logic in the local valve controls, the facility for an operator to integrate with the conditional logic to ensure safe valve operation can be essential.

On many control valves, manual reset solenoid pilot valves such as the Nadi F03, Asco 327 or Maxseal IC04S provide this input by requiring the solenoid to be energised at the same time as an operator physically moves the button or lever so that the valve changes over. In the event of a commanded fault state, the valve returns to its original position and can't change again without operator input. However, for systems where solenoid valves are not permitted or practical, this function has to be achieved with purely pneumatic components and would commonly be achieved with several valves in a sub circuit to give the manual reset function.

In practice, increasing the number of valves required to achieve the logic functions for the valve actuator has a knock on effect

The new manual reset pilot spool valve stocked in the UK by Red Dragon Valves

of the overall cost of the process valve, particularly for offshore systems where all the instrument piping has to be done in Hastelloy, Monel or 6MO and each additional pneumatic connection has a significant cost implication.

One way to meet this challenge is by installing the new manual reset pilot spool valve manufactured in Italy by Sitecna Srl and stocked in the UK by Red Dragon Valves. The DPXX-MR unit is designed specifically for these applications where the valve will only move from rest when the pilot pressure is applied and the button is pushed. As soon as the pilot pressure is removed the valve returns to the rest position and won't change state again until both control inputs are initiated.

Constructed in 316L stainless steel to NACE MR01-75 and available in 3/2 and 5/2 functions for single or double acting actuator applications, the valves carry ATEX and GOST certification as standard and have traceability to EN10204 3.1.

Red Dragon Valves

Red Dragon Valves
Tel: 01443 772500
www.reddragonvalves.co.uk

Rotork Schischek boosts biogas production

Rotork Schischek ExMax explosionproof actuators have been selected to assist the production of biogas for district heating systems in the German city of Munich

Biogas is produced during the effluent treatment process at the city's largest waste water plant Klaerwerk Gut Grosslappen, situated close to the world famous Munich Allianz Arena, home to Bayern Munich football club.

The ExMax actuators have been installed in the digester and fermentation tanks, where all electrical equipment must be approved for use in hazardous areas. Built inside four large towers, the fermentation tanks mix the waste at a defined temperature to produce the biogas. For optimum performance the inner tank temperature must be maintained at 38ºC. Six ExMax actuators are installed in an area known as the lamp at the top of each tower for the operation of air dampers to balance the inside temperature with fluctuating ambient temperatures on the outside.

One of the four fermentation tank towers at the Munich waste water plant. Rotork Schischek actuators are installed in the lamp at the top of each tower.

Rotork Schischek ExMax actuator installation on an air damper at the Munich waste water plant

Factors favouring the Rotork Schischek products for this application include their compact size, ease of installation, standardised connections and Zone 1 hazardous area explosionproof certification. In addition Rotork Schischek has developed established relationships with the damper OEM, local engineering companies and the end user.

All Rotork Schischek products are manufactured with colour coding to indicate at a glance the appropriate hazardous or non-hazardous area of application. Yellow denotes hazardous Zones 1, 2, 21 and 22, red denotes hazardous Zones 2 and 22 and green denotes non-hazardous areas only.

SCHISCHEK
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Schischek
Tel: 01245 256007
www.schischek.co.uk

Saint-Gobain Pam UK

the 'Natural' Choice for Wessex Water

Saint-Gobain PAM UK has been awarded a major contract to supply more than 70km of its EN545 approved Natural ductile iron pipe range for a flagship project for Wessex Water.

The water company is constructing a number of schemes as part of its water supply grid project to help meet future demand without developing new sources. The project will allow Wessex Water to improve the security of supply for customers – even in the event of a catastrophic failure - and meet reductions in abstraction licenses required by the Environment Agency to improve flows in some rivers and protect their ecology. It will also help deal with seasonal or occasional deteriorating raw water quality – particularly increasing concentrations of nitrates at some groundwater sources – as well as meeting future water supply demands. It includes the construction of a new water main to transfer water from the south of Wessex Water's region, in Dorset, to Salisbury in Wiltshire via Blandford and Shaftesbury.

Due for completion by 2018, much of the pipeline route passes through the Cranborne Chase and West Wiltshire Area of Outstanding Natural Beauty and has been designed to avoid environmentally sensitive areas.

The first order will see around 17km of DN350 pipe supplied for a twin main section between Sturminster Marshall and Snowsdown.

Wessex Water held a number of initial consultations with Saint-Gobain PAM UK to discuss the options for pipe materials. Ductile iron was ultimately selected by Wessex Water for the majority of the project for its strength. The design was able to achieve a bed and haunch to support the pipe, which has reduced the import and export of materials, lowering the impact on the environment. Ductile iron pipes also offer installation flexibility, with multiple pipes in a single trench, as well as a relatively short and discreet installation period, meaning trenches do not need to be left open for extended periods. With the native soils being primarily chalk, the ability to rapidly backfill trenches quickly is key, as chalk left at a trench side for long periods could be exposed to the effects of heavy rainfall, making it more difficult to reinstate.

Ductile iron pipes offer installation flexibility

The project will allow Wessex Water to improve the security of supply for customers

The Natural range, available in diameters from DN350DN to DN600DN, offers strong corrosion resistance in soils with resistivity as low as 500ohm cm through its 400grm Zinc Aluminium alloy protection. The protective coating also eliminates the need to identify transition points between medium and low resistivity soils, where alternative systems may require a change from standard to supplementary protection.

Simon Cottingham, Director of Key Accounts and Major Projects at Saint-Gobain PAM UK, commented: *'We worked closely with the Wessex Water team to define the scope of the project and recommend a solution which would allow the customer to benefit fully from the performance attributes offered by ductile iron pipes. We are very proud of taking part in this project and contributing to its success.'*

Davin Eversett, Project Manager at Wessex Water commented: *'Wessex Water's project management team in conjunction with the internal design and procurement teams have worked with Saint-Gobain PAM UK in the development of this pipeline and concluded that ductile iron pipes will offer the lowest whole life cost as well as the flexibility to deliver what will be a challenging construction programme.'*

Saint-Gobain PAM UK Ltd
Tel: 0115 930 5000
www.saint-gobain-pam.co.uk

Smith Flow Control Introduces TorkDrive to Prevent Plant Shut-Down and Aid Site Maintenance

Smith Flow Control launches TorkDrive, a device that can be mounted to either the valve input handwheel or directly to the valve input shaft to safeguard the valve from excessive torque.

TorkDrive has two distinct benefits. It prevents valve damage, thus reducing the need for expensive plant shutdown and valve replacement (through over-torque) and provides vital information regarding site maintenance requirements.

TorkDrive can increase valve life as it prevents the operator from applying excessive force when closing the valve, protecting the valve seat. TorkDrive controls the torque applied when operating a valve, ensuring that the same force is used regardless of the strength of the operator.

'compact design'

TorkDrive can be incorporated seamlessly into plant maintenance systems and schedules. TorkDrive is set to a predetermined maximum torque and, if during the operation cycle of the valve, the operating torque increases above the maximum limit, the TorkDrive will slip, indicating an irregular valve condition. This will alert the operator to report the valve status to Site Maintenance, rather than continue to apply force to the valve.

TorkDrive boasts a compact design, weighing less than 4kg, despite an all-mechanical construction. It is a completely maintenance free device, made from 316 Stainless Steel and is suitable for oil refineries, power plants, paper mills, water plants and chemical processing facilities. TorkDrive withstands temperatures from -56°C to +100°C, with a torque setting range from 80Nm – 500Nm. TorkDrive can be installed directly to manually operated valves, requiring torque monitoring

Colour coded spring for torque range identification

TorkDrive Gearbox

over 80Nm (Ball, Gear, Gate & Globe etc). TorkDrive also benefits from IP65 protection, safeguarding the device in the most aggressive of environments.

TorkDrive features unique clutch plates that are controlled by a series of calibrated compression springs. Two spring set configurations are available, a low range TorkDrive unit offering a maximum torque output range between 80Nm – 280Nm and a high range unit offering 250Nm-500Nm. Each unit is factory set before installation and the unit can be adjusted to suit the host equipment's torque requirements using a calibrated setting scale within the body of the device. Each spring set has a unique colour code, thus ensuring that the correct torque range is always used.

TorkDrive comes complete with a tool for making fine adjustments.

The TorkDrive is supplied with bespoke adaptation to the host valve and its own operating handwheel/lever.

SMITH FLOW CONTROL LTD

Smith Flow Control Ltd
Tel: +44 (0)1376 517 901
www.smithflowcontrol.com

Hardide Coatings strengthens technical team with new appointments

Hardide Coatings, provider of advanced surface coating technology, has made two key appointments to bolster its team focused on developing tungsten-carbide based engineering solutions

Hardide Coatings has appointed Ioan Jones (seated), laboratory manager and Oliver Jones, pre-treatment specialist.

Ioan Jones takes up the post of laboratory manager and Oliver Jones has been brought in as pre-treatment specialist. The duo will complement the current team of 29 staff, bringing additional metallurgy and chemistry expertise to the company.

As laboratory manager, Ioan will focus on analysis, development and improvement of existing production processes, as well as new procedures and applications for Hardide coatings. Joining from Norma UK, he has an extensive background in metallurgy and has previously held positions with ASAMS Ltd, Aero Engine Controls, and spent thirty years in nuclear research with AWE Aldermaston.

> *'Developing our technical team is vital…'*

Oliver joins from MacDermid Limited with experience in developing plating processes, following completion of an MSc Chemistry last year. His pre-treatment specialist role at Hardide Coatings will include creating new pre-treatment methods and improving and adapting the existing processes to new types of steel and alloys. Pre-treatment is a vital part of the production route for Hardide coatings.

Hardide plc CEO Philip Kirkham said: *'We are pleased to welcome Ioan and Oliver, their skills will be a great addition to the laboratory and they will play an important part in the advancement of our surface engineering offering going forward. Developing our technical team is vital as we expand into new markets and extend the capability of our technology to deliver new applications for our range of coatings.'*

Hardide Coatings recently developed an innovative coating for TSP (thermally stable polycrystalline) diamonds to extend the life and improve the performance of drilling tools operating in extremely abrasive environments. The company has also solved the hard chrome plating problem with Hardide-A, which meets the EU and US environmental standards that will soon see toxic hard chrome plating restricted or banned.

Hardide Coatings
Tel: 01869 353830
www.hardide.com

AUMA Gains National Grid Approval

AUMA, supplier of modular electric actuators to the gas, petrochemical and process industries, has achieved National Grid T/SP/VA/2 approval for its range of Ex certified actuators

AUMA Ex actuators gain National Grid approval

The approval, which covers both actuators supplied directly to National Grid and products incorporated within permanent works undertaken by approved main works contractors, adds to AUMA's extensive list of approvals including ATEX, IECEx, FM and CSA.

'successful experience'

Commenting on the achievement Paul Hopkins, MD of AUMA UK Ltd., said:

"We are delighted to receive the certification from National Grid. It reinforces AUMA's long and successful experience in supplying actuator solutions globally to industries managing hazardous environments.

"On a local UK level, it gives AUMA access to provide solutions to both National Grid and its main contractors."

National Grid is an international electricity and gas company and one of the largest investor-owned energy companies in the world: energy is provided to millions of customers across Great Britain and the Northeast US.

AUMA UK Ltd. is the UK subsidiary of AUMA GmbH, the manufacturer and global supplier of modular electric actuators.

Auma Actuators Ltd
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www.auma.com

By BVAA's Technical Consultant, Peter Churm

TECHNICAL HOT SPOT

Hot Spot prEN 764-1 "Pressure equipment - Part 1: Vocabulary"

prEN 764-1 "Pressure equipment - Part 1: Vocabulary" is currently under CEN Enquiry ending on 8 January 2014 It has been prepared by Technical Committee CEN/TC 54 "Unfired pressure vessels", the secretariat of which is held by BSI.

This document will supersede EN 764-1:2004.

CEN Enquiry is an opportunity to propose CEN/TC 69 definitions to be included in EN 764-1 to promote consistency across the pressure equipment sector.

This European Standard specifies terms and definitions to be used for pressure equipment and assemblies addressed by the European Directive 97/23/EC.

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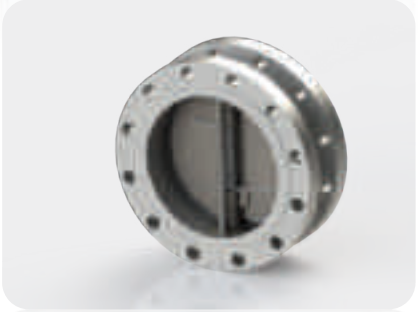

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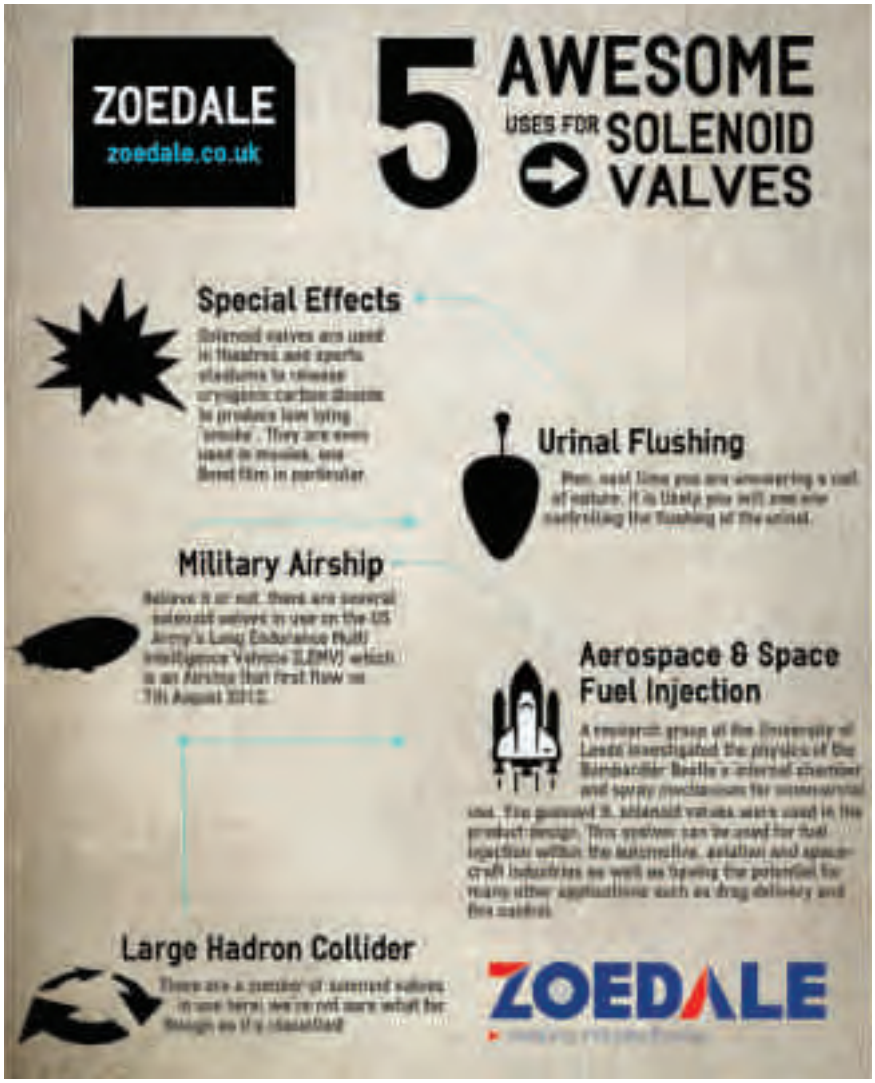
Some cool uses for Solenoid Valves

Zoedale Plc has been selling Solenoid Valves since 1976 and has seen them used in some obscure and interesting applications. The valves have been used in everything from toilet flushing to aerospace. To illustrate this point the Bedford based supplier has produced this list of ten interesting uses for solenoid valves:



1. Special Effects. Solenoid valves are used in theatres & sports stadiums to release cryogenic carbon dioxide to produce low lying *"smoke"*

2. Drinks Dispensing. Ever wondered how the bar staff at Twickenham pour a measured pint or how coffee machines never overflow the cup? Yes, solenoid valves are used in these drinks dispensing machines.

3. Gas Analysers. Manufacturers like Jaguar Landrover, Cosworth and others are using them to check and analyse gas content at their production sites.

4. Urinal Flushing. Men, look up next time you are answering a call of nature. It's likely you will see one controlling the flushing of a urinal toilet.

5. Aircraft De Icing. Some air craft use solenoid valves to de-ice their windscreens, it's important the pilot can see where he / she is flying!

6. Art Installations. Various art installations have used them on robotic models and the Barbican Centre in London needed 30 solenoid valves for their popular *"Rain Room"*.

7. Large Hadron Collider. There are a number of solenoid valves in use here; we're not sure what for as it is classified!

8. Military Air Ship. Believe it or not, there are several in use on the US Army's Long Endurance Multi Intelligence Vehicle (LEMV) which is an Airship that first flew on 7th August 2012.

9. Automatic Irrigation Sprinklers. Think Golf Courses and public gardens.

10. Automotive, Aerospace and Space Fuel Injection. A research group at the University of Leeds investigated the physics of the Bombardier Beetle's internal chamber and spray mechanism for commercial use. You guessed it, solenoid valves were used in the product design. This system can be used for fuel injection within the automotive, aviation, space-craft industries as well as having the potential for many other spray applications such as drug delivery, household, products, fire control, etc.

Some interesting applications here, I hope you agree.

Zoedale
Tel: 01234 832832
www.zoedale.co.uk

By BVAA's Technical Consultant, Peter Churm

TECHNICAL HOT SPOT

Hot Spot API 6FA/6FD and API 607 review

API 6FA Specification for Fire Test for Valves

API Spec 6FD Specification for Fire Test for Check Valves

API Std 607 Fire Test for Quarter-turn Valves and Valves Equipped with Nonmetallic Seats,

In an earlier Hot Spot I reported on a discussion/proposal made within an API 6D Task Group meeting that consideration be given to the revision of API 6FA/6FD to be in line with API 607 with respect to metallic materials.

Following questions on this issue at the BVAA Valve WG meeting last week I have asked the API 6D Convenor for an update on any developments with regard to this possible revision – see below:

It seems that this issue is still live but awaiting revisit by the API Task Group.

I will continue to monitor and report on any progress.

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Utilities industries ripe for aftermarket growth

The Power industry is one market which Severn hopes to grow its aftermarket care activity

Control valve expert Severn Unival is unveiling ambitious plans to grow aftermarket activity in the power, industry and water sectors over the next three years. It has identified an opportunity to increase its presence in this area by 70 per cent.

The firm believes there are significant prospects for its advanced engineering services, with the power industry offering immediate possibilities. Recent market activity and conglomeration in the sector is leading to a surge in multi-site asset management initiatives. This is unlocking potential for sophisticated intelligence-led strategies to optimise performance of valve populations, with multiple benefits for the end-users.

Factors such as commonality between sites, better materials management and potential service exchange programs offer opportunities for an enhanced approach. This can have a considerable impact on lead times for parts and replacement valves, which is hugely advantageous during time-critical maintenance shutdowns.

Severn Unival provides total valve care, covering both mechanical repair and actuation, which reduces the number of contractors or disciplines required onsite during maintenance. Benefits of this include improved efficiency and reduced risk in terms of health and safety.

The long-term goal of intelligence-led valve management and maintenance is to instigate a virtuous cycle where the root causes of problems are addressed to optimise operations over time. This is Severn Unival's core strength and the firm draws on more than 30 years of proven experience in control valve engineering to deliver tangible performance improvements.

The firm has appointed Andrew Davidson as a dedicated aftermarket sales manager for the UK power, industry and water sectors. He says that Severn Unival's technical capabilities as an OEM manufacturer and provider of maintenance solutions means it is poised to corner the market.

> *'technical expertise'*

'Maintaining performance is not enough for Severn Unival, we offer superior technical expertise to significantly enhance performance,' Davidson explains. *'What's more, our customers can work with us in confidence, knowing that they are reducing financial, operational and safety risks.'*

Severn Unival is part of the Severn Glocon Group, which employs 800 people worldwide and won a Queen's Award for Enterprise in International Trade in 2011.

SEVERN GLOCON GROUP PLC

Severn Glocon Group
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Plan for 2014 training with Spirax Sarco

Spirax Sarco has launched a new training brochure for 2014, giving plant operators and managers more ways to save energy, increase productivity, improve product quality and reduce risk.

Discover the latest boiler guidance by enrolling on the Boiler Operation Accreditation Scheme (BOAS) course. Recommended as the qualification of best practice by the Health & Safety Executive, Combustion Engineering Association and The Safety Assessment Federation, BOAS provides a national accreditation for boiler operation or management.

The BOAS Renewal course also features within the 2014 prospectus. Qualified engineers with a BOAS certificate must retake a refresher course every five years to remain BOAS accredited. This course gives an update on best practice and safety to candidates and covers any new legislation or guidance notes.

Plant Engineers and Energy Managers looking to improve energy efficiency may consider the Saving Energy (E1) course. Participants will learn how to identify and evaluate energy savings and carbon reduction opportunities within a plant, such as optimising a steam system, identifying and quantifying savings and relating fuel savings to carbon and CO2 emissions.

The 2014 training course brochure offers a wide range of courses covering the latest legislation and aspects of the design, operation and maintenance of steam systems. Each course is taught by leading experts in steam technology and is approved by professional bodies such as Pearson BTEC; City & Guilds; CEA; and CIBSE.

Training can be completed at Spirax Sarco's Cheltenham-based Steam Technology Centre. It is the only UK facility to offer a fully operational steam system with SCADA control, which helps provide a very high standard of theory, practical and design steam engineering courses. Alongside other facilities, like the on-site boiler, this gives training delegates the opportunity to work on live systems and develop their skills without compromising a real production installation.

In addition to training courses at the Steam Technology Centre, Spirax Sarco provides a selection of national qualifications, correspondence courses and on-site training to suit any training need.

spirax sarco

Spirax Sarco
Tel: 01242 521361
www.spiraxsarco.com

Versa 316 Stainless Steel Regulators

The ARFA 316 stainless steel construction is ideal for sour gas

Versatile Controls Ltd introduce the latest addition to their successful range of Versa 1/4" and 1/2" npt AR-316 series hi-flow regulators, by completing it with 1" npt regulators, filters, and combination units.

Suitable for inlet pressures of up to 20 bar (290 psi), these quality instruments are economical to operate and provide extremely stable and repeatable control of instrument air and gas pressure. Over-ported internal flow paths helps the units achieve very high flow rates with minimal pressure drop.

The ARFA 316 stainless steel construction is ideal for sour gas and/or corrosive environments and is NACE compliant. This meets sulphide stress cracking material requirements of the NACE standard MR-01-75.

'highly accurate pressure regulation'

Standard seals and diaphragms are FKM (fluorocarbon), but other materials are available to meet low temperature conditions of -51°C to 149°C (-60°F to 300°F).

The filters are fitted with 25μ 316 stainless steel washable elements as standard, but 5μ & 40μ are also available. There is a choice of manual drain or auto-drain, along with a full range of accessories - stainless steel gauges and mounting brackets. Also the regulators can be fitted with adjusting knobs for applications where the downstream pressure is required to be continually altered manually. These options complete this comprehensive range.

The Versa Type AR-316 series of stainless steel regulators and filter regulators are designed to stand up to the harshest environments while providing highly accurate pressure regulation. Proven design and construction makes the AR-316 series adaptable to offshore environments as well as land based refineries, petrochemical plants and other process industries.

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Biffi and Power Mechanical Collaborate

Actuation Solution for Complex Plant Regeneration Project

Pentair's Biffi is working in collaboration with its UK distributor Power Mechanical to deliver an innovative actuation solution for the Bacton Rejuvenation project in Norfolk, UK.

The existing Bacton plant controls 25% of the UK's annual gas intake from the Southern North Sea (SNS) and European supply partners via the BBL Pipeline, and is a strategic facility for natural gas supply into the UK.

Having secured the actuation contract through Power Mechanical, Biffi is supplying 17 hydraulic linear (HLAS) and quarter-turn (OLGAS) spring return actuators for both gate and ball valve applications. The HLAS series in particular will be engineered for a range of class 600 valves from 12-24" and will be some of the largest linear actuators available on the market.

HLAS spring return actuators are designed for on-off and regulating service. The modular design allows transformation of the linear actuator from spring to close action to spring to open action and vice versa using the same components. Designed for extended service life and with minimal maintenance the actuators are engineered to order, to fit the specific stroke and torque requirements of the individual valves.

'experience and knowledge'

OLGAS hydraulic scotch yoke design actuators generate high break torque up to 750000 Nm with low hysteresis and high efficiency. Both Biffi actuator ranges are already installed on various Shell projects and meet Shell's rigorous type approval, including 100-cycle testing.

Biffi is supplying 17 hydraulic linear (HLAS) and quarter-turn (OLGAS) spring return actuators for both gate and ball valve applications

Rejuvenating the Shell Bacton plant requires complex reengineering of the current valve and actuation technology at the site to bring the facility up to current international standards. A key requirement of the actuation solution is the need to upgrade the valve and control technology to emergency shutdown standards as part of the plant's compliance with SIL 2.

A significant challenge on this project is the interfacing of old valve equipment with reengineered actuation technology. Bacton is a strategically important site and delivering a successful project is vital to improving safety and reliability, and maximizing uptime at the plant.

Marco Stoto, engineering manager for piston actuators at Biffi, adds:

'Our expertise and track record ensures we can draw on experience and knowledge from a wide installed base. For complex projects such as this, engineering capability and testing, combined with close collaboration are key. Our relationship with Power Mechanical and Shell ensures that each actuator is engineered for a specific valve application and is delivered to site on time.'

Paolo Moretti, managing director of Power Mechanical, concludes:

'Given the lifespan of the facility to date, it has been quite a challenge working with the existing valve equipment. Our relationship with Biffi goes back to 1988 and our previous project experience with Shell ensures we can provide an ongoing interface and support with the project engineering contractors. This approach enables us to overcome any engineering problems quickly and keep the project on track for a successful completion.'

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CVS Manager takes efficiency to new levels

Control Valve Solutions' (CVS) Technical and Production Teams have recently made breakthroughs in the lead time for both the repair and supply of control, isolation and ESDVs through significant improvements in its bespoke software CVS Manager™.

Whilst the development of CVS Manager™ is ongoing the Technical Team wanted to really drive efficiency as clients demand faster response times. The challenge for the Technical Team has been to ensure that efficiency levels were improved across a broader range of valves that the Production Team now repair or supply. This ever expanding range includes control and isolation valves including Emergency Shutdown Valve (ESDV) packages.

The current lead times for all types of valves including ESDV packages have been reduced dramatically in response to clients needs particularly an increasingly challenging environment to maintain 24/7 production. With the reduction in lead times which is set to continue, CVS' Sales Team are more than confident about giving clients the best possible service.

The reduction in lead times is the result of a range of improvements including the introduction of a more robust quotation system and changing the parameters within stockholding, supplier call-offs as well as work flow processes in line with CVS' accreditation to ISO9001, ISO14001 and OSHAS18001.

'improving efficiency'

However, CVS' handling of ESDVs is already relatively quick with packages turned around within 3 to 4 days and the production team pride itself in the reputation it now has with some of the major platform operators in the North Sea.

CVS' new Workshop Supervisor, Ross Wilson, has over 10 years hands-on production experience to ensure that efficiency levels are raised even further. Ross said: *'The main reason for joining CVS was my belief that with the company's investment in its people and the facilities, it is on course to be the leading valve specialist in Aberdeen.'*

As for future service developments in line with CVS' commitment to improving efficiency a new Valve

Carl Enston, Technical Manager and Ray Anderson, Senior Valve Engineer setting up an ESDV Control Panel within the new Valve Testing Facility at CVS' Portlethen Workshop

Testing facility is nearly complete. With an investment of just under £250,000 this new facility is considered to be amongst the best in Europe.

Mac Stevenson, CVS' Sales Manager said *'The major platform operators who have visited our Workshop and facilities have commented that CVS is ahead of the competition when it comes to all the facilities and particularly the new Valve Testing area.'*

The new Valve Testing Facility will be extensively used as part of the general production process but also gives CVS' clients who have commissioned a Valve Management contract the opportunity to witness remote valve testing. This not only saves time by speeding up the whole process of re-commissioning but a faster turnaround of valves especially ESDVs means that platform operators absolutely minimise platform shutdowns.

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